GRANTSVILLE

CITY COUNCIL

May 6, 2026

City Council Meeting Information Packet

Agenda Item # 1

Public Comment

Agenda Item # 2

Summary Action Items

a. Approval of Minutes from April 1, 2026 City Council Regular Meeting
b. Approval of Minutes from the April 14, 2026 City Council and Planning Commission Work Meeting

c. Approval of Minutes from the April 15, 2026 City Council Regular Meeting

d. Approval of bills

Alicia Fairbourne <afairbourne@grantsvilleut.gov>

Public Comment- May 6, 2026 City Council Meeting

1 message

Krysta M <[redacted] Wed, May 6, 2026 at 12:39 PM
To: afairbourne@grantsvilleut.gov
Cc: hhammond@grantsvilleut.gov, bskinner@grantsvilleut.gov, rbutler@grantsvilleut.gov, ddalton@grantsvilleut.gov, jthomas@grantsvilleut.gov, jwilliams@grantsvilleut.gov

Alicia,

I would like this to be included in the public comment for the May 6, 2026 City Council meeting. Thank you.

Council and Mayor,

My name is Krysta. My family moved to Grantsville in 2023 for the community, lifestyle and lower cost of living. I'm speaking tonight because that affordability is disappearing. Since we moved here, we have seen our tax burden increase every single year.

I understand that the recent utility increases were necessary to cover the building and operating costs of our wastewater system. We recognize that infrastructure costs money. But it is precisely because we are already absorbing those massive utility hikes—on top of school district increases and the rising cost of basic goods—that a property tax increase right now is so poorly timed.

I am asking this Council to adopt a strict 'Needs vs. Wants' policy for this budget. We need reliable sewers, we need safe roads, and we need public safety. However, anything that falls into the category of 'amenity' or 'quality of life' needs to be postponed until families have had a chance to catch their breath. If a project isn't essential to the immediate health and safety of our citizens, it should not be funded by a tax increase in 2026.

There seems to be an assumption that because our property values have risen, we have the capital to pay more. My home appraises for significantly more than I bought it for three years ago, but I cannot eat that equity. If I had to buy my own home at today's prices and today's interest rates, I wouldn't be able to afford to live in this city.
High appraisals don't mean we are wealthy; they just mean our cost of living is being artificially inflated. We are being taxed based on a 'market value' that doesn't reflect the reality of our paychecks.

Please, prioritize the absolute necessities. Do not tax us out of the homes we worked so hard to get into. Thank you for your time and commitment to our community.

Krysta MacFarlane
[redacted]

April 1, 2026 City Council Regular Meeting Minutes

MINUTES OF THE BUSINESS MEETING OF THE GRANTSVILLE CITY COUNCIL, HELD ON APRIL 1, 2026 AT THE GRANTSVILLE CITY HALL, LOCATED AT 429 EAST MAIN STREET, GRANTSVILLE, UTAH AND ELECTRONICALLY VIA ZOOM. THE MEETING BEGAN AT 7:00 P.M.

Mayor and Council Members Present:
Mayor Hammond
Rhett Butler
Derek Dalton
Jake Thomas
Jeff Williams

Council Members Excused: Brittany Skinner

Appointed Officers and Employees Present:
Michael Resare, City Manager
Alicia Fairbourne, City Recorder
Tysen Barker, City Attorney
Fire Chief Jason Remick
Christy Montierth, Public Works Director
Bill Cobabe, Comm. Development Director
Shelby Moore, Planning & Zoning Admin
Police Chief Robert Sager
Aspen Clegg, Finance Director (via Zoom)

Citizens and Guests Present or on Zoom: Les Peterson, Brian White, Robert Rousselle, Jolene Jenkins, Kevin Casey, Arlene Mair, Dee Mair, Mark Nielsen, Camille Burt, Troy Barney, Nick Jenkins, LoEne Simpson, Kristine Clayton, Brittany Coggle, Gary Meyer, Tricia Meyer, Tristine Haws, Diane Alvord, Caleb Martin, Jared Martin, Sam Martin, Chris Reilley, Mitchell Barney, Chance Peterson, Robert Rousselle, Ben German, KennaRae Arave, Alex Buxton, and others who may not have signed in or used their full name via Zoom.

Mayor Hammond called the meeting to order at 7:00 p.m. and asked Les Peterson to lead the Pledge of Allegiance.

AGENDA:

1. **Public Comment**

   Mayor Hammond opened the public comment period and noted that two written comments supporting the return of the rodeo had been received, entered into the public record, and distributed to the Council. She invited members of the public, including those attending via Zoom, to provide comment.

   Kevin Casey addressed the Council and asserted that the City's wastewater infrastructure issues were the result of long-term planning failures dating back to 2018. He stated that known regulatory requirements had not been adequately addressed, resulting in increased project costs and a looming compliance deadline. Mr. Casey cited budget growth, staffing increases, and a lack of capital investment in sewer infrastructure, and argued that the City had not taken responsibility for the situation. He expressed concern over proposed rate increases and debt issuance, stating that the burden was being placed on residents without corresponding reductions in City spending. He requested that the Council identify specific budget cuts or cost-saving measures to share in the

financial impact.

Mayor Hammond responded that several statements made were inaccurate and indicated they would be addressed during the sewer treatment discussion.

Caleb Martin addressed the Council and asked whether public comment could include any concern within the City. After receiving confirmation, he expressed concerns regarding car dependency in Grantsville, citing safety issues, street width encouraging speeding, and zoning practices that separate uses and require parking minimums. He stated that these factors contributed to increased infrastructure costs and reduced efficiency.

Mayor Hammond acknowledged Mr. Martin's comments and commended him for speaking. Councilmember Thomas encouraged Mr. Martin to consider participating in the Grantsville Youth Council as a way to become more involved in the community.

Kristine Clayton addressed the Council and expressed strong support for bringing a rodeo back to the community. She shared her personal experience participating in rodeo events at the Grantsville arena from a young age and stated that the arena was a factor in her decision to move back to the area. Ms. Clayton stated that rodeos preserve western heritage, promote community pride, support local businesses, and provide family-friendly opportunities for residents.

Tristine Haws addressed the Council and expressed her support for bringing back the rodeo, stating she supported it for similar reasons previously expressed by other speakers.

Mark Nielsen addressed the Council and stated that while he supported the idea of a rodeo, he did not believe the City's current facilities were adequate to support it. He expressed concerns regarding infrastructure, including the lack of a bypass road and the impact of truck traffic on Main Street, stating this contributed to road wear and safety issues.

Mr. Nielsen also echoed prior comments regarding accountability related to the sewer system and expressed concern about the financial burden being placed on residents. He alleged that individuals had been stealing water from City fire hydrants for construction purposes and stated that the City had been notified but had not adequately addressed the issue. He further raised concerns about code compliance, accessibility for individuals with disabilities, and overall City planning, urging the Council to take action on these matters.

Sam Martin addressed the Council and stated that he supported and seconded the comments made by his brother regarding transportation concerns. He emphasized the importance of ensuring that all forms of transportation, including pedestrian and vehicular travel, were designed to be as safe and practical as possible.

Jolene Jenkins addressed the Council and expressed appreciation for the City's support of the Veterans Memorial Park project. She encouraged the Council to approve the contract under consideration, noting that the selected contractor was local and understood the significance of the project. Ms. Jenkins stated that much of the funding had come from community donations, grants, and sponsorships, and that additional efforts were ongoing to secure funding. She also noted that over 1,200 names of local veterans had been submitted for inclusion on the memorial and encouraged continued community participation.

Ms. Jenkins also addressed the proposed wastewater treatment plant and associated rate increases.

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She acknowledged the necessity of the project but encouraged the Council to explore options for fee reductions for elderly and vulnerable residents, suggesting the City research programs implemented by other municipalities to lessen the financial impact on those populations.

LoEne Simpson addressed the Council and expressed support for bringing back the rodeo but questioned how it would be funded and what additional revenue sources might be pursued. She also inquired about the City's plans for funds generated from the sale of water credits, stating that she believed those funds should be used to help offset the cost of the wastewater treatment plant and reduce the financial burden on residents.

Ms. Simpson further asked which state officials residents could contact to advocate for financial assistance and encouraged the City to provide that information so the public could participate in outreach efforts. Mayor Hammond responded that she had recently communicated with state representatives and their staff regarding the issue and indicated it would be discussed further later in the meeting.

Ms. Simpson emphasized the importance of establishing clear priorities for City spending and requested that the Council identify those priorities and communicate them to the public.

Arlene Maier addressed the Council and encouraged approval of funding for the Veterans Memorial Park, stating that surrounding communities had similar memorials and that Grantsville should likewise honor its veterans. She noted that the project had been in progress for several years and that committee members had contributed personal funds to support its development.

Ms. Maier also expressed support for bringing back the rodeo and shared her experience organizing rodeo events, including high school rodeos and jackpots. She stated that while she supported the effort, the Council should be aware of the significant cost and work involved. She expressed hope that the arena could be improved to support future rodeo events and that the community could sustain a successful program.

Brittany Coggle addressed the Council and expressed concern regarding the proposed sewer rate increases and their impact on residents with limited incomes. She stated that as a single parent, she was already facing financial challenges and that the increase would force difficult decisions regarding basic household needs. Ms. Cobo indicated that she would be unable to afford the higher rates and emphasized that many other residents in similar situations would also be significantly affected. She acknowledged the Council's efforts but urged them to consider the financial burden on the community.

Diane Alvord addressed the Council regarding the proposed wastewater treatment plant and associated sewer project. She questioned whether the planned system, as described in the City's notice, included features beyond what was necessary to meet regulatory requirements. Ms. Alford asked whether a more basic and cost-effective option could be considered to reduce the overall project expense and lessen the financial burden on residents.

Mark Nielsen provided additional comment encouraging residents to report concerns and potential illegal activity through appropriate channels, including law enforcement agencies outside of the City when necessary. He emphasized the importance of accountability and stated that residents

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should not hesitate to take action if they believed laws were being violated.

There being no further comments, Mayor Hammond closed the floor at 7:32 p.m.

2. **Summary Action Items:**

   a. **Approval of Minutes from the March 25, 2026 City Council Regular Meeting**

The Council did not consider approval of the March 25, 2026 City Council Regular Meeting minutes, as they were not yet completed. It was stated that the minutes would be presented for approval at the April 15 meeting.

   b. **Approval of bills**

Motion: Councilmember Butler moved to approve the invoices.

Second: Councilmember Dalton seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, Absent; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

3. **Presentation of a Community Enhancement grant for the Grantsville Fire Department**

Mr. Nick Jenkins with Rocky Mountain Power presented a Community Enhancement Grant to the Grantsville Fire Department. He recognized the department's service to the community, including emergency response, fire suppression, rescue services, and public safety education. Mr. Jenkins noted the department's need for updated air monitoring equipment to ensure firefighter safety and presented a $5,000 grant to support that purchase. Mayor Hammond and the Council expressed appreciation for the donation and acknowledged the importance of the equipment for the Fire Department.

4. **Consideration of approving Resolution 2026-17 awarding the contract for professional landscape and memorial design services for the Veterans Memorial Park to Fritz Custom Concrete**

City Manager Michael Resare presented the proposed contract for professional landscape and memorial design services for the Veterans Memorial Park, explaining that the project had been rebid after the scope was reduced and that Fritz Custom Concrete submitted the lowest bid at $131,375. He explained that prior bids had come in higher than expected and provided background on the rebidding process and scope reductions in an effort to bring the project within budget. Staff recommended approval in order to move forward with the project.

Mayor Hammond clarified that approximately $180,000 had been raised and set aside for the project and that the funding would not come from the General Fund. Mr. Resare stated that staff hoped to minimize change orders and potentially use remaining funds to restore landscaping elements, such as grass, if feasible.

The Council discussed the proposed construction schedule and potential impacts on Fourth of July

activities at the fire station. Staff indicated that the contractor had proposed completing work in June, but the schedule would be finalized during contract negotiations, with consideration given to minimizing disruption to community events.

Motion: Councilmember Butler moved to approve Resolution 2026-17 awarding the contract for professional landscape and memorial design services for the Veterans Memorial Park to Fritz Custom Concrete.

Second: Councilmember Thomas seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, Absent; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

5. **Public Hearing: Public hearing to receive input on the issuance of sewer revenue bonds to finance wastewater treatment plant improvements**

At 7:40 p.m., Mayor Hammond opened the public hearing to receive input on the issuance of sewer revenue bonds to finance wastewater treatment plant improvements. She stated that several written comments had been received via email, distributed to the Council, and entered into the public record. Mayor Hammond invited public comment; however, no individuals spoke in person or online. The public hearing was then closed.

6. **Consideration of approving Resolution 2026-18 awarding the contract for construction of the Grantsville City Wastewater Treatment Plant to VanCon, Inc.**

Public Works Director Christy Montierth presented the bid results for construction of the Grantsville City Wastewater Treatment Plant, explaining that all contractors had been pre-qualified and that staff recommended awarding the contract to VanCon, Inc. as the lowest responsive bidder. She stated that six bids were received, ranging from approximately $43 million to $65 million, with VanCon submitting the lowest bid at approximately $43 million, which was within the engineer's projected budget.

Ms. Montierth explained that the project was necessary due to updated state regulations requiring higher levels of wastewater treatment, which existing lagoon systems could no longer meet. She stated that the selected design represented a scaled approach intended to meet current compliance requirements, and that additional components had been excluded to reduce costs. She further noted that failure to meet compliance deadlines could result in significant daily fines.

Mr. Resare added that certain enhancements, such as additional treatment processes to allow broader reuse of effluent water, were not included in the current scope but could be added in the future if needed. He also noted that the facility was designed to be expandable to accommodate future growth.

The Council discussed current system capacity and confirmed that existing lagoon facilities were operating near capacity and could not be fully utilized due to sediment limitations. Staff confirmed that the new facility would be constructed near the existing lagoons and that planning and engineering efforts for the project had been ongoing for several years.

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Councilmember Thomas addressed concerns raised by the public regarding timing, budgeting, and responsibility for the wastewater project. He stated that while prior councils had worked within the budgets available at the time, the need for long-term planning predated recent years and acknowledged that earlier preparation could have occurred. He clarified that the Council had already taken steps to address funding by increasing rates the previous year, which generated approximately $4.5 million to be applied toward the project, and stated that claims that no funds had been allocated were inaccurate.

Councilmember Thomas emphasized that the need for the wastewater treatment plant was driven by state regulatory requirements and current system demand rather than future growth. He stated that while growth would continue, the project was necessary to serve existing residents. He acknowledged the difficulty of the decision, noting that he had anticipated the issue when seeking office and that it had required significant time and consideration by both the Council and staff.

He further stated that the cost of the project was substantial but consistent with long-term infrastructure investments, which typically occur on multi-decade cycles. Councilmember Thomas indicated that, while the proposed plan might not represent a perfect solution and additional options could still be explored, he believed the City had reached a reasonable and necessary path forward based on the information and efforts to date.

Councilmember Williams expressed concern about rising construction costs and stated that delaying the project could result in further cost increases. Councilmember Butler stated that the bid was favorable and that the contractor was qualified to complete the work.

The Council confirmed that the contractor had committed to meeting required timelines and that appropriate bonding requirements would be included in the contract.

Motion: Councilmember Butler moved to approve Resolution 2026-18 awarding the contract for construction of the Grantsville City Wastewater Treatment Plant to VanCon, Inc.

Second: Councilmember Williams seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, Absent; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

7. Consideration of approval of Ordinance 2026-12 adjusting the sewer rate in connection with wastewater treatment plant improvements and associated sewer revenue bonds

Robert Rouselle from Ensign Engineering presented the updated sewer rate analysis, explaining that revisions had been made following Council direction and updated bid information. He stated that adjustments included lowering the upsized cost for the West Bench interceptor project, modifying commercial rate increases to support business growth, and updating the financing model to reflect a 30-year bond term at approximately 5.05% interest. He noted that the analysis assumed a private bond amount of approximately $25.15 million, with available cash reserves helping to reduce the overall borrowing need. Mr. Rousselle reviewed projected financial metrics, including maintaining a minimum 1.25 debt service coverage ratio and sufficient days of cash on hand.

Mayor Hammond stated that the City had been actively pursuing additional funding opportunities through the State, including lower-interest loan programs. She explained that the City had secured approximately $16 million at a lower interest rate and would be applying for additional funding opportunities that could reduce overall borrowing costs. She noted that if additional funding was secured, the Council could revisit and adjust the rates accordingly.

Mr. Resare confirmed that the City had accumulated approximately $4 to $5 million in funds through prior rate increases to apply toward the project. He explained that adoption of the proposed rates was necessary to demonstrate the City's ability to meet debt service requirements in order to secure bond financing. He further noted that the rates could be adjusted in the future if additional funding sources were obtained, including potential proceeds from the pending water rights transaction.

The Council discussed the proposed rate structure, including a reduction in the base rate and the implementation of a usage-based component calculated from winter water usage averages. Councilmember Butler stated that this approach was intended to more equitably distribute costs based on household usage, particularly benefiting smaller households. Councilmember Williams stated that the usage-based model was developed in response to public feedback. Councilmember Thomas noted that transitioning to a usage-based system was a new approach for the City and reflected efforts to address community concerns.

Councilmember Dalton expressed concern regarding the impact of the rate increases on residents with fixed or limited incomes and proposed that the City explore the creation of an assistance program for elderly and low-income residents. He offered to research potential options and bring recommendations back to the Council. Councilmember Thomas supported exploring additional funding strategies and potential use of City assets, such as water-related revenues, to help offset costs to residents.

The Council discussed implementation details, including using individual household water usage data from winter months to calculate initial rates, with adjustments to be made as more precise metering data becomes available. Staff confirmed that the new rates would be implemented in July.

Councilmember Butler clarified prior rate increases and stated that recent adjustments had been made in anticipation of the wastewater project. Councilmember Thomas noted that historical rate information was available on the City's website for public review.

Mayor Hammond asked if there were any additional questions prior to action. There were none.

Motion: Councilmember Butler moved to approve Ordinance 2026-12 adjusting the sewer rate in connection with wastewater treatment plant improvements and associated sewer revenue bonds, as presented, with direction to research the feasibility of implementing an assistance program for low-income and elderly residents.

Second: Councilmember Thomas seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, Absent; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

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8. Consideration of approving Resolution 2026-20 awarding a contract for rodeo stock services to Broken Heart Rodeo Company, LLC

Planning and Zoning Administrator Shelby Moore presented the proposal to award a contract for rodeo stock services to Broken Heart Rodeo Company, LLC. She explained that three bids had been received and that Broken Heart Rodeo Company was the most comprehensive and cost-effective option, as the proposal included livestock, timers, judges, and other necessary components to host a rodeo event.

Ms. Moore provided an overview of planning efforts, including projected revenues from sponsorships, ticket sales, entry fees, and vendors. She stated that approximately $16,500 in sponsorships had already been pledged, with a goal of $30,000, and outlined anticipated attendance and event logistics, including parking, seating capacity, and facility improvements. She also noted that the event would be sanctioned through the Rocky Mountain Professional Rodeo Association, which would help ensure contestant participation.

The Council discussed timing, facility readiness, and financial considerations. Councilmember Thomas expressed appreciation for the proposal and stated that the event had the potential to strengthen community engagement, but raised concerns regarding the short timeline and ensuring the event could be executed successfully without creating a financial burden. Ms. Moore responded that planning efforts were underway, including facility inspections, coordination with vendors, and community volunteer involvement.

Councilmember Dalton expressed support for the event and noted that he had received positive feedback from the community. He also asked about participant turnout and parking logistics, which Ms. Moore addressed by explaining the sanctioning process and planned traffic and parking arrangements.

The Council discussed projected attendance, potential need for additional seating, restroom facilities, and long-term maintenance of the arena. Mr. Resare noted that ongoing maintenance and potential staffing needs would need to be considered if the City continued hosting rodeo events in the future.

Councilmember Butler expressed support for the proposal, noting the potential for strong community involvement and suggesting that early ticket sales could help gauge attendance and inform planning efforts. He also stated that the timing of the event aligned well with other community activities.

Overall, the Council expressed support for moving forward with the rodeo event, while acknowledging logistical considerations and the need for continued planning and community coordination.

Motion: Councilmember Williams moved to approve Resolution 2026-20 awarding a contract for rodeo stock services to Broken Heart Rodeo Company, LLC.

Second: Councilmember Butler seconded the motion.

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Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Nay"; Councilmember Skinner, Absent; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

9. Discussion and possible approval of an additional $10,000 in funding for the Scenic Slopes Bike Track for installation of timing equipment

Ms. Montierth presented a proposal from American Ramp Company to add timing equipment to the Scenic Slopes bike track. She explained that the equipment would be installed beneath the track and would allow users to track lap times, speed, and usage through a mobile application. She noted that the feature was newly developed, with limited installations to date, and that the cost to add the equipment during construction would be $10,000.

Dalton Vaughn, representing American Ramp Company, participated by phone and provided additional details regarding the functionality of the system. He explained that the system would track rider activity through a mobile app, create leaderboards, and provide usage data to the City without requiring ongoing fees or maintenance. He also stated that installation could occur at a later date, but recommended installing it during initial construction to capture early usage and reduce future disruption.

The Council discussed the benefits of the system, including community engagement, usage tracking, and the ability to support events and competitions. Councilmember Butler asked questions regarding functionality, cost, and app usage, including whether the app would be free and accessible, which Mr. Dalton confirmed. Councilmember Thomas asked about accuracy and future adaptability, and Mr. Dalton stated the system was comparable to other tracking applications and could be installed at a later date if needed.

Councilmember Butler negotiated the cost of the equipment, and Mr. Vaughn agreed to reduce the price from $10,000 to $7,500. The Council discussed the cost in relation to the overall project budget and acknowledged the potential value of the feature. Staff noted that construction of the bike track was scheduled to begin soon, and direction would be needed in order to include the feature during installation.

Motion: Councilmember Butler moved to approve an additional $7500 in funding for the Scenic Slopes Bike Track for installation of timing equipment

Second: Councilmember Thomas seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, Absent; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

10. Consideration of approving Resolution 2026-19 authorizing the dissolution of the Desert Edge Public Infrastructure District Nos. 2-3

City Recorder Alicia Fairbourne presented a resolution authorizing the dissolution of Desert Edge Public Infrastructure Districts Nos. 2 and 3 on behalf of legal counsel. She explained that all land had previously been annexed into District No. 1, and that Districts Nos. 2 and 3 were no longer

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necessary. She stated that the developer, LGI Homes Utah, had submitted a petition for dissolution, and confirmed that the districts had not issued bonds, collected taxes or fees, expended funds, or incurred any debt or financial obligations.

Mayor Hammond characterized the item as routine housekeeping. Councilmember Butler noted that prior board changes had likely been made in preparation for the dissolution.

Motion: Councilmember Butler moved to approve Resolution 2026-19 authorizing the dissolution of the Desert Edge Public Infrastructure District Numbers 2 and 3.

Second: Councilmember Dalton seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Nay"; Councilmember Skinner, Absent; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

11. Council Reports

Councilmember Williams reported that upcoming mosquito abatement and irrigation meetings were scheduled and noted that arrangements would be made to spray the rodeo grounds prior to the event. Councilmember Dalton and Councilmember Thomas reported no new updates but noted upcoming site walkthroughs and meetings. Councilmember Butler reported on upcoming Planning and Zoning, Historic Preservation, and Library Board meetings, stating there were no significant updates at this time.

Mayor Hammond announced a ribbon cutting for the Desert Edge subdivision scheduled for April 6th and discussed scheduling a future Council training or retreat, with direction given to staff to coordinate potential dates. She also noted that Arbor Day tree distributions and school events were scheduled, and that a fire department training would be held on April 11th.

Mayor Hammond provided an update regarding a proposed nuclear campus project, stating that the State had submitted an application to the federal government and that a decision was expected later in the year. The Council discussed whether to share informational materials with the public, and staff was directed to post the information.

Additional discussion included encouragement to promote the rodeo through social media and outreach efforts. No further reports were provided.

12. Closed Session – (Imminent Litigation, Real Estate Negotiations, Personnel)

Motion: Councilmember Dalton moved to proceed into a closed session to discuss imminent litigation, real estate negotiations, or personnel.

Second: Councilmember Thomas seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Nay"; Councilmember Skinner, Absent; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

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At 9:08 p.m., the public meeting was closed. Mayor Hammond called for a ten-minute recess.

Present: Mayor Heidi Hammond, Councilmember Rhett Butler, Councilmember Derek Dalton, Councilmember Jake Thomas, Councilmember Jeff Williams, Michael Resare, and Alicia Fairbourne.

Motion: Councilmember Butler moved to adjourn the closed session and proceed into open meeting.

Second: Councilmember Williams seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, Absent; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

13. Adjourn

There being no further business,

Motion: Councilmember Williams moved to adjourn.

Second: Councilmember Thomas seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, Absent; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

The meeting adjourned at 9:55 p.m.

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GRANTSVILLE

CITY COUNCIL

April 14, 2026 City Council and Planning Commission Joint Work Meeting Minutes

MINUTES OF THE COMBINED WORK MEETING OF THE GRANTSVILLE CITY COUNCIL AND GRANTSVILLE CITY PLANNING COMMISSION HELD ON APRIL 14, 2026 AT THE GRANTSVILLE CITY HALL, LOCATED AT 429 EAST MAIN STREET, GRANTSVILLE, UTAH AND ELECTRONICALLY VIA ZOOM. THE MEETING BEGAN AT 7:00 P.M.

Mayor and Council Members Present:
Mayor Hammond
Rhett Butler
Derek Dalton
Brittany Skinner
Jeff Williams *joined at 7:15 pm*

Council Members Excused: Jake Thomas

Planning Commissioners Present:
Chair Sarah Moore
Gary Merrill
Cameron Moulton
Jason Hill
John Montgomery

Planning Commissioners Excused: Christopher Horrocks.

Appointed Officers and Employees Present:
Michael Resare, City Manager
Alicia Fairbourne, City Recorder
Tysen Barker, City Attorney
Christy Montierth, Public Works Director
Bill Cobabe, Comm. Development Director
Aspen Clegg, Finance Director
Shelby Moore, Planning and Zoning
Ben Henderson, Roads Supervisor
Barry Bunderson, City Engineer

Citizens and Guests Present or on Zoom: Robert Rousselle (Ensign Engineering), Micklane Farmer (Jones & DeMille Engineering), Mario Meno, and others who may not have signed in or used their full name via Zoom.

Mayor Hammond called the meeting to order at 7:02 p.m. and led the Pledge of Allegiance.

AGENDA:

1. **Presentation and Discussion: Discussion regarding the Grantsville City Master Transportation Plan, including current conditions, future transportation needs, and potential improvements. *No formal action will be taken.***

   The Council and Planning Commission received a presentation from Micklane Farmer of Jones & DeMille Engineering regarding the Grantsville City Master Transportation Plan. The presentation included an overview of current roadway conditions, projected traffic volumes, and future transportation needs based on anticipated growth. Mr. Farmer explained that traffic modeling indicated most roadways could function with three lanes or less, though several corridors were currently planned as five-lane arterials with wider right-of-way widths.

   Discussion focused on whether to maintain these wider right-of-way corridors or reduce them to better align with projected demand. Staff advised that preserving additional right-of-way would allow for future expansion without requiring property acquisition or eminent domain. However, it

was also noted that requiring more right-of-way than justified could create legal risk and potential obligations to compensate property owners.

Councilmember and Planning Commission discussion included the long-term implications of roadway width decisions, including maintenance costs, setbacks tied to right-of-way, and the importance of planning for future growth. Community Development Director Bill Cobabe recommended maintaining wider corridors where possible to preserve flexibility for future expansion, noting that previous planning decisions had allowed Main Street to accommodate current traffic demands. Other members expressed concern about maintaining unused right-of-way areas and the associated upkeep.

Specific roadway segments were reviewed, including Main Street, Depot Road, and developing areas on the west bench. The group discussed the importance of ensuring adequate north-south connectivity and planning for future development areas that are not yet built out. Mayor Hammond asked clarifying questions regarding existing and future development locations to better understand how the proposed road network would serve those areas.

Significant discussion occurred regarding the proposed alignment of 33rd Parkway and its connection to State Route 112. Mr. Farmer and staff outlined multiple alignment options, including connections through or around the Lakeview Business Park and potential ties to Durfee Street or Nygreen Street. Staff explained that existing development agreements anticipated the roadway along the north side of the business park, while current right-of-way ownership and rail infrastructure created design constraints.

Councilmembers and Planning Commission members discussed the challenges of aligning intersections, particularly at Durfee Street and State Route 112, and the need to meet UDOT requirements for safe intersection design. The consultant indicated that connecting the roadway to Nygreen Street would provide better overall traffic flow and connectivity through the City, while also reducing impacts to existing residential areas. Additional discussion included the presence of rail crossings, long-term plans for grade separation, and the importance of maintaining an effective east-west corridor to alleviate congestion on State Route 138 and Main Street.

Mayor Hammond and other members noted that without an additional east-west connection, traffic congestion would continue to increase on existing routes. Discussion also addressed the balance between engineering recommendations, property constraints, and political considerations associated with roadway alignment decisions.

2. **Presentation and Discussion: Discussion of proposed amendments to the Parks and Transportation Capital Facilities Plans (CFPs), Impact Fee Facilities Plans (IFFPs), and Impact Fee Analyses (IFAs) for Grantsville City.** ***No formal action will be taken.***

Following the transportation discussion, the Council and Planning Commission received a presentation from Robert Rousselle of Ensign Engineering regarding proposed amendments to the Capital Facilities Plans (CFPs), Impact Fee Facilities Plans (IFFPs), and Impact Fee Analyses (IFAs) for water, wastewater, parks, public safety, and other infrastructure systems.

Mr. Rousselle explained that the plans are updated annually and are based on projected growth, level of service standards, and anticipated infrastructure needs over a ten-year planning period. He reviewed updated demographic projections, noting that growth rates had been slightly reduced from prior estimates, and explained how those projections were used to determine required capital

improvements.

The presentation included a review of planned infrastructure projects across multiple service areas, including water system expansions, wastewater treatment and collection improvements, park development projects, and public safety facilities. Mr. Rousselle explained how impact fee eligible costs are calculated and clarified that developer-funded projects are not included in impact fee calculations.

Discussion included changes to impact fee calculations based on updated data. For public safety, Mr. Rousselle explained that fees were recalculated using police call data, which resulted in lower impact fees for single-family residential units and higher fees for multi-family and non-residential uses. For parks, project timelines were adjusted to maintain positive fund balances. For wastewater, impact fees increased slightly due to planned system improvements, including interceptor upgrades and treatment facility capacity needs.

Councilmember and Planning Commission members asked questions regarding how impact fees are set and whether the City should consider higher fees to create additional financial buffers. Mr. Rousselle explained that impact fees must be based on documented need and proportionate to growth, and that setting fees too high could result in legal challenges. Mr. Cobabe added that impact fees are heavily regulated and must be supported by defensible data, noting that excessive fees could be challenged by developers.

Additional discussion addressed how impact fees compare to other municipalities, how they are applied to different types of development, and the role of fee waivers or incentives in economic development. Members also discussed the flexibility of the plans, noting that impact fees and capital improvement plans are updated regularly to reflect changing conditions.

At 8:24 p.m., there was a brief recess.

The meeting reconvened at 8:30 p.m.

The presentation resumed and additional questions were addressed by staff and the consultant.

The meeting concluded following discussion, with no formal action taken.

3. Adjourn

There being no further discussion, Mayor Hammond asked for a motion to adjourn.

Motion: Councilmember Dalton moved to adjourn.

Second: Councilmember Williams seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, "Aye"; Councilmember Thomas, Absent; Councilmember Williams, "Aye". There were none opposed. The motion carried.

The meeting adjourned at 9:40 p.m.

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April 15, 2026 City Council Regular Meeting Minutes

MINUTES OF THE BUSINESS MEETING OF THE GRANTSVILLE CITY COUNCIL, HELD ON APRIL 15TH, 2026 AT THE GRANTSVILLE CITY HALL, LOCATED AT 429 EAST MAIN STREET, GRANTSVILLE, UTAH AND ELECTRONICALLY VIA ZOOM. THE MEETING BEGAN AT 7:00 P.M.

Mayor and Council Members Present:

Mayor Hammond
Rhett Butler
Derek Dalton
Brittany Skinner
Jake Thomas
Jeff Williams

Council Members Excused: none.

Appointed Officers and Employees Present:

Michael Resare, City Manager
Alicia Fairbourne, City Recorder
Tysen Barker, City Attorney
Christy Montierth, Public Works Director
Bill Cobabe, Comm. Development Director
Barry Bundersen, City Engineer
Aspen Clegg, Finance Director
Police Chief Robert Sager
Ben Henderson, Roads Supervisor
Fire Chief Jason Remick
Markus Seat, Deputy Public Works Director

Citizens and Guests Present or on Zoom: Brian White, Les Peterson, Chad Hambree, Ryan Noble, Daniel Meza, Angelyn Kemp, Spencer Reynolds, Don Rivera, and others who may not have signed in or used their full name via Zoom.

Mayor Hammond called the meeting to order at 7:00 p.m. and asked Les Peterson to lead the Pledge of Allegiance.

AGENDA:

1. **Public Comment**

   Mayor Hammond opened the floor for public comment at 7:01 p.m. There were none. The floor was closed.

2. **Summary Action Items:**

   a. **Approval of Minutes from the April 1st, 2026 City Council Regular Meeting**

   The minutes from the April 1, 2026 City Council meeting were not ready to be presented.

   b. **Approval of bills**

   Councilmember Thomas asked for clarification regarding a cemetery expense listed for underlayment. Staff explained that the material was a thick rubber weed barrier that would be installed beneath the fence liner. No additional questions or concerns were raised regarding the bills.

   Motion: Councilmember Thomas moved to approve the invoices.

Second: Councilmember Butler seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, "Aye"; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

3. Consideration of Resolution 2026-24 approving the appointment of Candy Swallom to the Grantsville City Library Board

Councilmember Butler stated that both individuals being considered for appointment to the Library Board had been attending Library Board meetings as citizens in order to learn the process prior to council approval. He noted that they had made an extra effort to support the Library Board. Mayor Hammond thanked Councilmember Butler, who served as the council representative on the Library Board, for the update.

Motion: Councilmember Butler moved to approve Resolution 2026-25 approving the appointment of Candy Swallom to the Grantsville City Library Board.

Second: Councilmember Williams seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, "Aye"; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

4. Consideration of Resolution 2026-25 approving the appointment of Camille Coons to the Grantsville City Library Board

Motion: Councilmember Williams moved to approve Resolution 2026-25 approving the appointment of Camille Coons to the Grantsville City Library Board.

Second: Councilmember Dalton seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, "Aye"; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

5. Consideration of Resolution 2026-26 approving the Memorandum of Understanding with the Inland Port Authority

Stephanie Pack with the Utah Inland Port Authority presented the proposed Memorandum of Understanding regarding sales tax revenue within inland port project areas located in Grantsville City. Ms. Pack explained that the agreement would allow any sales tax collected by the Inland Port Authority within the project areas to be remitted back to Grantsville City. She stated that the project areas were anticipated to be primarily industrial, though future retail development could generate sales tax revenue subject to the agreement.

Councilmember Thomas confirmed that the agreement would apply to all Inland Port project area

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locations within the city boundaries. Mayor Hammond identified the areas as including the Broken Arrow site, the Romney property, and Robert Green's property. Councilmember Butler noted that the council had previously discussed the matter in detail during a February meeting.

Councilmember Dalton asked why the agreement did not specify a percentage for sales tax revenue sharing. Ms. Pack explained that sales tax distributions differed from property tax increment distributions and stated that the Inland Port Authority intended to remit its full sales tax portion back to the city. City Manager Michael Resare clarified that property tax arrangements would vary depending on each individual development and would be addressed separately through future agreements, while the current MOU focused solely on ensuring sales tax pass-throughs for all project areas.

Councilmember Thomas asked about the monthly reporting process and auditing procedures. Ms. Pack explained that sales tax collections occurred monthly and that the city would receive monthly reports and remittances. She stated that the Inland Port Authority was working with the Utah State Tax Commission to potentially automate the process while still complying with statutory auditing requirements.

Councilmember Butler asked whether the MOU could include language acknowledging that future property tax negotiations could occur through interlocal agreements. Ms. Pack stated that the request was appropriate and explained that property tax arrangements in other communities had been addressed through separate interlocal agreements. City Attorney Tysen Barker summarized the proposed language, stating that the MOU could clarify that future property tax negotiations would occur through interlocal agreements if needed. Mayor Hammond stated that including the language would help future councils and staff understand the process. Ms. Pack agreed that such language would be appropriate. Mr. Barker stated that he could draft the additional language and coordinate with staff without requiring the matter to return to the council.

Councilmember Dalton asked about provisions regarding jurisdiction and limitations of liability contained within the agreement. Mr. Barker explained that Salt Lake County jurisdiction was acceptable because matters within the Third District Court system could still be handled there even if filed in Tooele County. He also explained that the limitation of liability provision waived indirect or consequential damages but did not waive the city's ability to recover direct damages.

Councilmember Williams asked for additional information regarding the Inland Port Authority's involvement in residential development projects. Ms. Pack explained that residential components had been included in some rural project areas at the request of local communities in order to support workforce housing needs associated with industrial development. She stated that the Inland Port Authority followed the direction of participating communities and remained sensitive to impacts on taxing entities, including cities, counties, and school districts.

Councilmember Dalton asked what would occur if the agreement were terminated in the future. Ms. Pack explained that sales tax revenues would continue to flow monthly to the city under the agreement, but if the agreement were dissolved, the Inland Port Authority would retain and use the revenue for statutorily authorized infrastructure-related purposes within the project area. She further explained that project areas had a statutory life of 25 years unless dissolved earlier.

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Motion: Councilmember Butler moved to approve Resolution 2026-26 approving the Memorandum of Understanding with the Inland Port Authority with the addition of a clause after #3 with a heading of Property Tax, and having the City Attorney draft the paragraph and approve with staff prior to execution of the contract.

Second: Councilmember Williams seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, "Aye"; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

6. Public Hearing Item: Discussion and consideration of adopting Resolution 2026-22 approving the expenditure of Class C Road Funds for road department equipment

Road Department Supervisor Ben Henderson presented a proposal for the purchase of road maintenance equipment using Class C Road Funds. Mr. Henderson provided an overview of his professional background in asphalt maintenance, preservation, and public works operations. He explained that the proposed equipment purchases were intended to improve the city's ability to maintain roads in-house, extend roadway life, and reduce long-term repair costs. He stated that the city was currently behind on preventative maintenance efforts but could improve roadway conditions through crack sealing, mastic repairs, chip sealing, reclamation work, and related preservation methods.

Mr. Henderson reviewed several proposed equipment purchases, including a crack seal machine, mastic machine, chip seal truck, pneumatic roller, street sweeper, asphalt zipper, water truck, skid steer with grading capabilities, replacement dump truck, pickup trucks, trailer, and sign installation equipment. He discussed estimated return-on-investment calculations for each item and explained that performing work in-house would significantly reduce costs compared to contracting the work out. He also described various road preservation techniques and provided examples of similar projects completed during his prior employment with other municipalities and counties.

Councilmembers asked questions regarding staffing, long-term maintenance planning, road repair methods, succession planning within the department, contractor costs, and equipment storage. Mr. Henderson stated that he intended to train staff for long-term continuity and explained that most projects could be completed with existing staffing levels through proper planning and scheduling. Mr. Resare added that seasonal employees could potentially assist with some road maintenance operations during peak periods.

At 7:54 p.m., Mayor Hammond opened the floor for public comments regarding the proposed expenditure of Class C Road Funds. No public comments were made, and the public hearing was closed.

Finance Director Aspen Clegg explained that the city currently had approximately $4.8 million in restricted Class C Road Funds available as of March 31, 2026. She stated that the funds were distributed by the state based on fuel tax revenues, population, and road mileage, and that state law restricted the use of those funds solely for road-related purposes, including qualifying road maintenance equipment purchases. Ms. Clegg clarified that the funds could not be transferred to unrelated city projects or borrowed for other purposes and noted that the city's annual audit process

required proof that the funds remained restricted or were spent on qualifying road-related expenditures.

Councilmember Skinner asked whether sufficient funds would remain available after the proposed purchases. Ms. Clegg stated that approximately $1.7 million would remain in the account after the proposed expenditures and noted that the city also continued receiving annual Class C allocations. Mayor Hammond and staff emphasized that performing roadway maintenance in-house would allow the city to complete substantially more road work compared to hiring outside contractors.

Councilmember Butler asked whether the city had previously underutilized the Class C Road Funds. Public Works Director Christy Montierth stated that prior staffing and equipment limitations prevented the city from performing the level of maintenance now being proposed and explained that most work had historically been contracted out. Councilmember Thomas emphasized the importance of roadway preservation and preventative maintenance and expressed support for the department's long-term maintenance strategy while encouraging fiscal responsibility regarding equipment purchases.

Councilmember Dalton asked questions regarding equipment costs, warranties, replacement planning, return-on-investment calculations, and whether all equipment needed to be purchased immediately. Mr. Henderson and Ms. Clegg explained that the estimates presented reflected worst-case pricing assumptions and that staff would continue seeking the most cost-effective options, including state contract pricing, used equipment, and demo equipment when appropriate. Mr. Henderson stated that some equipment would require extended manufacturing and delivery timelines and could be phased as needed.

Councilmember Butler requested that staff provide future reports to the council regarding equipment purchases, project progress, and estimated savings achieved through in-house road maintenance work. Mayor Hammond agreed and requested that future updates include information regarding completed projects, roadway mileage improved, and estimated cost savings compared to contractor pricing.

Councilmember Williams expressed concern regarding the quality of some previously constructed roads within the city and asked about roadway inspection standards. Staff explained that the city had improved inspection practices in recent years and noted that some roadway issues were tied to utility infrastructure failures beneath the roads rather than solely roadway construction quality.

Mayor Hammond thanked Mr. Henderson, Ms. Clegg, Mr. Resare, and staff for the presentation and information provided regarding the proposed equipment purchases and roadway maintenance program.

Motion: Councilmember Butler moved to approve Resolution 2026-22 approving the expenditure of Class C Road Funds for road department equipment.

Second: Councilmember Skinner seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Nay"; Councilmember Skinner, "Aye"; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". The motion carried 4-1.

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7. Public Hearing Item: Discussion and consideration of Ordinance 2026-16 approving and adopting an updated Annexation Policy Plan; repealing and replacing the prior Annexation Policy Plans; and providing for an effective date

Bill Cobabe presented the proposed updated Annexation Policy Plan and explained that the item had previously been reviewed by the council but was being brought back to satisfy updated noticing requirements under state law. Mr. Cobabe explained that the annexation policy plan served as a guiding document for future annexation considerations involving unincorporated areas surrounding Grantsville City. He stated that the plan identified areas designated for possible future annexation consideration and clarified that the plan did not obligate the city to annex property or construct infrastructure improvements. He explained that future annexations would require developers or property owners to connect to existing city systems and provide necessary water shares and infrastructure improvements as part of the annexation process.

Mr. Cobabe further stated that the annexation policy plan helped establish the city's future planning boundaries and provided Grantsville City with priority consideration regarding annexation discussions involving adjacent municipalities. He noted that the Planning Commission had recommended approval of the updated annexation policy plan.

At 8:38 p.m., Mayor Hammond opened the public hearing for comments regarding the proposed annexation policy plan. No public comments were received, including from those participating online, and the public hearing was closed.

Councilmember Skinner confirmed that the document being considered was the same version previously reviewed by the council and that the item had only been delayed to complete the required public noticing process. City Attorney Tysen Barker stated that adopting the annexation policy plan was required by state code and explained that the plan benefited the city by preserving future annexation opportunities without creating binding obligations. Mr. Barker clarified that property owners within the identified annexation areas would still be required to complete the normal annexation review process, including Planning Commission and City Council review, and could also be required to enter into annexation agreements with the city prior to approval.

Motion: Councilmember Dalton moved to approve Ordinance 2026-16 approving and adopting an updated Annexation Policy Plan; repealing and replacing the prior Annexation Policy Plans; and providing for an effective date.

Second: Councilmember Thomas seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, "Aye"; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

8. Consideration of Resolution 2026-23 approving the purchase of a sewer Vactor truck and authorizing partial funding and financing

Public Works Director Christy Montierth and Deputy Public Works Director Markus Seat presented a proposal to purchase a sewer vacuum truck with partial funding from the current sewer budget and financing for the remaining balance. Mr. Seat explained that the city currently budgeted

approximately $90,000 annually for contracted sewer cleaning services, which only covered a portion of the city's approximately 90 miles of sewer system. He noted that the city currently owned an older jet rodding unit from the early 1990s that lacked vacuum capabilities, making it less effective because debris could not be removed from the sewer system during cleaning operations.

Mr. Seat explained that the proposed vacuum truck would allow the city to clean sewer lines internally by removing grease, sludge, gravel, and other debris from the system. He stated that the truck would also be capable of cleaning storm drains and performing hydro excavation work for utility projects. Mr. Seat noted that the city currently maintained approximately 1,600 manholes and emphasized the importance of regular sewer cleaning in preventing costly sewer backups and emergency situations.

Councilmember Butler asked whether sewer backups had previously occurred within the city. Mr. Seat acknowledged that backups had occurred and stated that the proposed equipment would improve the city's ability to respond quickly and reduce reliance on outside contractors for emergency services. He noted that emergency contractor callouts could cost between $5,000 and $10,000 per incident and that response times were dependent on contractor availability.

Councilmember Thomas asked about the truck's capabilities, including hydro excavation and storm drain cleaning functions. Mr. Seat explained that the truck would primarily be used for sewer and storm drain maintenance and clarified that cross-contamination concerns limited its use for water system cleaning operations. He also explained that the truck would provide sufficient vacuum power to clean deeper sewer infrastructure, including lift stations.

Councilmember Butler asked whether the department had the expertise necessary to operate the equipment. Mr. Seat confirmed that personnel had experience working with similar equipment and stated that additional training would continue after purchase. Ms. Montierth added that no immediate additional staffing would be required for operation of the truck, though an additional employee would eventually be needed once the new wastewater treatment plant became operational.

Ms. Montierth and Mr. Seat stated that they had researched multiple vacuum truck manufacturers and visited several municipalities, including Riverton, Eagle Mountain, Salt Lake City, Spanish Fork, Harrisville, and Tooele, to evaluate equipment and gather recommendations from operators. Mr. Seat explained that the proposed truck had been selected based on operational needs, durability, and overall performance. Ms. Clegg further noted that the selected manufacturer was available through a state contract purchasing program and that the truck would include a five-year warranty on the vacuum equipment.

Councilmember Skinner clarified the proposed financing structure. Ms. Montierth explained that approximately $100,000 from the existing sewer budget would be used as a down payment, while the remaining balance would be financed over approximately five to seven years. She further explained that the annual sewer cleaning budget currently paid to outside contractors would instead be redirected toward loan payments for the new truck.

Councilmember Butler asked about potential liability and insurance concerns associated with city staff operating the equipment rather than outside contractors. Finance Director Aspen Clegg explained that the city's existing insurance policies, including vehicle and general liability coverage

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through the Utah Local Government Trust, would apply to the equipment and operations. Councilmember Butler commented that proactively removing sewer debris would likely reduce overall liability risks.

Councilmember Dalton asked whether additional suppliers and pricing options had been reviewed. Mr. Seat confirmed that several manufacturers had been evaluated and explained that although one lower-priced option had been identified, it was a smaller-capacity truck that would not meet the city's operational needs as effectively. He further explained that the selected truck provided a larger debris capacity and operational efficiencies that justified the additional cost.

Motion: Councilmember Thomas moved to approve Resolution 2026-23 approving the purchase of a sewer Vactor truck and authorizing partial funding and financing.

Second: Councilmember Butler seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Nay"; Councilmember Skinner, "Aye"; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". The motion carried 4-1.

9. Consideration of Resolution 2026-21 approving the surplus of a decommissioned police department vehicle

Chief Sager presented a request to declare a decommissioned Police Department vehicle as surplus. He explained that the vehicle had been in the city's fleet since 2018 and had just under 100,000 miles. Chief Sager stated that the vehicle had developed mechanical issues that staff determined were not cost effective to repair. He noted that two vehicles had been evaluated for replacement, but one had been reassigned to Code Enforcement for part-time use, while the second vehicle was recommended for surplus.

Councilmember Thomas asked about the police vehicle decommissioning process. Chief Sager explained that the department evaluated patrol vehicles annually during the budget process and monitored wear, mileage, and maintenance needs. He stated that patrol vehicles generally experienced more wear due to emergency response use and were typically replaced within five to six years, while investigative or administrative vehicles could remain in service longer due to lighter use. Chief Sager further explained that once replacement vehicles became operational, usable equipment from the older vehicles was removed and transferred to new vehicles when possible.

Mr. Resare stated that once approved as surplus, the vehicle would be sold through a public auction website. Chief Sager noted that staff anticipated the vehicle would sell for approximately $10,000 to $15,000 depending on market conditions. Councilmember Skinner commented that the proceeds could help offset equipment costs associated with the sewer vacuum truck purchase. Chief Sager stated that the proceeds would return to the general fund unless otherwise allocated.

Motion: Councilmember Thomas moved to approve Resolution 2026-21 approving the surplus of a decommissioned police department vehicle.

Second: Councilmember Skinner seconded the motion.

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Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, "Aye"; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

10. Presentation of a concept plan for the Sun Sage Terrace Subdivision Phases 4 - 6

A concept plan was presented for Sun Sage Terrace Subdivision Phases 4 through 6. Mayor Hammond reminded those present that the item was for presentation and discussion purposes only and that no action would be taken by the council.

The applicant explained that staff had worked with the developer for several months to revise the concept plan in response to roadway and connectivity requirements. The applicant stated that the city required construction of the full width of a 90-foot collector road along the western portion of the property rather than requiring only a half-width road section adjacent to neighboring properties. The applicant explained that the wider roadway and additional connectivity requirements to the north reduced the total number of developable lots.

The applicant requested flexibility regarding several lots that would be slightly smaller than the required half-acre minimum lot size. He stated that the lots in question would still be approximately 20,000 square feet in size and that the overall development density would remain consistent with half-acre zoning standards. The applicant explained that the request was intended to preserve a minimum total of 128 lots after accounting for the roadway and infrastructure requirements.

The applicant also identified approximately 7.8 acres of proposed open space to be maintained by a homeowners association, including drainage areas and a planned walking trail near Apple Mill Road.

Mayor Hammond asked whether the requested lot count represented an increase in density. The applicant stated that the proposal did not increase overall density and was intended only to offset lots lost due to roadway requirements and connectivity improvements.

Community Development Director Bill Cobabe discussed the proposed roadway network and future connectivity with surrounding developments, including the future Nygren Loop arterial roadway and connections to the Mack Canyon subdivision area. Mr. Cobabe explained that existing residential properties along the northern boundary influenced the roadway alignment and stated that requiring the developer to construct the full road width avoided placing roadway impacts onto existing neighboring properties.

Mr. Cobabe stated that the developer had been cooperative throughout the review process and responsive to staff concerns and requested modifications. He explained that staff's primary concern involved the requested reduction in minimum lot sizes and stated that the matter would likely require a master development agreement to formally establish the approved layout and lot configuration while preserving the city's interests and the developer's entitlements.

Councilmember Dalton asked whether additional lot adjustments could reduce the roadway jog near Main Street. The applicant indicated a willingness to explore additional modifications provided the changes did not delay previously approved phases of the subdivision. Mr. Cobabe explained that while some aesthetic improvements could potentially be made to the roadway alignment, the current configuration did not create significant operational concerns.

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Councilmember Butler reminded the council that the developer had previously presented a higher-density proposal for the property and stated that the current concept reflected prior direction from the City Council, Planning Commission, and neighboring residents to pursue larger half-acre style lots with additional open space. Councilmember Skinner noted that the proposed lots being discussed were still approximately 20,000 square feet and only slightly smaller than the standard half-acre requirement.

The applicant stated that he was seeking preliminary feedback from the council before investing additional resources into engineering and final design work. Mr. Resare noted that the developer would be responsible for construction of the full width of Nygren Loop, which significantly impacted the project layout and lot count. The applicant also explained that no lots would front directly onto Main Street or Nygren Loop, which further reduced developable lot opportunities.

Mayor Hammond and councilmembers asked additional questions regarding roadway widths, future build-out of Main Street, access points, and surrounding subdivision connections. The applicant explained that only half of the Main Street roadway width would be constructed by the development, while the full width of Nygren Loop would be required.

Councilmember Thomas expressed interest in additional details regarding the proposed open space and trail system connectivity. The applicant and staff explained that a trail network had previously been incorporated into earlier concept revisions and that the current intent was to route trails through the drainage corridor and open space areas rather than between residential lots. Staff stated that the trail system would ultimately connect through the open space areas and provide future connectivity toward the Mack Canyon subdivision area.

Councilmember Butler noted that the distance between the development and the Mack Canyon subdivision was greater than initially perceived and emphasized that the proposal avoided taking property impacts from existing neighboring residents. Councilmember Dalton stated that although the process had been lengthy and occasionally frustrating, he believed the proposal represented an appropriate compromise that allowed the city to obtain needed roadway improvements while limiting the requested lot size reduction to approximately five percent. Councilmember Butler further noted that the overall density of the project was not increasing despite the requested lot size adjustments.

The applicant stated that if the council was generally supportive of the concept, he would proceed with preparation of a master development agreement and future formal applications for review.

11. Discussion and Council direction of the Townhomes on Willow sidewalks

Community Development Director Bill Cobabe introduced a discussion regarding sidewalk, curb, gutter, and roadway improvements associated with the Townhomes on Willow development. Mr. Cobabe thanked the developer, Shawn Holste, for his patience and willingness to work with staff and neighboring property owners while the city evaluated possible roadway and sidewalk modifications.

City Engineer Barry Bunderson reviewed the existing and proposed conditions along Willow Street between Durfee Street and Main Street. Mr. Bunderson explained that Willow Street was identified as a collector road within the city's transportation planning documents and that the approved

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Townhomes on Willow development included conditions requiring the sidewalk to be constructed along the west right-of-way boundary. He stated that because the sidewalk alignment and roadway improvements were specifically included within the approved development plans and resolution, staff did not believe they could make substantial modifications without additional council direction.

Mr. Bunderson reviewed roadway cross-sections, drainage considerations, curb and gutter options, sidewalk placement, and future transportation planning for the corridor. He explained that staff had analyzed the possibility of using a modified mountable curb rather than the city's standard high-back curb but determined that the modified curb reduced stormwater conveyance capacity and provided only minimal elevation differences for driveway transitions. He further explained that the park strip area was necessary to provide elevation transition between the roadway and sidewalk while maintaining drainage within the public right-of-way.

Mr. Bunderson stated that the current transportation plan anticipated Willow Street eventually functioning as a three-lane collector roadway with one lane in each direction and a center turn lane. He explained that the proposed roadway design fit within the existing 60-foot right-of-way and that the Townhomes on Willow frontage included an additional three feet of width to accommodate the city's current roadway standards. He clarified that the additional width primarily affected the park strip rather than the roadway travel lanes themselves.

Councilmembers discussed concerns regarding roadway width, traffic speeds, pedestrian safety near the elementary school, driveway elevations, drainage impacts, and the potential future widening of Willow Street. Councilmember Dalton expressed concern regarding widening the roadway beyond its current configuration and stated that narrower roads often reduced vehicle speeds and better reflected the existing character of Willow Street. Councilmember Thomas stated that maintaining adequate roadway width for future traffic flow and turning movements remained important, particularly given anticipated growth and additional townhome traffic.

Residents and the developer discussed concerns regarding impacts to existing lawns, sprinklers, driveways, and front yard areas within the existing right-of-way. Residents expressed concern regarding steep driveway transitions and the visual impact of future roadway improvements. Mr. Bunderson explained that the approved plans already included driveway reconstruction and grading adjustments where necessary to provide proper transitions from the roadway to existing properties. He further stated that affected driveway repairs would be completed as part of the development improvements.

The developer stated that he wanted to ensure the project was completed correctly and expressed concern that future roadway widening could negatively impact neighboring residents. He stated that he believed maintaining a narrower roadway configuration would better match the existing character of Willow Street while still allowing installation of sidewalks, curb, gutter, and other safety improvements.

Councilmembers discussed whether additional field review would be helpful prior to making a final decision. Staff offered to stake and mark the existing right-of-way boundaries, future curb locations, roadway centerlines, and other reference points along Willow Street so councilmembers could better visualize the proposed improvements and their impacts on adjacent properties. Mayor Hammond and councilmembers agreed additional on-site review would be beneficial before providing final direction.

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Mr. Bunderson stated that staff would coordinate additional field markings and site review opportunities for councilmembers prior to bringing the matter back for further discussion and direction at a future meeting.

12. Discussion of a utility assistance program

Mayor Hammond introduced discussion regarding a proposed utility assistance program and stated that Councilmember Dalton recommended postponing the item to a future meeting due to the late hour and concerns regarding the council's ability to give the matter proper attention. Councilmembers generally agreed that the discussion would be more productive at a future meeting.

Motion: Councilmember Dalton moved to continue the discussion of a utility assistance program to the May 6, 2026 meeting.

Second: Councilmember Butler seconded the motion.

Vote: The vote was as follows: Councilmember Butler, "Aye"; Councilmember Dalton, "Aye"; Councilmember Skinner, "Aye"; Councilmember Thomas "Aye"; Councilmember Williams, "Aye". There were none opposed. The motion carried.

13. Adjourn

There being no further business, Mayor Hammond asked for a motion to adjourn.

Motion: Councilmember Williams moved to adjourn the meeting. There were none opposed.

The meeting adjourned at 10:30 p.m.

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Agenda Item #3

Introduction of Officer John Pittman and Administration of the Oath of Office

Agenda Item # 4

Consideration of Resolution 2026-27 approving the 2026-2027 dispatch agreement

GRANTSVILLE CITY
RESOLUTION NO. 2026-27

A RESOLUTION APPROVING THE 2026-2027 DISPATCH AGREEMENT

Be it resolved by the City Council of Grantsville City, Utah as follows:

WHEREAS, Grantsville City desires to ensure continued and reliable dispatch services for its emergency operations; and

WHEREAS, Tooele County has proposed a Dispatch Service Agreement to provide such services to Grantsville City for the period beginning July 1, 2026, through June 30, 2027; and

WHEREAS, the City Council has reviewed the proposed Dispatch Service Agreement and finds it to be in the best interests of the City and its residents;

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF GRANTSVILLE CITY, STATE OF UTAH, AS FOLLOWS:

Section 1. Approval of Dispatch Agreement: The Dispatch Service Agreement between Grantsville City and Tooele County, attached hereto as Exhibit A, is hereby approved.

Section 2. Effective Date: This resolution shall take effect immediately upon its passage and approval as provided by law.

Section 3. Severability clause: If any part or provision of this Resolution is held invalid or unenforceable, such invalidity or unenforceability shall not affect any other portion of this Resolution and all provisions, clauses and words of this Resolution shall be severable.

ADOPTED AND PASSED BY THE CITY COUNCIL OF GRANTSVILLE CITY, THIS 6TH DAY OF MAY, 2026.

BY THE ORDER OF THE GRANTSVILLE CITY COUNCIL:

_____
By Mayor Heidi Hammond

ATTEST

_____
Alicia Fairbourne, City Recorder

EXHIBIT "A"

Dispatch Service Agreement

Dispatch Service Agreement
Tooele County – Grantsville City

1. CONTRACTING PARTIES: This agreement made and executed the 1st day of July 2026, by and between TOOELE COUNTY, a body politic and corporate of the State of Utah, (hereinafter referred to as "County"), and Grantsville City, (hereinafter referred to as "City").

2. PURPOSE: This agreement is for the purpose of Tooele County providing radio dispatch services to Grantsville City.

IN CONSIDERATION of the following mutual promises, terms and conditions, the parties agree as follows:

3. DISPATCH FEES: The County agrees to provide to the City the following radio dispatch services during the term of this agreement at an adequate level and in a timely fashion:

a. Receive and prioritize 911 emergency and non-emergency telephone answering and radio dispatch service for the City 24 hours a day 7 days a week. Handle outbound telephone calls for officers when appropriate.

b. Ensure officer safety by adequate security checks of on-duty officers.

c. Gather, record, and report all data collected by the dispatch center and provide recordings of such upon request.

d. Provide fire dispatch services.

e. Maintain operation of the Fire and EMS paging system.

f. Provide Spillman Flex interface system technology analyst support.

g. Conduct monthly area wide communication meetings.

h. Run Utah Criminal Justice Information System database checks.

i. Provide clearing house for NCIC entries including modifications and clears.

j. Oversee county-wide wrecker rotation.

4. CONSIDERATION: In consideration of the County providing the dispatch services specified herein from July 1, 2026, through June 30, 2027, the City agrees to pay the County the sum of $158,783.00. Said fees shall be paid to Tooele County on a quarterly basis and shall be paid without the necessity of being billed by the County. Said payments shall be made within fifteen (15) days following the end of each quarter. If payments are not made when due, they shall accrue interest at the rate of 1.5% per month until paid. The basis and method of computation of said amount is attached hereto as Tooele County Dispatch Fee Allocation in Exhibit "A" which by reference is made a part hereof. The County may at the end of each calendar year, adjust the fee it charges the City for dispatch services under this agreement.

5. BUDGET NOTICE: The County agrees to notify the City by January 31st of the previous year data, as requested. The County agrees to provide the agreement and fee allocation to the City no later than March 31st of each year.

6. CONTRACT TERM: This agreement shall take effect on July 1, 2026, and shall terminate on June 30, 2027, unless terminated sooner according to the terms and conditions of this agreement.

7. INADEQUATE SERVICE: If the City determines that it has received inadequate dispatch services under this agreement, the Police Chief shall report the problem, in writing, to the Sheriff. If the problem has not been resolved to the satisfaction of the City within fifteen (15) days, the original report, together with a supplemental report indicating the current status of the problem shall be forwarded to the Tooele County Council for review.

8. TERMINATION: This agreement may be terminated prior to its duration if a party materially breaches the terms or conditions thereof and provided the non-breaching party gives written notice to the breaching party to remedy said default if the said default is not cured within thirty (30) days after receipt of said notice. This agreement may also be terminated by either party for any reason upon ninety (90) days written notice. Failure to sign and return this agreement by August 31, 2026, shall be considered notice of termination and services will be discontinued.

9. LIABILITY: It is mutually agreed that each party shall be responsible for the negligent acts of their own representatives or employees and shall hold the other party harmless from claims made as a result of work performed by reason of this agreement.

DATED this 1st day of July 2026

GRANTSVILLE CITY

_____
Heidi Hammond
Mayor

_____
Date

ATTEST:

_____

_____
Date

APPROVED AS TO FORM:

_____
Tysen Barker
City Attorney

_____
Date

TOOELE COUNTY

_____
Andy Welch, County Manager
Tooele County Council

_____
Date

ATTEST:

_____
Tracy Shaw
Tooele County Clerk

_____
Date

APPROVED AS TO FORM:

_____
Nathan Harris
Deputy Tooele County Attorney

_____
Date

Agenda Item # 5

Consideration of Resolution 2026-29 approving the advance order of 100th anniversary badges and patches for the Grantsville Fire Department

GRANTSVILLE CITY
RESOLUTION NO. 2026-29

A RESOLUTION APPROVING THE ADVANCE ORDER OF 100TH ANNIVERSARY BADGES AND PATCHES FOR THE GRANTSVILLE FIRE DEPARTMENT

Be it resolved by the City Council of Grantsville City, Utah as follows:

WHEREAS, the Grantsville City Fire Department will be commemorating its 100th anniversary; and

WHEREAS, the Fire Department desires to purchase commemorative 100th Anniversary badges and patches in recognition of this milestone; and

WHEREAS, the City has received an estimate for the purchase of such badges and patches, attached hereto as Exhibit A; and

WHEREAS, the total estimated cost for the badges and patches is $6,700.40; and

WHEREAS, the badges must be ordered in advance, but will not be completed or paid for until Fiscal Year 2027; and

WHEREAS, the Fiscal Year 2027 budget has not yet been adopted, and City Council approval is required at this time to authorize the purchase and allow the order to proceed; and

WHEREAS, the City intends to include funding for this purchase in the Fiscal Year 2027 budget when it is presented for approval.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF GRANTSVILLE CITY, STATE OF UTAH, AS FOLLOWS:

Section 1. Section 1. Approval: The City Council hereby approves the purchase of 100th Anniversary badges and patches for the Grantsville City Fire Department, as more particularly described in Exhibit A.

Section 2. Authorization to Proceed: City staff is authorized to proceed with ordering the badges and patches consistent with the attached estimate.

Section 3. Future Budgeting and Payment: Payment for the purchase shall be made in Fiscal Year 2027, subject to appropriation by the City Council, and shall be included in the Fiscal Year 2027 budget.

Section 4. Effective Date: This resolution shall take effect immediately upon its passage and approval as provided by law.

Section 5. Severability clause: If any part or provision of this Resolution is held invalid or unenforceable, such invalidity or unenforceability shall not affect any other portion of this Resolution and all provisions, clauses and words of this Resolution shall be severable.

ADOPTED AND PASSED BY THE CITY COUNCIL OF GRANTSVILLE CITY, THIS 6TH DAY OF MAY, 2026.

BY THE ORDER OF THE GRANTSVILLE CITY COUNCIL:

_____
By Mayor Heidi Hammond

ATTEST

_____
Alicia Fairbourne, City Recorder

EXHIBIT “A”

Estimate

SymbolArts LLC
6083 S 1550 E
Ogden UT 84405-5006
United States

Estimate #36629

Date: 11/7/2025

Expires: 12/7/2025

Bill To

Grantsville Fire Department
PO Box 673
Grantsville UT 84029-0673
United States

Ship To

Jason Smith
Grantsville Fire Department
429 E Main St
Grantsville UT 84029-9568
United States

TOTAL

$6,700.40

Expires	Exp. Close	Sales Rep	Shipping Method
12/7/2025	12/19/2025	Stander, Kinsley	UPS® Ground

Quantity	Item	Options	Rate	Amount
58	**C-225929** BADGE, 3.25" Grantsville Fire Department 100th Anniversary Badge Utah		$100.00	$5,800.00
58	**C-218899** Tin SymbolArts 40th Anniversary Badge Tin		$0.00	$0.00
1	**/ADDITIONAL** Credit for Mold Fee		($600.00)	($600.00)
200	**C-226162** PATCH, 5" Grantsville Fire Department 100 Years Patch Utah		$5.69	$1,138.00
	Tariff Surcharge		5%	$56.90
Subtotal				$6,394.90
Tax Total (%)				$0.00
Shipping Cost				$305.50

Total **$6,700.40**

Once approved, client accepts responsibility for content and copy. Molds will be made on final approval of artwork and estimate. Any corrections made after the molds or product are made are subject to additional cost and new die service charges. Changes to order may not be made after 24-48 hours.

36629

Agenda Item # 6

Discussion of a utility assistance program

Agenda Item # 7

Public Hearing Item: Consideration of Ordinance 2026-19 approving a General Plan Amendment for the Wellstone Subdivision ***(this item will not be discussed and will be continued to the May 20, 2026 City Council Meeting)***

Agenda Item #8

Public Hearing Item: Consideration of Ordinance 2026-20 approving a rezone from R-1-21 to R-1-12 for the Wellstone subdivision ***(this item will not be discussed and will be continued to the May 20, 2026 City Council Meeting)***

Agenda Item #9

Public Hearing Item: Consideration of Resolution 2026-30 approving a plat amendment to the Moody Acres Subdivision, located at approximately 415 South Worthington Street

GRANTSVILLE CITY
RESOLUTION NO. 2026-30

A RESOLUTION APPROVING A PLAT AMENDMENT TO THE MOODY ACRES SUBDIVISION, LOCATED AT APPROXIMATELY 415 SOUTH WORTHINGTON STREET

Be it resolved by the City Council of Grantsville City, Utah as follows:

WHEREAS, Grantsville City has received an application for a plat amendment to the Moody Acres Subdivision, originally recorded in 2007; and

WHEREAS, the proposed amendment adjusts the configuration of Lot 2 to better align with planned future right-of-way and access associated with Coach Lane, without increasing density; and

WHEREAS, the amendment improves lot layout and has been reviewed by City staff and the Development Review Committee for compliance with applicable standards; and

WHEREAS, the Planning Commission has considered the request and forwarded a recommendation to the City Council; and

WHEREAS, the City Council finds that approval of the plat amendment is in the best interest of the public health, safety, and welfare.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF GRANTSVILLE CITY, STATE OF UTAH, AS FOLLOWS:

Section 1. Approval: The plat amendment to the Moody Acres Subdivision, attached hereto as Exhibit A and incorporated herein by this reference, is hereby approved.

Section 2. Conditions of Approval: This approval is subject to the following conditions:

1. The final plat shall be recorded with Tooele County.
2. All required signatures and approvals shall be obtained prior to recordation.
3. The plat shall comply with all applicable City standards and requirements.

Section 3. Effective Date: This resolution shall take effect immediately upon its passage and approval as provided by law.

Section 4. Severability clause: If any part or provision of this Resolution is held invalid or unenforceable, such invalidity or unenforceability shall not affect any other portion of this Resolution and all provisions, clauses and words of this Resolution shall be severable.

ADOPTED AND PASSED BY THE CITY COUNCIL OF GRANTSVILLE CITY, THIS 6TH DAY OF MAY, 2026.

BY THE ORDER OF THE GRANTSVILLE CITY COUNCIL:

_____
By Mayor Heidi Hammond

ATTEST

_____
Alicia Fairbourne, City Recorder

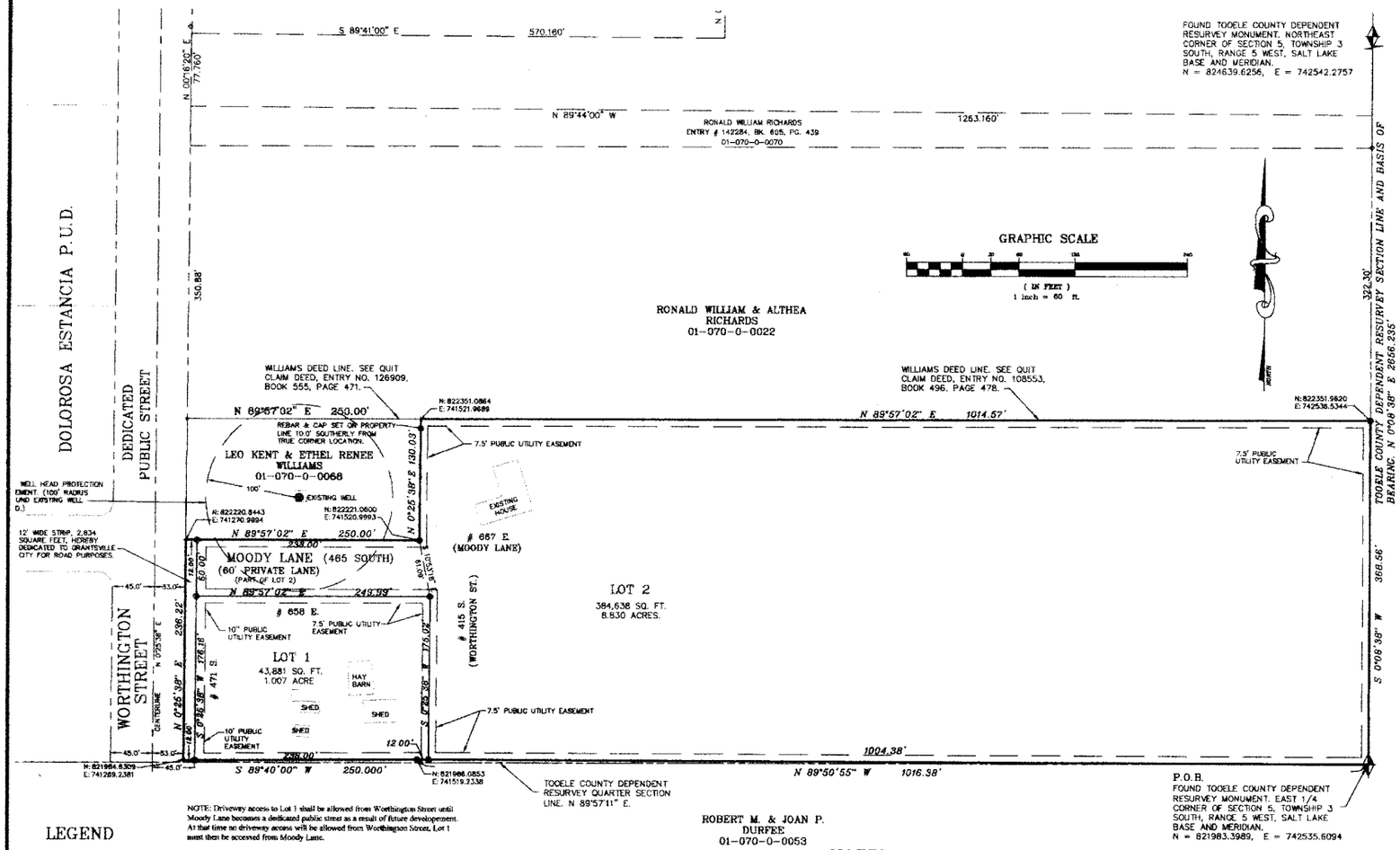
EXHIBIT “A”

Final Plat

MOODY ACRES MINOR SUBDIVISION

A MINOR SUBDIVISION
LOCATED IN THE NORTHEAST QUARTER
OF SECTION 5, TOWNSHIP 3 SOUTH,
RANGE 5 WEST, SALT LAKE BASE AND MERIDIAN
CITY OF GRANTSVILLE, TOOELE COUNTY, UTAH

Pg 3 of 3



NOTE: Driveway access to Lot 1 shall be allowed from Worthington Street until Moody Lane becomes a dedicated public street as a result of future development. At that time no driveway access will be allowed from Worthington Street, Lot 1 must then be accessed from Moody Lane.

LEGEND

- FOUND STANDARD TOOELE COUNTY BRASS WITNESS MONUMENT
- FOUND STANDARD TOOELE COUNTY BRASS SECTION CORNER MONUMENT
- SET 5/8" x 24" REBAR WITH YELLOW CAP MARKED "HATHCOCK – L.S. 166346"

NOTES:

1. A 7.5' Public Utility Easement shall exist around the perimiter of each lot in this minor subdivision with the exception of the front lot lines where the easement shall be 10 feet wide.

2. Final grading of all lots in this subdivision shall be done so as to retain on each individual lot all storm water generated by improvement of the lot. This may be accomplished with earthen berms, shallow retention basins, landscaping or other means approved by Grantsville City.

3. The current owner of these lots has agreed to immediately install or pay for the installation of sidewalk and curb and gutter upon the request of Grantsville City. The agreement to install or pay for the said improvements is a covenant running with the lots and subsequent owners of these lots assume the same obligation when they acquire title to these lots.

4. Coordinate values shown hereon are based upon Tooele County Dependent Resurvey data.

Record of Survey plat is filed with the Tooele County Surveyor as File No. 07-0036-01.

PREPARED BY:
NOLAN C. HATHCOCK
PROFESSIONAL LAND SURVEYOR
LICENSE NO. 166346
9592 STORNOWAY CIRCLE
SOUTH JORDAN, UTAH 84095
PHONE 801-280-1596

GRANTSVILLE CITY COUNCIL
PRESENTED TO THE GRANTSVILLE CITY COUNCIL, THIS 2 DAY OF May 20 07 AT WHICH TIME THIS PLAT WAS APPROVED AND ACCEPTED.
MAYOR — ATTEST: CITY RECORDER

TOOELE COUNTY BOARD OF HEALTH	GRANTSVILLE CITY ENGINEER	GRANTSVILLE CITY PUBLIC WORKS	GRANTSVILLE CITY ATTORNEY	TOOELE COUNTY TREASURER	GRANTSVILLE CITY FIRE DEPARTMENT	TOOELE COUNTY SURVEYOR	PLANNING COMMISSION
APPROVED THIS 10TH DAY OF August 2007 BY THE TOOELE COUNTY BOARD OF HEALTH.	APPROVED THIS 5TH DAY OF June 20 07 BY THE GRANTSVILLE CITY ENGINEER.	APPROVED THIS 1ST DAY OF MAY 20 07 BY THE GRANTSVILLE CITY PUBLIC WORKS DIRECTOR.	APPROVED THIS 2ND DAY OF August 20 07 BY THE GRANTSVILLE CITY ATTORNEY.	APPROVED THIS 17TH DAY OF April 20 07 BY THE COUNTY TREASURER.	APPROVED THIS 17TH DAY OF April 20 07 BY THE GRANTSVILLE CITY FIRE DEPARTMENT.	APPROVED THIS 24 DAY OF April 20 07 BY THE TOOELE COUNTY SURVEYOR. Res Mon. 07-0036-01	APPROVED THIS 3rd DAY OF May 20 07 BY THE GRANTSVILLE CITY PLANNING COMMISSION.
DIRECTOR, BOARD OF HEALTH	CITY ENGINEER OR DESIGNEE	PUBLIC WORKS DIRECTOR OR DESIGNEE	CITY ATTORNEY	TOOELE COUNTY TREASURER	FIRE CHIEF OR DESIGNEE	COUNTY SURVEYOR OR DEPUTY	CHAIR, GRANTSVILLE CITY PLANNING COMM.

RECORDED # 291049
STATE OF UTAH, COUNTY OF TOOELE, RECORDED AND FILED AT THE REQUEST OF Charles Williams
DATE 8/10/07 TIME 3:12 BOOK — PAGE 1-4
FEE $ 22.00 — TOOELE COUNTY RECORDER

SURVEYOR'S CERTIFICATE

I, Nolan C. Hathcock, do hereby certify that I am a Registered Professional Land Surveyor holding License No. 166346 as prescribed by the laws of the State of Utah. I further certify that by authority of the owners, I have made a survey of the tract of land shown on this plat and described below, and have subdivided said tract of land into lots, hereafter to be known as

MOODY ACRES MINOR SUBDIVISION

and that the same has been correctly surveyed and staked on the ground as shown on this plat.

REGISTERED LAND SURVEYOR NO. 166346 NOLAN C. HATHCOCK STATE OF UTAH 4/10/07

BOUNDARY DESCRIPTION

Beginning at the Tooele County Dependent Resurvey monument representing the East Quarter Corner of Section 5, Township 3 South, Range 5 West, Salt Lake Base and Meridian (Basis of bearing for this description is North 0°08'38" East 2656.23 feet along the Tooele County Dependent Resurvey section line defined by found Tooele County Dependent Resurvey monuments representing said East Quarter Corner and the Northeast Corner of said Section 5.); thence along an established fence line the following two (2) courses: (1) North 89°50'55" West 1016.38 feet; (2) South 89°40'00" West 250.00 feet to the easterly line of Worthington Street, said easterly line being 33 feet perpendicularly distant easterly from the centerline of Worthington Street as established by Dolorosa Estancia P.U.D. (Note: The bearings of said P.U.D. have been rotated 0°00'42" clockwise to agree with the bearing base of this description.); thence along said easterly line, North 0°25'38" East 236.22 feet; thence North 89°57'02" East 250.00 feet; thence North 0°25'38" East 130.03 feet; thence North 89°57'02" East 1014.57 feet to intersect the Tooele County Dependent Resurvey section line; thence along said section line, South 0°08'38" West 368.56 feet to the point of beginning. The above described parcel of land contains approximately 431,354 square feet in area or 9.903 acres divided into two (2) lots.

OWNER'S DEDICATION AND CONSENT TO RECORD

Know all men by these presents that the undersigned are the owners of the hereon described tract of land and hereby cause the same to be divided into lots and streets together with easements as set forth, hereafter to be known as:

MOODY ACRES MINOR SUBDIVISION

The undersigned owners hereby dedicate to Grantsville City all those parts or portions of said tract of land on said plat designated hereon as streets, the same to be used as public thoroughfares forever. The undersigned owners also hereby convey to any and all public and private utility companies providing service to the hereon described tract a perpetual, non-exclusive easement over the streets and public utility easements shown on this plat, the same to be used for drainage and installation, maintenance and operation of public utility service lines and facilities.

In witness whereof we have hereunto set our hands this 20 day of April A.D., 2007

ADAM DEAN WILLIAMS — MISTY D. WILLIAMS

Individual

ACKNOWLEDGEMENT

STATE OF UTAH } s.s.
County of ____

On the ____ day of ____ A.D., 200__, personally appeared before me, the undersigned Notary Public, in and for said County of ____ in the State of Utah, ____ the signer(s) of the above Owner's Dedication, ____ in number, who duly acknowledged to me that ____ signed it freely and voluntarily and for the uses and purposes therein mentioned.

MY COMMISSION EXPIRES: ____
NOTARY PUBLIC: ____
RESIDING IN: ____

NOTARY PUBLIC STATE OF UTAH NOTARY PUBLIC NOLAN C. HATHCOCK 9592 Storneway Circle South Jordan, UT 84095 My Commission Expires Jan. 2, 2010 STATE OF UTAH

OWNER OF RECORD
ADAM DEAN & MISTY D. WILLIAMS

FINAL PLAT
APRIL 5, 2007

MOODY ACRES MINOR SUBDIVISION

A MINOR SUBDIVISION
LOCATED IN THE NORTHEAST QUARTER
OF SECTION 5, TOWNSHIP 3 SOUTH,
RANGE 5 WEST, SALT LAKE BASE AND MERIDIAN
CITY OF GRANTSVILLE, TOOELE COUNTY, UTAH

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

Know what's below. Call before you dig.

Grantsville City Development Review
Submittal # 3 04/01/2026

APPROVED
Grantsville City
Planning Department
04/01/2026

APPROVED
Grantsville City
Engineer
04/01/2026

APPROVED
Grantsville City
Public Works
04/02/2026

APPROVED
Grantsville City
Fire Department
04/03/2026

Approved
Grantsville
Irrigation Co.
04/03/2026

WILLIAMS MINOR SUBDIVISION
FINAL PLAT

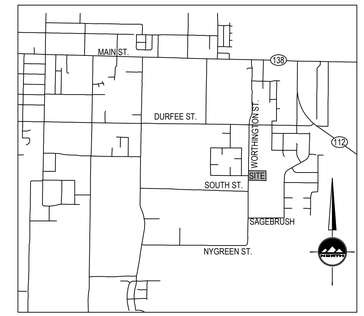
(AMENDING LOT 2 OF THE MOODY ACRES MINOR SUBDIVISION)
LOCATED IN THE NORTHEAST QUARTER
OF SECTION 5
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
GRANTSVILLE CITY, TOOELE COUNTY, UTAH

LEGEND

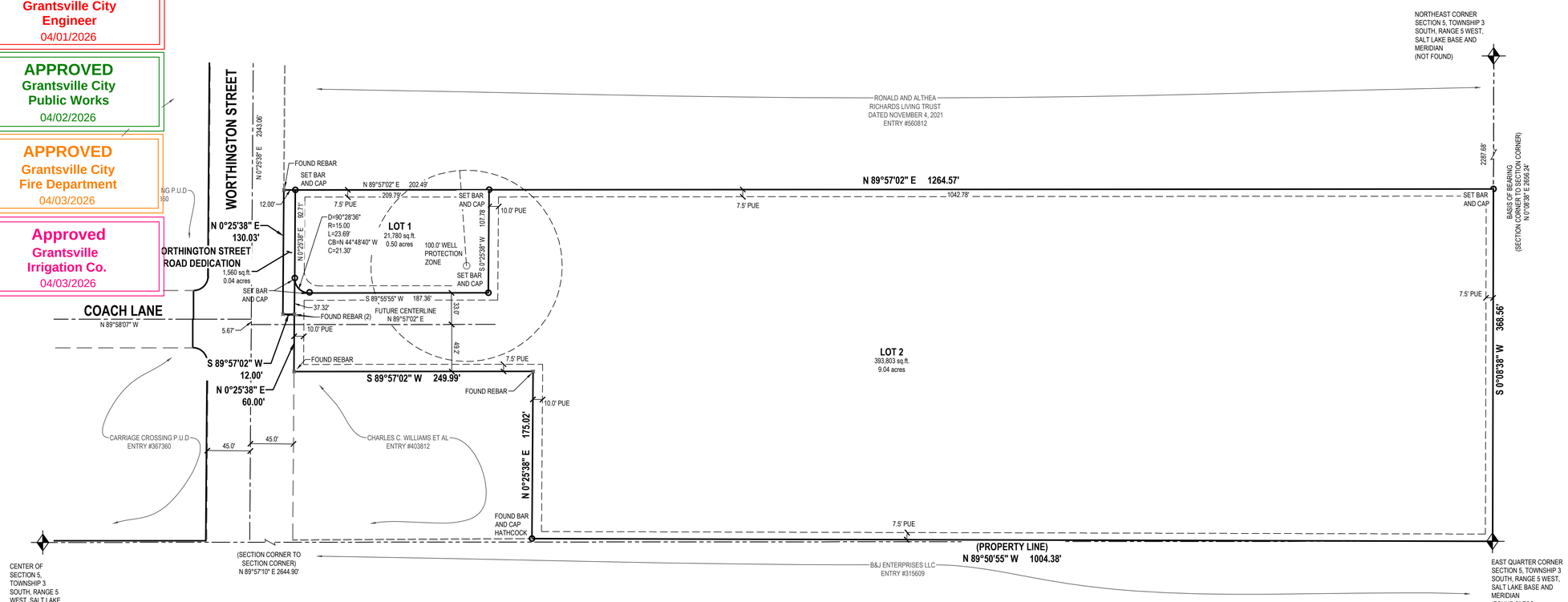
- SECTION CORNER
- MONUMENT
- EXIST REBAR AND CAP
- SET ENSIGN REBAR AND CAP 5/8"X 24" REBAR WITH YELLOW PLASTIC CAP, OR NAIL STAMPED "ENSIGN ENG. OR LAND SURV."
- ENSIGN ENG. LAND SURV.
- ADJACENT RIGHT OF WAY
- RIGHT OF WAY
- CENTERLINE
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- DEED LINE

NOTES

1. A 7.5' PUBLIC UTILITY EASEMENT SHALL EXIST AROUND THE PERIMETER OF EACH LOT IN THIS MINOR SUBDIVISION WITH THE EXCEPTION OF THE FRONT LOT LINES WHERE THE EASEMENT SHALL BE 10 FEET WIDE.
2. FINAL GRADING OF ALL LOTS IN THIS SUBDIVISION SHALL BE DONE SO AS TO RETAIN ON EACH INDIVIDUAL LOT ALL STORM WATER GENERATED BY IMPROVEMENT OF THE LOT. THIS MAY BE ACCOMPLISHED WITH EARTHEN BERMS, SHALLOW RETENTION BASINS, LANDSCAPING OR OTHER MEANS APPROVED BY GRANTSVILLE CITY.
3. THE CURRENT OWNER OF THESE LOTS HAS AGREED TO IMMEDIATELY INSTALL OR PAY FOR THE INSTALLATION OF SIDEWALK AND CURB AND GUTTER UPON THE REQUEST OF GRANTSVILLE CITY. THE AGREEMENT TO INSTALL OR PAY FOR THE SAID IMPROVEMENTS IS A COVENANT RUNNING WITH THE LOTS AND SUBSEQUENT OWNERS OF THESE LOTS ASSUME THE SAME OBLIGATION WHEN THEY ACQUIRE TITLE TO THESE LOTS.
4. COORDINATE VALUES SHOWN HEREON ARE BASED UPON TOOELE COUNTY DEPENDENT RESURVEY DATA



VICINITY MAP
NOT TO SCALE



SURVEYOR'S CERTIFICATE

I, **Douglas J Kinsman** do hereby certify that I am a Professional Land Surveyor, and that I hold license No. **334575** in accordance with Title 58, Chapter 22, of the Professional Engineers and Land Surveyors Act; I further certify that by authority of the owners I have completed a survey of the property described on this subdivision plat in accordance with Section 17-73-504, have verified all measurements, and have subdivided said tract of land into a lot, together with easements, hereafter to be known as **Williams Minor Subdivision**, and that the same has been correctly surveyed and monumented on the ground as shown on this plat. I further certify that the lot meets frontage width and area requirements of the applicable zoning ordinances.

A parcel of land, situate in the Northeast Quarter of Section 5, Township 3 South, Range 5 West, Salt Lake Base and Meridian, said parcel also located in Grantsville City, Tooele County, Utah, more particularly described as follows;

Beginning at the East Quarter Corner of Section 5, Township 3 South, Range 5 West, Salt Lake Base and Meridian, and running;

thence North 89°50'55" West 1004.38 feet to the East line of a parcel whose vesting document is recorded under Entry No. 403812 in the office of the Tooele County Recorder;
thence North 0°25'38" East 175.02 feet along said East line to the North line of said parcel;
thence South 89°57'02" West 249.99 feet along said North line to the East Right-of-Way line of Worthington Street;
thence North 0°25'38" East 60.00 feet along said East line;
thence South 89°57'02" West 12.00 feet;
thence North 0°25'38" East 130.03 feet to the South line of a parcel whose vesting document is recorded under Entry No. 560812 in the office of the Tooele County Recorder;
thence North 89°57'02" East 1264.57 feet along said South line to the Section line of said Section 5;
thence South 0°08'38" West 368.56 feet along said Section line to the Point of Beginning;

Contains 417,143 square feet or 9.58 acres

Date
Douglas J. Kinsman
License no. 334575

OWNER'S DEDICATION AND CONSENT TO RECORD

Known all men by these present that the undersigned are the owner(s) of the hereon described tract of land and hereby cause the same to divided into lots and streets together with easements as set forth hereafter to be known as:

WILLIAMS MINOR SUBDIVISION
FINAL PLAT
(AMENDING LOT 2 OF THE MOODY ACRES MINOR SUBDIVISION)

The undersigned owner(s) hereby dedicate to Grantsville City all those parts or portions of said tract of land on said plat designated hereon as streets, the same to be used as public thoroughfares forever. The undersigned owner(s) also hereby convey to Grantsville City and to all public utility companies providing service to the hereon described tract a perpetual, non-exclusive easement over the public utility, and drainage easements shown on this plat, the same to be used for drainage and the installation, maintenance and operation of public utility service lines and facilities. The undersigned owner(s) also convey any other easements shown on this plat to the parties indicated and for the purposes shown hereon.

In witness whereof I / we have hereunto set my / our hand this_____day of_____A.D., 20_____.

By: Adam Dean Williams By: Misti D. Williams

INDIVIDUAL ACKNOWLEDGMENT

STATE OF UTAH
County of Tooele }S.S.

On the _____ day of _____ A.D., 20 _____, personally appeared before me, the undersigned Notary public, in and for said County of _____ in said State of Utah, who after being duly sworn, acknowledged to me that He/She/They signed the Owner's Dedication,_____ in number, freely and voluntarily for the purposes therein mentioned.

MY COMMISSION EXPIRES:_____,

_____ RESIDING IN_____ COUNTY.
NOTARY PUBLIC

INDIVIDUAL ACKNOWLEDGMENT

STATE OF UTAH
County of Tooele }S.S.

On the _____ day of _____ A.D., 20 _____, personally appeared before me, the undersigned Notary public, in and for said County of _____ in said State of Utah, who after being duly sworn, acknowledged to me that He/She/They signed the Owner's Dedication,_____ in number, freely and voluntarily for the purposes therein mentioned.

MY COMMISSION EXPIRES:_____,

_____ RESIDING IN_____ COUNTY.
NOTARY PUBLIC

ROCKY MOUNTAIN POWER COMPANY

1. PURSUANT TO UTAH CODE ANN. § 54-3-27 THIS PLAT CONVEYS TO THE OWNER(S) OR OPERATORS OF UTILITY FACILITIES A PUBLIC UTILITY EASEMENT ALONG WITH ALL THE RIGHTS AND DUTIES DESCRIBED THEREIN.
2. PURSUANT TO UTAH CODE ANN. § 17-27A-603(4)(C)(ii) ROCKY MOUNTAIN POWER ACCEPTS DELIVERY OF THE PUE AS DESCRIBED IN THIS PLAT AND APPROVES THIS PLAT SOLELY FOR THE PURPOSE OF CONFIRMING THAT THE PLAT CONTAINS PUBLIC UTILITY EASEMENTS AND APPROXIMATES THE LOCATION OF THE PUBLIC UTILITY EASEMENTS, BUT DOES NOT WARRANT THEIR PRECISE LOCATION. ROCKY MOUNTAIN POWER MAY REQUIRE OTHER EASEMENTS IN ORDER TO SERVE THIS DEVELOPMENT. THIS APPROVAL DOES NOT AFFECT ANY RIGHT THAT ROCKY MOUNTAIN POWER HAS UNDER:
   (1) A RECORDED EASEMENT OR RIGHT-OF WAY
   (2) THE LAW APPLICABLE TO PRESCRIPTIVE RIGHTS
   (3) TITLE 54, CHAPTER 8A, DAMAGE TO UNDERGROUND UTILITY FACILITIES OR
   (4) ANY OTHER PROVISION OF LAW.

APPROVED THIS _____ DAY OF _____, 20

ROCKY MOUNTAIN POWER

BY - _____

TITLE - _____

ENBRIDGE GAS

ENBRIDGE GAS UTAH - NOTE:
QUESTAR GAS COMPANY, DBA ENBRIDGE GAS UTAH ("ENBRIDGE"), APPROVES THIS PLAT SOLELY TO APPROXIMATE THE LOCATION OF ENBRIDGE'S RIGHT-OF-WAY/EASEMENT(S) AND EXISTING UNDERGROUND FACILITIES BUT DOES NOT WARRANT OR VERIFY THEIR PRECISE LOCATION. THIS APPROVAL DOES NOT (A) AFFECT ANY RIGHT ENBRIDGE HAS UNDER TITLE 54, CHAPTER 8A, A RECORDED EASEMENT OR RIGHT-OF-WAY, PRESCRIPTIVE RIGHTS, OR ANY PROVISION OF LAW; (B) CONSTITUTE ACCEPTANCE OF ANY TERMS CONTAINED IN ANY PORTION OF THE PLAT; AND (C) GUARANTEE ANY TERMS OR WAIVE ENBRIDGE'S RIGHT TO REQUIRE ADDITIONAL EASEMENTS FOR GAS SERVICE.

APPROVED THIS _____ DAY OF _____, 20

QUESTAR GAS COMPANY DBA ENBRIDGE GAS UTAH

BY -

TITLE -

HORIZONTAL GRAPHIC SCALE

60 0 30 60 120
(IN FEET)
HORZ: 1 inch = 60 ft.

TOOELE COUNTY TREASURER

I HEREBY CERTIFY THAT PROPERTY TAXES DUE AND OWNING HAVE BEEN PAID IN FULL THIS _____ DAY OF _____, 20_____, FOR PARCEL NO.

TOOELE COUNTY TREASURER

GRANTSVILLE CITY MAYOR APPROVAL

APPROVED THIS _____ DAY OF _____, 20_____, BY THE GRANTSVILLE CITY MAYOR.

GRANTSVILLE CITY MAYOR ATTEST: GRANTSVILLE CITY RECORDER

GRANTSVILLE CITY ATTORNEY'S APPROVAL

APPROVED THIS _____ DAY OF _____, 20_____, BY THE GRANTSVILLE CITY ATTORNEY.

GRANTSVILLE CITY ATTORNEY

GRANTSVILLE CITY PLANNER

APPROVED THIS _____ DAY OF _____, 20_____, BY THE GRANTSVILLE CITY PLANNER.

GRANTSVILLE CITY PLANNER

WILLIAMS MINOR SUBDIVISION
FINAL PLAT
(AMENDING LOT 2 OF THE MOODY ACRES MINOR SUBDIVISION)
LOCATED IN THE NORTHEAST QUARTER
OF SECTION 5
TOWNSHIP 3 SOUTH, RANGE 5 WEST
SALT LAKE BASE AND MERIDIAN
GRANTSVILLE CITY, TOOELE COUNTY, UTAH

GRANTSVILLE CITY FIRE DEPARTMENT APPROVAL

APPROVED THIS _____ DAY OF _____, 20_____, BY THE GRANTSVILLE CITY FIRE DEPT.

GRANTSVILLE CITY FIRE CHIEF

GRANTSVILLE CITY PUBLIC WORKS APPROVAL

APPROVED THIS _____ DAY OF _____, 20_____, BY THE GRANTSVILLE CITY PUBLIC WORKS.

GRANTSVILLE CITY PUBLIC WORKS DIRECTOR

GRANTSVILLE PLANNING COMMISSION APPROVAL

APPROVED THIS _____ DAY OF _____, 20_____, BY THE GRANTSVILLE CITY PLANNING COMMISSION.

CHAIR, GRANTSVILLE CITY PLANNING COMMISSION

TOOELE COUNTY SURVEY DEPARTMENT

APPROVED THIS _____ DAY OF _____, 20_____, BY THE TOOELE COUNTY SURVEY DEPARTMENT.

RECORD OF SURVEY FILE #

TOOELE COUNTY SURVEY DEPT. DIRECTOR

GRANTSVILLE CITY ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS OFFICE HAS EXAMINED THIS PLAT AND IT IS CORRECT IN ACCORDANCE WITH INFORMATION ON FILE IN THIS OFFICE.

GRANTSVILLE CITY ENGINEER DATE

SHEET 1 OF 1

PROJECT NUMBER : 14351
MANAGER : D. THACKER
DRAWN BY : D. THACKER
CHECKED BY : D. KINSMAN
DATE : 3/25/2026

ENSIGN
THE STANDARD IN ENGINEERING

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TOOELE COUNTY RECORDER

RECORDED # _____
STATE OF UTAH, COUNTY OF TOOELE, RECORDED AND FILED AT THE
REQUEST OF : _____

DATE: _____ TIME: _____

FEE$ TOOELE COUNTY RECORDER

Agenda Item #10

Public Hearing Item: Consideration of approving amendments to the Capital Facilities Plan, Impact Fee Facilities Plan, and Impact Fee Analysis

GRANTSVILLE CITY
RESOLUTION NO. 2026-31

A RESOLUTION APPROVING AMENDMENTS TO THE CAPITAL FACILITIES PLAN (CFP), IMPACT FEE FACILITIES PLAN (IFFP), AND IMPACT FEE ANALYSIS (IFA)

Be it resolved by the City Council of Grantsville City, Utah as follows:

WHEREAS, Grantsville City periodically updates its Capital Facilities Plan (CFP), Impact Fee Facilities Plan (IFFP), and Impact Fee Analysis (IFA) to reflect current conditions, growth projections, infrastructure needs, and cost assumptions; and

WHEREAS, the proposed amendments update projected growth, identify future infrastructure needs, and revise project lists and cost estimates; and

WHEREAS, the CFP, IFFP, and IFA provide the basis for the City's impact fee program and ensure that new development contributes its proportionate share toward public infrastructure; and

WHEREAS, the proposed amendments have been prepared in accordance with the Utah Impact Fees Act and are intended to maintain legally compliant and proportionate impact fees; and

WHEREAS, the Planning Commission has reviewed the proposed amendments and provided a recommendation to the City Council;

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF GRANTSVILLE CITY, STATE OF UTAH, AS FOLLOWS:

Section 1. Approval: The amendments to the Capital Facilities Plan (CFP), Impact Fee Facilities Plan (IFFP), and Impact Fee Analysis (IFA) are hereby approved, as more particularly described in the documents attached hereto as Exhibit A.

Section 2. Effective Date: This resolution shall take effect immediately upon its passage and approval as provided by law.

Section 3. Severability clause: If any part or provision of this Resolution is held invalid or unenforceable, such invalidity or unenforceability shall not affect any other portion of this Resolution and all provisions, clauses and words of this Resolution shall be severable.

ADOPTED AND PASSED BY THE CITY COUNCIL OF GRANTSVILLE CITY, THIS 6TH DAY OF MAY, 2026.

BY THE ORDER OF THE GRANTSVILLE CITY COUNCIL:

_____
By Mayor Heidi Hammond

ATTEST

_____
Alicia Fairbourne, City Recorder

EXHIBIT “A”

Capital Facilities Plan, Impact Fee Facilities Plan, and Impact Fee Analysis 2026 Amendments

Capital Facilities Plan, Impact Fee Facilities Plan, and Impact Fee Analysis 2026 Amendments

April 2026

Prepared For:
Grantsville City
429 East Main Street
Grantsville, Utah 84029

Prepared By:
Max Nelsen, Dylan Cooper, EIT, and Conor Dunkel, PE

Reviewed By:
Robert Rousselle, PE

GRANTSVILLE
INCORPORATED 1867

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THE STANDARD IN ENGINEERING

Acknowledgments

A special thanks to all who contributed to the development of this plan. Its completion was made possible by the effort, support, and collaboration from each person involved. The participation of the following individuals is greatly appreciated.

Grantsville City Council

Mayor Heidi Hammond
Rhett Butler
Brittany Skinner
Jake Thomas
Jeff Williams
Derek Dalton

Planning Commission

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Andy Jensen (Building Official)
Shelby Moore (Planning and Zoning Administrator)
Alicia Fairbourne (City Recorder)
Jason Remick (Fire Chief / Fire Marshal)
Robert Sager (Chief of Police)
Tae-Eun Ko (GIS Analyst / City Planner)
Barry Bunderson (City Engineer)

H.W. Lochner

Brad Lucas

Certification and Declaration of Impact Fee Analysis

In accordance with Utah Code Annotated, 11-36a-306(1) and (2), I, Robert Joseph Rousselle, on behalf of Ensign Engineering and Land Surveying, LLC, certify that I am a Registered Professional Engineer holding Certificate 7885569-2202 in the State of Utah.

I declare, to the best of my knowledge, information, and belief that the Impact Fee Facilities Plan and Impact Fee Analysis included herein include only the costs of public facilities that are:

- Allowed under the Impact Fees Act;
- Actually incurred; or
- Projected to be incurred or encumbered within six (6) years after the day on which each impact fee is paid;
- Does not include costs for operation and maintenance of public facilities;
- Does not include costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
- Offsets costs with grants or alternate sources of payment;
- Complies in each and every relevant respect with the Impact Fees Act.

I make this certification and declaration with the following conditions:

1. All of the recommendations for implementation of the Capital Facilities Plans (CFP) made in the CFP documents or in the Impact Fee Analysis documents are followed in their entirety by Grantsville City and its elected officials.
2. All information provided to Ensign Engineering and Land Surveying, LLC, its contractors or suppliers is assumed to be correct, complete, and accurate. This includes information provided by Grantsville City and outside sources.

Ensign Engineering and Land Surveying, LLC

Robert Joseph Rousselle
Senior Associate

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Glossary of Technical Terms

80th Percentile Rainfall Event

Storm event in which precipitation is greater than or equal to 80 percent of all storm events averaged over a given period of record.

Average Daily or Day Demand

The average yearly demand volume expressed as a flow rate. Demand is typically used in irrigation or drinking water terminology.

Average Daily or Day Flow

The average yearly flow volume expressed as a flow rate. Term typically used in wastewater terminology.

Average Yearly Demand

Amount of water delivered to consumers by a public water system during a typical year. Demand is typically used in irrigation or drinking water terminology.

Bonds

Fixed-income instrument representing a loan made by an investor to a borrower (typically corporate or governmental). Bonds are used by companies, municipalities, states, and sovereign governments to finance projects and operations.

Build-Out

The maximum number of ERCs or EDUs allowed by the planning jurisdiction in its service area.

Buy-in Costs

Depreciated costs for municipal or service district assets which have excess capacity and can be contributed to existing or future development.

Capital Facilities Plan

A plan to assist a jurisdiction to use its funding wisely and efficiently to maximize funding opportunities. A capital facilities plan will assist in determining needs, prioritizing projects, coordinating related projects, and applying for load, bonds, and grant opportunities.

Collection System

Wastewater system consisting of manholes, gravity pipes, force mains, interceptors, trunk lines, lift stations, and appurtenances.

Collector Line

Sanitary sewer line which receives wastewater flow from lateral sewer lines and conveys flow to a trunk line or an interceptor line.

Cost Estimate

Typically, an Engineer's Estimate of Probably Costs for a project improvement based on recently bid projects and current construction climate. A cost estimate may include design fees, permitting, administrative costs, and contingency.

Curve Number

Empirical parameter used in hydrology for predicting storm water runoff potential for a given drainage area based on land use, soil group, and soil moisture derived by the National Resources Conservation Service (NRCS). Term typically used in storm water terminology.

Debt Service

Money required to cover the payment of interest and principal on a loan or other debt for a particular time period.

Demand

The drinking water flow rate or volume consumed by water system users.

Demographics

Characteristics of human population and population segments.

Detention

Term typically used in storm water terminology to define a storm water storage site which stores and releases storm water at a controlled discharge rate.

Disinfection

A process which inactivates pathogenic organisms in water by chemical oxidants or equivalent agents.

Distribution System

Drinking water system's network of pipes, valves, fitting, and appurtenances.

Drinking Water

Water suitable to be ingested by humans. Sometimes referred to as Culinary or Potable Water.

Dwelling Unit(s)

Dwelling Unit (DU) is a structure or the part of a structure used as a home, residence, or sleeping place by one person who maintains a household or by two or more persons who maintain a common household.

Equivalent Residential Connection(s), Dwelling Unit(s) or Residential Unit(s)

An ERC, EDU, or ERU is a unit of measurement used to compare water demand from non-residential connections to residential connections. Water use criteria from source (wells and springs) and metered data are established based on average demand or consumption by residential connections. This is compared with non-residential uses.

Excess Capacity

Excess capacity used for engineering purposes is when the demand is less than capacity. An example of excess capacity is when the water demand (consumption) of drinking water system users is less than the drinking water system supply.

Fixture Unit

A unit of measure expressing the hydraulic loading imposed by any sanitary fixture on the system of pipe work to which it discharges. Fixture units are typically defined in the International Plumbing Code (IPC).

Fire Flow

Available flowrate of water supply for firefighting with a residual pressure of 20 psi. Typically measured as a rate of flow (gpm) for a specific period of time or duration (hours).

Flood Hazard Zone

Flood Hazard Zone is an area identified on a Flood Insurance Rate Map (FIRM) which specifies a Base Flood Elevation (BFE) or flood depth.

Head

Also referred to as Pressure Head is a measurement of water pressure in a hydraulic setting expressed as feet of water. One (1) lbs per square inch (psi) of head equals 2.31 feet.

Head Loss

Measurement of energy dissipated in a fluid system due to friction along the length of a pipe or hydraulic system, and those due to fittings, valves and other system structures.

HEC

Computer software for hydrologic engineering and planning analysis.

HEC-RAS

Computer program which models the hydraulics of water flow through natural rivers and channels.

Hydrology

Scientific study of the properties, distribution, and effects of water on the earth's surface, in the soil and underlying rocks, and in the atmosphere.

Hydrologic Soil Group

Natural Resource Conservative Service (NRCS) classification system in which soils are categorized into four (4) runoff potential groups. This groups consist of soil groups A, B, C, or D.

Indoor Use

Hydraulic loading imposed by any sanitary fixture on the system of pipe work to which it discharges inside a building.

Infiltration

Process by which water enters the soil and recharges streams, lakes, rivers, and underground aquifers. Term typically used in storm water terminology.

Infiltration Rate

Flow rate by which water enters the soil and recharges streams, lakes, rivers, and underground aquifers. Typically, specified in inches per hour. Term typically used in storm water terminology.

Inflation

Rate at which prices for goods and services increases.

Interceptor Lines

Major sanitary sewer line that receives flow from trunk sanitary sewer lines.

Interest

Amount paid to borrow money or the cost charged to lend money. Interest is most often reflected as an annual percentage of the amount of a loan.

Impact Fee

Payment of money imposed upon new development activity as a condition of development approval to mitigate the impact of the new development on public infrastructure.

Impact Fee Analysis

The written analysis of each impact fee required by Utah Code Section 11-36a-303.

Impact Fee Facilities Plan

Plan required by Utah Code Section 11-36a-301.

Impervious

Term typically used in storm water terminology to define an area which is impervious such as asphalt pavement or a concrete sidewalk.

Level of Service

Defined performance standard or unit of demand for each capital component of a public facility within a service area.

LID

Low Impact Development is a storm water management strategy which seeks to mitigate the impacts of increased runoff and storm water pollution by managing runoff as close to its source as possible.

Manning's n

Unitless coefficient which represents the roughness or friction applied to the flow of a conduit or a channel.

Master Plan

Dynamic long-term planning document providing a conceptual layout to guide future growth and development.

Major Head Losses

Major head losses or friction losses is the loss of pressure or "head" in pipe flow due to the effect of the fluid's viscosity near the surface of the pipe or duct.

Minor Head Losses

Minor head losses are local pressure losses or pressure drops of various hydraulic elements such as bends, fittings, valves, elbows, tees or heated channels.

Multi-Unit

Any attached housing units not limited to: town homes, condos, apartments, duplexes, etc..

NOAA ATLAS 14 Precipitation Data

Point precipitation frequency estimates for a specific area in the United States available on NOAA's website.

Non-Residential

A non-residential use such as a warehouse, commercial building, or business.

Occurrence

Term used in storm water terminology to estimate the frequency of a storm water event.

Outdoor Use

Hydraulic loading imposed on the system typically by an irrigation system.

Par

A par rate is the special loan (grant) interest rate that a lender charges for access to a specific loan.

Peak Day Demand

Amount of water utilized by a water supplier on the day of highest consumption, generally expressed in gallons per day (gpd) or millions of gallons per day (MGD). Demand is typically used in irrigation or drinking water terminology.

Peak Day Flow

Amount of wastewater utilized by a wastewater supplier on the day of highest consumption, generally expressed in gallons per day (gpd) or millions of gallons per day (MGD).

Peak Discharge

Maximum rate of flow during a storm event. Term typically used in storm water terminology.

Peaking Factors

Ratio of a peak day or instantaneous flow/demand to the average day or daily flow/demand.

Peak Inflow

Highest inflow of wastewater into a wastewater treatment facility.

Peak Instantaneous Demand

Calculated or estimated highest demand which can be expected through any water main of the distribution network of a water system at any instant in time, generally expressed in gpm or cfs.

Peak Instantaneous Flow

Calculated or estimated highest flowrate which can be expected through any wastewater collection system at any instant in time, generally expressed in gpm or cfs.

Peak Rainfall Depth

The point at which the amount of rain received is at its highest depth.

Percolation Rate

Flow rate by which water enters the soil and recharges streams, lakes, rivers, and underground aquifers. Typically, specified in minutes per inch. Term typically used in storm water terminology.

Pervious

Term typically used in storm water terminology to define an area which is pervious or allows storm water to infiltrate into the soil such as a parking strip or lawn.

Planning Period

The period of time, typically in years, used in a plan. A planning period of 10-years is typically used in Impact Fee Facilities Plans. Master or General Plans may use planning periods from 20 to 50 years.

Pressure Reducing Valve

Valve provided to reduce pressure in a water distribution system. Typically, used to reduce pressure greater than 100 psi to 50 – 65 psi depending on specific distribution system requirements.

Pressure Zone

A pressure zone in a distribution system is established with a minimum and maximum pressure range which is maintained without the use of ancillary control equipment (e.g. booster pumps, pressure reducing valves, etc.). Maximum static pressures in a typical drinking water pressure zone are 100 to 120 psi with minimum static pressures from 50 to 65 psi.

Professional Expenses

Expenses of a professional consultant. An example is engineering design and construction administrative fees from an engineering company.

Proportionate Share

Cost of public facility improvements which are roughly proportionate and reasonably related to the service demands and needs of any development activity.

Retention

Term typically used in storm water terminology to define a storm water storage site which retains storm water without releasing at a controlled discharge rate and instead infiltrates stored storm water into the ground.

Runoff

Precipitation which does not soak or absorb into the soil surface.

Runoff Coefficients

Percentage of precipitation leaving a particular site as runoff.

Safety Factor

Engineering term utilized to describe how much stronger a system or structure is than it is required to be to fulfil its purpose under expected conditions.

SCS Method

Soil Conservation Service (SCS) Method is a hydrologic modeling method for computing the volume of surface runoff for a given rainfall event from small agricultural, forest, and urban watersheds.

Service Area

Geographic area designated by an entity which a facility, or a defined set of facilities, provides service within the area.

Single Family

Residence used by a single private family which serves no other purpose.

Source

Term used in irrigation or drinking water terminology to specify where the supply of water originates. Examples include groundwater wells or springs.

Static Pressure

The pressure exerted by a liquid or gas, especially water or air, on a body at rest.

Storm and Sanitary Analysis

Comprehensive hydrology and hydraulic analysis application which assists in planning and design of storm water and sanitary sewer systems.

Storm Event

Amount of precipitation which occurs during a specific duration and recurrence interval for the location of the storm event. An example is a 100-year storm event during a 24-hour duration.

Surplus Capacity

The amount of surplus or excess capacity a system has available to future development.

SWMM Method

Storm Water Management Model (SWMM) Method is used throughout the world for planning, analysis and design related to storm water runoff, combined and sanitary sewers, and other drainages. SWMM is a Windows-based, open source, desktop program.

Time of Concentration

Time required for water to flow from the most remote point in a watershed to the point of interest within the watershed. It is a function of topography, geology and land use within the watershed and is computed by summing all the travel times for consecutive components of the drainage conveyance system.

Total Dynamic Head

Total Dynamic Head is the total equivalent height that water needs to be pumped or lifted vertically while also factoring in the friction losses of the pipe and minor head losses in valves and fittings.

TR-55

Technical Release 55 (TR-55) presents simplified procedures to calculate storm runoff volume, peak rate of discharge, hydrographs, and storage volumes required for storm water detention or retention.

Transmission Pipeline

For drinking water or irrigation, a transmission pipeline is typically defined as the pipe from a storage reservoir to the distribution system. A transmission pipeline typically does not have any user water connections.

Trunk Line

Sewer line which receives wastewater flow from the collector sanitary sewer lines and conveys this wastewater either to an interceptor line or a wastewater treatment or reclamation facility.

Waterline

A line formed by the surface of the water on a structure.

Water Line

Pipe or conduit which contains and conveys water.

Water Right

The right to use water diverted at a specific location on a water source, and putting it to recognized beneficial uses at set locations.

Water Wise, Waterwise, or Water-Wise

Generally a functional, attractive, and easily maintained landscape in its natural surroundings. A water wise landscape helps conserve water. Note: Local jurisdiction may have specific definition of water wise landscaping.

Abbreviations and Units

ac	acre [area unit of measurement]
ac-ft	acre-foot (1 acre-foot = 325,851 gallons) [volume unit of measurement]
AWWA	American Water Works Association
BFE	Base Flood Elevation
C	Runoff Coefficient
CN	Curve Number(s)
CFP	Capital Facilities Plan
cfs	cubic feet per second [flow rate unit of measurement]
cfs/acre	cubic feet per acre [flow rate per area unit of measurement]
CMP	Corrugated Metal Pipe
d/D	depth to diameter ratio
DIP	Ductile Iron Pipe
DEQ	Department of Environmental Quality
DU	Dwelling Unit(s)
EDU	Equivalent Dwelling Unit(s)
Ensign	Ensign Engineering and Land Surveying
EPA	U.S. Environmental Protection Agency
ERC	Equivalent Residential Connection(s)
ERU	Equivalent Residential Units(s)
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map(s)
ft	foot [length unit of measurement]
ft/s or fps	feet per second [velocity unit of measurement]
FU	Fixture Unit
gal	gallons [volume unit of measurement]
gpd	gallons per day [flow rate unit of measurement]
gpm	gallons per minute [flow rate unit of measurement]
HDPE	High-density Polyethylene [material used for various building materials]
HEC	Hydrologic Engineering Center
HEC-RAS	Hydrologic Engineering Center – River Analysis System
hr	hour [time unit of measurement]
ID	Inside Diameter

IFFP	Impact Fee Facilities Plan
IPC	International Plumbing Code
i	Average Rainfall Intensity (inches per hour)
I&I	Inflow and Infiltration
in.	inch [length unit of measurement]
L	Length (ft)
LID	Low Impact Development
LOS	Level of Service
MG	million gallons [volume unit of measurement]
MGD	millions of gallons per day [flow rate unit of measurement]
mi	mile [length unit of measurement]
min	minute [time unit of measurement]
MP	Master Plan
NOAA	National Oceanic Atmospheric Administration
NOI	Notice of Intent
NOT	Notice of Termination
NRCS	Natural Resources Conservation Service
PF	Peaking Factor
PRV	Pressure Reducing Valve
psi	pounds per square inch [pressure unit of measurement]
PVC	Polyvinyl Chloride [type of plastic pipe]
Q	Flow Rate or Peak Rate of Runoff (cubic feet second)
RCP	Reinforced Concrete Pipe
s	second [time unit of measurement]
SCADA	Supervisory Control And Data Acquisition
SCS	Soil Conservation Service
SF	Safety Factor
SR	State Route
SSA	Storm and Sanitary Analysis
SWMP	Storm Water management Program
SWPPP	Storm Water Pollution Prevention Plan
Tc	Time of Concentration
UAC	Utah Administrative Code
V	Velocity (fs/s or fps)

WSFU	Water Supply Fixture Unit
WW	Wastewater
WWTF	Wastewater Treatment Facility
WWRF	Wastewater Reclamation Facility
yr	year [time unit of measurement]

Executive Summary

The City of Grantsville is amending its Capital Facilities Plan (CFP), Impact Fee Facilities Plan (IFFP), and Impact Fee Analysis (IFA) in order to ensure the current level of service (LOS) provided to citizens meets demands and can be maintained as the City continues to grow. The CFP, IFFP, and IFA contained in this plan update projects identified in the previous Capital Facility Plans, propose new projects, and update impact fees associated with planned development.

First, a demographic analysis of Grantsville City's current population, land-use, development patterns, and development potential was completed. The results of the analysis have been used as a basis for projection of future growth over a 10-year planning period and its distribution throughout the planning area. These future growth projections were used as one of the factors to estimate future utility demands and infrastructure requirements for the community. The existing conditions resulting from this analysis are shown in Table ES 1 and the future growth projections are shown in Table ES 2.

Table ES 1: Existing Demographic Conditions

Service Connection Type	Service Connections	Units	ERC / Unit	ERCs
Single Family	4,609	4,618	1.00	4,618
Multi-Unit	46	290	0.52	151
Trailer	8	208	1.12	233
Commercial	110	155	7.34	1,138
Church	10	11	4.57	50
School	7	12	5.09	61
Construction Water	20	20	6.81	136
City Rate	5	33	10.59	349
Total	**4,815**	**5,347**		**6,736**

Table ES 2: Future Growth Projections

Year:		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035	
Projected Population:		**16,056**		**16,592**		**17,148**		**17,803**		**18,486**		**19,193**		**19,934**		**20,705**		**21,501**		**22,332**		**23,192**	
Residential Growth Rate:		**2.93%**		**3.5%**		**3.5%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**	
Commercial Growth Rate:		**0.73%**		**0.88%**		**0.88%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**	
Service Connection Type	**ERC / Unit**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**
Single Family	1.00	4,618	4,618	4,780	4,780	4,947	4,947	5,145	5,145	5,351	5,351	5,565	5,565	5,788	5,788	6,020	6,020	6,261	6,261	6,511	6,511	6,771	6,771
Multi-Unit	0.52	290	151	300	156	311	162	323	168	336	175	349	181	363	189	378	197	393	204	409	213	425	221
Trailer [1]	1.12	208	233	208	233	208	233	208	233	208	233	208	233	208	233	208	233	208	233	208	233	208	233
Commercial	7.34	155	1,138	156	1,145	157	1,152	159	1,167	161	1,182	163	1,196	165	1,211	167	1,226	169	1,240	171	1,255	173	1,270
Church [2]	4.57	11	50	11	50	11	50	12	55	12	55	13	59	13	59	14	64	14	64	15	69	15	69
School [3]	5.09	12	61	12	61	12	61	13	66	13	66	14	71	14	71	15	76	16	81	16	81	17	87
Construction Water	6.81	20	136	21	143	22	150	23	157	24	163	25	170	26	177	27	184	28	191	29	197	30	204
City Rate [4]	10.59	33	349	35	371	36	381	37	392	37	392	39	413	39	413	40	424	41	434	42	445	42	445
Total		**5,347**	**6,736**	**5,523**	**6,939**	**5,704**	**7,136**	**5,920**	**7,383**	**6,142**	**7,617**	**6,376**	**7,888**	**6,616**	**8,141**	**6,869**	**8,424**	**7,130**	**8,708**	**7,401**	**9,004**	**7,681**	**9,300**
Increase from 2025		*-*	*-*	*176*	*203*	*357*	*400*	*573*	*647*	*795*	*881*	*1,029*	*1,152*	*1,269*	*1,405*	*1,522*	*1,688*	*1,783*	*1,972*	*2,054*	*2,268*	*2,334*	*2,564*

[1] Trailer units are not expected to increase.
[2] Church growth rate is 1 church per 1,450 population.
[3] School growth rate is 1 school per 1,330 population.
[4] City Rate growth rate is based on anticipated City projects.

Next, an analysis of the existing facilities for each utility (drinking water, public safety, parks, wastewater, water rights acquisition, storm drainage, and transportation) was completed. A level of service was proposed for each utility which was used to determine the capacity of existing facilities and future projects required to meet the demands of future development. A cost estimate was completed for each proposed project, and proportionate shares were determined based on the proportion of future development expected to be served by the facility within the planning period. The amount of each project which is eligible for impact fees was calculated by multiplying the proportionate share by the estimated project cost (inflated to the proposed construction year). The proposed system improvements for each utility along with the results of these calculations are shown in Table ES 3 through Table ES 6.

Table ES 3: Drinking Water System Improvements

Project	Construction Year	Current Year (2025) Cost Estimate	Construction Year Cost Estimate	Proportionate Share	Impact Fee Eligible Cost
Bates Well	2027	$3,041,918.77	$3,258,579.43	0% [2]	$0.00
West Bank Well	2027	$3,518,067.73	$3,768,642.10	0% [2]	$0.00
Southwest Well	2031	$2,979,952.08	$3,663,121.97	0%	$0.00
Northstar Tank No. 1	2026	$3,387,223.88	$3,505,776.72	0.00%	$0.00
West Bank Tank	2027	$4,898,123.85	$5,246,992.72	0% [2]	$0.00
Southwest Tank	2031	$3,825,690.00	$4,702,749.81	0% [2]	$0.00
Osborne Way Water Line Loop	2026	$76,356.25	$79,028.72	27.6%	$21,788.13
SR-138 Water Line Extension (Developer Portion)	2026	$6,272,971.05	$6,492,525.04	0% [2]	$0.00
Northstar Tank No. 1 Transmission Line	2026	$2,504,135.45	$2,591,780.19	0% [2]	$0.00
SR-138 Water Line Extension	2027	$566,221.70	$606,550.84	27.6%	$167,225.41
Generator	2027	$269,200.00	$288,373.77	27.6%	$79,504.34
SR-112 Water Line Extension	2027	$540,168.75	$578,642.27	0% [2]	$0.00
Southeast Water Line Project	2028	$1,507,959.92	$1,671,902.12	0% [2]	$0.00
Clark Street Water Line Project	2029	$480,299.94	$551,155.23	27.6%	$151,952.90
Burmester and Vegas Street Water Pipeline Project	2031	$973,445.29	$1,196,612.81	27.6%	$329,904.86
Centennial Way Water Line Project	2035	$357,093.75	$503,716.00	27.6%	$138,873.96
Public Works Improvements	2035	$1,318,982.50 [1]	$1,860,555.08	27.6%	$512,953.03
Hale Street Water Line Replacement	2029	$878,172.10	$1,007,722.68	27.6%	$277,828.06
Total		**$37,395,983.01**	**$41,574,427.50**		**$1,680,030.71**

[1] *The cost shown for the Public Works Improvements project is half of the total cost estimate because this project cost will be split evenly between the wastewater and drinking water utilities.*

[2] *The proportionate share is 0% because the project is expected be constructed by developers.*

Table ES 4: Public Safety System Improvements

Project	Construction Year	Current Year (2025) Cost Estimate	Construction Year Cost Estimate	Proportionate Share	Impact Fee Eligible Cost
Animal Control Shelter	2033	$1,567,581.40	$2,064,205.35	14.3%	$295,585.40
Justice Center Police Expansion	2034	$1,246,608.00	$1,698,998.74	34.0%	$578,158.28
Total		**$2,814,189.40**	**$3,763,204.10**		**$873,743.68**

Table ES 5: Parks System Improvements

Project	Construction Year	Current Year (2025) Cost Estimate	Construction Year Cost Estimate	Proportionate Share	Impact Fee Eligible Cost
West Street Park	2026	$297,903.23	$308,329.84	19.7%	$60,752.89
Scenic Slopes Park, Utilities, Pump Track, Site Improvements	2026	$3,170,969.33	$2,420,969.33[2]	100.0%	$2,420,969.33
Desert Edge Park	2027	$2,664,070.11	$2,853,818.50	0% [1]	$0.00
Scenic Slopes Parking, Park Amenities, Ball Courts	2028	$2,447,372.82	$2,713,445.99	100.0%	$2,713,445.99
President's Park	2034	$1,695,904.66	$2,311,343.97	100.0%	$2,311,343.97
Scenic Slopes Park Baseball and Soccer Field	2032	$3,198,537.29	$4,069,432.67	100.0%	$4,069,432.67
Twenty Wells Park	2032	$8,628,500.00	$10,977,861.62	0% [1]	$0.00
Highlands Park	2033	$3,392,678.66	$4,467,509.92	0% [1]	$0.00
Clark Farm Park	2034	$3,405,170.23	$4,640,897.49	0%	$0.00
Total		**$28,901,106.33**	**$34,763,609.34**		**$11,575,944.86**

[1] *The proportionate share is 0% because the project is expected be constructed by developers.*

[2] *Construction Year Cost based on Resolution No. 2025-71 not inflated, without grant of $750k which is not impact fee eligible.*

Table ES 6: Wastewater System Improvements

Project	Construction Year	Current Year (2025) Cost Estimate	Construction Year Cost Estimate	Proportionate Share	Impact Fee Eligible Cost
SR112 Interceptor	2027	$2,988,835.56	$3,201,715.37	0% [2]	$0.00
West Bank Interceptor Segment 1	2027	$376,287.40	$403,088.47	8.8% [4]	$35,294.63
West Bank Interceptor Segment 2	2027	$39,832.00	$42,669.03	13.5% [4]	$5,756.82
West Bank Interceptor Segment 3	2027	$3,927,403.66	$4,207,132.99	0% [2]	$0.00
Southeast Sewer Line	2027	$1,564,982.00	$1,676,447.84	0% [2]	$0.00
Vegas Street Collector	2035	$5,790,294.14	$8,167,781.74	0.0%	$0.00
Northwest Lift Station - Upsize Force Main	2028	$194,363.06	$215,493.80	100%	$215,493.80
Proposed Wastewater Treatment Facility	2026	$48,402,175.15 [3]	$48,402,175.15	12.8%	$6,205,158.85
Public Works Improvements	2035	$1,318,982.50 [1]	$1,860,555.08	27.6%	$512,953.03
Total		**$64,603,155.47**	**$68,177,059.48**		**$6,974,657.14**

[1] The cost shown for the Public Works Improvements project is half of the total cost estimate because this project cost will be split evenly between the wastewater and drinking water utilities.

[2] The proportionate share is 0% because the project is expected be constructed by developers.

[3] Proposed WWTF is 2026 cost estimate.

[4] The proportionate share within the planning period for Segment 1 is calculated by dividing planning period ERCs (1,544 ERCs) by upsize capacity [36-inch capacity (26,682 ERCs) - Deseret minimum diameter (9,050 ERCs)]=17,632 ERCs.

The proportionate share within the planning period for Segment 2 is calculated by dividing planning period ERCs (1,544 ERCs) by upsize capacity [36-inch capacity (15,008 ERCs) - Deseret minimum diameter (3,565 ERCs)]=11,443 ERCs. The costs shown for West Bank Interceptor Segment 1 and 2 in the table are upsize costs only.

Impact fees were then calculated considering buy-in costs to be charged for existing facilities with excess capacity, the proposed system improvements, and any loans which are anticipated to fund proposed projects. There is no impact fee charged for storm drainage because the required projects are associated with correcting existing deficiencies, and it is the responsibility of the developers, not the City, to construct facilities required to meet the specified level of service. The impact fee for water rights acquisition is calculated by multiplying the required quantity of water rights shown in Table ES 11 and Table ES 12 by the typical cost of water rights of $29,000 per acre-foot. The proposed impact fees for each utility are shown in Table ES 7 through Table ES 11 with the maximum allowable impact fees for each infrastructure type. Where appropriate, the maximum allowable fee is adjusted to reflect the proportional infrastructure needs of different land use types. In case of excess capacity, new development

contributions to existing infrastructure are included to calculate the final recommended impact fee.

Table ES 7: Proposed Drinking Maximum Allowable Water Impact Fees

Water Meter Size (inches)	Maximum Flow Rate (gpm)	ERCs	Impact Fee
3/4	25 [1]	1	$2,841.56
1	40 [1]	1.6	$4,546.49
1 1/2	50 [1]	2	$5,683.11
2	100 [1]	4	$11,366.22
3	200 [2]	8	$22,732.45
4	400 [2]	16	$45,464.89
6	800 [2]	32	$90,929.79
8	1,000 [2]	40	$113,662.24
Non-Residential Development Indoor			$28.97 per fixture unit
Non-Residential Development Outdoor			$17,957.79 per irrigated acre

[1] From AWWA M6 Table 5-3 Displacement Meters.

[2] From AWWA M6 Table 5-3 Electromagnetic and Ultrasonic Meter Type 1.

Table ES 8: Proposed Public Safety Maximum Allowable Impact Fees

Land Use	Impact Fee
Single Family	$712.43 per Dwelling Unit
Multi-Unit	$2,388.62 per Dwelling Unit
Non-Residential	$3,070.10 per Non-Residential Unit

Table ES 9: Proposed Parks Maximum Allowable Impact Fees

Land Use	Impact Fee
Single Family and Multi-Unit	$3,762.18 per Dwelling Unit

Table ES 10: Proposed Wastewater Maximum Allowable Impact Fees

Water Meter Size (inches)	Maximum Flow Rate (gpm)	ERCs	Impact Fee
3/4	25 [1]	1	$6,081.18
1	40 [1]	1.6	$9,729.89
1 1/2	50 [1]	2	$12,162.36
2	100 [1]	4	$24,324.72
3	200 [2]	8	$48,649.44
4	400 [2]	16	$97,298.89
6	800 [2]	32	$194,597.77
8	1,000 [2]	40	$243,247.22
Non-Residential Development			$253.38 per fixture unit

[1] From AWWA M6 Table 5-3 Displacement Meters.

[2] From AWWA M6 Table 5-3 Electromagnetic and Ultrasonic Meter Type 1.

Table ES 11: Indoor Use Water Rights Requirements and Maximum Alllowable Impact Fee

Land Use	Water Right Quantity (ac-ft)	Impact Fee	Unit
Single Family Residential	0.218	$6,322.00	per Dwelling Unit
Multi-Unit Residential	0.120	$3,480.00	per Dwelling Unit
Non-Residential	0.00908	$263.32	per fixture unit

Table ES 12: Outdoor Use Water Rights Requirements

Land Use	Water Right Quantity (ac-ft)
No Waterwise Landscaping	
Category 1	= (lot size[1], acres) * (0.64) * (3.33 ac-ft/irr. ac)
Category 2	= (irrigated area, acres) * (3.33 ac-ft/irr. ac)
Waterwise Landscape Front Yard Only	
Category 1	= (lot size[1], acres) * [(0.18) * (2.28 ac-ft/irr. ac) + (0.46) * (3.33 ac-ft/irr. ac)]
Category 2	= (front yard irrigated area, acres) * (2.28 ac-ft/irr. ac) + (remaining irrigated area, acres) * (3.33 ac-ft/irr. ac)
Waterwise Landscape Entire Lot	
Category 1	Reduction not allowed (use front yard only formula)
Category 2	= (irrigated area, acres) * (2.28 ac-ft/irr. ac)

[1] Lot size capped at 1 acre.

Section 1 Introduction

1.1 Purpose and Scope

Grantsville City is amending its Capital Facilities Plan (CFP), Impact Fee Facilities Plan (IFFP), and Impact Fee Analysis (IFA) to ensure the City's infrastructure will continue to meet the demands of its residents; to plan for improvements needed to meet new demands of future residents; and to collect funding for these projects necessitated by future growth. This plan builds upon information presented in the City's previous CFPs, IFFPs, and IFAs.

1.2 Capital Facilities Plan and Impact Fee Facilities Plan Overview

Capital facilities plans provide a path forward for the City by identifying future capital improvement projects necessary to maintain the current LOS provided by the City to its current and future residents. This capital facilities plan addresses the following:

- Complete a 10-year population and demographic projection within existing City limits by reviewing U.S. Census Data; Utah Division of Drinking Water (UDDW) data; an analysis of recent impact fees paid to the City; Utah State demographic data; and other demographic data sources.
- Identify existing City infrastructure using City records, past and present master plans, and the previous CFP.
- Identify new, proposed, and previously undocumented improvements for each infrastructure and public safety element.
- Calculate existing levels of service (LOS) using specified standards.
- Identify system deficiencies and surpluses.
- Identify present and future demands on the system.
- Identify Capital Improvement Projects (CIP) necessary to remedy deficiencies and meet the demands of new and proposed development.
- Identify and quantify all revenue sources for potential improvements.
- Prioritize and schedule each CIP within the 10-year planning period.
- Solicit and document input from City officials, staff, stakeholders, and affected entities during the CFP process.

Per Impact Fees Act, 11-36a-301, before imposing an impact fee the City shall prepare an impact fee facilities plan to determine the public facilities required to serve development resulting from a new development activity. An impact fee facilities plan shall:

- Identify the existing level of service.
- Establish a proposed level of service.
- Identify any excess capacity to accommodate future growth at the proposed level of service.
- Identify demands placed upon existing public facilities by new development activity at the proposed level of service.
- Identify the means by which the political subdivision or private entity will meet those growth demands.

Impact fees may not be used to directly improve the existing level of service. Existing deficiencies must use funding other than impact fees to be corrected or improved (Impact Fees Act, 11-36a-302).

1.3 Impact Fee Analysis Overview

Per Impact Fees Act, 11-36a-304, an impact fee analysis shall:

- Identify the anticipated impact on or consumption of any existing capacity of a public facility by the development activity.
- Identify system improvements required to maintain the level of service for the anticipated development activity.
- Demonstrate how the anticipated impacts are related to the development activity.
- Estimate the proportionate share of the costs of existing capacity that will be recouped and the cost of system improvements related to the development activity.
- Identify the manner of financing each public facility, and the extent to which development activity will contribute to the financing and cost of existing public facilities and future system improvements.
- Identify the extent to which development activity is entitled to a credit against impact fees, extraordinary costs in servicing the newly developed properties, and the time-price differential of amounts paid at different times.

In calculating an impact fee, a local political subdivision or private entity may include (Impact Fees Act, 11-36a-305):

- The construction contract price.
- The cost of acquiring land, improvements, materials, and fixtures.
- The cost for planning, surveying, and engineering fees for services provided for and directly related to the construction of the system improvements.
- For a political subdivision, debt service charges, if the political subdivision might use impact fees as a revenue stream to pay the principal and interest on bonds, notes, or other obligations issued to finance the costs of the system improvements.
- One or more expenses for overhead.

In addition to preparing an impact fee analysis, a summary of the impact fee analysis shall be prepared so that it can be understood by a layperson (Impact Fees Act, 11-36a-303).

1.4 Impact Fee Requirements

The authority to implement impact fees in Utah was established with the Impact Fee Act, Utah Code – Title 11 – Chapter 36a. The Impact Fees Act grants the City the ability to impose fair impact fees on new development in accordance with requirements set forth in the act to maintain existing levels of service. Impact fees on new development help distribute the cost associated with providing expanded services to a greater population over a larger area to ensure that the existing LOS is not diminished with new and anticipated development. In order to establish an impact fee, the City must complete an Impact Fee Facilities Plan and Impact Fee Analysis which meet the provisions of the Impact Fees Act as discussed in Sections 1.2 and 1.3. Additionally, the City must comply with the Impact Fees Act requirements of enactment, notice, proceeds, and challenges discussed below. Refer to Appendix B for the City's current Impact Fee Ordinance. The details of the Impact Fees Act described in this plan are a summary of the code for reference purposes; the original and complete text of Utah Code 11-36a should be referred to in conjunction with this document.

1.4.1 Prohibitions

The City may not in accordance with Utah Code Section 11-36a-202:

- Impose an impact fee to:
  - Cure deficiencies in a public facility serving existing development.
  - Raise the established level of service of a public facility serving existing development.
  - Recoup more than the local political subdivision's or private entity's costs actually incurred for excess capacity in an existing system improvement.
- Delay the construction of a school or charter school because of a dispute with the school or charter school over impact fees.
- Impose or charge any other fees as a condition of development approval unless those fees are a reasonable charge for the service provided.
- Impose an impact fee on:
  - Residential components of development to pay for a public safety facility that is a fire suppression vehicle.
  - A school district or charter school for a park, recreation facility, open space, or trail.

1.4.2 Enactment

In order to impose impact fees, an impact fee enactment shall be passed in accordance with Section 11-36a-402. The imposed impact fees may not exceed the highest fee justified by the impact fee analysis and may not take effect until 90 days after the impact fee enactment is approved. An impact fee enactment shall contain:

- A provision establishing one or more service areas within which the City calculates and imposes impact fees for various land use categories.
- A schedule of impact fees for each type of development activity that specifies the amount of the impact fee to be imposed for each type of system improvement or the formula that the City will use to calculate each impact fee.
- A provision authorizing the City to adjust the standard impact fee at the time the fee is charged to:
  - Respond to unusual circumstances; or
  - Respond to a request for a prompt and individualized impact fee review for the development activity of the State, a school district, or a charter school and an

offset or credit for a public facility for which an impact fee has been or will be collected; and
    - Ensure that the impact fees are imposed fairly.
- A provision governing the calculation of the amount of the impact fee to be imposed on a particular development that permits adjustment of the amount of the impact fee based upon studies and data submitted by the developer.
- A provision that allows a developer, including a school district or a charter school, to receive a credit against or proportionate reimbursement of an impact fee if the developer:
    - Dedicates land for a system improvement;
    - Builds and dedicates some or all of a system improvement; or
    - Dedicates a public facility that the City and the developer agree will reduce the need for a system improvement.
- A provision that requires a credit against impact fees for any dedication of land for, improvement to, or new construction of, any system improvements provided by the developer if the facilities are system improvements or are dedicated to the public and offset the need for an identified system improvement.

1.4.3 Notice

Before preparing or amending an impact fee facilities plan, a local political subdivision or private entity shall provide written notice in accordance with Section 11-36a Part 5 of its intent to prepare or amend an impact fee facilities plan that shall:

- Indicate that the local political subdivision or private entity intends to prepare or amend an impact fee facilities plan.
- Describe or provide a map of the geographic area where the proposed impact fee facilities will be located.
- Be provided for the geographic area where the proposed impact fee facilities will be located, as a class A notice under Section 63G-30-102, for at least 10 days.

Before adopting or amending the impact fee facilities plan, the City shall:

- Give public notice of the plan or amendment at least 10 days before the day on which the public hearing is scheduled.

- Make a copy of the plan or amendment, together with a summary designed to be understood by a lay person, available to the public.
- Place a copy of the plan or amendment and summary in each public library within the local political subdivision.
- Hold a public hearing to hear public comment on the plan or amendment.

Before preparing or contracting to prepare an impact fee analysis, the City shall provide a public notice, as a class A notice under Section 63G-30-102, for at least 10 days. Before adopting an impact fee enactment, the City shall:

- Comply with the notice requirements of Section 10-9a-205 as if the impact fee enactment were a land use regulation.
- Hold a hearing in accordance with Section 10-9a-502 as if the impact fee enactment were a land use regulation.
- Receive the protections of Section 10-9a-801 as if the impact fee were a land use regulation.
- At least 10 days before the day on which a public hearing is scheduled:
    - Make a copy of the impact fee enactment available to the public.
    - Provide notice of the City's intent to enact or modify the impact fee, specifying the type of impact fee being enacted or modified, as a class A notice under Section 63G-30-102, for at least 10 days.
- Submit a copy of the impact fee analysis and a copy of the summary of the impact fee analysis on its website or to each public library within the local political subdivision.

1.4.4 Proceeds

To collect impact fees in accordance with Section 11-36a Part 6 the City shall:

- Establish a separate interest-bearing ledger account for each type of public facility for which an impact fee is collected.
- Deposit a receipt for an impact fee in the appropriate ledger account.
- Retain the interest earned on each fund or ledger account in the fund or ledger account.
- At the end of each fiscal year, prepare a report that:
    - For each fund or ledger account, shows the source and amount of all money collected, earned, and received by the fund or ledger account during the fiscal year and each expenditure from the fund or ledger account.

- Accounts for all impact fee funds that the local political subdivision has on hand at the end of the fiscal year.
- Identifies the impact fee funds by:
  - The year in which the impact fee funds were received;
  - The project from which the impact fee funds were collected;
  - The project for which the impact fee funds are budgeted; and
  - The projected schedule for expenditure.
- Is:
  - In a format developed by the state auditor;
  - Certified by the local political subdivision's chief financial officer; and
  - Transmitted to the state auditor within 180 days after the day on which the fiscal year ends.

The City may expend impact fees only for a system improvement identified in the impact fee facilities plan and for the specific public facility type for which the fee was collected. The City shall expend or encumber an impact fee collected with respect to a lot for a permissible use and within six years after the impact fee with respect to that lot is collected. The City may hold the fees for longer than six years if it identifies, in writing an extraordinary and compelling reason why the fees should be held longer than six years and an absolute date by which the fees will be expended.

The City shall refund any impact fee paid by a developer, plus interest earned, when the developer does not proceed with the development activity and has filed a written request for a refund, the fee has not been spent or encumbered, and no impact has resulted.

1.4.5 Challenges

In accordance with Utah Code Section 11-36a Part 7.

- A person or an entity residing in or owning property within a service area, or an organization, association, or a corporation representing the interests of persons or entities owning property within a service area, has standing to file a declaratory judgment action challenging the validity of an impact fee.
- A person or entity required to pay an impact fee who believes the impact fee does not meet the requirements of law may file a written request for information with the City.

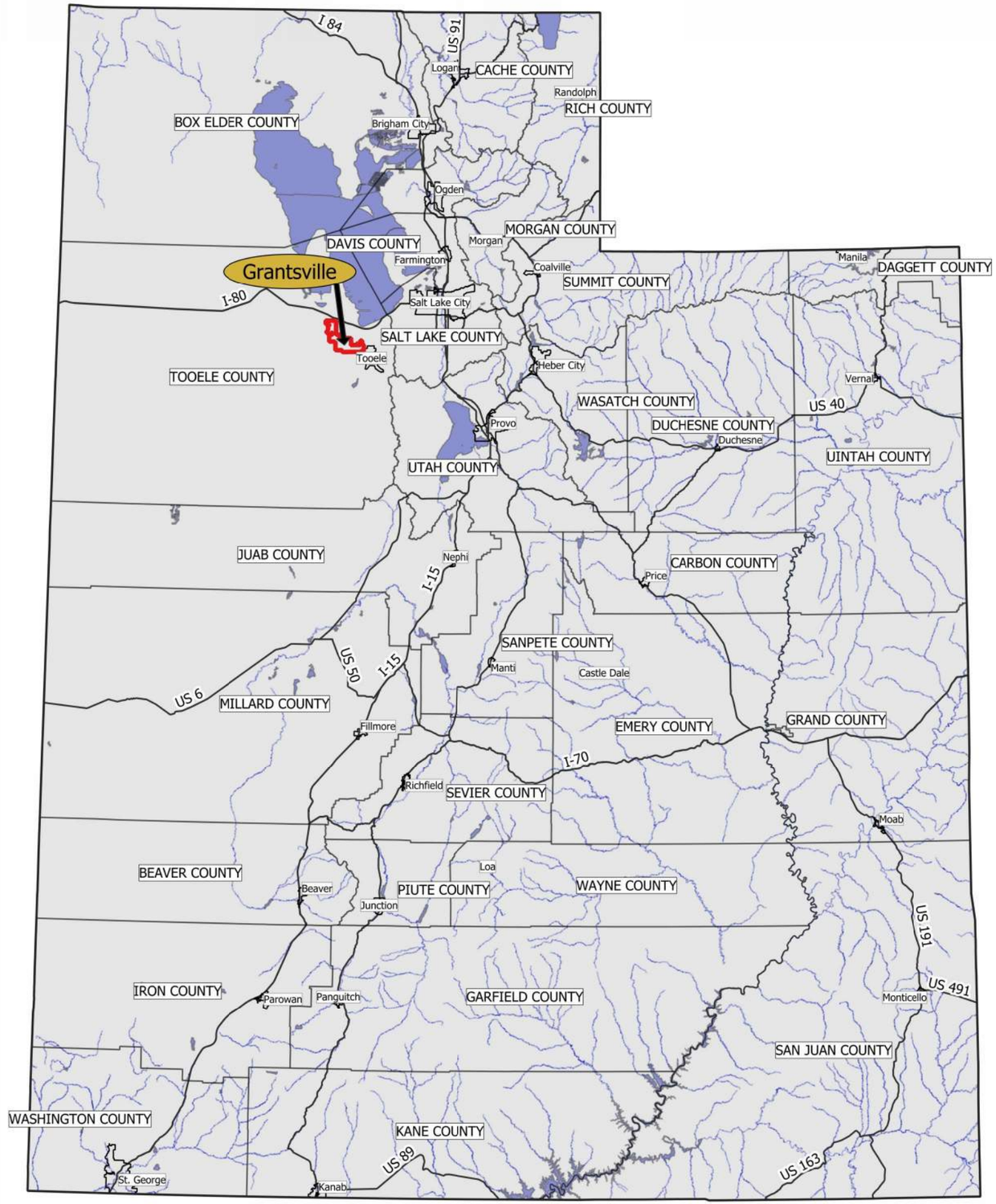
- Within two weeks after the receipt of the request for information, the City shall provide the person or entity with the impact fee analysis, the impact fee facilities plan, and any other relevant information relating to the impact fee.
- A person or entity that has paid an impact fee that the City imposed may challenge whether the City complied with the notice and other procedural requirements of the Impact Fees Act with respect to the imposition of the impact fee.
- If a challenge is successful, the remedy shall be a refund of the difference between what the person or entity paid as an impact fee and the amount the impact fee should have been if it had been correctly calculated.
- If an impact fee that is the subject of an advisory opinion is listed as a cause of action in litigation, the substantially prevailing party on that cause of action may collect reasonable attorney fees and court costs pertaining to the development of that cause of action and shall be refunded an impact fee held to be in violation of the Impact Fees Act, based on the difference between the impact fee paid and what the impact fee should have been if it had been correctly calculated.

1.5 Background

Grantsville City is situated in Tooele County at the northwestern end of the Tooele Valley and at the south end of the Great Salt Lake. The City's location is shown in Figure 1-1 and Figure 1-2. Grantsville is located both in the floor of the valley with western portions of the City entering into the foothills of the Stansbury Mountains to the west. The Tooele Valley is on the eastern end of the basin and range topography of the Great Basin Desert.

Grantsville City, like much of Utah, has experienced rapid growth in the past decade and is projected to continue for the next decade and beyond. This growth is coinciding with a transition period for the City as it grows from a bedroom community supported largely by jobs in the greater Tooele Valley or Salt Lake City metropolitan area, to a City with a sizable commercial presence. From the Wal-Mart distribution center in the northwest corner of the city to the Purple Mattress warehouse and Lakeview Business Center in the Deseret Peak portion of the City, the City is poised for continued growth in these sectors. Recent residential growth in the southern and western portions of the City indicate a growing local population to service these new industries. Additional dwelling units (ADU) are becoming more prevalent as the City grows, and for the sake of this plan shall only be considered impact fee eligible if they are an independent or detached structure. An ADU could be considered a duplex, townhomes, a commercial center

with multiple store fronts, or etc. The number of units an ADU can qualify for is determined by the number of independent connections to the system. As the cost of real-estate rises in the Salt Lake Valley and it nears build-out capacity, jobs that Grantsville City residents formerly commuted to could instead be re-located to Grantsville City itself. This growth and associated developments will bring needed improvements and extensions of the City's existing infrastructure to maintain existing levels of service.



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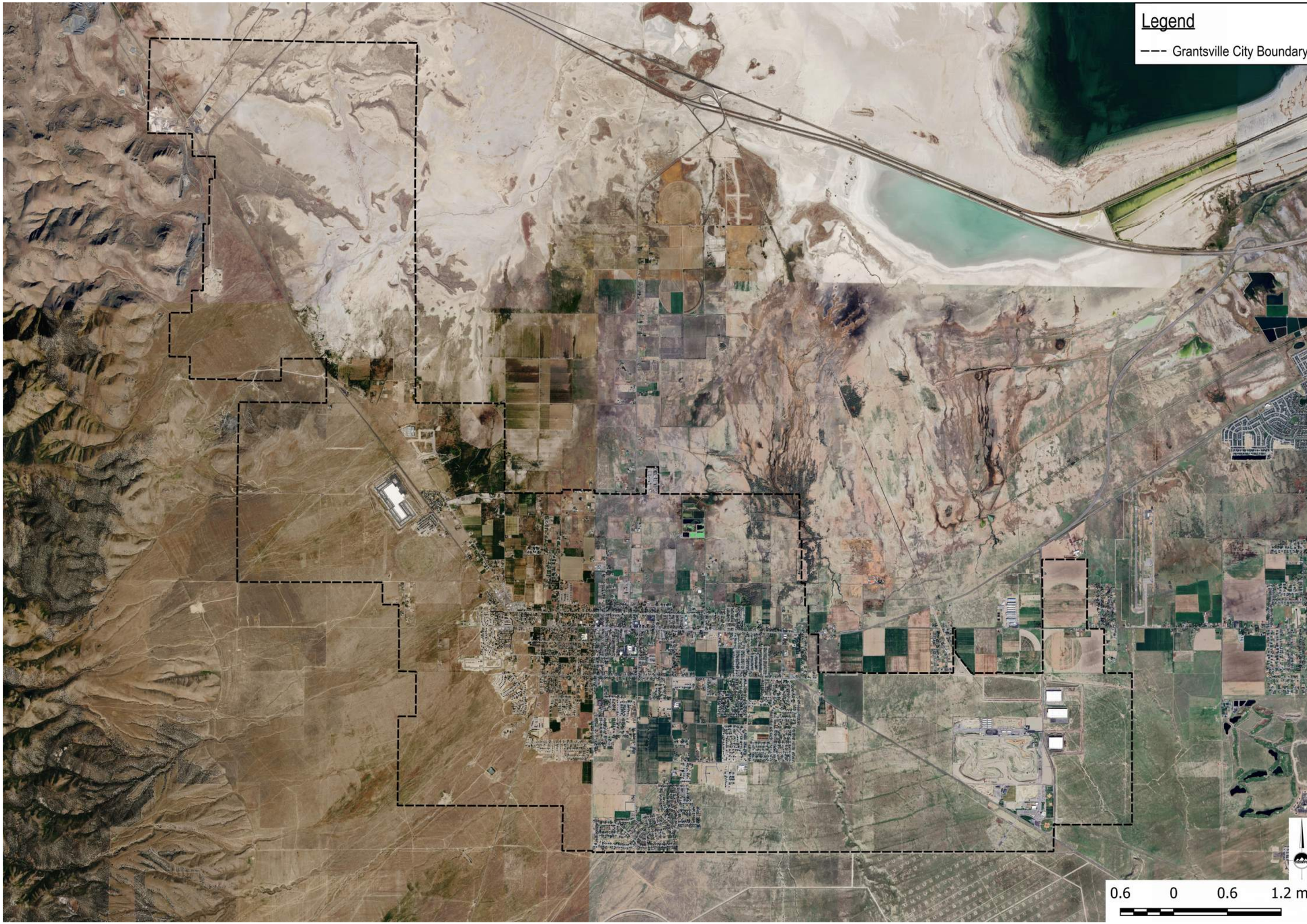
GRANTSVILLE CFP, IFFP, AND IFA

GRANTSVILLE, UTAH

LOCATION MAP

PROJECT NUMBER	PRINT DATE
11637	2026-04-02
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	M. SANFORD

FIG 1-1



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GRANTSVILLE CFP, IFFP, AND IFA

GRANTSVILLE, UTAH

CITY AERIAL OVERVIEW

PROJECT NUMBER	PRINT DATE
11637	2026-04-02
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	M. SANFORD

FIG 1-2

1.6 Inflation Rate

Inflation must be accounted for when calculating impact fees, so for the purposes of this CFP, IFFP, and IFA an annual inflation rate of 3.5% is used. It is recognized that the current economic climate is unpredictable and inflation rates vary significantly, but these rates are predicted to stabilize over time so 3.5% is believed to be a reasonably accurate rate. If this predicted rate is not consistent with actual inflation rates over time, then the City should revisit and update any cost-estimates contained in this plan to reflect an accurate inflation rate.

Section 2 Demographics

2.1 Introduction

Grantsville City is transitioning from a small bedroom community supporting the regional economy to a small city experiencing rapid growth. Many residents commute to work in the Salt Lake Valley, while others increasingly work locally providing services for the County and the community. Local work is concentrated in mineral extraction and waste disposal companies located in the West Desert and around the south arm of the Great Salt Lake along with warehousing, distribution, and manufacturing located in the Tooele Valley. Warehousing and distribution jobs increased in recent years with the arrival of a Walmart Distribution Center in the northwest corner of the City and a Purple Mattress warehouse in the southeast. The construction of the Lakeview Business Park, adjacent to the Utah Motorsports Campus in the Deseret Peak area of the City, will result in a substantial increase in warehousing and distribution jobs in the future. It is anticipated that the Flux and West areas of the City will see a significant increase in residential and commercial development. Even with this considerable anticipated growth, the City recognizes the importance in preserving its character and rural community.

A demographic analysis of Grantsville City's current population, land-use, development patterns, and development potential has been completed. The results of the analysis have been used as a basis for projection of future growth and its distribution throughout the planning area. These future growth projections will be used as one of the factors to estimate future utility demands and infrastructure requirements for the community.

2.2 Planning Period

This plan focuses on growth projected in the next 10 years to determine future capital facility needs. The planning period begins at the end of 2025 and finishes at the end of 2035. Anytime a year is stated throughout this plan it is referring to the end of the specified year.

2.3 Planning Areas

In order to identify areas that are showing recent growth trends and more accurately determine needed improvements, the entire planning area has been divided into six distinct planning areas: Flux, North, Central, South, West, and Deseret Peak (see Figure 2-1). Major roads,

transitions in existing development density, or changes in land use have been used as boundaries to the extent possible to define these planning areas.

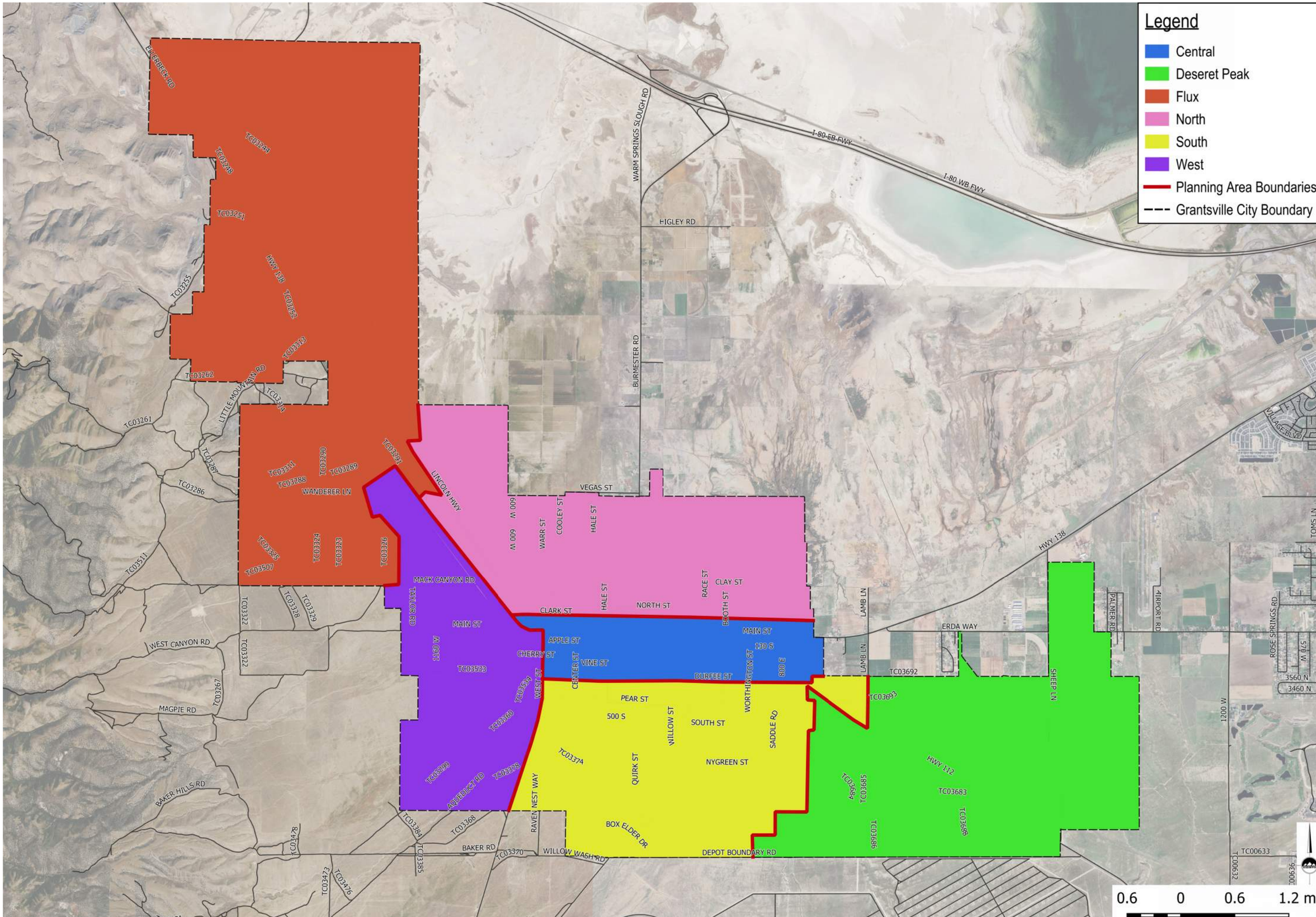
2.4 Land Use and Build Out Capacity

Grantsville City limits encompass approximately 25,522 gross acres. Much of this land is currently undeveloped, particularly in the area northwest of the City along SR 138 (Flux and West areas) and the Deseret Peak area. Future land use areas per the City's current zoning designations are shown in Figure 2-2. The Grantsville City General Plan provides values for maximum allowable densities for each land use type (Table 2-1), and Ensign assumed an actual build-out density for each land use type in order to project future development.

Table 2-1: Land Use Densities

Land Use	Maximum Land Use Density (Units/Acre)	Assumed Density (Units/Acre)
Commercial	-	3
Mixed-Use Density	10 to 15	5
High Single Family Residential	6	3.5
Medium Density Residential	3	1.75
Low Density Residential	2	1
Rural Residential-1	0.1 to 1	0.5
Rural Residential-2	0.1 to 0.2	0.15
Industrial	-	0.25
Municipal / School	-	0.1
Park & Open Space	-	0.01
General Manufacturing	-	0.25

Note: Assumed density was assigned to Park and Open Space to be able to determine future infrastructure improvements.



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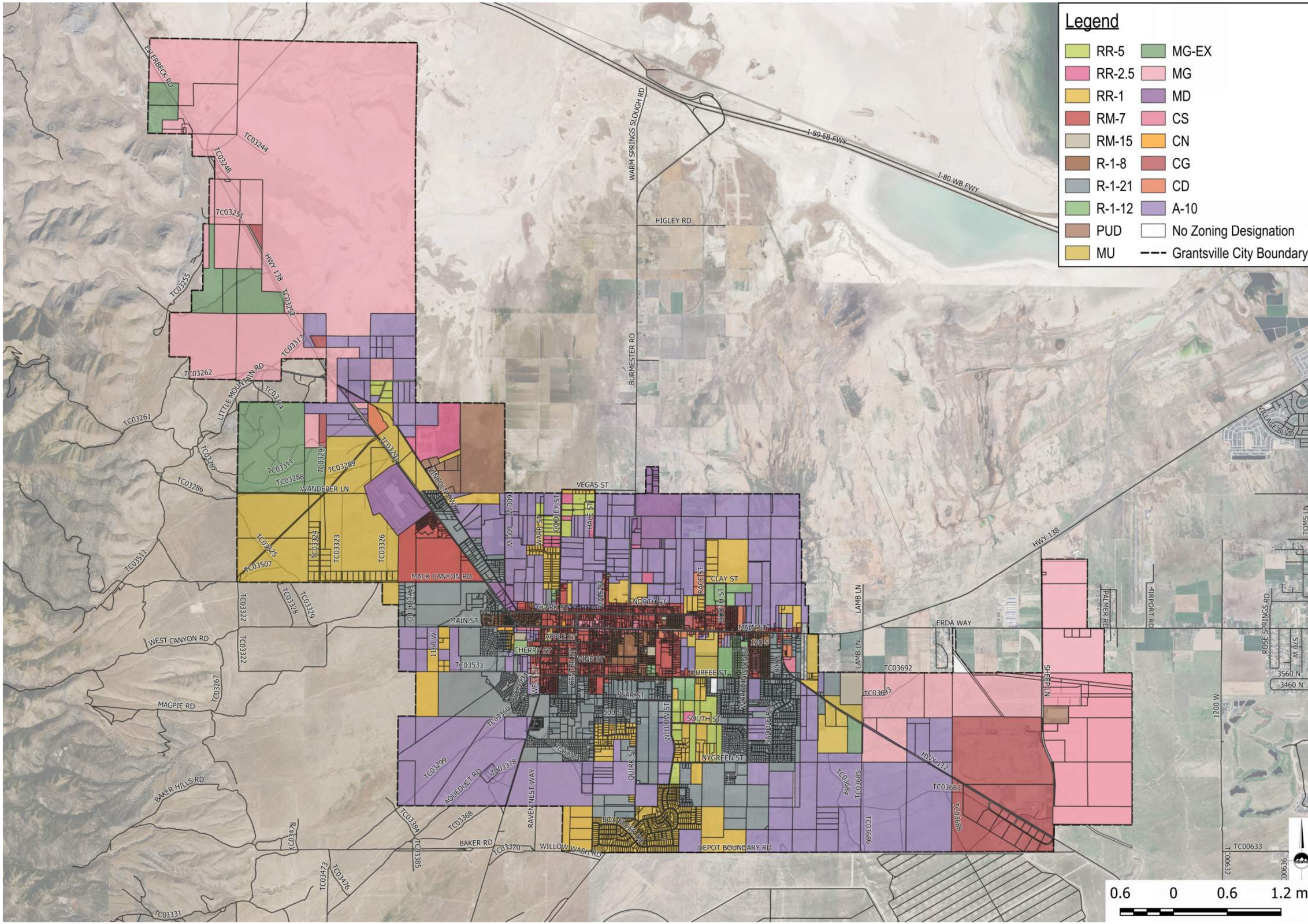
GRANTSVILLE CFP, IFFP, AND IFA

GRANTSVILLE, UTAH

PLANNING AREAS

PROJECT NUMBER	PRINT DATE
11637	2026-04-02
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	M. SANFORD

FIG 2-1



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GRANTSVILLE, UTAH

FUTURE LAND USE MAP

PROJECT NUMBER	PRINT DATE
11637	2026-04-02
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	M. SANFORD

FIG 2-2

2.5 Planning Conversions

The Equivalent Residential Connection (ERC) is the recognized standard planning unit when planning for future utility infrastructure needs. One ERC represents a single-family dwelling with known demand characteristics or requirements. Other types of uses are typically factored based upon comparison of their demand versus the residential single-family unit. The types of uses for Grantsville City are categorized as shown in Table 2-2. The Construction Water connection type represents water drawn from a hydrant for construction use, and the City Rate connection is water usage from City buildings and parks.

In order to determine the total number of ERCs, it is necessary to convert the number of physical units and metered service connections on the system to ERCs. The existing numbers of units and service connections for Grantsville were determined from the City's monthly water meter reports. The conversion between service connections and ERCs has been calculated (Appendix C) using approved methods as outlined in the State of Utah Administrative Code R309-510, and the results are summarized in Table 2-2.

Table 2-2: Existing Service Connections and ERCs

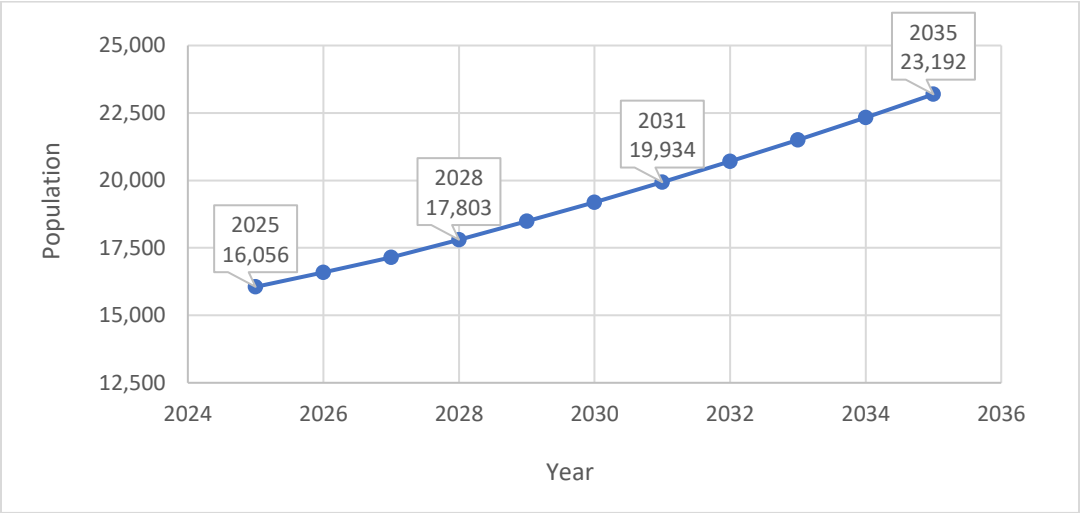
Service Connection Type	Service Connections	Units	ERC / Unit	ERCs
Single Family	4,609	4,618	1.00	4,618
Multi-Unit	46	290	0.52	151
Trailer	8	208	1.12	233
Commercial	110	155	7.34	1,138
Church	10	11	4.57	50
School	7	12	5.09	61
Construction Water	20	20	6.81	136
City Rate	5	33	10.59	349
Total	**4,815**	**5,347**		**6,736**

2.6 Population

The Utah Division of Drinking Water (UDDW) estimated Grantsville's 2018 population to be 10,660. The 2020 Census estimated Grantsville's population to be 12,617 and a Census Bureau estimate completed in 2023 estimated the population to be 15,267. Based on this information and the number of ERCs in the respective years, Ensign determined a ratio of 3.21 persons per residential ERC to estimate the City's population. These residential ERCs include the Single

Family, Multi-Unit, and Trailer service connection types. Based on the number of residential ERCs shown in Table 2-2, the City's estimated current (2026) population is 16,592. The following graph illustrates the projected population growth over the planning period. The method of estimating the future growth is discussed in Section 2.7.

Figure 2-3: 10-Year Population Projection



2.7 Growth Projections

Like much of Utah, Grantsville City experienced steady growth of approximately 1.5% to 2.5% between 2010 and 2014, with a growth rate that has accelerated exponentially since 2015. Looking back at recent history, an article from the Deseret News dated April 26, 1999, had projected that Grantsville's population at the time, 5,800, would increase 72% by the year 2020. The City ended up growing by 121% during this timeframe. Municipalities in Salt Lake Valley have seen this type of exponential growth in the 2000s to keep up with the booming economy. An example of this growth was Draper which grew from a population of 25,220 persons in 2000 to 42,275 persons in 2010 (67.6% growth) according to the U.S. Census Bureau. This high level of growth is expected to continue in Grantsville as a large majority of current development in Salt Lake Valley is higher-density residential infill projects, leaving people looking for affordable single-family homes to venture farther from the Salt Lake Valley into Tooele Valley. Additionally, a significant amount of future development in Grantsville is currently in the planning process. The West Bank and Northwest areas along with the Lakeview Business Park in the Deseret Peak planning area are anticipated to be the largest contributors to the growth of the City in the next 10 years.

Recently, Grantsville has observed annual growth rates of about 4% from 2016-2019 and approximately 3-10% from 2019-2025. Reviewing growth rates for various size cities throughout America, 75 to 80% growth in 10 years is the highest rate observed for a city similar in size to Grantsville. Considering the proposed developments, input from City staff, and the predicted growth in the Salt Lake and Tooele Valley and surrounding cities, a growth rate shown in Table 2-3 is anticipated in the next 10 years. Due to the significant change of growth rates seen in recent years along with an unstable economic climate and varying construction pricing and supplies available, the actual City growth may differ from these estimated projections. Therefore, the City should revisit the demographic projections of this plan on a yearly basis and compare them with the actual growth rates occurring in the City. If the actual growth differs significantly from the projections, then the demographic projections need to be amended, and this CFP/IFFP/IFA in its entirety needs to be amended, as the results contained throughout this plan are based on the assumption that the demographic projections accurately represent future conditions of the City.

The yearly unit and ERC projections over the planning period for each connection type are shown in Table 2-3. The annual growth rate was applied to Single-Family, Multi-Unit, Commercial, and Construction Water connection types to project the number of future units and thus ERCs. New trailer units are not expected to be constructed in Grantsville, so the future number of trailer units and ERCs are shown to remain unchanged. Future Church and School units were projected by maintaining a set unit density relative to the City's population, which were determined by the existing conditions in 2025. At this time, there was one church per 1,460 residents and one school per 1,340 residents. Lastly, the City Rate growth was estimated based on anticipated City projects and their predicted construction years.

2.8 Distribution of Growth

Uncertainties arise in predicting growth in a City due to different factors that can influence when and where it may occur. An analysis of past impact fee locations can provide an indication as to where growth is likely to continue. This, coupled with longer historic growth patterns, proximity to existing infrastructure, and input from the City can allow for a reasonable projection of growth. Considering each of these factors, the percentages of growth expected to occur in each planning area were determined and used to project units and ERCs per area for the planning period, shown in Table 2-4.

Table 2-3: Projected Units and ERCs

	Year:	2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035	
Projected Population:		**16,056**		**16,592**		**17,148**		**17,803**		**18,486**		**19,193**		**19,934**		**20,705**		**21,501**		**22,332**		**23,192**	
Residential Growth Rate:		**2.93%**		**3.5%**		**3.5%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**	
Commercial Growth Rate:		**0.73%**		**0.88%**		**0.88%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**	
Service Connection Type	**ERC / Unit**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**
Single Family	1.00	4,618	4,618	4,780	4,780	4,947	4,947	5,145	5,145	5,351	5,351	5,565	5,565	5,788	5,788	6,020	6,020	6,261	6,261	6,511	6,511	6,771	6,771
Multi-Unit	0.52	290	151	300	156	311	162	323	168	336	175	349	181	363	189	378	197	393	204	409	213	425	221
Trailer [1]	1.12	208	233	208	233	208	233	208	233	208	233	208	233	208	233	208	233	208	233	208	233	208	233
Commercial	7.34	155	1,138	156	1,145	157	1,152	159	1,167	161	1,182	163	1,196	165	1,211	167	1,226	169	1,240	171	1,255	173	1,270
Church [2]	4.57	11	50	11	50	11	50	12	55	12	55	13	59	13	59	14	64	14	64	15	69	15	69
School [3]	5.09	12	61	12	61	12	61	13	66	13	66	14	71	14	71	15	76	16	81	16	81	17	87
Construction Water	6.81	20	136	21	143	22	150	23	157	24	163	25	170	26	177	27	184	28	191	29	197	30	204
City Rate [4]	10.59	33	349	35	371	36	381	37	392	37	392	39	413	39	413	40	424	41	434	42	445	42	445
Total		**5,347**	**6,736**	**5,523**	**6,939**	**5,704**	**7,136**	**5,920**	**7,383**	**6,142**	**7,617**	**6,376**	**7,888**	**6,616**	**8,141**	**6,869**	**8,424**	**7,130**	**8,708**	**7,401**	**9,004**	**7,681**	**9,300**
Increase from 2025		*-*	*-*	*176*	*203*	*357*	*400*	*573*	*647*	*795*	*881*	*1,029*	*1,152*	*1,269*	*1,405*	*1,522*	*1,688*	*1,783*	*1,972*	*2,054*	*2,268*	*2,334*	*2,564*

[1.1] Trailer units are not expected to increase.
[2] Church growth rate is 1 church per 1,460 population.
[3] School growth rate is 1 school per 1,340 population.
[4] City Rate growth rate is based on anticipated City projects.

Table 2-4: Distribution of Projected Units and ERCs

	Year:	2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035	
Projected Population:		**16,056**		**16,592**		**17,148**		**17,803**		**18,486**		**19,193**		**19,934**		**20,705**		**21,501**		**22,332**		**23,192**	
Residential Growth Rate		**2.93%**		**3.5%**		**3.5%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**	
Commercial Growth Rate:		**0.73%**		**0.88%**		**0.88%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**	
Area	**Percentage of Growth**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**
Central	8.10%	2,245	2,806	2,259	2,822	2,274	2,838	2,291	2,858	2,309	2,877	2,328	2,899	2,347	2,919	2,368	2,942	2,389	2,965	2,411	2,989	2,434	3,013
Increase from 2025		-	-	*14*	*16*	*29*	*32*	*46*	*52*	*64*	*71*	*83*	*93*	*103*	*114*	*123*	*137*	*144*	*160*	*166*	*184*	*189*	*208*
Deseret Peak	16.02%	148	355	176	387	205	419	240	459	275	496	313	539	351	580	392	625	434	671	477	718	522	766
Increase from 2025		-	-	*28*	*33*	*57*	*64*	*92*	*104*	*127*	*141*	*165*	*185*	*203*	*225*	*244*	*270*	*286*	*316*	*329*	*363*	*374*	*411*
Flux	39.80%	314	409	384	490	456	568	542	666	631	760	724	867	819	968	920	1,081	1,024	1,194	1,132	1,312	1,243	1,429
Increase from 2025		-	-	*70*	*81*	*142*	*159*	*228*	*258*	*316*	*351*	*410*	*458*	*505*	*559*	*606*	*672*	*710*	*785*	*817*	*903*	*929*	*1,020*
North	2.38%	582	908	586	913	591	918	596	924	601	929	607	936	612	942	618	948	625	955	631	962	638	969
Increase from 2025		-	-	*4*	*5*	*8*	*10*	*14*	*15*	*19*	*21*	*24*	*27*	*30*	*33*	*36*	*40*	*42*	*47*	*49*	*54*	*56*	*61*
South	10.26%	1,659	1,837	1,677	1,858	1,696	1,878	1,718	1,903	1,741	1,927	1,765	1,955	1,789	1,981	1,815	2,010	1,842	2,039	1,870	2,070	1,899	2,100
Increase from 2025		-	-	*18*	*21*	*37*	*41*	*59*	*66*	*82*	*90*	*106*	*118*	*130*	*144*	*156*	*173*	*183*	*202*	*211*	*233*	*239*	*263*
West	23.44%	399	421	440	469	482	515	533	573	585	628	640	691	696	751	755	817	817	884	880	953	946	1,022
Increase from 2025		-	-	*41*	*48*	*84*	*94*	*134*	*152*	*186*	*207*	*241*	*270*	*297*	*329*	*357*	*396*	*418*	*462*	*481*	*532*	*547*	*601*
Total		**5,347**	**6,736**	**5,523**	**6,939**	**5,704**	**7,136**	**5,920**	**7,383**	**6,142**	**7,617**	**6,376**	**7,888**	**6,616**	**8,141**	**6,869**	**8,424**	**7,130**	**8,708**	**7,401**	**9,004**	**7,681**	**9,300**
Increase from 2025		-	-	*176*	*203*	*357*	*400*	*573*	*647*	*795*	*881*	*1,029*	*1,152*	*1,269*	*1,405*	*1,522*	*1,688*	*1,783*	*1,972*	*2,054*	*2,268*	*2,334*	*2,564*

Section 3 Drinking Water

3.1 Capital Facilities Plan and Impact Fee Facilities Plan

3.1.1 Inventory of Existing Facilities

Grantsville City's drinking water system consists of water sources (Table 3-1), storage tanks (Table 3-2), booster pump stations (Table 3-3), and a distribution system (Figure 3-1). The water system provides drinking water (indoor use), irrigation water (outdoor use), and fire suppression for the City. The City's system supplies irrigation water for approximately 2/3 of the City, and the Grantsville Irrigation Company supplies the remaining 1/3 of the City.

Table 3-1: Existing Sources

Source	Type/ Equipment	Casing, (inches) / Depth (feet)	Pump Setting (feet)	Equipped Capacity (gpm)	Well Completion Date	Cost [2]
Cherry Street (Park) Well	Well / 150 Hp Vertical Turbine Pump and Motor	12 / 480	150	1,030	1975	$9,618.00 [3]
South Willow Well	Well / 100 Hp Sub. Pump and Motor	16 / 395	254	620	May 15, 1998	$2,600.00 [3]
Hunsaker Well	Well / 125 Hp Sub. Pump and Motor	16 / 650	470	350 [1]	October 20, 2004	$265,003.92 [4]
South Well	Well / 100 Hp Hollow Shaft Pump and Motor	16 / 520	420	750	December 22, 1995	$197,555.36 [3]
North Well	Well / 150 Hp Sub. Pump and Motor	16 / 550	510	1,200	February 20, 2019	$1,499,501.65
Marshall Well	Well / 450 Hp Vertical Turbine Pump and Motor	16 / 610	410	2,500	2024	N/A [5]
Total				**6,450**		**$1,974,278.93**

[1] The Hunsaker Well is equipped and able to pump at 500 gpm however, the drawdown in the well limits pumping to approximately 350 gpm.
[2] The costs shown are historical costs which may include initial construction, acquiring land, improvements, planning, and engineering.
[3] The City does not have records of the original construction costs, but recorded costs of improvements made to the wells are included.
[4] The Hunsaker Well original construction cost was excluded because Tooele County constructed the well at its own cost. The cost of improvements paid for by the City are included.
[5] The Marshall Well cost was excluded because it was paid for by the Redevelopment Agency (RDA).

The City's existing storage tanks along with historic construction costs are listed in Table 3-2.

Table 3-2: Existing Storage Tanks

Tank	Diameter / Dimensions (feet)	Depth (feet)	Primary Supply Source(s)	Equipped Capacity (Million Gallons)	Cost [1]
North Tank (Rect.)	49.5 x 50.5	12.5	North Well and Cherry Street Well	0.225	N/A
North Tank (Circ.)	80	14	North Well and Cherry Street Well	0.5	N/A
South Tank	94	21	South Well	1.0	N/A
South Willow Tank	83	25.5	South Willow Well, Hunsaker Well, and Marshall Well	1.0	$12,308.53 [2]
Lakeview Business Park Tank	92	26	South Willow Well and Marshall Well	1.2	$1,746,515.04
Total				**3.925**	**$1,758,823.57**

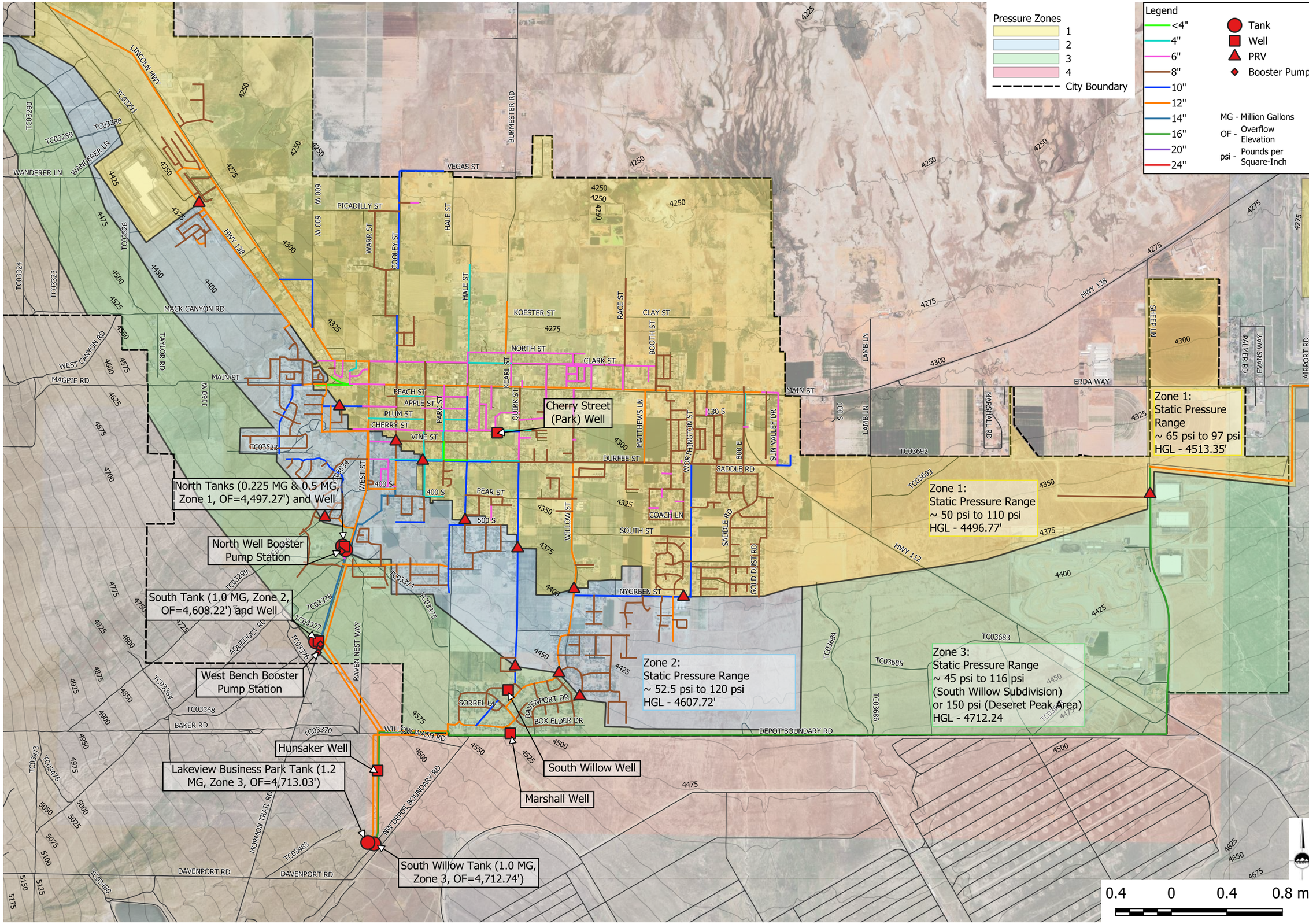
[1] The costs shown are historical costs which may include initial construction, acquiring land, improvements, planning, and engineering.
[2] The City does not have records of the original construction cost, but recorded costs of improvements made to the tank are included.

Grantsville's existing distribution system is shown in Figure 3-1. The City's booster pump stations are listed in Table 3-3. The total recorded historic cost for the distribution system is $18,410,022.79.

Table 3-3: Existing Booster Pump Stations

Booster Pump Station	Primary Supply	Equipped Capacity (gpm)	Completion Date	Cost [2]
West Bank Booster Pump Station	South Tank	540 (1 pump), 995 (2 pumps), 1,350 (3 pumps) [1]	2015	N/A
North Well Booster Pump Station	North Well	300 (1pumps), 600 (2 pumps), 900 (3 pumps), 1,200 (4 pumps), 1,500 gpm (5 pumps)	2023	$200,688.73 [3]

[1] Equipped capacities assume both the Hunsaker and South Willow Wells are pumping to the South Willow Tank at the same time the booster pump station is operating.
[2] The costs shown are historical costs which may include initial construction, acquiring land, improvements, planning, and engineering.
[3] The City does not have records of the original construction costs, but recorded costs of improvements made to the booster pumps are included.



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GRANTSVILLE CFP, IFFP, AND IFA

GRANTSVILLE, UTAH

EXISTING DRINKING WATER SYSTEM

PROJECT NUMBER	PRINT DATE
11637	2026-04-03
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

FIG 3-1

The existing Public Works Building serves both drinking water and wastewater facilities. The building was constructed in 2021 for a cost of $222,483.40 attributed to water facilities.

The City has long-term debt associated with a bond issued to finance improvements to the distribution system as shown in Table 3-4.

Table 3-4: Existing Water Long-Term Debt

Bond	Date of Issue	Interest Rate	Final Maturity Date	Original Bond, Note Issue	Principal Outstanding at June 30, 2025	Total Interest Payments (2025-2035)
Water Revenue Bond, Series 2018	December, 2018	1.50%	August, 2039	$2,700,000.00	$2,700,000.00	$293,430.00

3.1.2 Level of Service

The proposed level of service (LOS) standards, listed below, were previously established in the Grantsville City Capital Facilities Plan dated May 2022 by Ensign Engineering and Land Surveying. The City's recent water usage data (2022-2024) was analyzed and determined to be consistent with the previously established level of service.

- **Unit Average Day Demand = 807 gpd/ERC (0.618 ac-ft/year/ERC)**
  - Indoor Demand = 195 gpd/ERC (0.218 ac-ft/year/ERC)
  - Outdoor Demand = 612 gpd/ERC (0.400 ac-ft/year/ERC)
- **Unit Peak Day Demand = 1,416 gpd/ERC (0.983 gpm/ERC)**
  - Indoor Demand = 275 gpd/ERC (0.191 gpm/ERC)
  - Outdoor Demand = 1,141 gpd/ERC (0.792 gpm/ERC)
- **Peak Instantaneous Demand:**
  - Indoor Demand = $10.8*(\text{ERCs})^{0.64}$ gpm/ERC
  - Outdoor Demand = 1.58 gpm/ERC
- **Fire Flow:**
  - Industrial/Commercial Buildings = 2,050 gpm for 4 hours (492,000 gallons)
  - Residential = 1,500 for 2 hours

Drinking Water System Capacity Requirements:

- **Sources:**
  - Supply Peak Day Demand
- **Storage:**
  - Storage for Average Day Demand plus Fire Flow (Industrial/Commercial Buildings Fire Flow)
- **Distribution:**
  - Per UAC R309-105-9, distribution systems should maintain a minimum pressure at all points in the system during;
    - Peak Day Demand plus Fire Flow - 20 psi
    - Peak Instantaneous Demand – 30 psi
    - Peak Day Demand – 40 psi
  - Max Velocity Requirements:
    - Peak Day and Peak Instantaneous Demand - 5 fps
    - Peak Day Demand plus Fire Flow – 10 fps

3.1.3 Capacity of Existing Facilities

As mentioned in Section 3.1.2, source capacity requirements are based on peak day demand. The current peak day demand was calculated based on demographic projections established in Section 2.7 and the source level of service shown in Section 3.1.2. This demand was compared with the equipped capacity to determine the source deficit shown in Table 3-5.

Table 3-5: Capacity of Existing Sources

Current (2025) ERCs	Peak Day LOS (gpm/ERC)	Peak Day Demand (gpm)	Equipped Capacity (gpm)	Excess / (Deficit) (gpm)
6,736	0.983	6,621	6,450	(171.49)

The City's current average day demand plus the fire flow storage requirement shown in Section 3.1.2 was compared with the equipped storage capacity to calculate the current storage deficit as shown in Table 3-6.

Table 3-6: Capacity of Existing Storage

Current (2025) ERCs	Average Day LOS (gpd/ERC)	Fire Storage (gal)	Average Day Demand (gpd)	Average Day Demand Plus Fire Storage (gal)	Equipped Capacity (gal)	Excess / (Deficit) (gal)
6,736	807	492,000	5,435,952	5,927,952	3,925,000	(2,002,952)

Drinking water distribution systems are pressurized and the City of Grantsville is capable of pumping drinking water from its lowest pressure zone, zone 1, to its highest-pressure zone, zone 3. It is also capable of distributing from its pressure zone 3 tanks to all its pressure zones. Therefore, the distribution system serves the entire City equally and has excess capacity to accommodate any future development.

3.1.4 Demands of Future Development

The future requirements for the drinking water system (Table 3-7) were determined by utilizing the projected growth in the planning period shown in Table 2-3 and the levels of service from Section 3.1.2.

Table 3-7: Future Drinking Water Requirements

Year	ERCs	Sources		Storage		
		Peak Day Demand (gpm)	Excess / (Deficit) (gpm)	Average Day Demand (gpd)	Average Day Demand Plus Fire Storage (gal)	Excess / (Deficit) (gal)
2025	6,736	6,621	(171.49)	5,435,952	5,927,952	(2,002,952)
2026	6,939	6,821	(371)	5,599,773	6,091,773	(2,166,773)
2027	7,136	7,015	(565)	5,758,752	6,250,752	(2,325,752)
2028	7,383	7,257	(807)	5,958,081	6,450,081	(2,525,081)
2029	7,617	7,488	(1,038)	6,146,919	6,638,919	(2,713,919)
2030	7,888	7,754	(1,304)	6,365,616	6,857,616	(2,932,616)
2031	8,141	8,003	(1,553)	6,569,787	7,061,787	(3,136,787)
2032	8,424	8,281	(1,831)	6,798,168	7,290,168	(3,365,168)
2033	8,708	8,560	(2,110)	7,027,356	7,519,356	(3,594,356)
2034	9,004	8,851	(2,401)	7,266,228	7,758,228	(3,833,228)
2035	9,300	9,142	(2,692)	7,505,100	7,997,100	(4,072,100)

Future requirements for the distribution system were determined based on the distribution of growth throughout the City shown in Table 2-4.

3.1.5 Proposed Projects

Proposed projects were determined to meet the demands of future development shown in the previous section and located by utilizing the distribution of growth in the planning period, see Figure 3-2. The proposed wells and storage tanks are shown in Table 3-8 and Table 3-9, along with the planning year, construction year, and cost estimates (Appendix D).

Table 3-8: Proposed Source Projects

Source	Type / Equipment	Casing (inches) / Depth (feet)	Pump Setting (feet)	Equipped Capacity (gpm)	Construction Priority		Current Year (2025) Cost Estimate
					Begin Planning	Begin Construction	
Bates Well	Well / Line Shaft Pump	16 / 600	450	2,000	2024	2026	$3,041,918.77
West Bank Well	Well / Line Shaft Pump	16 / 600	550	2,000	2026	2027	$3,518,067.73
Southwest Well	Well / Line Shaft Pump	16 / 600	450	1,500	2030	2031	$2,979,952.08
Total				**5,500**			**$9,539,938.58**

Table 3-9: Proposed Storage Projects

Storage	Equipped Capacity (gal)	Construction Priority		Current Year (2025) Cost Estimate
		Begin Planning	Begin Construction	
Northstar Tank No. 1	2,000,000	2024	2026	$3,387,223.88 [1]
West Bank Tank	1,500,000	2026	2027	$4,898,123.85
Southwest Tank	1,500,000	2030	2031	$3,825,690.00
North Tank No. 3	2,000,000	2039	2040	$3,970,468.68 [2]
Total	**7,000,000**			**$16,081,506.41**

[1] Actual construction cost and includes $142k for engineering design and construction management.

[2] North Tank No. 3 is shown even though it falls outside the 10-year planning period, as it may be constructed prior to the Southwest Tank. This will be evaluated on an annual basis.

Proposed distribution system projects are shown in Table 3-10. These projects are required to extend water service to future development while providing vital distribution looping for the water system.

Table 3-10: Proposed Distribution System Projects

Distribution Project	Description	Construction Priority		Current Year (2025) Cost Estimate
		Begin Planning	Begin Construction	
Osborne Way Water Line Loop	Construct approximately 425 linear feet of 10-inch diameter water line from Osborne Way to Cherry Wood Lane	2024	2025	$76,356.25
SR-138 Water Line Extension (Developer Portion)	Extend approximately 300 linear feet of 8-inch diameter water line, 6,300 linear feet of 12-inch diameter water line, and 21,700 linear feet of 16-inch diameter water line along SR 138 and install a PRV Station.	2024	2025	$6,272,971.05
Northstar Tank No. 1 Transmission Line	Construct approximately 3,660 linear feet of 12-inch diameter and 10,750 linear feet of 16-inch diameter water line for the Northstar Tank No. 1 and install a PRV station.	2024	2025	$2,504,135.45
SR-138 Water Line Extension	Extend approximately 188 linear feet of 8-inch diameter water line and 1,760 linear feet of 12-inch diameter water line along SR 138.	2024	2026	$566,221.70
Generator	Purchase 350 kW Trailer Mounted Diesel Generator including cables, connectors, and appurtenances.	2024	2026	$269,200.00
SR-112 Water Line Extension	Extend approximately 3,950 linear feet of 12-inch diameter water line along SR 112.	2025	2026	$540,168.75
Apple Street Water Line Replacement	Replace approximately 920 linear feet of 6-inch diameter water line in Apple Street with 8-inch diameter water line.	2025	2026	$319,629.60

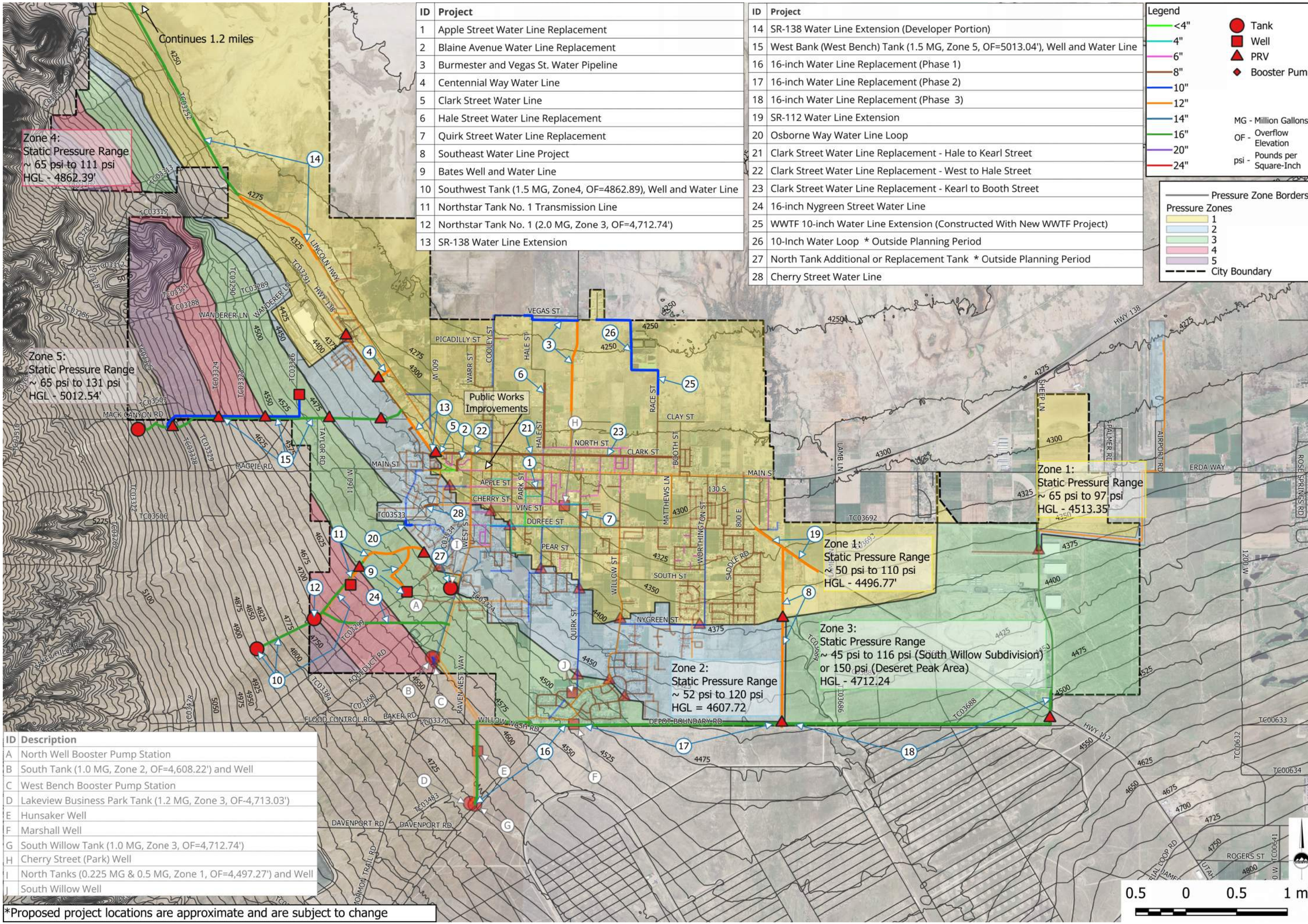
Distribution Project	Description	Construction Priority		Current Year (2025) Cost Estimate
		Begin Planning	Begin Construction	
Apple Street Water Line Replacement	Replace approximately 920 linear feet of 6-inch diameter water line in Apple Street with 8-inch diameter water line.	2025	2026	$319,629.60
Southeast Water Line Project	Construct approximately 9,380 linear feet of 12-inch diameter water line in the southeast portion of the City and two PRV Stations.	2026	2027	$1,507,959.92
Blaine Avenue Water Line Replacement	Replace approximately 1,070 linear feet of 6-inch diameter water line in Blaine Avenue with 8-inch diameter water line.	2026	2027	$357,991.20
Hale Street Water Line Replacement	Replace approximately 3,240 linear feet of 6-inch diameter water line in Hale Street with 8-inch diameter water line.	2027	2028	$878,172.10
16-inch Water Line Replacement Phase 1	Replace approximately 9,300 linear feet of damaged 16-inch diameter water line from the South Willow Tank to the Marshall Well with 16-inch diameter water line.	2027	2028	$2,510,954.37
Clark Street Water Line Project	Construct approximately 612 linear feet of 12-inch diameter water line along Clark Street and install a PRV station.	2027	2028	$480,299.94
Quirk Street Water Line Replacement	Replace approximately 1,200 linear feet of 6-inch diameter water line in Quirk Street with 8-inch diameter water line.	2028	2029	$408,871.50
Burmester Road and Vegas St. Water Pipeline Project	Extend approximately 7,757 linear feet of 12-inch diameter water line along Burmester Street.	2029	2030	$973,445.29
16-inch Water Line Replacement Phase 2	Replace approximately 10,800 linear feet of damaged 16-inch diameter water line from the Marshall Well to the Twenty Wells connection with 16-inch diameter water line.	2029	2031	$2,659,736.68
Centennial Way Water Line Project	Construct approximately 810 linear feet of 12-inch diameter water line along Centennial Way and install a PRV station.	2033	2034	$357,093.75
16-inch Water Line Replacement Phase 3	Replace approximately 14,900 linear feet of damaged 16-inch diameter water line from the Twenty Wells connection to Sheep Lane with 16-inch diameter water line and install a PRV station.	2033	2034	$4,437,861.29

Distribution Project	Description	Construction Priority		Current Year (2025) Cost Estimate
		Begin Planning	Begin Construction	
Hale to Kearl Street Clark Street Water Line Replacement Project	Replace approximately 1,640 linear feet of 6-inch diameter water line with 8-inch diameter water line along Clark Street from Hale Street to Kearl Street.	2026	2027	$913,693.52
West to Hale Street Clark Street Water Line Replacement Project	Replace approximately 3,780 linear feet of 6-inch diameter water line with 8-inch diameter water line along Clark Street from West Street to Hale Street.	2029	2030	$2,105,952.14
Kearl to Booth Street Clark Street Water Line Replacement Project	Replace approximately 3,780 linear feet of 6-inch diameter water line with 8-inch diameter water line along Clark Street from West Street to Hale Street.	2032	2033	$3,078,144.34
Total				**$31,579,427.84**

The City also plans to expand the Public Works site to add a shop area, expected to begin construction in 2035. The estimated cost is $1.86 million and will be split evenly between the drinking water and wastewater utility.

3.1.6 Methods of Financing

The intent is to fund the majority of the projects through impact fees. The portion of the projects not eligible for impact fees may be funded through grants, loans, developer dedications, or reserves in the Water Fund.



ID	Project
1	Apple Street Water Line Replacement
2	Blaine Avenue Water Line Replacement
3	Burmester and Vegas St. Water Pipeline
4	Centennial Way Water Line
5	Clark Street Water Line
6	Hale Street Water Line Replacement
7	Quirk Street Water Line Replacement
8	Southeast Water Line Project
9	Bates Well and Water Line
10	Southwest Tank (1.5 MG, Zone4, OF=4862.89), Well and Water Line
11	Northstar Tank No. 1 Transmission Line
12	Northstar Tank No. 1 (2.0 MG, Zone 3, OF=4,712.74')
13	SR-138 Water Line Extension

ID	Project
14	SR-138 Water Line Extension (Developer Portion)
15	West Bank (West Bench) Tank (1.5 MG, Zone 5, OF=5013.04'), Well and Water Line
16	16-inch Water Line Replacement (Phase 1)
17	16-inch Water Line Replacement (Phase 2)
18	16-inch Water Line Replacement (Phase 3)
19	SR-112 Water Line Extension
20	Osborne Way Water Line Loop
21	Clark Street Water Line Replacement - Hale to Kearl Street
22	Clark Street Water Line Replacement - West to Hale Street
23	Clark Street Water Line Replacement - Kearl to Booth Street
24	16-inch Nygreen Street Water Line
25	WWTF 10-inch Water Line Extension (Constructed With New WWTF Project)
26	10-Inch Water Loop * Outside Planning Period
27	North Tank Additional or Replacement Tank * Outside Planning Period
28	Cherry Street Water Line

Legend

- <4"
- 4"
- 6"
- 8"
- 10"
- 12"
- 14"
- 16"
- 20"
- 24"

- Tank
- Well
- PRV
- Booster Pump

MG - Million Gallons
OF - Overflow Elevation
psi - Pounds per Square-Inch

Pressure Zone Borders
Pressure Zones
1
2
3
4
5
City Boundary

ID	Description
A	North Well Booster Pump Station
B	South Tank (1.0 MG, Zone 2, OF=4,608.22') and Well
C	West Bench Booster Pump Station
D	Lakeview Business Park Tank (1.2 MG, Zone 3, OF-4,713.03')
E	Hunsaker Well
F	Marshall Well
G	South Willow Tank (1.0 MG, Zone 3, OF=4,712.74')
H	Cherry Street (Park) Well
I	North Tanks (0.225 MG & 0.5 MG, Zone 1, OF=4,497.27') and Well
J	South Willow Well

*Proposed project locations are approximate and are subject to change

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GRANTSVILLE CFP, IFFP, AND IFA

GRANTSVILLE, UTAH

PROPOSED DRINKING WATER SYSTEM

PROJECT NUMBER	PRINT DATE
11637	2026-04-02
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

FIG 3-2

3.2 Impact Fee Analysis

3.2.1 Existing Facilities

As shown in Section 3.1.3, there is no excess source or storage capacity so no buy-in cost can be charged for source or storage facilities. The existing distribution system has excess capacity to serve future development and benefits all of the City proportionally as the City is able to pump or gravity flow water throughout the drinking water system. Therefore, the proportionate share for the existing distribution system was calculated based on the proportion of future ERCs expected to be served within the planning period as shown in Table 3-11. The existing Public Works Building will utilize the same proportionate share as it is considered beneficial to both existing and future development. Another item eligible to charge a buy-in cost for is the interest payment amount due within the planning period for the Water Revenue Bond shown in Table 3-4. This loan was used to fund past improvements to the distribution system which benefited existing and future development, so the buy-in cost was calculated using the same proportionate share as the existing distribution system. The proportionate share for each existing facility was multiplied by the historic construction costs in order to calculate the impact fee eligible buy-in costs (Table 3-12).

Table 3-11: Existing Drinking Water Facilities Proportionate Share

Facility	Total ERCs (Year 2035)	Increase in ERCs (Year 2025-2035)	Proportionate Share
Existing Distribution System, Public Works Building, and Water Revenue Bond Interest Payments	9,300	2,564	27.6%

Table 3-12: Drinking Water Buy-In Costs

Facility	Cost [1]	Proportionate Share	Buy-In Cost
Existing Distribution System	$18,182,119.15	27.6%	$5,012,790.70
Public Works Building	$222,483.40 [2]	27.6%	$61,338.43
Water Revenue Bond Interest Payments (2025-2035)	$293,430.00	27.6%	$80,898.34
Matthews Lane Water Line Project	$495,746.06	27.6%	$136,676.66
Durfee Street Water Line Project	$60,750.85	27.6%	$16,748.94
Total			**$5,308,453.07**

[1] The costs shown are historical costs which may include initial construction, acquiring land, improvements, planning, and engineering.

[2] The cost shown for the Public Works Building is the cost associated with drinking water facilities.

3.2.2 System Improvements

The drinking water system improvements needed to accommodate future development within the planning period were determined in Section 3.1.5. The proportionate shares for sources and storage were calculated based on the increase in system capacity to meet the level of service, as shown in Table 3-13 and Table 3-14. Any portion of a project associated with correcting an existing deficiency was excluded from the proportionate share calculation. The City does not charge impact fees for projects which are expected to be constructed by developers so they have a proportionate share of 0%. If it is determined the City will pay for any portion of these projects as the development agreements are finalized then this plan should be amended to include the project.

Table 3-13: Proposed Source Projects Proportionate Share

Project	Equipped Capacity (gpm)	Existing (2025) Deficit (gpm)	Future (2035) Deficit (gpm)	Proportionate Share
Bates Well	2,000	171.49	2,692	0% [1]
West Bank Well	2,000	371	692	0% [1]
Southwest Well	1,500	565	0	0% [1]

[1] The proportionate share is 0% because the project is expected be constructed by developers.

Table 3-14: Proposed Storage Projects Proportionate Share

Project	Equipped Capacity (gal)	Existing (2025) Deficit (gal)	Future (2035) Deficit (gal)	Proportionate Share
Northstar Tank No. 1	2,000,000	2,002,952	4,072,100	0.00%
West Bank Tank	1,500,000	2,166,773	2,072,100	0% [1]
Southwest Tank	1,500,000	2,325,752	572,100	0% [1]

[1] The proportionate share is 0% because the project is expected be constructed by developers.

The proposed distribution system projects and the Public Works Improvements project were determined to be beneficial to both existing and future development, so the proportionate share was calculated based on the ERCs expected to be served within the planning period as shown in Table 3-15.

Table 3-15: Proposed Distribution System and Public Works Proportionate Share

Project	Total ERCs (Year 2035)	Increase in ERCs (Year 2025-2035)	Proportionate Share
Distribution Projects and Public Works Improvements	9,300	2,564	27.6%

The cost of each project which is attributed to new development in the planning period, and therefore eligible for impact fees, was calculated by multiplying the total project cost by the proportionate share as shown in Table 3-16. In order to account for the time-price differential inherent with future costs, the current year cost estimates were inflated at a rate of 3.5% to the anticipated construction year.

Table 3-16: Drinking Water Impact Fee Eligible Costs

Project	Construction Year	Current Year (2025) Cost Estimate	Construction Year Cost Estimate	Proportionate Share	Impact Fee Eligible Cost
Bates Well	2027	$3,041,918.77	$3,258,579.43	0% [2]	$0.00
West Bank Well	2027	$3,518,067.73	$3,768,642.10	0% [2]	$0.00
Southwest Well	2031	$2,979,952.08	$3,663,121.97	0%	$0.00
Northstar Tank No. 1	2026	$3,387,223.88	$3,505,776.72	0.00%	$0.00
West Bank Tank	2027	$4,898,123.85	$5,246,992.72	0% [2]	$0.00
Southwest Tank	2031	$3,825,690.00	$4,702,749.81	0% [2]	$0.00
Osborne Way Water Line Loop	2026	$76,356.25	$79,028.72	27.6%	$21,788.13
SR-138 Water Line Extension (Developer Portion)	2026	$6,272,971.05	$6,492,525.04	0% [2]	$0.00
Northstar Tank No. 1 Transmission Line	2026	$2,504,135.45	$2,591,780.19	0% [2]	$0.00
SR-138 Water Line Extension	2027	$566,221.70	$606,550.84	27.6%	$167,225.41
Generator	2027	$269,200.00	$288,373.77	27.6%	$79,504.34
SR-112 Water Line Extension	2027	$540,168.75	$578,642.27	0% [2]	$0.00
Southeast Water Line Project	2028	$1,507,959.92	$1,671,902.12	0% [2]	$0.00
Clark Street Water Line Project	2029	$480,299.94	$551,155.23	27.6%	$151,952.90
Burmester and Vegas Street Water Pipeline Project	2031	$973,445.29	$1,196,612.81	27.6%	$329,904.86
Centennial Way Water Line Project	2035	$357,093.75	$503,716.00	27.6%	$138,873.96
Public Works Improvements	2035	$1,318,982.50 [1]	$1,860,555.08	27.6%	$512,953.03
Hale Street Water Line Replacement	2029	$878,172.10	$1,007,722.68	27.6%	$277,828.06
Total		**$37,395,983.01**	**$41,574,427.50**		**$1,680,030.71**

[1] The cost shown for the Public Works Improvements project is half of the total cost estimate because this project cost will be split evenly between the wastewater and drinking water utilities.

[2] The proportionate share is 0% because the project is expected be constructed by developers.

In addition to impact fee eligible project costs, planning costs can also be included in the calculation of impact fees. Due to the uncertainty which comes with long-term development projections, this plan is expected to be amended annually. The future professional expenses expected to occur within the planning period were inflated at a 3.5% rate as shown in Table 3-17.

Table 3-17: Drinking Water Professional Expenses

Year	Cost
2025	$8,300.00
2026	$8,590.50
2027	$8,891.17
2028	$9,202.36
2029	$9,524.44
2030	$9,857.80
2031	$10,202.82
2032	$10,559.92
2033	$10,929.52
2034	$11,312.05
2035	$11,707.97
Total	**$109,078.53**

3.2.3 Methods of Financing

The drinking water system improvements are expected to be funded through impact fees, loans, developer dedications, and Water Fund reserves as discussed in Section 3.1.6. As shown in Table 3-18, the City is financing the Northstar Tank No. 1 project with a loan through the Utah Drinking Water Board, which is necessary to prevent the impact fee fund balance from going negative (see Section 3.2.5). This loan is a 20-year bond with a 2.0% interest rate and 1.5% loan origination fee. The interest cost for this bond attributed to development within the planning period can be included in the impact fee calculation.

Table 3-18: Drinking Water Future Debt Financing

Project	Proceeds	Par Amount [1]	Debt Service (Interest)	Debt Service (Principal + Interest)	Proportionate Share	Impact Fee Eligible Debt Service (Interest)
Northstar Tank No. 1	$3,294,000.00	$3,326,940.00	$742,354.64	$4,069,294.64	0.00%	$0.00

[1] *Includes cost of issuance, bond insurance, and surety policy.*

3.2.4 Impact Fee Calculation

As shown in Table 3-19, impact fees to be charged per ERC were calculated by dividing the impact fee eligible costs by the number of ERCs expected to be served within the planning period, determined from Table 2-3. The City does not charge impact fees to the construction water and City rate connection types so they were excluded from the calculation.

Table 3-19: Drinking Water Impact Fee Calculation

Project	Impact Fee Eligible Cost	Planning Period (2025-2035) ERCs [1]	Cost per ERC
Buy-In Cost	$5,308,453.07	2,400	$2,211.86
Northstar Tank No. 1	$0.00	2,400	$0.00
Northstar Tank No. 1 Debt Service (Interest)	$0.00	2,400	$0.00
Osborne Way Water Line Loop	$21,788.13	2,400	$9.08
SR-138 Water Line Extension	$167,225.41	2,400	$69.68
Generator	$79,504.34	2,400	$33.13
Clark Street Water Line Project	$151,952.90	2,400	$63.31
Burmester and Vegas Street Water Pipeline Project	$329,904.86	2,400	$137.46
Centennial Way Water Line Project	$138,873.96	2,400	$57.86
Public Works Improvements	$512,953.03	2,400	$213.73
Professional Expenses	$109,078.53	2,400	$45.45
Total			**$2,841.56**

[1] Does not include Construction Water or City Rate ERCs.

The City charges impact fees to residential users based on their water meter size. A 3/4-inch water meter was determined to be equivalent to one ERC, and the remaining meter sizes were converted to ERCs based on the maximum flow rates from AWWA Manual M6, Table 5-3. Non-residential users are charged impact fees based on the number of fixture units in a development. A typical ERC was determined to have 24 fixture units as calculated in Appendix E. The results of these impact fee calculations are summarized in Table 3-20.

Table 3-20: Proposed Drinking Maximum Allowable Water Impact Fees

Water Meter Size (inches)	Maximum Flow Rate (gpm)	ERCs	Impact Fee
3/4	25 [1]	1	$2,841.56
1	40 [1]	1.6	$4,546.49
1 1/2	50 [1]	2	$5,683.11
2	100 [1]	4	$11,366.22
3	200 [2]	8	$22,732.45
4	400 [2]	16	$45,464.89
6	800 [2]	32	$90,929.79
8	1,000 [2]	40	$113,662.24
Non-Residential Development Indoor			$28.97 per fixture unit
Non-Residential Development Outdoor			$17,957.79 per irrigated acre

[1] From AWWA M6 Table 5-3 Displacement Meters.

[2] From AWWA M6 Table 5-3 Electromagnetic and Ultrasonic Meter Type 1.

3.2.5 Impact Fee Cashflow

The anticipated impact fee revenues and expenses over the 10-year planning period are shown in Table 3-21. The expenses represent only what is attributable to planning period development and include capital project costs, the expenditure of buy-in costs, and proposed bond payments. The impact fee cashflow (Table 3-22) estimates the end of year impact fee fund balance throughout the planning period by comparing the impact fee revenues, total expenses, and interest income calculated at 3.0% of the fund balance.

3.2.6 Impact Fee Credits

There are procedures in place for credits, appeals, and exemptions of impact fees for Grantsville City. Refer to Appendix B for the City's current impact fee ordinance.

Table 3-21: Drinking Water Impact Fee Revenues and Expenses

Year	ERCs [1]	Annual ERC Increase [1]	Impact Fee Revenues	Impact Fee Eligible Project Costs	Bond Payments	Bond Proceeds	Buy-In Cost Expenses	Professional Expenses	Total Expenses
2025	6,251	-	-	-	-	-	-	($8,300.00)	($8,300.00)
2026	6,425	174	$494,430.73	($21,788.13)	-	-	($384,862.85)	($8,590.50)	($415,241.48)
2027	6,605	180	$511,480.07	($246,729.75)	-	-	($398,133.98)	($8,891.17)	($653,754.90)
2028	6,834	229	$650,716.31	-	-	-	($506,514.90)	($9,202.36)	($515,717.26)
2029	7,062	228	$647,874.75	($429,780.96)	-	-	($504,303.04)	($9,524.44)	($943,608.45)
2030	7,305	243	$690,498.09	-	-	-	($537,480.87)	($9,857.80)	($547,338.67)
2031	7,551	246	$699,022.76	($329,904.86)	-	-	($544,116.44)	($10,202.82)	($884,224.12)
2032	7,816	265	$753,012.32	-	-	-	($586,141.69)	($10,559.92)	($596,701.61)
2033	8,083	267	$758,695.44	-	-	-	($590,565.40)	($10,929.52)	($601,494.92)
2034	8,362	279	$792,794.11	-	-	-	($617,107.67)	($11,312.05)	($628,419.72)
2035	8,651	289	$821,209.67	($651,826.99)	-	-	($639,226.22)	($11,707.97)	($1,302,761.19)
Total		**2,400**	**$6,819,734.25**	**($1,680,030.71)**			**($5,308,453.07)**	**($109,078.53)**	**($7,097,562.31)**

[1] *Does not include Construction Water or City Rate ERCs.*

Table 3-22: Drinking Water Impact Fee Cashflow

Year	Impact Fee Revenues	Total Expenses	Interest Income	End of Year Balance
2025	-	($8,300.00)	-	$1,321,360.81
2026	$494,430.73	($415,241.48)	$39,640.82	$1,440,190.89
2027	$511,480.07	($653,754.90)	$43,205.73	$1,341,121.78
2028	$650,716.31	($515,717.26)	$40,233.65	$1,516,354.49
2029	$647,874.75	($943,608.45)	$45,490.63	$1,266,111.43
2030	$690,498.09	($547,338.67)	$37,983.34	$1,447,254.20
2031	$699,022.76	($884,224.12)	$43,417.63	$1,305,470.46
2032	$753,012.32	($596,701.61)	$39,164.11	$1,500,945.29
2033	$758,695.44	($601,494.92)	$45,028.36	$1,703,174.16
2034	$792,794.11	($628,419.72)	$51,095.22	$1,918,643.78
2035	$821,209.67	($1,302,761.19)	$57,559.31	$1,494,651.57

Section 4 Public Safety

4.1 Capital Facilities Plan and Impact Fee Facilities Plan

4.1.1 Inventory of Existing Facilities

Grantsville City's public safety services consist of a Police Department, Animal Control, and Fire Department. There is also an Emergency Medical Technician (EMT)/ambulance service which the City has contracted with through Mountain West Hospital, but this will not be included in impact fee calculations because it is not a City run service.

The Utah Impact Fees Act defines a public safety facility as "a building constructed or leased to house police, fire, or other public safety entities; or a fire suppression vehicle costing in excess of $500,000." The City does not currently have any fire suppression vehicles which cost more than $500,000. The existing buildings associated with City's public safety services are listed in Table 4-1 along with the floor area and historical construction cost. The City Hall building is included in the public safety section of this plan, but it is not eligible for impact fees because it does not house any public safety services.

Table 4-1: Existing Public Safety Facilities

Facility	Construction Year	Floor Area (sq ft)	Cost [1]
Justice Center (Police Station)	2017	8,450 [2]	$3,905,831.64
Animal Shelter	1983	1,155	$10,006.00
Fire Station	2007	15,500	$2,376,472.15
City Hall	1996	7,000	$526,910.54
Total			**$6,819,220.33**

[1] The costs shown are historical costs which may include initial construction, acquiring land, improvements, planning, and engineering.
[2] The Justice Center is shared between the Police Department and the Justice Court. The total building floor area is 12,947 square feet, but the area of the portion occupied by the Police Department is 8,450 square feet.

The locations of these facilities are shown in Figure 4-1. See Appendix F for more detailed information about the Police Department staffing and Justice Center layout.

The City does have long-term debt associated with existing public safety facilities in the form of revenue bonds issued for the Fire Station and Justice Center. The details of these bonds are shown in Table 4-2.

Table 4-2: Existing Public Safety Long-Term Debt

Bond	Date of Issue	Interest Rate	Final Maturity Date	Original Bond, Note Issue	Principal Outstanding at June 30, 2024	Total Interest Payments (2024-2034)
MBA Lease Revenue Bond, Series 2006 (Fire Station)	May 25, 2006	3.50%	January, 2037	$2,000,000.00	$1,048,000.00	$241,780.00
MBA Lease Revenue Bond, Series 2016 (Justice Center)	December, 2016	2.50%	October, 2047	$2,700,000.00	$2,236,000.00	$470,875.00
Total				**$4,700,000.00**	**$3,284,000.00**	**$712,655.00**

4.1.2 Level of Service

The proposed levels of service for each public safety department (Table 4-3) were determined based on input from Police Chief Sager and Fire Chief Smith regarding the needs of each department. More information about these requirements can be found in Appendix F.

Table 4-3: Public Safety Level of Service

Department	Staff Level of Service	Facility Level of Service
Police	1.87 staff per 1,000 population [1]	232.1 sq ft building area per staff member
Fire	3.14 firefighters per 1,000 population	0.0565 fire stations per 1,000 population
Animal Control	0.156 officers per 1,000 population	90.3 sq ft building area per 1,000 population

[1] *Police staff LOS does not include animal control officers, crossing guards, or victim advocate volunteers.*

4.1.3 Capacity of Existing Facilities

The capacity of existing public safety facilities was calculated based on the current City population and the appropriate levels of service for each facility type, as shown in the following three tables.

Table 4-4: Capacity of Existing Police Facilities

Population (2024)	Police Staff per 1,000 Population	Police Staff Required	Building Area per Staff Member (sq ft)	Building Area Required (sq ft)	Existing Building Area (sq ft)	Excess / (Deficit) (sq ft)
16,056	1.87	30	232.1	6,963	8,450	1,487

Table 4-5: Capacity of Existing Fire Facilities

Population (2024)	Stations Per 1,000 Population	Number of Stations Required	Existing Number of Stations	Excess / (Deficit)
16,056	0.0565	0.91	1	0.09

Table 4-6: Capacity of Existing Animal Control Facilities

Population (2024)	Building Area per 1,000 Population (sq ft)	Building Area Required (sq ft)	Existing Building Area (sq ft)	Excess / (Deficit) (sq ft)
16,056	90.3	1,450	1,155	(295)

4.1.4 Demands of Future Development

Based on the demographic projections discussed in Section 2.7 and the levels of service established in Section 4.1.2, the requirements for public safety facilities to accommodate future development were calculated as shown in Table 4-7.

Table 4-7: Future Public Safety Requirements

Year	Population	Police			Fire		Animal Control	
		Police Staff Required	Building Area Required (sq ft)	Excess / (Deficit) (sq ft)	Number of Stations Required	Excess / (Deficit)	Building Area Required (sq ft)	Excess / (Deficit) (sq ft)
2025	16,056	30	6,963	1,487	0.91	0.09	1,450	(295)
2026	16,592	31	7,195	1,255	0.94	0.06	1,498	(343)
2027	17,148	32	7,427	1,023	0.97	0.03	1,548	(393)
2028	17,803	33	7,659	791	1.01	(0.01)	1,608	(453)
2029	18,486	35	8,124	327	1.04	(0.04)	1,669	(514)
2030	19,193	36	8,356	94	1.08	(0.08)	1,733	(578)
2031	19,934	37	8,588	(138)	1.13	(0.13)	1,800	(645)
2032	20,705	39	9,052	(602)	1.17	(0.17)	1,870	(715)
2033	21,501	40	9,284	(834)	1.21	(0.21)	1,942	(787)
2034	22,332	42	9,748	(1,298)	1.26	(0.26)	2,017	(862)
2035	23,192	43	9,980	(1,530)	1.31	(0.31)	2,094	(939)

4.1.5 Proposed Projects

The proposed public safety projects which are required to meet the demands of future development within the planning period are shown in Table 4-8 along with the anticipated planning and construction years as well as the estimated costs (Appendix G). These projects are shown in Figure 4-1, however the locations are subject to change as the planning process

begins. The Justice Center Renovations project will consist of converting the conference room into additional cubicle space to accommodate the required future staff. The Justice Center Police Expansion project will be renovating the Justice Center to allow the Police Department to expand into the space currently being used by the court. This project is expected to occur after the New City Hall Building project is constructed and the Existing City Hall Renovations project occurs to allow the court to move into the existing City Hall.

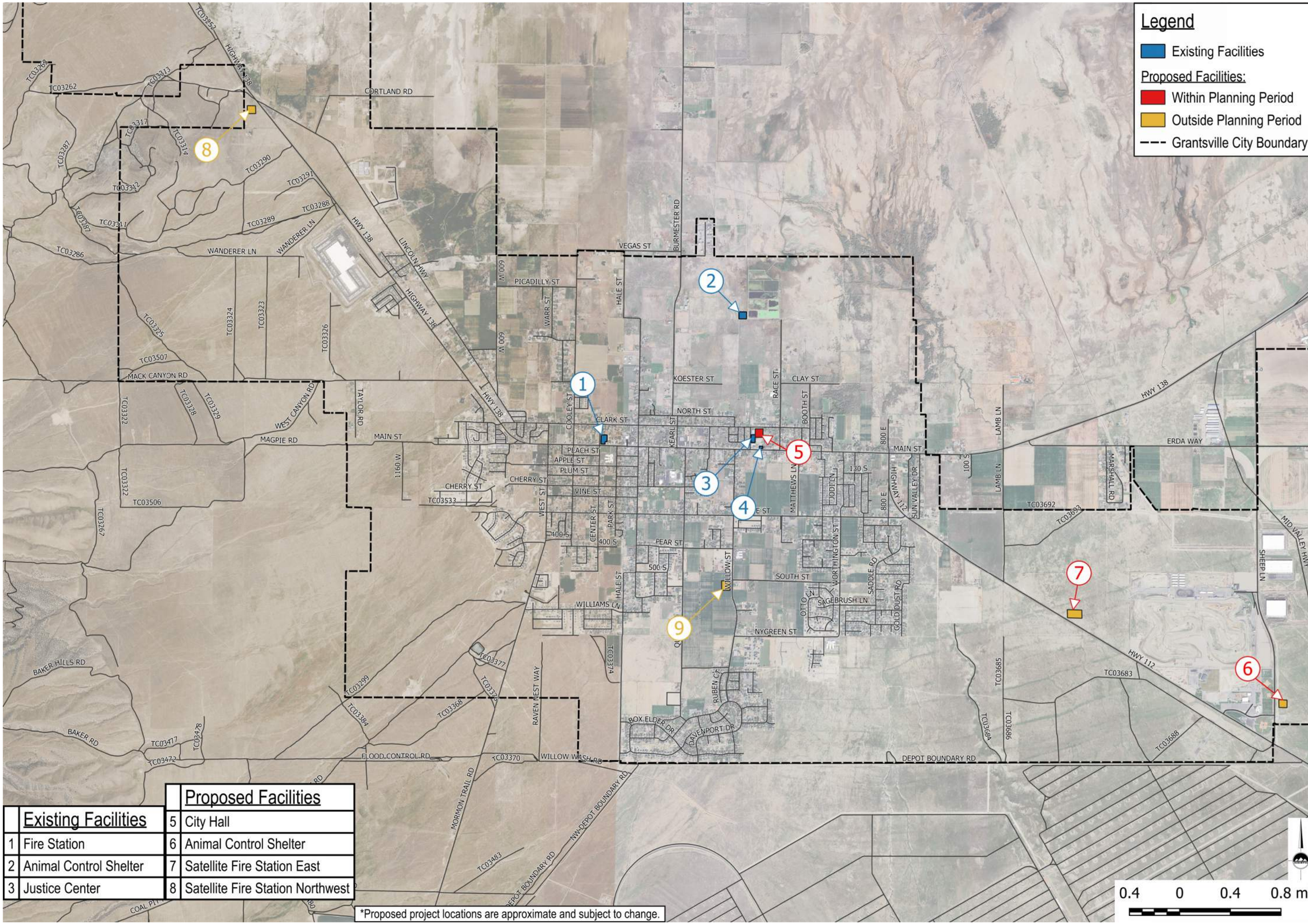
Table 4-8: Proposed Public Safety Projects

Project	Building Area (sq ft)	Construction Priority		Current Year (2025) Cost Estimate
		Begin Planning	Completion	
Animal Control Shelter	4,500	2025	2033	$1,567,581.40 [1]
Justice Center Renovations	N/A	2028	2029	$19,580.00 [1]
Justice Center Police Expansion	4,497	2033	2034	$1,246,608.00 [1]
New City Hall Building	20,000	2032	2034	$9,681,145.54 [1]
Existing City Hall Renovations	N/A	2033	2034	$2,425,500.00 [1]
Future Satellite Fire Station and Ladder Truck	N/A	N/A	N/A	$0.00
Total				**$14,940,414.94**

[1] Cost estimates are based on rough costs per square footage. These should be updated when project details are determined.
[2] Assumed that 50% of the Animal Control Shelter will be jointly paid and constructed in 2033

4.1.6 Methods of Financing

Funding for the City's public safety facilities typically comes from impact fees, grants, loans, taxes, and reserves in the Capital Project Fund. At this time, it is not expected that any of the proposed projects listed above will be funded through grants.



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GRANTSVILLE CFP, IFFP, AND IFA

GRANTSVILLE, UTAH

PUBLIC SAFETY FACILITIES

PROJECT NUMBER	PRINT DATE
11637	2026-04-02
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

FIG 4-1

4.2 Impact Fee Analysis

4.2.1 Existing Facilities

As determined in Section 4.1.3, the Justice Center and Fire Station have excess capacity to serve future development. Proportionate shares for these projects were calculated by dividing the excess capacity by the existing capacity. The proportionate share was multiplied by the historic project cost in order to calculate a buy-in cost, as shown in Table 4-9. The interest payments due within the planning period for the existing loans associated with each facility are also eligible for buy-in costs, calculated based on the proportionate share for the facility which the loan funded.

Table 4-9: Public Safety Buy-In Costs

Facility	Cost [1]	Existing Capacity	Excess Capacity	Proportionate Share	Buy-In Cost
Justice Center (Police Station)	$3,905,831.64	8,450 sq ft	1,487 sq ft	17.6%	$687,333.92
Justice Center Revenue Bond Interest Payments (2025-2035)	$470,875.00	N/A	N/A	17.6%	$82,862.86
Fire Station	$2,376,472.15	1 station	0.09 station	9.3%	$220,622.17
Fire Station Revenue Bond Interest Payments (2025-2035)	$241,780.00	N/A	N/A	9.3%	$22,445.89
Total					**$1,013,264.83**

[1] The costs shown are historical costs which may include initial construction, acquiring land, improvements, planning, and engineering.

4.2.2 System Improvements

The system improvements for public safety facilities proposed in the planning period were determined in Section 4.1.5. The proposed City Hall projects are not impact fee eligible as they do not directly serve any public safety facilities. Proportionate shares were calculated in Table 4-10 based on the requirements to meet the level of service for future development at the end of the planning period, excluding any portion of the project associated with correcting an existing deficiency. The fire vehicles associated with the proposed fire station were calculated at the same proportionate share as the station. However, the proposed vehicles which cost less than $500,000 are not eligible for impact fees per Utah Code Section 11-36a-102.

Table 4-10: Proposed Public Safety Projects Proportionate Share

Project	Building Area (sq ft)	Existing (2025) Deficit	Future (2035) Deficit	Proportionate Share
Animal Control Shelter	4,500	295 sq ft	939 sq ft	14.3%
Justice Center Police Expansion	4,497	N/A	1,530 sq ft	34.0%

[1] *The Satellite Fire Station East and Vehicles project is placed outside the planning period until demographics east of Grantsville City is determined.*

The cost of each project which is eligible for impact fees is based on the portion of the project associated with serving future development in the planning period, excluding any portion of the project attributed to correcting the existing deficiency. This was calculated in Table 4-11 by multiplying the total project cost by the proportionate share shown above. In order to account for the time-price differential inherent with future costs, the current year cost estimates were inflated at a rate of 3.5% to the anticipated construction year.

Table 4-11: Public Safety Impact Fee Eligible Costs

Project	Construction Year	Current Year (2025) Cost Estimate	Construction Year Cost Estimate	Proportionate Share	Impact Fee Eligible Cost
Animal Control Shelter	2033	$1,567,581.40	$2,064,205.35	14.3%	$295,585.40
Justice Center Police Expansion	2034	$1,246,608.00	$1,698,998.74	34.0%	$578,158.28
Total		**$2,814,189.40**	**$3,763,204.10**		**$873,743.68**

In addition to impact fee eligible project costs, planning costs can also be included in the calculation of impact fees. Due to the uncertainty that comes with long-term development projections, this plan is expected to be amended annually. The future professional expenses expected to occur within the planning period were inflated at a 3.5% rate as shown in Table 4-12.

Table 4-12: Public Safety Professional Expenses

Year	Cost
2025	$5,300.00
2026	$5,485.50
2027	$5,677.49
2028	$5,876.20
2029	$6,081.87
2030	$6,294.74
2031	$6,515.05
2032	$6,743.08
2033	$6,979.09
2034	$7,223.36
2035	$7,476.17
Total	**$69,652.56**

4.2.3 Methods of Financing

As discussed in Section 4.1.6, public safety system improvements are expected to be financed through impact fees, loans, and reserves in the Capital Project Fund. There is no debt expected to be incurred during this planning period. In the future the City expects to finance a future Satellite Fire Station project with a loan.

4.2.4 Impact Fee Calculation

Impact fees for public safety facilities are calculated based on the building area of proposed development and police computer aided dispatch (CAD) calls in order to make the fees equitable for the varying demands of different development types (see Appendix F). The number of CAD calls used in Table 4-13 was provided by the City to determine calls per unit. This rate was then applied to convert the projected annual increase in units into an increase in calls, as shown in the Future Calls and Units table (see Appendix F). The construction water and City rate development types were excluded from these calculations because there are no buildings associated with construction water and the City does not charge impact fees for their own buildings. Per Utah Code Section 11-36a-202, impact fees for fire suppression vehicles can only be charged to non-residential development. When a satellite fire station is constructed, these vehicles will be included in the impact fee calculation.

Table 4-13: Calls Per Unit

Type	Units	Calls	Calls/Unit
Single Family	4,618	2,655	0.575
Multi-Family	290	559	1.928
Non-Residential	178	441	2.478

Table 4-14: Public Safety Impact Fee Calculation

Project	Impact Fee Eligible Cost	Planning Period (2025-2035) Calls	Cost per Call
Buy-In Cost	$1,013,264.83	1,579	$641.71
Animal Control Shelter	$295,585.40	1,579	$187.20
Justice Center Police Expansion	$578,158.28	1,579	$366.15
Professional Expenses	$69,652.56	1,579	$44.11
Total			**$1,239.18**

In order to simplify the process of charging impact fees, the fees for residential development are charged based dwelling or non-residential unit. The results of these impact fee calculations are summarized in Table 4-15.

Table 4-15: Proposed Public Safety Maximum Allowable Impact Fees

Land Use	Impact Fee
Single Family	$712.43 per Dwelling Unit
Multi-Unit	$2,388.62 per Dwelling Unit
Non-Residential	$3,070.10 per Non-Residential Unit

Single family and multi-family units are self-explanatory, but non-residential units are different. An example of non-residential units are a strip mall with one building with 10 units or shops. Another example is a 1,000,000 square foot warehouse which only has one tenant/business accounting for one (1) unit. There may also be multiple commercial buildings on one property which are one (1) unit each if they are different businesses.

4.2.5 Impact Fee Cashflow

The anticipated impact fee revenues and expenses over the 10-year planning period are shown in Table 4-16. The expenses represent only what is attributable to planning period development and include capital project costs, the expenditure of buy-in costs, and proposed bond payments. The impact fee cashflow (Table 4-17) estimates the end of year impact fee fund balance

throughout the planning period by comparing the impact fee revenues, total expenses, and interest income calculated at 3.0% of the fund balance.

4.2.6 Impact Fee Credits

The City currently has procedures in place for credits, appeals, and exemptions of impact fees, refer to Appendix B for the City's current impact fee ordinance.

Table 4-16: Public Safety Impact Fee Revenues and Expenses

Year	Single Family Residential Units Increase	Multi-Family Residential Units Increase	Non-Residential Units Increase	Impact Fee Revenues	Impact Fee Eligible Project Costs	Bond Payments	Bond Proceeds	Buy-In Cost Expenses	Professional Expenses	Total Expenses
2025	-	-	-	-	-	-	-	-	($5,300.00)	($5,300.00)
2026	162	10	1	$142,370.47	-	-	-	($104.60)	($5,485.50)	($5,590.10)
2027	167	11	1	$148,321.25	-	-	-	($107.81)	($5,677.49)	($5,785.30)
2028	198	12	4	$182,005.59	-	-	-	($129.63)	($5,876.20)	($6,005.83)
2029	206	13	2	$183,953.48	-	-	-	($133.48)	($6,081.87)	($6,215.35)
2030	214	13	4	$195,793.14	-	-	-	($139.89)	($6,294.74)	($6,434.63)
2031	223	14	2	$198,453.47	-	-	-	($144.39)	($6,515.05)	($6,659.44)
2032	232	15	4	$213,394.18	-	-	-	($151.44)	($6,743.08)	($6,894.52)
2033	241	15	3	$216,735.98	($295,585.40)	-	-	($156.58)	($6,979.09)	($302,721.07)
2034	250	16	3	$225,536.50	($578,158.28)	-	-	($162.35)	($7,223.36)	($585,543.99)
2035	260	16	3	$232,660.83	-	-	-	($168.77)	($7,476.17)	($7,644.94)
Total	**2,153**		**27**	**$1,939,224.88**	**($873,743.68)**			**($1,398.93)**	**($69,652.56)**	**($944,795.17)**

Table 4-17: Public Safety Impact Fee Cashflow

Year	Impact Fee Revenues	Total Expenses	Interest Income	End of Year Balance
2025	-	($5,300.00)	-	$93,980.30
2026	$142,370.47	($5,590.10)	$2,819.41	$233,580.08
2027	$148,321.25	($5,785.30)	$7,007.40	$383,123.43
2028	$182,005.59	($6,005.83)	$11,493.70	$570,616.89
2029	$183,953.48	($6,215.35)	$17,118.51	$765,473.53
2030	$195,793.14	($6,434.63)	$22,964.21	$977,796.25
2031	$198,453.47	($6,659.44)	$29,333.89	$1,198,924.16
2032	$213,394.18	($6,894.52)	$35,967.72	$1,441,391.54
2033	$216,735.98	($302,721.07)	$43,241.75	$1,398,648.20
2034	$225,536.50	($585,543.99)	$41,959.45	$1,080,600.16
2035	$232,660.83	($7,644.94)	$32,418.00	$1,338,034.04

Section 5 Parks

5.1 Capital Facilities Plan and Impact Fee Facilities Plan

5.1.1 Inventory of Existing Facilities

Grantsville City's existing City parks are shown in Figure 5-1. These parks have a varying level of amenities as listed in Table 5-1. The City does not have any long-term debt associated with its park facilities.

Table 5-1: Existing Park Facilities

Facility	Area (ac)	Amenities	Cost [1]
Old Lincoln Park	1.08	Restroom, dog park, pavilion, playground, and drinking fountains	$240,986.42
Academy Square	0.65	Pavilion	N/A
Rodeo Grounds	6.26	Arena	$98,353.45
Scott Bevan Memorial Park	1.73	Flex trail and playground	$555,549.34
Cherry Street Park	19.58	Playground, picnic benches, soccer fields, tennis courts, baseball fields, softball fields, restrooms, skate park, four pavilions, T-ball field, water fountain, tot park, pickleball courts	$1,096,726.37
Hollywood Park	12.69	Shaded playground, restrooms, pavilion, basketball hoops, soccer field, ball field, splash pad	$1,696,554.79
Total	**41.99**		**$3,688,170.37**

[1] The costs shown are historical costs which may include initial construction, acquiring land, improvements, planning, and engineering.

5.1.2 Level of Service

The existing level of service for park facilities is 4 acres of park area per 1,000 population, as established in the City's previous Capital Facilities Plans as well as the Grantsville General Plan dated January 15, 2020. This CFP/IFFP will continue to use the established level of service of 4 acres per 1,000 population.

5.1.3 Capacity of Existing Facilities

The capacity of existing park facilities was calculated based on the park area needed to meet the level of service at the City's current population compared to the existing park area, as shown in Table 5-2.

Table 5-2: Capacity of Existing Parks

Population (2024)	Park Area LOS (ac/1,000 Population)	Park Area Required (ac)	Existing Park Area (ac)	Excess / (Deficit) (ac)
16,056	4	64.22	41.99	(22.23)

5.1.4 Demands of Future Development

Utilizing the demographic projections from Section 2.7, the park area required to meet the level of service throughout the planning period was calculated as shown in Table 5-3.

Table 5-3: Future Park Requirements

Year	Population	Park Area Required (ac)	Excess / (Deficit) (ac)
2025	16,056	64.22	(22.23)
2026	16,592	66.37	(24.38)
2027	17,148	68.59	(26.60)
2028	17,803	71.21	(29.22)
2029	18,486	73.94	(31.95)
2030	19,193	76.77	(34.78)
2031	19,934	79.74	(37.75)
2032	20,705	82.82	(40.83)
2033	21,501	86.00	(44.01)
2034	22,332	89.33	(47.34)
2035	23,192	92.77	(50.78)

5.1.5 Proposed Projects

Grantsville City plans to construct the parks listed in Table 5-4 within the planning period to satisfy the future park area requirements. Also shown in the table are the proposed areas, recommended years to begin planning and complete the project by, and the current year cost estimates (see Appendix H).

Table 5-4: Proposed Park Projects

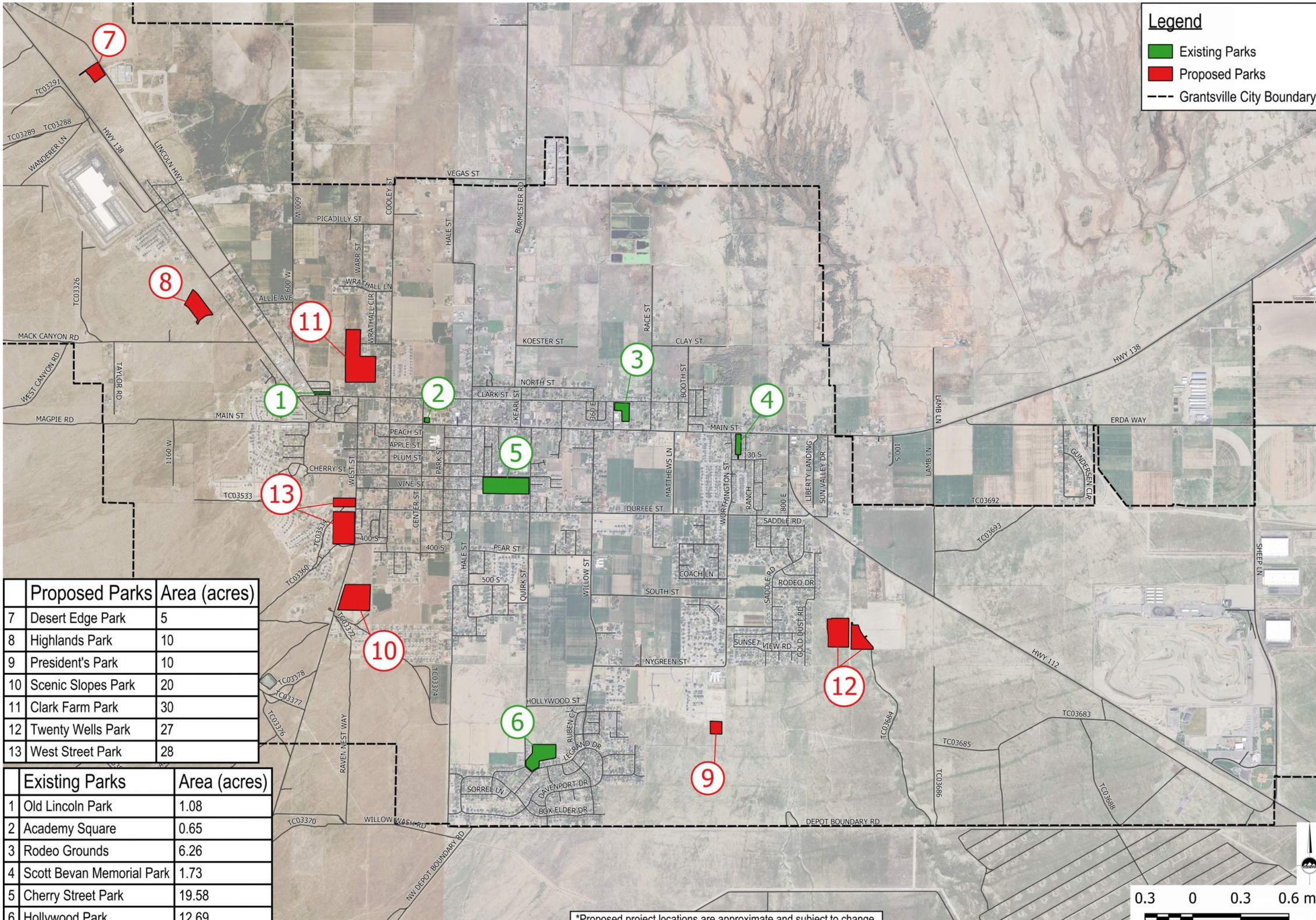
Project	Proposed Area (ac)	Construction Priority		Current Year (2025) Cost Estimate
		Begin Planning	Completion	
West Street Park	27.69	N/A [1]	2026	$297,903.23
Scenic Slopes Park, Utilities, Pump Track, Site Improvements	6.98	2025	2026	$3,170,969.33[2]
Desert Edge Park	5	2025	2027	$2,664,070.11
Scenic Slopes Parking, Park Amenities, Ball Courts	5.39	2026	2028	$2,447,372.82
President's Park	10	2026	2028	$1,695,904.66
Scenic Slopes Park Baseball and Soccer Field	7.05	2028	2030	$3,198,537.29
Twenty Wells Park	27	2030	2032	$8,628,500.00
Highlands Park	10	2031	2033	$3,392,678.66
Clark Farm Park	30	2032	2034	$3,405,170.23
Total	**129.11**			**$28,901,106.33**

[1] *The City has already begun the planning process.*
[2] *Cost Estimate based on Resolution 2025-71.*

The proposed locations of these parks are shown in Figure 5-1, but these are approximate locations which are subject to change, and the exact locations will be determined during the planning phase of each project. It should be noted the City does not maintain parks less than 10 acres but will work with developers for impact fee credits associated with parks less than 10 acres which are HOA maintained. The City also has the option to utilize parks as retention/detention basins, although this is typically not permitted.

5.1.6 Methods of Financing

The City funds park projects as much as possible through grants and impact fees. Parks may also be funded through loans, developer dedications, taxes, and reserves in the Capital Project Fund.



	Proposed Parks	Area (acres)
7	Desert Edge Park	5
8	Highlands Park	10
9	President's Park	10
10	Scenic Slopes Park	20
11	Clark Farm Park	30
12	Twenty Wells Park	27
13	West Street Park	28

	Existing Parks	Area (acres)
1	Old Lincoln Park	1.08
2	Academy Square	0.65
3	Rodeo Grounds	6.26
4	Scott Bevan Memorial Park	1.73
5	Cherry Street Park	19.58
6	Hollywood Park	12.69

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GRANTSVILLE CFP, IFFP, AND IFA

GRANTSVILLE, UTAH

PARK FACILITIES

PROJECT NUMBER 11637
PRINT DATE 2026-04-02
PROJECT MANAGER R. ROUSSELLE
DESIGNED BY C. DUNKEL

FIG 5-1

5.2 Impact Fee Analysis

5.2.1 Existing Facilities

As discussed in Section 5.1.3, there is no excess capacity for existing parks to serve future development. Therefore, no buy-in cost can be charged for existing park facilities.

5.2.2 System Improvements

The system improvements for park facilities which are needed to meet the demands of future development in the planning period were determined in Section 5.1.5. A proportionate share for each new park project was calculated based on the added park acreage to meet the level of service, as shown in Table 5-5. Any portion of a project associated with correcting an existing deficiency was excluded from the proportionate share calculation. The City does not charge impact fees for projects which are expected to be constructed by developers so they have a proportionate share of 0%. If it is determined the City will pay for any portion of these projects as the development agreements are finalized then this plan should be amended to include the project.

Table 5-5: Proposed Parks Proportionate Share

Project	Park Area (ac)	Existing (2025) Deficit (ac)	Future (2035) Deficit (ac)	Proportionate Share
West Street Park	27.69	22.23	50.78	19.7%
Scenic Slopes Park, Utilities, Pump Track, Site Improvements	6.98	0	23.09	100%
Desert Edge Park	5	0	16.11	0% [1]
Scenic Slopes Parking, Park Amenities, Ball Courts	5.39	0	11.11	100%
President's Park	10	0	23.09	100%
Scenic Slopes Park Baseball and Soccer Field	7.05	0	13.09	100%
Twenty Wells Park	27	0	6.04	0% [1]
Highlands Park	10	0	0	0% [1]
Clark Farm Park	30	0	0	0%

[1] *The proportionate share is 0% because the project is expected be constructed by developers.*

The cost of each project which is eligible for impact fees is based on the portion of the project associated with serving future development in the planning period, excluding any portion of the

project attributed to correcting an existing deficiency. This was calculated in Table 5-6 by multiplying the total project cost by the proportionate share shown above. In order to account for the time-price differential inherent with future costs, the current year cost estimates were inflated at a rate of 3.5% to the anticipated construction year.

Table 5-6: Parks Impact Fee Eligible Costs

Project	Construction Year	Current Year (2025) Cost Estimate	Construction Year Cost Estimate	Proportionate Share	Impact Fee Eligible Cost
West Street Park	2026	$297,903.23	$308,329.84	19.7%	$60,752.89
Scenic Slopes Park, Utilities, Pump Track, Site Improvements	2026	$3,170,969.33	$2,420,969.33[2]	100.0%	$2,420,969.33
Desert Edge Park	2027	$2,664,070.11	$2,853,818.50	0% [1]	$0.00
Scenic Slopes Parking, Park Amenities, Ball Courts	2028	$2,447,372.82	$2,713,445.99	100.0%	$2,713,445.99
President's Park	2034	$1,695,904.66	$2,311,343.97	100.0%	$2,311,343.97
Scenic Slopes Park Baseball and Soccer Field	2032	$3,198,537.29	$4,069,432.67	100.0%	$4,069,432.67
Twenty Wells Park	2032	$8,628,500.00	$10,977,861.62	0% [1]	$0.00
Highlands Park	2033	$3,392,678.66	$4,467,509.92	0% [1]	$0.00
Clark Farm Park	2034	$3,405,170.23	$4,640,897.49	0%	$0.00
Total		**$28,901,106.33**	**$34,763,609.34**		**$11,575,944.86**

[1] *The proportionate share is 0% because the project is expected be constructed by developers.*

[2] *Construction Year Cost based on Resolution No. 2025-71 not inflated, without grant of $750k which is not impact fee eligible.*

In addition to impact fee eligible project costs, planning costs can also be included in the calculation of impact fees. Due to the uncertainty that comes with long-term development projections, this plan is expected to be amended annually. The future professional expenses expected to occur within the planning period were inflated at a 3.5% rate as shown in Table 5-7.

Table 5-7: Parks Professional Expenses

Year	Cost
2025	$5,300.00
2026	$5,485.50
2027	$5,677.49
2028	$5,876.20
2029	$6,081.87
2030	$6,294.74
2031	$6,515.05
2032	$6,743.08
2033	$6,979.09
2034	$7,223.36
2035	$7,476.17
Total	**$69,652.56**

5.2.3 Methods of Financing

As discussed in Section 5.1.6, the parks system improvements are expected to be funded through impact fees, loans, developer dedications, taxes, and Capital Project Fund reserves. The City expects to finance the Scenic Slopes Park Amenities project with a loan, which is necessary to prevent the impact fee fund balance from going negative (see Section 5.2.5). This loan was assumed to be a 30-year bond with a 4.0% interest rate, 1.5% cost of issuance, 0.5% bond insurance, and a $20,000 surety policy. The interest cost for this bond attributed to development within the planning period can be included in the impact fee calculation. Table 5-8 shows the details of this bond along with the impact fee eligible interest cost.

Table 5-8: Parks Future Debt Financing

Project	Proceeds	Par Amount [1]	Debt Service (Interest)	Debt Service (Principal + Interest)	Proportionate Share	Impact Fee Eligible Debt Service (Interest)
Scenic Slopes Parking, Park Amenities, Ball Courts	$2,713,445.99	$1,403,857.46	$1,031,699.02	$2,435,556.48	100.0%	$1,031,699.02

[1] *Includes cost of issuance, bond insurance, and surety policy. It is assumed bond will be 50% of construction cost.*

5.2.4 Impact Fee Calculation

Impact fees for parks are charged based on the number of dwelling units. Per Utah Code Section 11-36a-202, it is prohibited to charge schools impact fees for park facilities. Additionally, park facilities only benefit residential development in the City, so only single family and multi-unit developments are charged impact fees for parks and were the only development types

considered in the impact fee calculation shown in Table 5-9. The growth of these development types was projected in Table 2-3. The proposed impact fees are summarized in Table 5-10.

Table 5-9: Parks Impact Fee Calculation

Project	Impact Fee Eligible Cost	Planning Period (2025-2035) Dwelling Units [1]	Cost per Dwelling Unit
West Street Park	$60,752.89	2,288	$26.55
Scenic Slopes Park, Utilities, Pump Track, Site Improvements	$2,420,969.33	2,288	$1,058.12
Scenic Slopes Parking, Park Amenities, Ball Courts	$2,713,445.99	2,288	$1,185.95
Scenic Slopes Parking, Park Amenities, Ball Courts Debt Service (Interest)	$1,031,699.02	2,288	$450.92
President's Park	$2,311,343.97	2,288	$1,010.20
Twenty Wells Park	$0.00	2,288	$0.00
Professional Expenses	$69,652.56	2,288	$30.44
Total			**$3,762.18**

[1] *Includes only residential dwelling units (single family and multi-unit).*

Table 5-10: Proposed Parks Maximum Allowable Impact Fees

Land Use	Impact Fee
Single Family and Multi-Unit	$3,762.18 per Dwelling Unit

5.2.5 Impact Fee Cashflow

The anticipated impact fee revenues and expenses over the 10-year planning period are shown in Table 5-11. The expenses represent only what is attributable to planning period development and include capital project costs, the expenditure of buy-in costs, and proposed bond payments. The impact fee cashflow (Table 5-12) estimates the end of year impact fee fund balance throughout the planning period by comparing the impact fee revenues, total expenses, and interest income calculated at 3.0% of the fund balance.

5.2.6 Impact Fee Credits

The City currently has procedures in place for credits, appeals, and exemptions of impact fees, refer to Appendix B for the City's current impact fee ordinance.

Table 5-11: Parks Impact Fee Revenues and Expenses

Year	Dwelling Units [1]	Annual Dwelling Unit Increase [1]	Impact Fee Revenues	Impact Fee Eligible Project Costs	Bond Payments	Bond Proceeds	Professional Expenses	Total Expenses
2025	4,908	-	-	-	-	-	($5,300.00)	($5,300.00)
2026	5,080	172	$647,094.65	($2,481,722.23)	-	-	($5,485.50)	($2,487,207.73)
2027	5,258	178	$669,667.72	-	-	-	($5,677.49)	($5,677.49)
2028	5,468	210	$790,057.43	($2,713,445.99)	-	$2,713,445.99	($5,876.20)	($5,876.20)
2029	5,687	219	$823,917.03	-	($81,185.22)	-	($6,081.87)	($87,267.09)
2030	5,914	227	$854,014.46	-	($81,185.22)	-	($6,294.74)	($87,479.95)
2031	6,151	237	$891,636.24	-	($81,185.22)	-	($6,515.05)	($87,700.27)
2032	6,398	247	$929,258.02	($4,069,432.67)	($81,185.22)	-	($6,743.08)	($4,157,360.96)
2033	6,654	256	$963,117.62	-	($81,185.22)	-	($6,979.09)	($88,164.30)
2034	6,920	266	$1,000,739.41	($2,311,343.97)	($81,185.22)	-	($7,223.36)	($2,399,752.54)
2035	7,196	276	$1,038,361.19	-	($81,185.22)	-	($7,476.17)	($88,661.39)
Total		**2,288**	**$8,607,863.77**	**($11,575,944.86)**			**($69,652.56)**	**($9,500,447.93)**

[1] *Includes only residential dwelling units (single family and multi-unit)*

Table 5-12: Parks Impact Fee Cashflow

Year	Impact Fee Revenues	Total Expenses	Interest Income	End of Year Balance
2025	-	($5,300.00)	-	$1,413,470.27
2026	$647,094.65	($2,487,207.73)	$42,404.11	($384,238.69)
2027	$669,667.72	($5,677.49)	-	$279,751.54
2028	$790,057.43	($5,876.20)	$8,392.55	$1,072,325.30
2029	$823,917.03	($87,267.09)	$32,169.76	$1,841,145.01
2030	$854,014.46	($87,479.95)	$55,234.35	$2,662,913.86
2031	$891,636.24	($87,700.27)	$79,887.42	$3,546,737.24
2032	$929,258.02	($4,157,360.96)	$106,402.12	$425,036.42
2033	$963,117.62	($88,164.30)	$12,751.09	$1,312,740.83
2034	$1,000,739.41	($2,399,752.54)	$39,382.22	($46,890.08)
2035	$1,038,361.19	($88,661.39)	-	$902,809.72

Section 6 Wastewater

6.1 Capital Facilities Plan and Impact Fee Facilities Plan

6.1.1 Inventory of Existing Facilities

Grantsville City's wastewater collection system consists of trunk lines, interceptor lines, collector lines, lift stations, force mains, and the Wastewater Treatment Facility (WWTF), as shown in Figure 6-1. The major gravity sewer lines and their historic construction costs are listed in **Error! Reference source not found.**. The minor gravity sewer lines owned by the City (all sewer lines not listed in **Error! Reference source not found.**) have historic construction costs totaling $12,632,038.68.

Table 6-1: Existing Major Gravity Sewer Lines

Pipeline	Diameter	Material	Length (ft)	Minimum Slope	Flow Capacity (gpm) [2]	Cost [3]
Main Trunk	18-inch	Concrete	2,340	0.113% [1]	1,252	N/A
Central Trunk	(2) parallel 12-inch	PVC	1,690	0.194% [1]	1,113	N/A
Central Interceptor	12-inch and 15-inch	PVC	2,480	0.194% [1]	556	N/A
Hale Street Collector	12-inch	PVC	3,990	0.37%	768	$1,060,736.07
Northwest Interceptor	12-inch, 15-inch, and 18-inch	PVC	17,770	0.12%	1,289 [4]	$749,254.71
Burmester Collector	12-inch	PVC	4,730	0.194% [1]	556	$226,236.98
West Interceptor	10-inch	PVC	6,440	0.25%	388	$1,712,065.24
Northeast Interceptor	18-inch and 24-inch	PVC	9,180	0.345%	2,186	$1,083,869.01
Matthew's Lane Collector	12-inch and 15-inch	PVC	7,670	0.20%	564	$2,039,059.07
Worthington Street Collector	12-inch	PVC	11,760	0.194% [1]	556	$193,636.00
Main Street Trunk	18-inch	PVC	2,460	0.20%	1,664	$653,987.65
Lakeview Business Park Offsite Gravity Line	18-inch and 21-inch	PVC	20,440	0.06%	912	$3,398,037.81
Deseret Peak Collector	8-inch, 10-inch, 12-inch, and 15-inch	PVC	7,630	1.60%	542	$190,270.90
West Street Collector	12-inch	PVC	6,600	1.06%	1,300	$1,324,885.24 [5]
Cooley Street Collector	8-inch	PVC	4,048	0.80%	383	
Total			**109,228**			**$12,632,038.68**

[1] The regulatory minimum slope per UAC R317-3-2 is used when the actual minimum slope is unknown.
[2] The flow capacity was calculated based on d/D=0.67 and the minimum slope of the pipeline.
[3] The costs shown are historical costs which may include initial construction, acquiring land, improvements, planning, and engineering.
[4] The flow capacity is 944 gpm for the 15-inch portion of the pipeline and 1,289 gpm for the 18-inch portion, but the 18-inch is the controlling portion because it collects significantly more flow than the 15-inch.

[5] *Cost does not include the amount paid for by a grant.*

The City's existing lift stations and associated force mains are detailed in Table 6-2. Additional existing lift stations include the Sheep Lane, Deseret Peak, Utah Motorsports Campus (UMC), and Tooele Valley Airport Lift Stations. However, the Sheep Lane Lift Station is no longer in use, the Deseret Peak Lift Station is County owned, and the UMC and Tooele Valley Airport Lift Stations are privately owned so these are not included in the table.

Table 6-2: Existing Lift Stations

Lift Station	Associated Force Main(s)	Flow Capacity (gpm)	Cost [1]
Northwest	6-inch and 10-inch	1,200	$500,000.00
Northeast	8-inch	2,170	$400,000.00
Total			**$900,000.00**

[1] *The costs shown are historical costs which may include initial construction, acquiring land, improvements, planning, and engineering.*

The capacity and historic cost of the City's Wastewater Treatment Facility is shown in Table 6-3. The WWTF was originally designed to treat an average day flow of 1.5 million gallons per day (MGD), but in 2019 permit requirements were updated to require greater nutrient removal which limits the average day capacity of the facility to 1 MGD (per the 2022 Wastewater Treatment Plant Study by AQUA Engineering).

Table 6-3: Existing Wastewater Treatment Facility

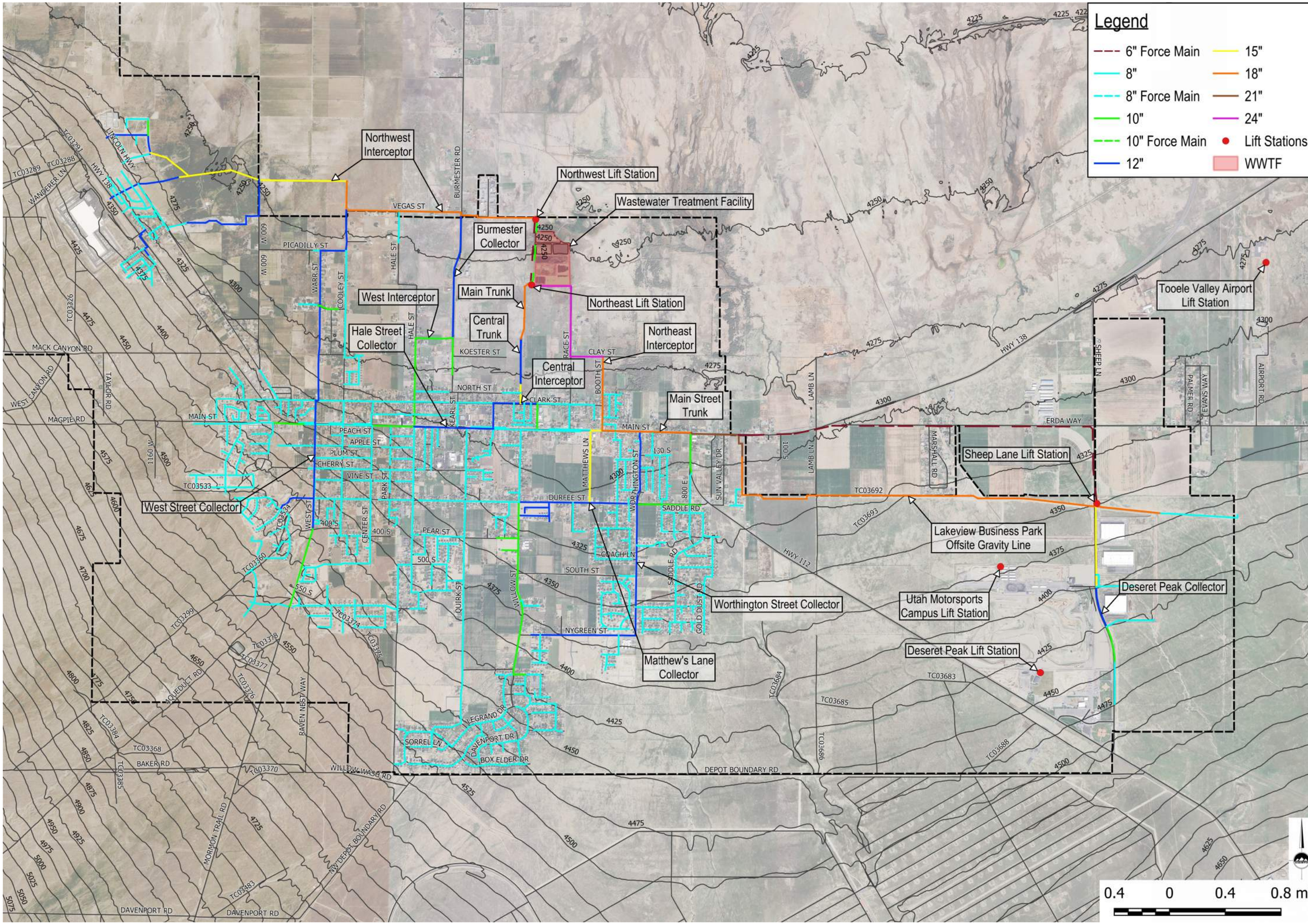
Facility	Capacity		Cost [2]
	Average Day Flow (MGD)	Peak Day Flow (MGD)	
Wastewater Treatment Facility	1.00 [1]	2.25	$5,559,563.47

[1] *The WWTF was originally designed to treat an average day flow of 1.5 MGD, but currently can only treat 1 MGD due to updated nutrient removal requirements.*

[2] *The costs shown are historical costs which may include initial construction, acquiring land, improvements, planning, and engineering.*

As discussed in Section 3.1.1, the existing Public Works Building serves both drinking water and wastewater facilities. The building was constructed in 2021 for a cost of $222,483.40 attributed to wastewater utilities.

The City has long-term debt associated with existing wastewater facilities in the form of a revenue bond, as detailed in Table 6-4. This Sewer Revenue Bond was used to finance improvements to the collection system.



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GRANTSVILLE CFP, IFFP, AND IFA

GRANTSVILLE, UTAH

EXISTING WASTEWATER SYSTEM

PROJECT NUMBER	PRINT DATE
11637	2026-04-02
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

FIG 6-1

Table 6-4: Existing Wastewater Long-Term Debt

Bond	Date of Issue	Interest Rate	Final Maturity Date	Original Bond, Note Issue	Principal Outstanding at June 30, 2025	Total Interest Payments (2025-2035)
Sewer Revenue Bond, Series 2018	December, 2018	1.75%	August, 2049	$4,880,000.00	$4,232,000.00	$628,057.00

6.1.2 Level of Service

The level of service standards to be used for this plan, shown in Table 6-5, were previously established in the Grantsville City Capital Facilities Plan dated May 2022. These standards were calculated based on measured flow data (see Appendix I), and peaking factors were determined from the Grantsville City – Sanitary Sewer Flow Monitoring 2018 – Flow and Model Summary by AQUA Engineering. The City's recent wastewater flow data (2022-2025) was analyzed and determined to be consistent with the previously established level of service.

Table 6-5: Wastewater Level of Service

Component	Parameter	Level of Service	
Collection System	Average Day Flow	150 gpd/ERC	
	Peaking Factors	*Miles From WWTF*	*Factor*
		<1	1.85
		>1 and <1.6	2.25
		>1.6	4
Lift Stations	Peak Inflow	0.35 gpm/ERC	
Wastewater Treatment Facility	Average Day Flow	150 gpd/ERC	
	Peak Day Flow	175 gpd/ERC	
	Peak Instantaneous Flow	0.4 gpm/ERC	

6.1.3 Capacity of Existing Facilities

The capacity of the City's major gravity sewer lines was determined by modeling the existing conditions of the entire wastewater collection system and then analyzing the flow in each of the major sewer lines. The total capacity of each pipe is defined as the flow by which the depth to diameter ratio (d/D) is equal to 0.67, also stated as the pipe flowing 67% full by depth. The excess capacity for each pipeline was calculated by dividing the estimated current flow in the pipe by the total capacity flow of the pipe at the most critical point (largest d/D) along the whole pipeline. The resulting excess capacities for each major gravity sewer line are shown in Table 6-6.

Table 6-6: Capacity of Existing Major Gravity Sewer Lines

Pipeline	Current (2025) Peak Hour Flow (gpm)	Flow Capacity (gpm)	Excess / (Deficit) (gpm)
Main Trunk	583	1,252	669
Central Trunk	583	1,113	530
Central Interceptor	441	556	115
Hale Street Collector	385	768	383
Northwest Interceptor	781	1,289	508
Burmester Collector	489	556	67
West Interceptor	260	388	128
Northeast Interceptor	1,138	2,186	1,048
Matthew's Lane Collector	252	564	312
Worthington Street Collector	69	556	487
Main Street Trunk	704	1,664	960
Lakeview Business Park Offsite Gravity Line	299	912	613
Deseret Peak Collector	274	542	268
West Street Collector	278	1,300	1,022

It was not feasible to complete a pipe by pipe analysis of every single sewer line in the collection system beyond the major sewer lines, and any inaccuracies in the modeled conditions would be emphasized in these smaller diameter sewer lines which are upstream of the major sewer lines. The sewer lines other than the major pipelines are typically constructed to serve a single subdivision and designed to have sufficient capacity to serve the build-out conditions of the subdivision. Therefore, all of these existing minor sewer lines should have excess capacity to serve any future development in their service area and are considered beneficial to both future and existing development. Additionally, the majority of existing and future development connect or will connect to a minor sewer line, as opposed to connecting directly to a major pipeline, so the system of minor sewer lines as a whole can be considered to be beneficial to the entire City, even though each line individually serves only a limited portion of the City. For the purposes of this plan, the minor sewer lines (all pipes not listed in Table 6-6) are considered to be a whole system which serves the entire City and has excess capacity to accommodate any future development.

The capacities of the City's existing lift stations were calculated by comparing the current modeled inflow with the total capacity of each lift station. The total capacities were determined by the design flows of the equipped pumps excluding any redundant or standby pumps. These results are shown in Table 6-7.

Table 6-7: Capacity of Existing Lift Stations

Lift Station	Current (2025) Peak Day Flow (gpm)	Flow Capacity (gpm)	Excess / (Deficit) (gpm)
Northwest	781	1,200	419
Northeast	1,138	2,170	1,032

The Wastewater Treatment Facility's capacity was determined by comparing the flow capacity for both average day and peak day conditions with the current inflow at the facility, which was calculated based on existing ERCs and the level of service, as shown in Table 6-8.

Table 6-8: Capacity of Existing Wastewater Treatment Facility

Current (2025) ERCs	Average Day			Peak Day		
	Current Flow (MGD)	Flow Capacity (MGD)	Excess / (Deficit) (MGD)	Current Flow (MGD)	Flow Capacity (MGD)	Excess / (Deficit) (MGD)
6,736	1.010	1.50	0.490	1.18	2.25	1.07

The WWTF was originally designed to treat an average day flow of 1.5 MGD. The practical capacity is 1.0 MGD to meet the nutrient limits. Grantsville is currently in a 5-year grace period until the new plant is constructed which is anticipated to be complete summer of 2028.

6.1.4 Demands of Future Development

The future requirements for sewer lines and lift stations were determined by adding the demands of future development to the sewer model and analyzing when and where any deficiencies appear in the system. These estimated demands were based on the demographic projections per planning area shown in Table 2-4 and the level of service from Section 6.1.2. The future requirements for the WWTF were determined from the level of service and the projected ERCs for the whole City, as shown in Table 6-9.

Table 6-9: Future Wastewater Treatment Facility Requirements

Year	ERCs	Average Day Flow (MGD)	Excess / (Deficit) (MGD)	Peak Day Flow (MGD)	Excess / (Deficit) (MGD)
2025	6,736	1.010	0.490	1.18	1.07
2026	6,939	1.041	0.459	1.21	1.04
2027	7,136	1.07	0.430	1.25	1.00
2028	7,383	1.11	0.393	1.29	0.958
2029	7,617	1.14	0.357	1.33	0.917
2030	7,888	1.18	0.317	1.38	0.870
2031	8,141	1.22	0.279	1.42	0.825
2032	8,424	1.26	0.236	1.47	0.776
2033	8,708	1.31	0.194	1.52	0.726
2034	9,004	1.35	0.149	1.58	0.674
2035	9,300	1.40	0.105	1.63	0.623

6.1.5 Proposed Projects

The wastewater projects required to meet the demands of development within the planning period were determined based on future deficiencies identified in the sewer model analysis as well as development anticipated to occur in areas of the City not currently served by sewer infrastructure. The locations of the proposed projects can be seen in Figure 6-2. The proposed gravity sewer lines (Table 6-10) were sized to have sufficient capacity to serve projected development for 30 years beyond the expected construction date. The minimum slope for each pipeline was chosen as the larger of the minimum existing ground slope along the expected alignment or the minimum regulatory slope per UAC R317-3-2. Since these existing ground slopes will likely change as roads are built and development will probably occur at a rate and in locations somewhat different than projected in this plan, the City should reevaluate and amend this plan periodically and consider the proposed diameters and alignments may change when the project is designed. The cost estimates for the gravity sewer projects were calculated based on the costs per linear foot for each diameter are shown in Appendix J.

Table 6-10: Proposed Gravity Sewer Lines

Pipeline	Diameter (in)	Length (ft)	Minimum Slope	Flow Capacity (gpm)	Construction Priority		Current Year (2025) Cost Estimate
					Begin Planning	Begin Construction	
Willow Street Sewer Improvements	12	3,380	0.25%	628	2035	2036	$1,310,628.80
SR112 Interceptor	15 and 18	6,914	0.13%	825 and 1,342	2026	2027	$2,988,835.56
West Bank Interceptor Segment 1	36	7,444	0.07%	6,252	2026	2027	$3,748,798.40
West Bank Interceptor Segment 2	36	2,695	0.07%	6,252	2026	2027	$1,357,202.00
West Bank Interceptor Segment 3	18 and 24	8,884	0.50%, 0.12%, and 0.07%	2,631and 2,776	2026	2027	$3,927,403.66
Southeast Sewer Line	10	4,120	1.27%	875	2026	2027	$1,564,982.00
Vegas Street Collector	18, and 24	12,966	0.08%, and 0.08%	1,053 and 2,267	2034	2035	$5,790,294.14
Total							**$20,688,144.56**

Note: Willow Street Sewer Improvements project is shown, but construction is outside the 10-year planning period so it won't be included in impact fee calculations.

Results from the sewer model analysis show the Northwest Lift Station is predicted to reach its capacity within the planning period. As shown in Table 6-11, it is proposed to replace the existing 6-inch diameter force main of the Northwest Lift Station with a 16-inch diameter force main. This would increase the flow capacity of the lift station from 1,200 gpm to 1,600 gpm which is enough to serve future development for the entire planning period. Additionally, when the Northwest Lift Station eventually reaches its capacity and needs to be replaced, the proposed 16-inch force main can be utilized as a part of the replacement project which significantly extends the design life of this project.

Table 6-11: Proposed Lift Station Projects

Project	Description	Length (ft)	Flow Capacity (gpm)	Construction Priority		Current Year (2025) Cost Estimate
				Begin Planning	Begin Construction	
Northwest Lift Station - Upsize Force Main	Upsize 6" diameter force main to 16"	2,380	1,600	2027	2028	$194,363.06

The existing WWTF was predicted to exceed its capacity in 2025. The City plans to correct this with the construction of a new WWTF as detailed in the 2022 Wastewater Treatment Plant Study by AQUA Engineering. The new WWTF is proposed to have the capacities shown in Table 6-12 and is expected to begin construction in 2026. The cost estimate was provided by AQUA Engineering.

Table 6-12: Proposed Wastewater Treatment Facility

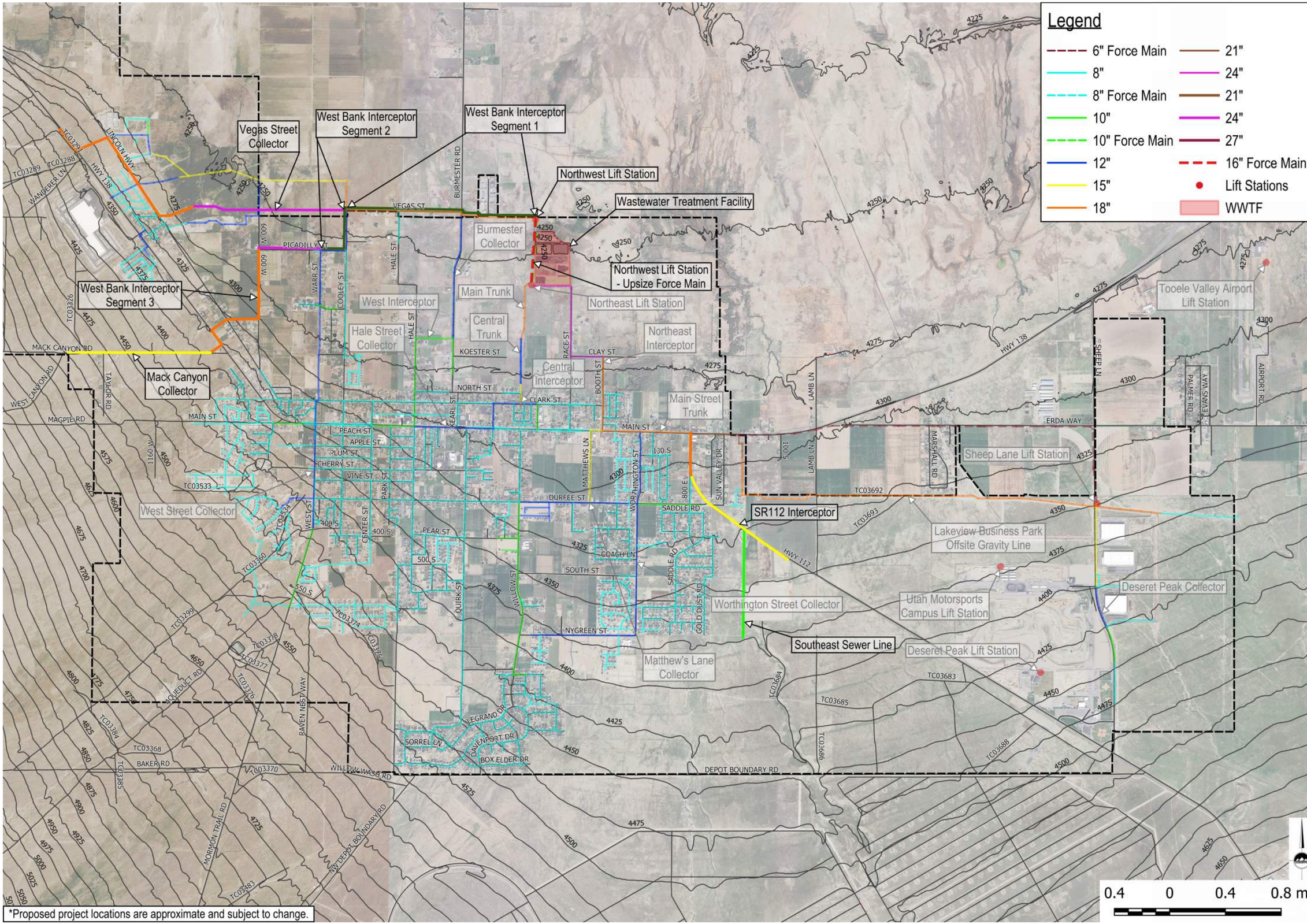
Project	Capacity		Construction Priority		Current Year (2025) Cost Estimate
	Average Day Flow (MGD)	Peak Hour Flow (MGD)	Begin Planning	Begin Construction	
Proposed Wastewater Treatment Facility	3.0	7.0	N/A [1]	2026	$48,402,175.15

[1] *The City has already begun the design process.*

As mentioned in Section 3.1.5, the City also plans to expand the Public Works site to add a shop area, expected to begin construction in 2035. The estimated cost is $1.86 million and will be split evenly between the drinking water and wastewater utility.

6.1.6 Methods of Financing

Each project will be funded to the extent possible through impact fees. The portion of each project not eligible for impact fees may be funded through grants, loans, developer dedications, or reserves in the Sewer Fund.



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GRANTSVILLE CFP, IFFP, AND IFA

GRANTSVILLE, UTAH

PROPOSED WASTEWATER SYSTEM

PROJECT NUMBER	PRINT DATE
11637	2026-04-02
PROJECT MANAGER	DESIGNED BY
R. ROUSSELLE	C. DUNKEL

FIG 6-2

6.2 Impact Fee Analysis

6.2.1 Existing Facilities

Grantsville City's existing wastewater facilities which have excess capacity to serve future development are listed in Table 6-14. Also shown are the historic construction costs for each project as well as the total and excess capacities which were discussed in Section 6.1.3. Proportionate shares were calculated by dividing the anticipated flow due to growth in the planning period by the total capacity. As discussed in Section 6.1.3, the City's existing minor gravity sewer lines also have excess capacity to accommodate future growth and are considered to be a whole system which benefits both existing and future development. Therefore, the proportionate share for minor sewer lines was calculated based on the proportion of future ERCs expected to be served within the planning period, as shown in Table 6-13. The existing Public Works Building will utilize this same proportionate share as it is also considered beneficial to both existing and future development. Another item eligible to charge a buy-in cost for is the interest payments amount due within the planning period for the Sewer Revenue Bond (Section 6.1.1). This loan was used to fund past improvements to the collection system which benefit existing and future development, so the buy-in cost was calculated utilizing the same proportionate share as the minor sewer lines. The proportionate share for each existing facility was multiplied by the historic construction cost in order to calculate the impact fee eligible buy-in costs (Table 6-14). The City has elected to not charge a buy-in cost for the WWTF, even though it technically has excess capacity for typical wastewater treatment but not for nutrients. The WWTF is needed for nutrient removal and will be replaced within the planning period.

Table 6-13: Existing Wastewater Facilities Proportionate Share

Facility	Total ERCs (Year 2035)	Increase in ERCs (Year 2025-2035)	Proportionate Share
Minor Sewer Lines, Public Works Building, and Sewer Revenue Bond Interest Payments	9,300	2,564	27.6%

Table 6-14: Wastewater Buy-In Costs

Facility	Cost [1]	Flow Capacity (gpm)	Planning Period (2025-2035) Flow (gpm)	Proportionate Share	Buy-In Cost
Main Trunk	N/A	1,252	115	9.18%	$0.00
Central Trunk	N/A	1,113	115	10.33%	$0.00
Central Interceptor	N/A	556	87	15.63%	$0.00
Hale Street Collector	$1,060,736.07	768	76	9.90%	$105,001.07
Northwest Interceptor	$749,254.71	1,289	508	39.4%	$230,953.43 [4]
Burmester Collector	$226,236.98	556	97	17.43%	$39,434.93
Northeast Interceptor	$1,083,869.01	2,186	743	34.0%	$368,428.33
Matthew's Lane Collector	$2,039,059.07	564	73	12.93%	$263,700.72
Worthington Street Collector	$193,636.00	556	20	3.59%	$6,959.24
Main Street Trunk	$653,987.65	1,664	444	26.7%	$174,475.51
Lakeview Business Park Offsite Gravity Line	$3,398,037.81	912	136	14.9%	$506,977.22
Deseret Peak Collector	$190,270.90	542	125	23.1%	$43,921.05
West Street Collector	$1,324,885.24	1,300	186	14.31%	$189,632.13
Northwest Lift Station	$500,000.00	1,200	419	34.9%	$174,583.33
Northeast Lift Station	$400,000.00	2,170	743	34.2%	$136,958.53
Wastewater Treatment Facility	$5,559,563.47	1.50 (MGD)	0.490 (MGD)	32.64%	$0.00 [2]
Minor Gravity Sewer Lines	$10,053,823.31	N/A	N/A	27.6%	$2,771,828.28
Public Works Building	$222,483.40 [3]	N/A	N/A	27.6%	$61,338.43
Sewer Revenue Bond Interest Payments (2025-2035)	$628,057.00	N/A	N/A	27.6%	$173,154.64
Total					**$5,247,346.84**

[1] The costs shown are historical costs which may include initial construction, acquiring land, improvements, planning, and engineering.
[2] The City is not charging a buy-in cost for the WWTF because it is expected to be replaced.
[3] The cost shown for the Public Works Building is the cost associated with wastewater facilities.
[4] The Northwest Interceptor remains in place and will be used for future development. The West Street Collector and Cooley Street are expected to be diverted to the West Bank Interceptor which frees up capacity in the Northwest Interceptor.

6.2.2 System Improvements

The wastewater system improvements needed to accommodate future development within the planning period were determined in Section 6.1.5. A proportionate share for each of these projects was calculated by estimating the flow to each facility contributed by the anticipated planning period development, which was divided by the total flow capacity of the facility (see Table 6-15). The City does not charge impact fees for projects which are expected to be constructed by developers so they have a proportionate share of 0%. If it is determined the City will pay for any portion of these projects as the development agreements are finalized then this plan should be amended to include the project. The Public Works Improvements project was determined to be beneficial to both existing and future development, so the proportionate share

was calculated based on the ERCs expected to be served within the planning period as shown in Table 6-16.

Table 6-15: Proposed Wastewater Projects Proportionate Share

Project	Flow Capacity (gpm)	Planning Period (2025-2035) Flow (gpm)	Proportionate Share
SR112 Interceptor	825 and 1,342	108	0% [4]
West Bank Interceptor Segment 1	6,252	305	4.9% [5]
West Bank Interceptor Segment 2	6,252	305	4.9% [5]
West Bank Interceptor Segment 3	2,631and 2,776	305	0% [4]
Southeast Sewer Line	875	36.1	0% [4]
Vegas Street Collector	1,053 and 2,267	0, and 0	0% [4]
Northwest Lift Station - Upsize Force Main	400 [2]	154.4 [3]	100%
Proposed Wastewater Treatment Facility	3.0 (MGD)	0.38 (MGD)	12.8%

[1] A proportionate share was calculated for each diameter of the project, which was scaled based on the length of each stretch then added together.
[2] The increase in flow capacity resulting from the proposed project upgrades is shown as opposed to the total capacity of the facility.
[3] The flow shown is the planning period flow exceeding the existing capacity of the facility before the proposed project upgrades.
[4] The proportionate share is 0% because the project is expected be constructed by developers.

Table 6-16: Proposed Public Works Improvements Proportionate Share

Project	Total ERCs (Year 2035)	Increase in ERCs (Year 2025-2035)	Proportionate Share
Public Works Improvements	9,300	2,564	27.6%

The cost of each project which is attributed to new development in the planning period, and therefore eligible for impact fees, was calculated by multiplying the total project cost by the proportionate share as shown in Table 6-17. In order to account for the time-price differential inherent with future costs, the current year cost estimates were inflated at a rate of 3.5% to the anticipated construction year.

Table 6-17: Wastewater Impact Fee Eligible Costs

Project	Construction Year	Current Year (2025) Cost Estimate	Construction Year Cost Estimate	Proportionate Share	Impact Fee Eligible Cost
SR112 Interceptor	2027	$2,988,835.56	$3,201,715.37	0% [2]	$0.00
West Bank Interceptor Segment 1	2027	$376,287.40	$403,088.47	8.8% [4]	$35,294.63
West Bank Interceptor Segment 2	2027	$39,832.00	$42,669.03	13.5% [4]	$5,756.82
West Bank Interceptor Segment 3	2027	$3,927,403.66	$4,207,132.99	0% [2]	$0.00
Southeast Sewer Line	2027	$1,564,982.00	$1,676,447.84	0% [2]	$0.00
Vegas Street Collector	2035	$5,790,294.14	$8,167,781.74	0.0%	$0.00
Northwest Lift Station - Upsize Force Main	2028	$194,363.06	$215,493.80	100%	$215,493.80
Proposed Wastewater Treatment Facility	2026	$48,402,175.15 [3]	$48,402,175.15	12.8%	$6,205,158.85
Public Works Improvements	2035	$1,318,982.50 [1]	$1,860,555.08	27.6%	$512,953.03
Total		**$64,603,155.47**	**$68,177,059.48**		**$6,974,657.14**

[1] The cost shown for the Public Works Improvements project is half of the total cost estimate because this project cost will be split evenly between the wastewater and drinking water utilities.

[2] The proportionate share is 0% because the project is expected be constructed by developers.

[3] Proposed WWTF is 2026 cost estimate.

[4] The proportionate share within the planning period for Segment 1 is calculated by dividing planning period ERCs (1,544 ERCs) by upsize capacity [36-inch capacity (26,682 ERCs) - Deseret minimum diameter (9,050 ERCs)]=17,632 ERCs.
The proportionate share within the planning period for Segment 2 is calculated by dividing planning period ERCs (1,544 ERCs) by upsize capacity [36-inch capacity (15,008 ERCs) - Deseret minimum diameter (3,565 ERCs)]=11,443 ERCs.
The costs shown for West Bank Interceptor Segment 1 and 2 in the table are upsize costs only.

In addition to impact fee eligible project costs, planning costs can also be included in the calculation of impact fees. Due to the uncertainty that comes with long-term development projections, this plan is expected to be amended annually. The future professional expenses expected to occur within the planning period were inflated at a 3.5% rate as shown in Table 6-18.

Table 6-18: Wastewater Professional Expenses

Year	Cost
2025	$8,300.00
2026	$8,590.50
2027	$8,891.17
2028	$9,202.36
2029	$9,524.44
2030	$9,857.80
2031	$10,202.82
2032	$10,559.92
2033	$10,929.52
2034	$11,312.05
2035	$11,707.97
Total	**$109,078.53**

6.2.3 Methods of Financing

As discussed in Section 6.1.6, the wastewater system improvements are expected to be funded through impact fees, loans, developer dedications, and Sewer Fund reserves. The City received a $16,000,000 Utah Water Quality Board 30-year loan with a 0.75% interest rate and $160,000 loan origination fee. The City is also anticipating obtaining a private bond in the amount of $25,152,175.15 assumed to be a 30-year bond with a 5.052% interest rate, 1.5% cost of issuance, 0.5% bond insurance, and a $20,000 surety policy. The interest cost for this bond attributed to development within the planning period can be included in the impact fee calculation. Additionally, a portion of the engineering cost of the Wastewater Treatment Facility project will be funded through a $1 million bond with a 0% interest rate. This is a 20-year bond and has a $33,000 issuance fee along with a $10,000 loan origination fee. Table 6-19 shows the details of these bonds along with the impact fee eligible interest cost.

Table 6-19: Wastewater Future Debt Financing

Project - Loan or Bond	Proceeds	Par Amount [1]	Debt Service (Interest)	Debt Service (Principal + Interest)	Proportionate Share	Impact Fee Eligible Debt Service (Interest)
Proposed WWTF - Private Bond	$25,152,175.15	$25,675,218.65	$15,711,571.94	$41,386,790.59	12.8%	$2,014,223.52
Proposed WWTF - Engineering Loan	$1,000,000.00	$1,043,000.00	$0.00	$1,043,000.00	12.8%	$0.00
Proposed WWTF - Utah Water Quality Board Loan	$16,000,000.00	$16,160,000.00	$1,946,388.33	$18,106,388.33	12.8%	$249,526.98

[1] *Includes cost of issuance, bond insurance, and surety policy.*

6.2.4 Impact Fee Calculation

As shown in Table 6-20, impact fees to be charged per ERC for each project were calculated by dividing the impact fee eligible costs by the number of ERCs expected to be served within the planning period, determined from Table 2-3. The construction water and City rate connection types were excluded from this calculation because construction water is not served by wastewater facilities and the City does not charge themselves impact fees.

Table 6-20: Wastewater Impact Fee Calculation

Project	Impact Fee Eligible Cost	Planning Period (2025-2035) ERCs [1]	Cost per ERC
Buy-In Cost	$5,247,346.84	2,400	$2,186.39
West Bank Interceptor Segment 1	$35,294.63	2,400	$14.71
West Bank Interceptor Segment 2	$5,756.82	2,400	$2.40
West Bank Interceptor Segment 3	$0.00	2,400	$0.00
Vegas Street Collector	$0.00	2,400	$0.00
Northwest Lift Station - Upsize Force Main	$215,493.80	2,400	$89.79
Proposed Wastewater Treatment Facility	$6,205,158.85	2,400	$2,585.48
Proposed Wastewater Treatment Facility Debt Service (Interest)	$2,263,750.51	2,400	$943.23
Public Works Improvements	$512,953.03	2,400	$213.73
Professional Expenses	$109,078.53	2,400	$45.45
Total			**$6,081.18**

[1] Does not include Construction Water or City Rate ERCs.

The City charges impact fees to residential users based on their water meter size. A 3/4-inch water meter was determined to be equivalent to one ERC, and the remaining meter sizes were converted to ERCs based on the maximum flow rates from AWWA Manual M6, Table 5-3. Non-residential users are charged impact fees based on the number of fixture units in a development. A typical ERC was determined to have 24 fixture units as calculated in Appendix I. The results of these impact fee calculations are summarized in Table 6-21.

Table 6-21: Proposed Wastewater Maximum Allowable Impact Fees

Water Meter Size (inches)	Maximum Flow Rate (gpm)	ERCs	Impact Fee
3/4	25 [1]	1	$6,081.18
1	40 [1]	1.6	$9,729.89
1 1/2	50 [1]	2	$12,162.36
2	100 [1]	4	$24,324.72
3	200 [2]	8	$48,649.44
4	400 [2]	16	$97,298.89
6	800 [2]	32	$194,597.77
8	1,000 [2]	40	$243,247.22

[1] From AWWA M6 Table 5-3 Displacement Meters.
[2] From AWWA M6 Table 5-3 Electromagnetic and Ultrasonic Meter Type 1.

6.2.5 Impact Fee Cashflow

The anticipated impact fee revenues and expenses over the 10-year planning period are shown in Table 6-22. The expenses represent only what is attributable to planning period development

and include capital project costs, the expenditure of buy-in costs, and proposed bond payments. The impact fee cashflow (Table 6-23) estimates the end of year impact fee fund balance throughout the planning period by comparing the impact fee revenues, total expenses, and interest income calculated at 3.0% of the fund balance.

6.2.6 Impact Fee Credits

The City currently has procedures in place for credits, appeals, and exemptions of impact fees, refer to Appendix B for the City's current impact fee ordinance.

Table 6-22: Wastewater Impact Fee Revenues and Expenses

Year	ERCs [1]	Annual ERC Increase [1]	Impact Fee Revenues	Impact Fee Eligible Project Costs	Bond Payments	Bond Proceeds	Buy-In Cost Expenses	Professional Expenses	Total Expenses
2025	6,251	-	-	-	-	$128,200.00	-	($8,300.00)	$119,900.00
2026	6,425	174	$1,058,125.39	($6,205,158.85)	($6,410.00)	$3,224,508.85	($380,432.65)	($8,590.50)	($3,376,083.15)
2027	6,605	180	$1,094,612.48	($41,051.45)	($381,801.79)	$2,051,200.00	($393,551.01)	($8,891.17)	$1,225,904.58
2028	6,834	229	$1,392,590.32	($215,493.80)	($298,410.34)	-	($500,684.34)	($9,202.36)	($1,023,790.84)
2029	7,062	228	$1,386,509.14	-	($298,410.34)	-	($498,497.95)	($9,524.44)	($806,432.73)
2030	7,305	243	$1,477,726.84	-	($298,410.34)	-	($531,293.87)	($9,857.80)	($839,562.00)
2031	7,551	246	$1,495,970.38	-	($298,410.34)	-	($537,853.05)	($10,202.82)	($846,466.21)
2032	7,816	265	$1,611,512.81	-	($298,410.34)	-	($579,394.55)	($10,559.92)	($888,364.80)
2033	8,083	267	$1,623,675.17	-	($298,410.34)	-	($583,767.34)	($10,929.52)	($893,107.19)
2034	8,362	279	$1,696,649.34	-	($298,410.34)	-	($610,004.07)	($11,312.05)	($919,726.45)
2035	8,651	289	$1,757,461.14	($512,953.03)	($298,410.34)	-	($631,868.02)	($11,707.97)	($1,454,939.36)
Total		**2,400**	**$14,594,833.02**	**($6,974,657.14)**			**($5,247,346.84)**	**($109,078.53)**	**($9,702,668.13)**

[1] *Does not include Construction Water or City Rate ERCs.*

Table 6-23: Wastewater Impact Fee Cashflow

Year	Impact Fee Revenues	Total Expenses	Interest Income	End of Year Balance
2025	-	$119,900.00	-	$352,296.11
2026	$1,058,125.39	($3,376,083.15)	$10,568.88	($1,955,092.76)
2027	$1,094,612.48	$1,225,904.58	-	$365,424.30
2028	$1,392,590.32	($1,023,790.84)	$10,962.73	$745,186.51
2029	$1,386,509.14	($806,432.73)	$22,355.60	$1,347,618.51
2030	$1,477,726.84	($839,562.00)	$40,428.56	$2,026,211.91
2031	$1,495,970.38	($846,466.21)	$60,786.36	$2,736,502.45
2032	$1,611,512.81	($888,364.80)	$82,095.07	$3,541,745.53
2033	$1,623,675.17	($893,107.19)	$106,252.37	$4,378,565.89
2034	$1,696,649.34	($919,726.45)	$131,356.98	$5,286,845.75
2035	$1,757,461.14	($1,454,939.36)	$158,605.37	$5,747,972.91

Section 7 Water Rights Acquisition

7.1 Capital Facilities Plan and Impact Fee Facilities Plan

7.1.1 Inventory of Existing Facilities

Grantsville City currently holds an estimated 10,286.86 acre-feet of municipal use water rights as shown in Appendix K. The historic cost to purchase these water rights totals $38,582,861.42, which represents all available records of water rights purchases but does not account for the full quantity of water rights held by the City. There is no existing long-term debt associated with water rights acquisition.

Most of the City's water rights have been quantified through the Change Application process, and these water rights total 5,787.39 ac-ft. A few of the City's water rights (15-376,15-516, and 15-1699) were originally established as municipal flow rights that total 6.215 cfs, and therefore have an estimated maximum of 4,499.46 ac-ft.

The majority of the City's water rights (totaling 5,775.39 ac-ft) have been acquired for new development since 2000, including water rights that have been dedicated to the City for completed developments, water rights that have been dedicated to the City for pending or planned developments, water rights that have been banked with the City for future development under Water Right Banking Agreements, and water rights that have been purchased by the City using water supply impact fee funds (i.e., "fee in lieu" funds).

Four of the City's water rights (15-376, 15-516, 15-1699, and 15-1060) were originally established by the City for municipal and irrigation purposes. These water rights have an estimated maximum of 4,511.46 ac-ft. As of 2000, which was prior to developers being required to dedicate water rights to the City per City Code, the City had a reported use of 896.43 ac-ft, as shown in the *Division of Water Rights Public Water Supplier Information* website. The remaining 3,615.03 ac-ft represents the maximum "available" water; i.e., water that the City may be able to use to support new development. It is questionable if the City will be able to fully develop this water as it may require the City to pump the full flow continuously, which may not be feasible. Using a "buffer" of 80%, the City estimates that it may be able to develop 2,892.02 ac-ft of the "available" water rights. This "available" water has been committed to future commercial and residential developments, including the Lakeview Business Park and the Deseret Development.

The estimated total of the City's water rights is 9,563.84 ac-ft (which is the sum of 5,775.39 ac-ft of water rights acquired for development, plus 896.43 ac-ft of water used to serve the City prior to dedications, plus 2,892.02 ac-ft of available water under the City's original water rights).

Tooele Valley is closed to water rights appropriations except for small amounts of shallow ground water that would otherwise flow to the Great Salt Lake. Therefore, the City can only acquire additional water rights through developer contributions or by purchasing existing water rights and, if needed, filing change applications to convert them to municipal use.

7.1.2 Level of Service

The level of service standards for water rights acquisition are determined based on the drinking water levels of service discussed in Section 3.1.2. The indoor water use level of service was determined from the drinking water indoor average day demand, which was calculated from the City's water use data. The outdoor use level of service was determined based on state standards and assuming an irrigation efficiency of 60%. These levels of service are shown in Table 7-1. For the purposes of estimating city-wide water rights demands, it is assumed there is an average of 0.12 irrigated acres per ERC based on an analysis of residential lots in Grantsville and estimates made by nearby cities.

Table 7-1: Water Rights Level of Service

Parameter	Level of Service
Indoor Use	0.218 acre-feet/year/ERC
Outdoor Use	3.33 acre-feet/year/irrigated acre

7.1.3 Capacity of Existing Facilities

The capacity of the City's held water rights to serve future development is difficult to accurately estimate. Based on the estimated quantity of the City's water rights and the level of service, an excess capacity of unused water rights can be estimated as shown in
Table 7-2. The actual quantity of water rights the City has available for future development is less than the amount shown in Appendix K. One reason for this, as discussed in Section 7.1.1, is the total quantity of water rights is expected to be less than what is estimated to be held. Additionally, some of the water rights held by the City have been allocated to developments yet to be built or have been banked for future development, which further reduces the excess

capacity of existing water rights. Lastly, in order to calculate the city-wide water demand the broad assumption of 0.12 irrigated acres per ERC was made, which most likely does not reflect the true outdoor water demand. Therefore, the estimated excess capacity shown in Table 7-2 should be considered a high-level estimate which overestimates the actual excess quantity of water rights the City currently holds. Furthermore, whatever excess of water rights does exist needs to be maintained in order to cover existing platted subdivisions and other such commitments while accounting for the uncertainty in quantity, possible reductions and cuts due to ongoing droughts, and being able to vary diversion through the year rather than a presumed constant pumping. For the purposes of this plan there is considered to be no excess capacity of water rights available to accommodate future growth.

Table 7-2: Estimated Capacity of Water Rights

Current (2025) ERCs	Water Demand				Existing Water Rights (ac-ft)	Excess / (Deficit) (ac-ft)
	Indoor Use (ac-ft)	Outdoor Use (ac-ft)	Committed to Future Development	Total (ac-ft)		
6,736	1,471.33	2,694.40	2,892.02	7,057.75	9,563.84	2,506.09

7.1.4 Demands of Future Development

The future water rights demand of development anticipated in the planning period (Table 7-3) was estimated based on the demographics calculated in Section 2.7 and the level of service from Section 7.1.2. Due to the reasons discussed in Section 7.1.3, these results should be considered high-level estimates, serving as a general guideline for the City's planning purposes.

Table 7-3: Future Water Rights Requirements

Year	ERCs	Water Demand		
		Indoor Use (ac-ft)	Outdoor Use (ac-ft)	Total (ac-ft)
2025	6,736	1,471.33	2,694.40	4,165.73
2026	6,939	1,515.67	2,775.60	4,291.27
2027	7,136	1,558.70	2,854.40	4,413.10
2028	7,383	1,612.65	2,953.20	4,565.85
2029	7,617	1,663.77	3,046.80	4,710.57
2030	7,888	1,722.96	3,155.20	4,878.16
2031	8,141	1,778.22	3,256.40	5,034.62
2032	8,424	1,840.04	3,369.60	5,209.64
2033	8,708	1,902.07	3,483.20	5,385.27
2034	9,004	1,966.73	3,601.60	5,568.33
2035	9,300	2,031.38	3,720.00	5,751.38

7.1.5 Proposed Projects

The City does not need to acquire the full quantity of water rights anticipated to be required by future development because it is expected many of these developments will acquire the water rights themselves and then transfer them to the City. The City requires large developments to contribute the water rights themselves, but smaller developments have the option to pay an impact fee in lieu of contributing water rights. Therefore, the City only needs to acquire the quantity of water rights anticipated to be paid for by impact fees, but this quantity is not able to be accurately predicted. Additionally, since it is desired to maintain an excess of water rights, as discussed in Section 7.1.3, and due to the increasingly limited availability of water rights for sale in the Tooele Valley, the City should plan to purchase any water rights listed for a reasonable price as soon as they become available. So, there are no specifically proposed water rights acquisition projects, but instead there is the ongoing consideration that the City should continue to seek out available water rights to purchase. It is expected water rights will typically cost around $29,000 per acre-foot, based on recent listings for water rights in the Tooele Valley and recent purchases made by the City.

7.1.6 Methods of Financing

The City expects to finance water rights acquisitions solely through developer contributions and impact fees.

7.2 Impact Fee Analysis

7.2.1 Existing Facilities

As discussed in Section 7.1.3, for the purposes of this plan there is considered to be no excess capacity of water rights and therefore no buy-in costs to be charged.

7.2.2 System Improvements

There is no specific system improvements proposed for water rights acquisition, as mentioned in Section 7.1.5. The City will purchase additional water rights as they become available.

7.2.3 Methods of Financing

The City will finance water rights purchases with impact fees, and other demands for water rights will be met through developer contributions.

7.2.4 Impact Fee Calculation

As discussed in Section 7.1.5, the City requires large developments to contribute the required quantity of water rights themselves, but smaller developments have the option to pay an impact fee in lieu of water rights. The impact fee is calculated as the required quantity of water rights multiplied by $29,000 per acre-foot (the current average cost of water rights in the Tooele Valley). The required quantity of water rights is determined based on various conditions of the development, and are calculated separately for indoor and outdoor water usage.

7.2.4.1 Indoor Use

The indoor use water right quantity for single family residential and multi-unit residential connections was determined by multiplying the indoor level of service (Table 7-1) times the equivalent ERCs per unit (Table 2-2). The indoor quantity for non-residential development is based on fixture units and was calculated using 24 fixture units per ERC (Appendix E). The required water rights quantity and the equivalent impact fees for each development type are summarized in Table 7-4.

Table 7-4: Indoor Use Water Rights Requirements

Land Use	Water Right Quantity (ac-ft)	Impact Fee	Unit
Single Family Residential	0.218	$6,322.00	per Dwelling Unit
Multi-Unit Residential	0.120	$3,480.00	per Dwelling Unit
Non-Residential	0.00908	$263.32	per fixture unit

7.2.4.2 Outdoor Use

Additional land use classifications were established for the calculation of required outdoor water rights. Category 1 includes single family homes only, while Category 2 covers all other types of development not included in Category 1. Water rights for Category 1 are calculated based on total lot size assuming that on average 64% of the lot area will be irrigated (see Appendix K). Additionally, it was found that as lot sizes increase above an acre the irrigated area does not increase proportionally. Therefore, the lot size for Category 1 is capped at 1 acre, so any lots larger than this would still use 1 acre in the calculation. The calculation for Category 2 is based directly on irrigated area. The formulas for the required water rights quantity (in ac-ft) are as follows:

- Category 1 = (lot size, acres) * (0.64) * (3.33 ac-ft/irr. ac)
- Category 2 = (irrigated area, acres) * (3.33 ac-ft/irr. ac)

The outdoor water rights requirements for typical residential lot sizes, without waterwise landscaping, are listed in Table 7-5.

Table 7-5: Outdoor Use Requirements (No Waterwise Landscaping)

Category 1 Lot Size	Water Right Quantity (ac-ft)	Impact Fee
7,000 sq ft	0.34	$9,931.90
8,000 sq ft	0.39	$11,350.74
10,000 sq ft	0.49	$14,188.43
14,000 sq ft	0.68	$19,863.80
1/2 acre	1.07	$30,902.40
2/3 acre	1.42	$41,203.20
3/4 acre	1.60	$46,353.60
1.0 acre	2.13	$61,804.80
> 1.0 acre	2.13	$61,804.80

The outdoor water rights impact fee for Category 2 developments with no waterwise landscaping is calculated as follows:

- **<u>Category 2</u> = (irrigated area, acres) * (3.33 ac-ft/irr. ac) * $29,000**

7.2.4.3 Waterwise Landscaping

In order to promote water conservation efforts for future development, the City allows a reduction in the required outdoor use water rights for developments which implement waterwise landscaping. The definition of waterwise landscaping is intended as "landscaping for water conservation with (1) no more than 35% of the total landscaped area planted in lawn, (2) planting beds and landscape plants watered with a drip-irrigation system, (3) watering zones separate for lawn and landscape plants, (4) back flow preventer required (5) and landscape plants should be waterwise, adapted to our local climate, able to thrive on less water." Refer to the Grantsville City Municipal Code and Land Use Code for the most current version of the waterwise landscaping definition. To qualify for the waterwise landscaping reduction, the waterwise landscaping and irrigation must be installed entirely during initial construction. Due to the challenges associated with monitoring and enforcing the requirements in residential backyards, the City only allows Category 1 development to receive a reduction for waterwise landscaping in the front yard. For purposes of calculating water rights requirements, the definition of front yard is intended to be "a yard extending across the full width of a parcel measured perpendicularly from the front boundary of the parcel to the front wall(s) of the main building situated on the parcel. For corner lots the front yard would include the side yard to the privacy fence, assumed to be located 5 feet forward from the back of the house." See Appendix K for a sketch depicting this definition, and refer to the Grantsville City Municipal Code and Land Use Code for the most current definition. Category 2 development can choose to receive a waterwise landscaping reduction for landscaping in the front yard only or the entire irrigated area. The outdoor use level of service is reduced from 3.33 to 2.28 acre-feet/year/irrigated acre for waterwise landscaping (see Appendix K for calculations). It was estimated the average residential front yard irrigated area in Grantsville is 18% of the total lot size. The lot size for Category 1 is again capped at 1 acre as done for the no waterwise calculation. The formulas to calculate outdoor use water rights for waterwise landscaping in the front yard only are:

- <u>Category 1</u> = (lot size, acres) * [(0.18) * (2.28 ac-ft/irr. ac) + (0.46) * (3.33 ac-ft/irr. ac)]
- <u>Category 2</u> = (front yard irrigated area, acres) * (2.28 ac-ft/irr. ac) + (remaining irrigated area, acres) * (3.33 ac-ft/irr. ac)

The outdoor water rights requirements for typical residential lot sizes, for waterwise landscaping in the front yard only, are given in Table 7-6.

Table 7-6: Outdoor Use Requirements (Waterwise Landscaping Front Yard Only)

Category 1 Lot Size	Water Right Quantity (ac-ft)	Impact Fee
7,000 sq ft	0.31	$9,051.12
8,000 sq ft	0.36	$10,344.13
10,000 sq ft	0.45	$12,930.17
14,000 sq ft	0.62	$18,102.23
1/2 acre	0.97	$28,161.90
2/3 acre	1.29	$37,549.20
3/4 acre	1.46	$42,242.85
1.0 acre	1.94	$56,323.80
> 1.0 acre	1.94	$56,323.80

The outdoor water rights impact fee for Category 2 developments with waterwise landscaping in the front yard only is calculated as follows:

- **<u>Category 2</u> = (front yard irrigated area, acres) * (2.28 ac-ft/irr. ac) + (remaining irrigated area, acres) * (3.33 ac-ft/irr. ac) * $29,000**

Category 1 developments utilizing waterwise landscaping for the entire lot would still use the front yard only formula above. Category 2 developments which are waterwise landscaping the entire lot calculate outdoor use water rights quantity with the following formula:

- <u>Category 2</u> = (irrigated area, acres) * (2.28 ac-ft/irr. ac)

The outdoor water rights impact fee for Category 2 developments with waterwise landscaping on the entire lot is calculated as follows:

- **<u>Category 2</u> = (irrigated area, acres) * (2.28 ac-ft/irr. ac) * $29,000**

A summary of all the water rights quantity formulas for each land use and landscaping condition discussed above is shown in Table 7-7.

Table 7-7: Summary of Outdoor Use Water Rights Requirements

Land Use	Water Right Quantity (ac-ft)
No Waterwise Landscaping	
Category 1	= (lot size[1], acres) * (0.64) * (3.33 ac-ft/irr. ac)
Category 2	= (irrigated area, acres) * (3.33 ac-ft/irr. ac)
Waterwise Landscape Front Yard Only	
Category 1	= (lot size[1], acres) * [(0.18) * (2.28 ac-ft/irr. ac) + (0.46) * (3.33 ac-ft/irr. ac)]
Category 2	= (front yard irrigated area, acres) * (2.28 ac-ft/irr. ac) + (remaining irrigated area, acres) * (3.33 ac-ft/irr. ac)
Waterwise Landscape Entire Lot	
Category 1	Reduction not allowed (use front yard only formula)
Category 2	= (irrigated area, acres) * (2.28 ac-ft/irr. ac)

[1] Lot size capped at 1 acre.

7.2.4.4 Example Calculations

For example, the impact fee for a single-family development on a 2-acre lot with waterwise landscaping would be calculated as follows:

- Indoor use quantity = 0.218 ac-ft
- Outdoor use quantity = (1 ac) * [(0.18) * (2.28 ac-ft/irr. ac) + (0.46) * (3.33 ac-ft/irr. ac)] = 1.9422 ac-ft
- Total quantity = (0.218 ac-ft) + (1.9422 ac-ft) = 2.16 ac-ft
- Total impact fee = (2.16 ac-ft) * $29,000 = $62,640

For an apartment building with 15 units, 1/8-acre irrigated area, and waterwise landscaping for the entire lot, the impact fee is calculated as:

- Indoor use quantity = (15 units) * (0.120 ac-ft/unit) = 1.800 ac-ft
- Outdoor use quantity = (1/8 ac) * (2.28 ac-ft/irr. ac) = 0.285 ac-ft
- Total quantity = (1.800 ac-ft) + (0.285 ac-ft) = 2.09 ac-ft
- Total impact fee = (2.09 ac-ft) * $29,000 = $60,610

The impact fee for a commercial development with 50 fixture units that will be irrigating 2,000 square feet and will not utilize waterwise landscaping would be calculated as follows:

- Indoor use quantity = (50 fixture units) * (0.00908 ac-ft/fixture unit) = 0.454 ac-ft
- Outdoor use quantity = (2,000 sq ft) / (43,560 sq ft/ac) * (3.33 ac-ft/irr. ac) = 0.153 ac-ft
- Total quantity = (0.454 ac-ft) + (0.153 ac-ft) = 0.61 ac-ft
- Total impact fee = (0.61 ac-ft) * $29,000 = $17,690

7.2.5 Impact Fee Credits

Water rights can be transferred to the City in lieu of paying the impact fees. The quantity to be transferred is calculated as discussed in Section 7.2.4. The water rights required must be transferred to City as 100% owner. If the quantity of water rights required is only a portion of the total right pledged, the City must be identified as the owner of the required portion, or the required portion must be segregated from the base right and transferred to City as 100% owner. Additionally, the water rights transferred to cover the indoor use requirement must be municipal use rights or change applications prepared to convert water rights to municipal rights. For the outdoor use requirement, municipal use water rights, change applications prepared to convert water rights to municipal rights, or Grantsville Irrigation Co. shares are accepted by the City. Refer to the Grantsville City Municipal Code and Land Use Code for the requirements to transfer Grantsville Irrigation Co. shares. The City currently has procedures in place for credits, appeals, and exemptions of impact fees, see Appendix B for the City's current impact fee ordinance.

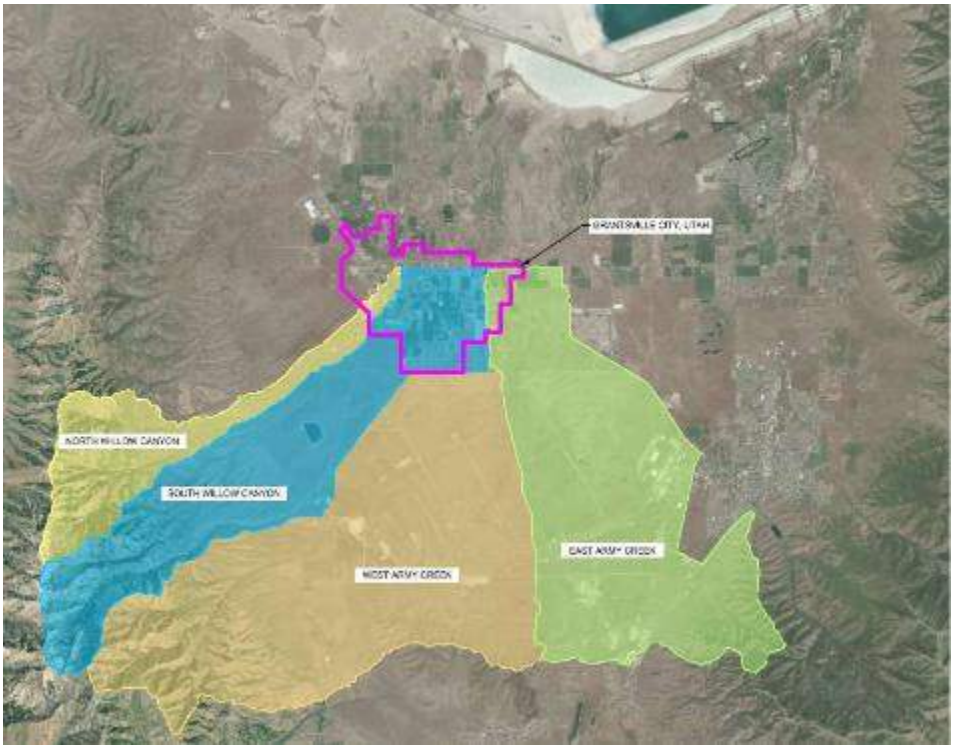
Section 8 Storm Drainage

8.1 Capital Facilities Plan and Impact Fee Facilities Plan

8.1.1 Inventory of Existing Facilities

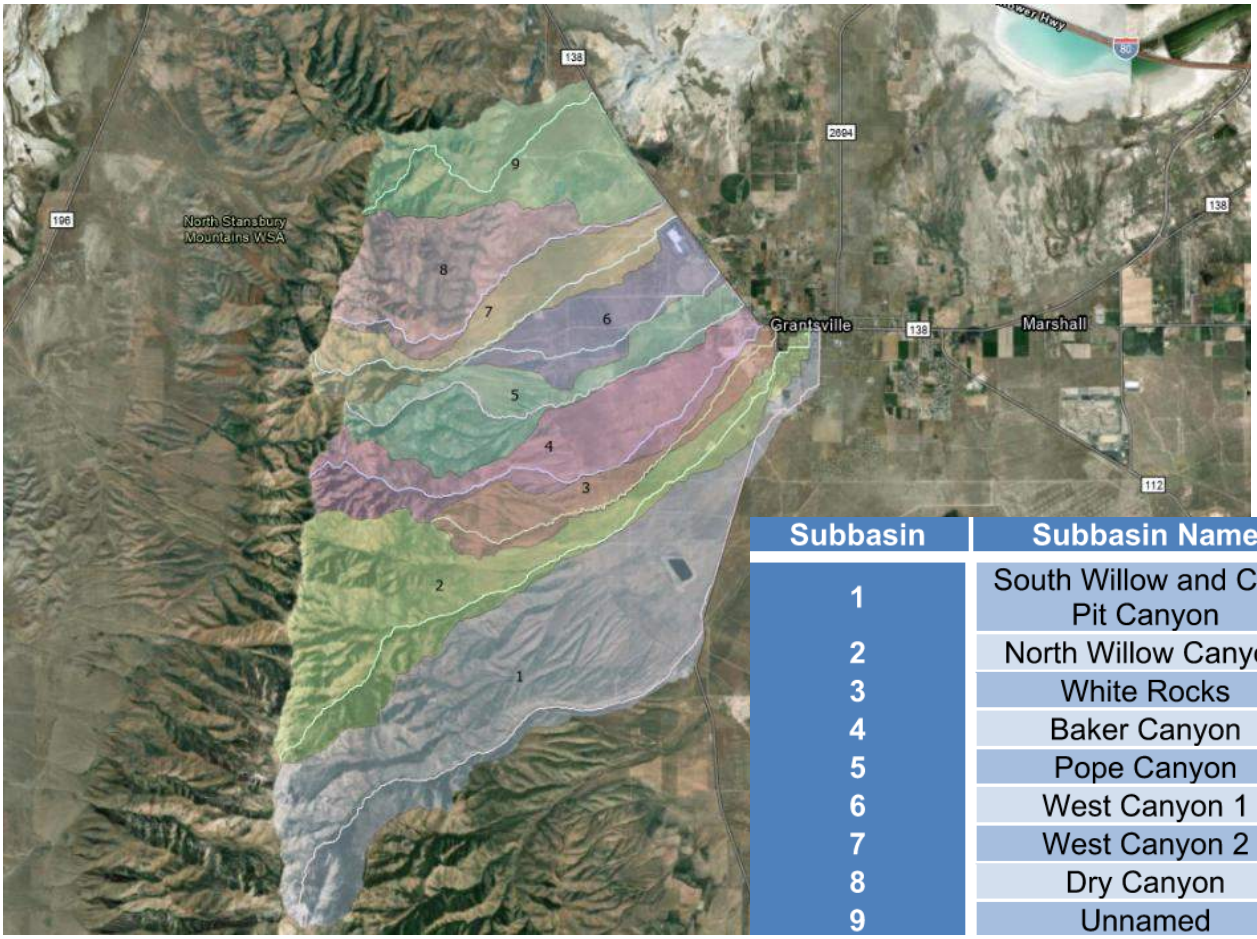
Grantsville City is situated at the base of the Stansbury Mountains and about six (6) miles south of the Great Salt Lake. The terrain of the City slopes gently northeasterly closer to the Stansbury Mountains and then northerly for the remainder of the City. The watersheds surrounding the City are shown in Figure 8-1 and Figure 8-2.

Figure 8-1: Existing Grantsville City Watersheds (Four Major)



Source: Figure 2-1 from Grantsville City FEMA BRIC Flood Protection Scoping Study dated February 6, 2024 by Jones & DeMille Engineering

Figure 8-2: Existing Grantsville City Watersheds (West Bank Area)

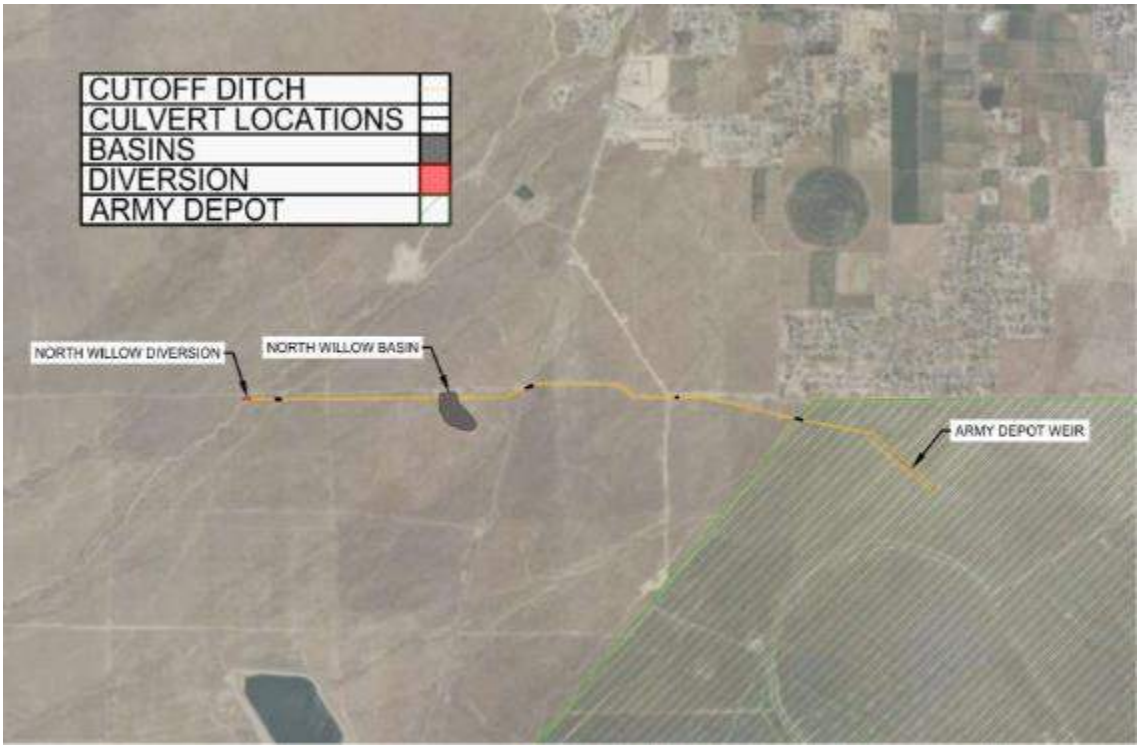


Subbasin	Subbasin Name
1	South Willow and Coal Pit Canyon
2	North Willow Canyon
3	White Rocks
4	Baker Canyon
5	Pope Canyon
6	West Canyon 1
7	West Canyon 2
8	Dry Canyon
9	Unnamed

Source: Figures 1 and 2 of 2024 Final Draft Grantsville West Bank Development Stormwater Master Plan Report by Jones & DeMille Engineering.

Tooele County has constructed flood control facilities, consisting of debris/detention basins and a cut-off ditch, which are located just south of the City (Figure 8-3).

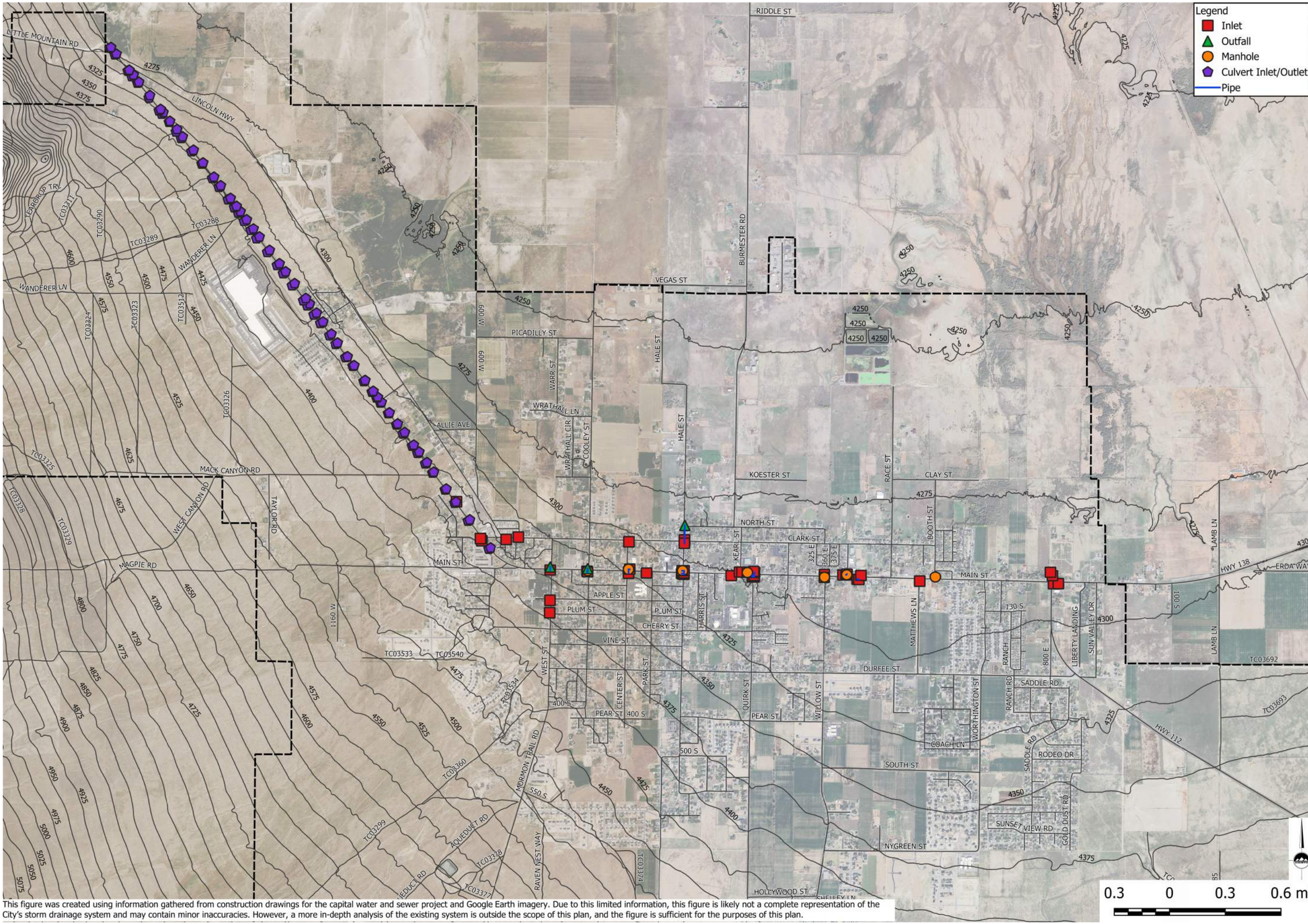
Figure 8-3: Existing Flood Protection Infrastructures



Source: Figure 4-1 from Grantsville City FEMA BRIC Flood Protection Scoping Study dated February 6, 2024 by Jones & DeMille Engineering

These facilities intercept runoff from the North Willow, South Willow Canyon, and West Army Creek and discharge east of Grantsville into an existing natural drainage. Also south of the City is the existing Grantsville Irrigation Company Reservoir, which collects the majority of flows from the South Willow Canyon and discharges any overflow into the County's flood control facilities. Grantsville City's storm drainage system consists of gutters, grates, detention/retention ponds, storm inlets, pipes, and culverts. There are upwards of 50 culverts crossing SR-138 ranging from corrugated metal pipe to an 8-foot wide by 4-foot-tall concrete box culvert. The main drainage system within the City is located mostly along Main Street and Clark Street as shown in Figure 8-4. The City does not currently have costs of past storm drain projects, therefore historical construction costs have not been listed.

The City has constructed the Clark Street Storm Drain Improvements project with a construction cost of $1,755,075.52. The City has received funding through Utah State via a Water Infrastructure Grant to construct this project. This project is shown in Figure 8-5.



This figure was created using information gathered from construction drawings for the capital water and sewer project and Google Earth imagery. Due to this limited information, this figure is likely not a complete representation of the City's storm drainage system and may contain minor inaccuracies. However, a more in-depth analysis of the existing system is outside the scope of this plan, and the figure is sufficient for the purposes of this plan.

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GRANTSVILLE CFP, IFFP, AND IFA

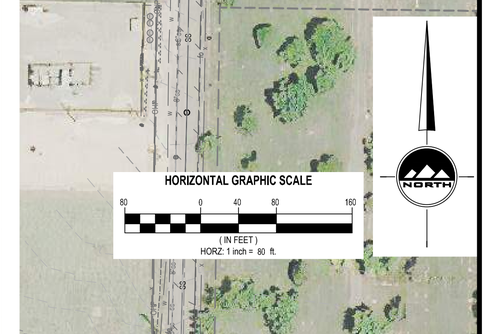
GRANTSVILLE, UTAH

EXISTING STORM DRAINAGE SYSTEM

PROJECT NUMBER: 11637
PRINT DATE: 04-02-2026
DRAWN BY: M. SANFORD
CHECKED BY: R. ROUSSELLE
PROJ. MANAGER: R. ROUSSELLE

FIG 8-4

1 DRAINAGE SETTLING BASIN
Scale: None



NOTES AND ASSUMPTIONS:

PIPE CAPACITY (CFS) AT SLOPE	0.5%	0.6%	1.0%	1.42%	1.87%
36-INCH	51.2	56.1	72.5	86.3	99.1

BAKER BASIN 1:
EXISTING Q100 AFTER IMPROVEMENTS IN UPPER BASINS = 43.26 CFS

POPE BASIN 6:
EXISTING Q100 AFTER IMPROVEMENTS UPPER BASINS = 10.63 CFS

COMBINED OFFSITE:
EXISTING Q100 AFTER IMPROVEMENTS UPPER BASINS = 53.89 CFS

SR-138 TO WEST STREET AND MAIN STREET TO CLARK STREET (31.5 ACRES):
RATIONAL (C=0.41, Tc=59 MIN) Q100 = 24.8 CFS

COMBINED OFFSITE AND ONSITE:
EXISTING Q100 AFTER IMPROVEMENTS UPPER BASINS = 79.5 CFS

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CLIENT
CLIENT'S ADDRESS
CLIENT CITY STATE ZIP

CONTACT:
CLIENT CONTACT
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BAKER DRAINAGE BASIN 1 DRAINAGE INFRASTRUCTURE PLANNING

GRANTSVILLE, UTAH

2024-04-19

CLARK STREET STORM DRAIN IMPROVEMENTS PROJECT EXHIBIT

PROJECT NUMBER 11637
PRINT DATE 2024-04-19
PROJECT MANAGER R. ROUSSELLE
DESIGNED BY M. SANFORD

FIG 8-5

8.1.2 Level of Service

The level of service standards to be used for this plan are shown in Appendix L which were established by the Grantsville City Storm Drainage Design Guidelines with the current version available on the City's website.

8.1.3 Capacity of Existing Facilities

Existing Grantsville City storm drainage studies, Storm Water Management Study for Baker and Pope Watersheds Grantsville City and Tooele County dated April 2015 by AQUA Engineering, Grantsville City FEMA BRIC Study Flood Protection Scoping Study dated February 6, 2024 by Jones & DeMille Engineering, and Grantsville West Bank Development Stormwater Master Plan Report dated August, 2024 by Jones & DeMille Engineering all identify the need for upstream diversion, detention, and retention to protect the existing developed areas of Grantsville City. The existing storm drainage system is not sufficient to meet the level of service, and there is no surplus capacity.

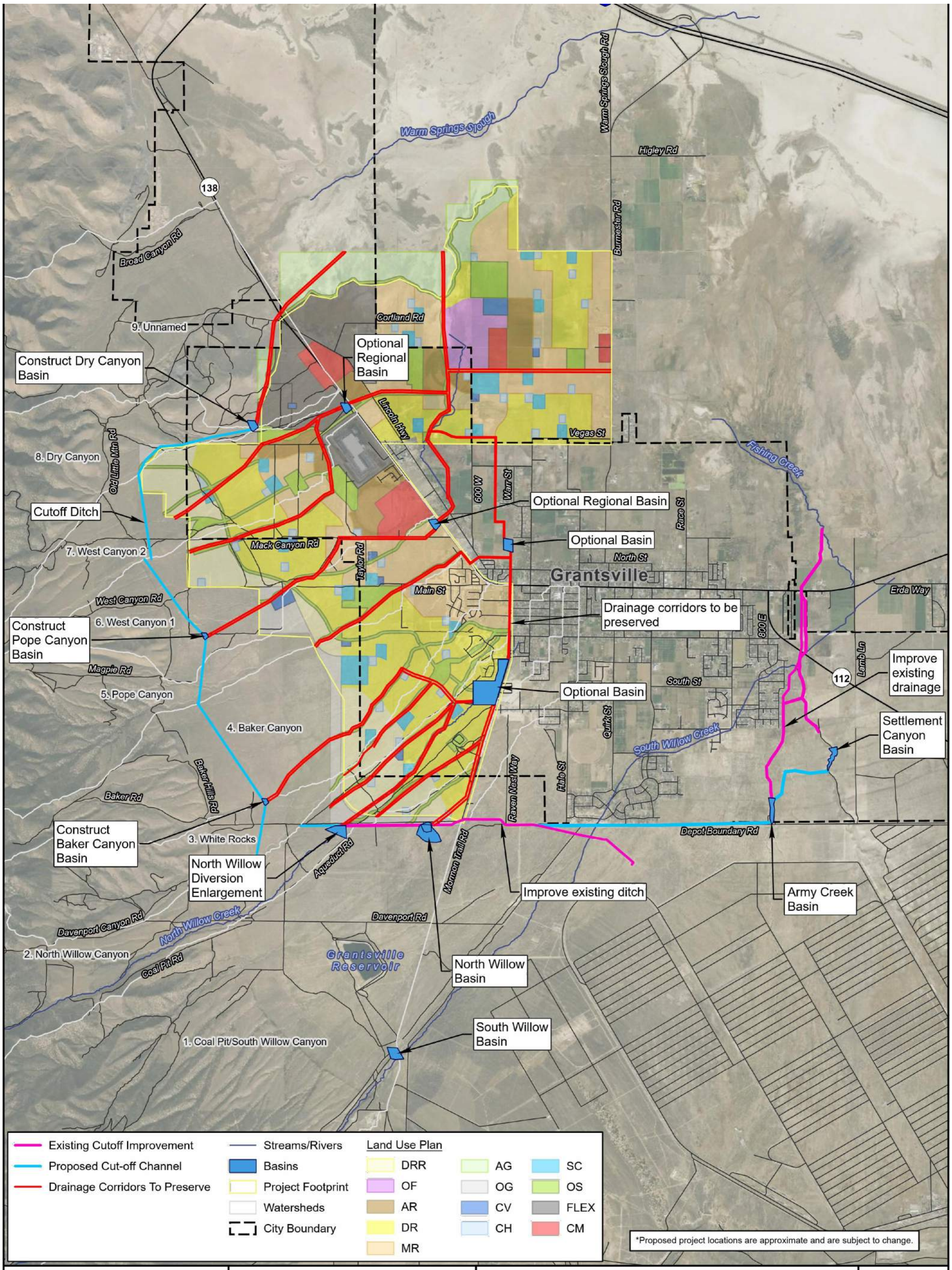
8.1.4 Demands of Future Development

The requirements for future development are based on the level of service requirements stated in Section 8.1.2. It is anticipated developers will construct future storm drainage improvements.

8.1.5 Proposed Projects

The future requirements for the storm drainage system outside of development constructed improvements were determined in the FEMA BRIC Study and West Bank Development Stormwater Master Plan. The FEMA BRIC Study analyzed the North Willow Canyon, South Willow Canyon, West Army Creek, and East Army Creek. These watersheds and storm drainage improvements were also incorporated into the West Bank Development Stormwater Master Plan.

Four alternatives of proposed projects were established for the West Bank Development Stormwater Master Plan. Alternative 4 was the selected alternative in the study. Alternative 4 would construct five debris/detention basins across the watersheds with smaller cutoff ditches to convey flows to these basins as depicted in Figure 8-6 at a cost of $143,215,000 (Appendix M).



Jones & DeMille Engineering

Grantsville City	Tooele County, Utah
West Bank & North West Master Development & Capital Facilities Plans Stormwater - Alternative 4 Overview	Scale: 1" = 1 mile
Map Name: H:\JD\Pro\2205-048\Design\GIS\Projects\2205-048_Model\2205-048_Model.aprx - Exh Grantsville - West Bank - Stormwater - Alternative 4 Overview 11x17P	**Figure 12**
Project Number: 2205-048 / Drawn by: JEM 04-24 / Last Edit: 04/04/2024	

PROJECT NUMBER

PRINT DATE 2024-04-19

PROJECT MANAGER

DESIGNED BY

FIG 8-6

WEST BANK DEVELOPMENT STORMWATER
MASTER PLAN ALTERNATIVE 4 PROJECT

SOURCE: GRANTSVILLE WEST BANK DEVELOPMENT, STORMWATER MASTER PLAN REPORT, JONES & DEMILLE ENGINEERING, APRIL 5, 2024

GRANTSVILLE, UTAH

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8.1.6 Methods of Financing

The projects listed are not attributable to new growth, so impact fees cannot be charged. Storm drainage projects may be funded through grants, loans, developer dedications, taxes, or the Capital Project Fund.

8.2 Impact Fee Analysis

As discussed in Section 8.1.3, there is no surplus capacity for existing facilities so no buy-in costs can be charged. There are no proposed storm drainage projects which are eligible for impact fees at this time because the required projects are associated with correcting existing deficiencies in the system. Additionally, it is the responsibility of the developers, not the City, to construct facilities required to meet the specified level of service. Thus, the City will not construct additional storm drainage projects to accommodate new development and have no storm drainage facilities for which to charge impact fees.

The State is currently mapping floodplains throughout Utah and specifically Tooele Valley where floodplains have not previously been mapped. This establishment of floodplains for the City of Grantsville will require projects to help existing and future developments. If any of these improvements are constructed by the City regionally and not by developers than impact fees might need to be reconsidered for storm drainage.

Appendix A References

1. Impact Fees Act. Title 11, Chapter 36a, Utah State Code
2. Growth Consuming Grantsville 72% Population Increase in City Expected by 2020. Don Baker, Deseret News, dated April 26, 1999. https://www.deseret.com
3. U.S. Census Bureau. https://www.census.gov
4. Utah Division of Drinking Water. https://deq.utah.gov/division-drinking-water
5. Grantsville General Plan. Grantsville City, Utah, dated January 15, 2020.
6. Utah Administrative Code Title R309. https://adminrules.utah.gov/public/search//Current%20Rules
7. Grantsville City, Utah - Culinary Water and Wastewater Systems Master Plan. AQUA Engineering, dated June 2005.
8. Capital Facilities Plan and Impact Fee Analysis Grantsville City Revision. AQUA Engineering, dated August 2016.
9. Capital Facilities Plan, Impact Fee Facilities Plan, and Impact Fee Analysis Updates. Ensign Engineering and Land Surveying, dated May 2022.
10. Capital Facilities Plan, Impact Fee Facilities Plan, and Impact Fee Analysis 2024 Amendments. Ensign Engineering and Land Surveying, dated July 2024.
11. Capital Facilities Plan, Impact Fee Facilities Plan, and Impact Fee Analysis 2025 Amendments. Ensign Engineering and Land Surveying, dated May 2025.
12. Grantsville City Culinary and Secondary Water Rights Forty-Year Master Plan. AQUA Engineering, dated October 2009.
13. AWWA Manual M6. American Water Works Association, dated November 2018.
14. Grantsville City Capital Facilities Plan. Hansen, Allen, and Luce, Inc. dated October 1996.
15. Capital Facilities Plan and Impact Fee Analysis Grantsville City. AQUA Engineering, dated April 3, 2013.
16. 2016 Crime in the United States, Table 24. FBI, dated fall 2017. https://ucr.fbi.gov
17. Calculating Shelter Capacity. UC Davis Koret Shelter Medicine Program, dated June 19, 2015. https://www.sheltermedicine.com
18. Fire Suppression Rating Schedule. Insurance Services Office, Inc.
19. As-Built Drawings for the Grantsville Wastewater Treatment Facility Improvement Project. AQUA Engineering, dated September 24, 2009.
20. Lakeview Business Park Culinary Water and Wastewater Master Plan. AQUA Engineering, dated August 6, 2020.

21. Grantsville City – Sanitary Sewer Flow Monitoring 2018 – Flow and Model Summary. AQUA Engineering, dated August 9, 2018.
22. Storm Water Management Study for Baker and Pope Watersheds Grantsville City and Tooele County. AQUA Engineering, dated April 2015.
23. Grantsville City Storm Drainage Master Plan. Hansen, Allen, and Luce, Inc. dated August 1998.
24. Grantsville City Wastewater Treatment Plant Study. AQUA Engineering dated November 2022.
25. Grantsville City Transportation Master Plan. Horrocks dated 2022.
26. Highway Capacity Manual (HCM). Transportation Research Board, Current Edition.
27. Trip Generation Manual, 11th Edition. Institute of Transportation Engineers dated September 2021.
28. Grantsville City FEMA BRIC Flood Protection Scoping Study. Jones & DeMille Engineering dated February 6, 2024.
29. West Bank & Northwest Area Master Development Plan & Capital Facilities Plan. PSOMAS, Wall Consultant Group, and Jones & DeMille Engineering dated August 2024.
30. Grantsville Engineering Report to Evaluate Minimum Sizing Standards. Ensign Engineering and Land Surveying, dated March 21, 2025.

Appendix B Grantsville City Current Impact Fee Ordinance

Title 13 Impact Fees
Chapter 13-1 General Provisions

Chapter 13-1 General Provisions

13-1-1 Definitions
13-1-2 Collection Procedures-Exemptions
13-1-3 Accounting
13-1-4 Refunds - Credits - Challenges - Appeals
13-1-5 Parks And Recreation Facilities Impact Fee
13-1-6 Public Safety (Fire And Police) Capital Facilities Impact Fees
13-1-7 Culinary Water Capital Facilities Impact Fee
13-1-8 Water Rights Acquisition Impact Fee
13-1-9 Wastewater Capital Facilities Impact Fee
13-1-10 Transportation Impact Fee

(Adopted by ordinance 2017-10, effective July 11, 2017)

13-1-1 Definitions

A. The definitions referred to in Utah Code Annotated § 11-36a-102, 2014 as amended, shall apply to the terms used in this chapter. (Adopted 07-16-1997 by Ord. No. 97-28; amended 10-15-1997 by Ord. No. 97-33, included unrevised in Ord. No. 2006-01 on 02-1-06.)

B. The term “Service Area” as used in this chapter and the area of Grantsville City, which will be served by the impact fees imposed by this chapter, shall constitute the entire corporate boundaries of Grantsville City, Tooele County, Utah unless otherwise indicated. (Adopted 07-16-1997 by Ord. No. 97-28; amended 10-15-1997 by Ord. No. 97-33.)

C. Equivalent Residential Connection (ERC) for the purposes of Section 30-1-7 (Culinary Water Capital Facilities Impact Fee) of this Chapter is defined as the storage and distribution requirement that will allow a peak usage of 900 gallons of water per day with an average flow of 475 gallons of water per day per connection for each single family dwelling unit. The Culinary Water Capital Facilities impact fee for nonresidential development shall be calculated by estimating the water service demands of the use and then converting it to an ERC, which shall then be multiplied by the impact fee specified in Section 30-1-7 herein for each ERC. Equivalent Residential Connection may also be specified as an equivalent residential user/unit or ERU. (Adopted 10-15-1997 by Ord. No. 97-33, amended on 02-1-06 by Ord. No. 2006-01)

D. Equivalent Residential Connection (ERC) for the purposes of Section 30-1-8 (Water Source Impact Fee) shall be calculated as follows: The water right required for indoor use is based upon two criteria; a) that the water right will allow the extraction of 800 gallons per day per connection, and b) that the yearly extraction be sufficient to provide 0.45 acre-feet per connection. The indoor water source (rights) acquisition impact fee for nonresidential development shall be calculated by estimating the indoor water service demands of the use and then converting it to an ERC, which shall then be multiplied by the impact fee specified in Section 30-1-8 herein for each ERC. No development, however, shall pay a water source impact fee of less than required for one ERC. The ERC for outdoor water use is based on .12 irrigated acres per ERC, 3.96 gallons per irrigated acre (.0099 cfs/acre) and 3.0 acre feet of water rights for each irrigated acre. Equivalent Residential Connection may also be specified as an equivalent residential user/unit or ERU. (Subsection (D) adopted 02-1-06 by Ord. No. 2006-01)

E. Equivalent Residential Connection (ERC) for the purposes of Section 30-1-9 (Wastewater Capital facilities Impact Fee) of this Chapter is defined as 280 gallons of wastewater per day. The wastewater impact fee for a nonresidential development shall be calculated by estimating

the wastewater flow per day and then converting it to an ERC, which shall then be multiplied by the impact fee specified in Section 30-1-9 herein for each ERC. Equivalent Residential Connection may also be specified as an equivalent residential user/unit or ERU. (Subsection (E) adopted 02-1-06 by Ord. No. 2006-01)

13-1-2 Collection Procedures-Exemptions

After the effective date of this Ordinance, no application for a building permit as set forth herein, shall be approved by Grantsville City unless the applicable impact fee has been paid or is adjusted or waived by the City Council.

The impact fees imposed by this Ordinance shall not apply to the following development activities:

A. Residential development activities that do not increase the number of residential dwelling units.

B. Nonresidential development activities that do not increase the total square footage in an existing nonresidential development.

C. Proposed development for which a building permit has been issued prior to the effective date of the enactment of an impact fee.

D. Any new subdivision or planned unit development(except minor subdivisions or small planned unit developments of six or less lots), shall be required to provide, prior to final approval, sufficient water rights to the City or dedicated private water resources to provide for all of the indoor and outdoor water uses required for the development.

E. Low income housing and other development activities with broad public purposes may be exempted from the payment of impact fees by the City Council. Low income housing shall be defined by the regulations adopted or used by the Tooele County Housing Authority.

(Originally adopted 07-16-1997 by Ord. No. 97-28; Subsection (D) was added by Ord. No. 99-13 on 04-21-1999; Subsection (E) was added by Ord. No. 2002-1 on 01-09-2002.)

13-1-3 Accounting

The City Treasurer shall establish separate interest-bearing ledger accounts for each type of public facility for which an impact fee is collected. The City shall also deposit impact fee receipts in the appropriate ledger account and retain the interest earned on each fund or account in the fund. The City Treasurer shall, at the end of each fiscal year prepare and submit a report to the City Council on each fund or account showing the source and amount of all monies collected, earned or received by the fund or account and each expenditure from the fund or account including other expenditures to support this impact fee process.

(Adopted on 07-16-1997 by Ord. No.97-28, included unrevised in Ord. No.99-13, adopted 4-21-1999.)

13-1-4 Refunds - Credits - Challenges - Appeals

A. Refunds. The City shall refund any impact fee paid by a developer, plus interest earned when:

1. The developer does not proceed with the development activity and has filed a written request for a refund; or

2. The fees have not been timely spent or encumbered as required by law; or

3. No impact has resulted.

B. Credits. Credits against the amount of an impact fee due from a proposed development may be provided for by the dedication of land or the provision of City resources or facilities by an applicant when such land, facilities or resources are determined to provide additional City facilities or resource capacity to meet the demand generated by the development and when either:

1. Costs. The costs of such land, facilities or resources have been included in the City impact fee calculation methodology or the land dedicated or facilities provided is determined by the City Council to be a reasonable substitute for the cost of facilities or resources which are included in the City's impact fee calculation methodology. Applications for a credit will be made to the City and will be submitted at or before the time when the impact fee is due. The application for a credit will be accompanied by relevant documentary evidence indicating the eligibility of the applicant for the credit. The City Recorder will present an application for any credit to the City Council, accompanied by a recommendation by the Mayor. Any credit determined appropriate by the City Council shall be applied against the impact fee calculated to be due; provided, however, that in no event shall a credit be granted in an amount exceeding the impact fee due.

2. Unusual Circumstances. The City Council may adjust the impact fee at the time the fee is charged, to respond to unusual circumstances in specific cases and ensure that the impact fees are imposed fairly. The City Council may also adjust an impact fee based upon studies and data submitted by a developer.

C. Challenges. Any person claiming that the impact fee required by this ordinance has no reasonable relationship to the needs created by or benefits conferred upon the proposed development and does not demonstrably benefit the new development or is otherwise constitutionally invalid or unlawful pursuant to the standards of applicable case law or statutes then in effect, must file a written challenge with the City Recorder in order to obtain a final determination regarding the application of the impact fee to the development by the City Council, which may include a request for a credit against the impact fees paid. Such a determination shall be a necessary prerequisite before filing any legal challenge to the basis of or the amount of the impact fee in question. Any challenge to an impact fee must be filed within 30 days after paying an impact fee. The City Council shall make its decision no later than 30 days after the date the challenge to the impact fee is filed.

D. Arbitration. In addition to the procedure under the foregoing paragraph to challenge an impact fee, a person or entity may submit an impact fee challenge to arbitration, if the person or entity resides in or owns property within the impact fee service area or is an organization, association, or corporation representing the interests of a person or entity owning property within the impact fee service area and files a written request for arbitration with the Grantsville City Council within 30 days after the day the impact fee is paid. If a person or entity files a written request for arbitration an arbitrator or arbitration panel shall be selected as follows:

1. the City Council and the person or entity filing the request may agree on a single arbitrator within ten days after the day the request for arbitration is filed; or

2. if a single arbitrator is not agreed to, an arbitration panel shall be created with the following members:

a. each party shall select an arbitrator within 20 days after the date the request is filed; and

b. the arbitrators selected by each party shall select a third arbitrator.

3. The arbitration panel shall hold a hearing on the challenge within 30 days after the date the single arbitrator is agreed upon or within 30 days after the two arbitrators are selected. The arbitrator or arbitration panel shall issue a decision in writing within ten days from the date the hearing is completed. Except as provided in this section, each arbitration shall be governed by Utah Code Ann. Title 78B, Chapter 11, Utah Uniform Arbitration Act. The parties may agree to binding arbitration, formal, nonbinding arbitration or informal, nonbinding arbitration. If the parties agree in writing to binding arbitration, the arbitration shall be binding, the decision of the arbitration panel shall be final, neither party may appeal the decision of the arbitration panel and notwithstanding Subsection (C) above, the person or entity challenging the impact fee may not file an action under Subsection (C) or Utah Code Ann. §11-36a-701, et al. If the parties agree to formal, nonbinding arbitration, the arbitration shall be governed by the provisions of Utah Code Ann. Title 63G, Chapter 4, Administrative Procedures Act. For purposes of applying Utah Code Ann. Title 63G, Chapter 4, Administrative Procedures Act, to a formal, nonbinding arbitration under this section, notwithstanding Utah Code Ann. §63G-4-502, "agency" means a local political subdivision. An appeal from a decision in an informal, nonbinding arbitration may be filed with the district court in which Grantsville City is located. Each authorized appeal to the district court shall be filed within 30 days after the date the arbitration panel issues a decision. The district court shall consider de novo each appeal filed from an informal, nonbinding arbitration filed under this subsection. A person or entity that files an appeal to the district court after an informal nonbinding arbitration decision under this subsection may not file an action under Subsection (C) of this provision or Utah Code Ann. §11-36a-701, et al. The filing of a valid written request for arbitration within 30 days after the date the impact fee is paid tolls all time limitations under Utah Code Ann. §11-36a-701, et al. until the date the arbitration panel issues a decision. The person or entity filing a request for arbitration and Grantsville City shall equally share all costs of an arbitration proceeding under this section. Except as provided for herein, this subsection shall not be construed to prohibit a person or entity from challenging an impact fee as provided in Subsection (C) or Utah Code Ann. §11-36a-701, et al.

E. Oversized Water Services - No Appeal Allowed. If the developer or owner of property knowingly requests or installs a water service, at its option, that is larger than is required by this Chapter or any other part of this Code, the impact fees associated with the requested service size, shall be charged and collected by the City. No credit, challenge, appeal or arbitration related to the impact or other fees knowingly paid for an oversized service, shall be allowed under this Chapter, after the impact fee has been paid to the City. If an oversized water service has been installed and the impact fee for the same has not been paid, the developer or owner may replace the oversized service, with a properly sized service, provided the City is paid for its costs to inspect the new installation. (Adopted 02-04-2009 by Ord. 2009-03).

(Section 30-1-4 originally adopted on 02-05-1997, amended and renumbered on 07-16-1997 by Ord. No.97-28, amended 04-21-99 by Ord. No. 99-13.)

13-1-5 Parks And Recreation Facilities Impact Fee

As a condition for the issuance of a building permit for the new construction or placement of any structure for a single or multi-family dwelling within Grantsville City's Boundaries, the developer, owner or builder shall pay an impact fee of $936.00 for each single family dwelling unit and $3,952.56 for each individual dwelling unit in a multi-family dwelling. The City council may adjust the standard impact fee at the time of the fee is charged to respond to unusual circumstances in specific cases and ensure that the impact fees are imposed fairly.

(Originally adopted on 02-05-1997 by Ord. No. 97-5, included unrevised and renumbered in Ord. No. 99-13 adopted 04-21-99)

HISTORY
Amended by Ord. 2024-32 on 11/6/2024

13-1-6 Public Safety (Fire And Police) Capital Facilities Impact Fees

As a condition for the issuance of a building permit for the new construction or placement of any structure for a single or multi-family dwelling within Grantsville City's Boundaries, the developer, owner or builder shall pay a public safety (fire and police) capital facilities impact fee of $996.12 for each single-family dwelling unit and $430.33 per unit for each individual dwelling unit in a multi-family dwelling. Prior to the issuance of a building permit for any nonresidential development activity within the District's boundaries, the developer, owner or builder thereof, shall pay a public safety facilities impact fee of $953.80 per 1,000 sq ft building area. The City Council may adjust the standard impact fee at the time the fee is charged to respond to unusual circumstances in specific cases and ensure that the impact fees are imposed fairly.

(Adopted 07-16-1997 by Ord.No.97-28, amended 07-08-1998 by Ord. No. 98-17, included unrevised in Ord. No. 99-13 adopted 04-21-99).

HISTORY
Amended by Ord. 2024-32 on 11/6/2024

13-1-7 Culinary Water Capital Facilities Impact Fee

As a condition for the issuance of a building permit or as a condition of obtaining culinary water service for any new residential construction or development within Grantsville City's boundaries that requires a new or expanded culinary water service, the developer, owner or builder shall pay a culinary water (source development, storage and distribution) capital facilities impact fee based upon the size of the culinary water service meter connection necessary for the development as follows:

Meter Size in Inches	Max Flow Rate (GPM)	ERC's	Impact Fee per Meter Size
3/4"	25	1.00	$3,432.76
1"	40	1.60	$5,492.42
1 1/2"	50	2.00	$6,865.52
2"	100	4.00	$13,731.05
3"	150	6.00	$27,462.09
4"	200	8.00	$54,924.19
6"	500	20.00	$109,848.38

As a condition for the issuance of a building permit or as a condition of obtaining culinary water service for any new residential construction or development or any other activity within Grantsville City's

boundaries that requires a new or expanded culinary water service, the developer, owner or builder shall pay a culinary water (source development, storage and distribution) capital facilities impact fee based upon the number of fixture units for indoor water use or the number of fixture units per acre for outdoor water use as follows:

Non-Residential (Indoor Use) $35.00 per fixture unit
Non-Residential (Outdoor Use) $21,694.03 per irrigated acre

The City council may adjust the standard water capital facilities impact fee at the time of the fee is charged, to respond to unusual circumstances in specific cases and ensure that the impact fees are imposed fairly. (Originally adopted 07-16-1997 by Ord. No. 97-28, amended 04-21-1999 by Ord. No. 99-13; amended 02-1-06 by Ord. No. 2006-01)

13-1-8 Water Rights Acquisition Impact Fee

A. As a condition for the issuance of a building permit or as a condition of obtaining Citywater service for any new residential or commercial construction or development or any other activity within Grantsville City's boundaries that requires City water for indoor or outdoor use or a new or expanded City water service, the developer, owner or builder, when required by this ordinance, shall pay an indoor and outdoor water right acquisition impact fee for the development as follows:

1. Single Family Residential: :$5,450.00 per Dwelling Unit. (0.218 acre-feet per year per Equivalent Residential Connection (ERC)x $25,000.00 per acre foot of water)

Multi-Unit Residential: $3,000.00 per Dwelling Unit. (0.120 acre-feet per Dwelling Unit x $25,000.00 per acre-foot of water)

Non-Residential: $227.00per Fixture Unit. (0.00908 acre-feet per Fixture Unit x $25,000.00 per acre-foot of water)

2. Outdoor Use Impact Fee:

Outdoor use impact fee shall be calculated utilizing the Grantsville Water Rights Dedication Requirements and then multiplying the resulting acre feet of required water for the lot by $25,000.00.&

No additional outdoor use impact fee shall be charged for single family residential lots (Category 1) over one acre in size and therefore the outdoor use impact fee is capped at $53,280.00 (no waterwise landscaping) and $48,555.00 (waterwise landscape front yard only) for single family residential lots (Category 1) of one acre in size or larger; provided that irrigation of more than 0.64 acres per lot may be temporarily or permanently terminated by Resolution, as provided in subsection (F)

Example: A single family residential lot of 8,000 total square feet, no waterwise landscaping = (8,000 square feet / 43,560 square feet per acre x 0.64= irrigated area of 0.1175 acre x 3.33 = .39 acre feet of water x $25,000.00 = $9,785.12 as the outdoor use impact fee.

*See the Impact Fee Analysis for more examples

(Adopted 04-21-1999 by Ord. No. 99-13; amended 12-19-2001 by Ord. No. 2001-19)

B. Developments providing a permanent secondary water source (non-City waterworks sources) for outdoor use on the property may petition the City Council for a waiver of the Outdoor Use Impact Fee, which may be granted, provided that said water right can be verified as supplying adequate water for outdoor purposes on the property and adequate assurance is given that no Grantsville City will be used for outdoor purposes on the property in perpetuity. Adequate assurance for purposes of the waiver may be by transfer to the City of water shares to be held by the City foruse on the property or within the City. Secondary water user fees and related charges may be collected by the City from the owner or tenant of the property in connection with the City's billing for culinary water and other City services. (Adopted 04-21-1999 by Ord. No. 99-03; amended 12-03-2003 by Ord. 2003-29).All charges provided for hereunder shall be charged with the City sewer and water fees and shall constitute one charge. If any part of the account for either the secondary water assessment or the City sewer or charges becomes delinquent, as in this Code provided, the City shall discontinue the water service until all delinquencies have been paid in full, including the reconnection fee. (Included 03-02-2005 by Ord. No.2005-04)C. Subsection (C) was repealed on October 17, 2007 by Ord. No. 2007-36)D. Any new subdivision or planned unit development (except(i) developments of one to four family dwellings, and (ii) amendments to existing platted subdivisions that require only up to a total of two acre-feet of additional indoor water and only up to a total of eight acre-feet of additional outdoor water for full development,shall be required to provide, prior to final approval, sufficient water rights to the City or dedicated private water resources to provide for all of the indoor and outdoor water uses required for the development. Unless otherwise provided for, the impact fees specified in this Section shall apply to all development in subdivisions and planned unit developments initiated prior to April 23, 1999 and shall be collected as provided in subsection (A) above. (Adopted 04-21-1999 by Ord. No. 99-13; amended 12-19-2001 by Ord. No.2001-19).

A. The Outdoor Use Impact fee is based upon a typical irrigated single family residential lot (Category 1) or development as defined in the Grantsville Water Rights Dedication Requirements.. The Outdoor Use Impact fee for residential lots (Category 1) up to one acre in size shall be strictly applied without regard to claims of restricted irrigation areas, since these claims can rarely be verified or enforced. The water rights acquisition fee for all development that does not fall under Category 1 as defined in the Grantsville Water Rights Dedication Requirements shall be based upon an estimate of the indoor and outdoor water usage specified for the project, (Adopted 04-21-1999 by Ord. No. 99-13; amended 12-19-2001 by Ord. No. 2001-19)

B. No owner or possessor of real property within Grantsville City has the right to use City water for outdoor use (irrigation) on more than the irrigated acreage as defined in subsection (A) above or in the development plan as otherwise approved by the City. Owners or possessors of such real property, who do not have access to non-City secondary water, may at their option irrigate more than the specified irrigated acreage of their property or lot with City y water until such time as the City determines by a formally adopted Resolution that itsCity water supply is insufficient to continue to allow such irrigation. Any such Resolution may temporarily terminate the use of culinary water on more than the allowed irrigated acreage until the water shortage abates or the Resolution may permanently terminate such use. Any person who irrigates more of their property than the allowed irrigated acreage as defined herein, after a Resolution prohibiting said use is adopted, shall be guilty of guilty of a Class "C" Misdemeanor. Nothing contained in this Section shall prohibit the City from otherwise limiting the outside use of Citywater in times of emergency or shortage. (Adopted 12-19-2001 by Ord. No.2001-19)

HISTORY
Amended by Ord. 2024-11 on 5/1/2024
Amended by Ord. 2024-32 on 11/6/2024

13-1-9 Wastewater Capital Facilities Impact Fee

As a condition for the issuance of a building permit or as a condition of obtaining wastewater (sewer) service for any new residential construction or development within Grantsville City's boundaries that requires a new or expanded wastewater service, the developer, owner or builder shall pay a wastewater capital facilities impact fee based upon the size of the wastewater service meter connection necessary for the development as follows:

Meter Size In	(GPM)	(ERC's)	Impact Fee Meter Size
3/4"	20	1.00	$5,120.79
1"	38	1.90	$8,193.26
1 1/2"	48	2.38	$10,241.58
2"	95	4.75	$20,483.15
3"	143	7.13	$40,966.30
4"	190	9.50	$81,932.61
6"	475	23.75	$163,865.22

As a condition for the issuance of a building permit or as a condition of obtaining wastewater (sewer) service for any new commercial construction or development or any other activity within Grantsville City's boundaries that requires a new or expanded wastewater service, the developer, owner or builder shall pay a wastewater capital facilities impact fee based upon the number of fixture units necessary for the development as follows:

Non-Residential Wastewater $213.37 per fixture unit

(Originally adopted 7-16-1997 by Ord. No. 97-28, amended and renumbered on 04-21-1999 by Ord. No. 99-13; amended 02-01-2006 by Ord. No. 2006-01).

HISTORY
Amended by Ord. 2024-32 on 11/6/2024

13-1-10 Transportation Impact Fee

As a condition for the issuance of a building permit for any new residential construction or development within Grantsville City's boundaries, impact fees for transportation will be based on development type.

Development Type	Peak Hour Trips Rate	Impact Fee	Units
Single Family	0.99	$2,754.42	per Dwelling Unit
Multi-Unit	0.56	$1,558.05	per Dwelling Unit
Trailer	0.46	$1,279.83	per Dwelling Unit
Industrial/Manufacturing	0.37	$1,029.43	per 1,000 sf Building Area
Warehousing	0.09	$250.40	per 1,000 sf Building Area
Retail	3.295	$9,167.48	per 1,000 sf Building Area
Church	0.049	$136.33	per 1,000 sf Building Area
School	0.0665	$185.07	per Student

HISTORY
Amended by Ord. 2024-32 on 11/6/2024

Appendix C Demographic Calculations

ERC / Unit Summary:

Service Connection Type	2019	2020	2021	2022	2023	2024	2025	Average
Single Family	1.000	1.000	1.000	1.000	1.000	1.000	1.000	**1.000**
Multi-Unit	0.472	0.532	0.572	0.476	0.474	0.419	0.716	**0.523**
Trailer	1.074	1.222	1.116	1.143	1.033	1.179	1.039	**1.115**
Commercial	8.753	8.056	6.744	6.852	6.851	6.849	7.247	**7.336**
Church	3.689	3.326	4.234	4.360	6.119	5.681	4.572	**4.569**
School	2.726	3.254	6.566	3.865	4.314	3.938	10.974	**5.091**
Construction Water	17.373	3.709	6.372	4.533	4.308	4.121	7.261	**6.811**
City Rate			9.663	9.976	9.281	13.363	10.685	**10.594**

Year 2025:

Service Connection Type	Avg Units	Avg Monthly Usage (gal)	Usage (gal) / Unit	ERC / Unit
Single Family	4,560	42,805,833	9,387.59	1.000
Multi-Unit	292	1,959,250	6,721.27	0.716
Trailer	213	2,075,500	9,751.76	1.039
Commercial	154	10,487,583	68,027.57	7.247
Church	11	472,167	42,924.24	4.572
School	12	1,236,250	103,020.83	10.974
Construction Water	16	1,102,042	68,167.53	7.261
City Rate	33	3,310,167	100,308.08	10.685

Year 2024:

Service Connection Type	Avg Units	Avg Monthly Usage (gal)	Usage (gal) / Unit	ERC / Unit
Single Family	4,417	38,437,000	8,701.57	1.000
Multi-Unit	291	1,058,167	3,642.57	0.419
Trailer	213	2,188,000	10,256.25	1.179
Commercial	153	9,098,833	59,599.34	6.849
Church	11	543,750	49,431.82	5.681
School	12	405,500	34,267.61	3.938
Construction Water	16	567,742	35,857.39	4.121
City Rate	33	3,866,167	116,275.69	13.363

Year 2023:

Service Connection Type	Avg Units	Avg Monthly Usage (gal)	Usage (gal) / Unit	ERC / Unit
Single Family	4,208	32,012,917	7,607.78	1.000
Multi-Unit	285	1,027,917	3,603.56	0.474
Trailer	218	1,715,917	7,859.16	1.033
Commercial	146	7,627,417	52,123.58	6.851
Church	11	512,083	46,553.03	6.119
School	11	361,000	32,818.18	4.314
Construction Water	15	475,234	32,774.79	4.308
City Rate	34	2,400,667	70,607.84	9.281

Year 2022:

Service Connection Type	Avg Units	Avg Monthly Usage (gal)	Usage (gal) / Unit	ERC / Unit
Single Family	4,012	33,274,417	8,293.38	1.000
Multi-Unit	272	1,075,333	3,951.01	0.476
Trailer	224	2,119,000	9,480.98	1.143
Commercial	143	8,130,917	56,826.44	6.852
Church	11	397,750	36,159.09	4.360
School	12	371,250	32,050.36	3.865
Construction Water	20	767,546	37,594.08	4.533
City Rate	35	2,854,250	82,731.88	9.976

Year 2021:

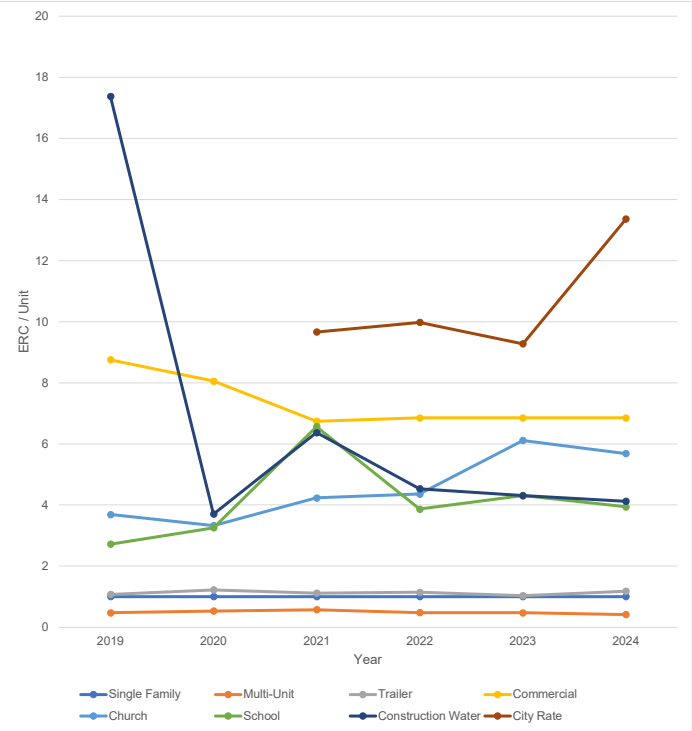
Service Connection Type	Avg Units	Avg Monthly Usage (gal)	Usage (gal) / Unit	ERC / Unit
Single Family	3,737	31,404,250	8,403.97	1.000
Multi-Unit	264	1,267,417	4,809.93	0.572
Trailer	227	2,132,417	9,376.69	1.116
Commercial	138	7,835,333	56,675.11	6.744
Church	11	388,417	35,580.15	4.234
School	11	602,417	55,183.21	6.566
Construction Water	22	1,169,167	53,549.62	6.372
City Rate	32	2,558,083	81,208.99	9.663

Year 2020:

Service Connection Type	Avg Units	Avg Monthly Usage (gal)	Usage (gal) / Unit	ERC / Unit
Single Family	3,428	31,442,292	9,171.97	1.000
Multi-Unit	268	1,307,667	4,880.87	0.532
Trailer	225	2,517,167	11,208.16	1.222
Commercial	130	9,605,250	73,886.54	8.056
Church	11	335,545	30,504.13	3.326
School	11	328,333	29,848.48	3.254
Construction Water	22	731,426	34,019.81	3.709
City Rate				

Year 2019:

Service Connection Type	Avg Units	Avg Monthly Usage (gal)	Usage (gal) / Unit	ERC / Unit
Single Family	3,185	27,138,200	8,521.52	1.000
Multi-Unit	270	1,085,750	4,020.06	0.472
Trailer	227	2,075,250	9,148.79	1.074
Commercial	126	9,366,583	74,584.61	8.753
Church	11	345,833	31,439.39	3.689
School	11	255,500	23,227.27	2.726
Construction Water	20	2,899,199	148,044.21	17.373
City Rate				



Appendix D Drinking Water Cost Estimates

ENGINEERS ESTIMATE OF PROBABLE COSTS

These costs are opinions only and should not be considered as a formal construction estimate. These quantites and costs are based on information derived from the master plan and are therefore subject to change. Ensign has no control over costs of labor, materials, bidding procedures, unidentified field conditions, or other factors. Ensign cannot and does not make any warranty, promise, or guarantee as to the accuracy of this estimate.

ENSIGN
THE STANDARD IN ENGINEERING

Project: Grantsville City CFP, IFFP, and IFA
By: Dylan Cooper
Date: 3/16/2026

Project No.: 11637
Checked By: Robert Rousselle

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT COST [1]	COST
Bates Well					
1	Well Flush Line	LS	1	$50,000.00	$50,000.00
2	Exploratory and Municipal Production Well Drilling and Completion	LF	600	$2,400.00	$1,440,000.00
3	Municipal Well Equipment, Connection to Existing Infrastructure, and Modification to Electrical/Controls	LS	1	$890,000.00	$890,000.00
4	Mobilization	LS	1	$18,000.00	$18,000.00
5	Furnish and Install 12-inch Water Main Including Fittings and Appurtenances	LF	3,110	$85.00	$264,350.00
6	Furnish and Install 12-inch Isolation Valve	EA	2	$2,300.00	$4,600.00
7	Furnish and Install 12-inch Tee and (3) 12-inch Butterfly Valves, Including Fittings and Appurtenances	EA	1	$12,000.00	$12,000.00
8	Furnish and Install 2-inch Combination Air Vac Valve	EA	1	$13,000.00	$13,000.00
9	Disinfection and Testing Water Line	LF	3,110	$0.55	$1,710.50
10	Revegetation	SF	124,400	$0.06	$7,464.00
11	Easement Acquisition	AC	1.43	$45,000.00	$64,256.20
				Subtotal	**$2,765,380.70**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)				$276,538.07
				Total Bates Well Cost	**$3,041,918.77**
Southwest Well					
1	Well Flush Line	LS	1	$50,000.00	$50,000.00
2	Exploratory and Municipal Production Well Drilling and Completion	LF	600	$2,400.00	$1,440,000.00
3	Municipal Well Equipment, Connection to Existing Infrastructure, and Modification to Electrical/Controls	LS	1	$890,000.00	$890,000.00
4	Mobilization	LS	1	$16,000.00	$16,000.00
5	Furnish and Install 10-inch Water Main Including Fittings and Appurtenances	LF	220	$75.00	$16,500.00
6	Furnish and Install 12-inch Water Main Including Fittings and Appurtenances	LF	2,410	$85.00	$204,850.00
7	Furnish and Install 12-inch Isolation Valve	EA	2	$2,300.00	$4,600.00
8	Furnish and Install 12-inch x 10-inch Tee, (2) 12-inch Butterfly Valves, and (1) 10-inch Butterfly Valve, Including Fittings and Appurtenances	EA	1	$12,000.00	$12,000.00
9	Furnish and Install 2-inch Combination Air Vac Valve	EA	1	$13,000.00	$13,000.00
10	Disinfection and Testing Water Line	LF	2,630	$0.55	$1,446.50
11	Revegetation	SF	105,200	$0.06	$6,312.00
12	Easement Acquisition	AC	1.21	$45,000.00	$54,338.84
				Subtotal	**$2,709,047.34**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)				$270,904.73
				Total Southwest Well Cost	**$2,979,952.08**
West Bank Well					
1	Well Flush Line	LS	1	$50,000.00	$50,000.00
2	Exploratory and Municipal Production Well Drilling and Completion	LF	600	$2,400.00	$1,440,000.00
3	Municipal Well Equipment, Connection to Existing Infrastructure, and Modification to Electrical/Controls	LS	1	$890,000.00	$890,000.00
4	Mobilization	LS	1	$39,000.00	$39,000.00
5	Furnish and Install 10-inch Water Main Including Fittings and Appurtenances	LF	7,385	$75.00	$553,875.00
6	Furnish and Install 10-inch Isolation Valve	EA	6	$2,000.00	$12,000.00
7	Furnish and Install 2-inch Combination Air Vac Valve	EA	3	$13,000.00	$39,000.00
8	Disinfection and Testing Water Line	LF	7,385	$0.55	$4,061.75
9	Revegetation	SF	295,400	$0.06	$17,724.00
10	Easement Acquisition	AC	3.39	$45,000.00	$152,582.64
				Subtotal	**$3,198,243.39**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)				$319,824.34
				Total West Bank Well Cost	**$3,518,067.73**
Southwest Tank					
1	Mobilization	LS	1	$171,000.00	$171,000.00
2	Site Clearing and Grubbing	LS	1	$16,000.00	$16,000.00
3	Earthwork / Fine Grading	CY	7,500	$11.50	$86,250.00
4	Construct 1.5 M.G. Buried Tank	LS	1	$2,250,000.00	$2,250,000.00
5	Furnish and Install Tank Valve Vault	LS	1	$130,000.00	$130,000.00
6	Electrical and Telemetry	LS	1	$125,000.00	$125,000.00
7	Disinfection and Testing Tank	LS	1	$21,000.00	$21,000.00
8	Revegetation	LS	1	$30,000.00	$30,000.00
9	Furnish and Install 16-inch Water Main Including Fittings and Appurtenances	LF	3,580	$115.00	$411,700.00
10	Furnish and Install 12-inch Water Main Including Fittings and Appurtenances	LF	1,090	$85.00	$92,650.00
11	Furnish and Install 16-inch Isolation Valve	EA	3	$4,500.00	$13,500.00
12	Furnish and Install 12-inch Isolation Valve	EA	1	$2,300.00	$2,300.00
13	Furnish and Install 16-inch x 12-inch Tee, (2) 16-inch Butterfly Valves, and (1) 12-inch Butterfly Valve, Including Fittings and Appurtenances	EA	1	$19,000.00	$19,000.00
14	Furnish and Install 4-inch Combination Air Vac Valve	EA	1	$17,000.00	$17,000.00
15	Furnish and Install 10-inch PRV Station	EA	1	$100,000.00	$100,000.00
16	Disinfection and Testing Water Line	LF	4,670	$0.55	$2,568.50
17	Easement Acquisition	AC	2.14	$45,000.00	$96,487.60
				Subtotal	**$3,584,456.10**
	Engineering, Surveying, and Construction Management and Inspection Costs (6.73%)				$241,233.90
				Total Southwest Tank Cost	**$3,825,690.00**
West Bank Tank					
1	Mobilization	LS	1	$219,000.00	$219,000.00

2	Site Clearing and Grubbing	LS	1	$16,000.00	$16,000.00
3	Earthwork / Fine Grading	CY	10,000	$11.50	$115,000.00
4	Construct 1.5 M.G. Buried Tank	LS	1	$2,250,000.00	$2,250,000.00
5	Furnish and Install Tank Valve Vault	LS	1	$130,000.00	$130,000.00
6	Electrical and Telemetry	LS	1	$125,000.00	$125,000.00
7	Disinfection and Testing Tank	LS	1	$21,000.00	$21,000.00
8	Revegetation	LS	1	$30,000.00	$30,000.00
9	Furnish and Install 16-inch Water Main Including Fittings and Appurtenances	LF	9,880	$115.00	$1,136,200.00
11	Furnish and Install 16-inch Isolation Valve	EA	7	$4,500.00	$31,500.00
14	Furnish and Install 4-inch Combination Air Vac Valve	EA	4	$17,000.00	$68,000.00
15	Furnish and Install 16-inch PRV Station	EA	1	$200,000.00	$200,000.00
16	Connect to Water Main	EA	2	$19,000.00	$38,000.00
17	Disinfection and Testing Water Line	LF	9,880	$0.55	$5,434.00
18	Easement Acquisition	AC	4.54	$45,000.00	$204,132.23
				Subtotal	**$4,589,266.23**
	Engineering, Surveying, and Construction Management and Inspection Costs (6.73%)				$308,857.62
				Total West Bank Tank Cost	**$4,898,123.85**
Northstar Tank No. 1 Transmission Line					
1	Mobilization	LS	1	$108,000.00	$108,000.00
2	Furnish and Install 16-inch Water Main Including Fittings and Appurtenances	LF	10,750	$115.00	$1,236,250.00
3	Furnish and Install 12-inch Water Main Including Fittings and Appurtenances	LF	3,660	$85.00	$311,100.00
4	Furnish and Install 16-inch Isolation Valve	EA	8	$4,500.00	$36,000.00
5	Furnish and Install 12-inch Isolation Valve	EA	3	$2,300.00	$6,900.00
6	Furnish and Install 16-inch Tee and (3) 16-inch Butterfly Valves, Including Fittings and Appurtenances	EA	1	$19,000.00	$19,000.00
7	Furnish and Install 4-inch Combination Air Vac Valve	EA	4	$17,000.00	$68,000.00
8	Furnish and Install 2-inch Combination Air Vac Valve	EA	1	$13,000.00	$13,000.00
9	Furnish and Install 10-inch PRV Station	EA	1	$100,000.00	$100,000.00
10	Connect to Water Main	EA	2	$19,000.00	$38,000.00
11	Disinfection and Testing Water Line	LF	14,410	$0.55	$7,925.50
12	Revegetation	SF	576,400	$0.06	$34,584.00
13	Easement Acquisition	AC	6.62	$45,000.00	$297,727.27
				Subtotal	**$2,276,486.77**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)				$227,648.68
				Total Northstar Tank No. 1 Transmission Line Cost	**$2,504,135.45**
Matthews Lane Water Line Project [2]					
1	Mobilization	LS	1	$16,000.00	$16,000.00
2	12" Tee	EA	3	$1,600.00	$4,800.00
3	12" C900 DR18 PVC	LF	2,711	$90.00	$243,990.00
4	Fire Hydrants Assembly	EA	7	$9,000.00	$63,000.00
				Subtotal	**$327,790.00**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)				$32,779.00
				Total Matthews Lane Water Line Project Cost	**$360,569.00**
SR-112 Water Line Extension					
1	Mobilization	LS	1	$23,000.00	$23,000.00
2	Saw Cut Asphalt	LF	3,950	$4.50	$17,775.00
3	Furnish and Install 12-inch Water Main Including Fittings and Appurtenances	LF	3,950	$85.00	$335,750.00
4	Furnish and Install 12-inch Isolation Valve	EA	3	$2,300.00	$6,900.00
5	Furnish and Install 12-inch Tee and (3) 12-inch Butterfly Valves, Including Fittings and Appurtenances	EA	1	$12,000.00	$12,000.00
6	Furnish and Install 2-inch Combination Air Vac Valve	EA	1	$13,000.00	$13,000.00
7	Connect to Water Main	EA	1	$19,000.00	$19,000.00
8	Disinfection and Testing Water Line	LF	3,950	$0.55	$2,172.50
9	Pavement Restoration	LF	3,950	$6.70	$26,465.00
10	Traffic Control	LS	1	$35,000.00	$35,000.00
				Subtotal	**$491,062.50**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)				$49,106.25
				Total SR-112 Water Line Extension Cost	**$540,168.75**
Southeast Water Line Project					
1	Mobilization	LS	1	$65,000.00	$65,000.00
2	Furnish and Install 12-inch Water Main Including Fittings and Appurtenances	LF	9,380	$85.00	$797,300.00
3	Furnish and Install 12-inch Isolation Valve	EA	7	$2,300.00	$16,100.00
4	Furnish and Install 2-inch Combination Air Vac Valve	EA	4	$13,000.00	$52,000.00
5	Furnish and Install 10-inch PRV Station	EA	2	$100,000.00	$200,000.00
6	Connect to Water Main	EA	1	$19,000.00	$19,000.00
7	Disinfection and Testing Water Line	LF	9,380	$0.55	$5,159.00
8	Revegetation	SF	375,200	$0.06	$22,512.00
9	Easement Acquisition	AC	4.306703398	$45,000.00	$193,801.65
				Subtotal	**$1,370,872.65**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)				$137,087.27
				Total Southeast Water Line Project Cost	**$1,507,959.92**
Public Works Improvements [3]					
1	Mobilization	LS	1	$114,000.00	$114,000.00
2	Shop Area	SF	6,330	$255.00	$1,614,150.00
3	Equipment (Crane Rail, Pit Lift, Exhaust Removal System, etc.)	LS	1	$170,000.00	$170,000.00
4	Salt Shed	LS	1	$500,000.00	$500,000.00
				Subtotal	**$2,398,150.00**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)				$239,815.00
				Total Public Works Improvements Cost	**$2,637,965.00**
North Tank No. 3					
1	Mobilization	LS	1	$177,000.00	$177,000.00
2	Site Clearing and Grubbing	LS	1	$16,000.00	$16,000.00
3	Earthwork / Fine Grading	CY	10,000	$11.50	$115,000.00
4	Construct 2.0 M.G. Buried Tank	LS	1	$3,000,000.00	$3,000,000.00
5	Furnish and Install Tank Valve Vault	LS	1	$130,000.00	$130,000.00
6	Electrical and Telemetry	LS	1	$125,000.00	$125,000.00
7	Disinfection and Testing Tank	LS	1	$21,000.00	$21,000.00
8	Revegetation	LS	1	$30,000.00	$30,000.00
9	Furnish and Install 16-inch Water Main Including Fittings and Appurtenances	LF	500	$115.00	$57,500.00
11	Furnish and Install 16-inch Isolation Valve	EA	0	$4,500.00	$0.00

14	Furnish and Install 4-inch Combination Air Vac Valve	EA	0	$17,000.00	$0.00
15	Furnish and Install 16-inch PRV Station	EA	0	$200,000.00	$0.00
16	Connect to Water Main	EA	2	$19,000.00	$38,000.00
17	Disinfection and Testing Water Line	LF	500	$0.55	$275.00
18	Easement Acquisition	AC	0.23	$45,000.00	$10,330.58
				Subtotal	**$3,720,105.58**
				Engineering, Surveying, and Construction Management and Inspection Costs (6.73%)	$250,363.11
				Total North Tank No. 3 Cost	**$3,970,468.68**

[1] Unit costs are from the 2022 Grantsville CFP/IFA and inflated to current year (2025).

ENGINEERS ESTIMATE OF PROBABLE COSTS

These costs are opinions only and should not be considered as a formal construction estimate. These quantities and costs are based on information derived from the design drawings and are therefore subject to change. Ensign has no control over costs of labor, materials, bidding procedures, unidentified field conditions, or other factors. Ensign cannot and does not make any warranty, promise, or guarantee as to the accuracy of this estimate.

ENSIGN
THE STANDARD IN ENGINEERING

Project: Osborne Way Water Line Loop: Osborne Way to Cherry Wood Lane
By: Ensign Engineering and Land Surveying
Date: 3/10/2026

Project No.: 11637
Checked By: Robert Rousselle

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
SITE WORK					
1	Mobilization	1	L.S.	$3,500.00	$3,500.00
				Sub Total	**$3,500.00**
CULINARY WATER					
1	Furnish and Install 10-inch Water Line with Fittings and Appurtenances	425	L.F.	$75.00	$31,875.00
2	Cross with Four (4) Gate Valves	1	E.A.	$10,500.00	$10,500.00
3	Connect to Existing Water Line	2	E.A.	$5,000.00	$10,000.00
				Sub Total	**$52,375.00**
MISCELLANEOUS ITEMS					
Traffic Control					
1	Traffic Control Implementation	1	L.S.	$2,500.00	$2,500.00
Erosion Control					
1	SWPPP/Maintenance	1	L.S.	$1,500.00	$1,500.00
				Sub Total	**$4,000.00**
				Construction Subtotal	**$59,875.00**
				Continency (15%)	**$8,981.25**
				Survey and Engineering (Design and CM)	**$7,500.00**
				Construction Total	**$76,356.25**

Desert Edge PH1 OFFSITE WATER LINE

FOCUS ENGINEERING & SURVEY

CONSTRUCTION BID 02/05/2025

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	AMOUNT
	WATER DISTRIBUTION SYSTEM				
1	Earthwork Haul Trench Spoils to Adjacent Properties	CY	4,400.00	$5.90	$25,960.00
2	Culinary Water 12" PVC W/ Fittings	LF	6,300.00	$74.75	$470,925.00
3	Culinary Water 8" PVC W/ Fittings	LF	300.00	$51.80	$15,540.00
4	Pipe Jacking / Boring 16" Casing For 8" PVC (blue grass crossing)	LF	40.00	$2,762.10	$110,484.00
5	Excavation Pothole Existing Utilities	EACH	72.00	$750.00	$54,000.00
6	Culinary Water 12" PVC Loop W/ Insulation Install With Steel Casing 24"	EACH	11.00	$18,970.00	$208,670.00
7	Culinary Water 12" Pressurized Reducing Valve -Cut In On Existing; Detail Provided For PRV	EACH	1.00	$87,750.00	$87,750.00
8	Culinary Water 12" PVC Loop - Lateral For PRV	EACH	1.00	$7,405.00	$7,405.00
9	Culinary Water 12" Gate Valve W/ Concrete Collar	EACH	18.00	$5,830.00	$104,940.00
10	Culinary Water 8" Gate Valve W/ Concrete Collar	EACH	4.00	$3,385.00	$13,540.00
11	CW End-Of-Line Connection 12" PVC	EACH	5.00	$5,965.00	$29,825.00
12	Fire Hydrant Assembly	EACH	12.00	$10,275.00	$123,300.00
13	Fire Hydrant Assembly - Cut In On Existing Line	EACH	2.00	$11,860.00	$23,720.00
14	CW Air Vac Assembly 2"	EACH	10.00	$8,630.00	$86,300.00
15	Culinary Water Import Select Backfill	TON	4,500.00	$17.00	$76,500.00
16	Asphalt Pavement 6" Remove & Replace	SF	750.00	$31.00	$23,250.00
17	Hold Power Poles For Waterline Install	EACH	7.00	$1,750.00	$12,250.00
TOTAL WATER IMPROVEMENTS:					*$1,474,359.00*
GRAND TOTAL					***$ 1,474,359.00***

ENGINEERS ESTIMATE OF PROBABLE COSTS

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ENSIGN
THE STANDARD IN ENGINEERING

Project: SR-138 Water Line Extension - Broken Arrow
By: Ensign Engineering and Land Surveying
Date: 3/10/2026

Project No.: 11637
Checked By: Robert Rousselle

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
SITE WORK					
1	Mobilization	1	L.S.	$200,000.00	$200,000.00
				Sub Total	**$200,000.00**
CULINARY WATER					
1	16-inch C-900 PVC Culinary Water Line with Fittings and Appurtenances	21,700	L.F.	$140.00	$3,038,000.00
2	Steel Casing Sleeve at Drainage Crossings	2	E.A.	$64,000.00	$128,000.00
3	Fire Hydrant Assembly (Complete)	17	E.A.	$7,500.00	$127,500.00
4	2-inch Air/Vacuum Combination Valve Station	1	E.A.	$10,000.00	$10,000.00
5	Jack and Bore with Steel Casing at SR-112 and Sheep Lane	125	L.F.	$1,600.00	$200,000.00
6	Blow Off Valve	1	E.A.	$5,000.00	$5,000.00
7	Connect to Existing Water Line	3	E.A.	$20,000.00	$60,000.00
				Sub Total	**$3,568,500.00**
MISCELLANEOUS ITEMS					
Traffic Control					
1	Traffic Control Implementation	1	L.S.	$100,000.00	$100,000.00
Erosion Control					
1	SWPPP/Maintenance	1	L.S.	$80,000.00	$80,000.00
				Sub Total	**$180,000.00**
				Construction Subtotal	**$3,948,500.00**
				Continency (15%)	**$592,275.00**
				Survey and Engineering (Design and CM)	**$257,837.05**
				Construction Total	**$4,798,612.05**

ENGINEERS ESTIMATE OF PROBABLE COSTS

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ENSIGN
THE STANDARD IN ENGINEERING

Project: SR-138 Water Line Extension - Broken Arrow
By: Ensign Engineering and Land Surveying
Date: 3/10/2026

Project No.: 11637
Checked By: Robert Rousselle

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3	Fire Hydrant Assembly (Complete)	17	E.A.	$7,500.00	$127,500.00
4	2-inch Air/Vacuum Combination Valve Station	1	E.A.	$10,000.00	$10,000.00
5	Jack and Bore with Steel Casing at SR-112 and Sheep Lane	125	L.F.	$1,600.00	$200,000.00
6	Blow Off Valve	1	E.A.	$5,000.00	$5,000.00
7	Connect to Existing Water Line	3	E.A.	$20,000.00	$60,000.00
				Sub Total	**$3,568,500.00**
MISCELLANEOUS ITEMS					
Traffic Control					
1	Traffic Control Implementation	1	L.S.	$100,000.00	$100,000.00
Erosion Control					
1	SWPPP/Maintenance	1	L.S.	$80,000.00	$80,000.00
				Sub Total	**$180,000.00**
				Construction Subtotal	**$3,948,500.00**
				Continency (15%)	**$592,275.00**
				Survey and Engineering (Design and CM)	**$257,837.05**
				Construction Total	**$4,798,612.05**

HADCO® CONSTRUCTION
EST. 1989

1850 N 1450 W P.O. BOX 437
Lehi, UT 84043

office 801-766-7611
fax 801-766-7604

To:	Grantsville	**Contact:**	
Address:	(Not Provided)	**Phone:**	(801) 884-3411
		Fax:	
Project Name:	SR 138 Waterline Extension - BUDGET CONCEPT	**Bid Number:**	
Project Location:	SR138 Bluegrass - Clark, Grantsville, UT	**Bid Date:**	3/12/2025

HADCO CONSTRUCTION CORDIALLY OFFERS THE FOLLOWING PROPOSAL

PRELIMINARY CONCEPT, SUBJECT TO CHANGE AND REVIEW WITH FINAL PLANS.

Line #	Item Description	Estimated Quantity	Unit	Unit Price	Total Price
SR138 EXTENSION					
1	Mobilization & Demobilization	1.00	LS	$14,385.00	$14,385.00
2	Traffic Control / Barricades	1.00	LS	$5,315.00	$5,315.00
3	Culinary Water 12" PVC	1,710.00	LF	$91.90	$157,149.00
4	Culinary Water 8" PVC	188.00	LF	$80.40	$15,115.20
5	Culinary Water 12" PVC Loop W/ Insulation Install With Steel Casing 24"	1.00	EACH	$26,210.00	$26,210.00
6	Culinary Water 12" Gate Valve W/ Concrete Collar	2.00	EACH	$7,240.00	$14,480.00
7	Culinary Water 8" Gate Valve W/ Concrete Collar	1.00	EACH	$3,585.00	$3,585.00
8	CW Inline Connection 8" PVC W/ Sleeve & Tee In Right-Of-Way	1.00	EACH	$9,955.00	$9,955.00
9	CW Fitting 8" Ductile Iron	3.00	EACH	$1,425.00	$4,275.00
10	CW Fitting 12" Ductile Iron	5.00	EACH	$1,710.00	$8,550.00
11	Fire Hydrant	4.00	EACH	$11,165.00	$44,660.00
12	CW Service 12x1" -Crossing Existing Roadway	1.00	EACH	$5,110.00	$5,110.00
13	Earthwork Haul Trench Spoils To Adjacent Properties	1,650.00	CY	$14.50	$23,925.00
14	Culinary Water Import Select Backfill	1,750.00	TON	$19.50	$34,125.00
15	Asphalt Pavement 6" Remove & Replace	1,800.00	SF	$30.20	$54,360.00
100	Traffic Control / Barricades -UDOT Permits	1.00	LS	$3,705.00	$3,705.00
				Total Price for above SR138 EXTENSION Items:	**$424,904.20**
BLUE GRASS UPSIZE					
101	CW Inline Connection 12" PVC W/ Sleeve, Gate Valve & 90 In Right-Of-Way	1.00	EACH	$18,745.00	$18,745.00
102	Demo & Remove Culinary Water Pipe 8" PVC / Casing -Install New Casing - Flowable Fill Backfill	50.00	LF	$943.00	$47,150.00
103	Culinary Water 12" PVC	50.00	LF	$116.00	$5,800.00
104	Demo & Remove Culinary Water Pipe 8" PVC	30.00	LF	$22.70	$681.00
105	CW Fitting 12" Ductile Iron	1.00	EACH	$3,400.00	$3,400.00
106	Culinary Water 12" Gate Valve W/ Concrete Collar	3.00	EACH	$7,240.00	$21,720.00
107	CW Fitting 8" Ductile Iron	4.00	EACH	$226.00	$904.00
108	Earthwork Haul Trench Spoils To Adjacent Properties	120.00	CY	$14.50	$1,740.00
109	Culinary Water Import Select Backfill	45.00	TON	$19.50	$877.50
110	Asphalt Pavement UDOT 7" Remove & Replace	500.00	SF	$33.00	$16,500.00
				Total Price for above BLUE GRASS UPSIZE Items:	**$117,517.50**

Total Bid Price: $542,421.70

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Lehi, UT 84043

office 801-766-7611
fax 801-766-7604

To:	Grantsville	**Contact:**	
Address:	(Not Provided)	**Phone:**	(801) 884-3411
		Fax:	
Project Name:	SR 138 Waterline Extension - BUDGET CONCEPT	**Bid Number:**	
Project Location:	SR138 Bluegrass - Clark, Grantsville, UT	**Bid Date:**	3/12/2025

Notes:

- **ESCALATION FOR PVC, HDPE, ADS: Due to the volatile nature of raw material supplies and the energy and transportation markets required for the production and delivery of these products, suppliers do not guarantee firm material pricing. It is Hadco's aim to maintain the quoted pricing. In the event of supplier price increases, Hadco reserves the right to adjust pricing based on pricing issued at the time of material shipment.**
- **The quoted asphalt paving price is based on the Asphalt Paving Subcontractor's ability to purchase the required materials, in particular liquid asphalt oil, at the quoted price. The quoted price for liquid asphalt oil (PG 64-22 or PG 58-28), at the date of this proposal, is $640.00 per ton. Any increase in price, including freight and taxes, which the Asphalt Paving Subcontractor must pay, will be billed to and paid for by the Client/Owner.**
- **Fuel Escalation/Surcharge: Fuel pricing included in this proposal is based on the Rocky Mountain Fuel Index Dated [03/10/2025]. If fuel prices increase, each billing will include a 3% fuel surcharge for each $.01 increase beyond the established baseline.**
- Proposal based on plans set dated **CONCEPT NOTED GOOGLE MAP**
- Proposal includes only items specifically included in line item pricing above.
- Imported aggregate, soil and material will be billed by truck delivery tickets and/or pit scale weight tickets.
- Proposal includes no engineering nor surveying.
- Proposal excludes placement and installation of survey monuments.
- Amount paid to be based on actual quantities installed.
- Proposal excludes demolition and disposal of existing homes and structures.
- Proposal excludes tree removal and disposal.
- Proposal excludes municipal connection fees and impact fees.
- Trenching for power lines & dry utility crossings are estimated values only.
- Proposal excludes street lighting.
- Proposal includes grading in right-of-way only. Lot grading is excluded.
- Proposal excludes landscaping work, including restoration of existing landscaping disturbed and import of topsoil.
- Proposal excludes bonding.
- Proposal excludes rock excavation beyond standard machine capability.
- Proposal excludes dewatering.
- Prices are valid for 60 days from date of proposal.
- Proposal excludes provisions for ground heaters, blanketing and cold weather concrete placement (e.g. 7 bag mix, hot water admixture, etc.). If required, pricing will be provided for cold weather conditions prior to proceeding with the work.
- **PROPOSAL EXCLUDES THE FOLLOWING:** Enginnering, Surveying, Structure Demolition, Tree Removal, Electrical, Telecommunications, Natural Gas, Landscaping

ACCEPTED:	**CONFIRMED:**
The above prices, specifications and conditions are satisfactory and are hereby accepted.	**HADCO CONSTRUCTION LLC**
Buyer: _____	
Signature: _____	**Authorized Signature:** _____
Date of Acceptance: _____	**Estimator:** Kendall Page (801) 420-4750 KPage@HadcoConstruction.com

From: Mat Wangsgaard <mwangsgaard@focus-es.com> on behalf of Mat Wangsgaard
Sent: Friday, January 17, 2025 10:24 AM
To: Shelby Moore
Cc: Sherrie Broadbent; ncritchlow@grantsvilleut.gov; Tysen Barker; Markus Seat; gmillward@grantsvilleut.gov; Christy Montierth; Cody Christensen; Braydee Baugh; Jason Smith; Robert Rousselle; Ben Duzett
Subject: RE: SR-138 Water Line Extension from Bluegrass to Clark Street - Concept Drawing

Shelby,

I wasn't able to get a contractor to give me a price for Robert's exhibit. They said they haven't had time to look at it yet. I am hoping they can get me numbers next week.

1. Our fee would be $23,800 for survey of the area, final design, construction staking, record drawings and GIS.

I will push them to get the costs for items 2 & 3 as soon as possible.

Thanks,
Mat

From: Shelby Moore <smoore@grantsvilleut.gov>
Sent: Thursday, January 16, 2025 2:27 PM
To: Mat Wangsgaard <mwangsgaard@focus-es.com>
Cc: Sherrie Broadbent <sbroadbent@grantsvilleut.gov>; ncritchlow@grantsvilleut.gov; Tysen Barker <tbarker@grantsvilleut.gov>; Markus Seat <mseat@grantsvilleut.gov>; gmillward@grantsvilleut.gov; Christy Montierth <cmontierth@grantsvilleut.gov>; Cody Christensen <cchristensen@grantsvilleut.gov>; Braydee Baugh <bbaugh@grantsvilleut.gov>; Jason Smith <firechief@grantsvilleut.gov>; Robert Rousselle <rrousselle@ensignutah.com>
Subject: Re: SR-138 Water Line Extension from Bluegrass to Clark Street - Concept Drawing

Caution: This email originated from outside of FOCUS. Do not click links or open attachments unless you are positive of the sender's identity and have verified the content is safe.

Mat,

Do you have an update on this request?

SHELBY MOORE
Planning & Zoning Administrator
Department of Public Works
Office: (435) 884-4604
Email: Smoore@Grantsvilleut.gov

This e-mail may contain privileged and confidential information intended for the use of the individual or entity named above. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you received this communication in error, please immediately notify sender by telephone or reply e-mail, do not use or disclose the contents to others, and delete the message and all attachments from your computer, system, &/or network.

On Thu, Jan 9, 2025 at 6:52 PM Robert Rousselle <rrousselle@ensignutah.com> wrote:

> Mat,
>
> Good evening. Following up on our phone conversation yesterday, 1/8, attached is a concept drawing showing the scope for the SR-138 Water Line Extension from Bluegrass to Clark Street. Per our discussion, please provide the following costs so the City can review and make a decision on these costs which would be paid by the City.
>
> 1. Engineering Design for SR-138 Extension to Clark Street
> 2. Construction Cost for Bluegrass Way and SR-138 Crossing Revisions
> a. City will pay for upsize costs art this crossing.
> b. As we discussed, this upsize will probably need to be updated on your drawings anyways as the plan is to connect and test fire hydrants after the connections are made at Bluegrass. If fire hydrants do have 1,000 gpm within The Highlands subdivision, then the Clarks Street connection will not be made at this time.
> 3. Construction Cost from Bluegrass Way along SR-138 to Clark Street Connection
>
> Please let me know if there are any questions. Please send me these cost by the end of next week, 1/17, if possible. Thank you.

Robert Rousselle, P.E., LEED-AP | Senior Associate
Main 801.255.0529 | Cell 801.859.4759
rrousselle@ensignutah.com | ensignutah.com

ENSIGN
THE STANDARD IN ENGINEERING

CONFIDENTIALITY NOTICE: The content of this email is confidential, proprietary, and privileged. If you are not the intended recipient, please destroy it.

HADCO® CONSTRUCTION
EST. 1989

1850 N 1450 W P.O. BOX 437
Lehi, UT 84043

office 801-766-7611
fax 801-766-7604

To:	Grantsville	**Contact:**	
Address:	(Not Provided)	**Phone:**	(801) 884-3411
		Fax:	
Project Name:	SR 138 Waterline Extension - BUDGET CONCEPT	**Bid Number:**	
Project Location:	SR138 Bluegrass - Clark, Grantsville, UT	**Bid Date:**	3/12/2025

HADCO CONSTRUCTION CORDIALLY OFFERS THE FOLLOWING PROPOSAL

PRELIMINARY CONCEPT, SUBJECT TO CHANGE AND REVIEW WITH FINAL PLANS.

Line #	Item Description	Estimated Quantity	Unit	Unit Price	Total Price
SR138 EXTENSION					
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4	Culinary Water 8" PVC	188.00	LF	$80.40	$15,115.20
5	Culinary Water 12" PVC Loop W/ Insulation Install With Steel Casing 24"	1.00	EACH	$26,210.00	$26,210.00
6	Culinary Water 12" Gate Valve W/ Concrete Collar	2.00	EACH	$7,240.00	$14,480.00
7	Culinary Water 8" Gate Valve W/ Concrete Collar	1.00	EACH	$3,585.00	$3,585.00
8	CW Inline Connection 8" PVC W/ Sleeve & Tee In Right-Of-Way	1.00	EACH	$9,955.00	$9,955.00
9	CW Fitting 8" Ductile Iron	3.00	EACH	$1,425.00	$4,275.00
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13	Earthwork Haul Trench Spoils To Adjacent Properties	1,650.00	CY	$14.50	$23,925.00
14	Culinary Water Import Select Backfill	1,750.00	TON	$19.50	$34,125.00
15	Asphalt Pavement 6" Remove & Replace	1,800.00	SF	$30.20	$54,360.00
100	Traffic Control / Barricades -UDOT Permits	1.00	LS	$3,705.00	$3,705.00
				Total Price for above SR138 EXTENSION Items:	**$424,904.20**
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106	Culinary Water 12" Gate Valve W/ Concrete Collar	3.00	EACH	$7,240.00	$21,720.00
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Total Bid Price: $542,421.70

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EST. 1989

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office 801-766-7611
fax 801-766-7604

To:	Grantsville	**Contact:**	
Address:	(Not Provided)	**Phone:**	(801) 884-3411
		Fax:	
Project Name:	SR 138 Waterline Extension - BUDGET CONCEPT	**Bid Number:**	
Project Location:	SR138 Bluegrass - Clark, Grantsville, UT	**Bid Date:**	3/12/2025

Notes:

- **ESCALATION FOR PVC, HDPE, ADS: Due to the volatile nature of raw material supplies and the energy and transportation markets required for the production and delivery of these products, suppliers do not guarantee firm material pricing. It is Hadco's aim to maintain the quoted pricing. In the event of supplier price increases, Hadco reserves the right to adjust pricing based on pricing issued at the time of material shipment.**
- **The quoted asphalt paving price is based on the Asphalt Paving Subcontractor's ability to purchase the required materials, in particular liquid asphalt oil, at the quoted price. The quoted price for liquid asphalt oil (PG 64-22 or PG 58-28), at the date of this proposal, is $640.00 per ton. Any increase in price, including freight and taxes, which the Asphalt Paving Subcontractor must pay, will be billed to and paid for by the Client/Owner.**
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- Proposal excludes placement and installation of survey monuments.
- Amount paid to be based on actual quantities installed.
- Proposal excludes demolition and disposal of existing homes and structures.
- Proposal excludes tree removal and disposal.
- Proposal excludes municipal connection fees and impact fees.
- Trenching for power lines & dry utility crossings are estimated values only.
- Proposal excludes street lighting.
- Proposal includes grading in right-of-way only. Lot grading is excluded.
- Proposal excludes landscaping work, including restoration of existing landscaping disturbed and import of topsoil.
- Proposal excludes bonding.
- Proposal excludes rock excavation beyond standard machine capability.
- Proposal excludes dewatering.
- Prices are valid for 60 days from date of proposal.
- Proposal excludes provisions for ground heaters, blanketing and cold weather concrete placement (e.g. 7 bag mix, hot water admixture, etc.). If required, pricing will be provided for cold weather conditions prior to proceeding with the work.
- **PROPOSAL EXCLUDES THE FOLLOWING:** Enginnering, Surveying, Structure Demolition, Tree Removal, Electrical, Telecommunications, Natural Gas, Landscaping

ACCEPTED:	**CONFIRMED:**
The above prices, specifications and conditions are satisfactory and are hereby accepted.	**HADCO CONSTRUCTION LLC**
Buyer: _____	
Signature: _____	**Authorized Signature:** _____
Date of Acceptance: _____	**Estimator:** Kendall Page (801) 420-4750 KPage@HadcoConstruction.com

From: Mat Wangsgaard <mwangsgaard@focus-es.com> on behalf of Mat Wangsgaard
Sent: Friday, January 17, 2025 10:24 AM
To: Shelby Moore
Cc: Sherrie Broadbent; ncritchlow@grantsvilleut.gov; Tysen Barker; Markus Seat; gmillward@grantsvilleut.gov; Christy Montierth; Cody Christensen; Braydee Baugh; Jason Smith; Robert Rousselle; Ben Duzett
Subject: RE: SR-138 Water Line Extension from Bluegrass to Clark Street - Concept Drawing

Shelby,

I wasn't able to get a contractor to give me a price for Robert's exhibit. They said they haven't had time to look at it yet. I am hoping they can get me numbers next week.

1. Our fee would be $23,800 for survey of the area, final design, construction staking, record drawings and GIS.

I will push them to get the costs for items 2 & 3 as soon as possible.

Thanks,
Mat

From: Shelby Moore <smoore@grantsvilleut.gov>
Sent: Thursday, January 16, 2025 2:27 PM
To: Mat Wangsgaard <mwangsgaard@focus-es.com>
Cc: Sherrie Broadbent <sbroadbent@grantsvilleut.gov>; ncritchlow@grantsvilleut.gov; Tysen Barker <tbarker@grantsvilleut.gov>; Markus Seat <mseat@grantsvilleut.gov>; gmillward@grantsvilleut.gov; Christy Montierth <cmontierth@grantsvilleut.gov>; Cody Christensen <cchristensen@grantsvilleut.gov>; Braydee Baugh <bbaugh@grantsvilleut.gov>; Jason Smith <firechief@grantsvilleut.gov>; Robert Rousselle <rrousselle@ensignutah.com>
Subject: Re: SR-138 Water Line Extension from Bluegrass to Clark Street - Concept Drawing

Caution: This email originated from outside of FOCUS. Do not click links or open attachments unless you are positive of the sender's identity and have verified the content is safe.

Mat,

Do you have an update on this request?

SHELBY MOORE
Planning & Zoning Administrator
Department of Public Works
Office: (435) 884-4604
Email: Smoore@Grantsvilleut.gov

This e-mail may contain privileged and confidential information intended for the use of the individual or entity named above. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you received this communication in error, please immediately notify sender by telephone or reply e-mail, do not use or disclose the contents to others, and delete the message and all attachments from your computer, system, &/or network.

On Thu, Jan 9, 2025 at 6:52 PM Robert Rousselle <rrousselle@ensignutah.com> wrote:

> Mat,
>
> Good evening. Following up on our phone conversation yesterday, 1/8, attached is a concept drawing showing the scope for the SR-138 Water Line Extension from Bluegrass to Clark Street. Per our discussion, please provide the following costs so the City can review and make a decision on these costs which would be paid by the City.
>
> 1. Engineering Design for SR-138 Extension to Clark Street
> 2. Construction Cost for Bluegrass Way and SR-138 Crossing Revisions
> a. City will pay for upsize costs art this crossing.
> b. As we discussed, this upsize will probably need to be updated on your drawings anyways as the plan is to connect and test fire hydrants after the connections are made at Bluegrass. If fire hydrants do have 1,000 gpm within The Highlands subdivision, then the Clarks Street connection will not be made at this time.
> 3. Construction Cost from Bluegrass Way along SR-138 to Clark Street Connection
>
> Please let me know if there are any questions. Please send me these cost by the end of next week, 1/17, if possible. Thank you.

Robert Rousselle, P.E., LEED-AP | Senior Associate
Main 801.255.0529 | Cell 801.859.4759
rrousselle@ensignutah.com | ensignutah.com

ENSIGN
THE STANDARD IN ENGINEERING

CONFIDENTIALITY NOTICE: The content of this email is confidential, proprietary, and privileged. If you are not the intended recipient, please destroy it.

ENGINEERS ESTIMATE OF PROBABLE COSTS

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ENSIGN
THE STANDARD IN ENGINEERING

Project: Apple Street Water Line Replacement: Hale Street to Park Street
By: Ensign Engineering and Land Surveying
Date: 3/10/2026

Project No.: 11637
Checked By: Robert Rousselle

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
SITE WORK					
1	Mobilization	1	L.S.	$12,500.00	$12,500.00
2	3-inch Asphalt	7,776	S.F.	$2.90	$22,550.40
3	6-inch Untreated Base Course	7,776	S.F.	$2.00	$15,552.00
4	Sawcut and Remove Asphalt or Concrete	7,776	S.F.	$1.60	$12,441.60
5	Mill and Overlay	11,040	S.F.	$2.50	$27,600.00
6	24-inch Collection Curb and Gutter w/Base Course	20	L.F.	$78.00	$1,560.00
7	Striping	1	L.S.	$5,000.00	$5,000.00
				Sub Total	**$97,204.00**
CULINARY WATER					
1	8-inch C-900 PVC Culinary Water Line with Fittings and Appurtenances	920	L.F.	$65.00	$59,800.00
2	Reconnect 3/4-inch Culinary Water Service	21	E.A.	$1,500.00	$31,500.00
3	Fire Hydrant Assembly (Complete)	2	E.A.	$7,500.00	$15,000.00
4	Connect to Existing Water Line	4	E.A.	$5,000.00	$20,000.00
				Sub Total	**$126,300.00**
MISCELLANEOUS ITEMS					
Traffic Control					
1	Traffic Control Implementation	1	L.S.	$13,000.00	$13,000.00
Erosion Control					
1	SWPPP/Maintenance	1	L.S.	$11,000.00	$11,000.00
				Sub Total	**$24,000.00**
				Construction Subtotal	**$247,504.00**
				Continency (15%)	**$37,125.60**
				Survey and Engineering Design and CM	**$35,000.00**
				Construction Total	**$319,629.60**

ENGINEERS ESTIMATE OF PROBABLE COSTS

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ENSIGN
THE STANDARD IN ENGINEERING

Project: Blaine Avenue Water Line Replacement: Clark to Main
By: Ensign Engineering and Land Surveying
Date: 3/10/2026

Project No.: 11637
Checked By: Robert Rousselle

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
SITE WORK					
1	Mobilization	1	L.S.	$14,000.00	$14,000.00
2	3-inch Asphalt	8,932	S.F.	$2.90	$25,902.80
3	6-inch Untreated Base Course	8,932	S.F.	$2.00	$17,864.00
4	Sawcut and Remove Asphalt or Concrete	8,932	S.F.	$1.60	$14,291.20
5	Mill and Overlay	12,840	S.F.	$2.50	$32,100.00
6	6-inch Thick Concrete Sidewalk w/ Base Course	50	S.F.	$26.00	$1,300.00
7	24-inch Collection Curb and Gutter w/Base Course	10	L.F.	$78.00	$780.00
8	4-foot Concrete Waterway	10	L.F.	$90.00	$900.00
9	Striping	1	L.S.	$2,500.00	$2,500.00
				Sub Total	**$109,638.00**
CULINARY WATER					
1	8-inch C-900 PVC Culinary Water Line with Fittings and Appurtenances	1,070	L.F.	$65.00	$69,550.00
2	Reconnect 3/4-inch Culinary Water Service	17	E.A.	$1,500.00	$25,500.00
3	Fire Hydrant Assembly (Complete)	3	E.A.	$7,500.00	$22,500.00
4	2-inch Air/Vacuum Combination Valve Station	1	E.A.	$2,500.00	$2,500.00
5	Connect to Existing Water Line	5	E.A.	$5,000.00	$25,000.00
				Sub Total	**$145,050.00**
MISCELLANEOUS ITEMS					
Traffic Control					
1	Traffic Control Implementation	1	L.S.	$13,000.00	$13,000.00
Erosion Control					
1	SWPPP/Maintenance	1	L.S.	$11,000.00	$11,000.00
				Sub Total	**$24,000.00**
				Construction Subtotal	**$278,688.00**
				Continency (15%)	**$41,803.20**
				Survey and Engineering (Design and CM)	**$37,500.00**
				Construction Total	**$357,991.20**

ENGINEERS ESTIMATE OF PROBABLE COSTS

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ENSIGN
THE STANDARD IN ENGINEERING

Project: Hale Street Water Line Replacement: North Street to 528
By: Ensign Engineering and Land Surveying
Date: 3/10/2026

Project No.: 11637
Checked By: Robert Rousselle

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
SITE WORK					
1	Mobilization	1	L.S.	$36,000.00	$36,000.00
2	3-inch Asphalt	26,536	S.F.	$2.90	$76,954.40
3	6-inch Untreated Base Course	26,536	S.F.	$2.00	$53,072.00
4	Sawcut and Remove Asphalt or Concrete	26,536	S.F.	$1.60	$42,457.60
5	Mill and Overlay	38,904	S.F.	$2.50	$97,260.00
6	6-inch Thick Concrete Sidewalk w/ Base Course	50	S.F.	$26.00	$1,300.00
7	24-inch Collection Curb and Gutter w/Base Course	10	L.F.	$78.00	$780.00
8	4-foot Concrete Waterway	10	L.F.	$90.00	$900.00
9	Striping	1	L.S.	$2,500.00	$2,500.00
				Sub Total	**$311,224.00**
CULINARY WATER					
1	8-inch C-900 PVC Culinary Water Line with Fittings and Appurtenances	3,242	L.F.	$65.00	$210,730.00
2	Reconnect 3/4-inch Culinary Water Service	35	E.A.	$1,500.00	$52,500.00
3	Fire Hydrant Assembly (Complete)	7	E.A.	$7,500.00	$52,500.00
4	2-inch Air/Vacuum Combination Valve Station	1	E.A.	$2,500.00	$2,500.00
5	Connect to Existing Water Line	2	E.A.	$5,000.00	$10,000.00
				Sub Total	**$328,230.00**
MISCELLANEOUS ITEMS					
Traffic Control					
1	Traffic Control Implementation	1	L.S.	$39,000.00	$39,000.00
Erosion Control					
1	SWPPP/Maintenance	1	L.S.	$33,000.00	$33,000.00
				Sub Total	**$72,000.00**
				Construction Subtotal	**$711,454.00**
				Continency (15%)	**$106,718.10**
				Survey and Engineering (Design and CM)	**$60,000.00**
				Construction Total	**$878,172.10**

ENGINEERS ESTIMATE OF PROBABLE COSTS

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ENSIGN
THE STANDARD IN ENGINEERING

Project: 16-inch Water Transmission Line Replacement: South Willow Tank to Marshall Well (Phase 1)
By: Ensign Engineering and Land Surveying
Date: 3/10/2026

Project No.: 11637
Checked By: Robert Rousselle

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
SITE WORK					
1	Mobilization	1	L.S.	$102,000.00	$102,000.00
2	Gravel Surface Course	46,500	S.F.	$2.50	$116,250.00
				Sub Total	**$218,250.00**
CULINARY WATER					
1	16-inch C-900 PVC Culinary Water Line with Fittings and Appurtenances	9,300	L.F.	$140.00	$1,302,000.00
2	Steel Casing Sleeve at Drainage Crossings	3	E.A.	$64,000.00	$192,000.00
3	Fire Hydrant Assembly (Complete)	8	E.A.	$7,500.00	$60,340.91
4	2-inch Air/Vacuum Combination Valve Station and 16-inch Isolation Valve	8	E.A.	$16,500.00	$132,750.00
5	Connect to Existing Water Line	3	E.A.	$20,000.00	$60,000.00
				Sub Total	**$1,747,090.91**
MISCELLANEOUS ITEMS					
Traffic Control					
1	Traffic Control Implementation	1	L.S.	$52,000.00	$52,000.00
Erosion Control					
1	SWPPP/Maintenance	1	L.S.	$42,000.00	$42,000.00
				Sub Total	**$94,000.00**
				Construction Subtotal	**$2,059,340.91**
				Continency (15%)	**$308,901.14**
				Survey and Engineering (Design and CM)	**$142,712.33**
				Construction Total	**$2,510,954.37**

ENGINEERS ESTIMATE OF PROBABLE COSTS

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ENSIGN
THE STANDARD IN ENGINEERING

Project: 16-inch Water Transmission Line Replacement: Marshall Well to Twenty Wells Connection (Phase 2)
By: Ensign Engineering and Land Surveying
Date: 3/10/2026

Project No.: 11637
Checked By: Robert Rousselle

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
SITE WORK					
1	Mobilization	1	L.S.	$110,000.00	$110,000.00
2	Gravel Surface Course	54,000	S.F.	$2.50	$135,000.00
				Sub Total	**$245,000.00**
CULINARY WATER					
1	16-inch C-900 PVC Culinary Water Line with Fittings and Appurtenances	10,800	L.F.	$140.00	$1,512,000.00
2	Steel Casing Sleeve at Drainage Crossings	1	E.A.	$64,000.00	$64,000.00
3	Fire Hydrant Assembly (Complete)	9	E.A.	$7,500.00	$68,863.64
4	2-inch Air/Vacuum Combination Valve Station and 16-inch Isolation Valve	9	E.A.	$16,500.00	$151,500.00
5	Connect to Existing Water Line	2	E.A.	$20,000.00	$40,000.00
				Sub Total	**$1,836,363.64**
MISCELLANEOUS ITEMS					
Traffic Control					
1	Traffic Control Implementation	1	L.S.	$55,000.00	$55,000.00
Erosion Control					
1	SWPPP/Maintenance	1	L.S.	$45,000.00	$45,000.00
				Sub Total	**$100,000.00**
				Construction Subtotal	**$2,181,363.64**
				Continency (15%)	**$327,204.55**
				Survey and Engineering (Design and CM)	**$151,168.50**
				Construction Total	**$2,659,736.68**

ENGINEERS ESTIMATE OF PROBABLE COSTS

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ENSIGN
THE STANDARD IN ENGINEERING

Project: 16-inch Water Transmission Line Replacement: Twenty Wells Connection to Sheep Lane (Phase 3)
By: Ensign Engineering and Land Surveying
Date: 3/10/2026

Project No.: 11637
Checked By: Robert Rousselle

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
SITE WORK					
1	Mobilization	1	L.S.	$180,000.00	$180,000.00
2	Gravel Surface Course	74,500	S.F.	$2.50	$186,250.00
				Sub Total	**$366,250.00**
CULINARY WATER					
1	16-inch C-900 PVC Culinary Water Line with Fittings and Appurtenances	14,900	L.F.	$140.00	$2,086,000.00
2	Steel Casing Sleeve at Drainage Crossings	2	E.A.	$64,000.00	$128,000.00
3	Fire Hydrant Assembly (Complete)	12	E.A.	$7,500.00	$92,159.09
4	2-inch Air/Vacuum Combination Valve Station and 16-inch Isolation Valve	12	E.A.	$16,500.00	$202,750.00
5	Jack and Bore with Steel Casing at SR-112 and Sheep Lane	250	L.F.	$1,600.00	$400,000.00
6	12-inch PRV Station	1	E.A.	$175,000.00	$175,000.00
7	Connect to Existing Water Line	2	E.A.	$20,000.00	$40,000.00
				Sub Total	**$3,123,909.09**
MISCELLANEOUS ITEMS					
Traffic Control					
1	Traffic Control Implementation	1	L.S.	$90,000.00	$90,000.00
Erosion Control					
1	SWPPP/Maintenance	1	L.S.	$71,500.00	$71,500.00
				Sub Total	**$161,500.00**
				Construction Subtotal	**$3,651,659.09**
				Continency (15%)	**$547,748.86**
				Survey and Engineering (Design and CM)	**$238,453.34**
				Construction Total	**$4,437,861.29**

ENGINEERS ESTIMATE OF PROBABLE COSTS

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ENSIGN
THE STANDARD IN ENGINEERING

Project: Clark Street Water Line Extension
By: Ensign Engineering and Land Surveying
Date: 3/10/2026

Project No.: 11637
Checked By: Robert Rousselle

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
SITE WORK					
1	Mobilization	1	L.S.	$20,000.00	$20,000.00
2	3-inch Asphalt	4,200	S.F.	$2.90	$12,180.00
2	6-inch Untreated Base Course	4,200	S.F.	$2.00	$8,400.00
2	Sawcut and Remove Asphalt or Concrete	4,200	S.F.	$1.60	$6,720.00
2	Mill and Overlay	6,144	S.F.	$2.50	$15,360.00
2	Striping	1	L.S.	$2,500.00	$2,500.00
				Sub Total	**$65,160.00**
CULINARY WATER					
1	12-inch C-900 PVC Culinary Water Line with Fittings and Appurtenances	612	L.F.	$80.00	$48,960.00
2	Reconnect 3/4-inch Culinary Water Service	4	E.A.	$1,500.00	$6,000.00
3	Fire Hydrant Assembly (Complete)	2	E.A.	$7,500.00	$15,000.00
4	10-inch PRV Station	1	E.A.	$100,000.00	$100,000.00
5	Jack and Bore with Steel Casing at SR-138 and Clark Street	100	L.F.	$1,200.00	$120,000.00
6	Connect to Existing Water Line	2	E.A.	$7,500.00	$15,000.00
				Sub Total	**$304,960.00**
MISCELLANEOUS ITEMS					
Traffic Control					
1	Traffic Control Implementation	1	L.S.	$10,000.00	$10,000.00
Erosion Control					
1	SWPPP/Maintenance	1	L.S.	$7,500.00	$7,500.00
				Sub Total	**$17,500.00**
				Construction Subtotal	**$387,620.00**
				Continency (15%)	**$58,143.00**
				Survey and Engineering (Design and CM)	**$34,536.94**
				Construction Total	**$480,299.94**

ENGINEERS ESTIMATE OF PROBABLE COSTS

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ENSIGN
THE STANDARD IN ENGINEERING

Project: Quirk Street Water Line Replacement: Cherry Street to Durfee Street
By: Ensign Engineering and Land Surveying
Date: 3/10/2026

Project No.: 11637
Checked By: Robert Rousselle

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
SITE WORK					
1	Mobilization	1	L.S.	$16,000.00	$16,000.00
2	3-inch Asphalt	9,900	S.F.	$2.90	$28,710.00
3	6-inch Untreated Base Course	9,900	S.F.	$2.00	$19,800.00
4	Sawcut and Remove Asphalt or Concrete	9,900	S.F.	$1.60	$15,840.00
5	Mill and Overlay	14,400	S.F.	$2.50	$36,000.00
6	24-inch Collection Curb and Gutter w/Base Course	20	L.F.	$78.00	$1,560.00
7	Striping	1	L.S.	$5,000.00	$5,000.00
				Sub Total	**$122,910.00**
CULINARY WATER					
1	8-inch C-900 PVC Culinary Water Line with Fittings and Appurtenances	1,200	L.F.	$65.00	$78,000.00
2	Reconnect 3/4-inch Culinary Water Service	10	E.A.	$1,500.00	$15,000.00
3	Fire Hydrant Assembly (Complete)	5	E.A.	$7,500.00	$37,500.00
4	Connect to Existing Water Line	7	E.A.	$5,000.00	$35,000.00
				Sub Total	**$165,500.00**
MISCELLANEOUS ITEMS					
Traffic Control					
1	Traffic Control Implementation	1	L.S.	$15,500.00	$15,500.00
Erosion Control					
1	SWPPP/Maintenance	1	L.S.	$12,500.00	$12,500.00
				Sub Total	**$28,000.00**
				Construction Subtotal	**$316,410.00**
				Continency (15%)	**$47,461.50**
				Survey and Engineering Design and CM	**$45,000.00**
				Construction Total	**$408,871.50**

Total Project Estimate

Project Name: **Burmester and Vegas Water Pipeline** Engineer: **Civil Proj-Ex, Inc**

Location: **Grantsville, Utah** Stage of Design: **100%**

ITEM NUMBER	CWS #	DESCRIPTION	UNIT	UNIT QTY	UNIT COST	TOTAL
	1	**General Requirements**				
0101	01 31 19	Preconstruction Conference and Progress Schedule	LS	1.0	$2,500.00	$ 2,500.00
0102	01 45 00	Quality Control (materials testing and documentation)	LS	1.0	$9,170.14	$ 9,170.14
0103	01 55 26	Traffic Control	LS	1.0	$5,486.41	$ 5,486.41
0104	01 57 00	Temporary Controls (SWPPP, Erosion Control)	LS	1.0	$4,389.13	$ 4,389.13
0105	01 71 13	Mobilization and Demobilization	LS	1.0	$35,269.76	$ 35,269.76
0107	01 78 39	Project Record Documents	LS	1.0	$3,526.98	$ 3,526.98
0108	01 78 50	Closeout Procedures	LS	1.0	$1,959.43	$ 1,959.43
		TOTAL GENERAL REQUIREMENTS				$ 62,301.83
	2	**EXISTING CONDITIONS**				
0208	02 41 14	Pavement Removal	SF	7238.0	$0.98	$ 7,093.24
		TOTAL EXISTING CONDITIONS				$ 7,093.24
	31	**EARTHWORK**				
3101	31 05 13	Trench Foundation Stabilization Material	CY	290.8	$38.50	$ 11,196.37
3104	31 11 00	Site Clearing	LS	1.0	$37,025.00	$ 37,025.00
3105	31 23 16	Locate Utilities	LS	1.0	$5,000.00	$ 5,000.00
		TOTAL EARTHWORK				$ 53,221.37
	33	**UTILITIES**				
3303	33 05 25	Unpaved Road Restoration	SF	2993.0	$0.86	$ 2,573.98
3304	33 05 25	Pavement Restoration, PG64-22-DM-1/2	SF	7238.0	$3.65	$ 26,418.70
3305	33 05 07	PVC Pipe, 8-inch, C900 SDR 18 with import backfill	LF	14	$43.25	$ 605.50
3306	33 05 07	PVC Pipe, 12-inch, C900 SDR 18 with import backfill	LF	1565	$55.35	$ 86,622.75
3307	33 05 07	PVC Pipe, 8-inch, C900 SDR 18	LF	81	$37.00	$ 2,997.00
3308	33 05 07	PVC Pipe, 12-inch, C900 SDR 18	LF	6192	$49.00	$ 303,408.00
3310	33 12 16	Gate Valve, 12-inch, AWWA C509	EA	17.0	$5,470.00	$ 92,990.00
3311	33 12 16	Gate Valve, 8-inch, AWWA C509	EA	4.0	$3,090.00	$ 12,360.00
3312	33 12 19	Fire Hydrant, AWWA C502	EA	13.0	$7,265.00	$ 94,445.00
3333	33 12 33	Potable Water Service, 1-inch, CIY STD	EA	3.0	$2,025.00	$ 6,075.00
3345	34 41 00	CPP Storm Drain Pipe, 15-inch, APWA 382	LF	80.0	$46.00	$ 3,680.00
3349	34 41 00	"V" Ditch 1 FT Deep w/ 4:1 (H:V) Side Slopes	LF	4140.0	$7.00	$ 28,980.00
		TOTAL UTILITIES				$ 661,155.93

Divisions Total	$	783,772.37
Contingency @ 20%	$	156,754.47
Estimate Total	$	940,526.85

ENGINEERS ESTIMATE OF PROBABLE COSTS

These costs are opinions only and should not be considered as a formal construction estimate. These quantities and costs are based on information derived from the design drawings and are therefore subject to change. Ensign has no control over costs of labor, materials, bidding procedures, unidentified field conditions, or other factors. Ensign cannot and does not make any warranty, promise, or guarantee as to the accuracy of this estimate.

ENSIGN
THE STANDARD IN ENGINEERING

Project: Centennial Way Water Line
By: Ensign Engineering and Land Surveying
Date: 3/10/2026

Project No.: 11637
Checked By: Robert Rousselle

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT COST	COST
SITE WORK					
1	Mobilization	1	L.S.	$15,000.00	$15,000.00
2	3-inch Asphalt	6,552	S.F.	$2.90	$19,000.80
2	6-inch Untreated Base Course	6,552	S.F.	$2.00	$13,104.00
2	Sawcut and Remove Asphalt or Concrete	6,552	S.F.	$1.60	$10,483.20
2	Mill and Overlay	9,720	S.F.	$2.50	$24,300.00
2	Striping	1	L.S.	$2,500.00	$2,500.00
				Sub Total	**$84,388.00**
CULINARY WATER					
1	12-inch C-900 PVC Culinary Water Line with Fittings and Appurtenances	810	L.F.	$80.00	$64,800.00
2	Reconnect 3/4-inch Culinary Water Service	2	E.A.	$1,500.00	$3,000.00
3	Fire Hydrant Assembly (Complete)	1	E.A.	$7,500.00	$7,500.00
4	10-inch PRV Station	1	E.A.	$100,000.00	$100,000.00
5	Connect to Existing Water Line	2	E.A.	$7,500.00	$15,000.00
				Sub Total	**$190,300.00**
MISCELLANEOUS ITEMS					
Traffic Control					
1	Traffic Control Implementation	1	L.S.	$7,500.00	$7,500.00
Erosion Control					
1	SWPPP/Maintenance	1	L.S.	$6,000.00	$6,000.00
				Sub Total	**$13,500.00**
				Construction Subtotal	**$288,188.00**
				Continency (15%)	**$43,228.20**
				Survey and Engineering (Design and CM)	**$25,677.55**
				Construction Total	**$357,093.75**

3.02

3.02 *Unit Price Bids*

A. Bidder will perform the following Work at the indicated unit prices:

BID SCHEDULE					
Item No.	Item Description	Unit	Estimated Quantity	Bid Unit Price	Bid Price
1-1	Mobilization	L.S.	1	XXX	200,000.00
1-2	Quality Control Testing	L.S.	1	XXX	50,000.00
1-3	Survey Staking	L.S.	1	XXX	10,000.00
1-4	Clearing and Grubbing	L.S.	1	XXX	5,475.00
1-5	Tank Excavation and Site Grading	L.S.	1	XXX	265,000.00
1-6	Seeding (Plan Quantity)	Acre	1.44	7,187.50	10,350.00
1-7	6 Foot Chain Link Fencing	L.F.	975	50.00	48,750.00
1-8	Chain Link Double Gate 16 Feet	Each	1	2,050.00	2,050.00
1-9	Chain Link Single Gate 4 Feet	Each	1	500.00	500.00
1-10	Scada and Telemetry	L.S.	1	XXX	47,725.00
1-11	Concrete Headwall	L.S.	1	XXX	17,465.00
1-12	Riprap	C.Y.	10	351.00	3,510.00
1-13	16-Inch Dia. PVC Inlet/Outlet Pipe	L.F.	117	635.00	74,295.00
1-14	16-Inch Butterfly Valve	Each	3	15,630.00	46,890.00
1-15	8' x 18.75' Deep Precast Concrete Valve Vault (Inlet/Outlet Valves)	Each	1	32,000.00	32,000.00
1-16	8' x24.75' Deep Precast Concrete Valve Vault (Drain Valve)	Each	1	38,000.00	38,000.00
1-17	Inlet/Outlet Vault Pipiping (Detail C-501/D5)	L.S.	1	XXX	99,580.00
1-18	Drain Vault Pipiping (Detail C-501/A1)	L.S.	1	XXX	67,590.00
1-19	16-Inch Dia. PVC C900 Overflow Pipe	L.F.	805	170.00	136.850.00
1-20	12-Inch Gate Valve	Each	1	8,700.00	8,700.00
1-21	Air Valve Assembly	Each	1	8,430.00	8,430.00
1-22	12-Inch PVC C900 Drain Pipe	L.F.	44	167.00	7,348.00
1-23	16" Steel to PVC Coupler with Cathodic Protection	Each	3	7,400.00	22,200.00
1-24	16" 22.5 Bend with Cathodic Protection	Each	1	3,600.00	3,600.00
1-25	16" 11.25 Bend with Cathodic Protection	Each	1	3,350.00	3,350.00
1-26	16" 45/22.5 Bends with Cathodic Protection	Each	1	3,400.00	3,400.00
1-27	Cathodic Test Station for Steel Pipes	Each	3	22,700.00	68,100.00
				Base Bid / Schedule 1 - Subtotal	1,281,158.00

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ADDITIVE ALTERNATIVE NO. 1					
2-1	2-Million Gallon Concrete Water Tank - Cast-in-Place Concrete Tank	L.S.	1	XXX	1,737,712.00
				Additive Alternate No. 1 - Subtotal	1,737,712.00
				Total Bid Price (Base + Alt No 1)	3,018,870.00
ADDITIVE ALTERNATIVE NO. 2					
2-2	Xypex Admixture for a Cast-in-Place Concrete Tank	L.S.	1	XXX	42,000.00
				Additive Alternate No. 2 - Subtotal	42,000.00
				Total Bid Price (Base + Alt No 1 & 2)	3,060,870.00
ADDITIVE ALTERNATIVE NO. 3					
3-1	2-Million Gallon Concrete Water Tank - AWWA D110 Type III Pretensioned Concrete Tank	L.S.	1	XXX	
				Additive Alternate No. 3 - Subtotal	
				Total Bid Price (Base + Alt No 3)	
ADDITIVE ALTERNATIVE NO. 4					
4-1	2-Million Gallon Concrete Water Tank - AWWA D115 Posttensioned Concrete Tank	L.S.	1	XXX	1,968,690.00
				Additive Alternate No. 4 - Subtotal	1,968,690.00
				Total Bid Price (Base + Alt No 4)	3,249,848.00

Change Order No. 2	($5,000.00)
Design	$110,375.88
Construction Management	$32,000.00
Project Total	**$3,387,223.88**

B. Bidder acknowledges that:

1. each Bid Unit Price includes an amou Contractor's overhead and profit for each separately identified item, and

2. estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.

ARTICLE 4—BASIS OF BID—COST-PLUS FEE - DELETED

ARTICLE 5—PRICE-PLUS-TIME BID - DELETED

ARTICLE 6—TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Deleted.

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Appendix E Drinking Water Calculations

Single Family 5 Bed, 3 Bath = 1 ERC			
Fixture	**Fixture Count**	**Water Supply Fixture Units**	**Total Fixture Units**
Kitchen sink, Private, Faucet	1	1.4	1.4
Dishwashing machine, Private, Automatic	1	1.4	1.4
Washing machine (8 lb), Private, Automatic	1	1.4	1.4
Exterior hose bib	3	2.2	6.6
Shower head, Private, Mixing valve	3	1.4	4.2
Lavatory, Private, Faucet	3	0.7	2.1
Water closet, Private, Flushtank	3	2.2	6.6
Total			**24**

MEMORANDUM

ENSIGN
THE STANDARD IN ENGINEERING

Structural Engineering
Municipal Services
Civil Engineering
Land Surveying

Date: March 21, 2025

To: Chris Martin and Mike Newberry
Utah Division of Drinking Water
195 N 1950 W
Salt Lake City, Utah 84116
Transmitted Via Email: cmartin@utah.gov, mnewberry@utah.gov
CC: cmontierth@grantsvilleut.gov, mseat@grantsvilleut.gov

From: Conor Dunkel, PE
Robert Rousselle, PE

RE: Grantsville Engineering Report to Evaluate Minimum Sizing Standards
Grantsville, Utah
Ensign Engineering Project No.: 11637

Ensign Engineering and Land Surveying has prepared this engineering report to assess Grantsville City's System-Specific Minimum Water Sizing Standards set by the Utah Department of Environmental Quality Division of Drinking Water (DDW). Calculations for current demands, methodology, data used, and assumptions are included.

1 - Current Standards

The current Grantsville City System-Specific Minimum Water Sizing Standards set in 2022 are:

Peak Day Source (Indoor and Outdoor) Demand (gal/day/ERC) – 1,416 gal/day/ERC
Average Annual (Indoor and Outdoor) Demand (gal/yr/ERC) – 201,531 gal/yr/ERC
Equalization Storage (gal/ERC) – 807 gal/ERC
Fire Storage (gal) – 492,000 gal

The current standards were calculated based on source production for indoor water usage and state standards for outdoor irrigation assuming 0.12-acres per ERC. Calculations for outdoor peak day demand and equalization storage assume irrigation will be supplied by City municipal water and not secondary water due to Grantsville Irrigation Company's reservoir being drawn down during drought years and users switching to municipal water provided by the City for irrigation.

2 – Number of Equivalent Residential Connections (ERCs)

The number of ERCs previously submitted to the Division of Drinking Water for 2016, 2017, 2018, 2019, 2020, and 2021 were 5,028; 5,340; 5,345, 5,206, 5,559, and 5,975 respectively. Tables 2-1 through 2-3 show the calculations for number of ERCs in 2022, 2023, and 2024 where demographics and water usage were calculated from monthly water meter use reports.

Table 2-1: 2022 ERCs

Service Connection Type	Service Connections	Units	Usage (kgal)	ERCs	Annual Unit Demand (kgal/ERC)
Residential	4,121	4,123	399,293	4,123	96.85
Multi-Unit	47	276	12,904	152	
Trailer	10	223	25,428	252	
Commercial	106	144	97,571	1,140	
Church	10	11	4,773	102	
School	7	12	4,455	63	
Construction Water	17	17	9,211	82	
City Rate	5	34	34,251	292	
Totals	**4,323**	**4,840**	**587,886**	**6,206**	

Table 2-2: 2023 ERCs

Service Connection Type	Service Connections	Units	Usage (kgal)	ERCs	Annual Unit Demand (kgal/ERC)
Residential	4,267	4,274	384,155	4,274	89.88
Multi-Unit	47	291	12,335	160	
Trailer	9	216	20,591	245	
Commercial	107	146	91,529	1,156	
Church	10	11	6,145	102	
School	7	10	4,332	52	
Construction Water	13	13	5,703	63	
City Rate	5	34	28,808	292	
Totals	**4,465**	**4,995**	**553,598**	**6,344**	

Table 2-3: 2024 ERCs

Service Connection Type	Service Connections	Units	Usage (kgal)	ERCs	Annual Unit Demand (kgal/ERC)
Residential	4,495	4,503	461,244	4,503	102.43
Multi-Unit	46	290	12,698	142	
Trailer	9	212	26,256	240	
Commercial	109	152	109,186	1,117	
Church	10	11	6,525	50	
School	7	12	4,866	49	
Construction Water	18	18	6,813	121	
City Rate	5	33	46,394	349	
Totals	**4,699**	**5,231**	**673,982**	**6,571**	

Table 2-4 summarizes the number of ERCs from 2016 through 2024.

Table 2-4: Summary of ERCs

Year	ERCs
2016	5,028
2017	5,340
2018	5,345
2019	5,206
2020	5,559
2021	5,975
2022	6,206
2023	6,344
2024	6,571

3 – Average Day Demand

The average day demand for indoor use was calculated using the City's monthly water source data for November through March of 2016 to 2024 and shown in Appendix B. The mean indoor average day demand is 176 gpd per ERC and the maximum is 193 as shown in Table 3-1.

Table 3-1 Indoor Average Day Demand

Year	ERCs	Calculated November-March Average Day Indoor Demand (gpd)	Average Day Indoor Demand (gpd/ERC)
2016	5,028	923,673	183.7
2017	5,340	868,378	162.6
2018	5,345	894,044	167.3
2019	5,206	915,276	175.8
2020	5,559	1,015,736	182.7
2021	5,975	965,278	161.6
2022	6,206	1,092,774	176.1
2023	**6,344**	**1,225,890**	**193.2**
2024	6,571	1,108,958	168.8

(Maximum 193.2)
(Mean 175.7)

The current level of service set in 2022 is 195 gpd per ERC. The maximum average day demand is 193.2 gpd per ERC so the average day indoor demand of 195 gpd per ERC will continue to be used and will be adjusted in the future if future trends indicate an increase.

The average day demand for outdoor use was not calculated using the City's monthly water source data due to the variability of secondary water supplied by the Grantsville Irrigation Company. Instead, the outdoor demand was determined using the State Engineer's irrigation duty and assumptions about the City.

The State Engineer's irrigation duty of 4.0 acre-feet per irrigated acre per year with an irrigation efficiency of 50% was converted to 3.33 acre-feet per irrigated acre when considering an efficiency of 60% for sprinkler and drip irrigation systems. The previously determined average irrigated area of 0.12 acres per ERC with the irrigation season of 213 days per Utah Administrative Code R309-510-7 was used resulting in an outdoor average day demand of 612 gpd per ERC.

Table 3-2 Outdoor Average Day Demand

Irrigation Demand (ac-ft/irr. ac/yr)	Average Irrigated Area (ac/ERC)	Irrigated Days per Year	Outdoor Demand (gpd/ERC)
3.33	0.12	213	**612**

The average day indoor and outdoor demand, is 195 gpd/ERC + 612 gpd/ERC = 807 gpd/ERC, and is also the equalization storage. Assuming 213 days of outdoor water use and 365 days of indoor water use equates to an average annual demand of 201,531 gallons per year per ERC (195 gpd/ERC x 365 + 612 gpd/ERC x 213 = 71,175 gal/yr/ERC + 130,356 gal/yr/ERC = 201,531 gal/yr/ERC = 0.218 AF/yr/ERC + 0.400 AF/yr/ERC = 0.618 AF/yr/ERC).

4 – Peak Day Demand

The peak day demand for indoor use was calculated using the City's daily source water data for 2020 through 2024 and is not available earlier than 2020. Outlier data points for 2024 were excluded from the calculations when meter readings exceeded pump capacity or indicated unusually high water usage. Data for the months of November through March was analyzed to represent indoor usage when it is expected there is no irrigation and is shown in Appendix C. Table 4-1 shows the maximum indoor peak day demand of 281 gpd per ERC and a mean of 256 gpd per ERC.

Table 4-1 Indoor Peak Day Demand

Year	ERCs	Calculated November-March Peak Day Indoor Demand (gpd)	Peak Day Indoor Demand (gpd/ERC)
2020	5,559	1,212,300	218.1
2021	5,975	1,530,200	256.1
2022	**6,206**	**1,745,300**	**281.2**
2023	6,343	1,718,700	271.0
2024	6,571	1,657,400	252.2
			(Maximum 281.2)
			(Mean 255.7)

The current level of service set in 2022 is 275 gpd per ERC peak day indoor demand will continue to be used for the City. Year 2022 had greater peak day demand than 275 gpd, but the preceding 2 years were closer to 275 gpd. The City will continue to use 275 gpd for indoor peak day demand and will adjust if future trends indicate an increase.

The outdoor peak day demand was calculated using a net irrigation demand of 3.96 gpm per

irrigated acre per Utah Administrative Code R309-510-7 for Map Zone 4. A 60% irrigation efficiency and 0.12 irrigated acres per ERC were assumed, which were the same assumptions utilized for the average day demand calculations. A 60% efficiency equates to a gross irrigation demand of 6.6 gpm per irrigated acre.

Table 4-2 Outdoor Peak Day Demand

Irrigation Demand (gpm/irr. ac)	Average Irrigated Area (ac/ERC)	Outdoor Demand (gpd/ERC)
6.6	0.12	**1,141**

The peak day indoor and outdoor demand is 275 gpd/ERC + 1,141 gpd/ERC = 1,416 gpd per ERC.

5 – Fire Storage

As Grantsville City continues to grow including commercial development with larger buildings, the fire flow of 2,050 gpm for 4 hours (492,000 gallons) set in 2022 remains the required level of service. Discussions with Grantsville's Fire Chief Jason Smith confirmed that this is an adequate requirement to set for commercial buildings in other areas of the City as well.

Appendix A – References

1. Grantsville City Source and Water Usage Data, Grantsville City.
2. Grantsville Engineering Report to Update Minimum Sizing Standards Memo, Ensign Engineering and Land Surveying, dated March 8, 2022.
3. Utah Administrative Code Title R309-510-7. https://casetext.com
4. Lakeview Business Park Culinary Water and Wastewater Master Plan. AQUA Engineering, dated August 6, 2020.

Appendix B – Average Day Source Production Data

Month, Year	Total Water Use (gal)	Average Daily Water Use (gpd)
January, 2016	24,429,000	788,032
February, 2016	40,080,000	1,382,069
March, 2016	25,100,000	809,677
November, 2016	25,025,000	834,167
December, 2016	24,937,000	804,419
5-month avg:	**27,914,200**	**923,673**
January, 2017	27,183,000	876,871
February, 2017	24,723,000	882,964
March, 2017	27,304,000	880,774
November, 2017	26,452,000	881,733
December, 2017	25,406,000	819,548
5-month avg:	**26,213,600**	**868,378**
January, 2018	29,591,000	954,548
February, 2018	24,087,000	860,250
March, 2018	25,668,000	828,000
November, 2018	27,631,000	921,033
December, 2018	28,098,000	906,387
5-month avg:	**27,015,000**	**894,044**
January, 2019	29,771,000	960,355
February, 2019	26,596,000	949,857
March, 2019	27,769,000	895,774
November, 2019	23,413,000	780,433
December, 2019	30,688,783	989,961
5-month avg:	**27,647,557**	**915,276**
January, 2020	31,354,190	1,011,425
February, 2020	25,775,376	888,806
March, 2020	34,882,618	1,125,246
November, 2020	33,982,520	1,132,751
December, 2020	28,534,024	920,452
5-month avg:	**30,905,746**	**1,015,736**
January, 2021	27,393,864	883,673
February, 2021	25,298,272	903,510
March, 2021	32,604,168	1,051,747
November, 2021	30,671,000	1,022,367
December, 2021	29,917,904	965,094
5-month avg:	**29,177,042**	**965,278**
January, 2022	30,531,200	984,877
February, 2022	27,935,400	997,693
March, 2022	33,147,700	1,069,281

Month, Year	Total Water Use (gal)	Average Daily Water Use (gpd)
November, 2022	37,594,300	1,253,143
December, 2022	35,925,100	1,158,874
5-month avg:	**33,026,740**	**1,092,774**
January, 2023	39,636,700	1,278,603
February, 2023	38,866,000	1,388,071
March, 2023	41,480,700	1,338,087
November, 2023	31,693,500	1,056,450
December, 2023	33,115,400	1,068,239
5-month avg:	**36,958,460**	**1,225,890**
January, 2024	31,407,800	1,013,155
February, 2024	28,658,800	988,234
March, 2024	33,240,000	1,072,258
November, 2024	38,989,700	1,299,657
December, 2024	36,316,000	1,171,484
5-month avg:	**33,722,460**	**1,108,958**

Appendix C – Peak Day Source Production Data

Month, Year	Peak Day Total Use (kgal)
January, 2020	N/A
February, 2020	N/A
March, 2020	1,023.9
November, 2020	1,212.3
December, 2020	1,125.4
Max, 2020:	**1,212.3**
January, 2021	1,147.7
February, 2021	1,065.1
March, 2021	1,394.6
November, 2021	1,171.7
December, 2021	1,530.2
Max, 2021:	**1,530.2**
January, 2022	1,094.2
February, 2022	1,123.1
March, 2022	1,518.6
November, 2022	1,623.7
December, 2022	1,745.3
Max, 2022:	**1,745.3**
January, 2023	1,543.1
February, 2023	1,610.8
March, 2023	1,718.7
November, 2023	1,229.4
December, 2023	1,269.7
Max, 2023:	**1,718.7**
January, 2024	1,413.9
February, 2024	1,257.9
March, 2024	1,382.4
November, 2024	1,657.4
December, 2024	1,368.2
Max, 2024:	**1,657.4**

Appendix F Public Safety Calculations and Police Department Multiyear Plan

Grantsville City Police Department

Chief Robert Sager

50 North Bowery Street, Grantsville, UT 84029

(435)884.6881 Fax (435)884.0237

Multiyear plan

Summary

This guide was developed to assist in identifying and achieving departmental goals and objectives over the next five years 2024-2029. We looked at the police department facilities, current staffing levels for both civilian and sworn officers, studied the anticipated workload, population trend, personnel levels, capital improvements and equipment needs. This plan should be fluid and adjusted as needed to best serve our community and operational objectives.

Police Department Facilities Overview

Grantsville City contracted with Ensign Engineering to develop a Capital Facilities Plan. In that plan dated May of 2022, they provided an accurate summary of the Grantsville Justice Center. That plan is summarized as follows;

The Grantsville City Police Department operates from the Grantsville City Justice Center located at 50 North Bowery Street. The building is shared with the Grantsville City Justice Court (constructed in 2017) and consists of 12,947 square feet. The Police Department portion of the building occupies approximately 8,450 square feet and includes a one-vehicle sally port, two holding cell/interview rooms, a patrol operations room, two patrol supervisor offices, an evidence room, an evidence packaging room, a kitchen, a briefing room, locker room with two bathrooms/showers, an exercise room, an investigations area with three cubicles, two interview rooms, and two supervisor offices, a front desk reception area with four cubicles and a Chief's office, a records area, a lobby with an interview room and a multi-purpose room used for training. There is also a detached two-bay garage for vehicle and equipment storage and maintenance.

The Police Department is also tasked with operating, maintaining and staffing the Grantsville City Animal Shelter. There are current capital improvement plans for the design of a new Animal Shelter.

The Police Department operates a firearms range off the Mormon Trail, which consists of a pistol range, rifle range, competition shooting range, pavilion with picnic tables, and a storage compartment. Several law enforcement agencies use the range. However, recent construction of residential homes surrounding the range will soon render it unsafe to use. Outside agencies have been denied access to the range because of the encroaching residential homes.

Grantsville City Police Department
Chief Robert Sager
50 North Bowery Street, Grantsville, UT 84029
(435)884.6881 Fax (435)884.0237

Police Department Staffing Overview

As of June 2024, the Police Department is staffed as follows;

- 20 full-time officers, 1 full-time Administrative Assistant, 1 full-time and 1-part time Record Clerk, 1 full-time Victim Advocate, 1 part-time Animal Control Officer, 9-part time Crossing Guards and 4 Victim Advocate Volunteers.

The hierarchy of the sworn officer division of the police department consists of the following; Chief of Police, (1) Investigations Lieutenant, (1) Patrol Lieutenant, (1) Investigations Sergeant, (2) Patrol Sergeants, (3) Detectives including the School Resource Officer, 12 Patrol Officers and (1) K-9.

Foundational Goals and operational objectives

Training.

As a department we need to continue to provide continued education opportunities for our sworn and non-sworn staff while maintaining all Federal and State certificates. We will continually evaluate and improve department training programs and promote our staff to attend specialized training. Our training committee is dedicated to identifying, developing and implementing the tools needed for our staff to be safe and successful while providing quality service to the community that we serve. The Training Committee will be responsible for updating and maintaining all department lesson plans to adhere with current legislation, policy and best practice. The department has existing policy that account for at minimum an annual evaluation of the training program. The training committee will meet quarterly at minimum.

Professional Development.

Professional development, we will improve and develop clear career paths for all sworn and non-sworn staff at every level. The leaders today will mentor their subordinates, promote training, and support growth and advancement among staff.

Accountability

Our professional standards division will be fair, firm and consistent while ensuing integrity and adherence to ethical and policy standards.

Recruitment, hiring and retention.

First and foremost, Chief Sager believes we need to continue to invest in our people. Retaining staff has been a major hurdle over the years and is not unique to this department. Leadership

coupled with competitive benefits and pay will be paramount in the years to come. Over the next five years we should strive to improve attrition. Under the leadership of Chief Sager appointed in March of 2023 the attrition has slowed.

The last fiscal Year July 1, 2023 to July 1, 2024 there were two people who left the department, but they were terminated for cause. Prior to that, from 2017 to July 1, 2023, the department attrition averaged was 3.16 officers annually with an overall 95% turnover rate. It is imperative to build and constantly work to maintain a fully staffed police department.

The department needs to focus on continued recruitment efforts to attract qualified candidates for future and vacant roles. Recruitment correlates with improving benefits and pay, but deserves dedication from staff. Over the next year the department should develop and implement a recruitment committee while administrators strive to improve benefits and pay to remain competitive.

Community outreach and programs.

The department should focus on community oriented projects and partnerships. It is imperative that all staff engage the community to solve problems and improve trust. The department does not currently have a community outreach committee. Within the next year, the department should develop and implement a community outreach team.

There are two programs that have been partially implemented, RAD Women and NOVA Principals. The department should strive to fully implement these programs by July 1, 2025. Other programs such as a Citizen Police Academy and public education classes related to police use of force and other topics should be developed and offered to the public.

Transparency

Our police department will be dedicated to providing prompt and accurate information to the public. To do this we should proactively release month reports to include summaries of use of force incidents, citizen complaints, internal investigations, and the department budget. The department website and social media accounts should be revamped with updated information, links to state crime dashboards, crime mapping and prevention information.

Accreditation

The Grantsville City Police Department achieved accreditation from the Utah Chiefs of Police Association July of 2022. Our department is dedicated to maintaining accreditation by complying will all standards required of the department by The Utah Chiefs of Police Association.

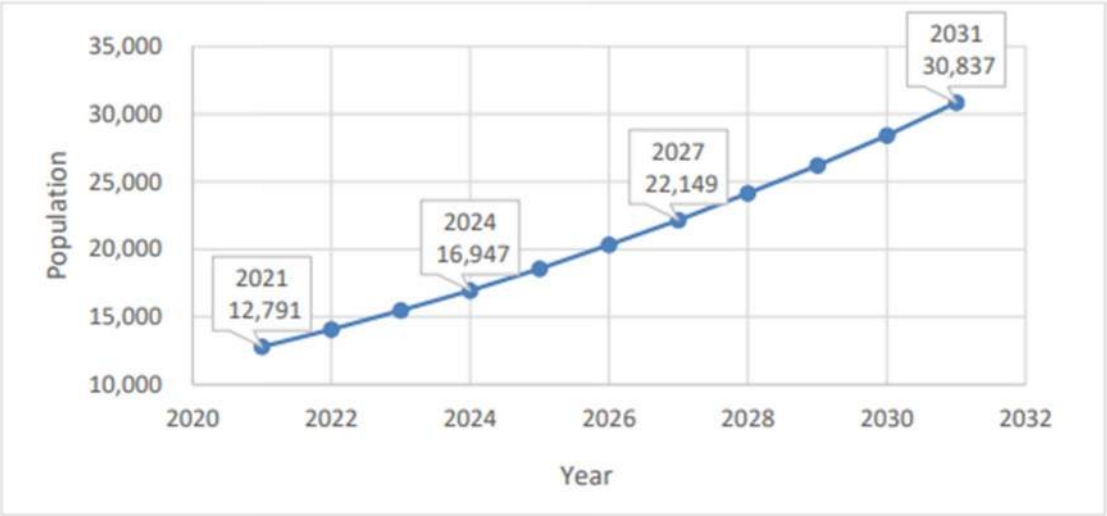
Grantsville City Police Department
Chief Robert Sager
50 North Bowery Street, Grantsville, UT 84029
(435)884.6881 Fax (435)884.0237

Anticipated workload and population trends

Grantsville City is projected to experience steady and consistent growth over the next ten years. As part of Ensign Engineering's Capital Facility Plan (2022) they provided a ten-year population estimate. The graph provided by Ensign Engineering is included below (Figure E1).

In addition to population there are multiple warehouses and businesses projected to come into the city as part of the Twenty Wells Inland Port Projects. These businesses can increase the daytime population above the residential population.

Figure E1: Grantsville 10-Year Population Projection



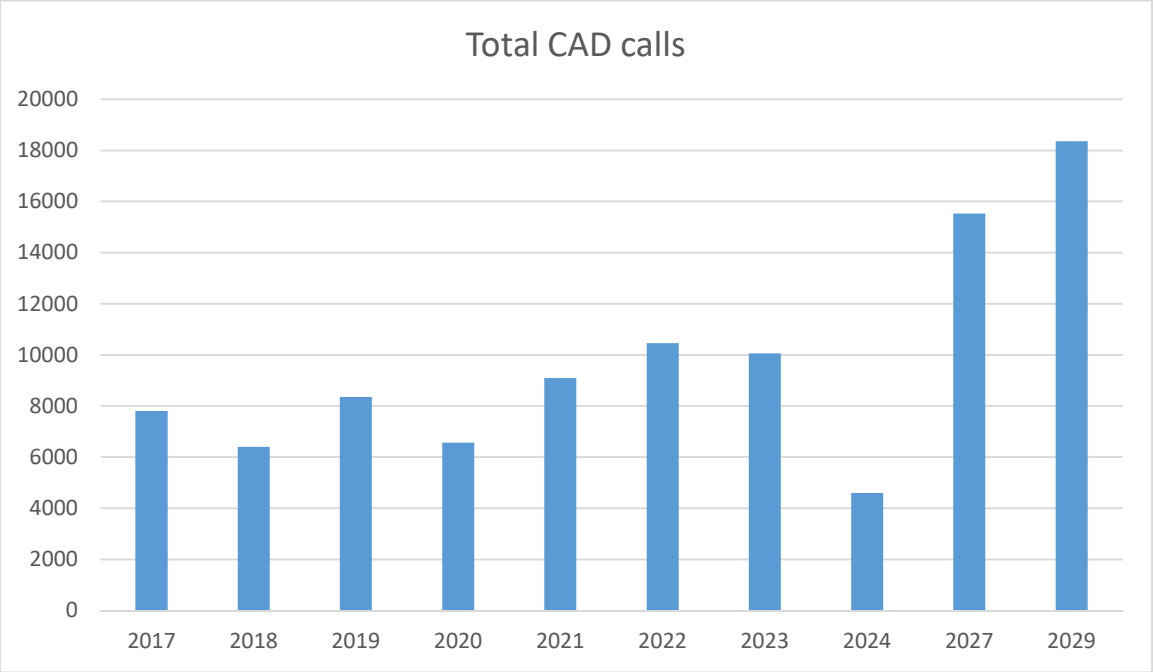
Anticipated Workload

Year over year we have had an increased number of CAD calls. A CAD call includes everything that is populated, by dispatch, in Grantsville jurisdiction through our record management system. Generally, all CAD calls are handled by the Patrol Division and include officers' proactive workload.

From 2017 to 2020 the average CAD calls per year was 7419. The average CAD calls per year from 2021 to 2023 is 9873 or a 33% increase from the previous three-year average. Over the next three years we anticipate steady population growth from 16,947 to 22,149 or a 31% increase. From year 2021 to 2023 we experienced 21% increase in population.

The average ratio of CAD call to population per 1000 between 2021 and 2023 is 701 CAD/1000 population. If this average remains consistent we can average the number of CAD calls per year based on the projected growth chart.

In 2027, the population estimate is 22,149. Using the ratio above the department has the potential to handle 15,526 CAD calls. In 2029, the population estimate is 26,195, the department has the potential to handle 18,362 CAD calls. The average number of CAD calls in 2023 is 9873, within five years of this report or 2029 the estimated number of CAD calls is 18,362 or an approximate 86% increase in service.



There are cases that do not generate a CAD call, but will generate a law incident or case number. Typically, these cases are internally generated by the Investigation Division. The number of case numbers without CAD calls minimally impact the above listed estimates, but the numbers would be slightly increased.

The Investigation Division has averaged 150 active cases each month over the last two years. Working these cases include an Investigation Sergeant and three Detectives that includes the School Resource Officer.

In 2023, there were 757 new cases assigned to investigators and 661 cases closed by investigators. This is approximately 189.25 cases per Investigator a year including the Sergeant. Most of the Sergeants time is devoted to working a case load, the department should strive to primarily shift the Sergeants responsibility from working cases to supervising. This would require one new Detective position to free up the Sergeant to allow more time for supervisor tasks. However, shifting the Sergeant's case workload to a detective will maintain the status quo outlined below.

As of June 30, 2024, there have been 332 new cases assigned to Detectives and they have closed 419 cases. We should expect the level of service to increase for the investigation division as population increases.

Investigators are scheduled to work 2080 hours a year or 208 days a year on a 4-10 schedule. After deducting the 13 paid holidays, investigators are scheduled to work 195 days a year. The 195 days do not account for any vacation, sick, or other time off. In 2023, Investigators averaged being assigned .97 cases a day, they also averaged closing 3.38 cases per day. As of June 30, 2024, the investigators have been scheduled to work 99 days. They are assigned an average of .83 new cases a day and have averaged closing 4.23 cases a day.

The number of cases closed per day has improved, but we maintain a backlog. We should expect the level of service to increase for the investigation division as population increases.

Anticipated sworn officer personnel Levels

As part of Ensign Engineering's capital facility assessment they provided a population estimate compared to the number of sworn officers needed at a ratio of 1.49 offers per 1000 population (Table 39 listed below). The number of officers estimated within the table below appears to be an accurate representation of the future need of sworn officers needed for this department at least over the next 3 years. These ratios, should be evaluated at least annually and compared to not only population, but other factors such as crime trends and staffing needs.

Currently at 20 full time officers we are operating at a ratio of approximately 1.18 offers per 1000 population, increasing at this rate over the next few years will maintain minimal staffing levels in patrol leaving little room for any vacancy and the investigation division active case load is currently 150. There is a need to follow the 1.49 ratio for at least a few years to maintain and start preparing for increased level of service.

Since 2021, the police department has been operating with 19 full time officer positions. As of July 2024 there will be 20 sworn officer positions so we will use 20 sworn officers for analysis.

Table 39: Future Police Department Requirements

Year	Population	Rate of Police Officers per 1,000 Population	Police Officers Required	Building Area per Officer (sq ft)	Building Area Requirement (sq ft)
2021	12,791	1.49	19	118.6	2,260
2022	14,070	1.49	21	118.6	2,486
2023	15,477	1.49	23	118.6	2,735
2024	16,947	1.49	25	118.6	2,995
2025	18,557	1.49	28	118.6	3,279
2026	20,320	1.49	30	118.6	3,591
2027	22,149	1.49	33	118.6	3,914
2028	24,143	1.49	36	118.6	4,266
2029	26,195	1.49	39	118.6	4,629
2030	28,421	1.49	42	118.6	5,022
2031	30,837	1.49	46	118.6	5,449

Using the data from the chart above and discussions between command staff and first line supervisors, within 2-3 years the hierarchy of the police department will need to be adjusted. A need for an administrative supervisor and first line supervisors will be needed as both sworn and non-sworn staff increases. To accomplish this the department should look to create an Assistant Chief Position, (3) additional Sergeant positions and then change the Administrative Assistant to the Chief of Police into a supervisor position to help manage civilian staff to minimize the responsibility of sworn staff to non-sworn staff.

Currently, the Chief of Police, two Lieutenants, and three Sergeants make up the supervisory roles of the department. The total number of positions within the department including non-sworn staff (5), seasonal crossing guards (9), and volunteers (4) totals 37 people. Supervisors account for approximately 16% of the total department workforce. When including only sworn and non-sworn staff, supervisors make up approximately 24% of the workforce. When including only sworn staff supervisors make up approximately 30% of the department workforce. Currently, the percentage of supervision to sworn staff seems to be efficient and effective and should be a reference to gauge potential future supervisor positions.

In three years the population estimate is 22,149 people in year 2027. With that population we are projected to need 33 sworn staff to operate. If the supervisors make up 30% we would need an additional 4 supervisor positions, these positions would be an Assistant Chief and three Sergeants mentioned above.

In the next year, 2025, we will need to adjust the Administrative Assistant position to a supervisor position to help mitigate the responsibilities of sworn personnel that manage non-sworn staff. This will allow the department to prepare for future growth and expansion within the non-sworn staff.

The future non-sworn staff increase over the next three years include; (1) full time records clerk, change the current part time record clerk to a full time position, (1) full time victim advocate and (1) part time evidence technician/record clerk.

Over the next 2-3 years we will need to add a full time Animal Control Officer in addition to keeping the current part-time position. These positions will also be responsible for code enforcement. Currently Officers are responsible for all code enforcement issues taking them away from other policing duties.

We do not believe an increase in crossing guards will be needed over the next three years. Currently there are no plans for any new schools and construction of a new school within three years without any current plans does not seem likely. However, the pay for crossing guards will need to be adjusted. Currently Grantsville is one of the lowest paid. Retention and dependability have been a major issue causing on duty officers to man many of the crossing guard shifts taking them from responding to other policing duties.

In years four and five it is suggested that we maintain as close to a 30% of the workforce as supervisors. And continue to evaluate if the ratio of 1.49 officers per 1000 population is sufficient or too many. We believe increasing the workforce at 1.49 ratio over the next three years is needed and will ready the department for the anticipated level of service increase and fulfill current staff shortages.

As a comparison to a local municipality, Tooele City Police Department (TCPD) provides service to an estimated population of 36,000 with 42 sworn officers and 11 non-sworn staff excluding seasonal crossing guards. The officer to 1000 population for TCPD is approximately 1.17.

Supervisor roles include; Chief of Police, (1) Capitan, (3) Lieutenants and (7) Sergeants totaling 12 supervisor positions. TCPD operates with 53 staff including sworn and non-sworn members making approximately 23% of the total staff supervisors. This is comparable to Grantsville Police Department at 24%. When you look at supervisor to sworn staff TCPD's workforce is approximately 29% supervisors. Again this is comparable to Grantsville Police Department at 30%.

Anticipated Capital improvement and equipment needs

The currently capital facility plans by Ensign Engineering indicate that our current space is sufficient to operate 46 officers. However, that plan does not account for non-sworn support staff, investigators, or administrative office space. There is limited room to expand office space or workstations without dissolving other functional rooms that are used for other purposes. These rooms would include eliminating the briefing room, soft interview room, medium security interview room, locker room, gym, storage space, and the community room.

A meeting between the Chief of Police and Ensign Engineering occurred in June of 2024, to discuss the potential need for Capital Facility Improvements and expansion for the Justice Center. After the discussion and walk through, it was determined that a capital facility plan to add supervisor, detective, support staff, and storage space is likely needed. A plan was made so that Ensign Engineering will research and evaluate these needs and include them in the upcoming Capital Facility Plan.

The Police Department currently operates its own shooting range. However, the range is starting to be surrounded by residential homes and will soon render it unsafe to discharge firearms. There are firearm ranges in the County that can be utilized for training. Thus, the city has time to decide if we desire to maintain and operate our own range. Possible agreements in future annexation or developmental agreements could create opportunities for a new range.

Equipment

Over the next two years we will upgrade our duty pistols. As of June 2024 we have discussed and will be testing the Glock 45 with an optic for standard issue. Tooele County Sherriff Office recently switched to this platform and the firearm qualification score average improved. The current duty pistols are aging and we should consider replacing them. The department will also need to retire some of the rifles and replace them with a new system.

Technology is ever evolving and can be utilized to enhance community safety and help the department be more efficient. The department should continually research products and equipment that helps to improve and enhance our level of service. Within the next five years the department should look to expand the Flock Safety System, implement a drone program, implement a server for digital evidence, purchase pole cameras, and evaluate data storage for body worn cameras. Along with body worn cameras the department should explore dash cameras for patrol vehicles.

The department should expand the less lethal weapon systems. Currently the department owns two pepper ball guns, one 40mm multi-launcher, one 37mm single launcher and shotguns that can be repurposed to less lethal platforms. Over the next two years the department should repurpose the shotguns and purchase at least one more pepper ball gun and multi-launcher to replace the single shot launcher. This would allow for each crew and the Investigations Division to always have access to a less lethal platform. The weapon systems are currently stored in the armory offering little access to patrol. The department should purchase a safe for the Sergeants office so that the weapons can be available for each shift.

The department should look to implement a mobile command center in all vehicles for Sergeants and command staff. The Investigation Division vehicles need lock boxes for equipment and weapon storage.

In conclusion we should evaluate this guide annually. The plan should remain fluid and adjust with the needs of the department, city, and most importantly maintaining quality service to our community.

Chief of Police
Robert Sager

Grantsville City Police Department

Year	Single Family			Multi-Unit			Non-Resdidential			Single Family Residential Calls Increase	Multi-Family Residential Calls Increase	Non-Residential Calls Increase	Total Calls Increase
	Units	Annual Unit Increase	Calls Increase	Units	Annual Unit Increase	Calls Increase	Units	Annual Unit Increase	Calls Increase				
2025	4,618	-	-	290	-	-	178	-	-	-	-	-	-
2026	4,780	162	94	300	10	20	179	1	3	94	20	3	117
2027	4,947	167	97	311	11	22	180	1	3	97	22	3	122
2028	5,145	198	114	323	12	24	184	4	10	114	24	10	148
2029	5,351	206	119	336	13	26	186	2	5	119	26	5	150
2030	5,565	214	124	349	13	26	190	4	10	124	26	10	160
2031	5,788	223	129	363	14	27	192	2	5	129	27	5	161
2032	6,020	232	134	378	15	29	196	4	10	134	29	10	173
2033	6,261	241	139	393	15	29	199	3	8	139	29	8	176
2034	6,511	250	144	409	16	31	202	3	8	144	31	8	183
2035	6,771	260	150	425	16	31	205	3	8	150	31	8	189
Total										**1,244**	**265**	**70**	**1,579**

Animal Shelter Required Physical Holding Capacity Calculation

Year 2021	Intake	Outake	Monthly Intake Avg	Daily Intake Avg
Dogs	146	136	12.17	0.400
Cats	79	76	6.58	0.216

	Avg Holding Period	RPHC
Dogs	16.8	6.7
Cats	21.2	4.6

Sept. 2021	Intake	Outake	Avg Holding Period	Daily Intake Avg
Dogs	15	15	21.60	0.500
Cats	10	10	15.11	0.333

Oct. 2021	Intake	Outake	Avg Holding Period	Daily Intake Avg
Dogs	9	9	25.56	0.290
Cats	9	9	22.33	0.290

Nov. 2021	Intake	Outake	Avg Holding Period	Daily Intake Avg
Dogs	7	7	1.14	0.233
Cats	12	12	26.17	0.400

Dec. 2021	Intake	Outake	Avg Holding Period	Daily Intake Avg
Dogs	8	8	19.00	0.258
Cats	1	0	N/A	0.032

Appendix G Public Safety Cost Estimates

ENGINEERS ESTIMATE OF PROBABLE COSTS

These costs are opinions only and should not be considered as a formal construction estimate. These quantites and costs are based on information derived from the master plan and are therefore subject to change. Ensign has no control over costs of labor, materials, bidding procedures, unidentified field conditions, or other factors. Ensign cannot and does not make any warranty, promise, or guarantee as to the accuracy of this estimate.

ENSIGN
THE STANDARD IN ENGINEERING

Project: Grantsville City CFP, IFFP, and IFA
By: Dylan Cooper
Date: 3/16/2026

Project No.: 11637
Checked By: Robert Rousselle

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT COST	COST
Satellite Fire Station East					
1	Mobilization	LS	1	$145,000.00	$145,000.00
2	Station Cost	SF	6,000	$481.96 [1]	$2,891,736.00
				Subtotal	**$3,036,736.00**
				Engineering, Surveying, and Construction Management and Inspection Costs (10%)	$303,673.60
				Total Satellite Fire Station East Cost	**$3,340,409.60**
Fire Vehicles					
1	Aerial Truck	EA	1	$1,500,000.00 [2]	$1,500,000.00
2	Pumper Truck	EA	1	$800,000.00 [2]	$800,000.00
3	Brush Truck	EA	1	$170,000.00 [2]	$170,000.00
				Total Fire Vehicles Cost	**$2,470,000.00**
Animal Control Shelter					
1	Mobilization	LS	1	$136,000.00	$136,000.00
2	Shelter Cost	SF	4,500	$603.14 [1]	$2,714,148.00
				Subtotal	**$2,850,148.00**
				Engineering, Surveying, and Construction Management and Inspection Costs (10%)	$285,014.80
				Total Animal Control Shelter Cost	**$1,567,581.40**
Justice Center Renovations					
1	Mobilization	LS	1	$1,000.00	$1,000.00
2	Renovation Cost	SF	280	$60.00	$16,800.00
3	Cubicles	EA	5	$3,600.00	$18,000.00
				Subtotal	**$17,800.00**
				Engineering, Surveying, and Construction Management and Inspection Costs (10%)	$1,780.00
				Total Justice Center Renovations Cost	**$19,580.00**
Justice Center Police Expansion					
1	Mobilization	LS	1	$54,000.00	$54,000.00
2	Renovation Cost	SF	4,497	$240.00	$1,079,280.00
				Subtotal	**$1,133,280.00**
				Engineering, Surveying, and Construction Management and Inspection Costs (10%)	$113,328.00
				Total Justice Center Police Expansion Cost	**$1,246,608.00**
New City Hall Building					
1	Mobilization	LS	1	$419,000.00	$419,000.00
2	Building Cost	SF	20,000	$413.11 [1]	$8,262,240.00
3	Land Acquistion	AC	1	$119,801.40 [1]	$119,801.40
				Subtotal	**$8,801,041.40**
				Engineering, Surveying, and Construction Management and Inspection Costs (10%)	$880,104.14
				Total New City Hall Building Cost	**$9,681,145.54**
Existing City Hall Renovations					
1	Mobilization	LS	1	$105,000.00	$105,000.00
2	Renovation Cost	SF	7,000	$300.00	$2,100,000.00
				Subtotal	**$2,205,000.00**
				Engineering, Surveying, and Construction Management and Inspection Costs (10%)	$220,500.00
				Total Existing City Hall Renovations Cost	**$2,425,500.00**

[1] Unit costs are from the 2022 Grantsville CFP/IFA and inflated to current year (2025).
[2] Costs provided by Fire Chief Smith.

Appendix H Parks Cost Estimates

ENGINEERS ESTIMATE OF PROBABLE COSTS

These costs are opinions only and should not be considered as a formal construction estimate. These quantites and costs are based on information derived from the master plan and are therefore subject to change. Ensign has no control over costs of labor, materials, bidding procedures, unidentified field conditions, or other factors. Ensign cannot and does not make any warranty, promise, or guarantee as to the accuracy of this estimate.

ENSIGN
THE STANDARD IN ENGINEERING

Project: Grantsville City CFP, IFFP, and IFA
By: Matthew Sanford
Date: 4/2/2026

Project No.: 11637
Checked By: Robert Rousselle

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT COST [1]	COST
West Street Park					
1	Mobilization	LS	1	$13,000.00	$13,000.00
2	Earthwork	CY	654	$10.33	$6,758.12
3	Erosion Control and Revegetation	LS	1	$6,000.00	$6,000.00
4	Fine Grading	SY	1,300	$2.07	$2,691.00
5	Gravel Parking Lot	SF	11,800	$3.00	$35,400.00
6	RV Dump Station	LS	1	$110,000.00	$110,000.00
7	Disc Golf	LS	1	$18,000.00	$18,000.00
8	Existing Trail Improvements	LF	6,581	$12.00	$78,972.00
9	Land Acquistion [4]	AC	0	$137,702.76	$0.00
				Subtotal	**$270,821.12**
				Engineering, Surveying, and Construction Management and Inspection Costs (10%)	$27,082.11
				Total West Street Park Cost	**$297,903.23**
Scenic Slopes Park, Utilities, Pump Track, Site Improvements					
1	Mobilization	LS	1	$65,000.00	$65,000.00
2	Earthwork	CY	46,996	$10.33	$485,472.81
3	Erosion Control and Revegetation	LS	1	$32,000.00	$32,000.00
4	Fine Grading	SY	31,331	$2.07	$64,855.03
5	Hydroseed	SF	592,000	$0.14	$82,880.00
6	Gravel Parking Lot	SF	11,800	$3.00	$35,400.00
7	Lights	EA	8	$8,124.46	$64,995.68
8	Bike Pump Track	LS	1	$528,602.40	$528,602.40
9	Land Acquistion [4]	AC	0	$137,702.76	$0.00
				Subtotal	**$ 3,096,673.72**
				Engineering, Surveying, and Construction Management and Inspection Costs (10%)	$ 74,295.61
				Total Scenic Slopes Park, Utilities, Pump Track, Site Improvements Cost	**$ 3,170,969.33**
Scenic Slopes Parking, Park Amenities, Ball Courts					
1	Mobilization	LS	1	$106,000.00	$106,000.00
2	Erosion Control and Revegetation	LS	1	$52,000.00	$52,000.00
3	Fine Grading	SY	9,680	$2.07	$20,037.60
4	Turf	SF	10,890	$12.00	$130,680.00
5	Irrigation System	SF	10,890	$0.28	$3,049.20
6	Restroom	LS	1	$285,044.71	$285,044.71
7	Paved Parking Lot	SF	11,800	$6.20	$73,160.00
8	Concrete (Sidewalk)	LF	1,500	$11.61	$17,419.35
9	Lights	EA	12	$8,124.46	$97,493.52
10	Amenities [2]	LS	1	$1,440,000.00	$1,440,000.00
11	Land Acquistion [4]	AC	0	$137,702.76	$0.00
				Subtotal	**$2,224,884.38**
				Engineering, Surveying, and Construction Management and Inspection Costs (10%)	$222,488.44
				Total Scenic Slopes Parking, Park Amenities, Ball Courts Cost	**$2,447,372.82**

Scenic Slopes Park Baseball and Soccer Field					
1	Mobilization	LS	1	$138,000.00	$138,000.00
2	Erosion Control and Revegetation	LS	1	$68,000.00	$68,000.00
3	Fine Grading	SY	52,982	$2.07	$109,672.46
4	Turf	SF	98,692	$6.00	$592,154.64
5	Irrigation System	SF	98,692	$0.28	$27,633.88
6	Baseball Park	LS	1	$450,000.00	$450,000.00
7	Dugouts	LS	1	$144,000.00	$144,000.00
8	Lights	LS	1	$144,000.00	$144,000.00
9	Stands	LS	1	$14,400.00	$14,400.00
10	Basketball Courts	LS	1	$288,000.00	$288,000.00
11	Soccer Goals	LS	1	$90,000.00	$90,000.00
12	Trails	LF	3,640	$24.00	$87,360.00
13	Lights	LS	1	$165,000.00	$165,000.00
14	Stands	LS	1	$45,000.00	$45,000.00
15	Paved Parking Lot	SF	80,000	$6.20	$496,000.00
16	Trees	EA	47	$1,032.77	$48,540.19
17	Land Acquistion [4]	AC	0	$137,702.76	$0.00
				Subtotal	**$2,907,761.18**
				Engineering, Surveying, and Construction Management and Inspection Costs (10%)	$290,776.12
				Total Scenic Slopes Park Baseball and Soccer Field Cost	**$3,198,537.29**
Desert Edge Park					
1	Mobilization	LS	1	$115,000.00	$115,000.00
2	Earthwork	CY	12,100	$10.33	$124,993.00
3	Erosion Control and Revegetation	LS	1	$56,000.00	$56,000.00
4	Fine Grading	SY	24,200	$2.07	$50,094.00
5	Hydroseed	SF	152,000	$0.14	$21,280.00
6	Irrigation System	SF	152,000	$0.28	$42,560.00
7	Restroom	LS	1	$285,044.71	$285,044.71
8	Group Pavilion	LS	1	$240,000.00	$240,000.00
9	Asphalt Trail	SF	22,211	$4.13	$91,805.47
10	Paved Parking Lot	SF	12,100	$6.20	$75,020.00
11	Trees	EA	52	$1,032.77	$53,704.04
12	Lights	EA	15	$8,124.46	$121,866.90
13	Hoseshot Pits	LS	1	$36,000.00	$36,000.00
14	Basketball Courts	LS	1	$420,000.00	$420,000.00
15	Land Acquistion	AC	5	$137,702.76	$688,513.80
				Subtotal	**$2,421,881.92**
				Engineering, Surveying, and Construction Management and Inspection Costs (10%)	$242,188.19
				Total Desert Edge Park Cost	**$2,664,070.11**
President's Park					
1	Mobilization	LS	1	$73,000.00	$73,000.00
2	Earthwork	CY	24,200	$10.33	$249,986.00
3	Erosion Control and Revegetation	LS	1	$36,000.00	$36,000.00
4	Fine Grading	SY	48,400	$2.07	$100,188.00
5	Hydroseed	SF	305,000	$0.14	$42,700.00
6	Irrigation System	SF	305,000	$0.28	$85,400.00
7	Restroom	LS	1	$285,044.71	$285,044.71
8	Paved Parking Lot	SF	11,800	$6.20	$73,160.00
9	Trees	EA	50	$1,032.77	$51,638.50
10	Lights	EA	30	$8,124.46	$243,733.80
11	Amenities [2]	LS	1	$300,880.50	$300,880.50
12	Land Acquistion [4]	AC	0	$137,702.76	$0.00
				Subtotal	**$1,541,731.51**
				Engineering, Surveying, and Construction Management and Inspection Costs (10%)	$154,173.15
				Total President's Park Cost	**$1,695,904.66**

Twenty Wells Park [3]					
1	Land Acquisition	LS	1	$1,050,000.00	$1,050,000.00
2	Landscaping / Scrapping / Haul Off-On	LS	1	$1,700,000.00	$1,700,000.00
3	Irrigation Lines	LS	1	$600,000.00	$600,000.00
4	Water Lines	LF	1,850	$70.00	$129,500.00
5	Sewer	LF	500	$110.00	$55,000.00
6	Storm Drain	LS	1	$175,000.00	$175,000.00
7	Buildings	LS	1	$1,250,000.00	$1,250,000.00
8	Pickle Ball Courts	LS	1	$350,000.00	$350,000.00
9	Baseball / Softball Fields	LS	1	$750,000.00	$750,000.00
10	Dugouts	LS	1	$240,000.00	$240,000.00
11	Fire Hydrants	LS	1	$24,000.00	$24,000.00
12	Fencing	LS	1	$210,000.00	$210,000.00
13	Concrete (Sidewalk)	LF	3,100	$9.68	$30,000.00
14	Concrete (C&G)	LF	4,350	$25.29	$110,000.00
15	Lights	LS	1	$275,000.00	$275,000.00
16	Stands	LS	1	$75,000.00	$75,000.00
17	Additional Sports Fields	LS	1	$110,000.00	$110,000.00
18	Goal Posts for Football	LS	1	$200,000.00	$200,000.00
19	Soccer Goals	LS	1	$75,000.00	$75,000.00
20	Score Board	LS	1	$125,000.00	$125,000.00
21	Parking Lot	SF	110,530	$2.94	$325,000.00
22	Parking Lot Lights	LS	1	$45,000.00	$45,000.00
23	Power	LS	1	$125,000.00	$125,000.00
24	Gas	LS	1	$75,000.00	$75,000.00
25	Materials	LS	1	$525,000.00	$525,000.00
				Total Twenty Wells Park Cost	**$8,628,500.00**
Highlands Park					
1	Mobilization	LS	1	$147,000.00	$147,000.00
2	Earthwork	CY	24,200	$10.33	$249,986.00
3	Erosion Control and Revegetation	LS	1	$72,000.00	$72,000.00
4	Fine Grading	SY	48,400	$2.07	$100,188.00
5	Hydroseed	SF	305,000	$0.14	$42,700.00
6	Irrigation System	SF	305,000	$0.28	$85,400.00
7	Restroom	LS	1	$285,044.71	$285,044.71
8	Paved Parking Lot	SF	11,800	$6.20	$73,160.00
9	Trees	EA	50	$1,032.77	$51,638.50
10	Lights	EA	30	$8,124.46	$243,733.80
11	Amenities [2]	LS	1	$356,374.72	$356,374.72
12	Land Acquistion	AC	10	$137,702.76	$1,377,027.60
				Subtotal	**$3,084,253.33**
				Engineering, Surveying, and Construction Management and Inspection Costs (10%)	$308,425.33
				Total Highlands Park Cost	**$3,392,678.66**
Clark Farm Park					
1	Mobilization	LS	1	$147,000.00	$147,000.00
2	Earthwork	CY	72,600	$10.33	$749,958.00
3	Erosion Control and Revegetation	LS	1	$72,000.00	$72,000.00
4	Fine Grading	SY	145,200	$2.07	$300,564.00
5	Hydroseed	SF	915,000	$0.14	$128,100.00
6	Irrigation System	SF	915,000	$0.28	$256,200.00
7	Restroom	LS	1	$285,044.71	$285,044.71
8	Paved Parking Lot	SF	11,800	$6.20	$73,160.00
9	Trees	EA	150	$1,032.77	$154,915.50
10	Lights	EA	90	$8,124.46	$731,201.40
11	Amenities [2]	LS	1	$197,465.69	$197,465.69
12	Land Acquistion [4]	AC	0	$137,702.76	$0.00
				Subtotal	**$3,095,609.30**
				Engineering, Surveying, and Construction Management and Inspection Costs (10%)	$309,560.93
				Total Clark Farm Park Cost	**$3,405,170.23**

[1] Unit costs are generally from the 2022 Grantsville CFP/IFA and inflated to current year (2025).
[2] Amenities vary by park but generally include benches, playground equipment, sports fields, pavillions, etc.
[3] Cost estimate provided by developer.
[4] Land acquisition is not included because the City already owns the land or the land will be dedicated to the City.

Appendix I Wastewater Calculations

Single Family 5 Bed, 3 Bath = 1 ERC			
Fixture	**Fixture Count**	**Water Supply Fixture Units**	**Total Fixture Units**
Kitchen sink, Private, Faucet	1	1.4	1.4
Dishwashing machine, Private, Automatic	1	1.4	1.4
Washing machine (8 lb), Private, Automatic	1	1.4	1.4
Exterior hose bib	3	2.2	6.6
Shower head, Private, Mixing valve	3	1.4	4.2
Lavatory, Private, Faucet	3	0.7	2.1
Water closet, Private, Flushtank	3	2.2	6.6
Total			**24**

Summary

Year	ERCs	Peak Instantaneous Flow (gpm/ERC)	Peak Day Flow (gpd/ERC)	Average Day Flow (gpd/ERC)	Sewer Units	Average Day Flow (gpd/Unit)
2021	5,975	0.397	163	136	4,082	199
2022	6,206	0.383	164	140	4,326	201
2023	6,344	0.374	163	143	4,592	197
2024	6,571	0.361	184	146	4,789	200
2025	6,717	0.354	203	147	4,958	199
	Maximum	**0.397**	**203**	**147**		**201**
	Average	**0.374**	**175**	**142**		**199**

Years 2021 Through 2025

Year 2021

Year	Peak Instantaneous Flow (gpm)	Peak Day Flow (MGD)	Peak Day Flow (gallons)	Average Day Flow (MGD)	Average Day Flow (gallons)
2021	2,375	0.971	971,000	0.811	811,025
Dec-21	1,943	0.922	922,000	0.846	846,032

ERCs	Peak Instantaneous Flow (gpm/ERC)	Peak Day Flow (gpd/ERC)	Average Day Flow (gpd/ERC)
5,975	0.397	163	136

Year 2022

Year	Peak Instantaneous Flow (gpm)	Peak Day Flow (MGD)	Peak Day Flow (gallons)	Average Day Flow (MGD)	Average Day Flow (gallons)
2022	2,375	1.017	1,017,000	0.871	870,995
Dec-22	1,699	0.969	969,000	0.876	876,258

ERCs	Peak Instantaneous Flow (gpm/ERC)	Peak Day Flow (gpd/ERC)	Average Day Flow (gpd/ERC)
6,206	0.383	164	140

Years 2021 Through 2025

Year 2023

Year	Peak Instantaneous Flow (gpm)	Peak Day Flow (MGD)	Peak Day Flow (gallons)	Average Day Flow (MGD)	Average Day Flow (gallons)
2023	2,375	1.037	1,037,000	0.906	906,438
Dec-23	2,118	1.022	1,022,000	0.921	921,226

ERCs	Peak Instantaneous Flow (gpm/ERC)	Peak Day Flow (gpd/ERC)	Average Day Flow (gpd/ERC)
6,344	0.374	163	143

Year 2024

Year	Peak Instantaneous Flow (gpm)	Peak Day Flow (MGD)	Peak Day Flow (gallons)	Average Day Flow (MGD)	Average Day Flow (gallons)
2024	2,375	1.206	1,206,000	0.960	959,579
Dec-24	1,872	1.059	1,059,000	0.975	975,484

ERCs	Peak Instantaneous Flow (gpm/ERC)	Peak Day Flow (gpd/ERC)	Average Day Flow (gpd/ERC)
6,571	0.361	184	146

Year 2025

Year	Peak Instantaneous Flow (gpm)	Peak Day Flow (MGD)	Peak Day Flow (gallons)	Average Day Flow (MGD)	Average Day Flow (gallons)
2025	2,375	1.366	1,366,000	0.988	987,929
Dec-25	1,759	1.095	1,095,000	0.999	999,323

ERCs	Peak Instantaneous Flow (gpm/ERC)	Peak Day Flow (gpd/ERC)	Average Day Flow (gpd/ERC)
6,717	0.354	203	147

Appendix J Wastewater Cost Estimates

ENGINEERS ESTIMATE OF PROBABLE COSTS

These costs are opinions only and should not be considered as a formal construction estimate. These quantites and costs are based on information derived from the master plan and are therefore subject to change. Ensign has no control over costs of labor, materials, bidding procedures, unidentified field conditions, or other factors. Ensign cannot and does not make any warranty, promise, or guarantee as to the accuracy of this estimate.

ENSIGN
THE STANDARD IN ENGINEERING

Project: Grantsville City CFP, IFFP, and IFA
Project No.: 11637
By: Dylan Cooper
Checked By: Robert Rousselle
Date: 4/2/2026

ITEM	DESCRIPTION	UNIT	QUANTITY	COST PER LF
8-inch Diameter Sewer				
1	Mobilization and permits	LS/LF	1	$18.36
2	Traffic control and flagging	LS/LF	1	$9.35
3	De-watering	LS/LF	1	$4.85
4	Saw cut, remove, and dispose of existing asphalt	LF	1	$3.53
5	Remove and dispose of excavated material	CY/LF	8.43	$59.18
6	Trench box 10'Hx16'L	LF	1	$0.74
7	8-inch diameter sewer	LF	1	$52.94
8	Bedding sand	CY/LF	1.19	$2.08
9	Granular borrow	CY/LF	6.11	$87.45
10	5-foot diameter concrete manhole on 6-foot x 6-foot concrete base (manhole spacing every 400-feet)	LF	0.0025	$35.00
11	Untreated base course	CY/LF	0.50	$28.27
12	Asphalt road (3-inch)	SY/LF	0.63	$36.82
			Subtotal	**$338.58**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)			$33.86
	Total 8-inch Diameter Sewer Cost per LF			**$372.43**
10-inch Diameter Sewer				
1	Mobilization and permits	LS/LF	1	$19.28
2	Traffic control and flagging	LS/LF	1	$9.82
3	De-watering	LS/LF	1	$5.09
4	Saw cut, remove, and dispose of existing asphalt	LF	1	$3.53
5	Remove and dispose of excavated material	CY/LF	8.43	$59.13
6	Trench box 10'Hx16'L	LF	1	$0.78
7	10-inch diameter sewer	LF	1	$59.59
8	Bedding sand	CY/LF	1.28	$2.23
9	Granular borrow	CY/LF	6.02	$86.13
10	5-foot diameter concrete manhole on 6-foot x 6-foot concrete base (manhole spacing every 400-feet)	LF	0.0025	$34.65
11	Untreated base course	CY/LF	0.50	$28.27
12	Asphalt road (3-inch)	SY/LF	0.63	$36.82
			Subtotal	**$345.32**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)			$34.53
	Total 10-inch Diameter Sewer Cost per LF			**$379.85**

12-inch Diameter Sewer				
1	Mobilization and permits	LS/LF	1	$20.24
2	Traffic control and flagging	LS/LF	1	$10.31
3	De-watering	LS/LF	1	$5.35
4	Saw cut, remove, and dispose of existing asphalt	LF	1	$3.53
5	Remove and dispose of excavated material	CY/LF	8.42	$59.07
6	Trench box 10'Hx16'L	LF	1	$0.82
7	12-inch diameter sewer	LF	1	$66.27
8	Bedding sand	CY/LF	1.36	$2.38
9	Granular borrow	CY/LF	5.93	$84.80
10	5-foot diameter concrete manhole on 6-foot x 6-foot concrete base (manhole spacing every 400-feet)	LF	0.0025	$34.65
11	Untreated base course	CY/LF	0.50	$28.27
12	Asphalt road (3-inch)	SY/LF	0.63	$36.82
			Subtotal	**$352.51**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)			$35.25
			Total 12-inch Diameter Sewer Cost per LF	**$387.76**
15-inch Diameter Sewer				
1	Mobilization and permits	LS/LF	1	$21.25
2	Traffic control and flagging	LS/LF	1	$10.82
3	De-watering	LS/LF	1	$5.61
4	Saw cut, remove, and dispose of existing asphalt	LF	1	$3.53
5	Remove and dispose of excavated material	CY/LF	8.40	$58.96
6	Trench box 10'Hx16'L	LF	1	$0.86
7	15-inch diameter sewer	LF	1	$104.98
8	Bedding sand	CY/LF	1.48	$2.59
9	Granular borrow	CY/LF	5.79	$82.81
10	5-foot diameter concrete manhole on 6-foot x 6-foot concrete base (manhole spacing every 400-feet)	LF	0.0025	$34.65
11	Untreated base course	CY/LF	0.50	$28.27
12	Asphalt road (3-inch)	SY/LF	0.63	$36.82
			Subtotal	**$391.17**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)			$39.12
			Total 15-inch Diameter Sewer Cost per LF	**$430.29**
18-inch Diameter Sewer				
1	Mobilization and permits	LS/LF	1	$22.32
2	Traffic control and flagging	LS/LF	1	$11.36
3	De-watering	LS/LF	1	$5.90
4	Saw cut, remove, and dispose of existing asphalt	LF	1	$3.53
5	Remove and dispose of excavated material	CY/LF	8.38	$58.83
6	Trench box 10'Hx16'L	LF	1	$0.90
7	18-inch diameter sewer	LF	1	$112.47
8	Bedding sand	CY/LF	1.60	$2.80
9	Granular borrow	CY/LF	5.65	$80.83
10	5-foot diameter concrete manhole on 6-foot x 6-foot concrete base (manhole spacing every 400-feet)	LF	0.0025	$34.65
11	Untreated base course	CY/LF	0.50	$28.27

12	Asphalt road (3-inch)	SY/LF	0.63	$36.82
			Subtotal	**$398.68**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)			$39.87
			Total 18-inch Diameter Sewer Cost per LF	**$438.54**
21-inch Diameter Sewer				
1	Mobilization and permits	LS/LF	1	$22.32
2	Traffic control and flagging	LS/LF	1	$11.36
3	De-watering	LS/LF	1	$5.90
4	Saw cut, remove, and dispose of existing asphalt	LF	1	$3.53
5	Remove and dispose of excavated material	CY/LF	9.91	$69.58
6	Trench box 10'Hx16'L	LF	1	$0.90
7	21-inch Diameter Sewer	LF	1	$127.50
8	Bedding sand	CY/LF	2.08	$3.63
9	Granular borrow	CY/LF	6.61	$94.61
10	5-foot diameter concrete manhole on 6-foot x 6-foot concrete base (manhole spacing every 400-feet)	LF	0.0025	$34.65
11	Untreated base course	CY/LF	0.56	$31.41
12	Asphalt road (3-inch)	SY/LF	0.67	$38.99
			Subtotal	**$444.38**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)			$44.44
			Total 21-inch Diameter Sewer Cost per LF	**$488.82**
24-inch Diameter Sewer				
1	Mobilization and permits	LS/LF	1	$23.43
2	Traffic control and flagging	LS/LF	1	$11.93
3	De-watering	LS/LF	1	$6.19
4	Saw cut, remove, and dispose of existing asphalt	LF	1	$3.53
5	Remove and dispose of excavated material	CY/LF	8.33	$58.48
6	Trench box 10'Hx16'L	LF	1	$0.95
7	24-inch diameter sewer	LF	1	$127.50
8	Bedding sand	CY/LF	1.83	$3.20
9	Granular borrow	CY/LF	5.37	$76.85
10	5-foot diameter concrete manhole on 6-foot x 6-foot concrete base (manhole spacing every 400-feet)	LF	0.0025	$34.65
11	Untreated base course	CY/LF	0.50	$28.27
12	Asphalt road (3-inch)	SY/LF	0.63	$36.82
			Subtotal	**$411.81**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)			$41.18
			Total 24-inch Diameter Sewer Cost per LF	**$452.99**
27-inch Diameter Sewer				
1	Mobilization and permits	LS/LF	1	$24.60
2	Traffic control and flagging	LS/LF	1	$12.53
3	De-watering	LS/LF	1	$6.50
4	Saw cut, remove, and dispose of existing asphalt	LF	1	$3.53
5	Remove and dispose of excavated material	CY/LF	9.86	$69.19
6	Trench box 10'Hx16'L	LF	1	$1.00
7	27-inch Diameter Sewer	LF	1	$131.66
8	Bedding sand	CY/LF	2.36	$4.12

9	Granular borrow	CY/LF	6.28	$89.84
10	5-foot diameter concrete manhole on 6-foot x 6-foot concrete base (manhole spacing every 400-feet)	LF	0.0025	$34.65
11	Untreated base course	CY/LF	0.56	$31.41
12	Asphalt road (3-inch)	SY/LF	0.67	$38.99
			Subtotal	**$448.02**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)			$44.80
	Total 27-inch Diameter Sewer Cost per LF			**$492.82**
30-inch Diameter Sewer				
1	Mobilization and permits	LS/LF	1	$25.83
2	Traffic control and flagging	LS/LF	1	$13.16
3	De-watering	LS/LF	1	$6.82
4	Saw cut, remove, and dispose of existing asphalt	LF	1	$3.53
5	Remove and dispose of excavated material	CY/LF	9.83	$68.96
6	Trench box 10'Hx16'L	LF	1	$1.05
7	30-inch Diameter Sewer	LF	1	$135.82
8	Bedding sand	CY/LF	2.49	$4.35
9	Granular borrow	CY/LF	6.11	$87.45
10	5-foot diameter concrete manhole on 6-foot x 6-foot concrete base (manhole spacing every 400-feet)	LF	0.0025	$34.65
11	Untreated base course	CY/LF	0.56	$31.41
12	Asphalt road (3-inch)	SY/LF	0.67	$38.99
			Subtotal	**$452.03**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)			$45.20
	Total 30-inch Diameter Sewer Cost per LF			**$497.23**
36-inch Diameter Sewer				
1	Mobilization and permits	LS/LF	1	$27.13
2	Traffic control and flagging	LS/LF	1	$13.81
3	De-watering	LS/LF	1	$7.17
4	Saw cut, remove, and dispose of existing asphalt	LF	1	$3.53
5	Remove and dispose of excavated material	CY/LF	9.75	$68.43
6	Trench box 10'Hx16'L	LF	1	$1.10
7	36-inch Diameter Sewer	LF	1	$144.13
8	Bedding sand	CY/LF	2.75	$4.80
9	Granular borrow	CY/LF	5.78	$82.68
10	5-foot diameter concrete manhole on 6-foot x 6-foot concrete base (manhole spacing every 400-feet)	LF	0.0025	$34.65
11	Untreated base course	CY/LF	0.56	$31.41
12	Asphalt road (3-inch)	SY/LF	0.67	$38.99
			Subtotal	**$457.82**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)			$45.78
	Total 36-inch Diameter Sewer Cost per LF			**$503.60**
42-inch Diameter Sewer				
1	Mobilization and permits	LS/LF	1	$28.48
2	Traffic control and flagging	LS/LF	1	$14.50
3	De-watering	LS/LF	1	$7.52
4	Saw cut, remove, and dispose of existing asphalt	LF	1	$3.53

5	Remove and dispose of excavated material	CY/LF	11.22	$78.71
6	Trench box 10'Hx16'L	LF	1	$1.15
7	42-inch diameter sewer	LF	1	$152.45
8	Bedding sand	CY/LF	3.55	$6.19
9	Granular borrow	CY/LF	6.35	$90.90
10	5-foot diameter concrete manhole on 6-foot x 6-foot concrete base (manhole spacing every 400-feet)	LF	0.0025	$34.65
11	Untreated base course	CY/LF	0.61	$34.56
12	Asphalt road (3-inch)	SY/LF	0.70	$41.16
			Subtotal	**$493.80**
	Engineering, Surveying, and Construction Management and Inspection Costs (10%)			$49.38
			Total 42-inch Diameter Sewer Cost per LF	**$543.18**

Appendix K Water Rights Calculations

Change	WR#	Owner	Diversion (AF)	Use
	15-1699	Grantsville City Corporation	10.86	Municipal
	15-1989	Grantsville City		Recreation
a37143	15-1060	Grantsville City	12	Municipal
a52141	15-376 15-516	Grantsville City	4488.6	Municipal
a21720a	15-4511	Grantsville City	513.5	Municipal
a26331	15-293 15-775 15-776 15-1139	Grantsville City	142	Municipal
a29351	15-4454	Grantsville City	20	Municipal
a29673	15-635 15-636	Grantsville City	112.88	Municipal
a30058	15-4524	Grantsville City Corporation	21.92	Municipal
a30059	15-4525	Grantsville City Corporation	18.98	Municipal
a30060	15-4528	Grantsville City Corporation	20	Municipal
a30879	15-829	Granstville City	1.4	Municipal
a31746	15-4654	Grantsville City	10	Municipal
a31931	15-4668	Grantsville City	600	Municipal
a32189	15-4628	Grantsville City	2	Municipal
a33658	15-4890	Grantsville City	102.75	Municipal
a35140	15-381 15-638 15-639	Grantsville City	312.16	Municipal
a35295	15-5072	Grantsville City	50	Municipal
a36121	15-5099	Grantsville City	48.64	Municipal
a36121a	15-5571	Grantsville City	260	Municipal
a36647	15-814 15-815 15-1199 15-1201 15-1390 15-1391 15-1392 15-1393	Grantsville City Corporation	177.652	Municipal
a37143	15-1382 15-1383 15-1384 15-1385 15-5148 15-5149	Grantsville City	85	Municipal
a37829	15-5173	Grantsville City	10	Municipal
a39241	15-5228	Grantsville City	150	Municipal
a39288	15-5232	Grantsville City	100	Municipal
a39758	15-2625 15-4431 15-5246	Grantsville City	74.65	Municipal

Last Updated: 10/22/2025

Change	WR#	Owner	Diversion (AF)	Use
a42163	15-1033 15-4918	Grantsville City	3.84	Municipal
a42847	15-787 15-1053 15-1153 55-1154 55-1155 55-1156 55-1308 55-1309	Grantsville City	240.96	Municipal
a42849	15-5402	Grantsville City	65	Municipal
a43320	15-1292 15-2770 15-4656 15-4927	Grantsville City	139.556	Municipal
a44008	15-5345	Grantsville City	16.35	Municipal
a45179	15-965 15-1228 15-5535	Grantsville City	4.25	Municipal
a45190	15-5548	Grantsville City	42.65	Municipal
a45496	15-5573	Grantsville City	87.12	Municipal
a47317	15-938 15-940	Grantsville City	6.77	Municipal
a47419	15-505	Grantsville City	202	Municipal
a47802	15-91 15-477 15-506	Grantsville City	794.8023	Municipal
a47899	15-5668	Grantsville City	80.54	Municipal
a47904	15-1389 15-5689	Grantsville City	12.4275	Municipal
a47906	15-1388 15-4170 15-4201 15-5690	Grantsville City	93.34	Municipal
a47907	15-4526 15-5691	Grantsville City	55.788	Municipal
a47914	15-5701	Grantsville City	25	Municipal
a47959	15-399	Grantsville City	161.68	Municipal
a48032	15-5697	Grantsville City	40	Municipal
a48474	15-5436	Grantsville City	134	Municipal
a48683	15-5101	Grantsville City	24.6	Municipal
a48957	15-5393	Grantsville City	27.162	Municipal
a49085	15-4254	Grantsville City	15	Municipal
a49157	15-481	Grantsville City	294.56	Municipal
a49383	15-1938	Grantsville City	320	Municipal
a49832	15-5517	Grantsville City	49.64	Municipal
a50000	15-916 15-2791	Grantsville City	4.82	Municipal
TOTAL			10,286.8478	

Last Updated: 10/22/2025

GRANTSVILLE CITY

WATERWISE IRRIGATION DEMANDS (60% EFF)

AVERAGE GROWING SEASON: (@ Elevation 4800 +/- feet average)						213	Days (Conservative)
UTAH IRRIGATION ZONE:						4	UDDW (moderately high)
UTAH WATER RIGHTS DUTY ZONE (AF/ACRE)						4	
* PEAK DAY CONSUMPTIVE USE (C.U./ET) (NWS station at Tooele using data from Grantsville)	Turf	peak month		July		5.08	in/month
(115% * ave day of peak month)	Turf grass =	0.16	$\frac{in}{day}$ *	1.15	=	0.19	in/day
* SEASONAL CONSUMPTIVE USE (C.U.)	Turf grass =	24.3	$\frac{in}{yr}$ *	1.00	=	24.28	in/yr

SEASONAL GROSS REQUIREMENTS

SEASONAL CONSUMPTIVE USE (C.U.) =						24.28	in/yr
Less soil moisture (fine sands 0.75 in/ft*1ft effective root zone)					-	0.75	in/yr
Less rainfall average (during Irrigation season) 80% of rain during irrig season					-	8.472	in/yr
NET SEASONAL CONSUMPTIVE USE (C.U.)/ET					=	15.06	in/yr

GROSS IRRIGATION REQUIREMENTS

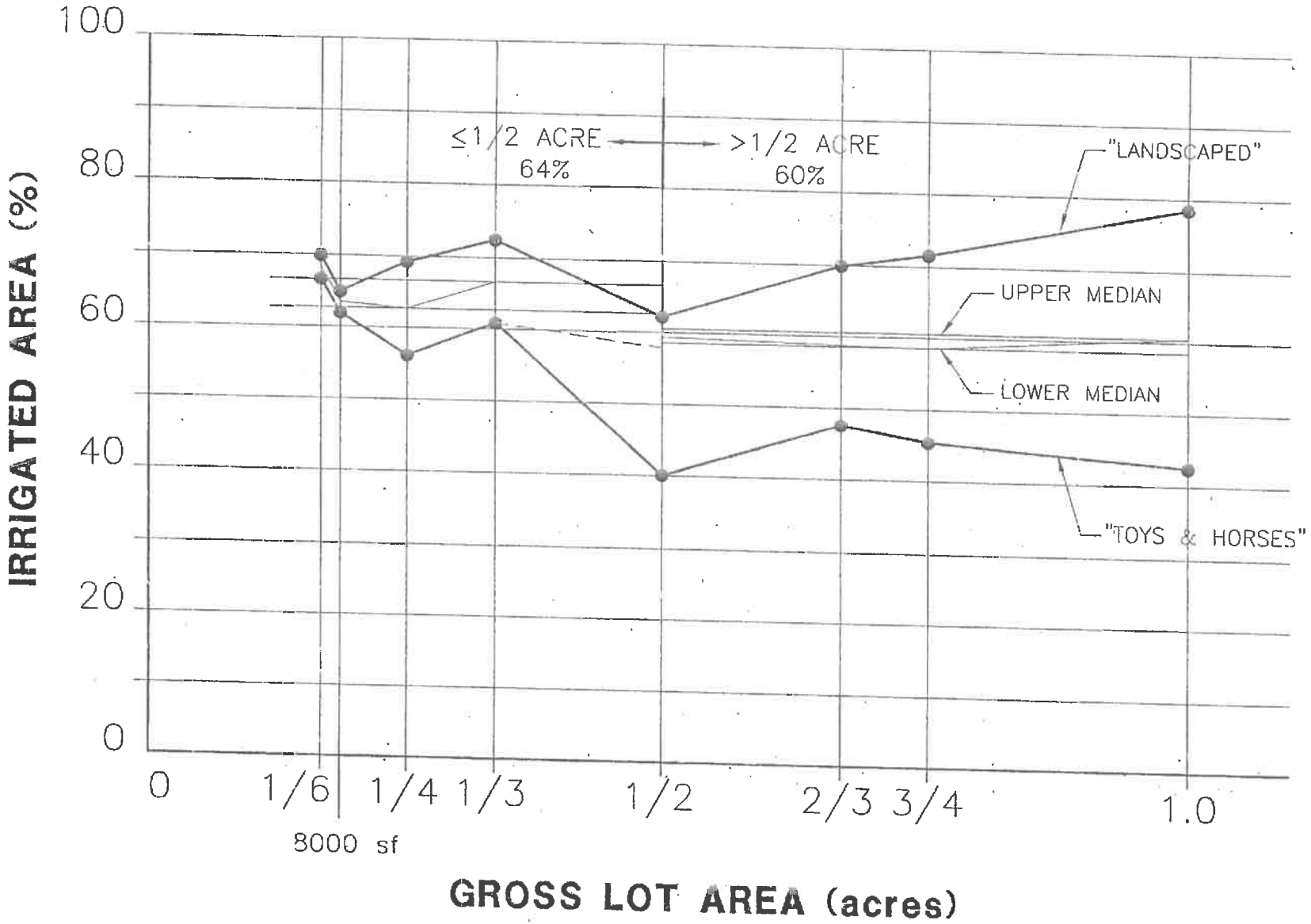
Assumed Efficiency = 60.0%
Seasonal:

Net C.U./Efficiency		15.06	$\frac{in}{yr}$ ÷	60.0%	=	25.10	in/yr
IF NO RAIN OCCURS AND NO SOIL MOISTURE (SEASONAL CONSUMPTIVE USE (C.U.))		24.3	$\frac{in}{yr}$ ÷	60.0%	=	40.47	in/yr
AC-FT/ACRE Conversion	40.47	$\frac{in}{yr} * 43{,}560 \frac{ft^2}{acre} * 7.48 \frac{gal}{ft^3} \Big/ 12 \frac{in}{ft} * 325{,}851 \frac{gal}{acre \cdot ft}$			=	**3.37**	**ac-ft/acre**
If conservation is practiced			Turf	35%		3.37	ac-ft/acre
			Xeriscape	65%		1.69	ac-ft/acre (assumed 3
			Weighted Average	**100%**		**2.28**	**ac-ft/acre**
						0.68351 0.31649	
Peak Day Peak C.U. / Efficiency		0.188	$\frac{in}{day}$ ÷	60.0%	=	0.314	in/day
gpm/ac Conversion	0.314	$\frac{in}{day} * 43{,}560 \frac{ft^2}{acre} * 7.48 \frac{gal}{ft^3} \Big/ 12 \frac{in}{ft} * 1{,}440 \frac{min}{day}$			=	**5.92**	gpm/ac
If conservation is practiced			Turf	35%		5.92	gpm/acre
			Xeriscape	65%		2.96	gpm/acre (assumed 3
			Weighted Average	**100%**		**4.00**	**gpm/acre**
gpd/ac Conversion with no conservation		5.92	$\frac{gpm}{acre} * 1{,}440 \frac{min}{day}$		=	**8,530**	**gpd/ac** (Peak Day Demand)
gpd/acre conversion if conservation practiced		4.00	$\frac{gpm}{acre} * 1{,}440 \frac{min}{day}$		=	**5,760**	**gpd/ac** (Peak Day Demand)

* Data taken from the Utah Division of Water Rights Consumptive Use Tables (http://nrwrt1.nr.state.ut.us/techinfo/consumpt/default.htm).

Ref: Ames Irrigation Handbook Third Edition 1967

PERCENTAGE OF LOT IRRIGATED



IRRIGATED ACREAGE WORKSHEET - 1/6 ACRE LAWN

LOT AREA (square feet)	7,200	80'x90' average lot size for very high density development
HOME FOOTPRINT	(1,200)	Assumes garage (25' x 25'), split level home (30' x 40')
DRIVEWAY	(600)	20' x 30'
PATIO	(225)	15' x 15'
SIDEWALK	(120)	4' by 30'
RV PAD	0	none
PLAY ITEMS	(100)	10' x 10' sand box
OUTBUILDINGS	(80)	8' x 10' tuff shed
ANIMAL CONTAINMENT	(72)	6' x 12' dog run
PARK STRIP (length of frontage - drive width)	240	4' x (80' - 20')
TOTAL IRRIGATED AREA (square feet)	**5,043**	**70.0%**

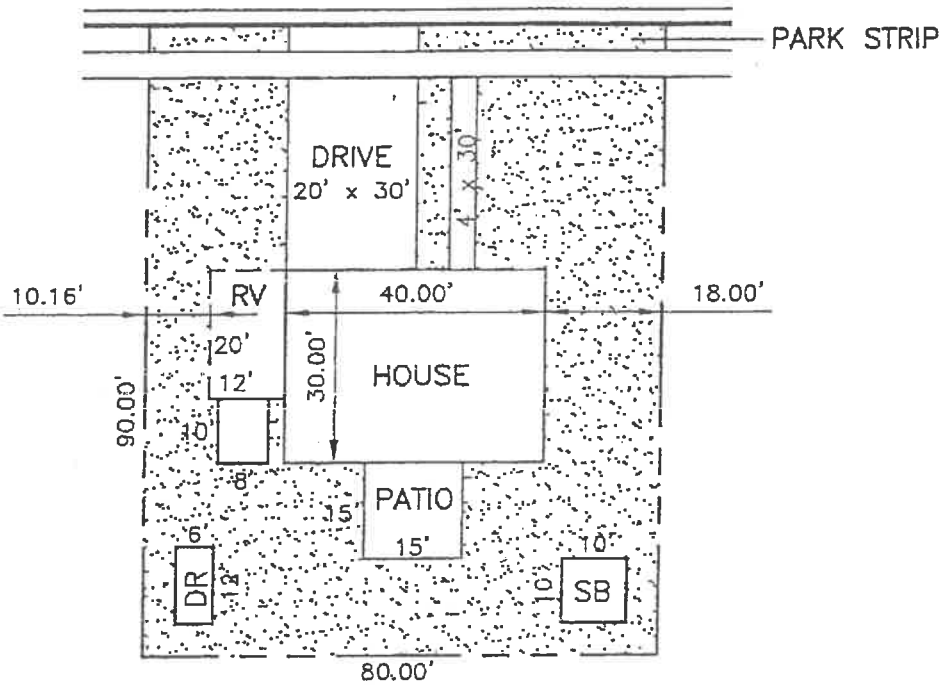
NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

IRRIGATED ACREAGE WORKSHEET - 1/6 ACRE RV

LOT AREA (square feet)	7,200	80'x90' average lot size for very high density development
HOME FOOTPRINT	(1,200)	Assumes garage (25' x 25'), split level home (30' x 40')
DRIVEWAY	(600)	20' x 30'
PATIO	(225)	15' x 15'
SIDEWALK	(120)	4' by 30'
RV PAD	(240)	12' x 20'
PLAY ITEMS	(100)	10' x 10' sand box
OUTBUILDINGS	(80)	8' x 10' tuff shed
ANIMAL CONTAINMENT	(72)	6' x 12' dog run
PARK STRIP (length of frontage - drive width)	240	4' x (80' - 20')
TOTAL IRRIGATED AREA (square feet)	**4,803**	**66.7%**

NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

1/6 ACRE - RV


PARK STRIP
DRIVE
20' x 30'
4' x 30'
10.16'
RV
40.00'
18.00'
20'
12'
30.00'
HOUSE
90.00'
10'
8'
PATIO
15'
15'
6'
10'
DR
12'
10'
SB
80.00'

IRRIGATED ACREAGE WORKSHEET - 8,000 SF LAWN

LOT AREA (square feet)	8,000	80' x 100' lot size for high density development
HOME FOOTPRINT	(1,600)	Assumes garage (25' x 25'), split level home (35' x 45.7')
DRIVEWAY	(750)	25' x30'
PATIO	(300)	15' x 20'
SIDEWALK	(120)	4' by 30'
RV PAD	0	none
PLAY ITEMS	(100)	10' x 10' sandbox
OUTBUILDINGS	(80)	8' x 10' tuff shed
ANIMAL CONTAINMENT	(72)	6' x 12' dog run
PARK STRIP (length of frontage - drive width)	220	4' x (80' - 25')
TOTAL IRRIGATED AREA (square feet)	**5,198**	**65.0%**

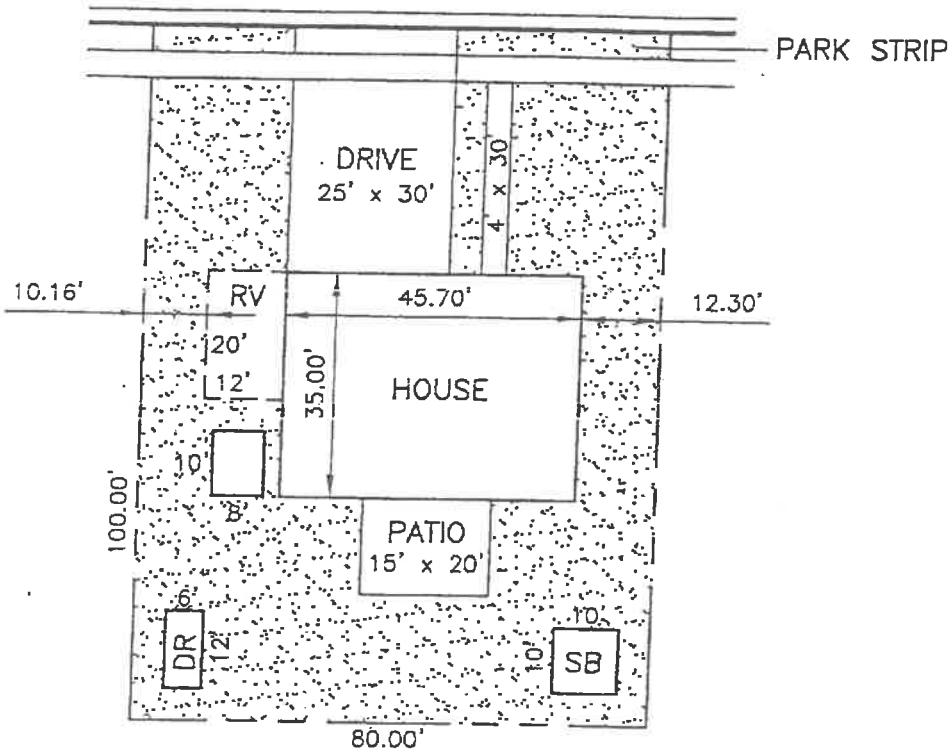
NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

IRRIGATED ACREAGE WORKSHEET - 8,000 SF RV

LOT AREA (square feet)	8,000	80' x 100' lot size for high density development
HOME FOOTPRINT	(1,600)	Assumes garage (25' x 25'), split level home (35' x 45.7')
DRIVEWAY	(750)	25' x30'
PATIO	(300)	15' x 20'
SIDEWALK	(120)	4' by 30'
RV PAD	(240)	12' x 20'
PLAY ITEMS	(100)	10' x 10' sandbox
OUTBUILDINGS	(80)	8' x 10' tuff shed
ANIMAL CONTAINMENT	(72)	6' x 12' dog run
PARK STRIP (length of frontage - drive width)	220	4' x (80' - 25')
TOTAL IRRIGATED AREA (square feet)	**4,958**	**62.0%**

NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

8,000 SF - RV

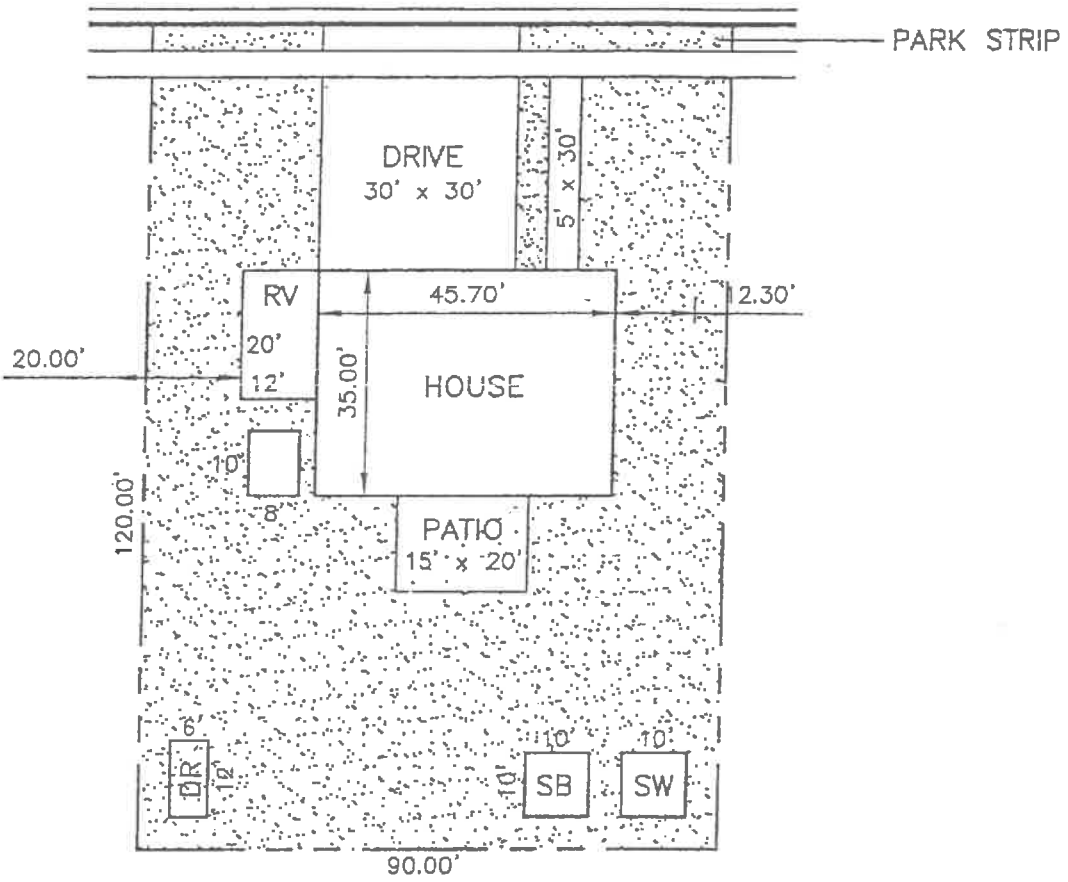

PARK STRIP
DRIVE
25' x 30'
4' x 30'
10.16'
RV
45.70'
12.30'
20'
12'
35.00'
HOUSE
10'
8'
100.00'
PATIO
15' x 20'
6'
DR
12'
10'
10'
SB
80.00'

IRRIGATED ACREAGE WORKSHEET - 1/4 ACRE LAWN

LOT AREA (square feet)	10,800	90' x 120' average lot size for high density development
HOME FOOTPRINT	(1,600)	Assumes garage (25' x 35'), split level home (35' x 45.7')
DRIVEWAY	(900)	30' x30'
PATIO	(300)	15' x 20'
SIDEWALK	(150)	5' by 30'
RV PAD	(240)	12' x 20'
PLAY ITEMS	(200)	10' x 10' sandbox, 10' x 10' swing set
OUTBUILDINGS	(80)	8' x 10' tuff shed
ANIMAL CONTAINMENT	(72)	6' x 12' dog run
PARK STRIP (length of frontage - drive width)	240	4' x (90' - 30')
TOTAL IRRIGATED AREA (square feet)	**7,498**	**69.4%**

NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

1/4 ACRE LOT - LAWN

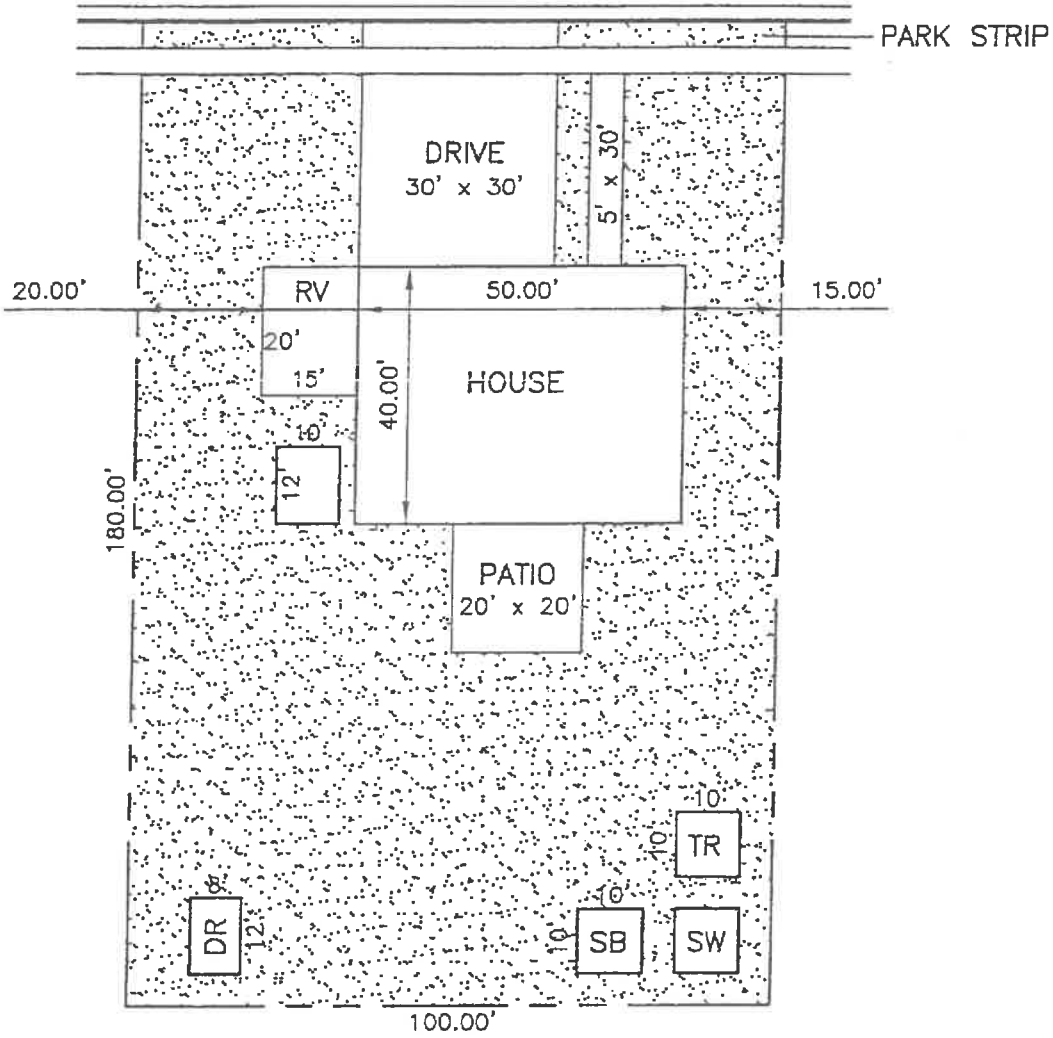


IRRIGATED ACREAGE WORKSHEET - 1/4 ACRE SHOP

LOT AREA (square feet)	10,800	90' x 120' average lot size for high density development
HOME FOOTPRINT	(1,600)	Assumes garage (25' x 35'), split level home (35' x 45.7')
DRIVEWAY	(900)	30' x30'
PATIO	(300)	15' x 20'
SIDEWALK	(150)	5' by 30'
RV PAD	(240)	12' x 20'
PLAY ITEMS	(200)	10' x 10' sandbox, 10' x 10' swing set
OUTBUILDINGS	(1,500)	20' x 30' shop, 90' x 10' gravel access drive
ANIMAL CONTAINMENT	(72)	6' x 12' dog run
PARK STRIP (length of frontage - drive width)	240	4' x (90' - 30')
TOTAL IRRIGATED AREA (square feet)	**6,078**	**56.3%**

NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

1/3 ACRE LOT - LAWN

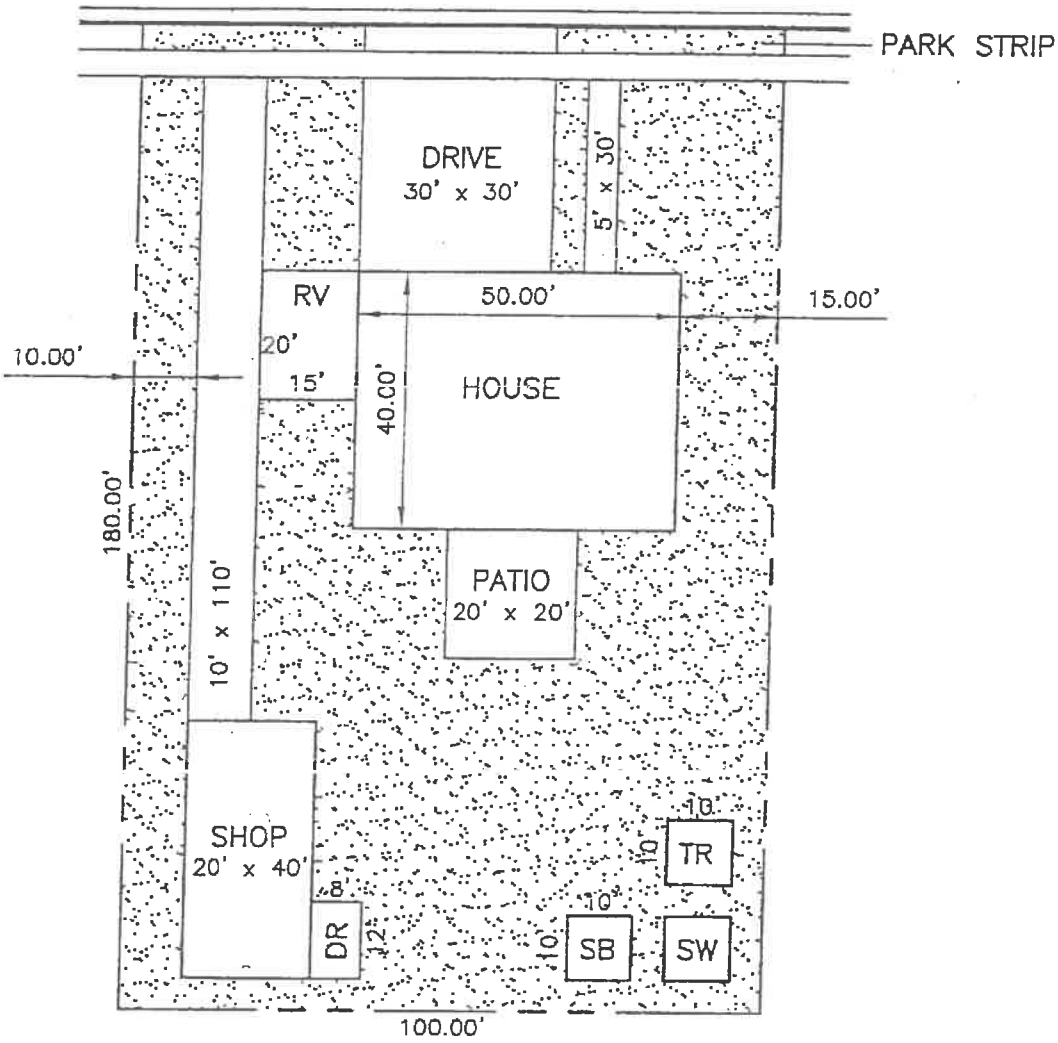


IRRIGATED ACREAGE WORKSHEET - 1/3 ACRE SHOP

LOT AREA (square feet)	14,500	100' x 145' average lot size for medium density development
HOME FOOTPRINT	(2,000)	Assumes garage (25' x 35'), split level home (40' x 50')
DRIVEWAY	(900)	30' x30'
PATIO	(400)	20' x 20'
SIDEWALK	(150)	5' x 30'
RV PAD	(300)	15' x 20'
PLAY ITEMS	(300)	10' x 10' sandbox, 10' x 10' swing set, 10' x 10' trampoline
OUTBUILDINGS	(1,800)	20' x 40' shop 100' x 10' gravel access drive
ANIMAL CONTAINMENT	(96)	8' x 12' dog run
PARK STRIP (length of frontage - drive width)	280	4' x (100' - 30')
TOTAL IRRIGATED AREA (square feet)	**8,834**	**60.9%**

NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

1/3 ACRE LOT - SHOP



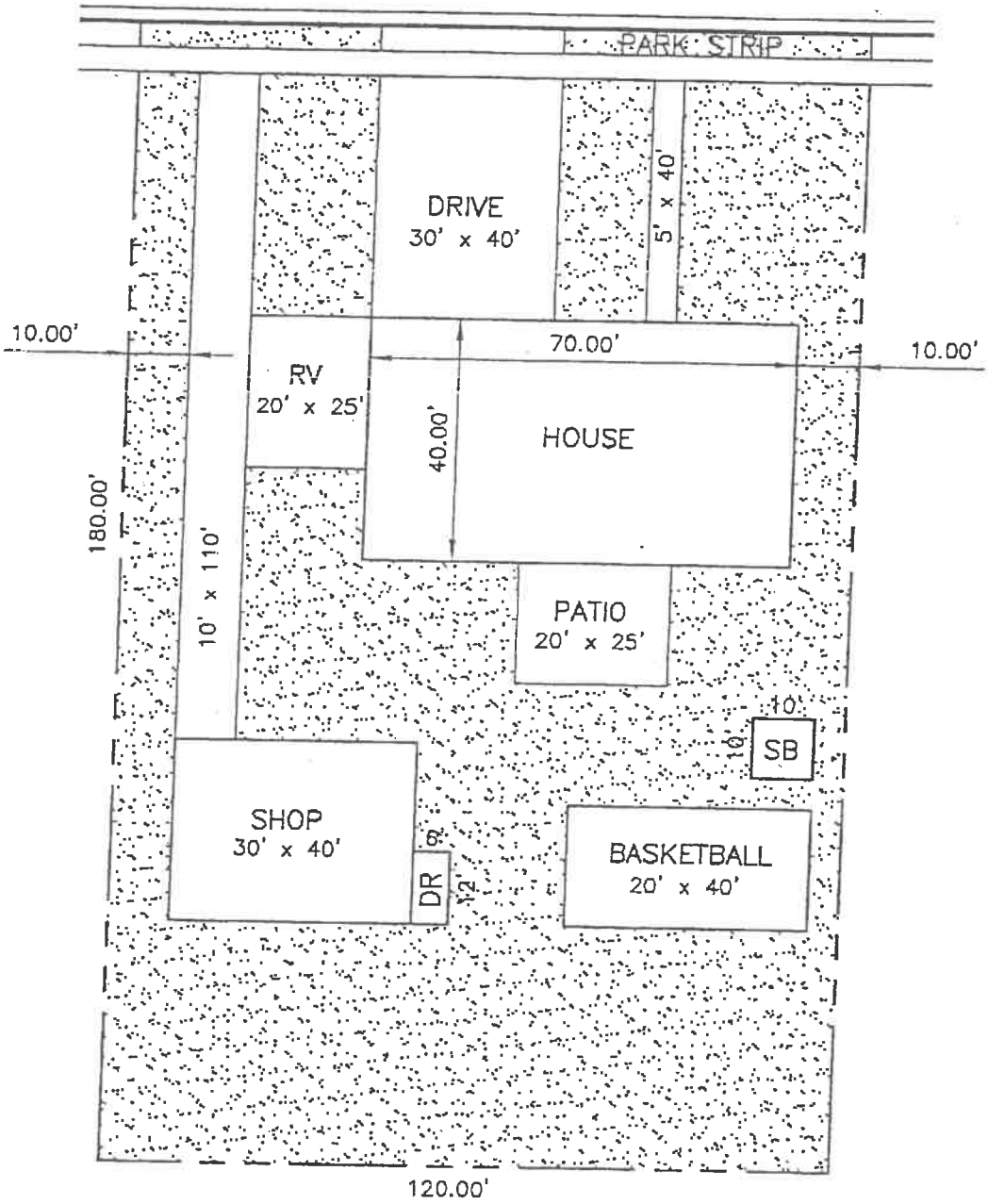
IRRIGATED ACREAGE WORKSHEET - 1/2 ACRE LAWN

LOT AREA (square feet)	21,600	120' x 180' average lot size for medium density development
HOME FOOTPRINT	(2,800)	Assumes garage (25' x 35'), split level home (40' x 70')
DRIVEWAY	(1,200)	30' x 40'
PATIO	(500)	25' x 20'
SIDEWALK	(200)	5' x 40'
RV PAD	(500)	20' x 25'
PLAY ITEMS	(900)	10' x 10' sandbox, 20' x 40' basketball court
OUTBUILDINGS	(2,300)	30' x 40' shop, 110' x 10' gravel access drive
ANIMAL CONTAINMENT	(72)	6' x 12' dog run
PARK STRIP (length of frontage - drive width)	360	4' x (120' - 30')
TOTAL IRRIGATED AREA (square feet)	**13,488**	**62.4%**

NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

Assumes that large animals are kept on property, along with feed storage for the animal.

1/2 ACRE LOT - LAWN



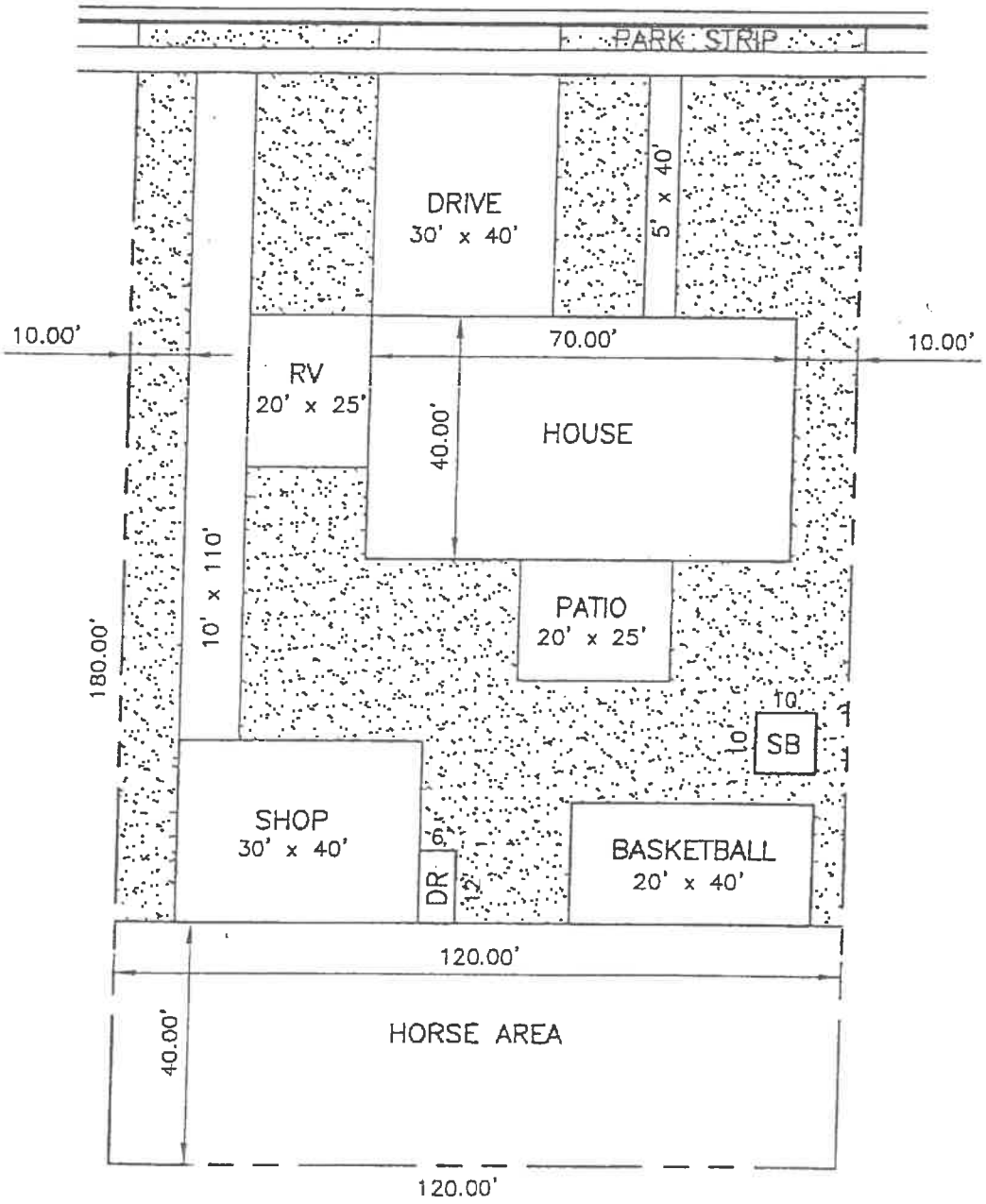
IRRIGATED ACREAGE WORKSHEET - 1/2 ACRE HORSE

LOT AREA (square feet)	21,600	120' x 180' average lot size for medium density development
HOME FOOTPRINT	(2,800)	Assumes garage (25' x 35'), split level home (40' x 70')
DRIVEWAY	(1,200)	30' x 40'
PATIO	(500)	25' x 20'
SIDEWALK	(200)	5' by 40'
RV PAD	(500)	20' x 25'
PLAY ITEMS	(900)	10' x 10' sandbox, 20' x 40' basketball court
OUTBUILDINGS	(2,300)	30' x 40' shop, 110' x 10' gravel access drive
ANIMAL CONTAINMENT	(4,872)	6' x 12' dog run, 40' x 120' large animal corral & support area
PARK STRIP (length of frontage - drive width)	360	4' x (120' - 30')
TOTAL IRRIGATED AREA (square feet)	**8,688**	**40.2%**

NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

Assumes that large animals are kept on property, along with feed storage for the animal, and no animal containment area (pasture) is irrigated.

1/2 ACRE LOT - HORSE

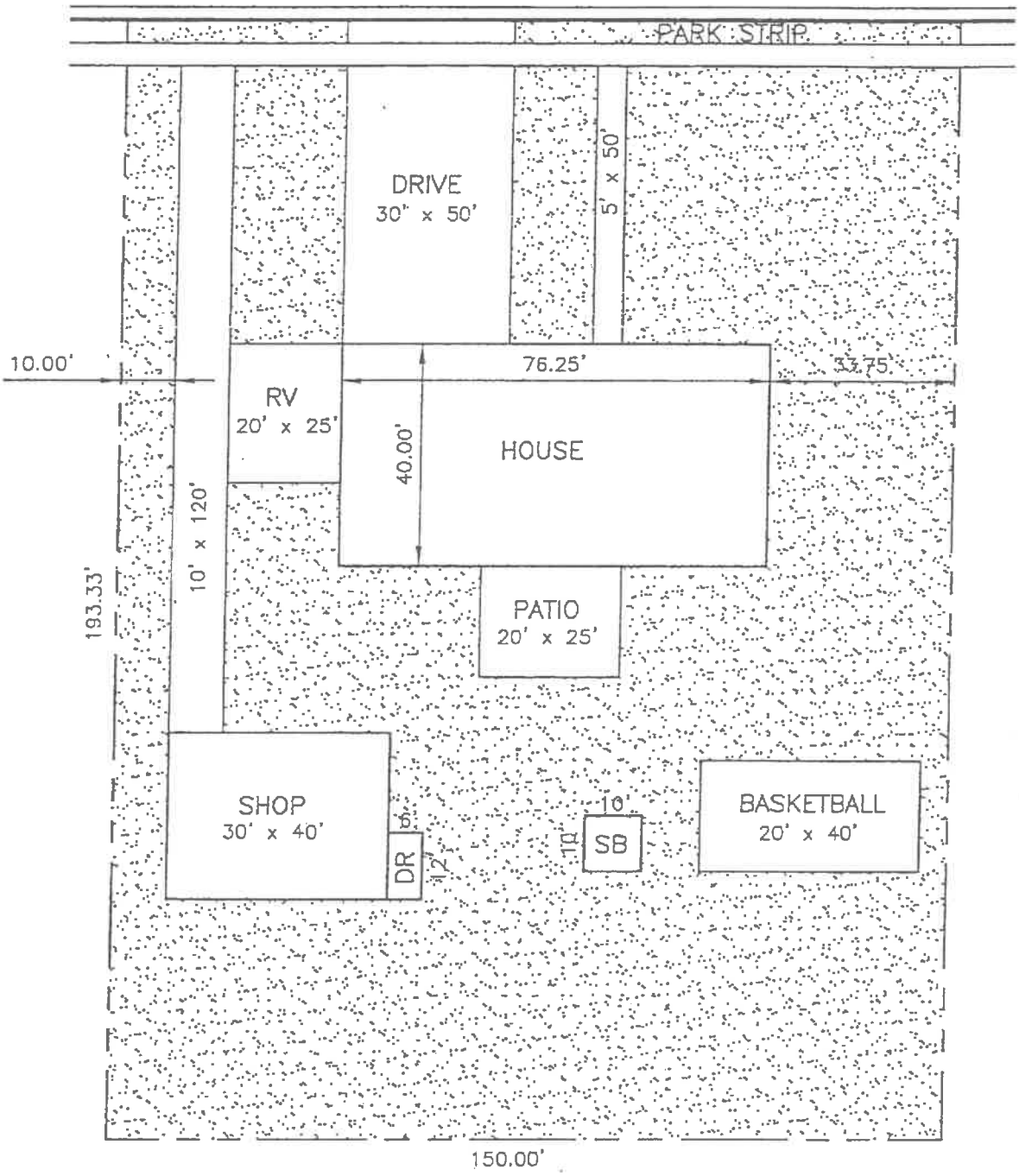


IRRIGATED ACREAGE WORKSHEET - 2/3 ACRE LAWN

LOT AREA (square feet)	29,000	150' x 193.33' average lot size for medium density developme
HOME FOOTPRINT	(3,050)	Assumes garage (25' x 35'), split level home (40' x 76.25')
DRIVEWAY	(1,500)	30' x 50'
PATIO	(500)	20' x 25'
SIDEWALK	(250)	5' by 50'
RV PAD	(500)	20' x 25'
PLAY ITEMS	(900)	10' x 10' sandbox, 20' x 40' basketball court
OUTBUILDINGS	(2,400)	30' x 40' shop, 120' x 10' gravel access drive
ANIMAL CONTAINMENT	(72)	6' x 12' dog run
PARK STRIP (length of frontage - drive width)	480	4' x (150' - 30')
TOTAL IRRIGATED AREA (square feet)	**20,308**	**70.0%**

NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

2/3 ACRE LOT - LAWN



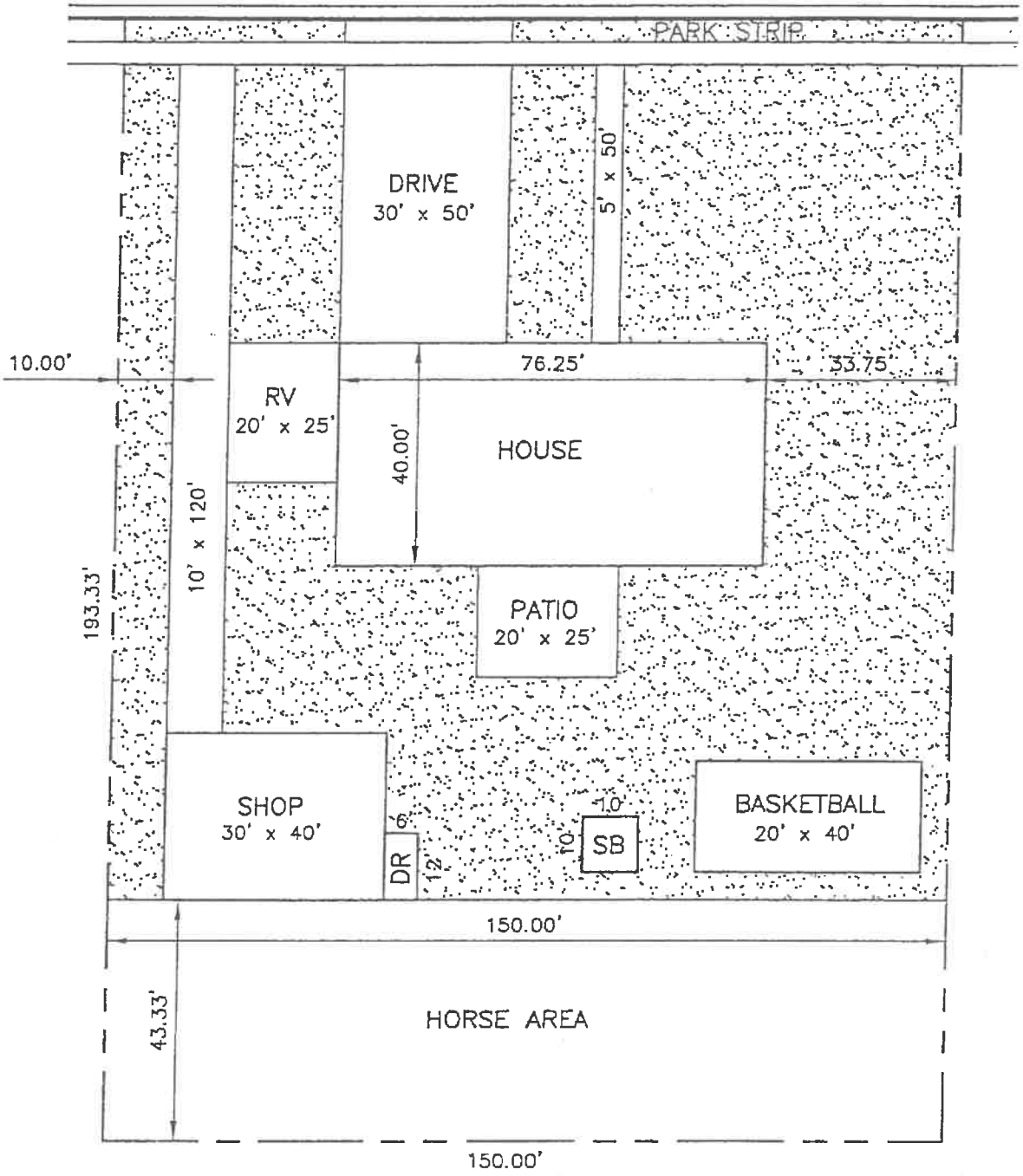
IRRIGATED ACREAGE WORKSHEET - 2/3 ACRE HORSE

LOT AREA (square feet)	29,000	150' x 193.33' average lot size for medium densily developme
HOME FOOTPRINT	(3,050)	Assumes garage (25' x 35'), split level home (40' x 76.25')
DRIVEWAY	(1,500)	30' x 50'
PATIO	(500)	20' x 25'
SIDEWALK	(250)	5' by 50'
RV PAD	(500)	20' x 25'
PLAY ITEMS	(900)	10' x 10' sandbox, 20' x 40' basketball court
OUTBUILDINGS	(2,400)	30' x 40' shop, 120' x 10' gravel access drive
ANIMAL CONTAINMENT	(6,572)	6' x 12' dog run, 40' x 120' large animal corral & support area
PARK STRIP (length of frontage - drive width)	480	4' x (150' - 30')
TOTAL IRRIGATED AREA (square feet)	**13,809**	**47.6%**

NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

Assumes that large animals are kept on property, along with feed storage for the animal, and no animal containment area (pasture) is irrigated.

2/3 ACRE LOT - HORSE

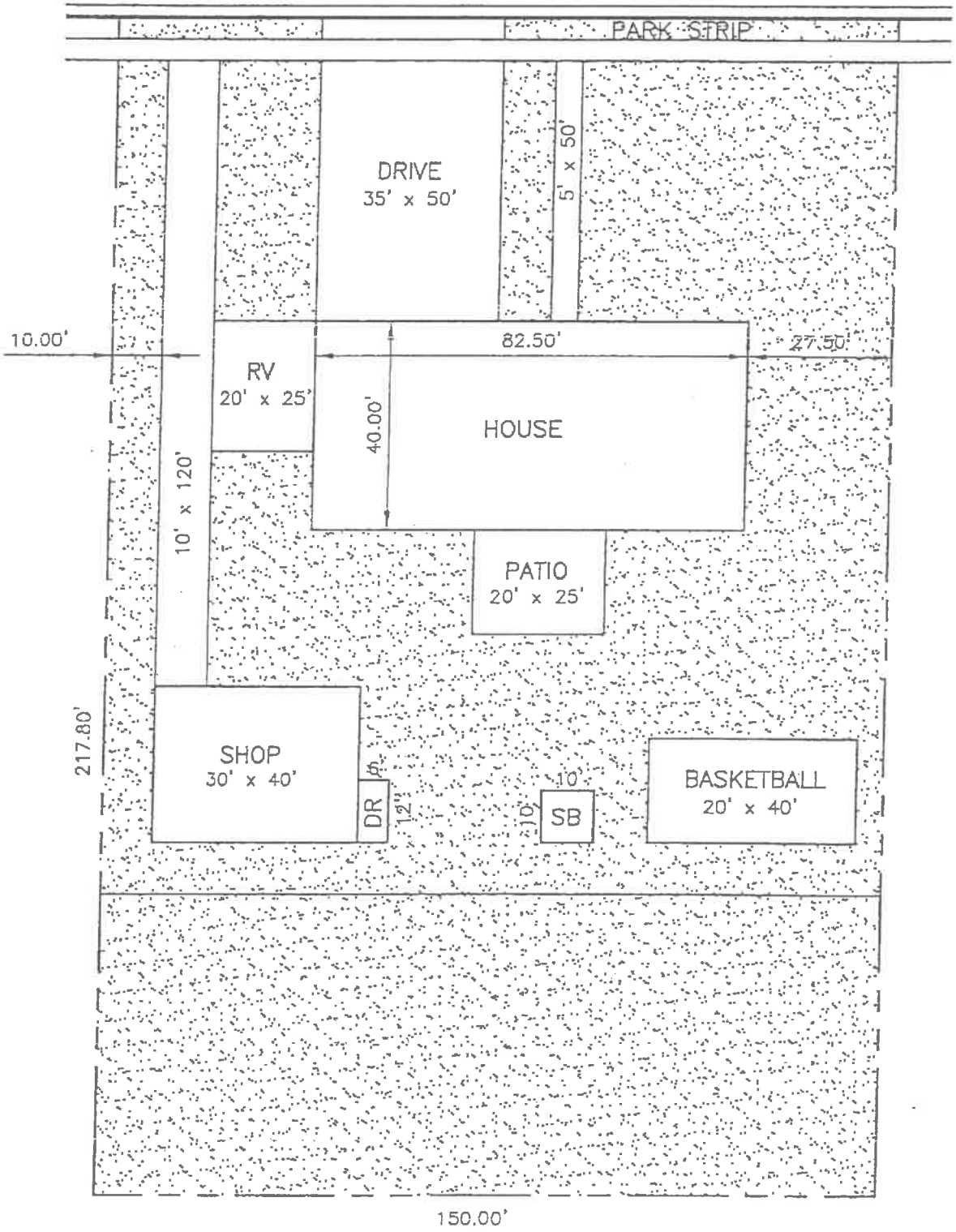


IRRIGATED ACREAGE WORKSHEET - 3/4 ACRE LAWN

LOT AREA (square feet)	32,670	150' x 217.8' average lot size for medium density development
HOME FOOTPRINT	(3,300)	Assumes garage (25' x 35'), split level home (40' x 82.5')
DRIVEWAY	(1,750)	35' x 50'
PATIO	(500)	20' x 25'
SIDEWALK	(250)	5' by 50'
RV PAD	(500)	20' x 25'
PLAY ITEMS	(900)	10' x 10' sandbox, 20' x 40' basketball court
OUTBUILDINGS	(2,400)	30' x 40' shop, 120' x 10' gravel access drive
ANIMAL CONTAINMENT	(72)	6' x 12' dog run
PARK STRIP (length of frontage - drive width)	460	4' x (150' - 35')
TOTAL IRRIGATED AREA (square feet)	**23,458**	**71.8%**

NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

3/4 ACRE LOT - LAWN



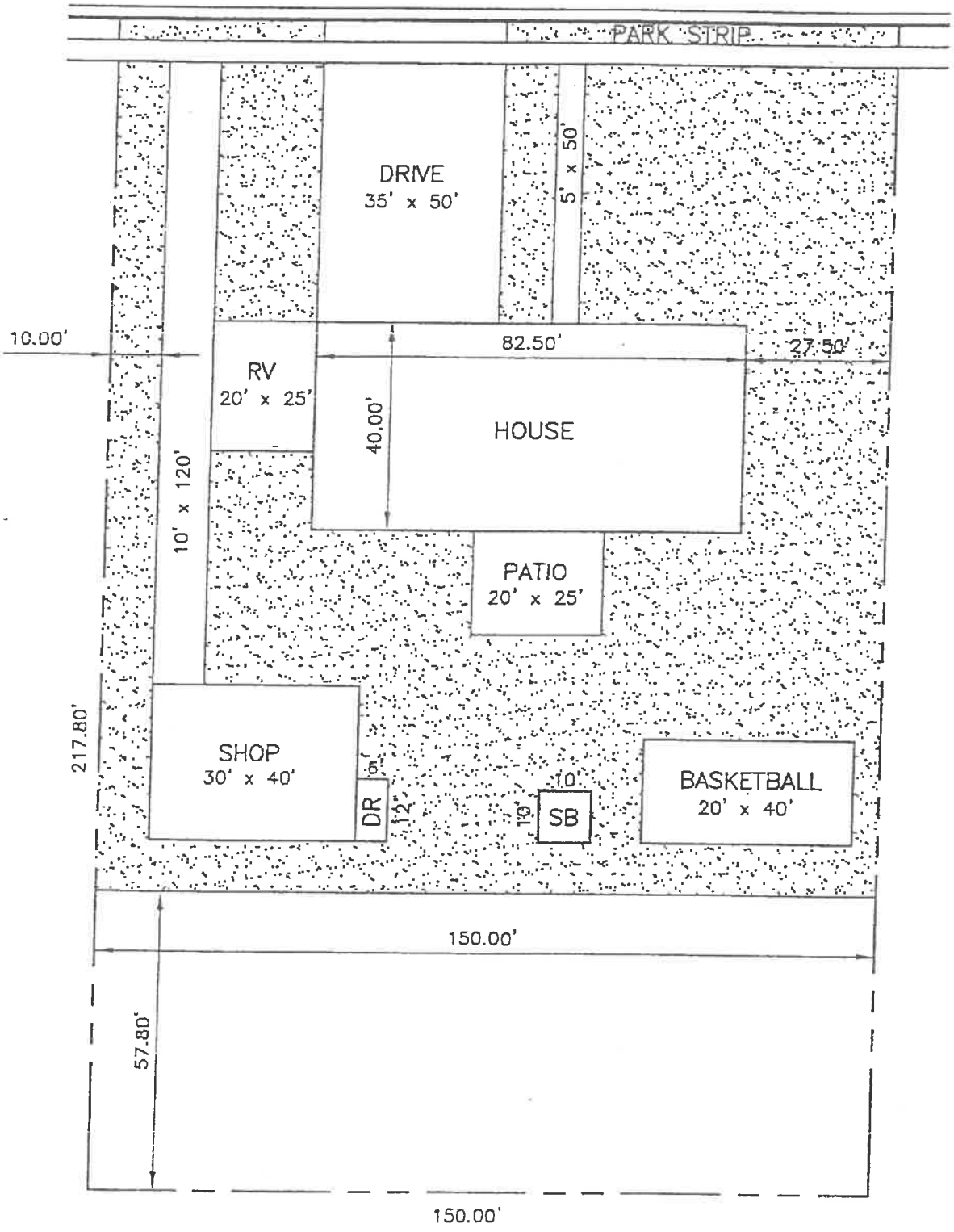
IRRIGATED ACREAGE WORKSHEET - 3/4 ACRE HORSE

LOT AREA (square feet)	32,670	150' x 217.8' average lot size for medium density development
HOME FOOTPRINT	(3,300)	Assumes garage (25' x 35'), split level home (40' x 82.5')
DRIVEWAY	(1,750)	35' x 50'
PATIO	(500)	20' x 25'
SIDEWALK	(250)	5' by 50'
RV PAD	(500)	20' x 25'
PLAY ITEMS	(900)	10' x 10' sandbox, 20' x 40' basketball court
OUTBUILDINGS	(2,400)	30' x 40' shop, 120' x 10' gravel access drive
ANIMAL CONTAINMENT	(8,742)	6' x 12' dog run, 57.5' x 150' large animal corral/support area
PARK STRIP (length of frontage - drive width)	460	4' x (150' - 35')
TOTAL IRRIGATED AREA (square feet)	**14,788**	**45.3%**

NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

Assumes that large animals are kept on property, along with feed storage for the animal, and no animal containment area (pasture) is irrigated.

3/4 ACRE LOT - HORSE

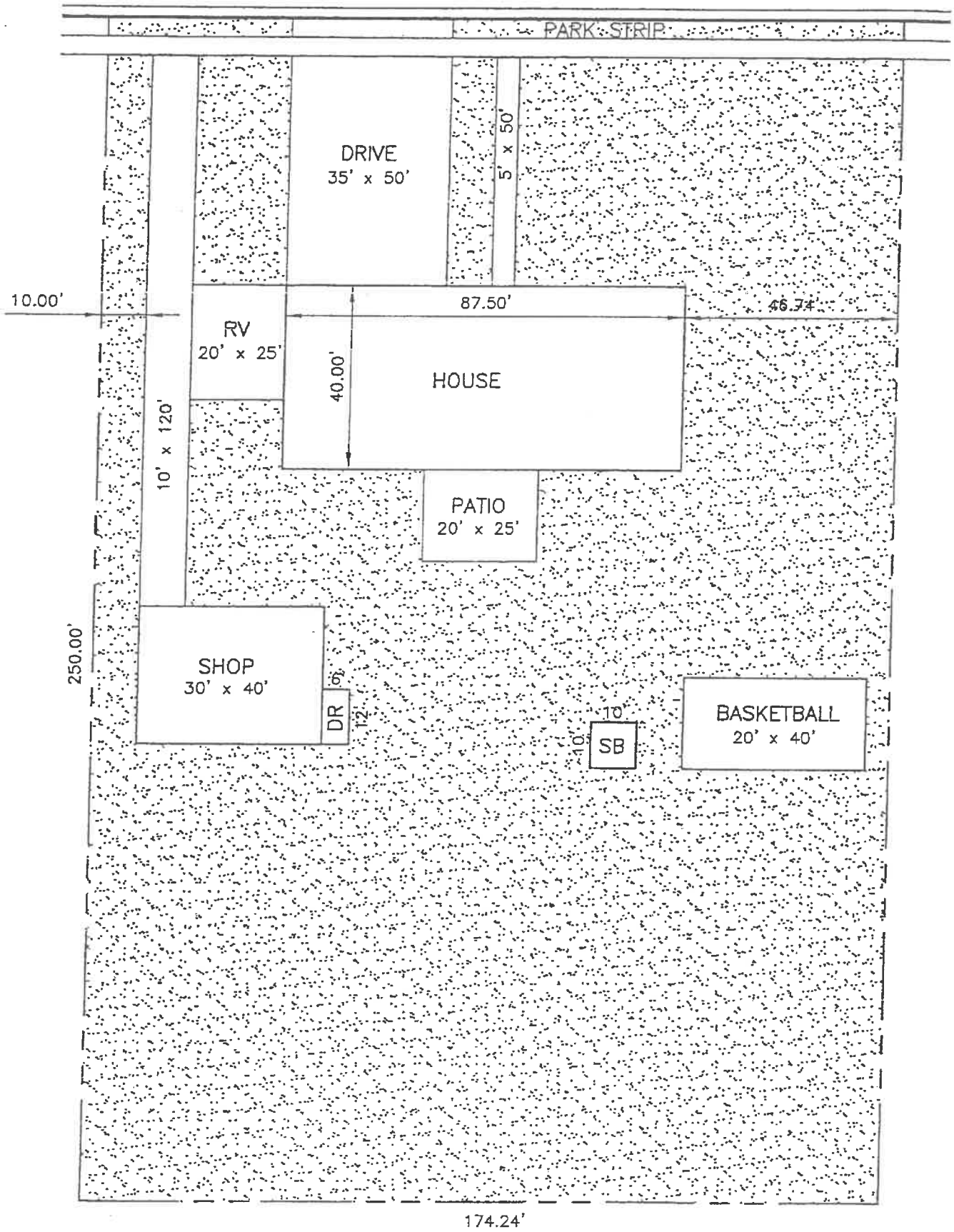


IRRIGATED ACREAGE WORKSHEET - 1 ACRE LAWN

LOT AREA (square feet)	43,560	174.24' x 250' average lot size for low density development
HOME FOOTPRINT	(3,500)	Assumes garage (25' x 35'), split level home (40' x 87.5')
DRIVEWAY	(1,750)	35' x 50'
PATIO	(500)	20' x 25'
SIDEWALK	(250)	5' by 50'
RV PAD	(500)	20' x 25'
PLAY ITEMS	(900)	10' x 10' sandbox, 20' x 40' basketball court
OUTBUILDINGS	(2,400)	30' x 40' shop, 120' x 10' gravel access drive
ANIMAL CONTAINMENT	(72)	6' x 12' dog run
PARK STRIP (length of frontage - drive width)	557	4' x (174.24' - 35')
TOTAL IRRIGATED AREA (square feet)	**34,245**	**78.6%**

NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

1 ACRE LOT - LAWN



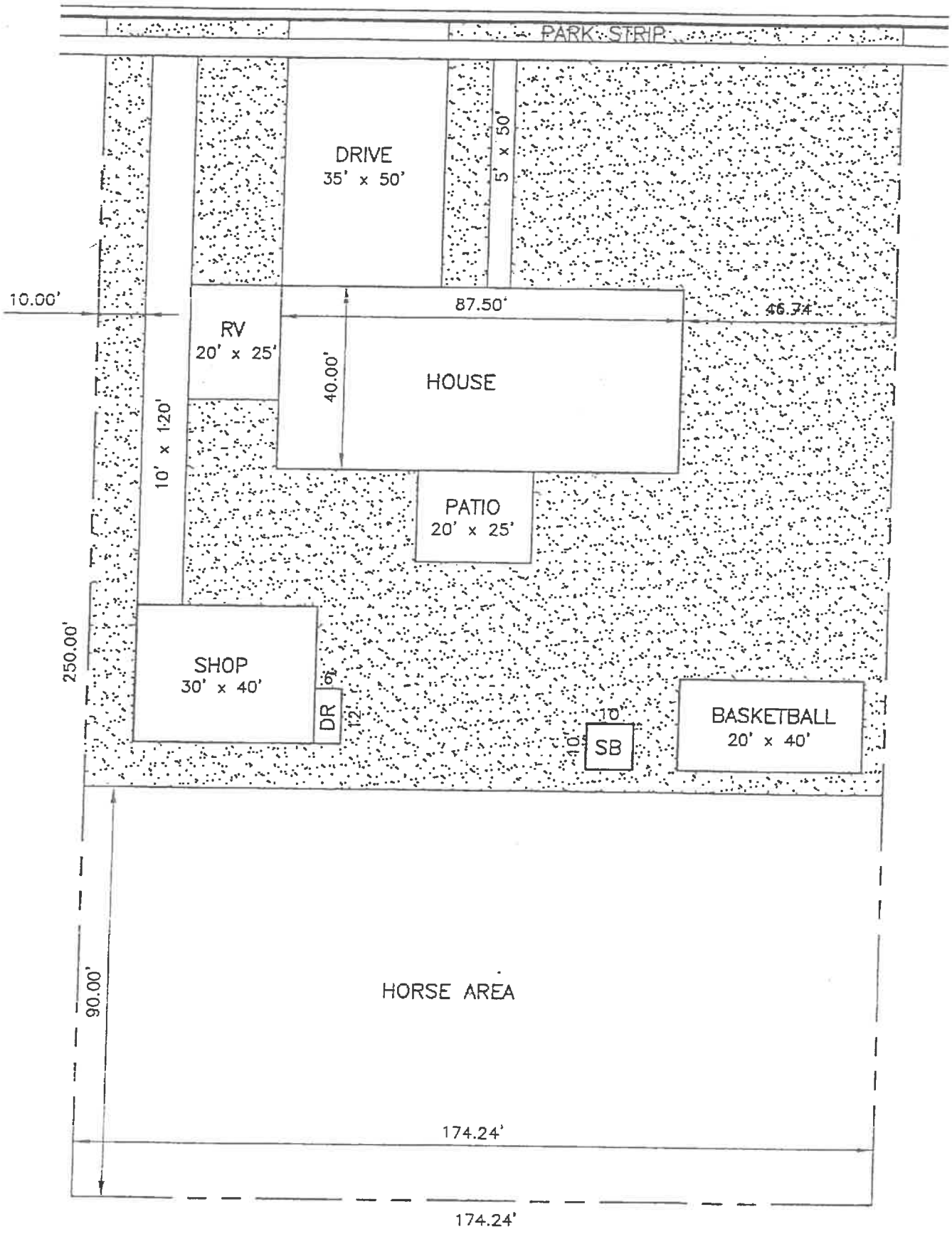
IRRIGATED ACREAGE WORKSHEET - 1 ACRE HORSE

LOT AREA (square feet)	43,560	174.24' x 250' average lot size for low density development
HOME FOOTPRINT	(3,500)	Assumes garage (25' x 35'), split level home (40' x 87.5')
DRIVEWAY	(1,750)	35' x 50'
PATIO	(500)	20' x 25'
SIDEWALK	(250)	5' by 50'
RV PAD	(500)	20' x 25'
PLAY ITEMS	(900)	10' x 10' sandbox, 20' x 40' basketball court
OUTBUILDINGS	(2,400)	30' x 40' shop, 120' x 10' gravel access drive
ANIMAL CONTAINMENT	(15,754)	6' x 12' dog run, 90' x 174.24' large animal corral/support area
PARK STRIP (length of frontage - drive width)	557	4' x (174.24' - 35')
TOTAL IRRIGATED AREA (square feet)	**18,563**	**42.6%**

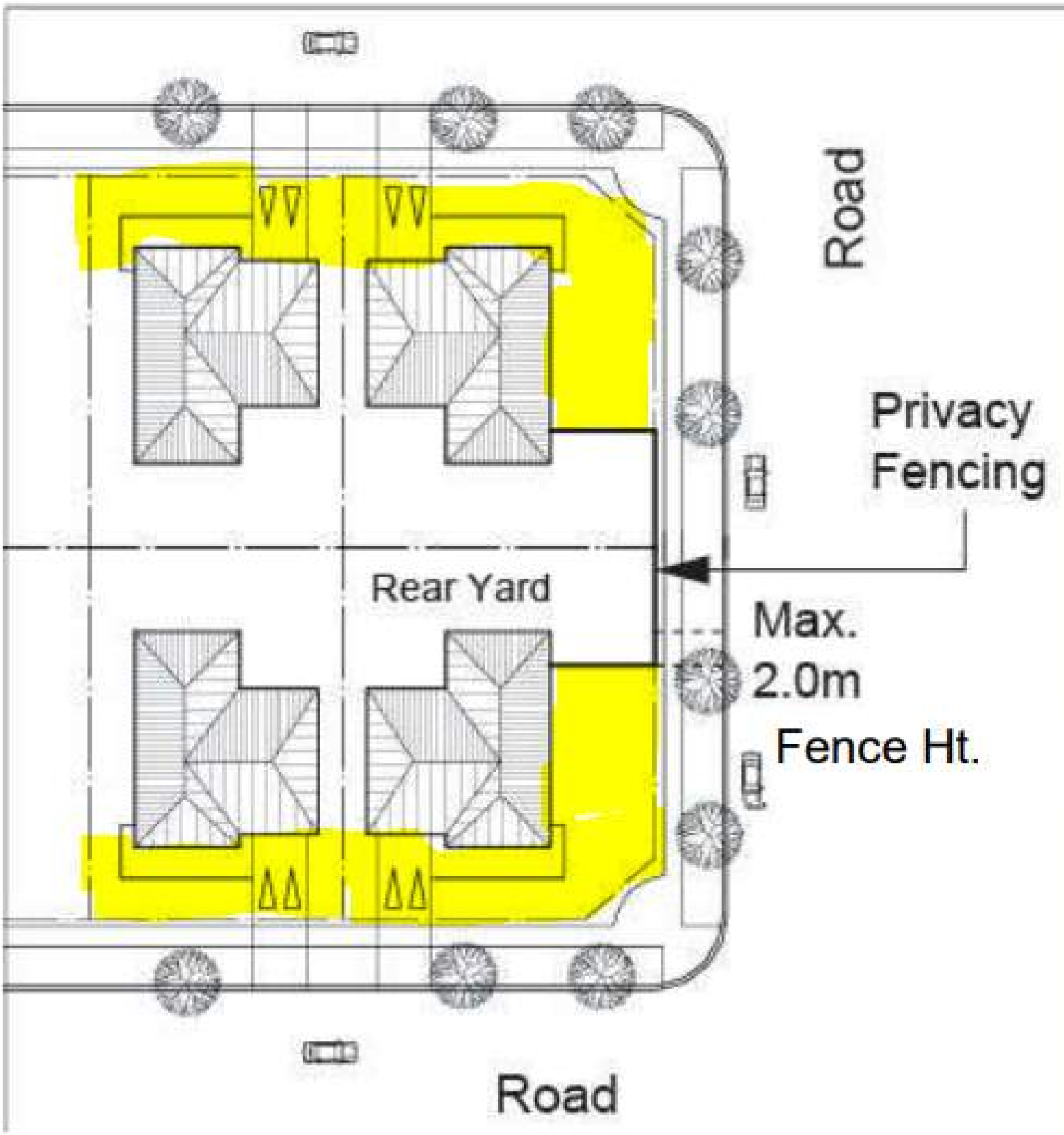
NOTE: Actual irrigated acreage will vary from lot to lot. This worksheet is intended to be an average only. Where actual data exists, it should be used.

Assumes that large animals are kept on property, along with feed storage for the animal, and no animal containment area (pasture) is irrigated.

1 ACRE LOT - HORSE



Front Yard Definition for Waterwise Landscaping



Appendix L Grantsville City Storm Drainage Design Guidelines

GRANTSVILLE CITY
STORM DRAINAGE DESIGN REQUIREMENTS

1. **Storm Water Collection System Requirements:**

   a) Design Storms:

   The storm water pipe collection system shall be designed to convey the 24-hour duration – Annual Exceedance Probability (AEP) 10-percent (10%) storm, 24-hour duration event if there is a continuous pathway to the Great Salt Lake. Collection systems for basin and street shall be sized for the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point.

   Note: The AEP 10-percent (10%) storm is equivalent to a 10-year recurrence interval storm and an AEP 1-percent (1%) storm is equivalent to a 100-year recurrence interval storm. The 10-year and 100-year terms are not used by Grantsville City to reduce confusion and accurately convey such storms have a 10-percent or 1-percent chance of occurring in any given year, rather than implying these events happen once every 10-years or 100-years.

   b) Storm Water Runoff into Street Encroachment Requirements:

   i. Flow from the AEP 10-percent (10%) storm shall not extend more than halfway into the travel lane adjacent to the curb and a minimum 12-foot wide travel lane shall be maintained for emergency vehicles. If there is a curb then total spread must be no more than 8-feet from the curb face.

   c) Easement and Access Requirements:

   i. Easement widths and access for drainage channels, detention/ retention basins, lots line swales, and public storm drainage lines shall be reviewed and approved by the City Engineer. Access easements shall be a minimum width of 15-feet.

   d) Acceptable Pipe Materials:

   i. Refer to the current City's preconstruction notes for acceptable pipe materials.

   e) Minimum Pipe Diameter and Slope:

   i. The minimum pipe diameter for any public storm water collection system pipe is 15-inches with a minimum slope of 0.50 percent. If pipe diameter and slope is below the minimum standards then approval from the City Engineer is required.

   f) Manhole Spacing:

   i. Minimum manhole spacing is 400-feet, unless otherwise approved by the City Engineer.

   g) Storm Drain Structure Drops:

   i. Where changes in pipe sizes occur in a manhole, the inlet pipe crown must match or be higher than the larger outlet pipe crown.

   h) Cover:

   i. Minimum cover is 18-inches or 6 inches below the pavement section whichever is greater, unless approved by City Engineer. Pipe cover must comply with pipe manufacturer's recommendations.

   i) Catch Basin Requirements:

   i. Catch basins will not be allowed on the radius of curves at intersections.

   ii. Flow through catch basins shall not be allowed unless designed as a combination box with manhole lid access. Locked gate access with keys for designate basin maintenance personnel and for City emergency access shall be provided.

   iii. A manufactured snout or similar oil/debris/water separator is required prior to a detention basin, retention basin, or any other discharges from a development into a public drainage. Sump depth in

catch basin with snout shall be sized as recommended by snout manufacturer.

iv. Catch basins shall be installed at maximum intervals of 400-feet where channelized flow is occurring.

j) Detention/Retention Basin Requirements:

i. Public, private, or HOA detention/retention basins shall have 6-foot tall (finish grade to top of sign) telespar, or City approved, post with the following signs:

   a. "Stormwater Basin" 12-inch x 18-inch Sign
   b. "No Trespassing" 12-inch x 18-inch Sign
   c. Each sign shall be RA Type I Engineering Grade Prismatic Reflective Sheeting on 0.080 aluminum.

ii. Public detention/retention basins with amenities shall have 6-foot tall (finish grade to top of sign) telespar, or City approved, post with the following signs:

   a. "No Dumping" 12-inch x 18-inch Sign
   b. "Stormwater Basin
      Designed to collect runoff from the local storm sewer system following either a rainfall or snowmelt event.
      Basins temporarily hold this stormwater, provides treatment to remove pollutants, and then slowly release the water back to our waterways.
      No swimming, use at your own risk." 18-inch x 24-inch Sign
   c. Each sign shall be RA Type I Engineering Grade Prismatic Reflective Sheeting on 0.080 aluminum.

iii. Storm water drainage areas need to include front yards and rear yards in the developments calculations if they do not include individual lots detention/ retention basins.

iv. Retention and detention basins shall completely infiltrate and drain within 72-hours from the beginning of a storm event for vector control. Infiltration tests shall be performed using the double ring infiltrometer test in accordance with ASTM D 3385 for all retention and detention basins. The test shall be completed at the elevation of the bottom of the basin where infiltration will occur. A factor of safety of two (2) shall be used for design and a minimum of two (2) tests shall be completed with a minimum of one (1) test per 10,000 square feet of infiltration area. These tests shall be submitted with drainage calculations to the City for review. If the retention or detention basin is constructed in gravel soils then a percolation test may be used to determine the infiltration rate. The infiltration rate shall be calculated as follows:

Infiltration Rate = (Percolation Rate) / (Reduction Factor)

Where the Reduction Factor is given by**:

$$R_f = \frac{2d_1 - \Delta d}{DIA} + 1$$

With:

d_1	=	Initial Water Depth (in.)
Δd	=	Average/Final Water Level Drop (in.)
DIA	=	Diameter of the Percolation Hole (in.)

*** The area Reduction Factor accounts for the exfiltration occurring through the sides of percolation hole. It assumes that the percolation rate is affected by the depth of water in the hole and that the percolating surface of the hole is in uniform soil. If there are significant problems with either of these assumptions then other adjustments may be necessary.*

v. Storm water dry wells, injections wells, or any underground storm water discharge structure is acceptable in the City, but shall comply with the Utah Department of Environmental Quality (UDEQ) Underground Injection Control (UIC) program requirements. Proof of an application pertaining to the development has been submitted under the UIC program shall be provided to the City for their records. Special consideration shall be given to water quality, groundwater depth, and other factors. Individual or single-family homes may be exempt from these requirements. Please contact the Utah Department of Environmental Quality - Water Quality for clarification. Developments may use percolation tests for underground systems which infiltrate in the horizontal and vertical planes.

vi. 1-foot freeboard minimum above the AEP 1-percent (1%) storm, 24-hour duration event when discharging water level through spillway is required. Spillway shall be reinforced with concrete per City Detail.

vii. Detention/retention basin minimum of top berm width shall be 3-feet.

viii. Maximum water depths shall be 30-inches with a maximum slope of 5:1 for small detention/retention basins serving single lots or less than 5-lots unless approved by the City Engineer. Large basins serving 5-lots or more shall have a maximum slope of 3:1 and, if deeper than 3-feet, shall be provided with ingress and egress at least 12-feet wide at less than 15% grade with a 15% grade all weather surface ramp into the basin.

ix. Vegetate basins with turf, if irrigated, or native seeded grass for maintenance purposes. If turf is installed, turf soil shall be free draining, not include clay soils, and not impact stormwater infiltration.

x. Rocks or gravel surfacing of detention/retention basins are not allowed without City approval.

xi. Detention/retention basins with amenities shall have accessible path to amenity which is a concrete sidewalk meeting ADA standard. Interior slope of detention/retention basin at ramp shall be between 8 Horizontal:1 Vertical to 12 Horizontal:1 Vertical slope.

xii. Detention/Retention basins with amenities shall have a sediment forebay and be able to pass the AEO 50-percent (50%) storm, 24-hour duration event through the basin without stormwater impacting amenities.

k) Manning's n Values:

i. n value for linings shall be determined per an approved Engineers Manual based on size and placement of materials. Calculations shall include the reference used for the n value for review by the City Engineer.

Manning's Roughness n for Open Channels			
Channel Type	Manning n		
	Minimum	Normal	Maximum
1. Lined or Constructed Channels			
a. Cement:			
1. Neat, surface	0.01	0.011	0.013
2. Mortar	0.011	0.013	0.015
b. Concrete:			
1. Trowel finish	0.011	0.013	0.015
2. Float finish	0.013	0.015	0.016

Channel Type	Manning n		
	Minimum	Normal	Maximum
3. Finished, with gravel on bottom	0.015	0.017	0.02
4. Unfinished	0.014	0.017	0.02
5. Gunite, good section	0.016	0.019	0.023
6. Gunite, wavy section	0.018	0.022	0.025
7. On good excavated rock	0.017	0.02	-
8. On irregular excavated rock	0.022	0.027	-
c. Concrete Bottom Float Finish with sides of:			
1. Dressed stone in mortar	0.015	0.017	0.02
2. Random stone in mortar	0.017	0.02	0.024
3. Cement rubble masonry, plastered	0.016	0.02	0.024
4. Cement rubble masonry	0.02	0.025	0.03
5. Dry rubble or riprap	0.02	0.03	0.035
d. Gravel Bottom with sides of:			
1. Formed concrete	0.017	0.02	0.025
2. Random stone mortar	0.02	0.023	0.026
3. Dry rubble or riprap	0.023	0.033	0.036
e. Brick:			
1. Glazed	0.011	0.013	0.015
2. In cement mortar	0.012	0.015	0.018
f. Masonry:			
1. Cemented rubble	0.017	0.025	0.03
2. Dry rubble	0.023	0.032	0.035
g. Dressed Ashlar / Stone Paving	0.013	0.015	0.017
h. Asphalt:			
1. Smooth	0.013	0.013	0.017
2. Rough	0.016	0.016	0.017
i. Vegetal Lining	0.03	-	0.5
j. Wood:			
1. Planed, untreated	0.01	0.012	0.014
2. Planed, creosoted	0.011	0.012	0.015
3. Unplanned	0.011	0.013	0.015
4. Plank with battens	0.012	0.015	0.018
5. Lined with roofing paper	0.01	0.014	0.017

Channel Type	Manning n		
	Minimum	Normal	Maximum
2. Excavated or Dredged Channels			
a. Earth, Straight, and Uniform:			
1. Clean, recently completed	0.016	0.018	0.02
2. Clean, after weathering	0.018	0.022	0.025
3. Gravel, uniform section, clean	0.022	0.025	0.03
4. With short grass, few weeds	0.022	0.027	0.033
b. Earth Winding and Sluggish:			
1. No vegetation	0.023	0.025	0.03
2. Grass, some weeds	0.025	0.03	0.033
3. Dense weeds or aquatic plants in deep channels	0.03	0.035	0.04
4. Earth bottom and rubble sides	0.028	0.03	0.035
5. Stony bottom and weedy banks	0.025	0.035	0.04
6. Cobble bottom and clean sides	0.03	0.04	0.05
c. Dragline-Excavated or Dredged:			
1. No vegetation	0.025	0.028	0.033
2. Light brush on banks	0.035	0.05	0.06
d. Rock Cuts:			
1.Smooth and Uniform	0.025	0.035	0.04
2. Jagged and irregular	0.035	0.04	0.05
e. Channels not Maintained, Weeds and Brush Uncut:			
1. Dense weeds, high as flow depth	0.05	0.08	0.12
2. Clean bottom, brush on sides	0.04	0.05	0.08
3. Same as above, highest stage of flow	0.045	0.07	0.11
4. Dense brush, high stage	0.08	0.1	0.14
3. Main Channels			
a. Clean, straight, full stage, no rifts or deep pools	0.025	0.03	0.033
b. Same as above, but more stones and weeds	0.03	0.035	0.04
c. Clean, winding, some pools and shoals	0.033	0.04	0.045
d. Same as above, but some weeds and stones	0.035	0.045	0.05
e. Same as above, lower stages, more ineffective	0.04	0.048	0.055
f. Same as (d) with more stones	0.045	0.05	0.06
g. Sluggish reaches, weedy, deep pools	0.05	0.07	0.08
h. Very weedy reaches, deep pools, or floodways with heavy stand of timber and underbrush	0.075	0.1	0.15

Channel Type	Manning n		
	Minimum	Normal	Maximum
4. Mountain Streams, No Vegetation in Channel, Banks usually Steep, Trees and Brush along Banks Submerged at High Stages			
a. Bottom: gravels, cobbles, and few boulders	0.03	0.04	0.05
b. Bottom: cobbles with large boulders	0.04	0.05	0.07

Source:

(1) ASCE, (1982), Gravity Sanitary Sewer Design and Construction, ASCE Manual of Practice No. 60, New York, NY.

(2) Chow, V.T., (1959), Open Channel Hydraulics, McGraw-Hill, New York, NY.

l) Riprap Sizing:

i. Channel Riprap sizing calculation shall utilize Federal Highway Administration (FHWA) Hydraulic Engineering Circular (HEC) No. 14, Current Edition, Chapter 10 or equivalent standard.

m) Erosion Control:

i. The developer shall provide a copy of their Fugitive Dust Mitigation Plan, Erosion Control Plans, SWPPP, Notice of Intent (NOI), and Notice of Termination (NOT) with the State if their construction project is greater than 1 acre. The SWPPP sign shall be posted on site and visible to adjacent public right-of-way.

2. **<u>Hydrology Requirements:</u>**

a) Rainfall Data:

i. NOAA Atlas 14 shall be used for rainfall in the City of Grantsville (see https://hdsc.nws.noaa.gov/hdsc/pfds_map_cont.html)

b) Design Storms:

i. To reduce post-development storm water runoff, developments must retain and treat the 80th percentile rainfall event. The 80th percentile rainfall event for Grantsville City is 0.50 inches. The Reese method, as shown below, shall be used to calculate the volumetric runoff coefficient used for determining the 80th percentile volume. For developments larger than 10 acres use the SCS Method to determine the 80th percentile volume.

a. Sedimentation basin shall be provided for first flush/80th percentile rainfall events in retention/detention basins and shall be designed to be easily accessed and maintained.

i. Method 1- Reese Method:

1. Comparing the imperviousness of 44 nationwide sites to their respective calculated volumetric runoff coefficient, a simple linear regression equation was created to estimate the volumetric runoff coefficient for small urban catchments. Land uses for these sites were classified as residential, mixed, commercial, industrial, and urban open and nonurban (Schueler, Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs, 1987). Outliers were removed from this dataset by Reese to derive the equation below. Removing outliers from the dataset reduces the impact of erroneous measurements (Reese, 2006). $RV=0.91i-0.0204$

Source: <u>A Guide to Low Impact Development within Utah.</u> Revised August 2020 by Michael Baker International.

ii. Retain/Detain the AEP 1-percent (1%) storm, 24-hour duration event for project site.

iii. Developments may detain the AEP 10-percent (10%) storm event, 24-hour duration if there is a

continuous pathway to the Great Salt Lake.

iv. For West Bank drainage areas, developed drainage may discharge at the following rates if there is a continuous path to the Great Salt Lake:

Table 1: Unit Discharge Requirement for West Bank Watersheds

24-hour Duration Storm Event	Watershed's Peak Unit Discharge (cfs/acre)	All Other Watersheds Peak Unit Discharge (cfs/acre)
10 years	0.003	0.05
100 years	0.01	0.15

Source: Table 17 in Section 5 from the Storm Water Management Study for Baker and Pope Watersheds dated *April 2015 by AQUA Engineering.*

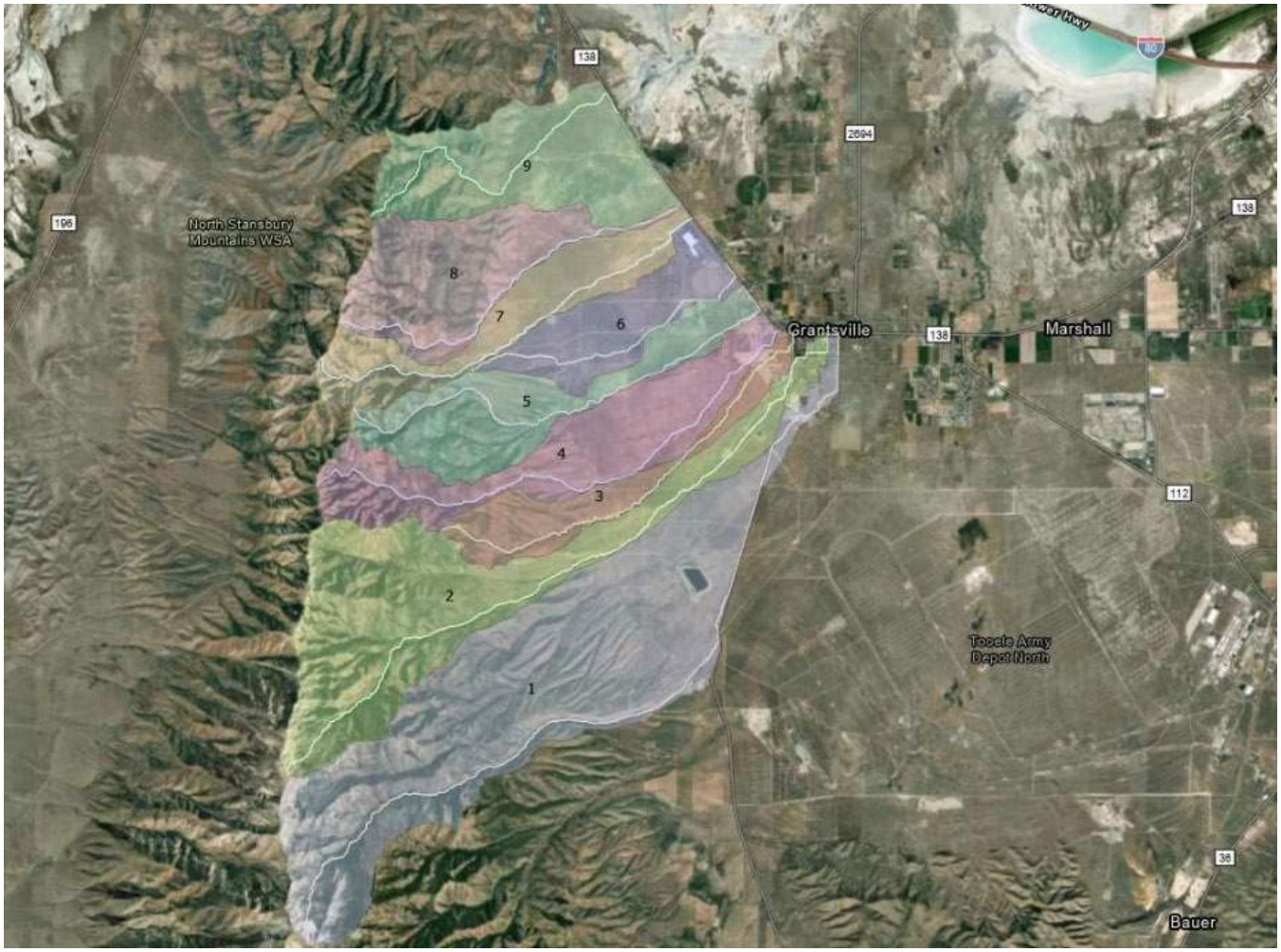
v. Refer to Table 2 and Figure 1 for a map of West Bank Watersheds.

Table 2: West Bank Sub-basin Number and Name

Subbasin	Subbasin Name
1	South Willow and Coal Pit Canyon
2	North Willow Canyon
3	White Rocks
4	Baker Canyon
5	Pope Canyon
6	West Canyon 1
7	West Canyon 2
8	Dry Canyon
9	Unnamed

Source: Grantsville West Bank Development Stormwater Master Plan Report by Jones & DeMille Engineering

Figure 1: Map of West Bank Watersheds



Source: Grantsville West Bank Development Stormwater Master Plan Report by Jones & DeMille Engineering

vi. The West Bank area consists of alluvial fans which are an accumulation of sediments fanning outwards from a concentrated source of sediments. Alluvial fans are typically formed where flow emerges from a confined channel and is free to spread and infiltrate. Due to these sediments, deposits in an alluvial fan can cause the defined channels to shift courses which is why it is important to construct sedimentation basins at the top of the alluvial fan and reinforce and define channels throughout the fan to discharge safely through existing and proposed development avoiding riverine flooding. Recently the West Bank Area has been identified as an alluvial fan Zone A based on a Base Level Engineering (BLE) analysis. This area is currently being studied by the State in more detail, but the results are currently not available. Channelization through the alluvial fan and sedimentation basins above the alluvial fan are improvements to allow storm water to flow through developments or mitigate alluvial fan hazards. Mitigation measures within the alluvial fan will need to be constructed to remove hazards either regionally or localized. Developers should coordinate with the State and FEMA MT-2 team (LOMR reviewers) along with the City and County to work through development in the alluvial fan.

3. **Drainage Calculations or Report Requirements:**
   a) If discharge will be above the allowed discharge per area rates shown on Table 1 then a pre and post development hydrologic analysis will be required showing flows will not cause a negative affect downstream. The Rational Method (Q=CiA) may be used in computations for the rate of runoff for urban and small watershed 100 acres or less.
      i. Q = peak rate of runoff, cubic feet per second
      ii. C = runoff coefficient
      iii. i= average rainfall intensity, inches per hour
   b) The SCS method, SCS TR-55 "Urban Hydrology for Small Watershed", HEC-1/HEC-HMS, or other methods shall be used for larger watersheds.
   c) Table 2 shall be used for runoff coefficients unless approved by the City Engineer.

Table 2: Runoff Coefficients

Land Use Type	Runoff Coefficients "C"
Rural	0.25-0.35
Single Family Residential	0.45-0.60
Multi-Residential	0.60-0.70
Neighborhood Commercial	0.85
Community Commercial	0.85
Tourist Commercial	0.85
Office	0.85
Manufacturing	0.85-0.90
Distribution and Warehousing	0.85-0.90
Public Facility	0.50-0.85
Pavement and Concrete Surfaces	0.90-0.95
Park	0.25
Open Space (0-5% grade – vegetated)	0.20-.030
Open Space (0-5% grade – no vegetation)	0.30-0.40
Open Space (5-15% grade – vegetated or unvegetated)	0.40-0.50
Open Space (Over 15% grade – sparsely vegetated, rock or clay soils	0.40-0.60

      i. Weighted values of the runoff coefficient "C" may be required where land use is most accurately described as a mixture of the land uses listed above or where it is a mixture of pervious and impervious areas and not represented by a single entry in Table 2.
   d) Intensity-Duration-Frequency curves for NOAA Atlas 14 shall be used for determining the applicable intensity. (see https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=ut)
   e) Definition for Time of Concentration
      i. $t_c = 10$ or $\frac{L}{V \times 60}$ whichever is greater

         t_c = initial time of concentration at inlet, minutes
         L = Flow line length from uppermost point of watershed to the discharge point, feet
         V = channel or overland velocity, feet per second

         * Velocity shall be calculated using NRCS Urban Hydrology for Small Watersheds, current edition, or equivalent standards.

ii. Given the time of concentration at a design point, the time of concentration at the next design point is determined by adding travel time, expressed as:

iii. $t = \frac{L}{V \times 60}$

t = travel time, minutes
L = length of channel or conduit between design points, feet
V = channel or conduit, feet per second

4. **Submittal Requirements for Drainage Drawings and Report**

a) **Project Drawings:**
   i. Hydraulic grade line (HGL) profiles, (see sample sheet).
   ii. Location and size of all existing and proposed structures.
   iii. Proposed materials.
   iv. Pertinent elevations and slopes.
   v. Pipe capacity, and the AEP 10-percent (10%) storm, and the AEP 1-percent (1%) storm, 24-hour flows, and velocities.

b) **Drainage Report or Calculations: (Shown on Drawings)** – The following standards apply to the Drainage Report or Calculations (public and private).
   1. **Title Page:**
      a. Project name.
      b. Preparer's name, firm, date.
      c. Professional engineer's seal of preparer and signature.
   2. **Introduction:**
      a. **Site location:**
         i. Street location, parcel number(s), and section reference.
         ii. Adjacent developments.
      b. **Site Description:**
         i. Topography, ground cover, etc.
         ii. Existing drainage facilities, major drainage facilities, flood hazard areas, irrigation ditches, other site conditions that must be considered.
      c. Proposed project description.
      d. Other previous studies relevant to site.
   3. Historic drainage system (discuss the following):
      a. Major basins and offsite contributions:
         i. Relationship to major drainage facilities.
         ii. Major basin drainage characteristics (topography, runoff, cover, use, erosion, etc.).
      b. Sub-basin and site drainage (i and ii may be tabulated on map):
         i. Minor AEP 10-percent (10%) storm and major AEP 1-percent (1%) storm, 24-hour storm flows for each sub-basin affecting the site.
         ii. Existing drainage patterns: channelized or overland flow, point of discharge, etc.
         iii. Effect of historic flows on adjacent properties.
   4. **Proposed (developed) drainage system:** (discuss each of the following)
      a. **Criteria:**
         i. Size of major basins, tributary sub-basins, and other offsite contributions.
         ii. Hydrologic method to be used for analysis (Rational, SCS, etc.).

iii. Design storm intensities (minor AEP 10-percent (10%) storm, major the AEP 1-percent (1%) storm, 24-hour duration event,) or as required by the City Engineer.

b. **Runoff And Other Contributions:**
   i. Historic storm flow rates and paths.
   ii. Developed storm flow rates and paths for minor and major storms.
   iii. Contributions from open joined system.
   iv. Demonstrate flows are routed to a public system with adequate capacity when/ if available.

c. **Piping:**
   i. Demonstrate the capacity of the storm drain system, including all downstream improvements.
   ii. Verify storm flows and capacity from inlets to ultimate outlets of the drainage system.

d. **Detention/Retention System Including:**
   i. Volume required to hold the AEP 1-percent (1%) storm, 24-hour storm with 1-foot freeboard minimum above the AEP 1-percent (1%) storm, 24-hour event flowing water level through spillway.
   ii. Show the overflow location for volumes over the AEP1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point..
   iii. Passage of storms exceeding the AEP 10-percent (10%) storm up to the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point..
   iv. Engineer to provide detailed description of downstream constraints (or none) and design calculations on how to mitigate the problem.
   v. Need for detention/retention shall be clearly identified in the preliminary or schematic report and the necessary detention/retention area shall be identified on preliminary plans.

e. **Streets:** (This information may be shown on the plans.)
   i. Depth and velocity of flow for major and minor storms. Demonstrate a 12-foot clear lane exists for emergency vehicles at all times.
   ii. Drainage system.

f. **Open Channel Flow:** (This information may be shown on the plans.)
   i. Type.
   ii. Depth and velocity.
   iii. Freeboard.
   iv. HEC-RAS analysis when required by the City Engineer.

g. Storm drains and culverts (Show all data on plans.)

5. **<u>Areas within flood hazard zone when applicable:</u>**
   a) Impacts.
   b) Protection.
   c) Compliance with Federal Emergency Management Administration (FEMA) requirements, RMC 18.12 "Flood Hazard Areas", and critical flood zones. Show existing and proposed CLOMR and LOMR information, and show status of submittal and review process.
   d) Provide elevation certificate for occupied structures within current BLE floodway determination. Coordinate with Utah Flood Hazards and Floodplain management for 2-D HEC-RAS model for BFE.
   e) Comply with Grantsville City Code, Chapter 5-3, Flood Damage Prevention Regulations.

6. **<u>Conclusions:</u>**
   a) Benefits.
   b) Adverse effects with solutions for mitigation of impacts.

7. **Appendices:**

a) Hydrologic and hydraulic computations:

i. List and explain basin assumptions and input factors used.

1) Tabularized and/or discussed as necessary.
2) Indicate any sensitivity analysis performed.
3) Include source tables and references for parameters, such as soil groups, SCS curve numbers, C values, n values, etc.

ii. Historic Runoff:

1) Off-site.
2) On-site.

iii. Developed Runoff:

1) Off-site – Flows that have been concentrated into one area from the project shall not flow higher than the project flow in that area.
2) On-site.

iv. Detention for up to the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point:

v. Hydraulic Computations:

1) Hydraulic grade line (HGL) minor storm.
2) Hydraulic grade line (HGL) major storm.
3) Inlet/outlet calculations.

vi. Rip-rap sizing:

b) Drainage Plan:

i. Site Drainage Plan:

1) Show the existing and proposed contours for the property.
2) The site drainage plan may be at the same scale as the grading plan but must meet legibility requirements for scanned documents. Show all sub-drainage areas per catch basin or channel and tabulate existing and proposed drainage showing length, calculated velocity and time of concentration on various runs of grass, gutters, etc., cumulative time of concentration, average rainfall intensity, area, runoff coefficient (weighted if necessary), and peak flows for the AEP 10-percent (10%) storm and the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point.
3) All inlets and manholes shall be labeled to correspond to tabular numbering system used in drainage report. Pipe sizes, grades, velocities, peak flows and hydraulic grade lines shall be shown for all parts of the system in a tabular form on the plans.
4) Both location plan (overall drainage) and sub-drainage plan shall be signed and sealed by a Utah Registered Civil Engineer and shall be included in the construction plans for the subdivision/development.
5) On grading plans show peak flows for the AEP 10-percent (10%) storm and the AEP 10-percent (10%) storm at inlets and other sub-basin points of concentration, at discharge points and in channels. Show peak flows entering and leaving the site; trace path leaving site to nearest major drainage facility without adverse impact to downstream owners.
6) On plan and profile sheets, show peak flows for the AEP 10-percent (10%) storm and the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point at all inlets and in pipes as per above, and in pipes show slope, velocity, and capacity, and hydraulic grade line if surcharged.
7) If the lot cannot drain the yard to the street, then a basin shall be located in the rear yard to

prevent storm runoff from draining to the neighbors from the back of the property.

ii. Benchmarks – To be shown on plans with benchmarks to match the existing state approved benchmarks.

iii. Existing and proposed property lines.

iv. Existing and proposed drainage easements.

v. Street names, grades, widths and rights-of-way or easements.

vi. Routing and peak flow rate or volume at the upstream and downstream ends of the site and at various critical points on-site for both minor and major runoff. Depth and hydrograph for both storms for all sub basins.

vii. Street cross sections showing the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point flood level, no more than one-half way into the outside travel lane for emergency vehicle clear lane.

viii. Existing and proposed major drainage facilities.

ix. Open channel flow in major channels shall be provided with the following information on plans:

1) Channel and hydraulic grade line (HGL) profiles.
2) Cross sections and required rights-of-way or easements at the AEP 1-percent (1%) storm, 24-hour duration event intervals or changes from the typical section.
3) Location and size of all existing and proposed structures.
4) Channel section and lining details.
5) Freeboard for the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point.
6) Channel capacity and storm flows, the AEP 10-percent (10%) storm and the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point flows and velocities.

Appendix M Storm Drainage Cost Estimates

Owner: Granstville City
Project: West Bank Stormwater Master Plan
Project #: 2205-048
PM: Matt Laurendeau
Date: 1/4/2024

Jones & DeMille Engineering

1-800-748-5275
www.jonesanddemille.com

Alternative 4

ENGINEER'S OPINION OF PROBABLE COST					
Item No.	**Item Description**	**Unit**	**Estimated Quantity**	**Unit Price**	**Price**
		Construction			
1	Mobilization and Survey	LS	1	$ 7,500,000	$ 7,500,000
2	Channel Excavation	CY	530,000	$ 10	$ 5,300,000
3	Channel Riprap (9" D50 1.5' thick)	CY	225,000	$ 90	$ 20,250,000
4	Road Crossings	LS	1	$ 2,000,000	$ 2,000,000
5	Settlement Canyon Debris Basin	LS	1	$ 18,517,000	$ 18,517,000
6	Army Creek Debris Basin	LS	1	$ 21,415,000	$ 21,415,000
7	South Willow Debris Basin	LS	1	$ 4,616,000	$ 4,616,000
8	North Willow Debris Basin	LS	1	$ 4,445,000	$ 4,445,000
9	North Willow Div Debris Basin	LS	1	$ 1,357,000	$ 1,357,000
10	Baker Canyon Debris Basin	LS	1	$ 1,428,000	$ 1,428,000
11	Pope Canyon Debris Basin	LS	1	$ 1,428,000	$ 1,428,000
12	Dry Canyon Debris Basin	LS	1	$ 2,856,000	$ 2,856,000
13	Acquire Additional Channel ROW	Acre	340	$ 10,000	$ 3,400,000
14	General Site Improvements	LS	1	$ 1,000,000	$ 1,000,000
				Construction Subtotal =	**$ 94,512,000**
		Professional Services and Permitting			
1	Engineering Design	LS	1	$ 4,726,000	$ 4,726,000
2	Construction Management	LS	1	$ 5,671,000	$ 5,671,000
3	Environmental Permitting	LS	1	$ 500,000	$ 500,000
				Professional Services and Permitting Subtotal =	**$ 10,897,000**
		Contingency			
1	Construction Contingency (30%)	LS	1	$ 28,354,000	$ 28,354,000
2	Uncosted Items (10)%)	LS	1	$ 9,452,000	$ 9,452,000
				Contingencies Subtotal =	**$ 37,806,000**
				Total Probable Construction Cost	**$ 143,215,000**

Figure 16. Stormwater Alternative 4 Cost Estimate

CFPs, IFFPs, and IFAs 2026 Amendments

Drinking Water, Public Safety, Parks, Wastewater,
Water Rights Acquisition, and Storm Drainage

May 6, 2026
City Council Meeting

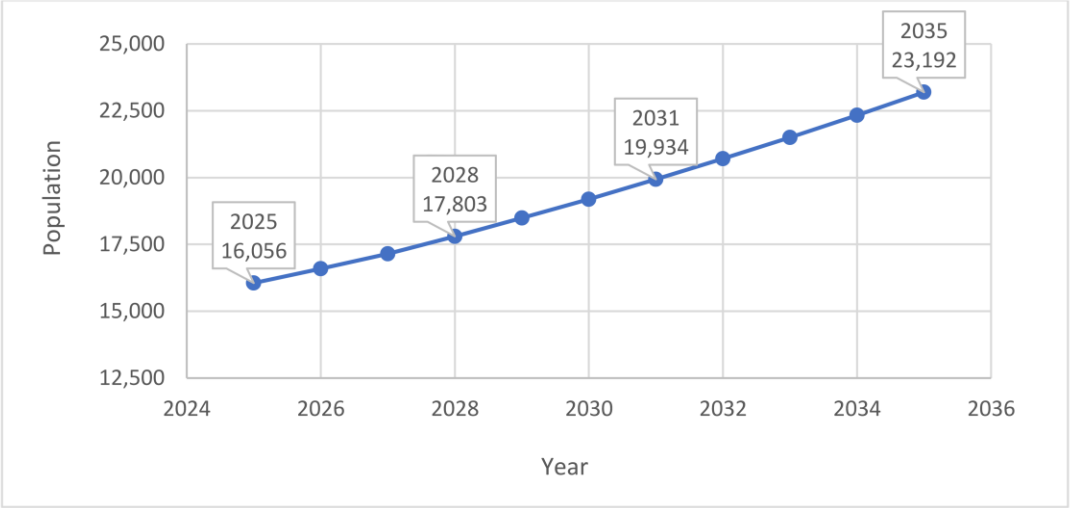
GRANTSVILLE
INCORPORATED 1867

Introduction and Process

- Ensign is amending the Capital Facility Plans (CFPs), Impact Fee Facility Plans (IFFPs), and Impact Fee Analyzes (IFAs) for 2026 excluding **Transportation Only**.
    - Last amendment was in May 2025 to all plans except for Parks and Transportation which were amended in January 2026.
    - Impact fees help fund expansion of public facilities necessary to accommodate new growth.
    - Plans are amended yearly.
    - Have met with City Staff to discuss projects and incorporated City Staff comments in amendments.
    - It takes 90 days before amended impact fees go into effect once City Council approves.
    - Developer funded projects are not impact fee eligible.
- Demographics were updated with 2026 Sewer Rate Study and utilized in CFP, IFFP, and IFAs. The actual growth rate in 2025 was 2.93% and a projected growth rate of 3.5% in 2026 and 2027 is utilized with a 4.0% growth rate from 2028 to 2035 which is the end of the 10-year planning period. For the past 26 years, Grantsville's average growth rate is approximately between 4.5% to 5.0% with spikes of approximately 10% during COVID years.
- Determined capital improvement projects using demographics and the level of service.
- Determined non-capital improvement project costs (i.e. interest expense, existing capital assets, professional expenses, future debt service, etc.).

Demographics

- Population Projection in 10-year Planning Period

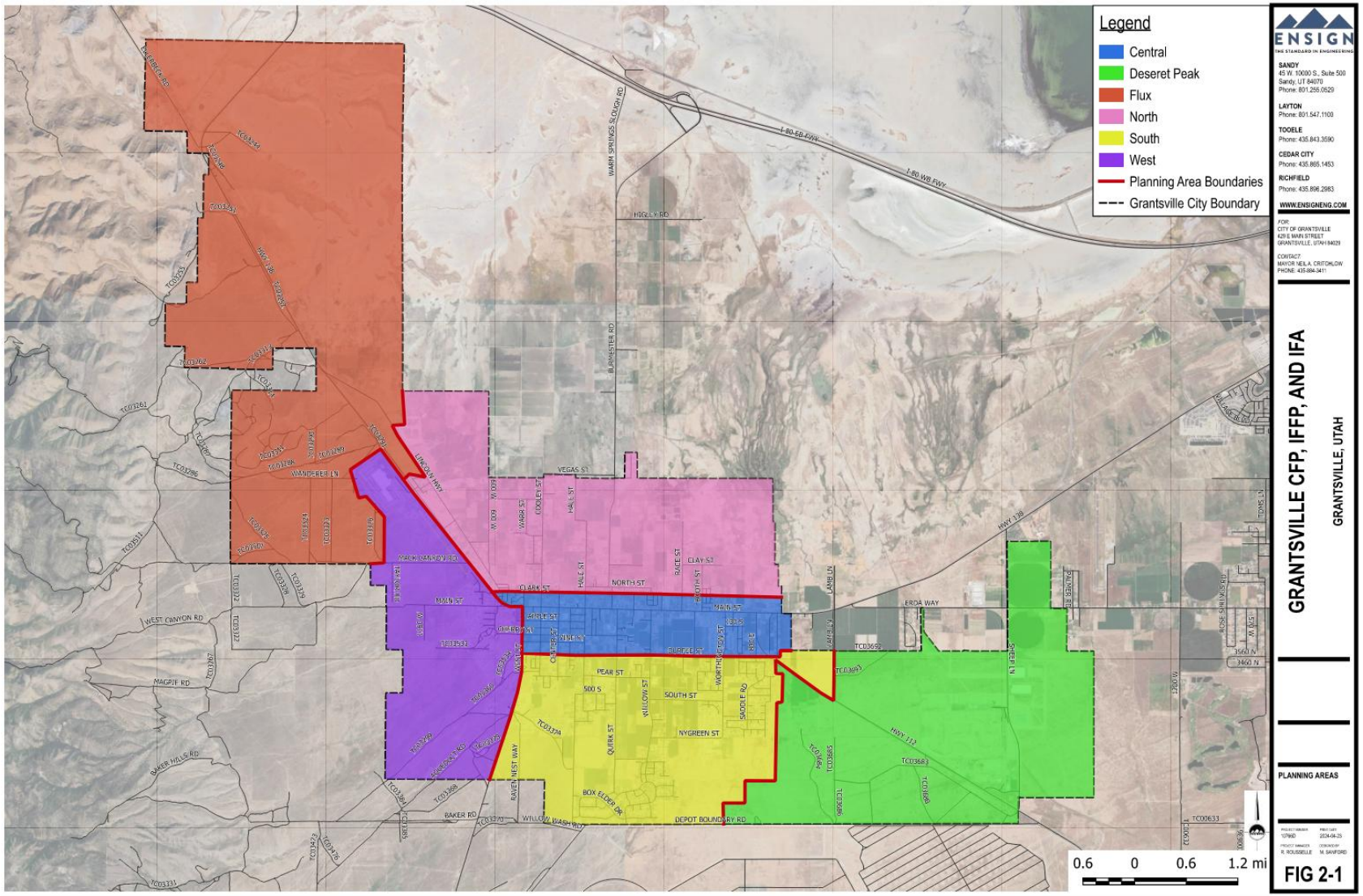


- Current Service Connections and ERCs

Service Connection Type	Service Connections	Units	ERC / Unit	ERCs
Single Family	4,609	4,618	1.00	4,618
Multi-Unit	46	290	0.52	151
Trailer	8	208	1.12	233
Commercial	110	155	7.34	1,138
Church	10	11	4.57	50
School	7	12	5.09	61
Construction Water	20	20	6.81	136
City Rate	5	33	10.59	349
Total	**4,815**	**5,347**		**6,736**

Demographics

- Planning Sub-Areas



Demographics

- Projected ERCs and Growth Distribution in 10-year Planning Period

	Year:	2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035	
Projected Population:		**16,056**		**16,592**		**17,148**		**17,803**		**18,486**		**19,193**		**19,934**		**20,705**		**21,501**		**22,332**		**23,192**	
Residential Growth Rate:		**2.93%**		**3.5%**		**3.5%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**		**4.0%**	
Commercial Growth Rate:		**0.73%**		**0.88%**		**0.88%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**		**1.00%**	
Service Connection Type	**ERC / Unit**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**	**Units**	**ERCs**
Single Family	1.00	4,618	4,618	4,780	4,780	4,947	4,947	5,145	5,145	5,351	5,351	5,565	5,565	5,788	5,788	6,020	6,020	6,261	6,261	6,511	6,511	6,771	6,771
Multi-Unit	0.52	290	151	300	156	311	162	323	168	336	175	349	181	363	189	378	197	393	204	409	213	425	221
Trailer [1]	1.12	208	233	208	233	208	233	208	233	208	233	208	233	208	233	208	233	208	233	208	233	208	233
Commercial	7.34	155	1,138	156	1,145	157	1,152	159	1,167	161	1,182	163	1,196	165	1,211	167	1,226	169	1,240	171	1,255	173	1,270
Church [2]	4.57	11	50	11	50	11	50	12	55	12	55	13	59	13	59	14	64	14	64	15	69	15	69
School [3]	5.09	12	61	12	61	12	61	13	66	13	66	14	71	14	71	15	76	16	81	16	81	17	87
Construction Water	6.81	20	136	21	143	22	150	23	157	24	163	25	170	26	177	27	184	28	191	29	197	30	204
City Rate [4]	10.59	33	349	35	371	36	381	37	392	37	392	39	413	39	413	40	424	41	434	42	445	42	445
Total		**5,347**	**6,736**	**5,523**	**6,939**	**5,704**	**7,136**	**5,920**	**7,383**	**6,142**	**7,617**	**6,376**	**7,888**	**6,616**	**8,141**	**6,869**	**8,424**	**7,130**	**8,708**	**7,401**	**9,004**	**7,681**	**9,300**
Increase from 2025		-	-	*176*	*203*	*357*	*400*	*573*	*647*	*795*	*881*	*1,029*	*1,152*	*1,269*	*1,405*	*1,522*	*1,688*	*1,783*	*1,972*	*2,054*	*2,268*	*2,334*	*2,564*

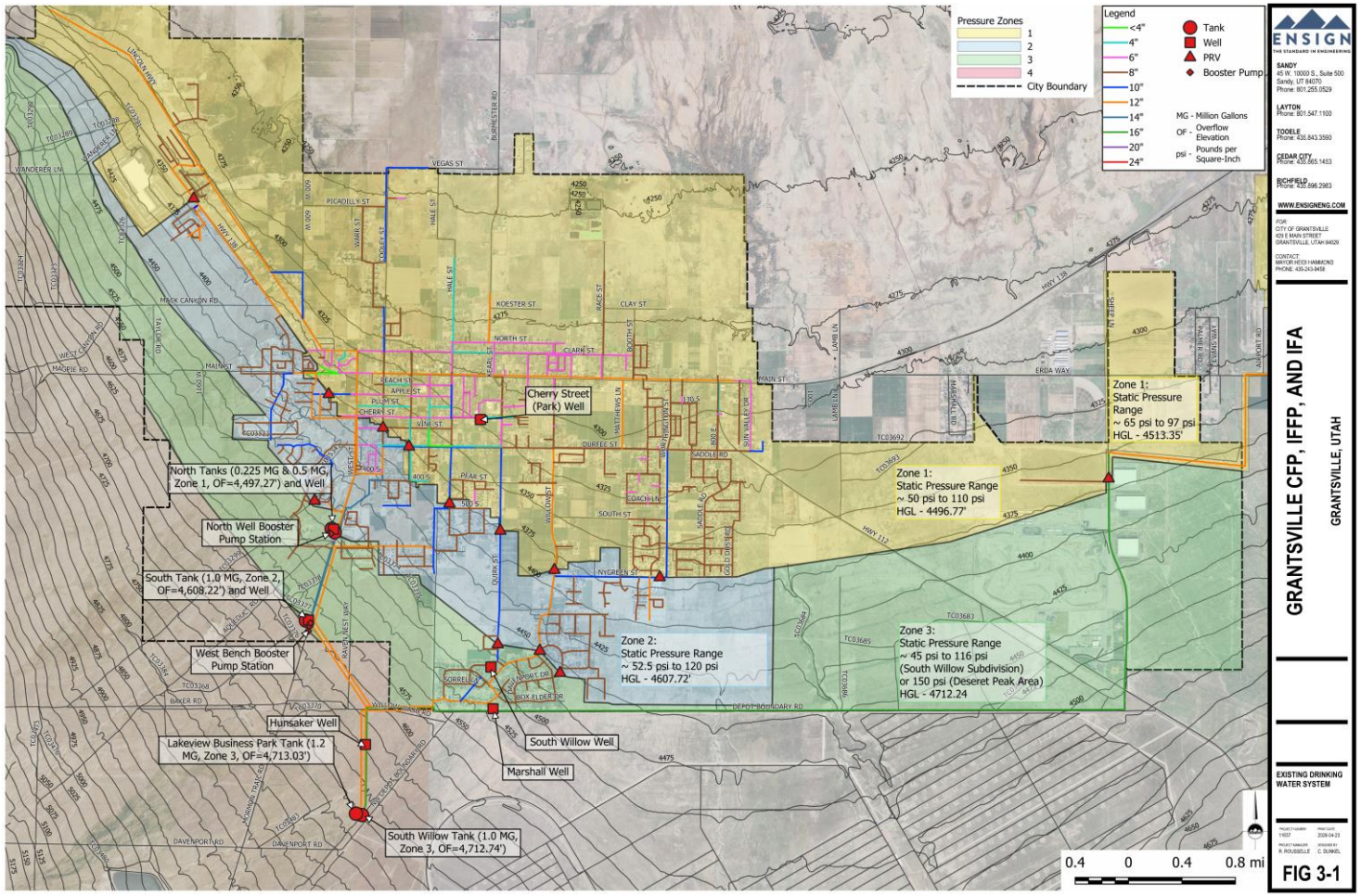
[1.1] Trailer units are not expected to increase.
[2] Church growth rate is 1 church per 1,480 population.
[3] School growth rate is 1 school per 1,360 population.
[4] City Rate growth rate is based on anticipated City projects.

Drinking Water (Existing)

- Level of Service
  - **Unit Average Day Demand = 807 gpd/ERC (0.618 ac-ft/year/ERC)**
    - Indoor Demand = 195 gpd/ERC (0.218 ac-ft/year/ERC)
    - Outdoor Demand = 612 gpd/ERC (0.400 ac-ft/year/ERC)
  - **Unit Peak Day Demand = 1,416 gpd/ERC (0.983 gpm/ERC)**
    - Indoor Demand = 275 gpd/ERC (0.191 gpm/ERC)
    - Outdoor Demand = 1,141 gpd/ERC (0.792 gpm/ERC)
  - **Peak Instantaneous Demand:**
    - Indoor Demand = $10.8*(ERCs)^{0.64}$ gpm/ERC
    - Outdoor Demand = 1.58 gpm/ERC
  - **Fire Flow:**
    - Industrial/Commercial Buildings = 2,050 gpm for 4 hours (492,000 gallons)
    - Residential = 1,500 for 2 hours

Drinking Water System Capacity Requirements:

- **Sources:**
  - Supply Peak Day Demand
- **Storage:**
  - Storage for Average Day Demand plus Fire Flow (Industrial/Commercial Buildings Fire Flow)
- **Distribution:**
  - Per UAC R309-105-9, distribution systems should maintain a minimum pressure at all points in the system during;
    - Peak Day Demand plus Fire Flow - 20 psi
    - Peak Instantaneous Demand – 30 psi
    - Peak Day Demand – 40 psi
  - Max Velocity Requirements:
    - Peak Day and Peak Instantaneous Demand - 5 fps
    - Peak Day Demand plus Fire Flow – 10 fps



Drinking Water (Proposed)

- Capital Improvement Projects and Impact Fee Eligible Costs

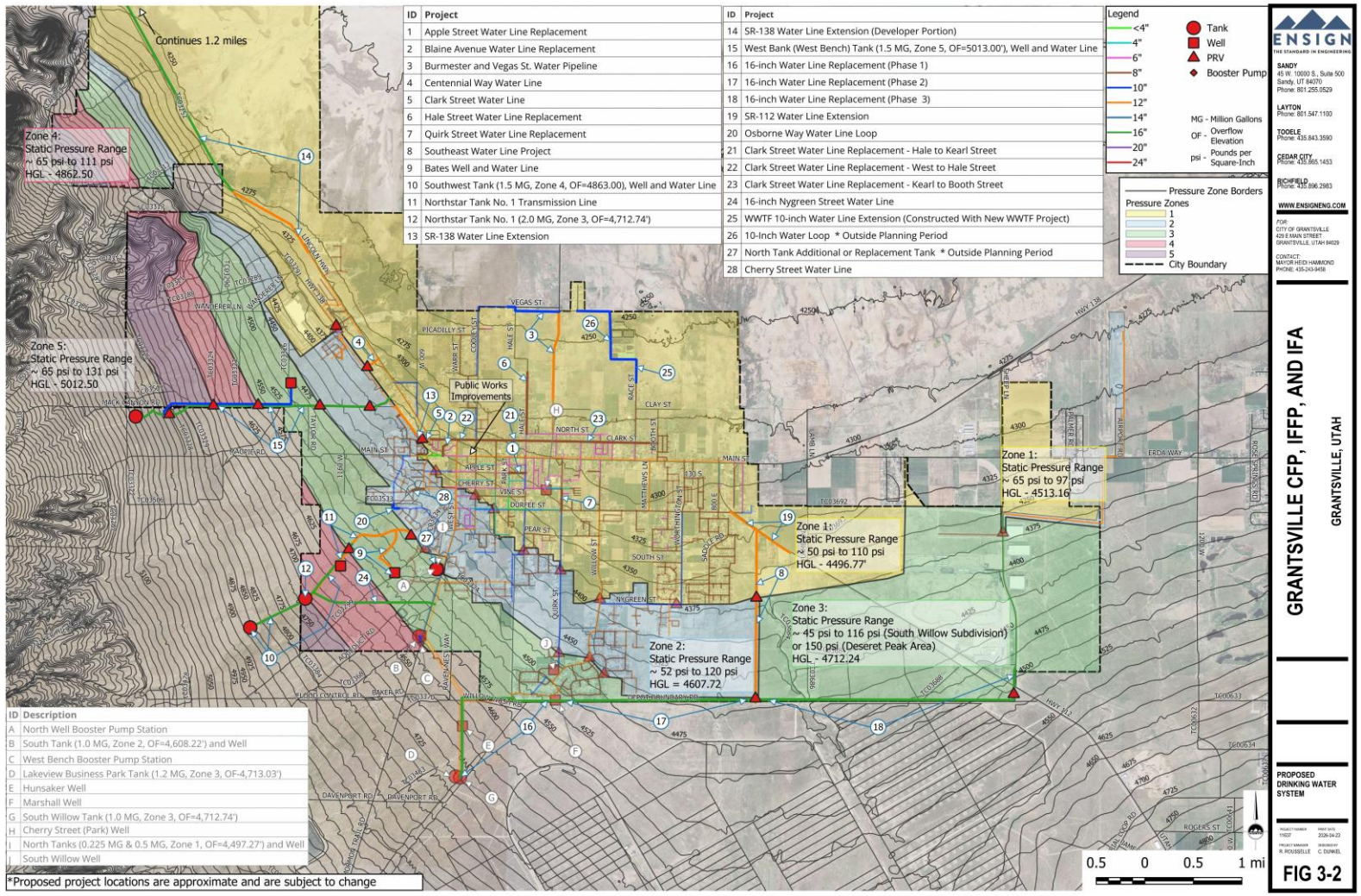
Project	Construction Year	Current Year (2025) Cost Estimate	Construction Year Cost Estimate	Proportionate Share	Impact Fee Eligible Cost
Bates Well	2027	$3,041,918.77	$3,258,579.43	0% [2]	$0.00
West Bank Well	2027	$3,518,067.73	$3,768,642.10	0% [2]	$0.00
Southwest Well	2031	$2,979,952.08	$3,663,121.97	0%	$0.00
Northstar Tank No. 1	2026	$3,387,223.88	$3,505,776.72	0.00%	$0.00
West Bank Tank	2027	$4,898,123.85	$5,246,992.72	0% [2]	$0.00
Southwest Tank	2031	$3,825,690.00	$4,702,749.81	0% [2]	$0.00
Osborne Way Water Line Loop	2026	$76,356.25	$79,028.72	27.6%	$21,788.13
SR-138 Water Line Extension (Developer Portion)	2026	$6,272,971.05	$6,492,525.04	0% [2]	$0.00
Northstar Tank No. 1 Transmission Line	2026	$2,504,135.45	$2,591,780.19	0% [2]	$0.00
SR-138 Water Line Extension	2027	$566,221.70	$606,550.84	27.6%	$167,225.41
Generator	2027	$269,200.00	$288,373.77	27.6%	$79,504.34
SR-112 Water Line Extension	2027	$540,168.75	$578,642.27	0% [2]	$0.00
Southeast Water Line Project	2028	$1,507,959.92	$1,671,902.12	0% [2]	$0.00
Clark Street Water Line Project	2029	$480,299.94	$551,155.23	27.6%	$151,952.90
Burmester and Vegas Street Water Pipeline Project	2031	$973,445.29	$1,196,612.81	27.6%	$329,904.86
Centennial Way Water Line Project	2035	$357,093.75	$503,716.00	27.6%	$138,873.96
Public Works Improvements	2035	$1,318,982.50 [1]	$1,860,555.08	27.6%	$512,953.03
Hale Street Water Line Replacement	2029	$878,172.10	$1,007,722.68	27.6%	$277,828.06
Total		**$37,395,983.01**	**$41,574,427.50**		**$1,680,030.71**

[1] *The cost shown for the Public Works Improvements project is half of the total cost estimate because this project cost will be split evenly between the wastewater and drinking water utilities.*

[2] *The proportionate share is 0% because the project is expected be constructed by developers.*

Drinking Water (Proposed)

- Capital Improvement Projects Figure



ID	Project
1	Apple Street Water Line Replacement
2	Blaine Avenue Water Line Replacement
3	Burmester and Vegas St. Water Pipeline
4	Centennial Way Water Line
5	Clark Street Water Line
6	Hale Street Water Line Replacement
7	Quirk Street Water Line Replacement
8	Southeast Water Line Project
9	Bates Well and Water Line
10	Southwest Tank (1.5 MG, Zone 4, OF=4863.00), Well and Water Line
11	Northstar Tank No. 1 Transmission Line
12	Northstar Tank No. 1 (2.0 MG, Zone 3, OF=4,712.74')
13	SR-138 Water Line Extension
14	SR-138 Water Line Extension (Developer Portion)
15	West Bank (West Bench) Tank (1.5 MG, Zone 5, OF=5013.00'), Well and Water Line
16	16-inch Water Line Replacement (Phase 1)
17	16-inch Water Line Replacement (Phase 2)
18	16-inch Water Line Replacement (Phase 3)
19	SR-112 Water Line Extension
20	Osborne Way Water Line Loop
21	Clark Street Water Line Replacement - Hale to Kearl Street
22	Clark Street Water Line Replacement - West to Hale Street
23	Clark Street Water Line Replacement - Kearl to Booth Street
24	16-inch Nygreen Street Water Line
25	WWTF 10-inch Water Line Extension (Constructed With New WWTF Project)
26	10-Inch Water Loop * Outside Planning Period
27	North Tank Additional or Replacement Tank * Outside Planning Period
28	Cherry Street Water Line

ID	Description
A	North Well Booster Pump Station
B	South Tank (1.0 MG, Zone 2, OF=4,608.22') and Well
C	West Bench Booster Pump Station
D	Lakeview Business Park Tank (1.2 MG, Zone 3, OF-4,713.03')
E	Hunsaker Well
F	Marshall Well
G	South Willow Tank (1.0 MG, Zone 3, OF=4,712.74')
H	Cherry Street (Park) Well
I	North Tanks (0.225 MG & 0.5 MG, Zone 1, OF=4,497.27') and Well
J	South Willow Well

Drinking Water Impact Fees

- Impact Fees
  - Existing Impact Fees

Water Meter Size (inches)	Maximum Flow Rate (gpm)	ERCs	Impact Fee
3/4	25 [1]	1	$2,497.04
1	40 [1]	1.6	$3,995.27
1 1/2	50 [1]	2	$4,994.08
2	100 [1]	4	$9,988.16
3	200 [2]	8	$19,976.33
4	400 [2]	16	$39,952.65
6	800 [2]	32	$79,905.30
8	1,000 [2]	40	$99,881.63
Non-Residential Development Indoor			$25.46 per fixture unit
Non-Residential Development Outdoor			$15,780.55 per irrigated acre

[1] *From AWWA M6 Table 5-3 Displacement Meters.*
[2] *From AWWA M6 Table 5-3 Electromagnetic and Ultrasonic Meter Type 1.*

  - Proposed Maximum Allowable Impact Fees

Water Meter Size (inches)	Maximum Flow Rate (gpm)	ERCs	Impact Fee
3/4	25 [1]	1	$2,841.56
1	40 [1]	1.6	$4,546.49
1 1/2	50 [1]	2	$5,683.11
2	100 [1]	4	$11,366.22
3	200 [2]	8	$22,732.45
4	400 [2]	16	$45,464.89
6	800 [2]	32	$90,929.79
8	1,000 [2]	40	$113,662.24
Non-Residential Development Indoor			$28.97 per fixture unit
Non-Residential Development Outdoor			$17,957.79 per irrigated acre

[1] *From AWWA M6 Table 5-3 Displacement Meters.*
[2] *From AWWA M6 Table 5-3 Electromagnetic and Ultrasonic Meter Type 1.*

Public Safety

- Level of Service

Department	Staff Level of Service	Facility Level of Service
Police	1.87 staff per 1,000 population [1]	232.1 sq ft building area per staff member
Fire	3.14 firefighters per 1,000 population	0.0565 fire stations per 1,000 population
Animal Control	0.156 officers per 1,000 population	90.3 sq ft building area per 1,000 population

[1] *Police staff LOS does not include animal control officers, crossing guards, or victim advocate volunteers.*

Public Safety

- Capital Improvement Projects

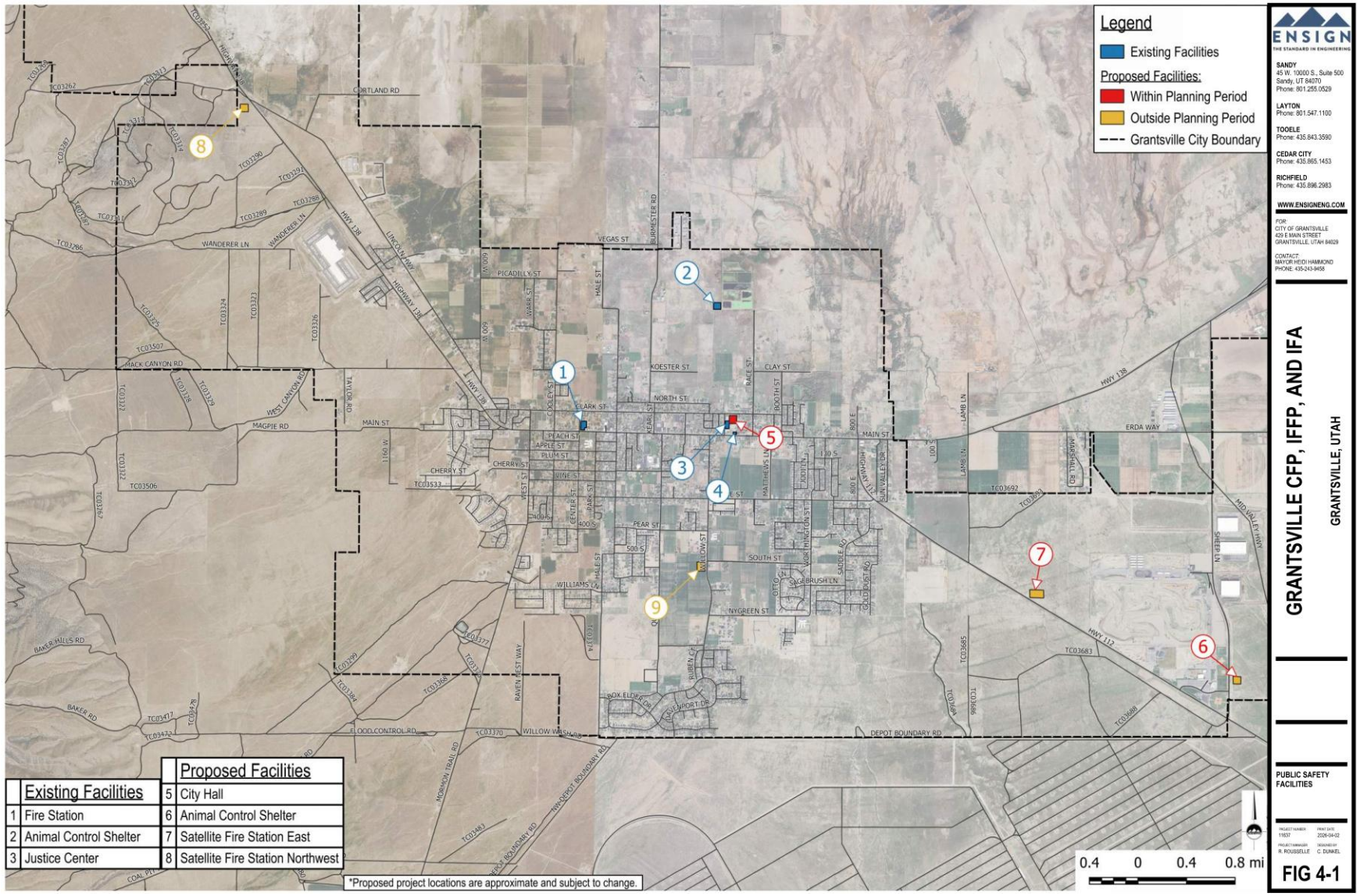
Project	Building Area (sq ft)	Construction Priority		Current Year (2025) Cost Estimate
		Begin Planning	Completion	
Animal Control Shelter	4,500	2025	2033	$1,567,581.40 [1]
Justice Center Renovations [2]	N/A	2028	2029	$19,580.00 [1]
Justice Center Police Expansion	4,497	2033	2034	$1,246,608.00 [1]
New City Hall Building	20,000	2032	2034	$9,681,145.54 [1]
Existing City Hall Renovations	N/A	2033	2034	$2,425,500.00 [1]
Aerial Truck Replacement	N/A	2026	2027	$1,500,000.00 [1]
Future Satellite Fire Station [3]	TBD	TBD	TBD	$3,340,409.60 [1]
Future Pumper Truck [3]	TBD	TBD	TBD	$800,000.00 [1]
Future Brush Truck [3]	TBD	TBD	TBD	$170,000.00 [1]
Future Aerial Truck [3]	TBD	TBD	TBD	$1,500,000.00 [1]
Total				**$22,250,824.54**

[1] Cost estimates are based on rough costs per square footage. These should be updated when project details are determined.
[2] Assumed that 50% of the Animal Control Shelter will be jointly paid and constructed in 2033. Cost estimate shown is 50% of estimated construction cost.
[3] Future satellite fire station which will include a pumper, brush, and aerial truck are to be determined (TBD) for location and size of station. Costs are shown, but not included in impact fee calculations at this time.

- Impact fee Eligible Costs

Project	Construction Year	Current Year (2025) Cost Estimate	Construction Year Cost Estimate	Proportionate Share	Impact Fee Eligible Cost
Animal Control Shelter	2033	$1,567,581.40	$2,064,205.35	14.3%	$295,585.40
Justice Center Police Expansion	2034	$1,246,608.00	$1,698,998.74	34.0%	$578,158.28
Total		**$2,814,189.40**	**$3,763,204.10**		**$873,743.68**

Public Safety



Public Safety

- Impact Fees
  - Existing Impact Fees

Land Use	Impact Fee
Single Family	$1,037.12 per Dwelling Unit
Multi-Unit	$448.05 per Dwelling Unit
Non-Residential	$615.28 per 1,000 sq ft building area

  - Proposed Maximum Allowable Impact Fees

Land Use	Impact Fee
Single Family	$712.43 per Dwelling Unit
Multi-Unit	$2,388.62 per Dwelling Unit
Non-Residential	$3,070.10 per Non-Residential Unit

- Calls Per Unit

Type	Units	Calls	Calls/Unit
Single Family	4,618	2,655	0.575
Multi-Family	290	559	1.928
Non-Residential	178	441	2.478

Parks, Recreation Facilities, Open Spaces, and Trails

- Level of Service

Parameter	LOS Requirement
Park Acreage per 1,000 population	4.00 acres

Parks, Recreation Facilities, Open Spaces, and Trails

- Capital Improvement Projects and Impact Fee Eligible Costs

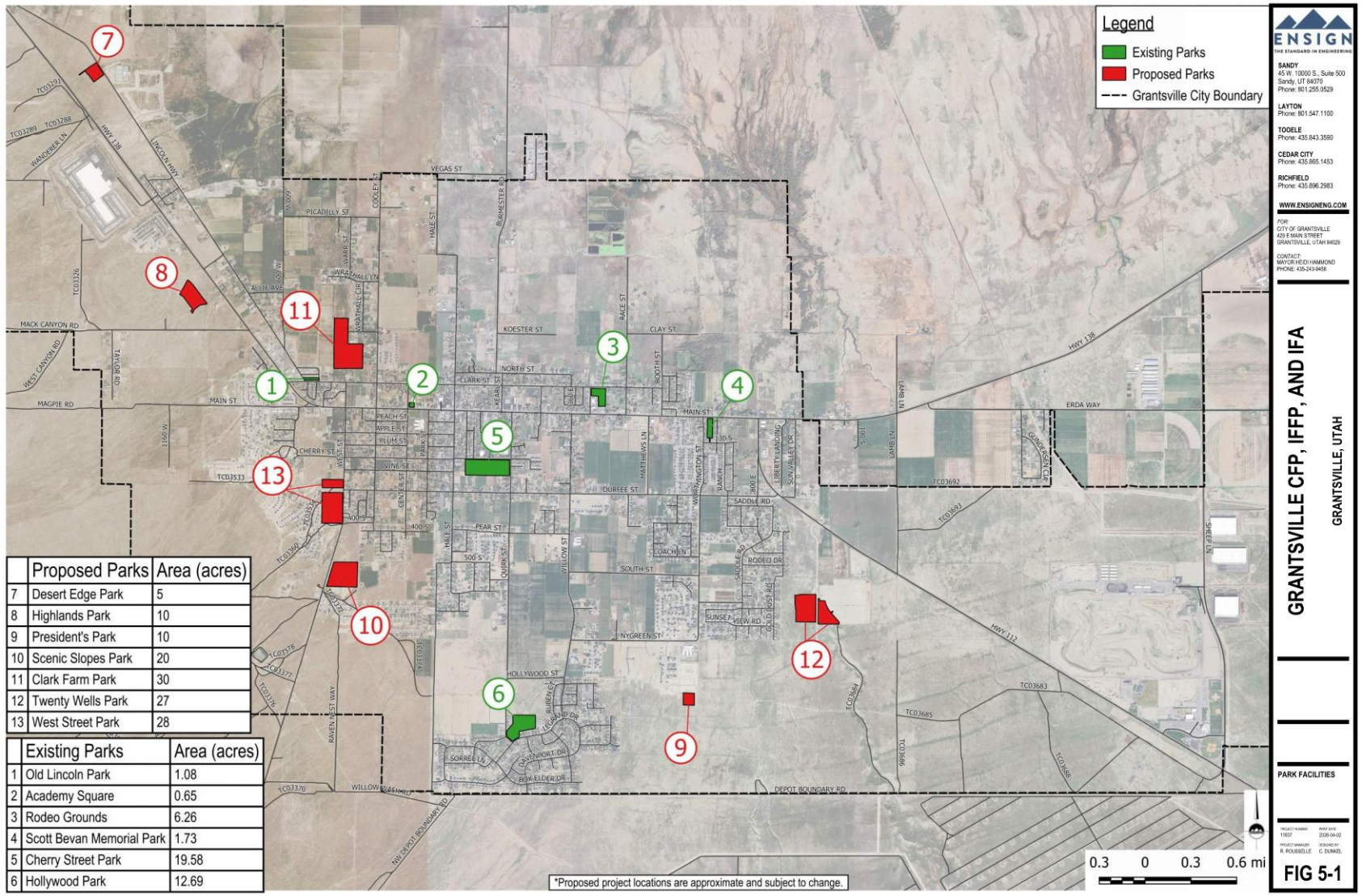
Project	Construction Year	Current Year (2025) Cost Estimate	Construction Year Cost Estimate	Proportionate Share	Impact Fee Eligible Cost
West Street Park	2026	$297,903.23	$308,329.84	19.7%	$60,752.89
Scenic Slopes Park, Utilities, Pump Track, Site Improvements	2026	$3,170,969.33	$2,420,969.33[2]	100.0%	$2,420,969.33
Desert Edge Park	2027	$2,664,070.11	$2,853,818.50	0% [1]	$0.00
Scenic Slopes Parking, Park Amenities, Ball Courts	2028	$2,447,372.82	$2,713,445.99	100.0%	$2,713,445.99
President's Park	2034	$1,695,904.66	$2,311,343.97	100.0%	$2,311,343.97
Scenic Slopes Park Baseball and Soccer Field	2032	$3,198,537.29	$4,069,432.67	100.0%	$4,069,432.67
Twenty Wells Park	2032	$8,628,500.00	$10,977,861.62	0% [1]	$0.00
Highlands Park	2033	$3,392,678.66	$4,467,509.92	0% [1]	$0.00
Clark Farm Park	2034	$3,405,170.23	$4,640,897.49	0%	$0.00
Total		**$28,901,106.33**	**$34,763,609.34**		**$11,575,944.86**

[1] *The proportionate share is 0% because the project is expected be constructed by developers.*

[2] *Construction Year Cost based on Resolution No. 2025-71 not inflated, without grant of $750k which is not impact fee eligible.*

Parks, Recreation Facilities, Open Spaces, and Trails

- Capital Improvement Projects Figure



	Proposed Parks	Area (acres)
7	Desert Edge Park	5
8	Highlands Park	10
9	President's Park	10
10	Scenic Slopes Park	20
11	Clark Farm Park	30
12	Twenty Wells Park	27
13	West Street Park	28

	Existing Parks	Area (acres)
1	Old Lincoln Park	1.08
2	Academy Square	0.65
3	Rodeo Grounds	6.26
4	Scott Bevan Memorial Park	1.73
5	Cherry Street Park	19.58
6	Hollywood Park	12.69

Parks, Recreation Facilities, Open Spaces, and Trails

- Impact Fees
  - Existing Impact Fees

Land Use	Impact Fee
Single Family and Multi-Unit	$4,032.45 per Dwelling Unit

  - Proposed Maximum Allowable Impact Fees

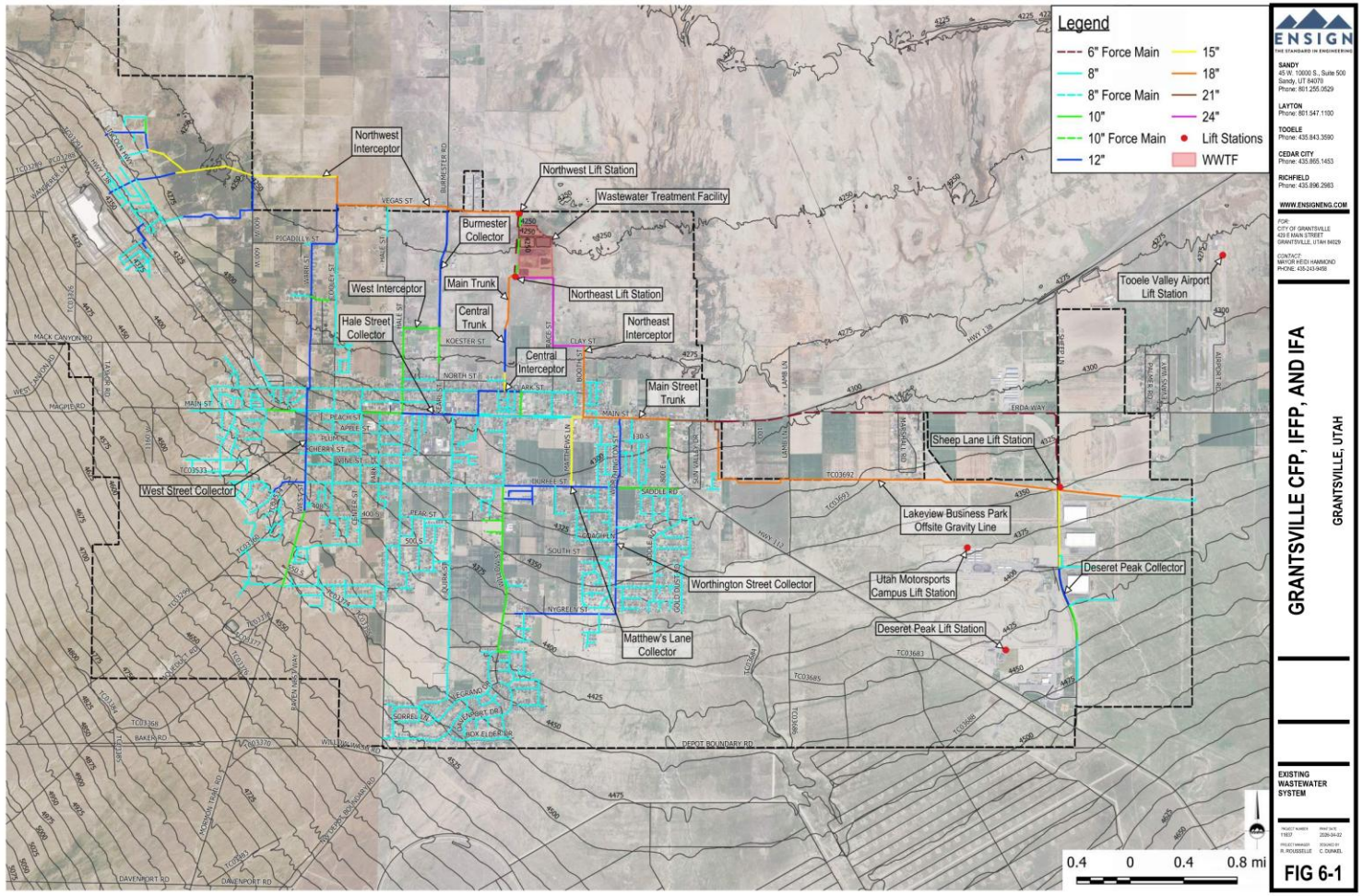
Land Use	Impact Fee
Single Family and Multi-Unit	$3,762.18 per Dwelling Unit

    - Note: Developer constructed parks are shown as not impact fee eligible.

Wastewater (Existing)

- Level of Service

Component	Parameter	Level of Service	
Collection System	Average Day Flow	150 gpd/ERC	
	Peaking Factors	*Miles From WWTF*	*Factor*
		<1	1.85
		>1 and <1.6	2.25
		>1.6	4
Lift Stations	Peak Inflow	0.35 gpm/ERC	
Wastewater Treatment Facility	Average Day Flow	150 gpd/ERC	
	Peak Day Flow	175 gpd/ERC	
	Peak Instantaneous Flow	0.4 gpm/ERC	



Wastewater (Proposed)

- Capital Improvement Projects and Impact Fee Eligible Costs

Project	Construction Year	Current Year (2025) Cost Estimate	Construction Year Cost Estimate	Proportionate Share	Impact Fee Eligible Cost
SR112 Interceptor	2027	$2,988,835.56	$3,201,715.37	0% [2]	$0.00
West Bank Interceptor Segment 1	2027	$376,287.40	$403,088.47	8.8% [4]	$35,294.63
West Bank Interceptor Segment 2	2027	$39,832.00	$42,669.03	13.5% [4]	$5,756.82
West Bank Interceptor Segment 3	2027	$3,927,403.66	$4,207,132.99	0% [2]	$0.00
Southeast Sewer Line	2027	$1,564,982.00	$1,676,447.84	0% [2]	$0.00
Vegas Street Collector	2035	$5,790,294.14	$8,167,781.74	0.0%	$0.00
Northwest Lift Station - Upsize Force Main	2028	$194,363.06	$215,493.80	100%	$215,493.80
Proposed Wastewater Treatment Facility	2026	$48,402,175.15 [3]	$48,402,175.15	12.8%	$6,205,158.85
Public Works Improvements	2035	$1,318,982.50 [1]	$1,860,555.08	27.6%	$512,953.03
Total		**$64,603,155.47**	**$68,177,059.48**		**$6,974,657.14**

[1] The cost shown for the Public Works Improvements project is half of the total cost estimate because this project cost will be split evenly between the wastewater and drinking water utilities.

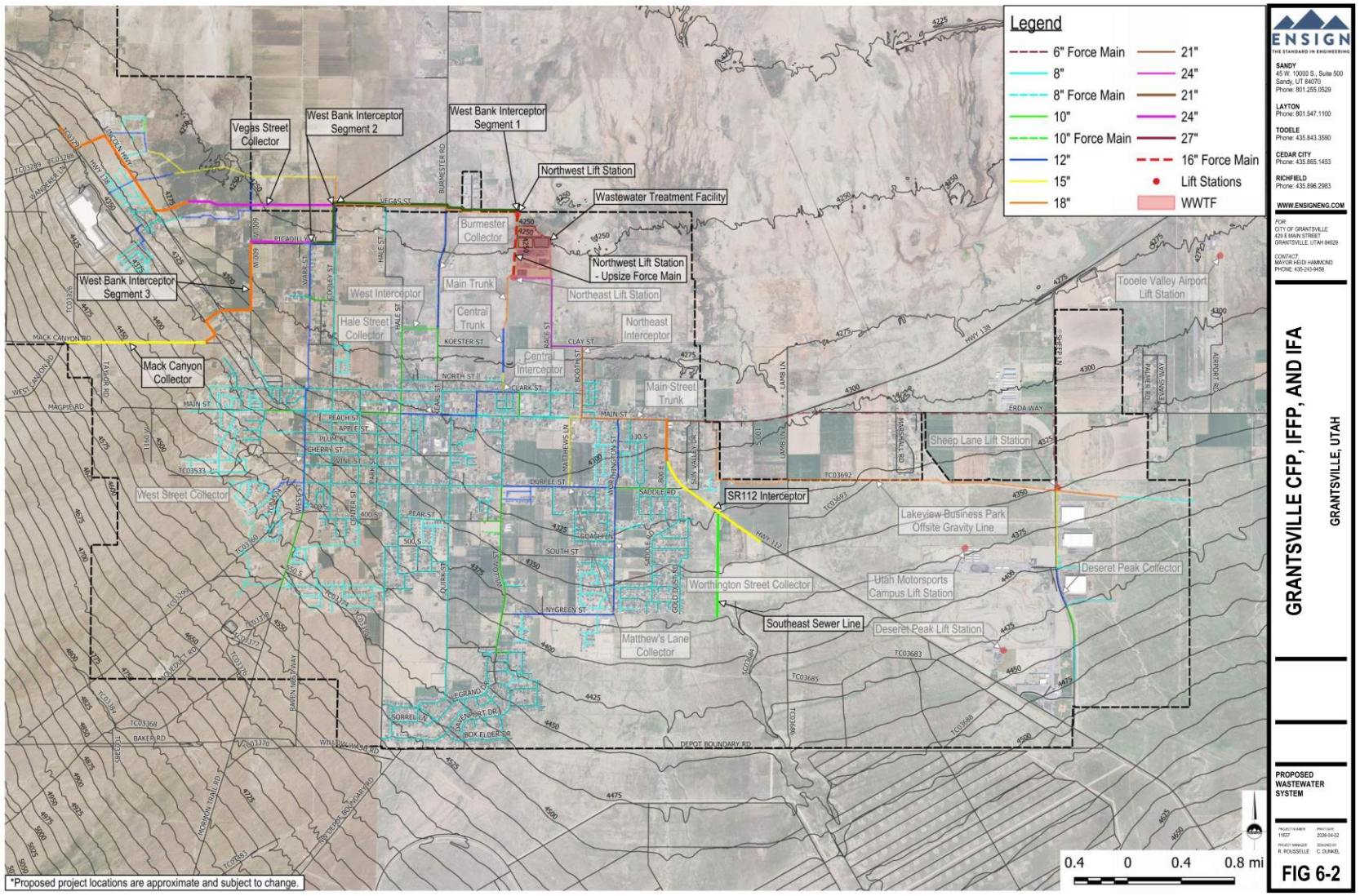
[2] The proportionate share is 0% because the project is expected be constructed by developers.

[3] Proposed WWTF is 2026 cost estimate.

[4] The proportionate share within the planning period for Segment 1 is calculated by dividing planning period ERCs (1,544 ERCs) by upsize capacity [36-inch capacity (26,682 ERCs) - Deseret minimum diameter (9,050 ERCs)]=17,632 ERCs.
The proportionate share within the planning period for Segment 2 is calculated by dividing planning period ERCs (1,544 ERCs) by upsize capacity [36-inch capacity (15,008 ERCs) - Deseret minimum diameter (3,565 ERCs)]=11,443 ERCs.
The costs shown for West Bank Interceptor Segment 1 and 2 in the table are upsize costs only.

Wastewater (Proposed)

- Capital Improvement Projects Figure



Wastewater Impact Fees

- Impact Fees
  - Existing Impact Fees

Water Meter Size (inches)	Maximum Flow Rate (gpm)	ERCs	Impact Fee
3/4	25 [1]	1	$5,949.41
1	40 [1]	1.6	$9,519.05
1 1/2	50 [1]	2	$11,898.81
2	100 [1]	4	$23,797.63
3	200 [2]	8	$47,595.25
4	400 [2]	16	$95,190.50
6	800 [2]	32	$190,381.00
8	1,000 [2]	40	$237,976.25
Non-Residential Development			$247.89 per fixture unit

[1] *From AWWA M6 Table 5-3 Displacement Meters.*
[2] *From AWWA M6 Table 5-3 Electromagnetic and Ultrasonic Meter Type 1.*

  - Proposed Maximum Allowable Impact Fees

Water Meter Size (inches)	Maximum Flow Rate (gpm)	ERCs	Impact Fee
3/4	25 [1]	1	$6,081.18
1	40 [1]	1.6	$9,729.89
1 1/2	50 [1]	2	$12,162.36
2	100 [1]	4	$24,324.72
3	200 [2]	8	$48,649.44
4	400 [2]	16	$97,298.89
6	800 [2]	32	$194,597.77
8	1,000 [2]	40	$243,247.22

[1] *From AWWA M6 Table 5-3 Displacement Meters.*
[2] *From AWWA M6 Table 5-3 Electromagnetic and Ultrasonic Meter Type 1.*

Water Rights Acquisition

- Level of Service

Parameter	Level of Service
Indoor Use	0.218 acre-feet/year/ERC
Outdoor Use	3.33 acre-feet/year/irrigated acre

Water Rights Acquisition

- Existing Impact Fees
  - Category 1 includes single family homes only.
  - Category 2 covers all other types of development not included in Category 1.
  - Proposed Impact Fees
    - Indoor Use

Land Use	Water Right Quantity (ac-ft)	Impact Fee	Unit
Single Family Residential	0.218	$6,322.00	per Dwelling Unit
Multi-Unit Residential	0.107	$3,103.00	per Dwelling Unit
Non-Residential	0.00908	$263.32	per fixture unit

    - Category 1 Outdoor Use (No Waterwise Landscaping)

Category 1 Lot Size	Water Right Quantity (ac-ft)	Impact Fee
7,000 sq ft	0.34	$9,931.90
8,000 sq ft	0.39	$11,350.74
10,000 sq ft	0.49	$14,188.43
14,000 sq ft	0.68	$19,863.80
1/2 acre	1.07	$30,902.40
2/3 acre	1.42	$41,203.20
3/4 acre	1.60	$46,353.60
1.0 acre	2.13	$61,804.80
> 1.0 acre	2.13	$61,804.80

- Category 1 Outdoor Use (Waterwise Landscaping Front Yard Only)

Category 1 Lot Size	Water Right Quantity (ac-ft)	Impact Fee
7,000 sq ft	0.31	$9,051.12
8,000 sq ft	0.36	$10,344.13
10,000 sq ft	0.45	$12,930.17
14,000 sq ft	0.62	$18,102.23
1/2 acre	0.97	$28,161.90
2/3 acre	1.29	$37,549.20
3/4 acre	1.46	$42,242.85
1.0 acre	1.94	$56,323.80
> 1.0 acre	1.94	$56,323.80

- Category 2 Outdoor Use (No Waterwise Landscaping)

Category 2 = (irrigated area, acres) * (3.33 ac-ft/irr. ac) * $29,000

- Category 2 Outdoor Use (Waterwise Landscaping)

Category 2 = (irrigated area, acres) * (2.28 ac-ft/irr. ac) * $29,000

Water Rights Acquisition

- Proposed Maximum Allowable Impact Fees
  - Category 1 includes single family homes only.
  - Category 2 covers all other types of development not included in Category 1.
  - Proposed Impact Fees
    - Indoor Use

Land Use	Water Right Quantity (ac-ft)	Impact Fee	Unit
Single Family Residential	0.218	$6,540.00	per Dwelling Unit
Multi-Unit Residential	0.120	$3,600.00	per Dwelling Unit
Non-Residential	0.00908	$272.40	per fixture unit

    - Category 1 Outdoor Use (No Waterwise Landscaping)

Category 1 Lot Size	Water Right Quantity (ac-ft)	Impact Fee
7,000 sq ft	0.34	$10,274.38
8,000 sq ft	0.39	$11,742.15
10,000 sq ft	0.49	$14,677.69
14,000 sq ft	0.68	$20,548.76
1/2 acre	1.07	$31,968.00
2/3 acre	1.42	$42,624.00
3/4 acre	1.60	$47,952.00
1.0 acre	2.13	$63,936.00
> 1.0 acre	2.13	$63,936.00

- Category 1 Outdoor Use (Waterwise Landscaping Front Yard Only)

Category 1 Lot Size	Water Right Quantity (ac-ft)	Impact Fee
7,000 sq ft	0.31	$9,363.22
8,000 sq ft	0.36	$10,700.83
10,000 sq ft	0.45	$13,376.03
14,000 sq ft	0.62	$18,726.45
1/2 acre	0.97	$29,133.00
2/3 acre	1.29	$38,844.00
3/4 acre	1.46	$43,699.50
1.0 acre	1.94	$58,266.00
> 1.0 acre	1.94	$58,266.00

- Category 2 Outdoor Use (No Waterwise Landscaping)
  - **<u>Category 2</u> = (irrigated area, acres) * (3.33 ac-ft/irr. ac) * $30,000**
- Category 2 Outdoor Use (Waterwise Landscaping)
  - **<u>Category 2</u> = (irrigated area, acres) * (2.28 ac-ft/irr. ac) * $30,000**

Storm Drainage

- Level of Service
  - On City's website under "Storm Drainage Design Requirements"

https://www.grantsvilleut.gov/departments/community_economic_development/construction_standards.php

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GRANTSVILLE CITY
STORM DRAINAGE DESIGN REQUIREMENTS

1. **Storm Water Collection System Requirements:**

a) Design Storms:
The storm water pipe collection system shall be designed to convey the 24-hour duration – Annual Exceedance Probability (AEP) 10-percent (10%) storm, 24-hour duration event if there is a continuous pathway to the Great Salt Lake. Collection systems for basin and street shall be sized for the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point.

Note: The AEP 10-percent (10%) storm is equivalent to a 10-year recurrence interval storm and an AEP 1-percent (1%) storm is equivalent to a 100-year recurrence interval storm. The 10-year and 100-year terms are not used by Grantsville City to reduce confusion and accurately convey such storms have a 10-percent or 1-percent chance of occurring in any given year, rather than implying these events happen once every 10-years or 100-years.

b) Storm Water Runoff into Street Encroachment Requirements:

i. Flow from the AEP 10-percent (10%) storm shall not extend more than halfway into the travel lane adjacent to the curb and a minimum 12-foot wide travel lane shall be maintained for emergency vehicles. If there is a curb then total spread must be no more than 8-feet from the curb face.

c) Easement and Access Requirements:

i. Easement widths and access for drainage channels, detention/ retention basins, lots line swales, and public storm drainage lines shall be reviewed and approved by the City Engineer. Access easements shall be a minimum width of 15-feet.

d) Acceptable Pipe Materials:

i. Refer to the current City's preconstruction notes for acceptable pipe materials.

e) Minimum Pipe Diameter and Slope:

i. The minimum pipe diameter for any public storm water collection system pipe is 15-inches with a minimum slope of 0.50 percent. If pipe diameter and slope is below the minimum standards then approval from the City Engineer is required.

f) Manhole Spacing:

i. Minimum manhole spacing is 400-feet, unless otherwise approved by the City Engineer.

g) Storm Drain Structure Drops:

i. Where changes in pipe sizes occur in a manhole, the inlet pipe crown must match or be higher than the larger outlet pipe crown.

h) Cover:

i. Minimum cover is 18-inches or 6 inches below the pavement section whichever is greater, unless approved by City Engineer. Pipe cover must comply with pipe manufacturer's recommendations.

i) Catch Basin Requirements:

i. Catch basins will not be allowed on the radius of curves at intersections.

ii. Flow through catch basins shall not be allowed unless designed as a combination box with manhole lid access. Locked gate access with keys for designate basin maintenance personnel and for City emergency access shall be provided.

iii. A manufactured snout or similar oil/debris/water separator is required prior to a detention basin, retention basin, or any other discharges from a development into a public drainage. Sump depth in

GRANTSVILLE - ENGINEERING -

catch basin with snout shall be sized as recommended by snout manufacturer.

iv. Catch basins shall be installed at maximum intervals of 400-feet where channelized flow is occurring.

j) Detention/Retention Basin Requirements:

i. Public, private, or HOA detention/retention basins shall have 6-foot tall (finish grade to top of sign) telespar, or City approved, post with the following signs:

a. "Stormwater Basin" 12-inch x 18-inch Sign
b. "No Trespassing" 12-inch x 18-inch Sign
c. Each sign shall be RA Type I Engineering Grade Prismatic Reflective Sheeting on 0.080 aluminum.

ii. Public detention/retention basins with amenities shall have 6-foot tall (finish grade to top of sign) telespar, or City approved, post with the following signs:

a. "No Dumping" 12-inch x 18-inch Sign
b. "Stormwater Basin
Designed to collect runoff from the local storm sewer system following either a rainfall or snowmelt event.
Basins temporarily hold this stormwater, provides treatment to remove pollutants, and then slowly release the water back to our waterways.
No swimming, use at your own risk." 18-inch x 24-inch Sign
c. Each sign shall be RA Type I Engineering Grade Prismatic Reflective Sheeting on 0.080 aluminum.

iii. Storm water drainage areas need to include front yards and rear yards in the developments calculations if they do not include individual lots detention/ retention basins.

iv. Retention and detention basins shall completely infiltrate and drain within 72-hours from the beginning of a storm event for vector control. Infiltration tests shall be performed using the double ring infiltrometer test in accordance with ASTM D 3385 for all retention and detention basins. The test shall be completed at the elevation of the bottom of the basin where infiltration will occur. A factor of safety of two (2) shall be used for design and a minimum of two (2) tests shall be completed with a minimum of one (1) test per 10,000 square feet of infiltration area. These tests shall be submitted with drainage calculations to the City for review. If the retention or detention basin is constructed in gravel soils then a percolation test may be used to determine the infiltration rate. The infiltration rate shall be calculated as follows:

Infiltration Rate = (Percolation Rate) / (Reduction Factor)

Where the Reduction Factor is given by**:

$$R_f = \frac{2d_1 - \Delta d}{DIA} + 1$$

With:

d_1 = Initial Water Depth (in.)
Δd = Average/Final Water Level Drop (in.)
DIA = Diameter of the Percolation Hole (in.)

*** The area Reduction Factor accounts for the exfiltration occurring through the sides of percolation hole. It assumes that the percolation rate is affected by the depth of water in the hole and that the percolating surface of the hole is in uniform soil. If there are significant problems with either of these assumptions then other adjustments may be necessary.*

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v. Storm water dry wells, injections wells, or any underground storm water discharge structure is acceptable in the City, but shall comply with the Utah Department of Environmental Quality (UDEQ) Underground Injection Control (UIC) program requirements. Proof of an application pertaining to the development has been submitted under the UIC program shall be provided to the City for their records. Special consideration shall be given to water quality, groundwater depth, and other factors. Individual or single-family homes may be exempt from these requirements. Please contact the Utah Department of Environmental Quality - Water Quality for clarification. Developments may use percolation tests for underground systems which infiltrate in the horizontal and vertical planes.

vi. 1-foot freeboard minimum above the AEP 1-percent (1%) storm, 24-hour duration event when discharging water level through spillway is required. Spillway shall be reinforced with concrete per City Detail.

vii. Detention/retention basin minimum of top berm width shall be 3-feet.

viii. Maximum water depths shall be 30-inches with a maximum slope of 5:1 for small detention/retention basins serving single lots or less than 5-lots unless approved by the City Engineer. Large basins serving 5-lots or more shall have a maximum slope of 3:1 and, if deeper than 3-feet, shall be provided with ingress and egress at least 12-feet wide at less than 15% grade with a 15% grade all weather surface ramp into the basin.

ix. Vegetate basins with turf, if irrigated, or native seeded grass for maintenance purposes. If turf is installed, turf soil shall be free draining, not include clay soils, and not impact stormwater infiltration.

x. Rocks or gravel surfacing of detention/retention basins are not allowed without City approval.

xi. Detention/retention basins with amenities shall have accessible path to amenity which is a concrete sidewalk meeting ADA standard. Interior slope of detention/retention basin at ramp shall be between 8 Horizontal:1 Vertical to 12 Horizontal:1 Vertical slope.

xii. Detention/Retention basins with amenities shall have a sediment forebay and be able to pass the AEO 50-percent (50%) storm, 24-hour duration event through the basin without stormwater impacting amenities.

k) Manning's n Values:

i. n value for linings shall be determined per an approved Engineers Manual based on size and placement of materials. Calculations shall include the reference used for the n value for review by the City Engineer.

Manning's Roughness n for Open Channels			
Channel Type	Manning n		
	Minimum	Normal	Maximum
1. Lined or Constructed Channels			
a. Cement:			
1. Neat, surface	0.01	0.011	0.013
2. Mortar	0.011	0.013	0.015
b. Concrete:			
1. Trowel finish	0.011	0.013	0.015
2. Float finish	0.013	0.015	0.016

Storm Drainage

- Level of Service (Continued)

Channel Type	Manning n		
	Minimum	Normal	Maximum
3. Finished, with gravel on bottom	0.015	0.017	0.02
4. Unfinished	0.014	0.017	0.02
5. Gunite, good section	0.016	0.019	0.023
6. Gunite, wavy section	0.018	0.022	0.025
7. On good excavated rock	0.017	0.02	-
8. On irregular excavated rock	0.022	0.027	-
c. Concrete Bottom Float Finish with sides of:			
1. Dressed stone in mortar	0.015	0.017	0.02
2. Random stone in mortar	0.017	0.02	0.024
3. Cement rubble masonry, plastered	0.016	0.02	0.024
4. Cement rubble masonry	0.02	0.025	0.03
5. Dry rubble or riprap	0.02	0.03	0.035
d. Gravel Bottom with sides of:			
1. Formed concrete	0.017	0.02	0.025
2. Random stone mortar	0.02	0.023	0.026
3. Dry rubble or riprap	0.023	0.033	0.036
e. Brick:			
1. Glazed	0.011	0.013	0.015
2. In cement mortar	0.012	0.015	0.018
f. Masonry:			
1. Cemented rubble	0.017	0.025	0.03
2. Dry rubble	0.023	0.032	0.035
g. Dressed Ashlar / Stone Paving	0.013	0.015	0.017
h. Asphalt:			
1. Smooth	0.013	0.013	0.017
2. Rough	0.016	0.016	0.017
i. Vegetal Lining	0.03	-	0.5
j. Wood:			
1. Planed, untreated	0.01	0.012	0.014
2. Planed, creosoted	0.011	0.012	0.015
3. Unplanned	0.011	0.013	0.015
4. Plank with battens	0.012	0.015	0.018
5. Lined with roofing paper	0.01	0.014	0.017

Channel Type	Manning n		
	Minimum	Normal	Maximum
2. Excavated or Dredged Channels			
a. Earth, Straight, and Uniform:			
1. Clean, recently completed	0.016	0.018	0.02
2. Clean, after weathering	0.018	0.022	0.025
3. Gravel, uniform section, clean	0.022	0.025	0.03
4. With short grass, few weeds	0.022	0.027	0.033
b. Earth Winding and Sluggish:			
1. No vegetation	0.023	0.025	0.03
2. Grass, some weeds	0.025	0.03	0.033
3. Dense weeds or aquatic plants in deep channels	0.03	0.035	0.04
4. Earth bottom and rubble sides	0.028	0.03	0.035
5. Stony bottom and weedy banks	0.025	0.035	0.04
6. Cobble bottom and clean sides	0.03	0.04	0.05
c. Dragline-Excavated or Dredged:			
1. No vegetation	0.025	0.028	0.033
2. Light brush on banks	0.035	0.05	0.06
d. Rock Cuts:			
1.Smooth and Uniform	0.025	0.035	0.04
2. Jagged and irregular	0.035	0.04	0.05
e. Channels not Maintained, Weeds and Brush Uncut:			
1. Dense weeds, high as flow depth	0.05	0.08	0.12
2. Clean bottom, brush on sides	0.04	0.05	0.08
3. Same as above, highest stage of flow	0.045	0.07	0.11
4. Dense brush, high stage	0.08	0.1	0.14
3. Main Channels			
a. Clean, straight, full stage, no rifts or deep pools	0.025	0.03	0.033
b. Same as above, but more stones and weeds	0.03	0.035	0.04
c. Clean, winding, some pools and shoals	0.033	0.04	0.045
d. Same as above, but some weeds and stones	0.035	0.045	0.05
e. Same as above, lower stages, more ineffective	0.04	0.048	0.055
f. Same as (d) with more stones	0.045	0.05	0.06
g. Sluggish reaches, weedy, deep pools	0.05	0.07	0.08
h. Very weedy reaches, deep pools, or floodways with heavy stand of timber and underbrush	0.075	0.1	0.15

Channel Type	Manning n		
	Minimum	Normal	Maximum
4. Mountain Streams, No Vegetation in Channel, Banks usually Steep, Trees and Brush along Banks Submerged at High Stages			
a. Bottom: gravels, cobbles, and few boulders	0.03	0.04	0.05
b. Bottom: cobbles with large boulders	0.04	0.05	0.07

Source:

(1) ASCE, (1982), Gravity Sanitary Sewer Design and Construction, ASCE Manual of Practice No. 60, New York, NY.

(2) Chow, V.T., (1959), Open Channel Hydraulics, McGraw-Hill, New York, NY.

l) Riprap Sizing:

i. Channel Riprap sizing calculation shall utilize Federal Highway Administration (FHWA) Hydraulic Engineering Circular (HEC) No. 14, Current Edition, Chapter 10 or equivalent standard.

m) Erosion Control:

i. The developer shall provide a copy of their Fugitive Dust Mitigation Plan, Erosion Control Plans, SWPPP, Notice of Intent (NOI), and Notice of Termination (NOT) with the State if their construction project is greater than 1 acre. The SWPPP sign shall be posted on site and visible to adjacent public right-of-way.

2. **Hydrology Requirements:**

a) Rainfall Data:

i. NOAA Atlas 14 shall be used for rainfall in the City of Grantsville (see https://hdsc.nws.noaa.gov/hdsc/pfds_map_cont.html)

b) Design Storms:

i. To reduce post-development storm water runoff, developments must retain and treat the 80th percentile rainfall event. The 80th percentile rainfall event for Grantsville City is 0.50 inches. The Reese method, as shown below, shall be used to calculate the volumetric runoff coefficient used for determining the 80th percentile volume. For developments larger than 10 acres use the SCS Method to determine the 80th percentile volume.

a. Sedimentation basin shall be provided for first flush/80th percentile rainfall events in retention/detention basins and shall be designed to be easily accessed and maintained.

i. Method 1- Reese Method:

1. Comparing the imperviousness of 44 nationwide sites to their respective calculated volumetric runoff coefficient, a simple linear regression equation was created to estimate the volumetric runoff coefficient for small urban catchments. Land uses for these sites were classified as residential, mixed, commercial, industrial, and urban open and nonurban (Schueler, Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs, 1987). Outliers were removed from this dataset by Reese to derive the equation below. Removing outliers from the dataset reduces the impact of erroneous measurements (Reese, 2006). $RV=0.91i-0.0204$

Source: A Guide to Low Impact Development within Utah. Revised August 2020 by Michael Baker International.

ii. Retain/Detain the AEP 1-percent (1%) storm, 24-hour duration event for project site.

iii. Developments may detain the AEP 10-percent (10%) storm event, 24-hour duration if there is a

Storm Drainage

- Level of Service (Continued)

continuous pathway to the Great Salt Lake.

iv. For West Bank drainage areas, developed drainage may discharge at the following rates if there is a continuous path to the Great Salt Lake:

Table 1: Unit Discharge Requirement for West Bank Watersheds

24-hour Duration Storm Event	Watershed's Peak Unit Discharge (cfs/acre)	All Other Watersheds Peak Unit Discharge (cfs/acre)
10 years	0.003	0.05
100 years	0.01	0.15

Source: Table 17 in Section 5 from the Storm Water Management Study for Baker and Pope Watersheds dated April 2015 by AQUA Engineering.

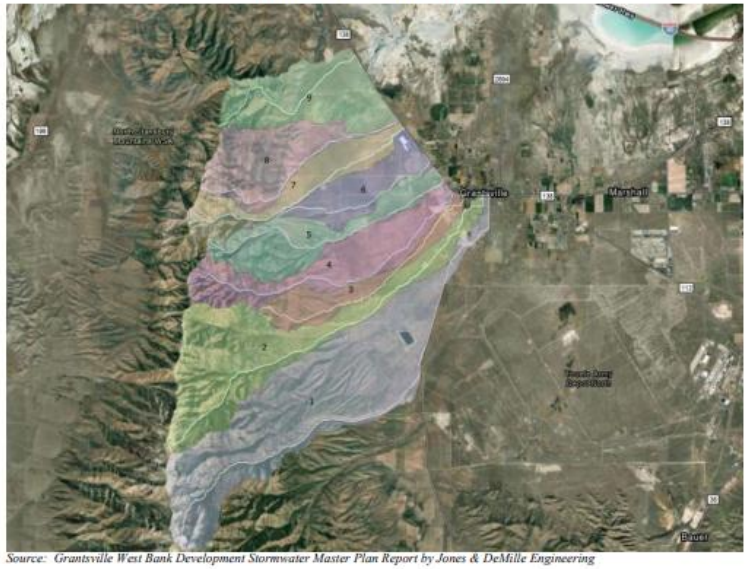
v. Refer to Table 2 and Figure 1 for a map of West Bank Watersheds.

Table 2: West Bank Sub-basin Number and Name

Subbasin	Subbasin Name
1	South Willow and Coal Pit Canyon
2	North Willow Canyon
3	White Rocks
4	Baker Canyon
5	Pope Canyon
6	West Canyon 1
7	West Canyon 2
8	Dry Canyon
9	Unnamed

Source: Grantsville West Bank Development Stormwater Master Plan Report by Jones & DeMille Engineering

Figure 1: Map of West Bank Watersheds



Source: Grantsville West Bank Development Stormwater Master Plan Report by Jones & DeMille Engineering

vi. The West Bank area consists of alluvial fans which are an accumulation of sediments fanning outwards from a concentrated source of sediments. Alluvial fans are typically formed where flow emerges from a confined channel and is free to spread and infiltrate. Due to these sediments, deposits in an alluvial fan can cause the defined channels to shift courses which is why it is important to construct sedimentation basins at the top of the alluvial fan and reinforce and define channels throughout the fan to discharge safely through existing and proposed development avoiding riverine flooding. Recently the West Bank Area has been identified as an alluvial fan Zone A based on a Base Level Engineering (BLE) analysis. This area is currently being studied by the State in more detail, but the results are currently not available. Channelization through the alluvial fan and sedimentation basins above the alluvial fan are improvements to allow storm water to flow through developments or mitigate alluvial fan hazards. Mitigation measures within the alluvial fan will need to be constructed to remove hazards either regionally or localized. Developers should coordinate with the State and FEMA MT-2 team (LOMR reviewers) along with the City and County to work through development in the alluvial fan.

3. **Drainage Calculations or Report Requirements:**
   a) If discharge will be above the allowed discharge per area rates shown on Table 1 then a pre and post development hydrologic analysis will be required showing flows will not cause a negative affect downstream. The Rational Method (Q=CiA) may be used in computations for the rate of runoff for urban and small watershed 100 acres or less.
      i. Q = peak rate of runoff, cubic feet per second
      ii. C = runoff coefficient
      iii. i= average rainfall intensity, inches per hour
   b) The SCS method, SCS TR-55 "Urban Hydrology for Small Watershed", HEC-1/HEC-HMS, or other methods shall be used for larger watersheds.
   c) Table 2 shall be used for runoff coefficients unless approved by the City Engineer.

Table 2: Runoff Coefficients

Land Use Type	Runoff Coefficients "C"
Rural	0.25-0.35
Single Family Residential	0.45-0.60
Multi-Residential	0.60-0.70
Neighborhood Commercial	0.85
Community Commercial	0.85
Tourist Commercial	0.85
Office	0.85
Manufacturing	0.85-0.90
Distribution and Warehousing	0.85-0.90
Public Facility	0.50-0.85
Pavement and Concrete Surfaces	0.90-0.95
Park	0.25
Open Space (0-5% grade – vegetated)	0.20-.030
Open Space (0-5% grade – no vegetation)	0.30-0.40
Open Space (5-15% grade – vegetated or unvegetated)	0.40-0.50
Open Space (Over 15% grade – sparsely vegetated, rock or clay soils	0.40-0.60

      i. Weighted values of the runoff coefficient "C" may be required where land use is most accurately described as a mixture of the land uses listed above or where it is a mixture of pervious and impervious areas and not represented by a single entry in Table 2.
   d) Intensity-Duration-Frequency curves for NOAA Atlas 14 shall be used for determining the applicable intensity. (see https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=ut)
   e) Definition for Time of Concentration
      i. $t_c = 10$ or $\frac{L}{V \times 60}$ whichever is greater

         t_c = initial time of concentration at inlet, minutes
         L = Flow line length from uppermost point of watershed to the discharge point, feet
         V = channel or overland velocity, feet per second

         * Velocity shall be calculated using NRCS Urban Hydrology for Small Watersheds, current edition, or equivalent standards.

Storm Drainage

- Level of Service (Continued)

ii. Given the time of concentration at a design point, the time of concentration at the next design point is determined by adding travel time, expressed as:

iii. $t = \frac{L}{V \times 60}$

t = travel time, minutes
L = length of channel or conduit between design points, feet
V = channel or conduit, feet per second

4. **Submittal Requirements for Drainage Drawings and Report**
   a) **Project Drawings:**
      i. Hydraulic grade line (HGL) profiles, (see sample sheet).
      ii. Location and size of all existing and proposed structures.
      iii. Proposed materials.
      iv. Pertinent elevations and slopes.
      v. Pipe capacity, and the AEP 10-percent (10%) storm, and the AEP 1-percent (1%) storm, 24-hour flows, and velocities.
   b) **Drainage Report or Calculations: (Shown on Drawings)** – The following standards apply to the Drainage Report or Calculations (public and private).
      1. **Title Page:**
         a. Project name.
         b. Preparer's name, firm, date.
         c. Professional engineer's seal of preparer and signature.
      2. **Introduction:**
         a. **Site location:**
            i. Street location, parcel number(s), and section reference.
            ii. Adjacent developments.
         b. **Site Description:**
            i. Topography, ground cover, etc.
            ii. Existing drainage facilities, major drainage facilities, flood hazard areas, irrigation ditches, other site conditions that must be considered.
         c. Proposed project description.
         d. Other previous studies relevant to site.
      3. Historic drainage system (discuss the following):
         a. Major basins and offsite contributions:
            i. Relationship to major drainage facilities.
            ii. Major basin drainage characteristics (topography, runoff, cover, use, erosion, etc.).
         b. Sub-basin and site drainage (i and ii may be tabulated on map):
            i. Minor AEP 10-percent (10%) storm and major AEP 1-percent (1%) storm, 24-hour storm flows for each sub-basin affecting the site.
            ii. Existing drainage patterns: channelized or overland flow, point of discharge, etc.
            iii. Effect of historic flows on adjacent properties.
      4. **Proposed (developed) drainage system:** (discuss each of the following)
         a. **Criteria:**
            i. Size of major basins, tributary sub-basins, and other offsite contributions.
            ii. Hydrologic method to be used for analysis (Rational, SCS, etc.).

iii. Design storm intensities (minor AEP 10-percent (10%) storm, major the AEP 1-percent (1%) storm, 24-hour duration event,) or as required by the City Engineer.

b. **Runoff And Other Contributions:**
   i. Historic storm flow rates and paths.
   ii. Developed storm flow rates and paths for minor and major storms.
   iii. Contributions from open joined system.
   iv. Demonstrate flows are routed to a public system with adequate capacity when/ if available.

c. **Piping:**
   i. Demonstrate the capacity of the storm drain system, including all downstream improvements.
   ii. Verify storm flows and capacity from inlets to ultimate outlets of the drainage system.

d. **Detention/Retention System Including:**
   i. Volume required to hold the AEP 1-percent (1%) storm, 24-hour storm with 1-foot freeboard minimum above the AEP 1-percent (1%) storm, 24-hour event flowing water level through spillway.
   ii. Show the overflow location for volumes over the AEP1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point..
   iii. Passage of storms exceeding the AEP 10-percent (10%) storm up to the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point..
   iv. Engineer to provide detailed description of downstream constraints (or none) and design calculations on how to mitigate the problem.
   v. Need for detention/retention shall be clearly identified in the preliminary or schematic report and the necessary detention/retention area shall be identified on preliminary plans.

e. **Streets:** (This information may be shown on the plans.)
   i. Depth and velocity of flow for major and minor storms. Demonstrate a 12-foot clear lane exists for emergency vehicles at all times.
   ii. Drainage system.

f. **Open Channel Flow:** (This information may be shown on the plans.)
   i. Type.
   ii. Depth and velocity.
   iii. Freeboard.
   iv. HEC-RAS analysis when required by the City Engineer.

g. Storm drains and culverts (Show all data on plans.)

5. **Areas within flood hazard zone when applicable:**
   a) Impacts.
   b) Protection.
   c) Compliance with Federal Emergency Management Administration (FEMA) requirements, RMC 18.12 "Flood Hazard Areas", and critical flood zones. Show existing and proposed CLOMR and LOMR information, and show status of submittal and review process.
   d) Provide elevation certificate for occupied structures within current BLE floodway determination. Coordinate with Utah Flood Hazards and Floodplain management for 2-D HEC-RAS model for BFE.
   e) Comply with Grantsville City Code, Chapter 5-3, Flood Damage Prevention Regulations.
6. **Conclusions:**
   a) Benefits.
   b) Adverse effects with solutions for mitigation of impacts.

7. **Appendices:**
   a) **Hydrologic and hydraulic computations:**
      i. List and explain basin assumptions and input factors used.
         1) Tabularized and/or discussed as necessary.
         2) Indicate any sensitivity analysis performed.
         3) Include source tables and references for parameters, such as soil groups, SCS curve numbers, C values, n values, etc.
      ii. **Historic Runoff:**
         1) Off-site.
         2) On-site.
      iii. **Developed Runoff:**
         1) Off-site – Flows that have been concentrated into one area from the project shall not flow higher than the project flow in that area.
         2) On-site.
      iv. Detention for up to the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point:
      v. **Hydraulic Computations:**
         1) Hydraulic grade line (HGL) minor storm.
         2) Hydraulic grade line (HGL) major storm.
         3) Inlet/outlet calculations.
      vi. **Rip-rap sizing:**
   b) **Drainage Plan:**
      i. **Site Drainage Plan:**
         1) Show the existing and proposed contours for the property.
         2) The site drainage plan may be at the same scale as the grading plan but must meet legibility requirements for scanned documents. Show all sub-drainage areas per catch basin or channel and tabulate existing and proposed drainage showing length, calculated velocity and time of concentration on various runs of grass, gutters, etc., cumulative time of concentration, average rainfall intensity, area, runoff coefficient (weighted if necessary), and peak flows for the AEP 10-percent (10%) storm and the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point.
         3) All inlets and manholes shall be labeled to correspond to tabular numbering system used in drainage report. Pipe sizes, grades, velocities, peak flows and hydraulic grade lines shall be shown for all parts of the system in a tabular form on the plans.
         4) Both location plan (overall drainage) and sub-drainage plan shall be signed and sealed by a Utah Registered Civil Engineer and shall be included in the construction plans for the subdivision/development.
         5) On grading plans show peak flows for the AEP 10-percent (10%) storm and the AEP 10-percent (10%) storm at inlets and other sub-basin points of concentration, at discharge points and in channels. Show peak flows entering and leaving the site; trace path leaving site to nearest major drainage facility without adverse impact to downstream owners.
         6) On plan and profile sheets, show peak flows for the AEP 10-percent (10%) storm and the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point at all inlets and in pipes as per above, and in pipes show slope, velocity, and capacity, and hydraulic grade line if surcharged.
         7) If the lot cannot drain the yard to the street, then a basin shall be located in the rear yard to

Storm Drainage

- Level of Service (Continued)

GRANTSVILLE ENGINEERING

prevent storm runoff from draining to the neighbors from the back of the property.

ii. Benchmarks – To be shown on plans with benchmarks to match the existing state approved benchmarks.

iii. Existing and proposed property lines.

iv. Existing and proposed drainage easements.

v. Street names, grades, widths and rights-of-way or easements.

vi. Routing and peak flow rate or volume at the upstream and downstream ends of the site and at various critical points on-site for both minor and major runoff. Depth and hydrograph for both storms for all sub basins.

vii. Street cross sections showing the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point flood level, no more than one-half way into the outside travel lane for emergency vehicle clear lane.

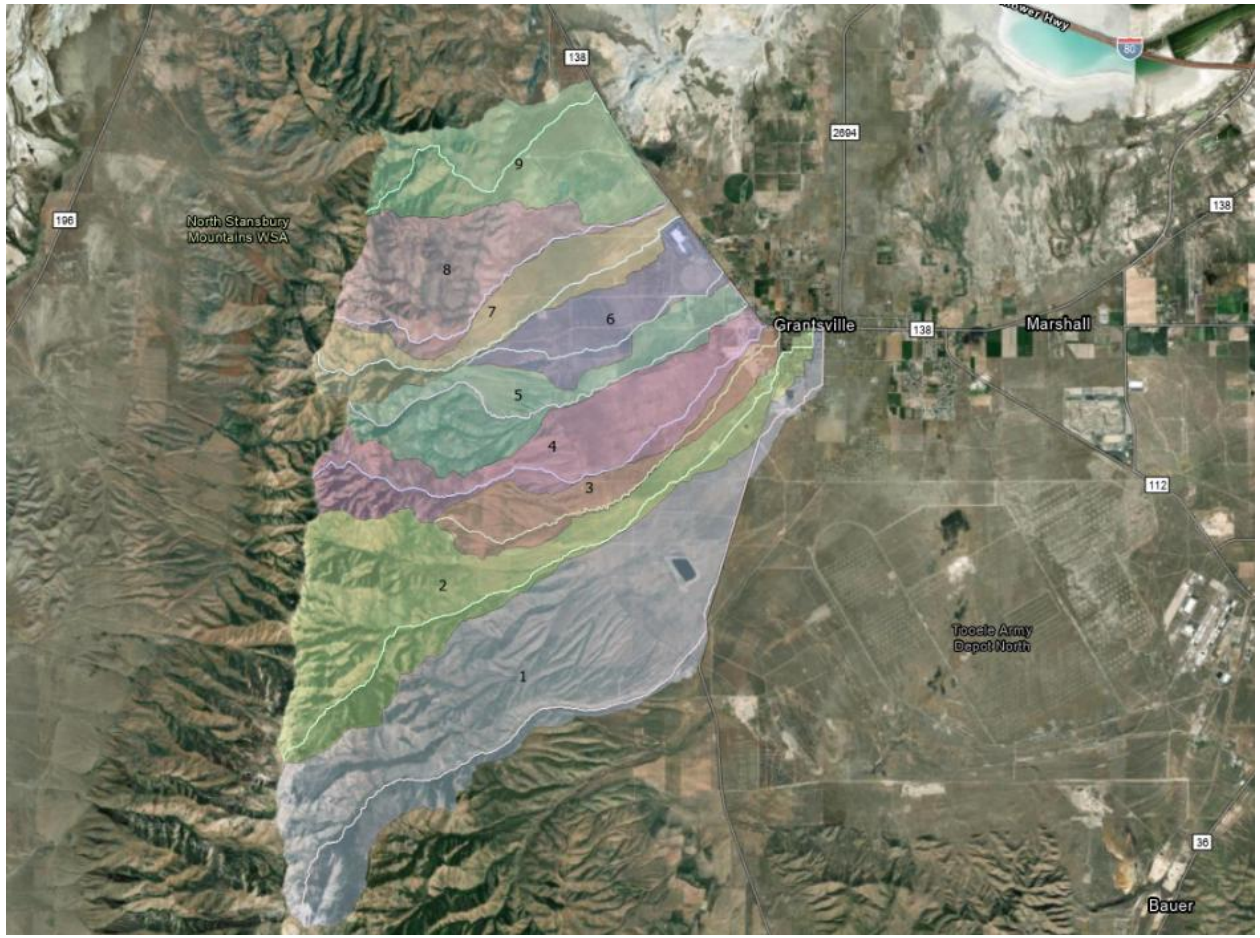
viii. Existing and proposed major drainage facilities.

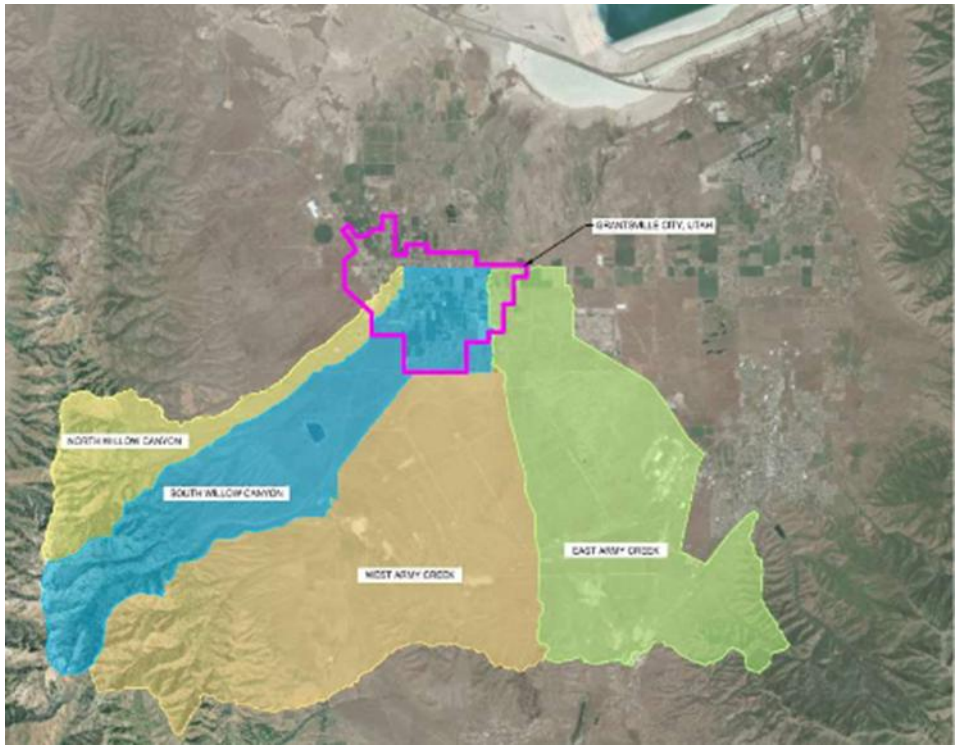
ix. Open channel flow in major channels shall be provided with the following information on plans:

1) Channel and hydraulic grade line (HGL) profiles.
2) Cross sections and required rights-of-way or easements at the AEP 1-percent (1%) storm, 24-hour duration event intervals or changes from the typical section.
3) Location and size of all existing and proposed structures.
4) Channel section and lining details.
5) Freeboard for the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point.
6) Channel capacity and storm flows, the AEP 10-percent (10%) storm and the AEP 1-percent (1%) storm, 24-hour duration event when discharging to an approved City release point flows and velocities.

Storm Drainage

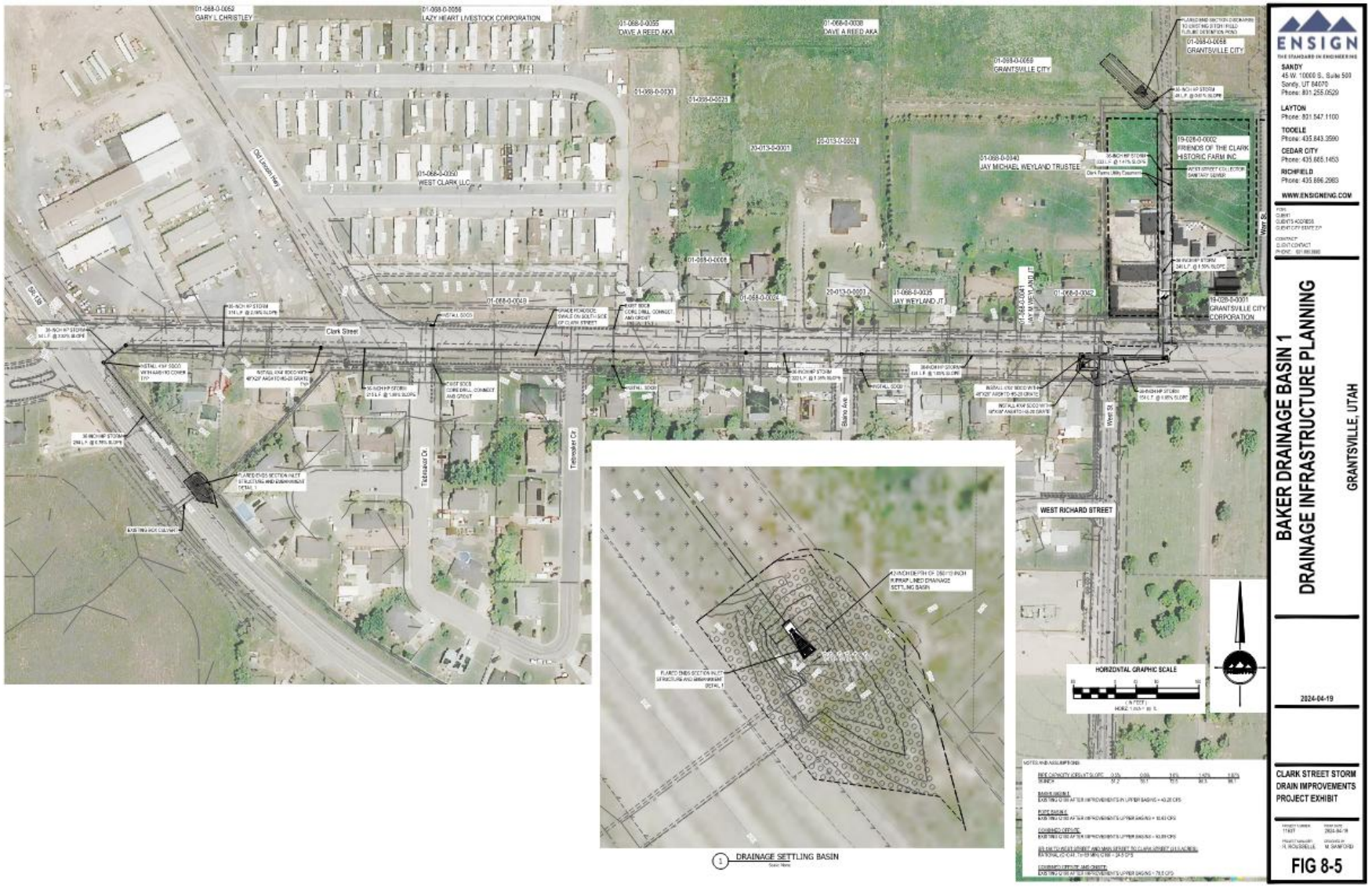
- Existing Storm Drainage Infrastructure





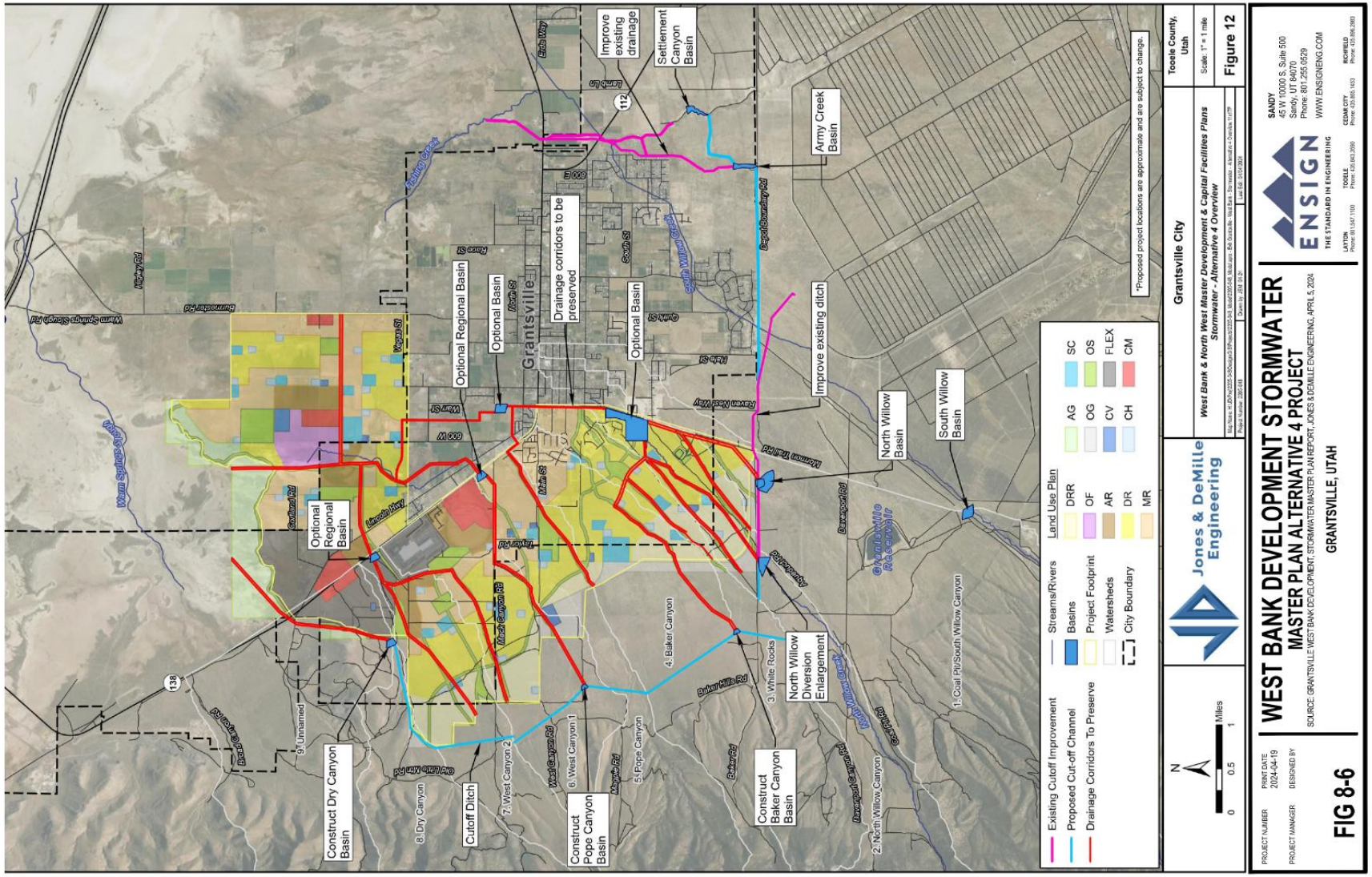
Storm Drainage

- Capital Improvement Projects (Clark Street Storm Drain Improvements Project)



Storm Drainage

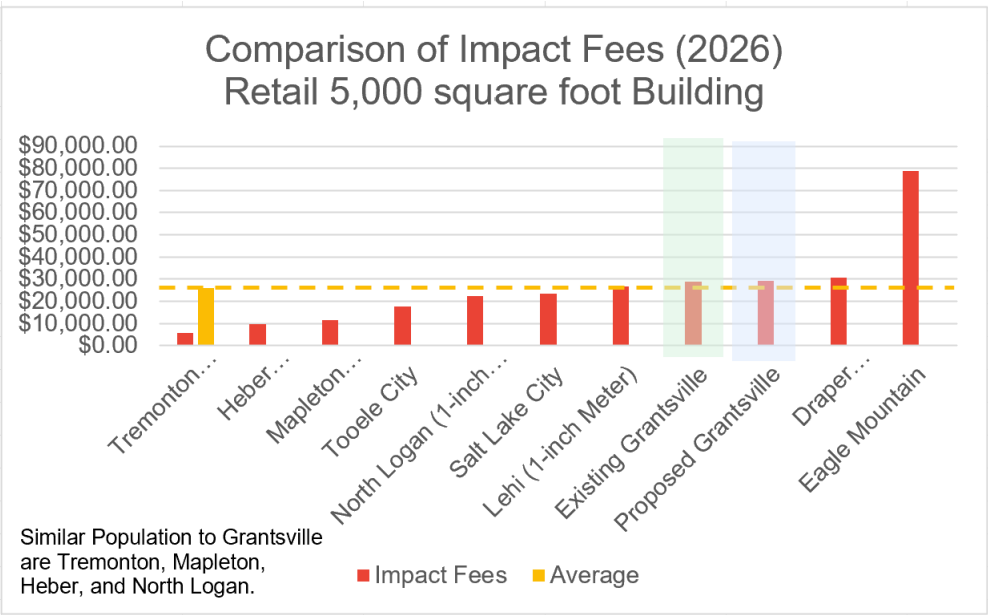
- Capital Improvement Projects (Alternative 4 – West Bank Study)

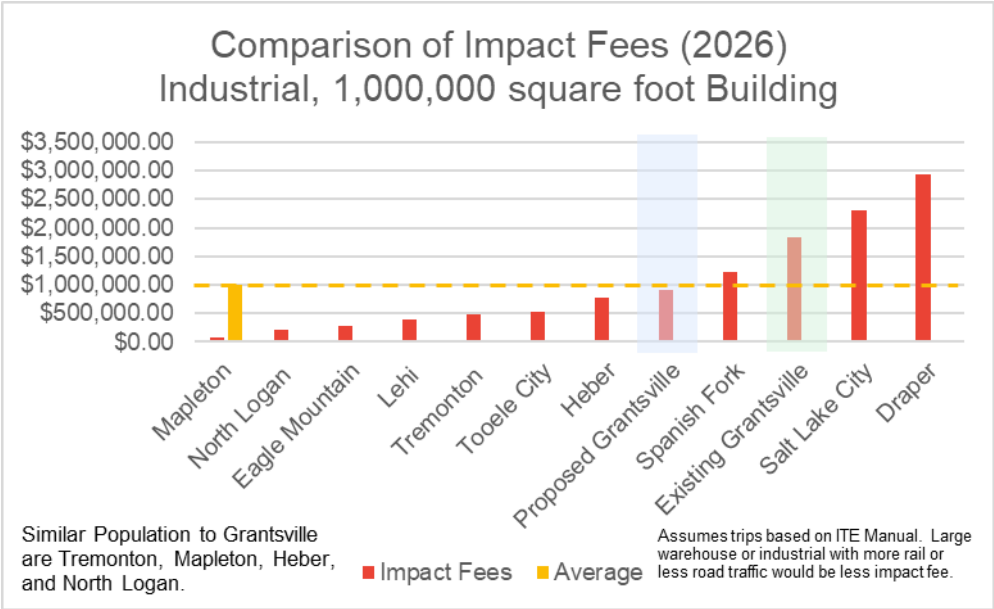


Storm Drainage

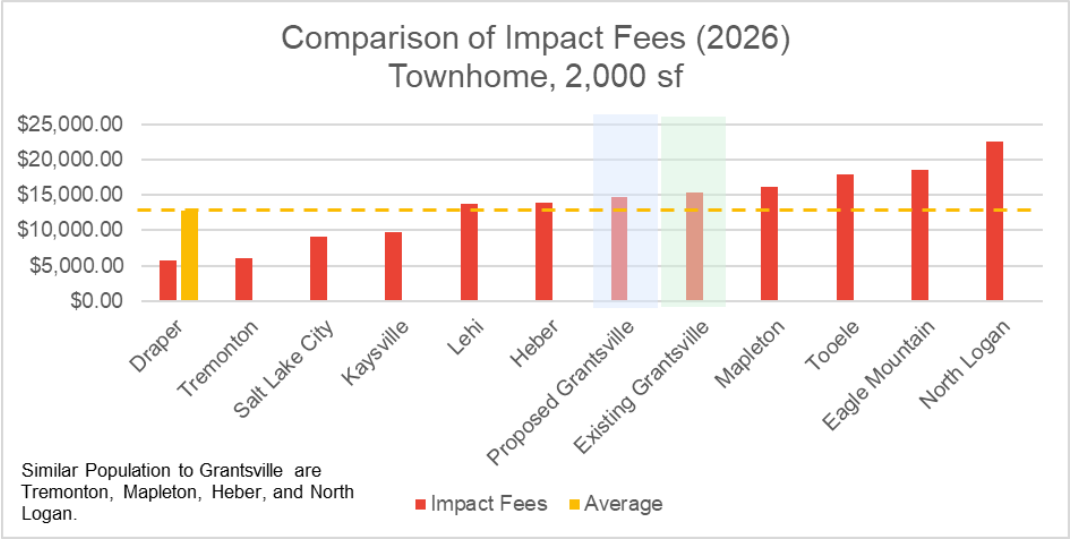
- Impact Fees
  - Not Applicable because Capital Improvement Projects address existing deficiencies.
  - Developers typically also construct improvements necessary to meet the level of service.
  - Does the City want to charge impact fees and storm water user fees in the future for improvements associated with flood plain mapping once updated?

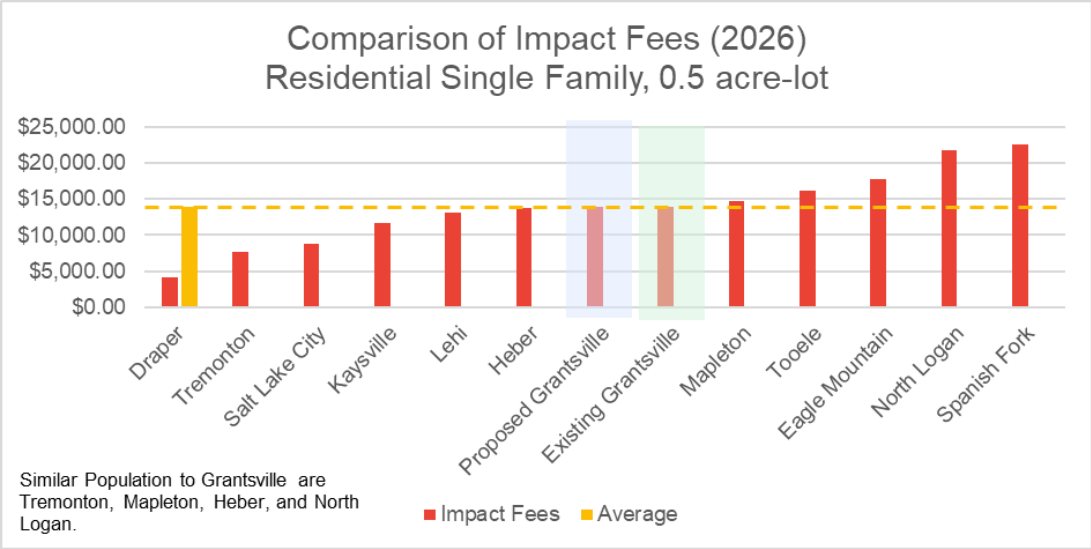
Impact Fee Comparisons



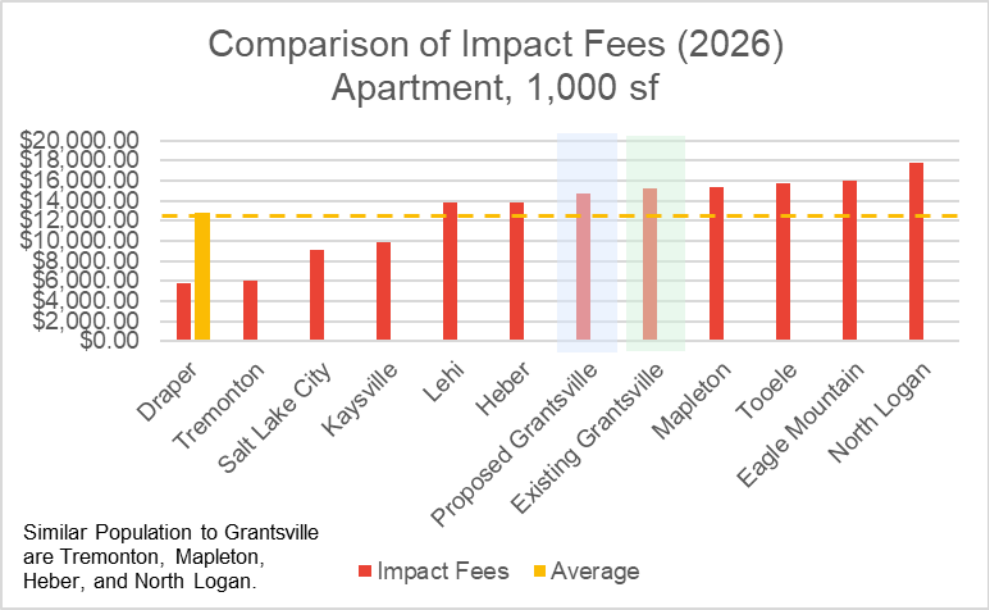


Impact Fee Comparisons





Impact Fee Comparisons



Agenda Item # 11

Public Hearing Item: Consideration of Ordinance 2026-18 approving amendments to the Grantsville City Land Use and Management Code Chapters 4, 6, 7, 8, 9, 14, 15, 16, 20, and 21

GRANTSVILLE
ORDINANCE 2026-18

AN ORDINANCE OF GRANTSVILLE CITY APPROVING AMENDMENTS TO CHAPTERS 4, 6, 7, 8, 9, 14, 15, 16, 20, AND 21 OF THE GRANTSVILLE CITY LAND USE AND MANAGEMENT CODE

WHEREAS, Grantsville City (the "City") is authorized pursuant to Utah law to adopt and amend land use regulations to promote the health, safety, and general welfare of its residents; and

WHEREAS, the City has undertaken a review of Chapters 4, 6, 7, 8, 9, 14, 15, 16, 20, and 21 of the Grantsville City Land Use and Management Code (the "Code"); and

WHEREAS, the proposed amendments include the removal of certain provisions, the addition of new provisions, and other clarifying revisions intended to improve the organization, clarity, and administration of the Code; and

WHEREAS, the Planning Commission reviewed the proposed amendments and provided a recommendation to the City Council on March 17th, 2026; and

WHEREAS, the City Council finds that the proposed amendments are in the best interest of the public health, safety, and welfare of the residents of Grantsville City;

NOW THEREFORE, be it ordained by the Council of the Grantsville, in the State of Utah, as follows:

SECTION 1: **AMENDMENT** "7.3 Site Plan And Permit Required" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

7.3 Site Plan And Permit Required

AFTER AMENDMENT

7.~~3~~4 Site Plan And Permit Required

SECTION 2: **AMENDMENT** "7.4 Fee" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

7.4 Fee

(1) The application for any conditional use permit shall be accompanied by the appropriate fee as determined by the City Council.

(2) Application fees are not refundable

AFTER AMENDMENT

7.~~4~~5 Fee

SECTION 3: **AMENDMENT** "7.6 Staff Report And Site Plan Report" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

7.6 Staff Report And Site Plan Report

Once the Zoning Administrator has determined that the application is complete, a Staff Report evaluating the conditional use application shall be prepared by the Community Development Director, Zoning Administrator, or their designee and forwarded to the Planning Commission along with a Site Plan Review Report prepared by the Community Development Director, Zoning Administrator, or their designee.

AFTER AMENDMENT

7.~~6~~7 Staff Report And Site Plan Report

SECTION 4: **REPEAL** "7.7 Public Hearing" of the Grantsville Land Use Ordinances is hereby *repealed* as follows:

BEFORE REPEAL

7.7 Public Hearing

A public hearing may be held if the Chairman of the Planning Commission shall deem a hearing to be necessary and in the public interest.

AFTER REPEAL

~~7.7 Public Hearing~~ *(Repealed)*

~~A public hearing may be held if the Chairman of the Planning Commission shall deem a~~

~~hearing to be necessary and in the public interest.~~

SECTION 5: **AMENDMENT** "4.16 Clear View Of Intersecting Streets" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

4.16 Clear View Of Intersecting Streets

A. For the purpose of providing adequate vision of vehicular and pedestrian traffic, a clear-view area shall be maintained at the intersection of every street, whether public or private street. The clear-view provisions are considered life-safety standards and shall supersede any conflicting provisions of this Code. . This Code applies to residential streets with speeds 25 mph or less. All sight triangles and clear view areas shall comply with the latest edition of the Geometric Design of Highway and Streets "Greenbook" by the American Association of State Highway and Transportation Officials.

B. No provision of this section shall be constructed to allow the continuance of any nonconforming tree, shurb, plant or plant growth, fence wall, other screening material, or other obstruction which interferes with the safety of pedestrians or vehicle traffic.

C. No obstruction to view in excess of three feet (3') in height shall be placed on any corner lot within a triangular area formed by the street property lines and line connecting them at points thirty feet (30') from the intersection of the street lines. Within that clear-view area, the following shall apply:

1. Solid fences, walls, signs, sight obscuring vegetation, and/or other sight obscuring devices shall not exceed three (3') feet in height above the level of the curb.
2. Open style fences shall not exceed four (4') feet in height above the level of the curb and front yard sold fencing shall not exceed three feet (3') in height.
3. Tree trunks shall not be located within the clear-view area, however, tree canopies may extend into the clear view area if they are trimmed at least seven (7) feet above the elevation of the sidewalk and eleven (11) feet above the elevation of the street. It is unlawful to allow any vegetation or other growth to block any traffic sign, traffic signal, street light, or other public safety device, regardless of whether it is located in a clear-view area or not.
4. No sign shall be allowed in the clear-view area unless it is specifically permitted in this Title and it is determined by the City Engineer that it is not a safety hazard.
5. No obstruction of any sort which interferes with the safety of pedestrians or traffic shall be allowed within the clear view area unless it is specifically permitted by this Title and it is determined by the City Engineer that it is not a safety hazard.

D. The clear view area for the intersection of a driveway and a street shall have no obstruction to view in excess of three feet (3') in height and shall be placed at any automobile access way

within the triangular area formed of points twelve feet (12') along the property line and twelve feet (12') along the driveway line. The driveway clear view fencing provisions may not be required on corner and double frontage lots for a secondary drive access that is gated, locked, and that accesses the rear yard, if it is determined by the City Engineer that the drive access is not a primary access.

E. Trees, shrubs that are located within the park strip must be thirty feet (30') from any traffic or street sign and must be pruned above the sidewalk seven feet (7') for pedestrian safety and above the road thirteen feet-six inches (13.6) for emergency and maintenance vehicles.

APPROVED TREE LIST FOR PARK STRIPS

a. *Acer platanoides 'Columnar'* (Columnar Maple)

b. *Celtis occidentalis* (Hackberry, Common, Prairie Pride, Chicagoland)

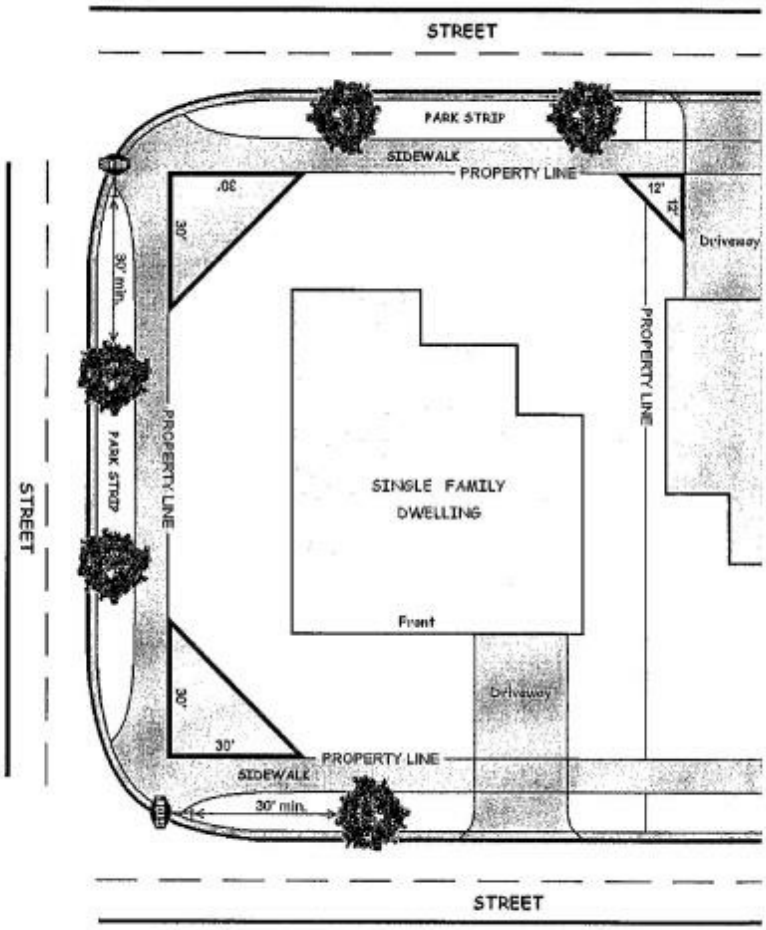
c. *ECorylus colluma* (Turkish Hazel)

d. *Fraxinus mandschurica* (Manchurian Ash)

e. *Ginkgo biloba* (Maidenhair tree, any hybrid variety)

f. *Quercus bicolor* (Swamp White Oak)

g. Tilia cordata (Littleleaf Linden)



AFTER AMENDMENT

4.16 Clear View Of Intersecting Streets

~~A~~(1)~~.~~ For the purpose of providing adequate vision of vehicular and pedestrian traffic, a clear-view area shall be maintained at the intersection of every street, whether public or private street. The clear-view provisions are considered life-safety standards and shall supersede any conflicting provisions of this Code. . This Code applies to residential streets with speeds 25 mph or less. All sight triangles and clear view areas shall comply with the latest edition of the

Geometric Design of Highway and Streets “Greenbook” by the American Association of State Highway and Transportation Officials.

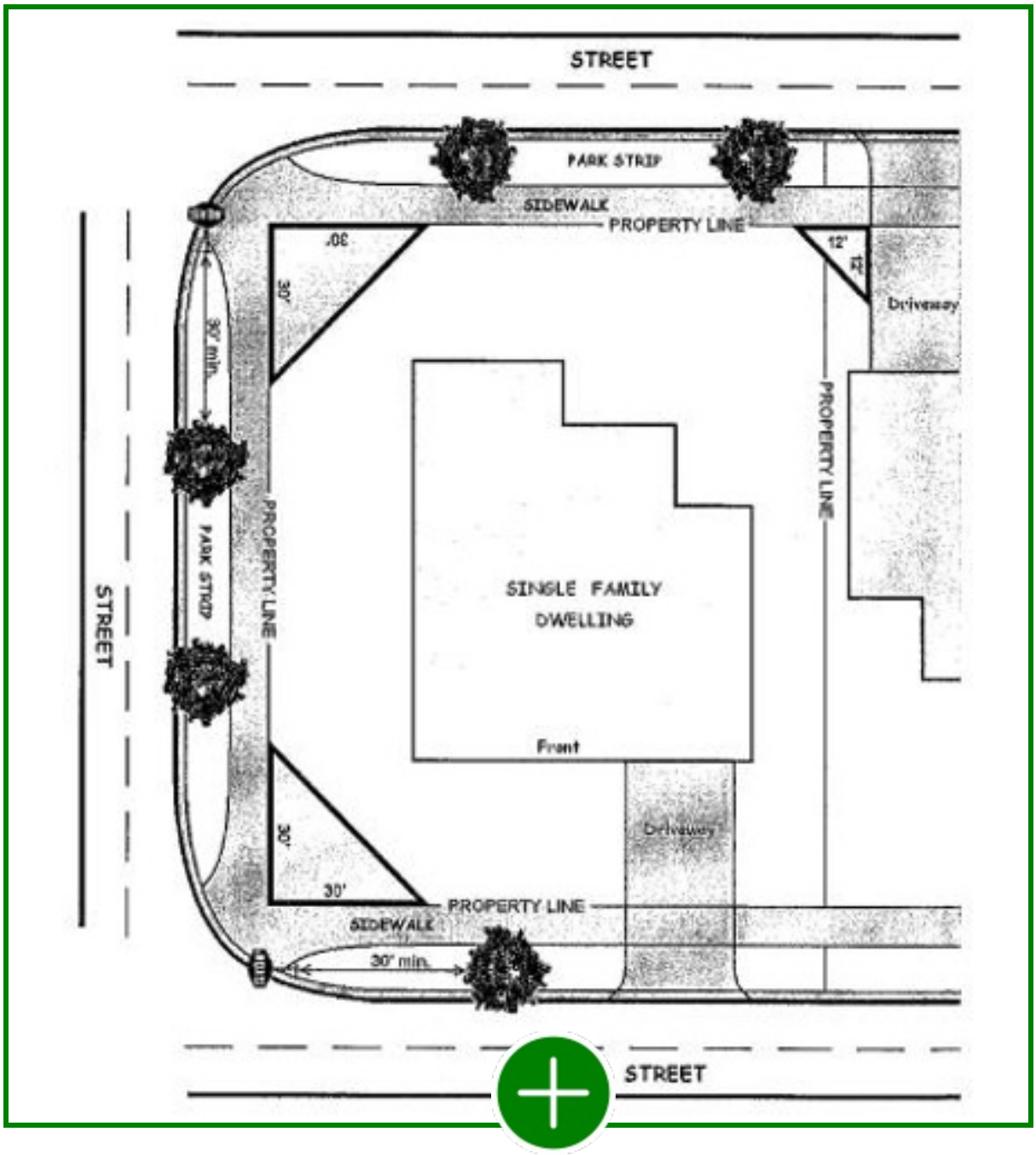
~~B.~~(2) No provision of this section shall be constructed to allow the continuance of any nonconforming tree, shurb, plant or plant growth, fence wall, other screening material, or other obstruction which interferes with the safety of pedestrians or vehicle traffic.

~~C.~~(3) No obstruction to view in excess of three feet (3') in height shall be placed on any corner lot within a triangular area formed by the street property lines and line connecting them at points thirty feet (30') from the intersection of the street lines. Within that clear-view area, the following shall apply:

(a) Solid fences, walls, signs, sight obscuring vegetation, and/or other sight obscuring devices shall not exceed three (3') feet in height above the level of the curb.
(b) Open style fences shall not exceed four (4') feet in height above the level of the curb and front yard sold fencing shall not exceed three feet (3') in height.
(c) Tree trunks shall not be located within the clear-view area, however, tree canopies may extend into the clear view area if they are trimmed at least seven (7) feet above the elevation of the sidewalk and eleven (11) feet above the elevation of the street. It is unlawful to allow any vegetation or other growth to block any traffic sign, traffic signal, street light, or other public safety device, regardless of whether it is located in a clear-view area or not.
(d) No sign shall be allowed in the clear-view area unless it is specifically permitted in this Title and it is determined by the City Engineer that it is not a safety hazard.
(e) No obstruction of any sort which interferes with the safety of pedestrians or traffic shall be allowed within the clear view area unless it is specifically permitted by this Title and it is determined by the City Engineer that it is not a safety hazard.

~~D.~~(4) The clear view area for the intersection of a driveway and a street shall have no obstruction to view in excess of three feet (3') in height and shall be placed at any automobile access way within the triangular area formed of points twelve feet (12') along the property line and twelve feet (12') along the driveway line. The driveway clear view fencing provisions may not be required on corner and double frontage lots for a secondary drive access that is gated, locked, and that accesses the rear yard, if it is determined by the City Engineer that the drive access is not a primary access.

~~E.~~ (5) Trees, shrubs that are located within the ~~park strip~~ must be thirty feet (30') from any traffic or street sign and must be pruned above [illegible] k seven feet (7') for pedestrian safety and above the road thirteen feet-six inches (13 [illegible] gency and maintenance vehicles.



SECTION 6: **<u>AMENDMENT</u>** "6.14.1 Driveway Construction Requirements" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

6.14.1 Driveway Construction Requirements

A. Driveway Construction

1. Driveways hereinafter constructed in the City shall be designed and constructed in conformance with this Chapter.
2. All driveways shall be hard surfaced, with a material approved by the City Engineer, and shall be designed and constructed to conform to current American Public Works Association ("APWA") standards as well as all standards developed by the City.
3. No building permit shall be issued for the erection or construction of a building unless all proposed driveways are reviewed and approved by the City.
4. No driveway or driveway approach shall be permitted to encompass any municipal facility, including but not limited to traffic signal standards, catch basins, fire hydrants, crosswalks, loading zones, storm drains, utility poles, fire alarm supports, meter boxes, manholes and sewer cleanouts.
    a. Any person, company, or enterprise found violating this Section shall be fined up to $1,000 per violation, and subject to all other fines and penalties found in this Chapter and allowed by law, including GCC 17-1-6.
    b. Any person, company or enterprise found violating this Section, in addition to any penalties found in 6.14(A)(4)(a), shall be liable for all costs repair or restore the municipal facility, all costs to remove, relocate, or bring into compliance the offending driveway or driveway approach, and all actual damages to real property caused by the offense.
5. Variations from the requirements of this Chapter may only be approved by the City Council.

AFTER AMENDMENT

6.14.1 Driveway Construction Requirements

(1) Driveway Construction

(a) Driveways hereinafter constructed in the City shall be designed and constructed in conformance with this Chapter.

(b) All driveways shall be hard surfaced, with a material approved by the City Engineer, and shall be designed and constructed to conform to current American Public Works Association ("APWA") standards as well as all standards developed by the City.

(c) No building permit shall be issued for the erection or construction of a building unless all proposed driveways are reviewed and approved by the City.

(d) No driveway or driveway approach shall be permitted to encompass any municipal facility, including but not limited to traffic signal standards, catch basins, fire hydrants, crosswalks, loading zones, storm drains, utility poles, fire alarm supports, meter boxes, manholes and sewer cleanouts.

(i) Any person, company, or enterprise found violating this Section shall be fined up to $1,000 per violation, and subject to all other fines and penalties found in this Chapter and allowed by law, including GCC 17-1-6.

(ii) Any person, company or enterprise found violating this Section, in addition to any penalties found in 6.14(A)(4)(a), shall be liable for all costs repair or restore the municipal facility, all costs to remove, relocate, or bring into compliance the offending driveway or driveway approach, and all actual damages to real property caused by the offense.

(e) ~~Variations from the requirements of this Chapter may only be approved by the City Council.~~

SECTION 7: **<u>AMENDMENT</u>** "6.14 Driveway Regulations" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

6.14 Driveway Regulations

6.14 <u>Purpose</u>

A. Purpose

1. The safety and efficiency of a roadway is impacted by the amount and type of interference experienced by the vehicles moving on it. Some interference may result from other vehicles on the roadway, moving in either the same or the opposite direction. The major form of interference, however, is from vehicles entering, leaving, or crossing the roadway at intersecting streets and driveways. In order to reduce interference with traffic flow, minimize accidents and assure the best overall utilization of the roadway of the motoring public, it is necessary to regulate vehicles entering and leaving roadside developments and intersecting streets.
2. Grantsville City recognizes the legal rights of abutting property owners to have access to their property. However, it must also consider the right of other roadway users to travel with relative safety and freedom from interference. Since these rights are at time in conflict, it is the City's responsibility to reconcile and, to the extent feasible, satisfy the needs and desires of all roadway users.

AFTER AMENDMENT

6.14 Driveway Regulations

6.14 <u>Purpose</u>

(1) Purpose

(a) The safety and efficiency of a roadway is impacted by the amount and type of interference experienced by the vehicles moving on it. Some interference may result from other vehicles on the roadway, moving in either the same or the opposite direction. The major form of interference, however, is from vehicles entering, leaving, or crossing the roadway at intersecting streets and driveways. In order to reduce interference with traffic flow, minimize accidents and assure the best overall utilization of the roadway of the motoring public, it is necessary to regulate vehicles entering and leaving roadside developments and intersecting streets.

(b) Grantsville City recognizes the legal rights of abutting property owners to have access to their property. However, it must also consider the right of other roadway users to travel with relative safety and freedom from interference. Since these rights are at time in conflict, it is the City's responsibility to reconcile and, to the extent feasible, satisfy the needs and desires of all roadway users.

SECTION 8: **AMENDMENT** "6.14.2 Secondary Access Permit Required" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

6.14.2 Secondary Access Permit Required

A. Permit

1. A driveway permit is required prior to the construction of a secondary access to any lot.
2. Construction of a secondary driveway access may be permitted with a driveway approach permit and payment of applicable fees, as designated in the City's Fee Schedule.
3. Applicants shall demonstrate that traffic safety, sight distances, and character of the neighborhood is not adversely impacted and shall comply with the design standards set forth in this Chapter.
4. Grantsville City's Engineer may deny any proposed driveway that violates any part of this Chapter.
5. The driveway approach for a secondary access must be inspected by Grantsville City prior to driveway construction, including the pouring of concrete or road base. The construction requirements must be in compliance with APWA standards, as applicable.

AFTER AMENDMENT

6.14.2 Secondary Access Permit Required

(1) Permit

(a) A driveway permit is required prior to the construction of a secondary access to any lot.

(b) Construction of a secondary driveway access may be permitted with a driveway approach permit and payment of applicable fees, as designated in the City's Fee Schedule.

(c) Applicants shall demonstrate that traffic safety, sight distances, and character of the neighborhood is not adversely impacted and shall comply with the design standards set forth in this Chapter.

(d) Grantsville City's Engineer may deny any proposed driveway that violates any part of this Chapter.

(e) The driveway approach for a secondary access must be inspected by Grantsville City prior to driveway construction, including the pouring of concrete or road base. The construction requirements must be in compliance with APWA standards, as applicable.

(2) Requirements: (a) Minimum Frontage; A lot must have a minimum frontage of 150 feet to qualify for a secondary access permit. (b) Driveway Width; Driveway approaches located in front or corner yards shall not exceed thirty feet (30') in width. (c) Parking Compliance; All required parking spaces located elsewhere on the lot shall comply with the applicable parking standards of this Chapter. (d) Parkway Parking Prohibited; No parkway or public right-of-way adjacent to or near the lot may be used for parking. (e) Number and Total Width of Driveway Approaches. (i) No more than two (2) driveway approaches are permitted. (ii) The combined width of two or more driveway approaches may not exceed one-third (1/3) of the lot frontage along which the approaches are constructed. (iii) A minimum separation of twelve feet (12') shall be maintained between driveway approaches, excluding flares. (f) Access to Arterial or Collector Streets; A secondary driveway shall not access an arterial or collector street unless approved by both the City Engineer and the City Council. (g) Minimum Separation Requirements. (i) Driveways shall not be located closer than: (A) Twelve feet (12') to each other (not including flares); and (B) Sixty feet (60') from the point of intersection of any road or street right-of-way, measured from the back of sidewalk or property line to the edge of the driveway. (h) Circular Driveways; Circular driveways are permitted only on local residential streets. (i) A minimum lot frontage of one hundred and fifty feet (150') is required: For corner lots, a minimum spacing of thirty-five feet (35') from the curb line to the leading edge of the driveway is required. (j) Setback from Property Lines; A secondary driveway must be located no closer than ten feet (10') from any adjacent property line, measured from the property line to the edge of the driveway, excluding flares. (3) Secondary Access Permit – Approval Criteria (a) A Secondary Access Permit may be approved only if the City makes all of the following findings: (i) Compliance with Dimensional Standards. (ii) The proposed secondary access complies with all frontage, width, spacing, and setback requirements of this Code, including the minimum lot frontage, maximum driveway widths, minimum separation distances, and property-line setbacks. (iii) No Adverse Traffic or Safety Impacts. (iv) The secondary access will not create unsafe turning movements, sight-distance conflicts, queuing issues, or other traffic hazards for vehicles,

pedestrians, cyclists, or adjacent properties, as determined by the City Engineer. (v) Street Classification Compatibility. (vi) The secondary access does not connect to an arterial or collector street unless specifically approved by both the City Engineer and the City Council. (vii) No Use of Parkway or Right-of-Way for Parking. (viii) The proposal does not rely on or encourage parking within any parkway or public right-of-way adjacent to or near the lot. (ix) No Increase in On-Street Congestion. (x) The secondary access will not increase on-street congestion, block travel lanes, or interfere with emergency access. (xi) Adequate On-Site Parking and Circulation. (xii) All required parking is provided on the lot in compliance with this Chapter, and the secondary access improves or maintains safe on-site circulation rather than creating conflicts. (xiii) No Negative Impact on Adjacent Properties. (xiv) The location and design of the secondary access will not create drainage, noise, lighting, or traffic impacts that adversely affect neighboring properties. (xv) Driveway Design Meets City Standards. (xvi) The driveway approach, surfacing, slope, drainage, and construction materials comply with City engineering standards and specifications. (xvii) Consistency with Purpose of Secondary Access. (xviii) The secondary access is necessary to improve site circulation, reduce congestion, enhance safety, or accommodate unique lot conditions, and is not requested solely for convenience or to increase parking beyond what is permitted.

SECTION 9: **AMENDMENT** "6.14.3 Tempering With City Infrastructure" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

6.14.3 Tempering With City Infrastructure

A. Damage to City Property
    1. It shall be unlawful for any person or firm to construct, cut, break out, or remove any curb along a public street, alley or right-of-way without prior authorization by the City Engineer and City Public Works Director.
    2. No person or firm shall remove, alter, or construct any curb, driveway, gutter, pavement or perform any other improvement in a public street or other property owned by or dedicated to the City without first obtaining a permit or prior authorization from the City Public Works Director authorizing such improvements.
B. Penalties
    1. Failure to secure a permit of authorization as described in this Chapter, or failure to construct a driveway in the manner described herein, is a violation of this Chapter and may result in a penalty of fifty dollars ($50.00) per violation, per day.

a. Prior to the issuance of any monetary penalty, the City shall provide the offender written notification of violation and permit the offender at least fourteen (14) days to come into compliance.
b. The City shall be required to notify the offender that he has the right to appeal the notice of violation to the Grantsville City Council. All decisions of the City Council shall be final.

AFTER AMENDMENT

6.14.3 Tempering With City Infrastructure

(1) Damage to City Property
    (a) It shall be unlawful for any person or firm to construct, cut, break out, or remove any curb along a public street, alley or right-of-way without prior authorization by the City Engineer and City Public Works Director.
    (b) No person or firm shall remove, alter, or construct any curb, driveway, gutter, pavement or perform any other improvement in a public street or other property owned by or dedicated to the City without first obtaining a permit or prior authorization from the City Public Works Director authorizing such improvements.
(2) Penalties
    (a) Failure to secure a permit of authorization as described in this Chapter, or failure to construct a driveway in the manner described herein, is a violation of this Chapter and may result in a penalty of fifty dollars ($50.00) per violation, per day.
        (i) Prior to the issuance of any monetary penalty, the City shall provide the offender written notification of violation and permit the offender at least fourteen (14) days to come into compliance.
        (ii) The City shall be required to notify the offender that he has the right to appeal the notice of violation to the Grantsville City Council. All decisions of the City Council shall be final.

SECTION 10: **<u>AMENDMENT</u>** "6.14.4 Driveway Location" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

6.14.4 Driveway Location

A. Streets and Roadways
    1. Driveways for off-street parking shall be located on streets designated as local, residential, or main street unless otherwise permitted herein.
    2. Driveways accessing arterial, rural, or collector streets require pre-authorization approval from the City Council prior to construction.

a. Approval will be granted only if access to the property off another road is impossible or overly burdensome.

3. Driveways shall not be constructed along the acceleration or deceleration lanes and tapers connecting to interchange ramp terminals.

B. Shared Access

1. Shared access driveways between adjacent lots are hereby encouraged.

C. Right-of-Way

1. Driveways, including the radii, but not including right-turn lanes, passing lanes, and tapers, shall be located entirely within the applicant's right-of-way frontage. This right-of-way frontage is determined by projecting the lot lines to the edge of pavement of the road. Encroachment of curb and radii on adjacent right-of-way frontage shall be permitted only upon written certifications from the adjacent property owner(s) (agreeing to such encroachment) and upon written confirmation from the City that the City has determined that such encroachment is necessary to preserve safe roadway conditions.

AFTER AMENDMENT

6.14.4 Driveway Location

(1) Streets and Roadways

(a) Driveways for off-street parking shall be located on streets designated as local, residential, or main street unless otherwise permitted herein.

(b) Driveways accessing arterial, rural, or collector streets require pre-authorization approval from the ~~City Council~~ Planning Commission prior to construction.

(i) Approval will be granted only if access to the property off another road is impossible or overly burdensome.

(c) Driveways shall not be constructed along the acceleration or deceleration lanes and tapers connecting to interchange ramp terminals.

(2) Shared Access; Shared access driveways between adjacent lots are hereby encouraged.

~~(a) Shared access driveways between adjacent lots are hereby encouraged.~~

(3) Right-of-Way; Driveways, including the radii, but not including right-turn lanes, passing lanes, and tapers, shall be located entirely within the applicant's right-of-way frontage. This right-of-way frontage is determined by projecting the lot lines to the edge of pavement of the road. Encroachment of curb and radii on adjacent right-of-way frontage shall be permitted only upon written certifications from the adjacent property owner(s) (agreeing to such encroachment) and upon written confirmation from the City that the City has determined that such encroachment is necessary to preserve safe roadway conditions.

~~(a) Driveways, including the radii, but not including right-turn lanes, passing lanes, and tapers, shall be located entirely within the applicant's right-of-way frontage. This right-of-way frontage is determined by projecting the lot lines to the edge of pavement of the road. Encroachment of curb and radii on adjacent~~

~~right-of-way frontage shall be permitted only upon written certifications from the adjacent property owner(s) (agreeing to such encroachment) and upon written confirmation from the City that the City has determined that such encroachment is necessary to preserve safe roadway conditions.~~

SECTION 11: **<u>AMENDMENT</u>** "6.14.5 Residential Districts" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

6.14.5 Residential Districts

A. Residential Districts
   1. The following restrictions shall apply to single family detached, single family attached and two family dwellings:
      a. Parking on driveways located between the front or corner side lot line and building shall not be allowed for satisfying the requirements stated in this Chapter.
      b. Unless an exception is granted by the City Council, driveway approaches in front and corner yards shall not be greater than thirty feet (30') in width.
      c. The provision of parking spaces elsewhere on the lot shall conform to the other applicable requirements of this Chapter. Requirements for garages shall be specified in each zoning district regulations.
      d. No parkway right-of-way adjacent to or near the lot shall be used for parking.
      e. For each single-family residential lot no more than two driveway approaches shall be permitted. In all instances, the total width of two or more driveway approaches may not exceed one-third of the lot frontage in which the drive approaches are constructed. A drive approach shall have a minimum width of twelve feet (12') between them, not including flares.
      f. The second driveway cannot access an arterial or collector street, unless approved by the City Engineer and City Council.
      g. Driveways shall not be closer than:
         (1) Twelve feet (12') to each other; and
         (2) Sixty feet (60') along the right of ways to a point of a road or street right-of-way intersection as measured from back of sidewalk or property line to edge of driveway.
      h. Circular driveways shall only be permitted on local residential streets. A minimum lot frontage of one hundred feet (100') or greater is required of if located on a corner lot, at least thirty-five feet (35') of spacing from the curb line to the leading edge of the driveway.

i. Secondary driveways must be no closer than 10' from the adjacent property line, as measured from the property line to the edge of driveway, not including flares.

AFTER AMENDMENT

6.14.5 Residential Districts

(1) Residential Districts

(a) The following restrictions shall apply to ~~single family detached, single family attached and two family dwellings~~ all residential developments:

(i) Parking on driveways located between the front or corner side lot line and building shall not be allowed for satisfying the requirements stated in this Chapter.

(ii) Unless an exception is granted by the City Council, driveway approaches in front and corner yards shall not be greater than thirty feet (30') in width.

(iii) The provision of parking spaces elsewhere on the lot shall conform to the other applicable requirements of this Chapter. Requirements for garages shall be specified in each zoning district regulations.

(iv) No parkway right-of-way adjacent to or near the lot shall be used for parking.

(v) For each single-family residential lot no more than two driveway approaches shall be permitted. In all instances, the total width of two or more driveway approaches may not exceed one-third of the lot frontage in which the drive approaches are constructed. A drive approach shall have a minimum width of twelve feet (12') between them, not including flares.

(vi) The second driveway cannot access an arterial or collector street, unless approved by the City Engineer and City Council.

(vii) ~~Driveways~~ Drive approaches shall not be closer than:

A. Twelve feet (12') to each other; and

B. Sixty feet (60') along the right of ways to a point of a road or street right-of-way intersection as measured from back of sidewalk or property line to edge of driveway.

(viii) Circular driveways shall only be permitted on local residential streets. A minimum lot frontage of one hundred feet (100') or greater is required of if located on a corner lot, at least thirty-five feet (35') of spacing from the curb line to the leading edge of the driveway.

(ix) Secondary driveways must be no closer than 10' from the adjacent property line, as measured from the property line to the edge of driveway, not including flares.

SECTION 12: **<u>AMENDMENT</u>** "6.14.6 Commercial Or Industrial Districts" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

6.14.6 Commercial Or Industrial Districts

A. The following restrictions shall apply to all commercial or industrial district driveways:
    1. All driveways shall be paved in their entirety, using either concrete or asphalt.
    2. All driveways shall be constructed with concrete curb and gutter along the entire required entry and exit radii for the driveway.
    3. No more than two (2) driveways are permitted per street frontage for any parcel, tract, or development, including access to any and all property designated as out parcels to be leased or sold for future development.
        a. Exceptions: The City Engineer, in consultation with the City Public Works Director, may recommend to the City Planning Commission and City Council for their approval three driveways provided the parcel has at least one thousand feet (1000') of frontage and a Traffic Impact Analysis is performed by a qualified engineer at the property owner's expense, justifying an additional driveway.

AFTER AMENDMENT

6.14.6 Commercial Or Industrial Districts

(1) The following restrictions shall apply to all commercial or industrial district driveways:
    (a) All driveways shall be paved in their entirety, using either concrete or asphalt.
    (b) All driveways shall be constructed with concrete curb and gutter along the entire required entry and exit radii for the driveway.
    (c) No more than two (2) driveways are permitted per street frontage for any parcel, tract, or development, including access to any and all property designated as out parcels to be leased or sold for future development.
        (i) Exceptions: The City Engineer, in consultation with the City Public Works Director, may recommend to the City Planning Commission and City Council for their approval three driveways provided the parcel has at least one thousand feet (1000') of frontage and a Traffic Impact Analysis is performed by a qualified engineer at the property owner's expense, justifying an additional driveway.

SECTION 13: **<u>AMENDMENT</u>** "6.14.7 Public Safety Access Driveway" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

6.14.7 Public Safety Access Driveway

A. Public Safety Access Driveway Required

1. The owner or developer of any new residence, occupied structure or commercial building or facility or portion thereof which is hereafter constructed or moved into the City, which is located more than one-hundred and fifty feet (150') from the City street or from an approved private street, shall be required to construct and maintain a public safety access driveway from the City street or private street to within one-hundred feet (100') of the residence, structure, building or facility and each part thereof, pursuant to the following standards:
    a. A public access driveway shall be constructed and maintained with an all-weather dustless surface that meets the requirements of the City for a standard residential street section. Said driveway shall also have constructed and maintained at its terminus, an emergency vehicle apparatus turnaround which shall comply with City's standards and specifications for public cul-de-sacs or the minimum specifications of the current International Fire Code or its appendices for dead-end fire apparatus access road turnarounds.
    b. If the public safety access driveway is more than 500 feet in length, it shall be constructed and maintained as provided for above, except that the base course shall be at least 26 feet wide.
    c. The distance from the public or private street to the residence, building, etc., shall be determined by a measurement along the private driveway from the street to the structure.
2. The public safety access driveway as required by this section shall be completed prior to the issuance of an occupancy permit. The owner of the property shall ensure that the public safety access driveway is maintained pursuant to the standards set forth in this Section and failure to maintain the same shall be guilty of an Infraction.

AFTER AMENDMENT

6.14.7 Public Safety Access Driveway

(1) Public Safety Access Driveway Required

(a) The owner or developer of any new residence, occupied structure or commercial building or facility or portion thereof which is hereafter constructed or moved into the City, which is located more than one-hundred and fifty feet (150') from the City street or from an approved private street, shall be required to construct and maintain a public safety access driveway from the City street or private street to within one-hundred feet (100') of the residence, structure, building or facility and each part thereof, pursuant to the following standards:

(i) A public access driveway shall be constructed and maintained with an all-weather dustless surface that meets the requirements of the City for a standard residential street section. Said driveway shall also have constructed and maintained at its terminus, an emergency vehicle apparatus turnaround which shall comply with City's standards and specifications for public cul-de-sacs or the minimum specifications of the current International Fire Code or its appendices for dead-end fire apparatus access road turnarounds.

(ii) If the public safety access driveway is more than 500 feet in length, it shall be constructed and maintained as provided for above, except that the base course shall be at least 26 feet wide.

(iii) The distance from the public or private street to the residence, building, etc., shall be determined by a measurement along the private driveway from the street to the structure.

(b) The public safety access driveway as required by this section shall be completed prior to the issuance of an occupancy permit. The owner of the property shall ensure that the public safety access driveway is maintained pursuant to the standards set forth in this Section and failure to maintain the same shall be guilty of an Infraction.

SECTION 14: **ADOPTION** "7.3 Approval Criteria" of the Grantsville Land Use Ordinances is hereby *added* as follows:

BEFORE ADOPTION

7.3 Approval Criteria (Non-existent)

AFTER ADOPTION

7.3 Approval Criteria*(Added)*

A Conditional Use Permit shall be approved if reasonable conditions can be imposed to mitigate or eliminate the reasonably anticipated detrimental impacts of the proposed use. If the Planning Commission, or upon authorization the Community Development Director, Zoning Administrator, or their designee, determines that the detrimental impacts of the proposed use cannot be substantially mitigated through reasonable conditions, the application shall be denied. The burden of demonstrating compliance with applicable standards rests with the applicant.

SECTION 15: **AMENDMENT** "7.5 Application" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

7.5 Application

(1) The Planning Commission may authorize the Community Development Director, Zoning Administrator, or their designee to grant, attach conditions to, or deny conditional use permits, subject to such limitations or qualifications as are deemed necessary. The Community Development Director, Zoning Administrator, or their designee is also authorized to issue conditional use permits for family food production, the raising of animals and commercial uses in existing buildings, when appropriate, but may also defer any such application to the Planning Commission for its determination, in the sole discretion of the Community Development Director, Zoning Administrator, or their designee.

(2) The Community Development Director, Zoning Administrator, or their designee shall send out the appropriate notification for all conditional use permits. If comments are received that indicate a concern about the proposed conditional use, the conditional use shall be sent to Planning Commission for its consideration.

(3) The Community Development Director, Zoning Administrator, or their designee does not have authority to approve commercial conditional use permits requiring construction of new facilities or requiring exceptions or variances to the city ordinances and standards.

(4) All applications for a conditional use permit shall include:

(a) The applicant's name, address, telephone numbers and interest in the property;

(b) The owner's name, address and telephone number, if different than the applicant, and the owner's signed consent to the filing of the application;

(c) The street address and legal description of the subject property;

(d) The zoning classification, zoning district boundaries and present use of the subject property;

(e) A vicinity map with North, scale and date, indicating the zoning classifications and current uses of properties within 500 feet of the boundaries of the subject property. When a conditional use permit will be considered by the Planning Commission, the application shall also include a current plat map showing the names and addresses of all property owners appearing on the tax rolls of the Tooele County Assessor within 500 feet of the boundaries of the subject property.

(f) A plat or a survey of the parcel of land, lots block, blocks, or parts or portions thereof, drawn to scale, showing the actual dimensions of the piece or parcel, lot, lots, block, blocks, or portions thereof, according to the registered or recorded plat of such land;

(g) The proposed title of the project and the names, addresses and telephone numbers of the architect, landscape architect, planner or engineer on the project;

(h) A complete description of the proposed conditional use;

(i) A plan or drawing drawn to scale of twenty feet to the inch (20' = 1 inch) or larger which includes the following information of the proposed use:

i. actual dimensions of the subject property;

ii. exact sizes and location of all existing and proposed buildings or other structures;

iii. driveways;

iv. parking spaces;

v. safety curbs;

vi. landscaping;

vii. location of trash receptacles;

viii. drainage features and environmental features.

(j) Traffic Impact Analysis;

(k) Geotechnical Report;

(l) Sewer and Water Modeling

(m) A statement indicating whether the applicant will require a variance in connection with the proposed conditional use permit;

(n) mailing labels and first class postage for all property owners located within 500 feet of the subject property when a conditional use permit will be considered by the Planning Commission: and

(o)Such other further information or documentation as the Zoning Administrator may deem to be necessary for a full and proper consideration and disposition of the particular application.

Amended 01/03 by Ordinance 2003-02

AFTER AMENDMENT

7.~~5~~6 Application

(1) The Planning Commission may authorize the Community Development Director, Zoning Administrator, or their designee to grant, attach conditions to, or deny conditional use permits, subject to such limitations or qualifications as are deemed necessary. The Community Development Director, Zoning Administrator, or their designee is also authorized to issue

conditional use permits for family food production, the raising of animals and commercial uses in existing buildings, when appropriate, but may also defer any such application to the Planning Commission for its determination, in the sole discretion of the Community Development Director, Zoning Administrator, or their designee.

(2) The Community Development Director, Zoning Administrator, or their designee shall send out the appropriate notification for all conditional use permits. If comments are received that indicate a concern about the proposed conditional use, the conditional use shall be sent to Planning Commission for its consideration.

(3) The Community Development Director, Zoning Administrator, or their designee does not have authority to approve commercial conditional use permits requiring construction of new facilities or requiring exceptions or variances to the city ordinances and standards.

(4) All applications for a conditional use permit shall include:

(a) The applicant's name, address, telephone numbers and interest in the property;

(b) The owner's name, address and telephone number, if different than the applicant, and the owner's signed consent to the filing of the application;

(c) The street address and legal description of the subject property;

(d) The zoning classification, zoning district boundaries and present use of the subject property;

(e) A vicinity map with North, scale and date, indicating the zoning classifications and current uses of properties within 500 feet of the boundaries of the subject property. When a conditional use permit will be considered by the Planning Commission, the application shall also include a current plat map showing the names and addresses of all property owners appearing on the tax rolls of the Tooele County Assessor within 500 feet of the boundaries of the subject property.

(f) A plat or a survey of the parcel of land, lots block, blocks, or parts or portions thereof, drawn to scale, showing the actual dimensions of the piece or parcel, lot, lots, block, blocks, or portions thereof, according to the registered or recorded plat of such land;

(g) The proposed title of the project and the names, addresses and telephone numbers of the architect, landscape architect, planner or engineer on the project;

(h) A complete description of the proposed conditional use;

(i) A plan or drawing drawn to scale of twenty feet to the inch (20' = 1 inch) or larger which includes the following information of the proposed use:

i. actual dimensions of the subject property;

ii. exact sizes and location of all existing and proposed buildings or other structures;

iii. driveways;

iv. parking spaces;

v. safety curbs;

vi. landscaping;

vii. location of trash receptacles;

viii. drainage features and environmental features.

(j) Traffic Impact Analysis;

(k) Geotechnical Report;

(l) Sewer and Water Modeling

(m) A statement indicating whether the applicant will require a variance in connection with the proposed conditional use permit;

(n) mailing labels and first class postage for all property owners located within 500 feet of the subject property when a conditional use permit will be considered by the Planning Commission: and

(o)Such other further information or documentation as the Community Development Director, Zoning Administrator or their designee may deem to be necessary for a full and proper consideration and disposition of the particular application.

Amended 01/03 by Ordinance 2003-02

SECTION 16: **AMENDMENT** "7.9 Planning Commission Action" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

7.9 Planning Commission Action

The staff's written recommendation shall be considered at the meeting. At the conclusion of the meeting, the Planning Commission shall either

(1) approve the conditional use;

(2) approve the conditional use subject to specific modifications;

(3) postpone a decision pending consideration of additional information to be submitted by the applicant; or

(4) deny the conditional use.

AFTER AMENDMENT

7.9 Planning Commission Action

(1) The staff's written recommendation shall be considered at the meeting. A decision of the Planning Commission shall include findings of fact at the time of its ruling. At the conclusion of the meeting, the Planning Commission shall either

~~(1) approve the conditional use; (2) approve the conditional use subject to specific modifications; (3) postpone a decision pending consideration of additional information to be submitted by the applicant; or (4) deny the conditional use.~~

(a) approve the conditional use; (b) approve the conditional use subject to specific modifications; (c) postpone a decision pending consideration of additional information to be submitted by the applicant; or deny the conditional use.

SECTION 17: **AMENDMENT** "7.10 Effect Of Approval Of Conditional Use" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

7.10 Effect Of Approval Of Conditional Use

The approval of a proposed conditional use by the Planning Commission or the Community Development Director, Zoning Administrator, or their designee shall not authorize the establishment or extension of any use nor the development, construction, reconstruction, alteration or moving of any building or structure, but shall merely authorize the preparation, filing and processing of applications for any permits or approvals that may be required by the regulations of the City, including but not limited to a Building Permit, Certificate of Occupancy and subdivision approval.

AFTER AMENDMENT

7.10 Effect Of Approval Of Conditional Use

The approval of ~~a proposed~~ the conditional use by the Planning Commission, ~~or~~ the

Community Development Director, Zoning Administrator, or their designee ~~shall~~ does not authorize the establishment or extension of ~~any~~ the use ~~n~~or the development, construction, reconstruction, alteration or ~~moving~~ relocation of any building or structure, ~~but~~ Such approval shall merely authorize the preparation, filing and processing of applications for any permits or approvals that may be required by ~~the regulations of~~ the City, including but not limited to ~~a~~ Building Permits, Certificates of Occupancy and subdivision approval.

SECTION 18: **AMENDMENT** "7.14 Notification Required" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

7.14 Notification Required

When the Planning Commission considers an application for a conditional use permit at the work meeting, notification shall be sent by mail to all landowners appearing on the tax rolls of Tooele County Assessor that adjoin the property or within an area that the Planning Commission or the Community Development Director, Zoning Administrator, or their designee deems to be impacted. It is the intent to make notification to all landowners or residents in the area that may be directly impacted by the conditional use action.

Amended 01/03 by Ordinance 2003-02

AFTER AMENDMENT

7.14 Public Hearing and Notification Required

When the Planning Commission considers an application for a conditional use permit ~~at the work meeting,~~ notification shall be sent by mail to all landowners appearing on the tax rolls of Tooele County Assessor that adjoin the ~~property or~~ properties within 500 feet. ~~an area that the Planning Commission or the Community Development Director, Zoning Administrator, or their designee deems to be impacted.~~ It is the intent to make notification to all landowners or residents in the area that may be directly impacted by the conditional use action.

Amended 01/03 by Ordinance 2003-02

SECTION 19: **ADOPTION** "7.17 Proposed Uses Not Listed In The Use Table" of the Grantsville Land Use Ordinances is hereby *added* as follows:

BEFORE ADOPTION

7.17 Proposed Uses Not Listed In The Use Table (Non-existent)

AFTER ADOPTION

7.17 Proposed Uses Not Listed In The Use Table*(Added)*

(1) When a proposed land use is not expressly listed as a permitted, conditional, or prohibited use within the applicable zoning district, the applicant may request a determination of use classification pursuant to this section. (2) Upon receipt of a complete request, the Community Development Director, Zoning Administrator, or their designee shall evaluate the proposed use based on the following factors: (a) similarity in nature, scale, intensity, and operational characteristics to existing listed uses; (b) compatibility with the purpose and intent of the zoning district; (c) consistency with the General Plan and Future Land Use Map; (d) potential impacts on surrounding properties; and (e) whether the use is reasonably anticipated to require conditions to mitigate detrimental impacts. (3) The Community Development Director, Zoning Administrator, or their designee may issue a written determination classifying the proposed use as: (a) a permitted use; (b) a conditional use; or (c) a prohibited use. (4) The determination shall include written findings supporting the classification. (5) If the proposed use cannot be reasonably classified under existing categories, the applicant may petition the City to amend the use table or create a new use category. Such amendments shall follow the procedures for legislative land use amendments, including public hearings and City Council approval. (6) Any determination made under this section may be appealed in accordance with Chapter 7.11.

SECTION 20: **AMENDMENT** "8.1 Home Occupations" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

8.1 Home Occupations

(1) All home occupations whether allowed as a permitted use, or as a conditional use, shall comply with the following standards:

(a) The home occupation must be clearly incidental and secondary to the primary use of the dwelling for residential purposes;

(b) Under appropriate circumstances up to fifty percent of the usable floor space of a

residence may be used for a home occupation, provided said home occupation does not change the character or primary use of the dwelling for residential purposes;

(c) A home occupation is generally intended to involve persons residing at the location where a home occupation is conducted. Non-residents may be allowed to participate in a home occupation when deemed appropriate by the Planning Commission as a part of a conditional use permit. The character of the home occupation and the neighborhood in which it is located shall be considered in granting any such conditional use permit. Appropriate conditions shall insure that any impacts upon the neighborhood are mitigated, which conditions may include adequate off-street parking. (Amended 1/99)

(d) The residence must be the principal residence of the applicant;

(e) Tools, items, equipment or occupations which are offensive or noxious by reason of the emission of odor, smoke, gas, vibration, magnetic interference or noise are prohibited;

(f) Stock in trade, inventory or other merchandise shall be allowed to be kept only in one room of the dwelling and limited to 100 square feet of floor space;

(g) Except for home occupation businesses authorized by a conditional use permit, no clients or customers shall come to the home nor shall any additional vehicular traffic or parking needs be generated.

(h) The home shall not require any internal alterations other than those necessary for a home occupation approved as a conditional use, nor any external alterations to the residence, nor provide any visible evidence from the exterior that the building is being used for any other purpose than that of a residence;

(i) Only one non-illuminated name plate, not exceeding two hundred square inches, and mounted flat against building; and

(j) Except for home occupations authorized by a conditional use permit, no advertising by any method shall identify the home address.

(2) The following activities shall be permitted as home occupations that only require the approval of the Community Development Director, Zoning Administrator, or their designee :

(a) Artists, illustrators, writers, photographers, editors, drafters, publishers;

(b) Consultants, private investigators, field representatives and other similar activities where the entire work of the business, except for record keeping and telephone, are conducted off of the premises; and

(c) Bookkeeping and other similar computer activities.

(d) Home occupations that require a client to come to the home for service including barbers, beauticians, tax accountants, home instruction of musical instruments, voice and

educational subjects and similar or professional services. Physicians, therapists or other health care providers must obtain approval of a home occupation permit from the Planning Commission. (Amended 5/02)

(3) Repealed (Reserved for Future Use). (Amended 5/02)

(4) Applications for home occupation permits shall be filed with the Community Development Director, Zoning Administrator, or their designee. The applications shall include the following information:

(a) The names and addresses of all residents within an three hundred (300) foot radius of the property (exclusive of intervening streets and alleys) and their signatures, when possible, stating whether they support or oppose the home occupation proposed;

(b) The expected number of clients per day; (Amended 6/00)

(c) A description of the type of business proposed;

(d) A listing of the individuals at the home who will be working on the business;

(e) The expected hours of operation of the business; and

(f) If the business is conducted in an apartment, the application must also be approved by the apartment management.

(5) Upon receipt of an application for a home occupation, the Community Development Director, Zoning Administrator, or their designee shall make a determination of the completeness. If the application is determined to be complete, the Community Development Director, Zoning Administrator, or their designee shall approve or deny the application, or forward it to the Planning Commission for a conditional use permit.

(6) The Community Development Director, Zoning Administrator, or their designee shall issue a permit for the home occupation if they finds that the:

(a) provisions of this Ordinance are satisfied;

(b) proposed home occupation will be in keeping with the character of the neighborhood and will not adversely affect the desirability or stability of the neighborhood;

(c) proposed home occupation does not diminish the use and enjoyment of adjacent properties or create an adverse traffic or parking impact on adjacent streets or properties;

(d) proposed home occupation will not negatively impact the future use of the property as a residence;

(e) proposed home occupation will not adversely affect the public health, safety or welfare; and

(f) proposed home occupation conforms with all fire, building, plumbing, electrical and health codes.

(7) If the application is forwarded to the Planning Commission for special consideration before issuing a conditional use permit, the Planning Commission shall consider the application and approve with conditions or deny the application in accordance with the procedures and standards set forth in chapter 7, Conditional Use Permits.

(8) The Planning Commission, or the City Council, and Community Development Director, Zoning Administrator, or their designee, in the case of home occupations authorized by this chapter, may terminate any permit for a home occupation use upon making findings that support either or both of the following conclusions:

(a) any of the required licenses or permits necessary for the operation of the business have been revoked or suspended;

(b) violation or disregard of any condition issued in approval of the permit; or

(c) violation of any of the provisions of this Ordinance anywhere on the property.

(9) Any termination of a home occupation conditional use permit may be appealed to the Planning Commission if such appeal is made 30 days following the date of termination. Any person adversely affected by the denial or issuance of a home occupation conditional use permit may appeal that decision to the Planning Commission pursuant to chapter 3.23.

(10) Existing licenses for home occupations which were legal under the prior ordinance regulating home occupations but which are not permitted under this Ordinance may be kept and reissued for subsequent years.

(11) Home occupation conditional use permits issued under this Ordinance are personal to the applicant, non-transferable and do not run with the land.

Amended 05/02 by Ordinance 2002-06, 01/03 by Ordinance 2003-02

AFTER AMENDMENT

8.1 Home Occupations

~~(1) All home occupations whether allowed as a permitted use, or as a conditional use, shall comply with the following standards:(a) The home occupation must be clearly incidental and secondary to the primary use of the dwelling for residential purposes;(b) Under appropriate circumstances up to fifty percent of the usable floor space of a residence may be used for a home occupation, provided said home occupation does not change the character or primary use of the dwelling for residential purposes;(c) A home occupation is generally intended to involve persons residing at the location where a home occupation is conducted. Non-residents may be allowed to participate in a home occupation when deemed appropriate by the Planning Commission as a part of a conditional use permit. The character of the home occupation and~~

~~the neighborhood in which it is located shall be considered in granting any such conditional use permit. Appropriate conditions shall insure that any impacts upon the neighborhood are mitigated, which conditions may include adequate off-street parking. (Amended 1/99)(d) The residence must be the principal residence of the applicant;(e) Tools, items, equipment or occupations which are offensive or noxious by reason of the emission of odor, smoke, gas, vibration, magnetic interference or noise are prohibited;(f) Stock in trade, inventory or other merchandise shall be allowed to be kept only in one room of the dwelling and limited to 100 square feet of floor space;(g) Except for home occupation businesses authorized by a conditional use permit, no clients or customers shall come to the home nor shall any additional vehicular traffic or parking needs be generated.(h) The home shall not require any internal alterations other than those necessary for a home occupation approved as a conditional use, nor any external alterations to the residence, nor provide any visible evidence from the exterior that the building is being used for any other purpose than that of a residence;(i) Only one non-illuminated name plate, not exceeding two hundred square inches, and mounted flat against building; and(j) Except for home occupations authorized by a conditional use permit, no advertising by any method shall identify the home address.(2) The following activities shall be permitted as home occupations that only require the approval of the Community Development Director, Zoning Administrator, or their designee :(a) Artists, illustrators, writers, photographers, editors, drafters, publishers;(b) Consultants, private investigators, field representatives and other similar activities where the entire work of the business, except for record keeping and telephone, are conducted off of the premises; and(c) Bookkeeping and other similar computer activities.(d) Home occupations that require a client to come to the home for service including barbers, beauticians, tax accountants, home instruction of musical instruments, voice and educational subjects and similar or professional services. Physicians, therapists or other health care providers must obtain approval of a home occupation permit from the Planning Commission. (Amended 5/02)(3) Repealed (Reserved for Future Use). (Amended 5/02)(4) Applications for home occupation permits shall be filed with the Community Development Director, Zoning Administrator, or their designee. The applications shall include the following information:(a) The names and addresses of all residents within an three hundred (300) foot radius of the property (exclusive of intervening streets and alleys) and their signatures, when possible, stating whether they support or oppose the home occupation proposed;(b) The expected number of clients per day; (Amended 6/00)(c) A description of the type of business proposed;(d) A listing of the individuals at the home who will be working on the business;(e) The expected hours of operation of the business; and(f) If the business is conducted in an apartment, the application must also be approved by the apartment management.(5) Upon receipt of an application for a home occupation, the Community Development Director, Zoning Administrator, or their designee shall make a determination of the completeness. If the application is determined to be complete, the Community Development Director, Zoning Administrator, or their designee shall approve or deny the application, or forward it to the Planning Commission for a conditional use permit.(6) The Community Development Director, Zoning Administrator, or their designee shall issue a permit for the home occupation if they finds that the:(a) provisions of this Ordinance are satisfied;(b) proposed home occupation will be in keeping with the character of the neighborhood and will not adversely affect the desirability or stability of the neighborhood;(c) proposed home occupation does not diminish the use and enjoyment of adjacent properties or create an adverse~~

~~traffic or parking impact on adjacent streets or properties;(d) proposed home occupation will not negatively impact the future use of the property as a residence;(e) proposed home occupation will not adversely affect the public health, safety or welfare; and(f) proposed home occupation conforms with all fire, building, plumbing, electrical and health codes.(7) If the application is forwarded to the Planning Commission for special consideration before issuing a conditional use permit, the Planning Commission shall consider the application and approve with conditions or deny the application in accordance with the procedures and standards set forth in chapter 7, Conditional Use Permits.(8) The Planning Commission, or the City Council, and Community Development Director, Zoning Administrator, or their designee, in the case of home occupations authorized by this chapter, may terminate any permit for a home occupation use upon making findings that support either or both of the following conclusions: (a) any of the required licenses or permits necessary for the operation of the business have been revoked or suspended;(b) violation or disregard of any condition issued in approval of the permit; or(c) violation of any of the provisions of this Ordinance anywhere on the property.(9) Any termination of a home occupation conditional use permit may be appealed to the Planning Commission if such appeal is made 30 days following the date of termination. Any person adversely affected by the denial or issuance of a home occupation conditional use permit may appeal that decision to the Planning Commission pursuant to chapter 3.23.(10) Existing licenses for home occupations which were legal under the prior ordinance regulating home occupations but which are not permitted under this Ordinance may be kept and reissued for subsequent years.(11) Home occupation conditional use permits issued under this Ordinance are personal to the applicant, non-transferable and do not run with the land.~~(1) All home occupations whether allowed as a permitted use, or as a conditional use, shall comply with the following standards: (a) The home occupation must remain subordinate to the primary residential use of the dwelling and shall not alter the residential character of the dwelling or neighborhood. (b) The occupation shall occupy no more than 25% of the gross floor area of the dwelling unit or 500 square feet, whichever is less. (c) Only residents of the dwelling may engage in the occupation, unless otherwise authorized by permit. (d) The residence must be the principal residence of the applicant; (e) The occupation shall not produce tools, items, equipment or occupations which are offensive or noxious by reason of the emission of odor, smoke, gas, vibration, magnetic interference noise traffic, or other impacts detectable beyond the property boundaries. (f) No outdoor display, storage, or activity related to the occupation shall be visible from adjoining properties or public rights-of-way. (g) . No more than two clients or customers per day may visit the premises. Deliveries shall be limited to those normally made to a residence (e.g., postal service, small parcel carriers). (h) The home shall not require any internal alterations other than those necessary for a home occupation approved as a conditional use, nor any external alterations to the residence, nor provide any visible evidence from the exterior that the building is being used for any other purpose than that of a residence; (i) No on-site advertising or signage is permitted, except as specifically allowed by ordinance. (j) Any conditional use permit issued for a home occupation shall ensure that the residential character of the premises and neighborhood is preserved. (2) The following activities shall be permitted as home occupations that only require the approval of the Community Development Director, Zoning Administrator, or their designee: (a) Artists, illustrators, writers, photographers, editors, drafters, publishers Consultants, private investigators, f record keeping, and Bookkeeping (b) Home occupations that require a client to come to the home for service

may be permitted, provided no more than two clients or customers per day visit the premises. Physicians, therapists, or other health care providers must obtain approval of a home occupation permit from the Planning Commission. (3) Applications for home occupation permits shall be filed with the Community Development Director, Zoning Administrator, or their designee. The applications shall include the following information: (a) Confirmation that client traffic will not exceed two clients or customers per day. (b) A description of the type of business proposed; (c) A listing of the individuals at the home who will be working on the business; (d) The expected hours of operation of the business; and (e) If the business is conducted in an apartment, the application must also be approved by the apartment management. (4) Upon receipt of an application for a home occupation, the Community Development Director, Zoning Administrator, or their designee shall make a determination of the completeness. If the application is determined to be complete, the Community Development Director, Zoning Administrator, or their designee shall approve or deny the application, or forward it to the Planning Commission for a conditional use permit. (5) The Community Development Director, Zoning Administrator, or their designee shall issue a permit for the home occupation if they find that the: (a) provisions of this Ordinance are satisfied; (b) proposed home occupation will be in keeping with the character of the neighborhood and will not adversely affect the desirability or stability of the neighborhood; (c) proposed home occupation does not diminish the use and enjoyment of adjacent properties or create an adverse traffic or parking impact on adjacent streets or properties; (d) proposed home occupation will not negatively impact the future use of the property as a residence; (e) proposed home occupation will not adversely affect the public health, safety, or welfare; and (f) proposed home occupation conforms with all fire, building, plumbing, electrical and health codes. (6) If the application is forwarded to the Planning Commission for special consideration before issuing a conditional use permit, the Planning Commission shall consider the application and approve with conditions or deny the application in accordance with the procedures and standards set forth in chapter 7, Conditional Use Permits. (a) The Planning Commission, or the City Council, and Community Development Director, Zoning Administrator, or their designee, in the case of home occupations authorized by this chapter, may terminate any permit for a home occupation use upon making findings that support either or both of the following conclusions: (b) any of the required licenses or permits necessary for the operation of the business have been revoked or suspended; (c) violation or disregard of any condition issued in approval of the permit; or (d) violation of any of the provisions of this Ordinance anywhere on the property. (7) Any termination of a home occupation conditional use permit may be appealed to the Planning Commission if such appeal is made 30 days following the date of termination. Any person adversely affected by the denial or issuance of a home occupation conditional use permit may appeal that decision to the Planning Commission pursuant to chapter 3.23. (8) Existing licenses for home occupations which were legal under the prior ordinance regulating home occupations but which are not permitted under this Ordinance may be kept and reissued for subsequent years. (9) Home occupation conditional use permits issued under this Ordinance are personal to the applicant, non-transferable and do not run with the land.

Amended 05/02 by Ordinance 2002-06, 01/03 by Ordinance 2003-02

SECTION 21: **<u>AMENDMENT</u>** "8.9 Micro Entrepreneurship" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

8.9 Micro Entrepreneurship

Micro Entrepreneurship A. Purpose & Intent The purpose of the Micro Entrepreneurship use is to support small, locally owned businesses that operate at a low-intensity and neighborhood-compatible scale. This use is intended to encourage economic vitality, self-employment, and innovation while preserving Grantsville City's rural character and minimizing land-use impacts such as traffic, noise, and visual clutter.

B. Use Description (What It Is) Micro Entrepreneurship is a small-scale use consisting of one independent micro-business operating within a single building or site. Activities are primarily conducted indoors and are characterized by: 1. No more than two (2) employees, which means the owner of the property and 1 employee, and 2. Customer traffic limited to approximately two to four (2-4) customers per hour, except for holidays and City events, and 3. Low environmental impact. Indoor activities are defined as business operations conducted entirely within an enclosed structure, including production, preparation, assembly, storage, office work, instruction, and customer interactions, with some regular outdoor business activity. The use may include small scale, small services, or limited sales that are incidental and proportional to the small scale of the operation. This use is not intended for industrial operations, large-scale retail, or high-traffic commercial centers.

C. Permitted Components (What's Allowed) The following activities may be permitted individually or in combination, subject to the Planning Commission approval and conditions: 1. Artisan or craft production. (e.g., woodworking, art, textiles, small-batch goods) 2. Cottage-scale and Micro Enterprise Kitchen food production consistent with Utah State Law 4-5a, 26B-7-416, and Tooele County Health Department. 3. Professional or creative offices. (e.g., design, consulting, technology services) 4. Personal services by appointment. (e.g., tutoring, repair services) 5. On-site and online sales of goods and produce. 6. Accessory storage directly related to on-site activities. a. Accessory Structure Standards: b. The permitted accessory structure shall be limited to one (1) freestanding, movable structure not exceeding ten feet by ten feet (10' x 10') in size. The structure may be used only for accessory storage and incidental on-site sales directly related to the approved Micro Entrepreneurship use. The structure shall not be permanently affixed to the ground, shall not contain plumbing or permanent utilities unless otherwise approved, and shall comply with applicable setback, visibility, and compatibility standards.

D. Operational Limitations (How It Operates) 1. Businesses shall be small-scale and non-industrial in nature. 2. The maximum number of tenants or operators shall be limited to one (1),

unless otherwise approved. 3. Retail sales shall be secondary to on-site production or services. 4. Wholesale distribution is prohibited. 5. No outdoor production activities unless expressly approved by the Planning Commission, subject to compatibility standards. 6. Events, classes, or demonstrations shall be limited in size and frequency and may require additional approval.

E. Compatibility Standards 1. Noise, odor, vibration, and emissions shall not exceed levels typical of residential or low-intensity areas of no more than 85 decibels as measured 20 feet from the property line. 2. Outdoor storage is prohibited unless screened and approved by the Planning Commission. 3. Hours of operation shall be limited to 7:00 a.m. to 7:00 p.m. to ensure neighborhood compatibility. 4. Lighting shall be downward-directed. Minimized, and no light trespassing. 5. Signage shall comply with applicable sign regulations chapter 20. 6. Traffic generation shall be comparable to a home occupation.

F. Site & Development Standards 1. Parking, setbacks, landscaping, and buffering shall comply with the requirements of the underlying zoning district. 2. Existing structures may be reused or adapted where compliant with applicable code requirements. 3. Lots used for Micro Entrepreneurship shall have a minimum of 150 feet of frontage.

G. Approval Type Conditional Use, as determined by the Planning Commission. Definition (If Added to Code) Micro Entrepreneurship: A low-intensity use consisting of one small, independent business operating at a limited scale, with minimal off-site impacts, and designed to be compatible with surrounding residential or rural uses.

H. Enforcement & Flexibility 1. Conditions of approval may be imposed to address site-specific impacts. 2. Expansion, additional tenants, or changes in activity type require review and new approval. 3. Activities not expressly approved are prohibited. I. Required Attachments 1. Site plan meeting Chapter 11 Site Plan Review requirements

AFTER AMENDMENT

8.9 Micro Entrepreneurship

~~Micro Entrepreneurship A. Purpose & Intent The purpose of the Micro Entrepreneurship use is to support small, locally owned businesses that operate at a low-intensity and neighborhood-compatible scale. This use is intended to encourage economic vitality, self-employment, and innovation while preserving Grantsville City's rural character and minimizing land-use impacts such as traffic, noise, and visual clutter. B. Use Description (What It Is) Micro Entrepreneurship is a small-scale use consisting of one independent micro-business operating within a single building or site. Activities are primarily conducted indoors and are characterized by: 1. No more than two (2) employees, which means the owner of the property and 1 employee, and 2. Customer traffic limited to approximately two to four (2-4) customers per hour, except for holidays and City events, and 3. Low environmental impact. Indoor activities are defined as business operations conducted entirely within an enclosed structure, including production, preparation, assembly, storage, office work, instruction, and customer~~

~~interactions, with some regular outdoor business activity. The use may include small scale, small services, or limited sales that are incidental and proportional to the small scale of the operation. This use is not intended for industrial operations, large-scale retail, or high-traffic commercial centers. C. Permitted Components (What's Allowed) The following activities may be permitted individually or in combination, subject to the Planning Commission approval and conditions: 1. Artisan or craft production. (e.g., woodworking, art, textiles, small-batch goods) 2. Cottage-scale and Micro Enterprise Kitchen food production consistent with Utah State Law 4-5a, 26B-7-416, and Tooele County Health Department. 3. Professional or creative offices. (e.g., design, consulting, technology services) 4. Personal services by appointment. (e.g., tutoring, repair services) 5. On-site and online sales of goods and produce. 6. Accessory storage directly related to on-site activities. a. Accessory Structure Standards: b. The permitted accessory structure shall be limited to one (1) freestanding, movable structure not exceeding ten feet by ten feet (10' x 10') in size. The structure may be used only for accessory storage and incidental on-site sales directly related to the approved Micro Entrepreneurship use. The structure shall not be permanently affixed to the ground, shall not contain plumbing or permanent utilities unless otherwise approved, and shall comply with applicable setback, visibility, and compatibility standards. D. Operational Limitations (How It Operates) 1. Businesses shall be small-scale and non-industrial in nature. 2. The maximum number of tenants or operators shall be limited to one (1), unless otherwise approved. 3. Retail sales shall be secondary to on-site production or services. 4. Wholesale distribution is prohibited. 5. No outdoor production activities unless expressly approved by the Planning Commission, subject to compatibility standards. 6. Events, classes, or demonstrations shall be limited in size and frequency and may require additional approval. E. Compatibility Standards 1. Noise, odor, vibration, and emissions shall not exceed levels typical of residential or low-intensity areas of no more than 85 decibels as measured 20 feet from the property line. 2. Outdoor storage is prohibited unless screened and approved by the Planning Commission. 3. Hours of operation shall be limited to 7:00 a.m. to 7:00 p.m. to ensure neighborhood compatibility. 4. Lighting shall be downward-directed. Minimized, and no light trespassing. 5. Signage shall comply with applicable sign regulations chapter 20. 6. Traffic generation shall be comparable to a home occupation. F. Site & Development Standards 1. Parking, setbacks, landscaping, and buffering shall comply with the requirements of the underlying zoning district. 2. Existing structures may be reused or adapted where compliant with applicable code requirements. 3. Lots used for Micro Entrepreneurship shall have a minimum of 150 feet of frontage. G. Approval Type Conditional Use, as determined by the Planning Commission. Definition (If Added to Code) Micro Entrepreneurship: A low-intensity use consisting of one small, independent business operating at a limited scale, with minimal off-site impacts, and designed to be compatible with surrounding residential or rural uses. H. Enforcement & Flexibility 1. Conditions of approval may be imposed to address site-specific impacts. 2. Expansion, additional tenants, or changes in activity type require review and new approval. 3. Activities not expressly approved are prohibited. I. Required Attachments 1. Site plan meeting Chapter 11 Site Plan Review requirements~~

(1) Purpose & Intent; The purpose of the Micro Entrepreneurship use is to support small, locally owned businesses that operate at a low-intensity and neighborhood-compatible scale. This use is intended to encourage economic vitality, self-employment, and innovation while

preserving Grantsville City's rural character and minimizing land-use impacts such as traffic, noise, and visual clutter. (2) Use Description (What It Is) Micro Entrepreneurship is a small-scale use consisting of one independent micro-business operating within a single building or site. Activities are primarily conducted indoors and are characterized by: (a) No more than two (2) employees, which means the owner of the property and 1 employee, and (b) Customer traffic limited to approximately two to four (2-4) customers per hour, except for holidays and City events, and (c) Low environmental impact. Indoor activities are defined as business operations conducted entirely within an enclosed structure, including production, preparation, assembly, storage, office work, instruction, and customer interactions, with some regular outdoor business activity. The use may include small scale, small services, or limited sales that are incidental and proportional to the small scale of the operation. This use is not intended for industrial operations, large-scale retail, or high-traffic commercial centers. (3) Permitted Components (What's Allowed) The following activities may be permitted individually or in combination, subject to the Planning Commission approval and conditions: (a) Artisan or craft production. (e.g., woodworking, art, textiles, small-batch goods) (b) Cottage-scale and Micro Enterprise Kitchen food production consistent with Utah State Law 4-5a, 26B-7-416, and Tooele County Health Department. (c) Professional or creative offices. (e.g., design, consulting, technology services) (d) Personal services by appointment. (e.g., tutoring, repair services) (e) On-site and online sales of goods and produce. (f) Accessory storage directly related to on-site activities. (i) Accessory Structure Standards; The permitted accessory structure shall be limited to one (1) freestanding, movable structure not exceeding ten feet by ten feet (10' x 10') in size. The structure may be used only for accessory storage and incidental on-site sales directly related to the approved Micro Entrepreneurship use. The structure shall not be permanently affixed to the ground, shall not contain plumbing or permanent utilities unless otherwise approved, and shall comply with applicable setback, visibility, and compatibility standards. (4) Operational Limitations (How It Operates) (a) Businesses shall be small-scale and non-industrial in nature. (b) The maximum number of tenants or operators shall be limited to one (1), unless otherwise approved. (c) Retail sales shall be secondary to on-site production or services. (d) Wholesale distribution is prohibited. (e) No outdoor production activities unless expressly approved by the Planning Commission, subject to compatibility standards. (f) Events, classes, or demonstrations shall be limited in size and frequency and may require additional approval. (5) Compatibility Standards (a) Noise, odor, vibration, and emissions shall not exceed levels typical of residential or low-intensity areas of no more than 85 decibels as measured 20 feet from the property line. (b) Outdoor storage is prohibited unless screened and approved by the Planning Commission. (c) Hours of operation shall be limited to 7:00 a.m. to 7:00 p.m. to ensure neighborhood compatibility. (d) Lighting shall be downward-directed. Minimized, and no light trespassing. (e) Signage shall comply with applicable sign regulations chapter 20. (f) Traffic generation shall be comparable to a home occupation. (6) Site & Development Standards (a) Parking, setbacks, landscaping, and buffering shall comply with the requirements of the underlying zoning district. (b) Existing structures may be reused or adapted were compliant with applicable code requirements. (c) Lots used for Micro Entrepreneurship shall have a minimum of 150 feet of frontage. (7) Approval Type; Conditional Use, as determined by the Planning Commission. (8) Enforcement & Flexibility (a) Conditions of approval may be imposed to address site-specific impacts. (b) Expansion, additional tenants, or changes in activity type require review and new approval. (c) Activities

not expressly approved are prohibited. (9) Required Attachments; Site plan meeting Chapter 11 Site Plan Review requirements

SECTION 22: **AMENDMENT** "9.2 Enforcement Of Landscape Requirements" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

9.2 Enforcement Of Landscape Requirements

Whenever the submission and approval of a landscape plan is required by this Ordinance, such landscape plan shall be an integral part of any application for a building permit and occupancy permit. No permit shall be issued without City approval of a landscape plan as required herein. Failure to implement the approved landscape plan shall be cause for revocation of the occupancy permit. However, the requirements of this Chapter may be modified by the Community Development Director, Zoning Administrator, or their designee, on a case by case basis, in response to input from the City Police Department regarding the effects of required landscaping on crime prevention.

AFTER AMENDMENT

9.2 Enforcement Of Landscape Requirements

Whenever the submission and approval of a landscape plan is required by this Ordinance, such landscape plan shall be an integral part of any application for a building permit and occupancy permit. No permit shall be issued without City approval of a landscape plan as required herein. Failure to implement the approved landscape plan shall be cause for revocation of the occupancy permit. However, the requirements of this Chapter may be modified by the Community Development Director, Zoning Administrator, or their designee, on a case by case basis, in response to input from the City Police Department regarding the effects of required landscaping on crime prevention.

(1) Definitions (a) Parkway; Parkway means the portion of the public right-of-way located between the back of curb and the sidewalk, or between the curb and the property line where no sidewalk exists, intended for landscaping, street trees, or utilities. (b) Park Strip; Park Strip means the linear landscaped area within the parkway, typically located between the curb and sidewalk, designed for street trees, turf, groundcover, or other approved plantings. (c) Median; Median means the raised or flush landscaped or hardscaped area located between opposing travel lanes within a public or private street right-of-way, intended to provide visual separation, traffic control, and support approved landscaping or streetscape features. (2) Enforcement of Landscaping in Parkways, Park Strips, and Medians (a) Responsibility for Installation and Maintenance; The property owner, subdivider, or developer is responsible for installing and

maintaining all required landscaping within any parkway, park strip, or median adjacent to or associated with the lot, in accordance with the approved landscape plan and City standards. (3) Prohibited Activities; No person shall remove, damage, alter, or fail to maintain landscaping within a parkway, park strip, or median required by an approved landscape plan. Parking, storing vehicles, or placing materials within these areas is prohibited unless expressly authorized by the City. (4) Failure to Maintain. (a) Failure to install or maintain required landscaping within a parkway, park strip, or median constitutes a violation of this Ordinance and may result in: (i) issuance of a notice of violation; (ii) withholding or revocation of a certificate of occupancy; (iii) correction by the City with costs billed to the responsible party; or (iv) any other enforcement action authorized by this Code. (5) City Authority to Modify Requirements; The Community Development Director, Zoning Administrator, or their designee may modify landscaping requirements within a parkway, park strip, or median. (6) Restoration After Damage; Any damage to landscaping within a parkway, park strip, or median caused by construction, parking, utility work, or other activity shall be repaired or replaced by the responsible party within the timeframe specified by the City.

SECTION 23: **AMENDMENT** "9.3 Landscape Plan" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

9.3 Landscape Plan

(1) Except for the construction of detached single-family residences and two-family residences a landscape plan shall be required for any change in use, building additions or increases in occupancy. Such landscape plan shall be drawn in conformance with the requirements specified in this chapter. Landscape plans must be approved by the Community Development Director, Zoning Administrator, or their designee prior to issuance of a building permit. Landscape plans for planned unit developments or conditional uses, or other uses requiring site plan approval shall be reviewed and approved by the Planning Commission.

(2) Unless specifically waived by the Community Development Director, Zoning Administrator, or their designee, all landscape plans submitted for approval shall contain the following information:

(a) The location and dimensions of all existing and proposed structures, property lines, easements, parking lots and drives, roadways and rights-of-way, sidewalks, bicycle paths, ground signs, refuge disposal and recycling areas, bicycle parking areas, fences, freestanding electrical equipment, tot lots and other recreational facilities, and other freestanding structural features as determined necessary by the Community Development Director, Zoning Administrator, or their designee ;

(b) The location, quantity, size and name, both botanical and common names, of all proposed woody plant materials;

(c) The location, quantity, size (where applicable) and name, both botanical and common names, of all proposed herbaceous plant material including ground cover, annuals/perennials and turf;

(d) The location, quantity, size and name, both botanical common names, of all existing plant materials, including trees and other material in the parkway, and indicating plant material to be retained and removed;

(e) The location of existing buildings, structures and plant materials on adjacent property within 20 feet of the site, as determined necessary by the Community Development Director, Zoning Administrator, or their designee;

(f) Existing and proposed grading of the site indicating contours at two foot intervals. Proposed berming shall be indicated using one-foot contour intervals;

(g) Elevations of all fences and retaining walls proposed for location on the site;

(h) Elevations, cross-sections and other details as determined necessary by the Community Development Director, Zoning Administrator, or their designee.

(i) Water efficient irrigation system (separate plan required); and

(j) Summary data indicating the area of the site in the following conditions:

i. Total area and percentage of the site in landscape area;

ii. Total area and percentage of the site in domestic turf grasses; and

iii. Total area and percentage of the site in drought tolerant plant species.

AFTER AMENDMENT

9.3 Landscape Plan

(1) ~~Except for the construction of detached single-family residences and two-family residences a~~ A landscape plan shall be required for any change in use, building additions or increases in occupancy. Such a landscape plan shall be drawn in conformance with the requirements specified in this chapter. Landscape plans must be approved by the Community Development Director, Zoning Administrator, or their designee prior to issuance of a building permit. Landscape plans for planned unit developments or conditional uses, or other uses requiring site plan approval shall be reviewed and approved by the Planning Commission.

(2) Unless specifically waived by the Community Development Director, Zoning Administrator, or their designee, all landscape plans submitted for approval shall contain the

following information:

(a) The location and dimensions of all existing and proposed structures, property lines, easements, parking lots and drives, roadways and rights-of-way, sidewalks, bicycle paths, ground signs, refuge disposal and recycling areas, bicycle parking areas, fences, freestanding electrical equipment, tot lots and other recreational facilities, and other freestanding structural features as determined necessary by the Community Development Director, Zoning Administrator, or their designee ;

(b) The location, quantity, size and name, both botanical and common names, of all proposed woody plant materials;

(c) The location, quantity, size (where applicable) and name, both botanical and common names, of all proposed herbaceous plant material including ground cover, annuals/perennials and turf;

(d) The location, quantity, size and name, both botanical common names, of all existing plant materials, including trees and other material in the parkway, and indicating plant material to be retained and removed;

(e) The location of existing buildings, structures and plant materials on adjacent property within 20 feet of the site, as determined necessary by the Community Development Director, Zoning Administrator, or their designee;

(f) Existing and proposed grading of the site indicating contours at two foot intervals. Proposed berming shall be indicated using one-foot contour intervals;

(g) Elevations of all fences and retaining walls proposed for location on the site;

(h) Elevations, cross-sections and other details as determined necessary by the Community Development Director, Zoning Administrator, or their designee.

(i) Water efficient irrigation system (separate plan required); and

(j) Summary data indicating the area of the site in the following conditions:

i. Total area and percentage of the site in landscape area;

ii. Total area and percentage of the site in domestic turf grasses; and

iii. Total area and percentage of the site in drought tolerant plant species.

SECTION 24: **<u>ADOPTION</u>** "9.8 Permitted Landscape Plants" of the Grantsville Land Use Ordinances is hereby *added* as follows:

BEFORE ADOPTION

9.8 Permitted Landscape Plants (Non-existent)

AFTER ADOPTION

9.8 Permitted Landscape Plants*(Added)*

(1) Purpose; This section establishes drought-tolerant, low-maintenance landscaping standards for parkways and medians to conserve water, enhance streetscape quality, and ensure long-term plant survivability in Grantsville's climate. (2) Shade Trees (a) City-Approved Shade Trees (Preferred Species) The following tree species are approved and strongly encouraged for use in parkways and medians due to their adaptability, canopy structure, and drought tolerance: (i) Hackberry (Celtis occidentalis) (ii) Ginkgo (Ginkgo biloba) — male cultivars only (iii) White Oak (Quercus alba) (b) The following species may be considered on a case-by-case basis subject to staff approval and site conditions: (i) Bur Oak (Quercus macrocarpa) (ii) Thornless Honey locust (Gleditsia triacanthos var. interims) (iii) Kentucky Coffee tree (Gymnocladus dioicous) (iv) Autumn Blaze Maple (Acer × freeman 'Autumn Blaze') (v) Chanticleer Pear (Pyrus caller Yana 'Chanticleer') (3) Shrubs Deciduous Shrubs; The following deciduous shrubs are permitted: (a) Silver Sagebrush (Artemisia cana) (b) Yellow Rabbitbrush (Chrysanthemums viscidiflorus) (c) Apache Plume (Fallugia paradoxa) (d) Western Sand cherry (Prunus besseyi) (4) Evergreen Shrubs The following evergreen shrubs are permitted. (a) Blue Chip Juniper is expressly prohibited: (b) Medora Juniper (Juniperus scopulorum 'Medora') (c) Dwarf Mogo Pine (Pinus mugo var. pumila) (5) Ornamental Grasses The following ornamental grasses are permitted: (a) Feather Reed Grass (Calamagrostis × acutiflora 'Karl Foerster') (b) Blue Fescue (Festuca glauca 'Blue Elijah') (c) 'Heavy metal' Switchgrass (Panicum virgatum 'Heavy metal') (d) Indian Grass (Sorghastrum nutans 'Sioux Blue') (6) Perennials The following perennial species are permitted: (a) Licorice Hyssop (Agastache rupestris) (b) Red Torch Lily (Kniphofia 'Stark's Early Hybrids') (7) General Landscaping Requirements Permitted and not Permitted (a) Turf grass is prohibited within medians. (b) Turf grass is permitted within parkways only where slopes do not exceed fifty percent (50%). (c) Evergreen groundcovers and shrubs shall not exceed eighteen (18) inches in mature height. (d) Thorn-bearing shrubs or groundcovers are prohibited. (e) Drip irrigation systems are required for all plant materials. (f) Trees are permitted in both medians and parkways. Street trees shall be planted within one growing season from the date the certificate of occupancy was issued. The developer in a subdivision or P.U.D., is responsible for the planting of street trees. (g) Bark, Mulch, Gravel, and concrete, is permitted in parkways. (h) Impervious materials are permitted in medians.(Brick pavers, Concrete) (i) Flowers are permitted. Flower bed not to exceed 24" in height at maturity. (j) Driveway and Walkways (carriage to street) are permitted. (k) Irrigation is required for plant materials. (l) Prohibited Materials - Large rock exceeding 1-½" inch, asphalt, concrete, thorny bearing plants, ground cover and shrubs exceeding 18" inches in height.

SECTION 25: **ADOPTION** "9.9 Applicability Standards" of the Grantsville Land Use Ordinances is hereby *added* as follows:

BEFORE ADOPTION

9.9 Applicability Standards (Non-existent)

AFTER ADOPTION

9.9 Applicability Standards*(Added)*

(1) These standards apply to all properties in the City that have street curb and/or gutter. Owners of property on streets that do not have curb and gutter, and vacant lot owners do not have to maintain landscaping within the public right-of-way. However, these properties shall maintain rocks, gravel, bark, or other similar materials within the public right-of-way. In addition, vacant property owners shall maintain native grasses and weeds to a maximum height of six (6) inches. (a) Turf is permitted on slope grades up to fifty percent. Turf is not recommended on slopes greater than fifty percent. (b) Ground covers are defined as any perennial evergreen plant material species that cover one hundred percent of the ground all year. Perennial is defined as a plant having a life span of more than two years. Evergreen is defined as a plant having foliage that remains on the plan throughout the year. Ground covers shall not exceed 18 inches in height at maturity. Flowers as permitted above are an exception to this definition and shall not exceed 36 inches in height at maturity. Thorn bearing ground covers are prohibited. (c) A limited variety of shrubs are available that will not exceed 18 inches in height at maturity. Thorn bearing shrubs are prohibited. (d) Flowers shall not include thorn bearing species. (e) Irrigation shall be provided to adequately maintain all plant materials in parkway areas. Irrigation may include a permanent "in-ground" system or manual hose and sprinkler application. (f) Retaining walls, fences, steps, and other similar structural encroachments shall be prohibited unless they are specifically approved through the City. A retaining wall is defined as a wall designed to resist the lateral displacement of soil or other material.

SECTION 26: **AMENDMENT** "14.6 Codes And Symbols, Use Table 14.1" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

14.6 Codes And Symbols, Use Table 14.1

In the following sections of this chapter, uses of land or buildings which are allowed in various districts are shown as "permitted uses," indicated by a "P" in the appropriate column, or as a

"conditional use," indicated by a "C" in the appropriate column. 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, "-." If a regulation applies in a given district, it is indicated in the appropriate column by a numeral to show the linear or square feet 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 multiple use, agricultural, or rural residential districts except as provided in this Code.

Table 14.1 Use Regulations *Amended 04/02 by Ordinance 2002-05, 08/02 by Ordinance 2002-15, 02/09 by Ordinance 2008-44, 11/10 by Ordinance 2010-23, 06/11 by Ordinance 2011-18, 03/15 by Ordinance 2015-05*

USE	A	RR-5	RR-2.5	RR-1
Accessory buildings & uses incidental to permitted ag uses (except for the keeping of animals). Said uses shall be kept a minimum of 100' from the property line on which the primary building fronts and 100' from any pre-existing dwelling. If these accessory buildings and uses have been kept prior to the construction of a residential dwelling on an adjoining parcel, said uses need not be kept 100' away from the new dwelling, but may be	P	P	P	P

maintained. (Amended 2008,2009)				
Accessory buildings and uses customarily incidental to permitted uses other than those listed above.	P	P	P	P
Accessory buildings and uses customarily incidental to conditional uses	C	C	C	C
Accessory buildings for the housing of animals customarily incidental to permitted ag uses, including pens, corrals and pastures for the keeping of animals. Such accessory buildings and uses shall not be allowed closer than 100' from any pre-existing residential dwelling on an adjoining parcel. If these accessory buildings and uses have been kept, prior to the construction of a residential	P	C	C	C

dwelling, but may be maintained subject to the terms of any required conditional use permit. (Amended 2008, 2009)				
Family Food Production and the Raising of Large, Medium, and Small Animals. The first large animal (fully grown) shall have 10,000 sq ft of open area, each additional large animal shall have an additional 2,000 sq ft of open area. Each medium sized animal (fully grown) shall have 1,000 sq ft of open area .ach small sized animal (fully grown) shall have 00 sq ft of open area, The area of stables, barns and pens accessible to regulate animals may count towards the open area requirements. No	P	P	P	C

animal shall be kept, corralled, penned, or raised within 100' from any pre-existing residential dwelling located on an adjoining lot measured at the nearest corner. There is no setback requirement from neighboring residential dwellings if a C.U.P. has been issued prior to the start of construction of a residential dwelling on an adjoining lot measured at the nearest corner.				
Class "A" Kennel (4-15 animals only). No animal shall be kept, penned, or raised within 100' from any preexisting residential dwelling located on an adjoining lot measured at the nearest corner and it must have 4,000 sq ft for each additional animal over 5.	C	C	C	C
Sportsman's				

Permit for 4-6 dogs. No dog shall be kept, penned, or raised within 100' of an adjoining residence or dwelling measured at the nearest corner.	C	C	C	C
Raising of Rabbits, Ducks, Chickens (hens only), or Turkeys with not more than six (6) such animals in any combination	P	P	P	P
Temporary buildings for uses incidental to construction work, including living quarters for guard or night watchman, which buildings must be removed upon completion or abandonment of the construction work.	C	C	C	C
Mobile Homes for temporary living quarters and such other temporary uses found appropriately by the Planning Commission.	C	C	C	C

Agriculture, including grazing and pasturing of animals.	P	C	C	C
Agricultural Industry (Amended 2010)	C	C	C	-
Fruit/Vegetable Stand	P	C	C	C
Farm (Amendment 8/21/02, complete addition of term)	P	P	P	C
Accessory Farm Employee Housing. Each accessory farm employee housing unit must be located on a contiguous parcel that contains at least 10 acres or more for each such unit and which must have at least 10 additional acres if it is located on the same property as the primary residential dwelling. (Amended 8/21/02, complete addition of term)	C	C	C	C
Farms devoted to raising and marketing				

chickens, turkeys or other fowl or poultry, fish or frogs, mink, rabbits, including wholesale and retail sale (does not include family food production).	P	C	-	-
Forestry and forest industry, such as a saw mill, wood products, plants, or others	C	-	-	-
Apiary	P	C	C	C
Aviary	P	P	P	P
Public Stable, riding academy or riding ring, horse show barns or facilities	C	C	C	C
RESIDENTIAL	**A**	**RR-5**	**RR-2.5**	**RR-1**
Single-Family Dwellings Detached	P	P	P	P
Single-Family Attached Dwellings	P	P	P	P
Two-Family Dwellings	P	P	P	P
Twin Home Dwellings	-	C	C	C
Congregate Care Facility	-	-	C	C

Nursing Care Facility	C	C	C	C
Group Home, Small	C	C	C	C
Group Home, Large	C	C	-C	C-
Transitional Treatment Home, Small	C	C	C	C
Transitional Treatment Home, Large	C	C	C	C
Residential facilities for handicapped or elderly	P	P	P	P
Home Occupation	C	C	C	C
Household Pets, other than a sportsman permit	P	P	P	P
INSTITUTIONAL	**A**	**RR-5**	**RR-2.5**	**RR-1**
Adult Day Care Center	C	C	C	C
Child Day Care Center	C	C	C	C
Places of Worship (Amended 7/98)	-	-	C	C
Schools, professional and vocational	C	C	C	C
Kennel	P	C	C	C

Mine, Quarry, Gravel Pit, Rock Crusher, Concrete Batching Plant, or Asphalt Plant, Oil Wells or Steam Wells, Land Excavations	C	-	-	-
<u>POWER GENERATION</u> (Primary Power for on-site use)	**A**	**RR-5**	**RR-2.5**	**RR-1**
Solar	P	P	P	P
Wind driven under 5.9 KVA output	P	P	P	P
Auxiliary, temporary, and/or wind, with more than 6 KVA, but less than 150 KVA output	P	C	C	C
Steam, hydro, or reciprocating engine with more than 10.05 KVA, but less than 150 kVA output	C	C	C	C
<u>RECREATION, CULTURAL & ENTERTAINMENT</u>	**A**	**RR-5**	**RR-2.5**	**RR-1**
Dude Ranch; Family Vacation Ranch	C	-	-	-

Natural Open Space & Conservation Areas	P	P	P	P
Parks and Playgrounds, Public and Private, Less than one acre in size	C	P	P	P
Community & Recreations Centers	C	C	C	C
Pedestrian Pathways, Trails & Greenways	P	P	P	P
Community Gardens	-	C	C	C
Commercial Outdoor Recreation (amended 6/11)	C	-	-	-
MISCELLANEOUS	**A**	**RR-5**	**RR-2.5**	**RR-1**
Personal Wireless Telecommunication Facilities (Amended 4/01)	C	-	-	-
Public/private Utility Transmission Wires, Line, Pipes, and Poles	P	P	P	P
Public/Private Utility Buildings and Structures	C	C	C	C

Veterinary Offices	P	P	P	P
Governmental Uses and Facilities	C	C	C	C
Municipal Service Uses, Including City Utility Uses, Police and Fire Stations	C	C	C	C
Correctional Facility, Detention Center, Jail, Penitentiary, Prison, Penal Institution (1 - 249 Beds)	-	-	-	-
Correctional Facility, Detention Center, Jail, Penitentiary, Prison, Penal Institution (250 or more Beds)	-	-	-	-

AFTER AMENDMENT

14.6 Codes And Symbols, Use Table 14.1

In the following sections of this chapter, uses of land or buildings which are allowed in various districts are shown as "permitted uses," indicated by a "P" in the appropriate column, or as a "conditional use," indicated by a "C" in the appropriate column. 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, "-." If a regulation applies in a given district, it is indicated in the appropriate column by a numeral to show the linear or square feet 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 multiple use, agricultural, or rural residential districts except as provided in this Code.

Table 14.1 Use Regulations *Amended 04/02 by Ordinance 2002-05, 08/02 by Ordinance 2002-15, 02/09 by Ordinance 2008-44, 11/10 by Ordinance 2010-23, 06/11 by Ordinance 2011-18, 03/15 by Ordinance 2015-05*

USE	A	RR-5	RR-2.5	RR-1
Accessory buildings & uses incidental to permitted ag uses (except for the keeping of animals). Said uses shall be kept a minimum of 100' from the property line on which the primary building fronts and 100' from any pre-existing dwelling. If these accessory buildings and uses have been kept prior to the construction of a residential dwelling on an adjoining parcel, said uses need not be kept 100' away from the new dwelling, but may be maintained. (Amended 2008,2009)	P	P	P	P

Accessory buildings and uses customarily incidental to permitted uses other than those listed above.	P	P	P	P
Accessory buildings and uses customarily incidental to conditional uses	C	C	C	C
Accessory buildings for the housing of animals customarily incidental to permitted ag uses, including pens, corrals and pastures for the keeping of animals. Such accessory buildings and uses shall not be allowed closer than 100' from any pre-existing residential dwelling on an adjoining parcel. If these accessory buildings and uses have been kept, prior to the construction of a residential dwelling, but may be maintained	P	C	C	C

subject to the terms of any required conditional use permit. (Amended 2008, 2009)				
~~Family Food Production and the Raising of Large, Medium, and Small Animals. The first large animal (fully grown) shall have 10,000 sq ft of open area, each additional large animal shall have an additional 2,000 sq ft of open area. Each medium sized animal (fully grown) shall have 1,000 sq ft of open area .ach small sized animal (fully grown) shall have 00 sq ft of open area, The area of stables, barns and pens accessible to regulate animals may count towards the open area requirements. No animal shall be kept, corralled, penned, or raised~~				

~~within 100' from any pre-existing residential dwelling located on an adjoining lot measured at the nearest corner. There is no setback requirement from neighboring residential dwellings if a C.U.P. has been issued prior to the start of construction of a residential dwelling on an adjoining lot measured at the nearest corner.~~ Family Food Production and the Raising of Large, Medium, and Small Animals. The first large animal (fully grown) shall have 10,000 sq ft of open area, each additional large animal shall have an additional 2,000 sq ft of open area. Each medium sized animal (fully grown) shall have 1,000 sq ft of open area, not to exceed more than 6 medium	P	P	P	C

animals per half acre. Each small sized animal (fully grown) shall have 100 sq ft of open area, not to exceed more than 6 medium animals per half acre. The area of stables, barns, and pens accessible to regulate animals may count towards the open area requirements. No animal shall be kept, corralled, penned, or raised within 100' from any pre-existing residential dwelling located on an adjoining lot measured at the nearest corner. There is no setback requirement from neighboring residential dwellings if a C.U.P. has been issued prior to the start of construction of a residential dwelling on an adjoining lot measured at the nearest corner.				
Class "A"				

Kennel (4-15 animals only). No animal shall be kept, penned, or raised within 100' from any preexisting residential dwelling located on an adjoining lot measured at the nearest corner and it must have 4,000 sq ft for each additional animal over 5.	C	C	C	C
Sportsman's Permit for 4-6 dogs. No dog shall be kept, penned, or raised within 100' of an adjoining residence or dwelling measured at the nearest corner.	C	C	C	C
Raising of Rabbits, Ducks, Chickens (hens only), or Turkeys with not more than six (6) such animals in any combination	P	P	P	P
Temporary buildings for uses incidental to construction work, including living quarters for guard or night				

watchman, which buildings must be removed upon completion or abandonment of the construction work.	C	C	C	C
Mobile Homes for temporary living quarters and such other temporary uses found appropriately by the Planning Commission.	C	C	C	C
Agriculture, including grazing and pasturing of animals.	P	C	C	C
Agricultural Industry (Amended 2010)	C	C	C	-
Fruit/Vegetable Stand	P	C	C	C
Farm (Amendment 8/21/02, complete addition of term)	P	P	P	C
Accessory Farm Employee Housing. Each accessory farm employee housing unit must be located on a contiguous parcel that contains at least 10 acres or				

more for each such unit and which must have at least 10 additional acres if it is located on the same property as the primary residential dwelling. (Amended 8/21/02, complete addition of term)	C	C	C	C
Farms devoted to raising and marketing chickens, turkeys or other fowl or poultry, fish or frogs, mink, rabbits, including wholesale and retail sale (does not include family food production).	P	C	-	-
Forestry and forest industry, such as a saw mill, wood products, plants, or others	C	-	-	-
Apiary	P	C	C	C
Aviary	P	P	P	P
Public Stable, riding academy or riding ring, horse show barns or facilities	C	C	C	C

RESIDENTIAL	**A**	**RR-5**	**RR-2.5**	**RR-1**
Single-Family Dwellings Detached	P	P	P	P
Single-Family Attached Dwellings	P	P	P	P
Two-Family Dwellings	P	P	P	P
Twin Home Dwellings	-	C	C	C
Congregate Care Facility	-	-	C	C
Nursing Care Facility	C	C	C	C
Group Home, Small	C	C	C	C
Group Home, Large	C	C	-C	C-
Transitional Treatment Home, Small	C	C	C	C
Transitional Treatment Home, Large	C	C	C	C
Residential facilities for handicapped or elderly	P	P	P	P
Home Occupation	P~~C~~	P~~C~~	P~~C~~	P~~C~~
Household Pets, other than a sportsman permit	P	P	P	P

INSTITUTIONAL	**A**	**RR-5**	**RR-2.5**	**RR-1**
Adult Day Care Center	C	C	C	C
Child Day Care Center	C	C	C	C
Places of Worship (Amended 7/98)	-	-	C	C
Schools, professional and vocational	C	C	C	C
Kennel	P	C	C	C
~~Mine, Quarry, Gravel Pit, Rock Crusher, Concrete Batching Plant, or Asphalt Plant, Oil Wells or Steam Wells, Land Excavations~~	~~C~~	~~-~~	~~-~~	~~-~~
POWER GENERATION (Primary Power for on-site use)	**A**	**RR-5**	**RR-2.5**	**RR-1**
Solar	P	P	P	P
Wind driven under 5.9 KVA output	P	P	P	P
Auxiliary, temporary, and/or wind, with more than 6 KVA, but less than 150	P	C	C	C

KVA output				
Steam, hydro, or reciprocating engine with more than 10.05 KVA, but less than 150 kVA output	C	C	C	C
RECREATION, CULTURAL & ENTERTAINMENT	**A**	**RR-5**	**RR-2.5**	**RR-1**
Dude Ranch; Family Vacation Ranch	C	-	-	-
Natural Open Space & Conservation Areas	P	P	P	P
Parks and Playgrounds, Public and Private, Less than one acre in size	C	P	P	P
Community & Recreations Centers	C	C	C	C
~~Pedestrian Pathways, Trails & Greenways~~	~~P~~	~~P~~	~~P~~	~~P~~
Community Gardens	P~~-~~	P~~C~~	P~~C~~	P~~C~~
Commercial Outdoor Recreation (amended 6/11)	C	-	-	-
MISCELLANE				

OUS	**A**	**RR-5**	**RR-2.5**	**RR-1**
Personal Wireless Telecommunication Facilities (Amended 4/01)	C	-	-	-
Public/private Utility Transmission Wires, Line, Pipes, and Poles	P	P	P	P
Public/Private Utility Buildings and Structures	C	C	C	C
Veterinary Offices	P	P	P	P
Governmental Uses and Facilities	C	C	C	C
Municipal Service Uses, Including City Utility Uses, Police and Fire Stations	C	C	C	C
~~Correctional Facility, Detention Center, Jail, Penitentiary, Prison, Penal Institution (1 - 249 Beds)~~	-	-	-	-
~~Correctional Facility, Detention Center,~~				

~~Jail, Penitentiary, Prison, Penal Institution (250 or more Beds)~~	-	-	-	-

SECTION 27: **AMENDMENT** "15.7 Codes And Symbols And Use Table 15.1" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

15.7 Codes And Symbols And Use Table 15.1

(1) In the following sections of this chapter, uses of land or buildings which are allowed in various districts are shown as "permitted uses," indicated by a "P" in the appropriate column, or as a "conditional use," indicated by a "C" in the appropriate column. 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, "-." If a regulation applies in a given district, it is indicated in the appropriate column by a numeral to show the linear or square feet 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 multiple use, agricultural, or rural residential districts except as provided in this Code.

Table 15.1 Use Regulations

C

USE	R-1-8	R-1-12	R-1-21	RM-7	RM-15
Accessory buildings and uses customarily incidental to permitted residential uses, when the residential	P	P	P	P	P

use has been previously established or is constructed simultaneously with the residential use.					
Accessory buildings and uses customarily incidental to permitted uses, when the residential use has not previously been established.	C	C	C	C	C
Accessory buildings and uses customarily incidental to conditional uses.	C	C	C	C	C
The tilling of the soil, the raising of crops, horticulture and home gardening.	P	P	P	P	P
Fruit/Vegetable Stand	-	C	C	-	C
Farm	**R-1-8**	**R-1-12**	**R-1-21**	**RM-7**	**RM-15**
Accessory Farm					

Employee Housing. Each accessory farm employee housing unit must be located on a contiguous parcel that contains at least 10 acres or more for each such unit and which must have at least 10 additional acres if it is located on the same property as the primary residential dwelling.	-	C	C	C	-
Family Food Production and the Raising of Horses. The first large animal (fully grown) shall have 10,000 sq ft of open area, each additional large animal shall have an additional 2,000 sq ft of open area. Each medium					

sized animal (fully grown) shall have 1,000 sq ft of open area ach small sized animal (fully grown) shall have 100 sq ft of open areaThe area of stables, barns and pens accessible to regulate animals may count towards the open area requirements. No animal shall be kept, corralled, penned, or raised within 100' from any pre-existing residential dwelling located on an adjoining lot. measured at the nearest corner There is no setback requirement from neighboring residential dwellings if a C.U.P. has been issued prior to the start of construction	-	C	C	C	-

of a residential dwelling on an adjoining lot.					
Class "A" Kennel (4-15 animals only). No animal shall be kept, penned, or raised within 100' from any pre-existing residential dwelling located on an lot measured at residence the nearest corner. Each animal shall have a minimum area of 1,000 sq. ft. and must have 4,000 sq ft for each additional animal over 5.	-	C	C	C	-
Sportsman's Permit for 4-6 dogs. No dog shall be kept, penned, or raised within 100' from any pre-existing residential dwelling located on an adjoining lot	-	C	C	C	C

measured at the nearest corner. Each animal shall have a minimum area of 1,000 sq. ft..					
Raising of Rabbits, Ducks, Chickens (hens only), or Turkeys with not more than six (6) such animals in any combination, provided that appropriate cages, pens, coops, houses, etc. shall be provided for when these animals are kept outdoors. (Amended 04/11, 02/13)	P	P	P	P	P
RESIDENTIAL	**R-1-8**	**R-1-12**	**R-1-21**	**RM-7**	**RM-15**
Single-Family Dwellings Detached	P	P	P	P	P
Single-Family Attached Dwellings	P	P	P	P	P
Two-Family Dwelling	-	C	C	P	P

(Amended 5/97)					
Twin Home Dwellings (Amended 5/97)	-	C	C	C	C
Multiple Family Dwellings	-	-	-	C	C
Congregate Care Facility	-	-	C	C	C
Nursing Care Facility	C	C	C	C	C
Group Home, Small	C	C	C	C	C
Group Home, Large	C	C	C	C C	
Transitional Treatment Home, Small	C	C	C	C	C
Mobile Home Parks	-	-	-	C	C
Mobile Home Subdivisions	C	C	C	C	C
Residential facilities for handicapped or elderly	P	P	P	P	P
HOME OCCUPATION	C	C	C	C	C
Household pets, other than Sportsman Permit	P	P	P	P	P

INSTITUTIONAL	**R-1-8**	**R-1-12**	**R-1-21**	**RM-7**	**RM-15**
Adult Day Care Center	-	-	C	C	P
Child Day Care Center (in a home, no more than 12 children at any one time with 1 provider and up to 16 with 2 providers, including those residing in the home with no more than 2 children under the age of two)	C	C	C	C	C
Commercial Day Care Center (not in a home) no more than 20 children at any one time	-	C	C	-	P
Child Day Care Facility (a commercial operation, not in a home, no more than 100 children at any one time)	-	-	C	-	P
Hospital	-	-	-	-	C
Medical or dental clinic	-	C	C	-	C

Places of Worship	C	C	C	C	C
Preschool (in a home, no more than 10 children from the ages of 4 to 6 years in age, including those residing in the home, with a maximum length of four hours for those who do not reside there)	C	C	C	C	C
Preschool (a commercial operation, not in a home, no more than 20 children from the ages of 4 to 6 years in age, at any one time, for a period not to exceed four hours)	-	-	C	-	C
Private educational institution having a curriculum similar to the public schools, grades K-12	C	C	C	C	C

Schools of higher education, community colleges, off campus facilities	-	-	C	-	C
Schools, professional and vocational	-	-	C	-	-
POWER GENERATION	**R-1-8**	**R-1-12**	**R-1-21**	**RM-7**	**RM-15**
Solar	P	P	P	P	P
RECREATION, CULTURAL & ENTERTAINMENT					
Private Recreational Grounds and Facilities not open to the public, in which no admission charge is made	C	C	C	C	C
Natural Open Space Areas	P	P	P	P	P
Community & Recreation Centers	C	C	C	C	C
Parks and Playgrounds, Public and	P	P	P	P	P

Private					
Pedestrian Pathways, Trails & Greenways	P	P	P	P	P
Community Gardens	P	P	P	P	P
MISCELLANEOUS	**R-1-8**	**R-1-12**	**R-1-21**	**RM-7**	**RM-15**
Public/Private Utility Transmission Wires, Lines, Pipes and Poles	P	P	P	P	P
Public/Private Utility Buildings and Structures	C	C	C	C	C
Cemetery	C	C	C	C	C
Golf Course	C	C	C	C	C
Government Uses and Facilities	C	C	C	C	C
Municipal Service Uses, including City utility uses, Police and Fire Stations	C	C	C	C	C
Temporary Buildings for uses incidental to construction work,					

including living quarters for guard or night watchman, which buildings must be removed upon completion or abandonment of the construction work	C	C	C	C	C
Correctional Facility, Detention Center, Jail, Penitentiary, Prison, Penal Institution (1 -249 beds)	-	-	-	-	-
Correctional Facility, Detention Center, Jail, Penitentiary, Prison, Penal Institution (250 or more beds)	-	-	-	-	-

Amended 08/02 by Ord. 2002-15, 10/02 by Ord. 2002-20, 02/09 by Ord. 2008-43, 02/11 by Ord. 2010-27, 04/11 by Ord. 2011-14, 08/11 by Ord. 2011-26, 09/11 by Ord. 2011-30, 09/11 by Ord. 2011-31, 09/12 by Ord. 2012-16, 03/15 by Ord. 2015-05

AFTER AMENDMENT

15.7 Codes And Symbols And Use Table 15.1

(1) In the following sections of this chapter, uses of land or buildings which are allowed in various districts are shown as "permitted uses," indicated by a "P" in the appropriate column,

or as a "conditional use," indicated by a "C" in the appropriate column. 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, "-." If a regulation applies in a given district, it is indicated in the appropriate column by a numeral to show the linear or square feet 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 multiple use, agricultural, or rural residential districts except as provided in this Code.

Table 15.1 Use Regulations

C

USE	R-1-8	R-1-12	R-1-21	RM-7	RM-15
Accessory buildings and uses customarily incidental to permitted residential uses, when the residential use has been previously established or is constructed simultaneously with the residential use.	P	P	P	P	P
Accessory buildings and uses customarily incidental to permitted uses, when the residential use has not previously been established.	C	C	C	C	C

Accessory buildings and uses customarily incidental to conditional uses.	C	C	C	C	C
The tilling of the soil, the raising of crops, horticulture and home gardening.	P	P	P	P	P
Fruit/Vegetable Stand	-	C	C	-	C
Farm	**R-1-8**	**R-1-12**	**R-1-21**	**RM-7**	**RM-15**
Accessory Farm Employee Housing. Each accessory farm employee housing unit must be located on a contiguous parcel that contains at least 10 acres or more for each such unit and which must have at least 10 additional acres if it is located on the	-	C	C	C	-

same property as the primary residential dwelling.					
Family Food Production ~~**and the Raising of Horses.**~~ and the Keeping of Large, Medium and Small Animals The first large animal (fully grown) shall have 10,000 sq ft of open area, each additional large animal shall have an additional 2,000 sq ft of open area. Each medium sized animal (fully grown) shall have 1,000 sq ft of open area not to exceed more than 6 medium animals per half acre. Each small sized animal (fully grown) shall have 100 sq ft of open area not to exceed more					

than 6 medium animals per half acre. The area of stables, barns and pens accessible to regulate animals may count towards the open area requirements. No animal shall be kept, corralled, penned, or raised within 100' from any pre-existing residential dwelling located on an adjoining lot. measured at the nearest corner There is no setback requirement from neighboring residential dwellings if a C.U.P. has been issued prior to the start of construction of a residential dwelling on an adjoining lot.	-	C	C	- ~~C~~	-
Class "A" Kennel (4-15					

animals only). No animal shall be kept, penned, or raised within 100' from any pre-existing residential dwelling located on an lot measured at residence the nearest corner. Each animal shall have a minimum area of 1,000 sq. ft. and must have 4,000 sq ft for each additional animal over 5.	-	C	C	- ~~C~~	-
Sportsman's Permit for 4-6 dogs. No dog shall be kept, penned, or raised within 100' from any pre-existing residential dwelling located on an adjoining lot measured at the nearest corner. Each animal shall have a minimum area of 1,000 sq. ft..	-	C	C	- ~~C~~	C

Raising of Rabbits, Ducks, Chickens (hens only), or Turkeys with not more than six (6) such animals in any combination, provided that appropriate cages, pens, coops, houses, etc. shall be provided for when these animals are kept outdoors. (Amended 04/11, 02/13)	P	P	P	P	P
RESIDENTIAL	**R-1-8**	**R-1-12**	**R-1-21**	**RM-7**	**RM-15**
Single-Family Dwellings Detached	P	P	P	P	P
Single-Family Attached Dwellings	P	P	P	P	P
Two-Family Dwelling (Amended 5/97)	-	C	C	P	P
Twin Home Dwellings (Amended 5/97)	-	C	C	C	C

Multiple Family Dwellings	-	-	-	C	C
Congregate Care Facility	-	-	C	C	C
Nursing Care Facility	C	C	C	C	C
Group Home, Small	C	C	C	C	C
Group Home, Large	C	C	C	C C	
Transitional Treatment Home, Small	C	C	C	C	C
Mobile Home Parks	-	-	-	C	C
Mobile Home Subdivisions	C	C	C	C	C
Residential facilities for handicapped or elderly	P	P	P	P	P
HOME OCCUPATION	P~~C~~	P~~C~~	P~~C~~	P~~C~~	P ~~C~~
Micro Entrepreneurship				C	
Household pets, other than Sportsman Permit	P	P	P	P	P
INSTITUTIONAL	**R-1-8**	**R-1-12**	**R-1-21**	**RM-7**	**RM-15**
~~Adult Day Care Center~~	~~-~~	~~-~~	~~C~~	~~C~~	~~P~~

Child Day Care Center (in a home, no more than 12 children at any one time with 1 provider and up to 16 with 2 providers, including those residing in the home with no more than 2 children under the age of two)	C	C	C	C	C
~~Commercial Day Care Center (not in a home) no more than 20 children at any one time~~	~~-~~	~~C~~	~~C~~	~~-~~	~~P~~
~~Child Day Care Facility (a commercial operation, not in a home, no more than 100 children at any one time)~~	~~-~~	~~-~~	~~C~~	~~-~~	~~P~~
~~Hospital~~	~~-~~	~~-~~	~~-~~	~~-~~	~~C~~
~~Medical or dental clinic~~	~~-~~	~~C~~	~~C~~	~~-~~	~~C~~
Places of Worship	C	C	C	C	C

Preschool (in a home, no more than 10 children from the ages of 4 to 6 years in age, including those residing in the home, with a maximum length of four hours for those who do not reside there)	C	C	C	C	C
~~Preschool (a commercial operation, not in a home, no more than 20 children from the ages of 4 to 6 years in age, at any one time, for a period not to exceed four hours)~~	~~-~~	~~-~~	~~C~~	~~-~~	~~C~~
~~Private educational institution having a curriculum similar to the public schools, grades K-12~~	~~C~~	~~C~~	~~C~~	~~C~~	~~C~~
~~Schools of higher education, community~~	~~-~~	~~-~~	~~C~~	~~-~~	~~C~~

~~colleges, off campus facilities~~					
~~Schools, professional and vocational~~	~~-~~	~~-~~	~~C~~	~~-~~	~~-~~
POWER GENERATION	**R-1-8**	**R-1-12**	**R-1-21**	**RM-7**	**RM-15**
~~Solar~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~
RECREATION, CULTURAL & ENTERTAINMENT					
Private Recreational Grounds and Facilities not open to the public, in which no admission charge is made	C	C	C	C	C
Natural Open Space Areas	P	P	P	P	P
Community & Recreation Centers	C	C	C	C	C
~~Parks and Playgrounds, Public and Private~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~
~~Pedestrian Pathways,~~					

~~Trails & Greenways~~	~~P~~	~~P~~	~~P~~	~~P~~	~~P~~
Community Gardens	P	P	P	P	P
MISCELLANEOUS	**R-1-8**	**R-1-12**	**R-1-21**	**RM-7**	**RM-15**
Public/Private Utility Transmission Wires, Lines, Pipes and Poles	P	P	P	P	P
Public/Private Utility Buildings and Structures	C	C	C	C	C
~~Cemetery~~	~~C~~	~~C~~	~~C~~	~~C~~	~~C~~
~~Golf Course~~	~~C~~	~~C~~	~~C~~	~~C~~	~~C~~
Government Uses and Facilities	C	C	C	C	C
Municipal Service Uses, including City utility uses, Police and Fire Stations	C	C	C	C	C
Temporary Buildings for uses incidental to construction work, including living quarters for guard or					

night watchman, which buildings must be removed upon completion or abandonment of the construction work	C	C	C	C	C
~~Correctional Facility, Detention Center, Jail, Penitentiary, Prison, Penal Institution (1 -249 beds)~~	-	-	-	-	-
~~Correctional Facility, Detention Center, Jail, Penitentiary, Prison, Penal Institution (250 or more beds)~~	-	-	-	-	-

Amended 08/02 by Ord. 2002-15, 10/02 by Ord. 2002-20, 02/09 by Ord. 2008-43, 02/11 by Ord. 2010-27, 04/11 by Ord. 2011-14, 08/11 by Ord. 2011-26, 09/11 by Ord. 2011-30, 09/11 by Ord. 2011-31, 09/12 by Ord. 2012-16, 03/15 by Ord. 2015-05

SECTION 28: **AMENDMENT** "16.8 Codes And Symbols And Use Table 16.1" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

16.8 Codes And Symbols And Use Table 16.1

(1) In the following sections of this chapter, uses of land or buildings which are allowed in various districts are shown as "permitted uses," indicated by a "P" in the appropriate column, or as a "conditional use," indicated by a "C" in the appropriate column. 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, "-". If a regulation applies in a given district, it is indicated in the appropriate column by a numeral to show the linear or square feet 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 multiple use, agricultural, or rural residential districts except as provided in this Code.

Table 16.1 Use Regulations

USE	C-N	C-S	C-G	C-D	M-D	M-G	MD-EX
COMMERCIAL							
Cabinet and Woodworking Mills	-	-	C	C	P	P	-
Bakery, Commercial	-	-	P	C	P	P	-
Blacksmith Shop	-	-	P	C	P	P	-
Carpet Cleaning	-	-	P	C	P	P	-
Commercial Laundries, Linen Service and Dry Cleaning	-	-	P	C	P	P	-
Convenience Store	C	P	P	C	P	P	-
Diaper Service	-	-	P	C	P	P	-
Gas Station							

(sales and/or minor repairs)	C	P	P	C	P	P	-
Greenhouse for Food and Plant Production	-	-	P	C	P	P	-
Heavy Equipment (Rental)	-	-	-	C	P	P	-
Heavy Equipment (Sales and Service)	-	-	-	C	P	P	-
Laboratory: Medical, Dental, Optical	-	-	P	C	-	-	-
Laboratory: Testing	-	C	P	C	P	P	-
Mini-warehouse	-	-	P	C	P	-	-
Motion Picture Studio	-	P	P	C	-	-	-
Photofinishing Lab	-	P	P	C	P	P	-
Plant and Garden Shop, including outdoor retail sales	C	C	C	C	-	-	-

area							
Precision Equipment Repair	-	-	P	C	P	P	-
Twin Commercial Units	C	C	C	C	C	C	-
Sign Painting/Fabrication	-	-	P	C	P	P	-
Welding Shop	-	-	P	C	P	P	-
Wholesale Distributors	-	-	P	C	P	P	-
Tobacco Specialty Store: This use is not permitted in any part of the proposed or existing building containing the use is located within 1,000 feet from (a) any school (public or private kindergarten, elementary, middle,							

charter, junior high, or high school), public park, public recreation facility, youth center, library, or church and (b) any other Tobacco Specialty Store. Distances shall be measured in a straight line, without regard to intervenin g structures or zoning districts, from a Tobacco Specialty Store structure to the property line of a school, public park,	-	C	C	C	P	P	-

library, church, youth center, cultural activity, residential use, zoning district boundary, or other Tobacco Specialty Store.							
MANUFACTURING	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Chemical Manufacturing and Storage	-	-	-	-	-	C	-
Concrete Manufacturing	-	-	-	-	-	P	-
Drop-Forge Industry	-	C	C	-	C	P	-
Explosive Manufacturing and Storage	-	-	-	-	-	C	-
Flammable Liquids or Gases, Heating Fuel Distribution & Storage	-	-	-	-	-	P	-

Grain Elevator	-	-	-	-	-	P	-
Bottling Plant	-	-	-	C	P	P	-
Cabinet Making/ Woodworking Mills	-	-	-	C	P	P	-
Heavy Manufacturing	-	-	-	-	-	P	-
Incinerator, Medical Waste/Hazardous Waste	-	-	-	-	-	C	-
Industrial Assembly	-	-	-	C	P	P	-
Light Manufacturing	-	-	-	C	P	P	-
Moving and Storage	-	-	-	C	P	P	-
Paint Manufacturing	-	-	-	-	-	P	-
Publishing Company	-	-	-	C	P	P	-
Railcar fabrication, repair and cleaning	-	-	-	-	-	C	C
Recycling Collection Station	-	-	-	C	P	P	-

Recycling Processing Center	-	-	-	C	C	P	-
Rock, Sand, and Gravel Storage and Distribution	-	-	-	-	-	C	C
Truck Freight Terminal	-	-	-	C	P	P	-
Sign Painting/Fabrication	-	-	-	C	P	P	-
Warehousing	-	-	-	C	P	P	-
OFFICE AND RELATED USES	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Financial Institution, without drive through facilities	C	P	P	C	P	P	-
Financial Institution, with drive through facilities	-	P	P	C	P	P	-
Offices	C	P	P	C	P	P	-
Veterinary Offices, operating							

entirely within an enclosed building and keeping animals	-	-	P	C	P	-	-
RETAIL SALES & SERVICES	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Auction Sales	-	P	P	C	-	-	-
Automobile Repair, Major	-	P	P	C	P	-	-
Automobile Repair, Minor	C	P	P	C	P	-	-
Automobile Sales/Rental and Service	C	P	P	C	C	-	-
Boat/Recreational Vehicle Sales and Service	-	P	P	C	C	-	-
Car Wash	C	P	P	C	P	P	-
Convenience retail store	C	P	P	C	P	P	-
Department Stores	-	P	P	C	-	-	-
Equipment rental, indoor	-	P	P	C	P	-	-

and outdoor							
Furniture Repair Shop	-	P	P	C	P	P	-
Health and Fitness Facility	-	P	P	C	-	-	-
Large Truck Rental	-	-	P	C	P	P	-
Liquor Store	-	C	C	C	-	-	-
Manufactured Home Sales, Service, and Storage	-	-	P	C	P	-	-
Pawnshop	-	-	P	C	P	-	-
Restaurants, with drive through facilities	C	P	P	C	P	P	-
Restaurants, without drive through facilities	C	P	P	C	P	P	-
Retail Goods Establishments	C	P	P	C	-	-	-
Retail Services Establish	C	P	P	C	P	P	-

ments							
Upholstery Shop	-	P	P	C	P	-	-
RECREATIONAL, CULTURAL, AND ENTERTAINMENT	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Amusement Park	-	P	P	C	-	-	-
Art Gallery	C	P	P	C	-	-	-
Art Studio	C	P	P	C	-	-	-
Commercial Indoor Recreation	-	P	P	C	P	-	-
Commercial Outdoor Recreation	-	P	P	C	P	-	-
Commercial Video Arcade	-	C	C	C	-	-	-
Dance Studio	C	P	P	C	-	-	-
Live Performance Theaters	-	P	P	C	-	-	-
Miniature Golf	-	P	P	C	P	-	-

Movie Theaters	-	P	P	C	-	-	-
Private Club	-	C	C	C	P	-	-
Sexually Oriented Businesses (Amended 4/05)	-	-	-	-	C	-	-
Tavern/Lounge/Brew Pub; more than 5,000 sq. ft. in floor area	-	C	C	C	-	-	-
RESIDENTIAL	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Dwelling Unit (Single Family)	C	C	C	C	C	C	-
Living Quarters for Caretaker or Security Guard	C	C	C	C	C	C	-
INSTITUTIONAL	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Adult Day Care Center	C	P	P	C	P	P	-

Child Day Care Center or Pre-School (a commercial operation) Amended 9/2011	C	P	P	C	P	P	-
Government Facilities	C	P	P	C	P	P	-
Hospital	-	-	P	C	-	-	-
Medical or Dental Clinic	C	P	P	C	P	P	-
Museum	-	P	P	C	-	-	-
Music Conservatory	-	P	P	C	-	-	-
Places of Worship				C			
Schools, Professional and Vocational	C	P	P	C	P	P	-
Schools of higher education, community colleges, off campus facilities	-	-	-	C	C	C	-
MISCELLANEO	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**

US							
Accessory Uses, except those that are otherwise specifically regulated in this Chapter, or elsewhere in this Code	C	P	P	C	P	P	-
Animal Pound (Amended 10/02)	-	-	-	-	-	P	-
Kennel (Amended 10/02)	C	C	-	C	C	C	-
Auditorium	-	P	P	C	-	-	-
Automobile Salvage & Recycling (Indoor)	-	-	-	C	P	P	-
Automobile Salvage & Recycling (Outdoor)	-	-	-	C	C	P	-
Boilerworks	-	-	-	-	-	P	-
Bus Line	-	-	P	C	P	P	-

Terminals							
Bus Line Yards and Repair Facilities	-	-	-	C	-	P	-
Commercial Parking Garage or Lot	C	C	C	C	C	C	C
Personal Wireless Telecommunication Facilities (Amended 4/02)	-	C	C	C	-	-	-
Communication Towers	-	P	P	C	P	P	-
Communication Towers, exceeding the maximum building height, but not higher than 80 feet	-	-	C	C	C	C	-
Contractor's Yard/Office (with outdoor storage)	-	-	P	C	P	P	-
Crop Productio	-	-	P	C	P	P	-

n							
Display Room; Wholesale	-	-	-	C	P	P	-
Farmer's Market	-	P	P	C	P	-	-
Flea Market (indoor)	-	P	P	C	P	-	-
Flea Market (outdoor)	-	P	P	C	P	-	-
Funeral Home	-	P	P	C	-	-	-
Hotel or Motel	-	P	P	C	-	-	-
Limousine Service	-	C	P	C	P	P	-
Outdoor Sales and Display	-	P	P	C	P	-	-
Commercial Storage Units	-	C	C	C	C	C	-
Outdoor Storage	-	-	P	C	P	P	-
Poultry Farm or Processing Plant	-	-	-	-	-	P	-
Public/Private Utility Transmission Wires, Lines,	C	P	P	C	P	P	-

Pipes, and Poles							
Public/Private Utility Buildings and Structures	C	C	P	C	P	P	-
Radio, Television Station	-	C	P	C	P	P	-
Sewage Treatment Plant	-	-	-	C	C	C	-
Golf Course	-	C	C	C	C	C	-
Ambulance Services dispatching, staging, and maintenance conducted entirely within an enclosed building	-	P	P	C	P	P	-
Vehicle Auction Use	-	-	P	C	P	P	-
Governmental Uses and Facilities	C	C	C	C	C	C	-
Municipal Service Uses,							

including City Utility Uses, Police and Fire Stations	C	C	C	C	C	C	-
Correctional Facility, Detention Center, Jail, Penitentiary, Prison, Penal Institution (1 -249 beds)	-	-	-	-	C	C	C
Correctional Facility, Detention Center, Jail, Penitentiary, Prison, Penal Institution (250 or more beds)	-	-	-	-	-	-	-
MINING AND EXCAVATION	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Accessory uses and buildings customaril							

y incidental to conditional uses	-	-	-	-	-	-	C
Agriculture, grazing of animals, raising crops	-	-	-	-	-	-	P
Automobile and truck service station	-	-	-	-	-	-	C
Cast stone, cement, cinder, terra cotta, tile brick, synthetic cast stone, block, pumice stone, and gypsum products	-	-	-	-	-	-	C
Coffee Shop	-	-	-	-	-	-	C
Construction equipment and supply trailer, temporary	-	-	-	-	-	-	C
Construction field	-	-	-	-	-	-	C

office, temporary							
Convenience store with gasoline sales	-	-	-	-	-	-	C
Gravel and sand excavation:							
1. Commercial operations	-	-	-	-	-	-	C
2. Temporary project specific operations	-	-	-	-	-	-	C
Machine Shop	-	-	-	-	-	-	C
Mines	-	-	-	-	-	-	C
Quarries	-	-	-	-	-	-	C
Parking lot incidental to a use conducted on the premises	C	C	C	C	C	C	C
Parking lot not incidental to a use conducted on the premises	C	C	C	C	C	C	C

Pottery, plaster, incidental plaster, plaster of paris, ceramic, and clay	-	-	-	-	-	-	C
Power generation (electrical) for on-site use							
Solar under 50 kvas	P	P	P	C	P	P	P
Solar 50 kva and above	C	C	C	C	C	C	C
Fuel cells, steam, hydro, or reciprocating engine	C	C	C	C	C	C	C
Wind under 5.9 kva	-	-	-	-	-	-	P
Auxiliary, temporary, wind, with more than 6 kva but less than 10 kva output	-	-	-	-	-	-	P
Fuel cells, steam, hydro, or reciprocati							

ng engine with more than 10.5 kva, but less than 150 kva output	-	-	-	-	-	-	C
Steam, hydro, or reciprocating engine with more than 150 kva, but less than 150 kva output	-	-	-	-	-	-	C
Rock crusher/concrete batch plant	-	-	-	-	-	-	C
Truck and freighting operation	-	-	-	-	-	-	C
Truck and heavy equipment service station and repair facility	-	-	-	-	-	-	C
Truck wash	-	-	-	-	-	-	C

Amended 06/02 by Ord. 2002-07, 10/02 by Ord. 2002-20, 10/03 by Ord. 2003-25, 03/05 by Ord. 2005-02, 03/05 by Ord. 2005-03, 06/06 by Ord. 2006-08, 04/07 by Ord. 2007-10, 09/10 by Ord. 2010-21, 09/10 by Ord. 2010-22, 11/10 by Ord. 2010-25, 02/11 by Ord. 2011-01, 02/11 by Ord. 2011-09, 02/11 by Ord. 2011-10, 09/11 by Ord. 2011-28, 09/11 by Ord. 2011-29, 09/11 by Ord. 2011-32, 08/12 by Ord. 2012-13, 03/15 by Ord. 2015-05, 07/16 by Ord.

AFTER AMENDMENT

16.8 Codes And Symbols And Use Table 16.1

(1) In the following sections of this chapter, uses of land or buildings which are allowed in various districts are shown as "permitted uses," indicated by a "P" in the appropriate column, or as a "conditional use," indicated by a "C" in the appropriate column. 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, "-". If a regulation applies in a given district, it is indicated in the appropriate column by a numeral to show the linear or square feet 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 multiple use, agricultural, or rural residential districts except as provided in this Code.

Table 16.1 Use Regulations

USE	C-N	C-S	C-G	C-D	M-D	M-G	MD-EX
COMMERCIAL							
Adult Day Care Center	C	C	C	C	-	-	-
Cabinet and Woodworking Mills	-	-	C	C	P	P	-
Bakery, Commercial	-	-	P	C	P	P	-
Blacksmith Shop	-	-	P	C	P	P	-
Carpet Cleaning	-	-	P	C	P	P	-
Commercial Laundries, Linen Service and Dry	-	-	P	C	P	P	-

Cleaning							
Commercial Day Care Center (not in a home) no more than 20 children at any one time	C	C	C	C	-	-	-
Child Day Care Facility (a commercial operation, not in a home, no more than 100 children at any one time)	C	C	C	C	-	-	-
Convenience Store	C	P	P	C	P	P	-
Diaper Service	-	-	P	C	P	P	-
Gas Station (sales and/or minor repairs)	C	P	P	C	P	P	-
Greenhouse for Food and Plant Production	-	-	P	C	P	P	-

Golf Course	C	C	C	C	C	C	C
Heavy Equipment (Rental)	-	-	-	C	P	P	-
Heavy Equipment (Sales and Service)	-	-	-	C	P	P	-
Hospital	-	C	C	C	-	-	-
Laboratory: Medical, Dental, Optical	-	-	P	C	-	-	-
Laboratory: Testing	-	C	P	C	P	P	-
Mini-warehouse	-	-	P	C	P	-	-
Motion Picture Studio	-	P	P	C	-	-	-
Photofinishing Lab	-	P	P	C	P	P	-
Plant and Garden Shop, including outdoor retail sales area	C	C	C	C	-	-	-
Precision Equipment Repair	-	-	P	C	P	P	-
Preschool							

(a commercial operation, not in a home, no more than 20 children from the ages of 4 to 6 years in age, at any one time, for a period not to exceed four hours)	C	C	C	C	-	-	-
Private educational institution having a curriculum similar to the public schools, grades K-12	C	C	C	C	-	-	-
Schools of higher education, community colleges, off campus facilities	C	C	C	C	-	-	-
Schools, professional and	C	C	C	C	-	-	-

vocational							
Twin Commercial Units	C	C	C	C	C	C	-
Sign Painting/Fabrication	-	-	P	C	P	P	-
Welding Shop	-	-	P	C	P	P	-
Wholesale Distributors	-	-	P	C	P	P	-
Tobacco Specialty Store: This use is not permitted in any part of the proposed or existing building containing the use is located within 1,000 feet from (a) any school (public or private kindergarten, elementary, middle, charter, junior							

high, or high school), public park, public recreation facility, youth center, library, or church and (b) any other Tobacco Specialty Store. Distances shall be measured in a straight line, without regard to intervening structures or zoning districts, from a Tobacco Specialty Store structure to the property line of a school, public park, library, church,	-	C	C	C	P	P	-

youth center, cultural activity, residential use, zoning district boundary, or other Tobacco Specialty Store.							
MANUFACTURING	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Chemical Manufacturing and Storage	-	-	-	-	-	C	-
Concrete Manufacturing	-	-	-	-	-	P	-
Drop-Forge Industry	-	C	C	-	C	P	-
Explosive Manufacturing and Storage	-	-	-	-	-	C	-
Flammable Liquids or Gases, Heating Fuel Distribution & Storage	-	-	-	-	-	P	-
Grain Elevator	-	-	-	-	-	P	-

Bottling Plant	-	-	-	C	P	P	-
Cabinet Making/ Woodworking Mills	-	-	-	C	P	P	-
Heavy Manufacturing	-	-	-	-	-	P	-
Incinerator, Medical Waste/Hazardous Waste	-	-	-	-	-	C	-
Industrial Assembly	-	-	-	C	P	P	-
Light Manufacturing	-	-	-	C	P	P	-
Moving and Storage	-	-	-	C	P	P	-
Paint Manufacturing	-	-	-	-	-	P	-
Publishing Company	-	-	-	C	P	P	-
Railcar fabrication, repair and cleaning	-	-	-	-	-	C	C
Recycling Collection Station	-	-	-	C	P	P	-
Recycling							

Processing Center	-	-	-	C	C	P	-
Rock, Sand, and Gravel Storage and Distribution	-	-	-	-	-	C	C
Truck Freight Terminal	-	-	-	C	P	P	-
Sign Painting/Fabrication	-	-	-	C	P	P	-
Warehousing	-	-	-	C	P	P	-
OFFICE AND RELATED USES	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Financial Institution, without drive through facilities	C	P	P	C	P	P	-
Financial Institution, with drive through facilities	-	P	P	C	P	P	-
Offices	C	P	P	C	P	P	-
Veterinary Offices, operating entirely							

within an enclosed building and keeping animals	-	-	P	C	P	-	-
RETAIL SALES & SERVICES	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Auction Sales	-	P	P	C	-	-	-
Automobile Repair, Major	-	P	P	C	P	-	-
Automobile Repair, Minor	C	P	P	C	P	-	-
Automobile Sales/Rental and Service	C	P	P	C	C	-	-
Boat/Recreational Vehicle Sales and Service	-	P	P	C	C	-	-
Car Wash	C	P	P	C	P	P	-
Convenience retail store	C	P	P	C	P	P	-
Department Stores	-	P	P	C	-	-	-
Equipment rental, indoor and	-	P	P	C	P	-	-

outdoor							
Furniture Repair Shop	-	P	P	C	P	P	-
Health and Fitness Facility	-	P	P	C	-	-	-
Large Truck Rental	-	-	P	C	P	P	-
Liquor Store	-	C	C	C	-	-	-
Manufactured Home Sales, Service, and Storage	-	-	P	C	P	-	-
Pawnshop	-	-	P	C	P	-	-
Restaurants, with drive through facilities	C	P	P	C	P	P	-
Restaurants, without drive through facilities	C	P	P	C	P	P	-
Retail Goods Establishments	C	P	P	C	-	-	-
Retail Services Establish	C	P	P	C	P	P	-

ments							
Upholstery Shop	-	P	P	C	P	-	-
RECREATIONAL, CULTURAL, AND ENTERTAINMENT	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Amusement Park	-	P	P	C	-	-	-
Art Gallery	C	P	P	C	-	-	-
Art Studio	C	P	P	C	-	-	-
Commercial Indoor Recreation	-	P	P	C	P	-	-
Commercial Outdoor Recreation	-	P	P	C	P	-	-
Commercial Video Arcade	-	C	C	C	-	-	-
Dance Studio	C	P	P	C	-	-	-
Live Performance Theaters	-	P	P	C	-	-	-
Miniature Golf	-	P	P	C	P	-	-
Movie							

Theaters	-	P	P	C	-	-	-
Private Club	-	C	C	C	P	-	-
Sexually Oriented Businesses (Amended 4/05)	-	-	-	-	C	-	-
Tavern/Lounge/Brew Pub; more than 5,000 sq. ft. in floor area	-	C	C	C	-	-	-
RESIDENTIAL	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Dwelling Unit (Single Family)	C	C	C	C	C	C	-
Living Quarters for Caretaker or Security Guard	C	C	C	C	C	C	-
INSTITUTIONAL	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Adult Day Care Center	C	P	P	C	P	P	-

Child Day Care Center or Pre-School (a commercial operation) Amended 9/2011	C	P	P	C	P	P	-
Government Facilities	C	P	P	C	P	P	-
Hospital	-	-	P	C	-	-	-
Medical or Dental Clinic	C	P	P	C	P	P	-
Museum	-	P	P	C	-	-	-
Music Conservatory	-	P	P	C	-	-	-
Places of Worship				C			
Schools, Professional and Vocational	C	P	P	C	P	P	-
Schools of higher education, community colleges, off campus facilities	-	-	-	C	C	C	-
MISCEL							

LANEOUS	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Accessory Uses, except those that are otherwise specifically regulated in this Chapter, or elsewhere in this Code	C	P	P	C	P	P	-
Animal Pound (Amended 10/02)	-	-	-	-	-	P	-
Kennel (Amended 10/02)	C	C	-	C	C	C	-
Auditorium	-	P	P	C	-	-	-
Automobile Salvage & Recycling (Indoor)	-	-	-	C	P	P	-
Automobile Salvage & Recycling (Outdoor)	-	-	-	C	C	P	-
Boilerworks	-	-	-	-	-	P	-
Bus Line							

Terminals	-	-	P	C	P	P	-
Bus Line Yards and Repair Facilities	-	-	-	C	-	P	-
Commercial Parking Garage or Lot	C	C	C	C	C	C	C
Personal Wireless Telecommunication Facilities (Amended 4/02)	-	C	C	C	-	-	-
Communication Towers	-	P	P	C	P	P	-
Communication Towers, exceeding the maximum building height, but not higher than 80 feet	-	-	C	C	C	C	-
Contractor's Yard/Office (with outdoor storage)	-	-	P	C	P	P	-
Crop							

Production	-	-	P	C	P	P	-
Display Room; Wholesale	-	-	-	C	P	P	-
Farmer's Market	-	P	P	C	P	-	-
Flea Market (indoor)	-	P	P	C	P	-	-
Flea Market (outdoor)	-	P	P	C	P	-	-
Funeral Home	-	P	P	C	-	-	-
Hotel or Motel	-	P	P	C	-	-	-
Limousine Service	-	C	P	C	P	P	-
Outdoor Sales and Display	-	P	P	C	P	-	-
Commercial Storage Units	-	C	C	C	C	C	-
Outdoor Storage	-	-	P	C	P	P	-
Poultry Farm or Processing Plant	-	-	-	-	-	P	-
Public/Private Utility Transmission Wires,	C	P	P	C	P	P	-

Lines, Pipes, and Poles							
Public/Private Utility Buildings and Structures	C	C	P	C	P	P	-
Radio, Television Station	-	C	P	C	P	P	-
Sewage Treatment Plant	-	-	-	C	C	C	-
Golf Course	-	C	C	C	C	C	-
Ambulance Services dispatching, staging, and maintenance conducted entirely within an enclosed building	-	P	P	C	P	P	-
Vehicle Auction Use	-	-	P	C	P	P	-
Governmental Uses and Facilities	C	C	C	C	C	C	-
Municipal Service							

Uses, including City Utility Uses, Police and Fire Stations	C	C	C	C	C	C	-
Correctional Facility, Detention Center, Jail, Penitentiary, Prison, Penal Institution (1 -249 beds)	-	-	-	-	C	C	C
Correctional Facility, Detention Center, Jail, Penitentiary, Prison, Penal Institution (250 or more beds)	-	-	-	-	-	-	-
MINING AND EXCAVATION	**C-N**	**C-S**	**C-G**	**C-D**	**M-D**	**M-G**	**MD-EX**
Accessory uses and buildings customaril							

y incidental to conditional uses	-	-	-	-	-	-	C
Agriculture, grazing of animals, raising crops	-	-	-	-	-	-	P
Automobile and truck service station	-	-	-	-	-	-	C
Cast stone, cement, cinder, terra cotta, tile brick, synthetic cast stone, block, pumice stone, and gypsum products	-	-	-	-	-	-	C
Coffee Shop	-	-	-	-	-	-	C
Construction equipment and supply trailer, temporary	-	-	-	-	-	-	C
Construction field							

office, temporary	-	-	-	-	-	-	C
Convenience store with gasoline sales	-	-	-	-	-	-	C
Gravel and sand excavation:							
1. Commercial operations	-	-	-	-	-	-	C
2. Temporary project specific operations	-	-	-	-	-	-	C
Machine Shop	-	-	-	-	-	-	C
Mines	-	-	-	-	-	-	C
Quarries	-	-	-	-	-	-	C
Parking lot incidental to a use conducted on the premises	C	C	C	C	C	C	C
Parking lot not incidental to a use conducted on the premises	C	C	C	C	C	C	C

Pottery, plaster, incidental plaster, plaster of paris, ceramic, and clay	-	-	-	-	-	-	C
Power generation (electrical) for on-site use							
Solar under 50 kvas	P	P	P	C	P	P	P
Solar 50 kva and above	C	C	C	C	C	C	C
Fuel cells, steam, hydro, or reciprocating engine	C	C	C	C	C	C	C
Wind under 5.9 kva	-	-	-	-	-	-	P
Auxiliary, temporary, wind, with more than 6 kva but less than 10 kva output	-	-	-	-	-	-	P
Fuel cells, steam,							

hydro, or reciprocating engine with more than 10.5 kva, but less than 150 kva output	-	-	-	-	-	-	C
Steam, hydro, or reciprocating engine with more than 150 kva, but less than 150 kva output	-	-	-	-	-	-	C
Rock crusher/concrete batch plant	-	-	-	-	-	-	C
Truck and freighting operation	-	-	-	-	-	-	C
Truck and heavy equipment service station and repair facility	-	-	-	-	-	-	C
Truck wash	-	-	-	-	-	-	C

Amended 06/02 by Ord. 2002-07, 10/02 by Ord. 2002-20, 10/03 by Ord. 2003-25, 03/05 by Ord. 2005-02, 03/05 by Ord. 2005-03, 06/06 by Ord. 2006-08, 04/07 by Ord. 2007-10, 09/10 by Ord. 2010-21, 09/10 by Ord. 2010-22, 11/10 by Ord. 2010-25, 02/11 by Ord. 2011-01,

02/11 by Ord. 2011-09, 02/11 by Ord. 2011-10, 09/11 by Ord. 2011-28, 09/11 by Ord. 2011-29, 09/11 by Ord. 2011-32, 08/12 by Ord. 2012-13, 03/15 by Ord. 2015-05, 07/16 by Ord. 2016-09

SECTION 29: **AMENDMENT** "20.2 Definitions" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

20.2 Definitions

Notwithstanding other definitions found in the code, the following words and phrases whenever used in this chapter shall be construed as defined in this section:. If there is a conflict between the different portions of the Code, the definitions and provisions in this Section shall govern. Words not defined shall have the meanings found in accepted reference manuals, published online in reasonable acceptable websites, or in industry-standard publications or materials. Further references and definitions can be found in the Sign Research Foundation's Sign Glossary as in industry standard if additional clarification is needed.

1. A-FRAME SIGN: Any sign or structure composed of two (2) sign faces mounted or attached back to back in such a manner as to form a basically triangular vertical cross section through the faces.

2. ANIMATED SIGN: Any sign which is designed and constructed to give its message through the flashing of or rotation of lights or figures.
3. APPURTENANT SIGN: See definition of On Premises Sign.
4. BANNER: A flexible sign characteristically supported by two (2) or more points. It is generally made of fabric or other nonrigid materials with no enclosing frame. Flags supported by one point are considered banners.
5. BILLBOARD: A freestanding ground sign, regardless of size, located on real property that is designed and intended to direct attention to a business, product, service or message that is not sold, offered or existing on the property, nor specific to the property where the property sign is located.
6. BUILDING FACE: The visible outer surface (façade) of an exterior wall of a building. The area of the face of the building shall be the total area such surface, including the solid walls (including parapet or projecting walls), roof, doors, and windows.
7. CANOPY: See definition of Marquee.
8. DISREPAIR: A sign shall be considered in disrepair when it fails to be in the same in form, style, shape, or structure as originally constructed, or when it fails to perform its intended function of conveying a message or when it reaches the point of a reduced value of over 50% of the value of the replacement cost. Conditions shall include, but not be limited to:
    a. Structural pole or support failure.

b. Signs not being held vertically or as originally constructed.
c. Borders falling off or already removed.
d. Panels missing or falling off.
e. Message falling off or in disrepair such that it cannot be interpreted by the motoring public.
f. Signs that are overgrown by trees or other vegetation.

9. ELECTRONIC MESSAGE CENTER (EMC): A sign with changeable copy that is controlled electronically via a remote programming device.
10. ENTRY FEATURE SIGN: A sign that is placed at the entrance of a subdivision or other residential or commercial project as part of a distinct architectural or landscape feature that identifies the project and displays the project name. Entry feature signs are permanent, decorative elements, as distinct from other directional, real estate, or informational signs which are designed to be temporary in nature and which will eventually be removed.

11. ERECT: To build, construct, place, relocate, enlarge, substantially alter, attach, suspend, paint, post or display. Normal maintenance, including refinishing, not to exceed 50% of the value of the si is not included in this definition, provided the location, character, style, materials, construction, size, or use of the sign is not changed or altered.
12. FLOATING SIGN: Any inflatable or floating sign or advertising device that is affixed to or displayed at a place of business. Examples are blimps, hot air balloons, and inflatable figures.
13. FREESTANDING SIGN: Any sign that is standing on or erected into the ground. Such signs are usually, but not necessarily, supported from the ground by one or more poles or posts or similar uprights, with or without braces. Any sign which is mounted into the ground, but has the supports to any portion of the roof of a building or structure, shall be considered to be a roof sign.

14. FRONTAGE: The length of the sides along the street or any other principal public thoroughfare, but not including such length along an alley, watercourse, railroad, street or thoroughfare with no permitted access.
15. LOGO SIGNS: Any sign whose single feature is a reproduction of the common recognized logo of the company and/or product.
16. MARQUEE: Any permanent roof like structure projection beyond a building or wall, generally designed and constructed to provide protection from the weather.
17. MONUMENT SIGN: Any on premises sign which is mounted directly to the ground having a foundation or pedestal that is at least sixty percent (60%) of the width of the actual sign structure and meeting the standards for height set for monument signs.
18. MOVABLE, FREESTANDING SIGN: Any sign not affixed to or erected into the ground.
19. OFF PREMISES SIGN OR NONAPPURTENANT SIGN: Any sign which advertises products, development projects, services, or business establishments which are not located, conducted, manufactured or sold upon the same premises upon which the sign is erected.

20. ON PREMISES SIGN OR APPURTENANT SIGN: Any sign which advertises products, services, development projects, or business establishments which are located, conducted, manufactured or sold upon the same premises on which the sign is erected.
21. OUTDOOR ADVERTISING SIGN: See definition of On Premises Sign Or Appurtenant Sign.
22. PROJECTING SIGN: Any sign attached to a building or structural wall and extending horizontally outward from such wall more than eighteen inches (18").
23. PUBLIC EVENT BANNER: A banner pertaining to festivals or events which is installed as a temporary sign. Installation of banners across SR-138 and SR-112 are generally not permitted without special permission of UDOT and the Grantsville City Council.
24. PUBLIC INFORMATION SIGN: Signs presenting travel information and signs concerning historic and scenic sites, public recreation facilities, miscellaneous instructions and warnings.

25. READER BOARD: A sign with manually changeable copy such as gas station prices, school events, etc.

26. REAL PROPERTY: Land or real estate, with or without structures; not goods or services.
27. RESIDENTIAL ZONE OR DISTRICT: Any zone that is zoned as residential under Utah State law and the Grantsville City Land Use management and Development Code.
28. ROOF SIGN: Any sign which is erected upon or over the roof or over a parapet of any building or structure.
29. SCENIC BYWAY: A road that possesses outstanding scenic, recreational, historical, educational, scientific or cultural values or features. The designation can be made by federal or state agencies.

30. SIGN: Any words, lettering, parts of letters, figures, numerals, phrases, sentences, devices, designs, pictures, trade names or trademarks by which anything is made known, such as are used to designate a firm, association, corporation, profession, business or service, whether placed on the ground, rocks, trees, stumps, or other natural objects, or on a building, wall, roof, frame, support, fence or other manmade structure, which are visible from any public street, public highway or public road right of way. For the purpose of this chapter, the word "sign" does not include any official notice issued by any court, public body or officer, or non-commercial directional, warning or informational sign or structure required or authorized by law.
31. SIGN AREA: The area of a sign that is used for display purposes, excluding the minimum frame and supports. In computing sign area, only one side of a double faced sign covering the same subject shall be computed. For signs that do not have a frame or a separate background, sign area shall be computed on the basis of the least rectangle, triangle or circle large enough to frame the display on one face. An electronic message center will be included in calculation of overall sign area.
32. SNIPE SIGN: Snipe signs, also known as bandit signs, are temporary, off-premises signs affixed to poles or by wire stakes to the ground in the public right-of-way or

private property, and are used to advertise services, events, or businesses. This definition does not include political or candidate signs used during elections.

33. TEMPORARY: A period not to exceed six (6) months.
34. TIME AND TEMPERATURE DEVICE: Any mechanism that displays the time and/or temperature, but does not display any commercial advertising or identification.
35. WALL SIGNS: Any sign posted, or painted upon, suspended from, or otherwise affixed to a wall, fascia, canopy, or marquee of a building located on the site to which the sign pertains.
36. WIND SIGNS: Any propeller, whirligig or similar commercial device which is designed to flutter, rotate or display other movement under the influence of wind. This definition shall not include pennants, flags or banners.

AFTER AMENDMENT

20.2 Definitions

Notwithstanding other definitions found in the code, the following words and phrases whenever used in this chapter shall be construed as defined in this section:. If there is a conflict between the different portions of the Code, the definitions and provisions in this Section shall govern. Words not defined shall have the meanings found in accepted reference manuals, published online in reasonable acceptable websites, or in industry-standard publications or materials. Further references and definitions can be found in the Sign Research Foundation's Sign Glossary as in industry standard if additional clarification is needed.

(1) A-FRAME SIGN: Any sign or structure composed of two (2) sign faces mounted or attached back to back in such a manner as to form a basically triangular vertical cross section through the faces.

(2) ABANDON SIGN. A sign which no longer identifies or advertises a bona fide business, lessor, service, owner, product, or activity, and/or for which no legal owner can be found.

(3) ALTERATIONS, SIGN. A change or rearrangement in the structural parts or design whether by extending on a side; increasing in area or height; or by relocation or changing the position of a sign.

(4) ANIMATED SIGN: Any sign which is designed and constructed to give its message through the flashing of or rotation of lights or figures. See and also note the difference from changeable sign) A sign or display manifesting either kinetic or illusionary motion occasion by natural, manual, mechanical, electrical, or other means. Animated signs include the following types: (a) Naturally Energized - Signs whose motion is activated by wind or other atmospheric impingement. Wind-driven signs include flags, banners, pennants, streamers, metallic disks. or other similar devices designed to move in the wind. (b) Mechanically Energized - signs manifesting a repetitious pre-programmed physical movement or rotation in either one or a series of planes activated by means of mechanical based drives. (c) Electrically energized - Illuminated signs whose motion or visual impression of motion is activated primarily by electrical means. Electrically energized animated signs are of two types: (d) Flashing Signs -

Illuminated signs exhibiting a preprogrammed repetitious cyclical interruption of illumination from one or more sources in which the duration of the period of illumination (on phase) is either the same as or less than the duration of the period of darkness (off phase, and in which the intensity of illumination varied from zero (off) to 100 percent (on) during the programmed cycle. (e) Illusionary Movement Signs - Illuminated signs exhibiting the illusion of movement by means of a pre-programmed repetitious sequential switching action in which illuminated elements of the sign are turned on or off to visually simulate the impression of motion characteristic of chasing, running, blinking, oscillating, twinkling, or expanding and contracting light patterns

(5) APPURTENANT SIGN: See definition of On Premises Sign.

(6) AWNING. A shelter projecting from and supported by the exterior wall of a building constructed of non-rigid materials on a supporting framework. (Compare "Marquee")

(7) AWNING SIGN. A sign painted on, printed on. or attached flat against the surface of an awning.

(8) BACK LIT AWNING. (see "Electric Awning Sign")

(9) BANNER: A flexible sign characteristically supported by two (2) or more points. It is generally made of fabric or other nonrigid materials with no enclosing frame. Flags supported by one point are considered banners.

(10) BILLBOARD: A freestanding ground sign, regardless of size, located on real property that is designed and intended to direct attention to a business, product, service or message that is not sold, offered or existing on the property, nor specific to the property where the property sign is located.

(11) BUILDING FACE: The visible outer surface (façade) of an exterior wall of a building. The area of the face of the building shall be the total area such surface, including the solid walls (including parapet or projecting walls), roof, doors, and windows.

(12) CANOPY: See definition of Marquee.

(13) CANOPY SIGN. A sign affixed or applied to the exterior facing surface or surfaces of a building or freestanding canopy.

(14) CANOPY (FREESTANDING). A rigid multi-sided structure that may or may not be illuminated by means of internal or external sources, covered with fabric, metal or other material and supported by columns or posts embedded in the ground.

(15) CHANGEABLE SIGN. A sign whose informational content can be changed or altered by manual or electric, electro-mechanical, or electronic means. Changeable signs include the following types: (a) Manually Activated - Signs whose alphabetic, pictographic, or symbolic informational content can be changed or altered by manual means. (b) Electrically activated - signs whose alphabetic, pictographic, or symbolic informational content can be changed or altered on a fixed display surface composed of electrically illuminated or mechanically driven changeable segments. Includes the following two types:

(16) Fixed Message Electronic Signs - Signs whose basic informational content has been pre-programmed to include only certain types of information projection, such as time, temperature, predictable traffic conditions, or other events subject to prior

programming.

(17) Computer controlled variable Message electronic Signs - Signs whose informational content can be changed or altered by means of computerized driven electronic impulses. (c) Mobile, Changeable Copy Sign - A sign mounted on a trailer, frame or legs, lighted or unlighted, box or "A" frame and shall have changeable lettering.

(18) COPY, SIGN. The graphic content of a sign surface in either permanent or removable letter, pictographic, symbolic, or alphabetic form.

(19) DISREPAIR: A sign shall be considered in disrepair when it fails to be in the same in form, style, shape, or structure as originally constructed, or when it fails to perform its intended function of conveying a message or when it reaches the point of a reduced value of over 50% of the value of the replacement cost. Conditions shall include, but not be limited to:

(a) Structural pole or support failure.
(b) Signs not being held vertically or as originally constructed.
(c) Borders falling off or already removed.

(d) Panels missing or falling off.
(e) Message falling off or in disrepair such that it cannot be interpreted by the motoring public.
(f) Signs that are overgrown by trees or other vegetation.

(20) DOUBLE-FACED SIGN. A sign with two faces diverged from a common angle of not more than 45 degrees or back-to-back

(21) ELECTRIC AWNING SIGN. (also "Back Lit Awning"). An internally illuminated fixed space-frame structure with translucent, flexible reinforced covering designed in awning form and with graphics or copy applied to the visible surface of the awning.

(22) ELECTRICAL SIGN. A sign or sign-structure in which electrical wiring, connection, or fixtures are used.

(23) ELECTRONIC MESSAGE CENTER (EMC): A sign with changeable copy that is controlled electronically via a remote programming device.

(24) ENTRY FEATURE SIGN: A sign that is placed at the entrance of a subdivision or other residential or commercial project as part of a distinct architectural or landscape feature that identifies the project and displays the project name. Entry feature signs are permanent, decorative elements, as distinct from other directional, real estate, or informational signs which are designed to be temporary in nature and which will eventually be removed.

(25) ERECT: To build, construct, place, relocate, enlarge, substantially alter, attach, suspend, paint, post or display. Normal maintenance, including refinishing, not to exceed 50% of the value of the si is not included in this definition, provided the location, character, style, materials, construction, size, or use of the sign is not changed or altered.

(26) FACE OF A SIGN. The area of a sign on which the copy is placed.

(27) FESTOONS (SIGN). A string of ribbons, tinsel, small flags, or pinwheels.

(28) FLOODLIGHTED SIGN. (see "Illuminated Sign").

(29) FLASHING SIGN. (see "Animated sign, Electrically Energized").

(30) FLOATING SIGN: Any inflatable or floating sign or advertising device that is affixed to or displayed at a place of business. Examples are blimps, hot air balloons, and inflatable figures.

(31) FLOODLIGHTED SIGN. (see "Illuminated Sign").

(32) FREESTANDING SIGN: Any sign that is standing on or erected into the ground. Such signs are usually, but not necessarily, supported from the ground by one or more poles or posts or similar uprights, with or without braces. Any sign which is mounted into the ground, but has the supports to any portion of the roof of a building or structure, shall be considered to be a roof sign.

(33) FRONTAGE: The length of the sides along the street or any other principal public thoroughfare, but not including such length along an alley, watercourse, railroad, street or thoroughfare with no permitted access.

(34) HEIGHT (of a Sign). The vertical distance measured from the highest point of the sign, excluding decorative embellishment, to the grade of the adjacent street or the surface grade beneath the sign, whichever is less. (compare "Clearance")

(35) IDENTIFICATION SIGN. A sign whose copy is limited to the name and address of a building, institution, or person and/or to the activity or occupation being identified.

(36) ILLEGAL SIGN. A sign which does not meet the requirements of this code and which has not received non-conforming status.

(37) ILLUMINATED SIGN. A sign with an artificial light source incorporated internally or externally for the purpose of illuminating the sign.

(38) INCIDENTAL SIGN. A small sign, emblem, or decal informing the public of goods, facilities, or services available on the premises, e.g., a credit card sign or a sign indicating hours of business.

(39) LOGO SIGNS: Any sign whose single feature is a reproduction of the common recognized logo of the company and/or product.

(40) LOW PROFILE SIGN (Also "Monument Sign"). A sign mounted directly to the ground with maximum height not to exceed six (6) feet.

(41) MARQUEE: Any permanent roof like structure projection beyond a building or wall, generally designed and constructed to provide protection from the weather.

(42) MAINTENANCE, SIGN. For the purposes of this Ordinance, the cleaning, painting, repair, or replacement of defective parts of a sign in a manner that does not alter the basic copy, design, or structure of the sign.

(43) MONUMENT SIGN: Any on premises sign which is mounted directly to the ground having a foundation or pedestal that is at least sixty percent (60%) of the width of the actual sign structure and meeting the standards for height set for monument signs.

(44) MOVABLE, FREESTANDING SIGN: Any sign not affixed to or erected into the ground.

(45) NON-CONFORMING SIGN. A sign which was erected legally, but which does not comply with subsequently enacted sign restrictions and regulations. (A) A sign which does not conform to the sign code requirements, but for which a conditional use permit has been issued.

(46) OFF-PREMISE SIGN (also "BILLBOARD"). A sign structure advertising an

establishment, merchandise, service, or entertainment, which is not sold, produced, manufactured, or furnished at the property on which said sign is located, e.g., "billboards" or "outdoor advertising".

(47) OFF-SITE DIRECTIONAL SIGN. A sign which provides directional assistance to access an establishment conveniently and safely. Such signs shall be limited by the Zoning Administrator in size, height, and placement as justified.

(48) OFF PREMISES SIGN OR NONAPPURTENANT SIGN: Any sign which advertises products, development projects, services, or business establishments which are not located, conducted, manufactured or sold upon the same premises upon which the sign is erected.

(49) ON PREMISES SIGN OR APPURTENANT SIGN: Any sign which advertises products, services, development projects, or business establishments which are located, conducted, manufactured or sold upon the same premises on which the sign is erected. A sign which pertains to the use; product or commodity sold; service performed on the premise and/or property on which it is located.

(50) OUTDOOR ADVERTISING SIGN: See definition of On Premises Sign Or Appurtenant Sign.

(51) PAINTED WALL SIGN. Any sign which is applied with paint or similar substance on the surface of a wall.

(52) PEDESTAL SIGN. A temporary and/or movable sign supported by a column(s) and a base so as to allow the sign to stand in an upright position.

(53) POLE COVER (SIGN). Cover enclosing or decorating poles or other structural supports of a sign.

(54) POLITICAL SIGN. A temporary sign used in connection with a local, state, or national election or referendum.

(55) PORTABLE SIGN. Any sign designed to be moved easily and not permanently affixed to the ground or to a structure or building.

(56) PROJECTING SIGN: Any sign attached to a building or structural wall and extending horizontally outward from such wall more than eighteen inches (18").

(57) PROPERTY SIGN. A sign related to the property upon which it is located and offering such information as the address, the property, warning against trespassing, any hazard, or other danger on the property. (see "Identification Sign")

(58) PUBLIC EVENT BANNER: A banner pertaining to festivals or events which is installed as a temporary sign. Installation of banners across SR-138 and SR-112 are generally not permitted without special permission of UDOT and the Grantsville City Council.

(59) PUBLIC INFORMATION SIGN: Signs presenting travel information and signs concerning historic and scenic sites, public recreation facilities, miscellaneous instructions and warnings.

(60) READER BOARD: A sign with manually changeable copy such as gas station prices, school events, etc.

(61) REAL PROPERTY: Land or real estate, with or without structures; not goods or services.

(62)

REAL ESTATE SIGN. A temporary sign advertising the real estate upon which the sign is located as being for rent, lease, or sale.

(63) RESIDENTIAL ZONE OR DISTRICT: Any zone that is zoned as residential under Utah State law and the Grantsville City Land Use management and Development Code.

(64) ROOF SIGN: Any sign which is erected upon or over the roof or over a parapet of any building or structure.

(65) ROTATING SIGN. (see "Animated Sign, Mechanically Energized").

(66) SCENIC BYWAY: A road that possesses outstanding scenic, recreational, historical, educational, scientific or cultural values or features. The designation can be made by federal or state agencies.

(67) SIGN: Any words, lettering, parts of letters, figures, numerals, phrases, sentences, devices, designs, pictures, trade names or trademarks by which anything is made known, such as are used to designate a firm, association, corporation, profession, business or service, whether placed on the ground, rocks, trees, stumps, or other natural objects, or on a building, wall, roof, frame, support, fence or other manmade structure, which are visible from any public street, public highway or public road right of way. For the purpose of this chapter, the word "sign" does not include any official notice issued by any court, public body or officer, or non-commercial directional, warning or informational sign or structure required or authorized by law.

(68) SIGN AREA: The area of a sign that is used for display purposes, excluding the minimum frame and supports. In computing sign area, only one side of a double faced sign covering the same subject shall be computed. For signs that do not have a frame or a separate background, sign area shall be computed on the basis of the least rectangle, triangle or circle large enough to frame the display on one face. An electronic message center will be included in calculation of overall sign area.

(69) SIGN CLEARANCE. The smallest vertical distance between the grade of the adjacent street, highway, or street curb and the lowest point of any sign, including framework and embellishment, if extended over that grade.

(70) SIGN SETBACK. The minimum distance that any portion of a sign or sign structure shall be from any street right-of-way line and yard line coterminous with a street or road.

(71) SNIPE SIGN. A temporary sign or poster affixed to a tree, fence, etc.

(72) SUBDIVISION IDENTIFICATION SIGN. A freestanding or wall sign identifying a recognized subdivision, condominium complex, or residential development.

(73) TEMPORARY: A period not to exceed six (6) months. A sign not constructed or intended for long-term use, with a maximum time period of ninety (90) days.

(74) ~~SNIPE SIGN: Snipe signs, also known as bandit signs, are temporary, off-premises signs affixed to poles or by wire stakes to the ground in the public right-of-way or private property, and are used to advertise services, events, or businesses. This definition does not include political or candidate signs used during elections.~~TIME AND TEMPERATURE DEVICE: Any mechanism that displays the time and/or

temperature, but does not display any commercial advertising or identification.

(75) ~~TIME AND TEMPERATURE DEVICE: Any mechanism that displays the time and/or temperature, but does not display any commercial advertising or identification.~~UNDER-CANOPY SIGN. A sign suspended beneath a canopy, ceiling, roof, or marquee.

(76) "V" SIGN. A sign consisting of two essentially equal faces, positioned at an angle subtending less than 179 degrees.

(77) WALL SIGNS: Any sign posted, or painted upon, suspended from, or otherwise affixed to a wall, fascia, canopy, or marquee of a building located on the site to which the sign pertains.

(78) WIND SIGNS: Any propeller, whirligig or similar commercial device which is designed to flutter, rotate or display other movement under the influence of wind. This definition shall not include pennants, flags or banners.

SECTION 30: **AMENDMENT** "21.1.15 Open Space Requirements" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

21.1.15 Open Space Requirements

(1) Each subdivision or site plan shall provide a minimum of 10% of its total parcel acreage as open space. The open space shall be designated on the preliminary plan or site plan and

recorded on the final plat. The minimum restricted open space shall comprise at least 10% of the total parcel acreage. The open space shall be held and maintained in a private protective trust. In limited cases such as the provision of a minimum of ten-acre public park the City Council at its discretion may, by finding of a beneficial public purpose, choose to accept the dedication of such parcels and improvements.

(2) Above-ground utility rights-of-way and small areas of impervious surface may be included within the protected open space but cannot be counted towards the 10% minimum area requirement except that historic structures and existing trails with public access may be counted. Areas greater than 10% of the total open space area that is covered with any impervious surface shall be excluded from the open space calculation.

(3) At least 75% of the open space shall be in a contiguous or interconnecting tract. The open space shall be designed in such a way that it adjoins 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. If there is no defined or identified open space on adjoining land, then the open space shall provide areas for the eventual connection with future development as practicable.

(4) The open space shall be directly accessible to the largest practicable number of lots within the subdivision. The type of open space shall be taken into consideration when making the determination of direct accessibility. Open space parcels that are preserved as active agriculture or pasture land may have limited direct accessibility as the use requires restricted access, but it is expected that such uses shall be located along the sides of public streets or trails so that the open space will provide for the benefit and enjoyment of residents as it reserves the open rural atmosphere desired by the residents. Historic features or other unique natural features due to the nature of their location, characteristics and configuration may also limit direct accessibility but shall be showcased in such a way that it may provide for the benefit and enjoyment of residents as it preserves the open rural atmosphere desired by the residents. Non-adjoining lots shall be provided with safe, convenient access to the open space. Trails are encouraged in the subdivision to access both natural open space areas within the subdivision and those that may be located nearby. Just as with streets, trail connections for connectivity and access with future subdivisions and the City-wide trails system shall be considered.

(5) For developments with a total aggregared development acreage is less than 20 acres, developers may pay in lieu of, or in a proportional combination with, the provision of 10% of the total parcel acreage as open space, The amount of the fee-in-lieu is determined byapply 10% of the predeveloped value of the total parcel acreage, as determined through a current owner provided appraisal by a certified real estate appraiser. The fees collected shall be used within 1 mile of the proposed development, or the nearest park to benefit the residents of the development.

(6) Land dedicated for use as a public park may be no smaller than ten acres and may not be located any closer than three quarters of a mile from another public park. The City Council may make exceptions to the minimum distance if walkability and other accessibility issues limit the residents of the proposed subdivision from safely or conveniently accessing the nearest

public park. Requiring improvements that remove the accessibility barriers may be considered proportionally not exceeding the appraised value of the predeveloped value of the total parcel acreage as detailed in 21.1.15.5.

AFTER AMENDMENT

21.1.15 Open Space Requirements

(1) Each subdivision or site plan shall provide a minimum of 10% of its total parcel acreage as open space. The open space shall be designated on the preliminary plan or site plan and recorded on the final plat. The minimum restricted open space shall comprise at least 10% of the total parcel acreage. The open space shall be held and maintained in a private protective trust. In limited cases such as the provision of a minimum of ten-acre public park the City Council at its discretion may, by finding of a beneficial public purpose, choose to accept the dedication of such parcels and improvements.

(2) Above-ground utility rights-of-way and small areas of impervious surface may be included within the protected open space but cannot be counted towards the 10% minimum area requirement except that historic structures and existing trails with public access may be counted. Areas greater than 10% of the total open space area that is covered with any impervious surface shall be excluded from the open space calculation.

(3) At least 75% of the open space shall be in a contiguous or interconnecting tract. The open space shall be designed in such a way that it adjoins 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. If there is no defined or identified open space on adjoining land, then the open space shall provide areas for the eventual connection with future development as practicable.

(4) The open space shall be directly accessible to the largest practicable number of lots within the subdivision. The type of open space shall be taken into consideration when making the determination of direct accessibility. Open space parcels that are preserved as active agriculture or pasture land may have limited direct accessibility as the use requires restricted access, but it is expected that such uses shall be located along the sides of public streets or trails so that the open space will provide for the benefit and enjoyment of residents as it reserves the open rural atmosphere desired by the residents. Historic features or other unique natural features due to the nature of their location, characteristics and configuration may also limit direct accessibility but shall be showcased in such a way that it may provide for the benefit and enjoyment of residents as it preserves the open rural atmosphere desired by the residents. Non-adjoining lots shall be provided with safe, convenient access to the open space. Trails are encouraged in the subdivision to access both natural open space areas within the subdivision and those that may be located nearby. Just as with streets, trail connections for connectivity and access with future subdivisions and the City-wide trails system shall be considered.

(5) For developments with a total aggregared development acreage is less than 20 acres, developers may pay in lieu of, or in a proportional combination with, the provision of 10% of

the total parcel acreage as open space, The amount of the fee-in-lieu is determined byapply 10% of the predeveloped value of the total parcel acreage, as determined through a current owner provided appraisal by a certified real estate appraiser. The fees collected shall be used within 1 mile of the proposed development, or the nearest park to benefit the residents of the development.

(6) Land dedicated for use as a public park may be no smaller than ten acres and may not be located any closer than three quarters of a mile from another public park. The City Council may make exceptions to the minimum distance if walkability and other accessibility issues limit the residents of the proposed subdivision from safely or conveniently accessing the nearest public park. Requiring improvements that remove the accessibility barriers may be considered proportionally not exceeding the appraised value of the predeveloped value of the total parcel acreage as detailed in 21.1.15.5.

(7) This section includes specifications for playground equipment, pavilions, and other facilities. Playgrounds: Pour-in-place rubber surfaces shall be installed under all playground equipment. The manner and area of installation shall be done according to the approved plans and the manufacturer's recommendations for both the play structure and play surface. Colors must be neutral earth tone colors. Pavilions: Any pavilions installed shall be finished with an architectural powder coated metal or aluminum construction.

SECTION 31: **AMENDMENT** "21.6.12 Water Supply" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

21.6.12 Water Supply

(1) All development shall have a public water supply unless this requirement is waived by the city council.

(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 meeting the Safe Drinking Water Standards by a water sample from wells on ten percent of the lots rounded up to the next whole number and approval of the system is granted through either the Tooele County Health Department or Utah State Drinking Water Board, as applicable. In the preliminary stage, the developer shall show possession of sufficient water rights to provide domestic use for the total number of dwellings being proposed for the entire development. The design stage for the first phase of development shall include the engineering for the water system for the entire development to include a fire flow calculation. If the development is not being connected to the city public water supply, the county health department shall approve the location of the test wells prior to the developer drilling them. The samples shall be taken by, and have a complete chemical analysis performed and approved by the county health department. All drinking water systems shall meet the standards of Tooele

Health County Department Regulation # for non-public systems, or the Utah State Drinking Water Board, Utah Administrative Code R-309 for systems that fall under the requirements of a public water system.

(3) Each development shall provide the details on the type of water system proposed, documentation of existing or proposed water rights and sources, historic water use, the estimated number of gallons per day of water system requirements for indoor and outdoor use, and a description of water storage requirements for daily fluctuations, irrigation, and fire suppression. The developer is required to provide dedicated or perpetual water rights or sources to meet the indoor and outdoor use requirements of all of the property in the development and the rights shall be sufficient to meet the total volume of water used and a rate of flow sufficient to meet peak demand. Culinary water rights shall include a conveyance to the City of a type which is perpetual in character and readily capable of use by the City. Outdoor water from a secondary (non-City) source may be obtained and provided from a private well or private water or irrigation company. The general requirement for outdoor water shall be one acre foot of water per one-third acre of net irrigated area. Net irrigated acreage shall be considered to be 64 percent of the total area of a lot of up to one-half acre and 60 percent of the total acreage of lots over one-half acre in size. All open spaces within a development shall generally be considered as irrigated acreage and one acre foot of outdoor water per one-third acre or any portion thereof shall be required, unless a different plan is proposed by the developer and is approved by the City. The exact amount of indoor and outdoor water rights to be provided should be based on reasonable assumptions with respect to projected use and demand and as reflected in Grantsville City's Capital Facilities Plan and Water Rights Impact Fee Study, as amended. The conveyance of water rights to Grantsville City should also take into account the uncertainty and time lag often required in securing approval from the State Engineer for a change of use of non-municipal water rights for municipal purposes and potential reductions in the quantity of water available during periods of drought.

(4) Amendments to existing platted developments that require only up to a total of two acre feet of additional indoor water and only up to a total of eight acre feet of additional outdoor water for full development, may at the option of the owner or developer and in lieu of providing actual water rights to the City, pay at the time each building permit is issued for each lot, the applicable indoor and outdoor water rights acquisition impact fees as specified by Section 13-1-8 of the Grantsville City Code. Minor Subdivisions, small subdivisions and small planned unit developments which have a projected indoor and outdoor water usage comparable to four or fewer single family dwellings are also exempt from the foregoing requirements to provide indoor and outdoor water. A water acquisition impact fee will be charged pursuant to the provisions of Section 13-1-8 of the Grantsville City Code under such circumstances that the conveyance of water rights is waived.

(5) Notwithstanding anything to the contrary specified in this Chapter, property that is proposed for a development that was previously platted and developed, shall be required to convey culinary and secondary water rights to the city pursuant to subsection (3) above, even if the new proposed development has four or fewer lots. Any waiver of the requirement to

provide secondary water rights to the city by this section, shall not apply to property that has had a secondary water right attached to it or has been irrigated with secondary water within the past five years, pursuant to Section 7-1-22 of the Grantsville City Code.

AFTER AMENDMENT

21.6.12 Water Supply

(1) All development shall have a public water supply unless this requirement is waived by the city council.

(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 meeting the Safe Drinking Water Standards by a water sample from wells on ten percent of the lots rounded up to the next whole number and approval of the system is granted through either the Tooele County Health Department or Utah State Drinking Water Board, as applicable. In the preliminary stage, the developer shall show possession of sufficient water rights to provide domestic use for the total number of dwellings being proposed for the entire development. The design stage for the first phase of development shall include the engineering for the water system for the entire development to include a fire flow calculation. If the development is not being connected to the city public water supply, the county health department shall approve the location of the test wells prior to the developer drilling them. The samples shall be taken by, and have a complete chemical analysis performed and approved by the county health department. All drinking water systems shall meet the standards of Tooele Health County Department Regulation # for non-public systems, or the Utah State Drinking Water Board, Utah Administrative Code R-309 for systems that fall under the requirements of a public water system.

(3) Each development shall provide the details on the type of water system proposed, documentation of existing or proposed water rights and sources, historic water use, the estimated number of gallons per day of water system requirements for indoor and outdoor use, and a description of water storage requirements for daily fluctuations, irrigation, and fire suppression. The developer is required to provide dedicated or perpetual water rights or sources to meet the indoor and outdoor use requirements of all of the property in the development and the rights shall be sufficient to meet the total volume of water used and a rate of flow sufficient to meet peak demand. Culinary water rights shall include a conveyance to the City of a type which is perpetual in character and readily capable of use by the City. Outdoor water from a secondary (non-City) source may be obtained and provided from a private well or private water or irrigation company. The general requirement for outdoor water shall be one acre foot of water per one-third acre of net irrigated area. Net irrigated acreage shall be considered to be 64 percent of the total area of a lot of up to one-half acre and 60 percent of the total acreage of lots over one-half acre in size. All open spaces within a development shall generally be considered as irrigated acreage and one acre foot of outdoor water per one-third acre or any portion thereof shall be required, unless a different plan is proposed by the developer and is approved by the City. The exact amount of indoor and outdoor water rights to be provided should be based on reasonable assumptions with respect to

projected use and demand and as reflected in Grantsville City's Capital Facilities Plan and Water Rights Impact Fee Study, as amended. The conveyance of water rights to Grantsville City should also take into account the uncertainty and time lag often required in securing approval from the State Engineer for a change of use of non-municipal water rights for municipal purposes and potential reductions in the quantity of water available during periods of drought.

(4) Amendments to existing platted developments that require only up to a total of two acre feet of additional indoor water and only up to a total of eight acre feet of additional outdoor water for full development, may at the option of the owner or developer and in lieu of providing actual water rights to the City, pay at the time each building permit is issued for each lot, the applicable indoor and outdoor water rights acquisition impact fees as specified by Section 13-1-8 of the Grantsville City Code. Minor Subdivisions, small subdivisions and small planned unit developments which have a projected indoor and outdoor water usage comparable to four or fewer single family dwellings are also exempt from the foregoing requirements to provide indoor and outdoor water. A water acquisition impact fee will be charged pursuant to the provisions of Section 13-1-8 of the Grantsville City Code under such circumstances that the conveyance of water rights is waived.

(5) Notwithstanding anything to the contrary specified in this Chapter, property that is proposed for a development that was previously platted and developed, shall be required to convey culinary and secondary water rights to the city pursuant to subsection (3) above, even if the new proposed development has four or fewer lots. Any waiver of the requirement to provide secondary water rights to the city by this section, shall not apply to property that has had a secondary water right attached to it or has been irrigated with secondary water within the past five years, pursuant to Section 7-1-22 of the Grantsville City Code.

(6) All culinary water meters shall be installed within the park strip along the lot frontage. Where no park strip exists, the water meter shall be installed directly behind the sidewalk and within the public right of way or utility easement, as approved by the City Engineer. Water meters shall not be located within private yards, behind fences, or in any location that restricts City access for maintenance, reading, or replacement.

SECTION 32: **AMENDMENT** "21.6.13 Storm Drainage And Flood Plains" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

21.6.13 Storm Drainage And Flood Plains

(1) A storm drainage system for the entire development shall be designed by a professional engineer, licensed in the State of Utah and qualified to perform such work. Existing storm drainage features which are to be incorporated in the design shall be identified. If the subdivision has phases, a general storm drainage plan for the entire area shall be presented with

the infrastructure design and engineering drawings with the preliminary plat for the first phase. 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 an elevation at least two feet above the elevation of the 100 year recurrence interval flood or, where such data is not available, five feet above the elevation of the maximum flood of record.

(3) Storm drainage systems shall be designed to consider the storm drainage basin as a whole and shall accommodate not only runoff from the development but also, where applicable, the runoff from those areas adjacent to and "upstream" from the development itself, as well as its effects on lands downstream.

(4) Storm drainage basins shall be designed and maintained to ensure that stormwater drains completely from any storm drainage basins within 72 hours after being filled to any capacity by a storm. If an owner of property containing a storm drainage basin fails to ensure the complete drainage of the basin within the 72-hour period described in this section, a representative or agent of the City's Public Works department may, for the safety and welfare of its citizens, intervene and enter onto the property of the storm water basin and take steps reasonably necessary to ensure the complete drainage of the basin. The City may then charge the owner of property containing the storm drainage basin the costs incurred by the City to completely drain the storm drainage basin.

(5) Storm drainage design and construction shall comply with Grantsville City Storm Drainage Design Requirements.

Storm Drainage Standards

AFTER AMENDMENT

21.6.13 Storm Drainage And Flood Plains

(1) A storm drainage system for the entire development shall be designed by a professional engineer, licensed in the State of Utah and qualified to perform such work. Existing storm drainage features which are to be incorporated in the design shall be identified. If the subdivision has phases, a general storm drainage plan for the entire area shall be presented with the infrastructure design and engineering drawings with the preliminary plat for the first phase. 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 an elevation at least two feet above the elevation of the 100 year recurrence interval flood or, where such data is not available, five feet above the elevation of the maximum flood of record.

(3) Storm drainage systems shall be designed to consider the storm drainage basin as a whole and shall accommodate not only runoff from the development but also, where applicable, the runoff from those areas adjacent to and "upstream" from the development itself, as well as its effects on lands downstream.

(4) Storm drainage basins shall be designed and maintained to ensure that stormwater drains completely from any storm drainage basins within 72 hours after being filled to any capacity by a storm. If an owner of property containing a storm drainage basin fails to ensure the complete drainage of the basin within the 72-hour period described in this section, a representative or agent of the City's Public Works department may, for the safety and welfare of its citizens, intervene and enter onto the property of the storm water basin and take steps reasonably necessary to ensure the complete drainage of the basin. The City may then charge the owner of property containing the storm drainage basin the costs incurred by the City to completely drain the storm drainage basin.

(5) Storm drainage design and construction shall comply with Grantsville City Storm Drainage Design Requirements.

(6) Stormwater Storage Requirements (a) Surface Ponds Prohibited in Side and Rear Yards. Surface ponds, depressions, or other non engineered surface level stormwater storage features are prohibited within side yard and rear yard areas. (b) Limited Allowance in Front Yard Setback. Surface ponds may be permitted within the front yard setback only upon written approval from the City Engineer, and only after the applicant demonstrates that no other technically feasible stormwater management option exists on the site. (c) Permanent Stormwater Structures Required in Side and Rear Yards. Where stormwater storage or detention is located within a side yard or rear yard, the facility shall be constructed as a permanent, engineered stormwater structure. Permanent structures shall include, but are not limited to, underground detention systems, vaults, chambers, or other engineered facilities designed to meet City stormwater standards. Temporary or surface level storage features do not satisfy this requirement. (d) Design and Maintenance Standards. All permanent stormwater structures shall comply with the City’s adopted stormwater design criteria, be designed by a licensed professional engineer, and include provisions for long term maintenance and access. (e) Surface ponds as individual storage solutions are not allowed over side or rear yard areas. Surface ponds may be allowed in the front yard setback area with special permission from the City Engineer after demonstrating other options are proved not viable. Permanent storm water storage structures are required in rear or side yard areas.

Storm Drainage Standards

SECTION 33: **AMENDMENT** "21.7.1 Improvement Installation Guarantee" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

21.7.1 Improvement Installation Guarantee

(1) In lieu of actual installation of off-site and common open space improvements required by this chapter, before recording a plat, the subdivider shall guarantee the installation of such improvements by executing a subdivision improvements agreement and by filing one or a combination of the following financial guarantee methods: a corporate surety bond, a deposit in escrow with an escrow holder or a letter of credit with a financial institution. The city council shall review the plat and may review the financial guarantee for the subdivision improvements at a public meeting where it can approve or deny the plat. If the financial guarantee and plat are approved, the plat shall be recorded within ninety days or it shall be void. The city council may authorize the Mayor and city staff to review and approve the financial guarantee, the final conveyance of water rights and the title insurance for the culinary water after approval of the final plat, but prior to the final plat being recorded.

(2) The guarantee shall be in an amount equal to 110% of the projected costs of required improvements as estimated by a licensed engineer retained by the subdivider and approved by the city engineer. The subdivision improvements agreement and the financial guarantee shall both assure the actual construction of such improvements within two years immediately following the approval of the final plat by the city council and shall include a maintenance guarantee as required by Section 21.7.3 herein.

(3) The guarantee shall be filed with the city recorder.

(4) The subdivision improvements agreement shall be executed by the developer and shall be accompanied by a financial guarantee issued by a company duly and regularly authorized to do a general surety business in the State of Utah and either (i) named in the current U.S. Treasury Department's list of approved sureties (Department Circular 570) (as amended), or (ii) with a current "A-" rating and a financial size category rating of at least a "VII" or better in A.M. Best Co., Inc.'s Best Insurance Reports, Property and Casualty Edition. The improvements agreement and the guarantee shall be approved as to method, institution and form by the city attorney.

AFTER AMENDMENT

21.7.1 Improvement Installation Guarantee

(1) ~~In lieu of actual installation of off-site and common open space improvements required by this chapter, before recording a plat, the subdivider shall guarantee the installation of such improvements by executing a subdivision improvements agreement and by filing one or a~~

~~combination of the following financial guarantee methods: a corporate surety bond, a deposit in escrow with an escrow holder or a letter of credit with a financial institution. The city council shall review the plat and may review the financial guarantee for the subdivision improvements at a public meeting where it can approve or deny the plat. If the financial guarantee and plat are approved, the plat shall be recorded within ninety days or it shall be void. The city council may authorize the Mayor and city staff to review and approve the financial guarantee, the final conveyance of water rights and the title insurance for the culinary water after approval of the final plat, but prior to the final plat being recorded.~~ In lieu of actual installation of off-site and common open space improvements required by this chapter, before recording a plat, the subdivider shall guarantee the installation of such improvements by executing a subdivision improvements agreement and by filing one or a combination of the following financial guarantee methods: a corporate surety bond or a deposit in escrow with an escrow holder with a financial institution. The city council shall review and approve the plat and shall approve the financial guarantee for the subdivision improvements at a public meeting. If the financial guarantee and plat are approved, the plat shall be recorded within ninety days or it shall be void. The city council may authorize the city staff to review and approve the final conveyance of water rights and the title insurance for the culinary water after approval of the final plat, but prior to the final plat being recorded; however, approval of the financial guarantee shall remain the sole authority of the City Council.

(2) ~~The guarantee shall be in an amount equal to 110% of the projected costs of required improvements as estimated by a licensed engineer retained by the subdivider and approved by the city engineer. The subdivision improvements agreement and the financial guarantee shall both assure the actual construction of such improvements within two years immediately following the approval of the final plat by the city council and shall include a maintenance guarantee as required by Section 21.7.3 herein.~~ The guarantee shall be in an amount equal to 110% of the projected costs of required improvements as estimated by a licensed engineer retained by the subdivider and approved by the city engineer. The subdivision improvements agreement and the financial guarantee shall jointly ensure the actual construction of such improvements within two years immediately following City Council approval of the final plat, and shall include a maintenance guarantee as required by Section 21.7.3 herein.

(3) The guarantee shall be filed with the city recorder.

(4) The subdivision improvements agreement shall be executed by the developer and shall be accompanied by a financial guarantee issued by a company duly and regularly authorized to do a general surety business in the State of Utah and either (i) named in the current U.S. Treasury Department's list of approved sureties (Department Circular 570) (as amended), or (ii) with a current "A-" rating and a financial size category rating of at least a "VII" or better in A.M. Best Co., Inc.'s Best Insurance Reports, Property and Casualty Edition. The improvements agreement and the guarantee shall be approved as to method, institution and form by the city attorney.

SECTION 34: **AMENDMENT** "21.7.2 Default" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

21.7.2 Default

In the event the subdivider defaults or fails or neglects to satisfactorily install required improvements within two years from date of approval of the final plat, the City Council may declare the bond, escrow,or a deed of trust, 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 subdivider shall be responsible for all costs incurred by the city to complete the required improvements in excess of the proceeds of the guarantee amount.

AFTER AMENDMENT

21.7.2 Default

~~In the event the subdivider defaults or fails or neglects to satisfactorily install required improvements within two years from date of approval of the final plat, the City Council may declare the bond, escrow,or a deed of trust, 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 subdivider shall be responsible for all costs incurred by the city to complete the required improvements in excess of the proceeds of the guarantee amount.~~ In the event the subdivider defaults or fails or neglects to satisfactorily install required improvements within two years from date of approval of the final plat, the City Council may declare the financial guarantee in default and may call the bond or an escrow and install or cause the required improvements to be installed The subdivider shall be responsible for all costs incurred by the city to complete the required improvements that exceed the amount recovered from the financial guarantee.

SECTION 35: **AMENDMENT** "21.7.3 Maintenance Guarantee" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

21.7.3 Maintenance Guarantee

(1) The subdivider shall guarantee all off-site improvements will remain in good condition for a period of one year after the date of final acceptance by the city. The subdivider shall make all repairs to and maintain the improvements in good condition during that one-year period at no cost to the city. The City shall retain up to 10% of the guarantee for a surety to cover the

maintenance period. The exact amount retained shall be determined per state law, in an amount the lesser of the municipal engineers original estimated cost of completion, or the applications reasonable proven cost of completion, by the City Engineer.

The City may require that the improvement assurance warranty be in place for a period of two years following final acceptance by the City, if the City determines for good cause that a lesser period would be inadequate for the following reasons:

(1) to protect the public health, safety and welfare,

(2) has substantial evidence of prior poor performance of the sub-divider/,

(3)developer; unstable soil conditions exist within the subdivision or development area,

(4) or extreme fluctuations exist in climatic conditions that would render impracticable the discovery of substandard or defective performance within a one-year period.

The guarantee shall extend to and include, but shall not be limited to necessary utilities, the entire street, subgrade, base and surface and all pipes, joints, valves, backfill and compacting, trails, as well as the working surface, curbs, gutters, sidewalks, landscaping and other accessories that are, or may be, affected by construction operations.

(3) Identifying necessary repairs and maintenance rests with the City Public Works Director, whose decision upon the matter shall be final and binding upon the subdivider/developer. The Public Works Director shall use City standards and specifications, the preliminary plat and engineering drawings and information from the City Engineer as the inspections standards for final acceptance of the required improvements. Whenever, in the judgment of the city public works director, the improvements shall need repairs, maintenance, or re-building, the City Public Works Director shall cause a written notice to be mailed or given to the subdivider/developer. Upon receipt, the subdivider/developer shall undertake and complete such repairs, maintenance or re-building. If repairs are not completed within the specified time, the city shall have such repairs made and the cost of such repairs shall be paid by the subdivider/developer or by the city using the guarantee.

AFTER AMENDMENT

21.7.3 Maintenance Guarantee

~~(1) The subdivider shall guarantee all off-site improvements will remain in good condition for a period of one year after the date of final acceptance by the city. The subdivider shall make all repairs to and maintain the improvements in good condition during that one-year period at no cost to the city. The City shall retain up to 10% of the guarantee for a surety to cover the maintenance period. The exact amount retained shall be determined per state law, in an amount the lesser of the municipal engineers original estimated cost of completion, or the applications reasonable proven cost of completion, by the City Engineer.The City may require that the improvement assurance warranty be in place for a period of two years following final~~

~~acceptance by the City, if the City determines for good cause that a lesser period would be inadequate for the following reasons:(1) to protect the public health, safety and welfare,(2) has substantial evidence of prior poor performance of the sub-divider/,(3)developer; unstable soil conditions exist within the subdivision or development area,(4) or extreme fluctuations exist in climatic conditions that would render impracticable the discovery of substandard or defective performance within a one-year period.The guarantee shall extend to and include, but shall not be limited to necessary utilities, the entire street, subgrade, base and surface and all pipes, joints, valves, backfill and compacting, trails, as well as the working surface, curbs, gutters, sidewalks, landscaping and other accessories that are, or may be, affected by construction operations. (3) Identifying necessary repairs and maintenance rests with the City Public Works Director, whose decision upon the matter shall be final and binding upon the subdivider/developer. The Public Works Director shall use City standards and specifications, the preliminary plat and engineering drawings and information from the City Engineer as the inspections standards for final acceptance of the required improvements. Whenever, in the judgment of the city public works director, the improvements shall need repairs, maintenance, or re-building, the City Public Works Director shall cause a written notice to be mailed or given to the subdivider/developer. Upon receipt, the subdivider/developer shall undertake and complete such repairs, maintenance or re-building. If repairs are not completed within the specified time, the city shall have such repairs made and the cost of such repairs shall be paid by the subdivider/developer or by the city using the guarantee.~~ (1) The subdivider shall guarantee all off-site improvements will remain in good condition for a period of one year after the date of final acceptance by the city. The subdivider shall make all repairs to and maintain the improvements in good condition during that one-year period at no cost to the city. The City shall retain up to 10% of the guarantee as a warranty guarantee during the maintenance period. The exact amount retained shall be determined in accordance with the state law and based on the City Engineer's estimated cost of completion, or the application's reasonable proven cost of completion, approved by the City Engineer. The City Council may require a warranty period of up to two years following final acceptance if, based on written recommendations from the Public Works Director and the City Engineer, the Council determines that a one-year period is inadequate due to: (a) the need to protect the public health, safety, and welfare, (b) substantial evidence of prior poor performance of the sub-divider/developer, (c) unstable soil or geologic conditions exist within the subdivision or development area, (d) or extreme climatic conditions that would delay the impracticable discovery of substandard or defective performance within a one-year period. The guarantee shall extend to and include, but shall not be limited to necessary utilities, the entire street, subgrade, base and surface and all pipes, joints, valves, backfill and compacting, trails, as well as the working surface, curbs, gutters, sidewalks, landscaping, and other accessories that are, or may be, affected by construction operations. Identifying necessary repairs and maintenance rests with the City Public Works Director, whose decision upon the matter shall be final and binding upon the subdivider/developer. The Public Works Director shall use City standards and specifications, the preliminary plat and engineering drawings and information from the City Engineer as the inspection's standards for final acceptance of the required improvements. Whenever, in the judgment of the city public works director, the improvements shall need repairs, maintenance, or re-building, the City Public Works Director shall cause a written notice to be mailed or given to the subdivider/developer. Upon receipt, the subdivider/developer shall undertake and complete

such repairs, maintenance, or re-building. If repairs are not completed within the specified time, the city shall have such repairs made and the cost of such repairs shall be paid by the subdivider/developer or by the city using the guarantee.

SECTION 36: **AMENDMENT** "21.7.4 Acceptance And Release Of Guarantee" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

21.7.4 Acceptance And Release Of Guarantee

(1) Upon completion of improvements, the subdivider/developer shall submit to the City a copy of the as-built construction drawings, along with a CAD file of said drawings and a GIS file containing at a minimum: address points, street centerlines, and parcel polygons in the current city coordinate system. Acceptance of all improvements shall be in writing from the public works director.

(2) The subdivider/developer shall in writing request that the city accept or reject the installation of required subdivision improvements or performance of warranty work.

(3) The city shall accept or reject the subdivision improvements within 45 days after receiving a written request from the subdivider/developer, or as soon as practicable after that 45-day period if inspection of the subdivision improvements is impeded by winter weather conditions.

(4) At the end of the warranty period the city shall accept or reject the performance of warranty work within 45 days after receiving a subdivider/developer's written request or as soon as practicable after that 45-day period if inspection of the work is impeded by winter weather conditions.

(5) If the city determines that the installation of required subdivision improvements or the performance of warranty work does not meet the City's adopted standards, the City shall comprehensively and with specificity list the reasons for its determination.

(6) Upon final completion of the performance warranty period and with the approval by the city public works director, the financial assurances may be released, at which time the subdivision will be deemed accepted.

(7) Nothing in this section and no action or inaction of the city relieves a subdivider/developer's duty to comply with all applicable substantive ordinances and regulations.

(8) There shall be no money damages remedy arising from a claim under this section.

AFTER AMENDMENT

21.7.4 Acceptance And Release Of Guarantee

(1) Upon completion of improvements, the subdivider/developer shall submit to the City a copy of the as-built construction drawings, along with a CAD file of said drawings and a GIS file containing at a minimum: address points, street centerlines, and parcel polygons in the current city coordinate system. Acceptance of all improvements ~~shall be in writing from the public works director.~~requires written verification from the Public Works Director and the City Engineer and approval by the City Council.

(2) The subdivider/developer shall in writing request that the city accept or reject the installation of required subdivision improvements or performance of warranty work.

(3) The city shall , upon receiving written recommendations from the Public Works Director and the City Engineer, accept or reject the subdivision improvements within 45 days after receiving a written request from the subdivider/developer, or as soon as practicable after that 45-day period if inspection of the subdivision improvements is impeded by winter weather conditions.

(4) At the end of the warranty period the city shall upon receiving written recommendations from the Public Works Director and the City Engineer, accept or reject the performance of warranty work within 45 days after receiving a subdivider/developer's written request or as soon as practicable after that 45-day period if inspection of the work is impeded by winter weather conditions.

(5) If the city determines that the installation of required subdivision improvements or the performance of warranty work does not meet the City's adopted standards, the City shall comprehensively and with specificity list the reasons for its determination.

(6) Upon final completion of the performance warranty period and after receiving written recommendations from the Public Works Director and the City Engineer, the financial guarantee may be released only upon approval by the City Council, ~~and with the approval by the city public works director, the financial assurances may be released,~~ at which time the subdivision will be deemed accepted.

(7) Nothing in this section and no action or inaction of the city relieves a subdivider/developer's duty to comply with all applicable substantive ordinances and regulations.

(8) There shall be no money damages remedy arising from a claim under this section.

SECTION 37: **AMENDMENT** "21.7.5 Engineering Review And Inspection Fee" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

21.7.5 Engineering Review And Inspection Fee

In addition to the improvement and maintenance guarantee, the subdivider shall deposit with the city recorder a sum equal to the percentage of the cost of the improvements as noted on the current adopted City fee schedule to cover engineering review and public works inspection.

AFTER AMENDMENT

21.7.5 Engineering Review And Inspection Fee

In addition to the improvement and maintenance guarantee, the subdivider shall deposit with the city the amount required under the City's currently adopted fee schedule, calculated as a percentage of the approved cost of the required improvements, ~~recorder a sum equal to the percentage of the cost of the improvements as noted on the current adopted City fee schedule~~ to cover engineering ~~review~~ and public works inspection.

SECTION 38: **AMENDMENT** "7.1 Definition Of Conditional Use" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

7.1 Definition Of Conditional Use

A conditional use permit is a land use that, because of its unique characteristics or potential impact on the city, surrounding neighbors or adjacent land uses, may not be compatible in some areas or may be compatible only if certain conditions are required that mitigate or eliminate the detrimental impacts.

AFTER AMENDMENT

7.1 Definition Of Conditional Use

~~A conditional use permit is a land use that, because of its unique characteristics or potential impact on the city, surrounding neighbors or adjacent land uses, may not be compatible in some areas or may be compatible only if certain conditions are required that mitigate or eliminate the detrimental impacts.~~Conditional Use Permit means a permit issued pursuant to this Code authorizing a Conditional Use on a specific property, subject to conditions imposed by the approving authority to mitigate or eliminate detrimental impacts. A Conditional Use Permit may be granted only when the approving authority determines, based on substantial evidence, that all required conditions can be met and that the proposed use will be compatible with surrounding properties.

SECTION 39: **AMENDMENT** "7.2 No Presumption Of Approval" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

7.2 No Presumption Of Approval

The listing of a conditional use in any table of permitted and conditional uses found at the end of each chapter of this ordinance for each category of zoning district or districts does not constitute an assurance or presumption that such conditional use will be approved. Rather, each proposed conditional use shall be evaluated on an individual basis, in relation to its compliance with the standards and conditions set forth in this chapter and with the standards for the district in which it is located, in order to determine if the conditional use is appropriate at the particular location.

AFTER AMENDMENT

7.2 No Presumption Of Approval

~~The listing of a conditional use in any table of permitted and conditional uses found at the end of each chapter of this ordinance for each category of zoning district or districts does not constitute an assurance or presumption that such conditional use will be approved. Rather, each proposed conditional use shall be evaluated on an individual basis, in relation to its compliance with the standards and conditions set forth in this chapter and with the standards for the district in which it is located, in order to determine if the conditional use is appropriate at the particular location.~~The listing of a conditional use in any table of permitted and conditional uses found at the end of each chapter of this ordinance for each category of zoning district or districts does not constitute an assurance or presumption that such conditional use will be approved. Each proposed conditional use shall be evaluated individually for its compliance with the standards and conditions set forth in this chapter and the standards for the district in which it is located, to determine whether the use is appropriate at that location.

SECTION 40: **AMENDMENT** "9.5 Parkway Landscaping" of the Grantsville Land Use Ordinances is hereby *amended* as follows:

BEFORE AMENDMENT

9.5 Parkway Landscaping

(1) The intent of these requirements is to maintain the appearance of parkways, protect the

users of parkways, expand landscape design flexibility, accommodate drought tolerant design options and improve environmental conditions. The following requirements shall apply to all lots abutting parkways, the ground area within the street right-of-way situated between the back of curb (or edge of pavement) and the sidewalk. However, these requirements shall not apply to official beautification districts where exceptions to parkway standards are approved.

(2) All parkways shall be landscaped in conformance with the provisions of this Section. In general, this will involve improving the ground surface of the parkway with turf or other plant material, or hard surface treatments where permitted. Parkway trees shall be required and meet the following specifications:

(a) Parkway trees shall be provided at the equivalent of not more than 30 feet apart in the right-of-way adjacent to the parcel;

(b) Parkway trees may be clustered or spaced linearly in the right-of-way as determined appropriate by the Zoning Administrator;

(c) Parkway trees shall have a minimum trunk size of two and one-half inches in caliper;

(d) A variety of compatible species should be included in the planting plan for a specific site or development. The selecting of a tree species shall be reviewed and approved by the Community Development Director, Zoning Administrator, or their designee; and

(e) The Community Development Director, Zoning Administrator, or their designee may waive or otherwise modify the requirements of this Section to better achieve the intent of this Section and address site specific conditions. This could also include requiring the planting of parkway trees on the lot adjacent to the right-of-way if adequate space is not available in the parkway.

(3) Materials prohibited in parkways referenced in Table 9-1 include rocks, gravel, bark, asphalt, thorn bearing plant species, ground cover and shrubs which exceed 18 inches in height at maturity. These materials are prohibited for the reasons stated below:

(a) Rocks, gravel, and bark are hazardous to pedestrians and bicyclists, are difficult to walk across particularly when covered with snow, are kicked or washed into the street and sidewalk causing potential traffic hazards and clog storm drainage systems, and requires additional City street cleaning and maintenance costs;

(b) Asphalt is inconsistent with the City's urban design policy, and deteriorates quicker than concrete or pavers;

(c) Thorn bearing plant species are hazardous to pedestrians and bicyclists, and are difficult to walk across; and

(d) Ground cover and shrubs which exceed eighteen inches in height at maturity are hazardous to pedestrians due to sight distance problems, are difficult to walk across, provides a visual barrier to promote crime, and limits access to vehicles parked adjacent to

the parkway.

(e) The developer in a subdivision or planned unit development is responsible for the planting of street trees.

Table 9-1, Parkway Design Standards *

Parkway Materials	Parkway
Turf[1]	Permitted
Evergreen Ground Cover[2]	Permitted - less that 18" in height at maturity
Shrubs[3]	Permitted - less than 18" in height at maturity
Trees	Permitted - See Section 9.5.6
Flowers[4]	Permitted - flower bed not to exceed 24" in height at maturity
Bark and Mulch	Permitted
Driveway and Walkways (carriage to street)	Permitted
Other Impervious Materials (brick pavers, concrete)	Not to exceed 25% of the park strip area
Street Trees	Street trees shall be planted within one growing season from the date the certificate of occupancy was issued. The developer in a subdivision or P.U.D., is responsible for the planting of street trees.
Irrigation[5]	Required for plant materials
Prohibited Materials[6]	Large rocks, asphalt, thorny bearing plants, ground cover and shrubs exceeding 18" in height.

Notes:

* These standards apply to all properties in the City that have street curb and/or gutter. Owners of property on streets that do not have curb and gutter, and vacant lot owners do not have to maintain landscaping within the public right-of-way. However, these properties shall not maintain rocks, gravel, bark, or other similar materials within the public right-of-way. In addition, vacant property owners shall maintain native grasses and weeds to a maximum height of six (6) inches.

1 Turf is permitted on slope grades up to fifty percent. Turf is not recommended on slopes greater than fifty percent.

2 Ground covers are defined as any perennial evergreen plant material species that cover one hundred percent of the ground all year. Perennial is defined as a plant having a life span of more than two years. Evergreen is defined as a plant having foliage that remains on the plan throughout the year. Ground covers shall not exceed 18 inches in height at maturity. Flowers as permitted above are an exception to this definition and shall not exceed 36 inches in height at maturity. Thorn bearing ground covers are prohibited.

3 A limited variety of shrubs are available that will not exceed 18 inches in height at maturity. Thorn bearing shrubs are prohibited.

4 Flowers shall not include thorn bearing species.

5 Irrigation shall be provided to adequately maintain all plant materials in parkway areas. Irrigation may include a permanent "in-ground" system or manual hose and sprinkler application.

6 Retaining walls, fences, steps, and other similar structural encroachments shall be prohibited unless they are specifically approved through the City. Retaining wall is defined as a wall designed to resist the lateral displacement of soil or other material.

AFTER AMENDMENT

9.5 Parkway Landscaping

(1) The intent of these requirements is to maintain the appearance of parkways, protect the users of parkways, expand landscape design flexibility, accommodate drought tolerant design options and improve environmental conditions. The following requirements shall apply to all lots abutting parkways, the ground area within the street right-of-way situated between the back of curb (or edge of pavement) and the sidewalk. ~~However, these requirements shall not apply to official beautification districts where exceptions to parkway standards are approved.~~

(2) All parkways shall be landscaped in conformance with the provisions of this Section. In general, this will involve improving the ground surface of the parkway with turf or other plant material, or hard surface treatments where permitted. Parkway trees shall be required and meet the following specifications:

(a) Parkway trees shall be provided at the equivalent of not more than 30 feet apart in the right-of-way adjacent to the parcel;

(b) Parkway trees may be clustered or spaced linearly in the right-of-way as determined appropriate by the Zoning Administrator;

(c) Parkway trees shall have a minimum trunk size of two and one-half inches in caliper;

(d) A variety of compatible species should be included in the planting plan for a specific site or development. The selecting of a tree species shall be reviewed and approved by the Community Development Director, Zoning Administrator, or their designee; and

(e) The Community Development Director, Zoning Administrator, or their designee may waive or otherwise modify the requirements of this Section to better achieve the intent of this Section and address site specific conditions. This could also include requiring the planting of parkway trees on the lot adjacent to the right-of-way if adequate space is not available in the parkway.

(3) Permitted and Prohibited Materials in Parkways To ensure pedestrian safety, proper storm drainage, and aesthetic quality, parkway materials referenced in Table 9-1 are regulated as follows: Permitted Hardscape Materials The following materials are permitted within the parkway, provided they are installed and maintained according to the standards below: (a) Decorative Rock: Rock, crushed gravel, or cobble is permitted if it is 1.5 inches or larger in diameter (sized to prevent material from washing into the storm drain system). All rock must be contained behind the curb or a concrete mow strip to prevent migration into the roadway or sidewalk. (b) Pavers and Flagstone: Brick, concrete pavers, or natural stone may be used. To ensure the health of street trees, pavers must be installed on a permeable base or spaced to allow water infiltration. (c) Concrete Strips (Carriageways): Concrete strips are permitted to provide step-out access from the curb to the sidewalk. Strips shall not exceed 24 inches in width and must be spaced at 25 feet to allow for adequate tree irrigation. Prohibited Materials The following materials remain prohibited for the reasons stated below: Asphalt: Prohibited due to inconsistency with City urban design and rapid deterioration compared to concrete. (a) Material smaller than 1 inch (Pea Gravel/Sand): Prohibited as it is easily displaced into the roadway, creating slip hazards for pedestrians/cyclists and clogging storm drains. (b) Bark or Wood Chips: Prohibited due to low density; materials float during storm events and obstruct drainage infrastructure. (c) horn-bearing plants: Prohibited to prevent injury to pedestrians and cyclists. (d) Visual Obstructions: Ground cover and shrubs that exceed 18 inches in height at maturity are prohibited to preserve sight lines for vehicles and pedestrians. (e) Concrete: Concrete, including poured-in-place concrete and pre-cast concrete panels is prohibited where its installation would obstruct required landscaping, interfere with stormwater infiltration, increase runoff into the public right-of-way, or conflict with the City's adopted streetscape and parkway design standards. (4) Street Trees The developer or property owner is responsible for the planting and irrigation of street trees as required by Table 9-1. Hardscape installations must include a tree well with a minimum diameter of 36 inches (or equivalent square footage) around the trunk to allow for growth and water access. (5) Utility Clearance (Water Meters) To ensure access for maintenance and meter reading, no concrete, pavers, or permanent hardscape may be poured or installed within two (2) feet of any water meter, fire hydrant, or utility box. This clearance area must be covered with removable material, such as decorative rock, to allow City crews unobstructed access to the infrastructure.~~Materials prohibited in parkways referenced in Table 9-1 include rocks, gravel, bark, asphalt, thorn bearing plant species, ground cover and shrubs which exceed 18 inches in height at maturity. These materials are prohibited for the reasons stated below:(a) Rocks, gravel, and bark are hazardous to pedestrians and bicyclists, are difficult to walk across particularly when covered with snow, are kicked or washed into the street and sidewalk causing potential traffic hazards and clog storm drainage systems, and requires additional City street cleaning and maintenance costs;(b) Asphalt is inconsistent with the City's urban design policy, and deteriorates quicker than concrete or pavers;(c) Thorn bearing plant species are hazardous to pedestrians and bicyclists, and are~~

~~difficult to walk across; and(d) Ground cover and shrubs which exceed eighteen inches in height at maturity are hazardous to pedestrians due to sight distance problems, are difficult to walk across, provides a visual barrier to promote crime, and limits access to vehicles parked adjacent to the parkway.(e) The developer in a subdivision or planned unit development is responsible for the planting of street trees.~~**~~Table 9-1, Parkway Design Standards *Notes:*~~** ~~These standards apply to all properties in the City that have street curb and/or gutter. Owners of property on streets that do not have curb and gutter, and vacant lot owners do not have to maintain landscaping within the public right-of-way. However, these properties shall not maintain rocks, gravel, bark, or other similar materials within the public right-of-way. In addition, vacant property owners shall maintain native grasses and weeds to a maximum height of six (6) inches.1 Turf is permitted on slope grades up to fifty percent. Turf is not recommended on slopes greater than fifty percent.2 Ground covers are defined as any perennial evergreen plant material species that cover one hundred percent of the ground all year. Perennial is defined as a plant having a life span of more than two years. Evergreen is defined as a plant having foliage that remains on the plan throughout the year. Ground covers shall not exceed 18 inches in height at maturity. Flowers as permitted above are an exception to this definition and shall not exceed 36 inches in height at maturity. Thorn bearing ground covers are prohibited.3 A limited variety of shrubs are available that will not exceed 18 inches in height at maturity. Thorn bearing shrubs are prohibited.4 Flowers shall not include thorn bearing species.5 Irrigation shall be provided to adequately maintain all plant materials in parkway areas. Irrigation may include a permanent "in-ground" system or manual hose and sprinkler application.~~**~~Parkway Materials~~**~~~~Parkway~~~~Turf[1]~~~~Permitted~~~~Evergreen Ground Cover[2]~~~~Permitted - less that 18" in height at maturity~~~~Shrubs[3]~~~~Permitted - less than 18" in height at maturity~~~~Trees~~~~Permitted - See Section 9.5.6~~~~Flowers[4]~~~~Permitted - flower bed not to exceed 24" in height at maturity~~~~Bark and Mulch~~~~Permitted~~~~Driveway and Walkways (carriage to street)~~~~Permitted~~~~Other Impervious Materials (brick pavers, concrete)~~~~Not to exceed 25% of the park strip area~~~~Street Trees~~~~Street trees shall be planted within one growing season from the date the certificate of occupancy was issued. The developer in a subdivision or P.U.D., is responsible for the planting of street trees.~~~~Irrigation[5]~~~~Required for plant materials~~~~Prohibited Materials[6]~~~~Large rocks, asphalt, thorny bearing plants, ground cover and shrubs exceeding 18" in height.6 Retaining walls, fences, steps, and other similar structural encroachments shall be prohibited unless they are specifically approved through the City. Retaining wall is defined as a wall designed to resist the lateral displacement of soil or other material.~~

SECTION 41: **<u>ADOPTION</u>** "9 .6 Permitted Landscape Plants" of the Grantsville Land Use Ordinances is hereby *added* as follows:

BEFORE ADOPTION

9 .6 Permitted Landscape Plants (Non-existent)

9 .6 Permitted Landscape Plants*(Added)*

(1) Purpose; This section establishes drought-tolerant, low-maintenance landscaping standards for parkways and medians to conserve water, enhance streetscape quality, and ensure long-term plant survivability in Grantsville's climate. (2) Shade Trees (a) City-Approved Shade Trees (Preferred Species) The following tree species are approved and strongly encouraged for use in parkways and medians due to their adaptability, canopy structure, and drought tolerance: (i) Hackberry (Celtis occidentalis) (ii) Ginkgo (Ginkgo biloba) — male cultivars only (iii) White Oak (Quercus alba) (b) The following species may be considered on a case-by-case basis subject to staff approval and site conditions: (i) Bur Oak (Quercus macrocarpa) (ii) Thornless Honey locust (Gleditsia triacanthos var. interims) (iii) Kentucky Coffee tree (Gymnocladus dioicous) (iv) Autumn Blaze Maple (Acer × freeman 'Autumn Blaze') (v) Chanticleer Pear (Pyrus caller Yana 'Chanticleer') (3) Shrubs Deciduous Shrubs; The following deciduous shrubs are permitted: (a) Silver Sagebrush (Artemisia cana) (b) Yellow Rabbitbrush (Chrysanthemums viscidiflorus) (c) Apache Plume (Fallugia paradoxa) (d) Western Sand cherry (Prunus besseyi) (4) Evergreen Shrubs The following evergreen shrubs are permitted. (a) Blue Chip Juniper is expressly prohibited: (b) Medora Juniper (Juniperus scopulorum 'Medora') (c) Dwarf Mogo Pine (Pinus mugo var. pumila) (5) Ornamental Grasses The following ornamental grasses are permitted: (a) Feather Reed Grass (Calamagrostis × acutiflora 'Karl Foerster') (b) Blue Fescue (Festuca glauca 'Blue Elijah') (c) 'Heavy metal' Switchgrass (Panicum virgatum 'Heavy metal') (d) Indian Grass (Sorghastrum nutans 'Sioux Blue') (6) Perennials The following perennial species are permitted: (a) Licorice Hyssop (Agastache rupestris) (b) Red Torch Lily (Kniphofia 'Stark's Early Hybrids') (7) General Landscaping Requirements Permitted and not Permitted (a) Turf grass is prohibited within medians. (b) Turf grass is permitted within parkways only where slopes do not exceed fifty percent (50%). (c) Evergreen groundcovers and shrubs shall not exceed eighteen (18) inches in mature height. (d) Thorn-bearing shrubs or groundcovers are prohibited. (e) Drip irrigation systems are required for all plant materials. (f) Trees are permitted in both medians and parkways. Street trees shall be planted within one growing season from the date the certificate of occupancy was issued. The developer in a subdivision or P.U.D., is responsible for the planting of street trees. (g) Bark, Mulch, Gravel, and concrete, is permitted in parkways. (h) Impervious materials are permitted in medians.(Brick pavers, Concrete) (i) Flowers are permitted. Flower bed not to exceed 24" in height at maturity. (j) Driveway and Walkways (carriage to street) are permitted. (k) Irrigation is required for plant materials. (l) Prohibited Materials - Large rock exceeding 1-½" inch, asphalt, concrete, thorny bearing plants, ground cover and shrubs exceeding 18" inches in height.

SECTION 42: **ADOPTION** "9. 7 Applicability Standards" of the Grantsville Land Use Ordinances is hereby *added* as follows:

BEFORE ADOPTION

9. 7 Applicability Standards (Non-existent)

AFTER ADOPTION

9. 7 Applicability Standards*(Added)*

(1) These standards apply to all properties in the City that have street curb and/or gutter. Owners of property on streets that do not have curb and gutter, and vacant lot owners do not have to maintain landscaping within the public right-of-way. However, these properties shall not maintain rocks, gravel, bark, or other similar materials within the public right-of-way. In addition, vacant property owners shall maintain native grasses and weeds to a maximum height of six (6) inches. (a) Turf is permitted on slope grades up to fifty percent. Turf is not recommended on slopes greater than fifty percent. (b) Ground covers are defined as any perennial evergreen plant material species that cover one hundred percent of the ground all year. Perennial is defined as a plant having a life span of more than two years. Evergreen is defined as a plant having foliage that remains on the plan throughout the year. Ground covers shall not exceed 18 inches in height at maturity. Flowers as permitted above are an exception to this definition and shall not exceed 36 inches in height at maturity. Thorn bearing ground covers are prohibited. (c) A limited variety of shrubs are available that will not exceed 18 inches in height at maturity. Thorn bearing shrubs are prohibited. (d) Flowers shall not include thorn bearing species. (e) Irrigation shall be provided to adequately maintain all plant materials in parkway areas. Irrigation may include a permanent "in-ground" system or manual hose and sprinkler application. (f) Retaining walls, fences, steps, and other similar structural encroachments shall be prohibited unless they are specifically approved through the City. A retaining wall is defined as a wall designed to resist the lateral displacement of soil or other material.

SECTION 43: **<u>SEVERABILITY CLAUSE</u>** Should any part or provision of this Ordinance be declared by the courts to be unconstitutional or invalid, such decision shall not affect the validity of the Ordinances a whole or any part thereof other than the part so declared to be unconstitutional or invalid.

SECTION 44: **<u>EFFECTIVE DATE</u>** This Ordinance shall be in full force and effect immediately upon its passage and approval as provided by law.

PASSED AND ADOPTED BY THE GRANTSVILLE COUNCIL
_____.

	AYE	NAY	ABSENT	ABSTAIN
Rhett Butler	_____	_____	_____	_____
Derek Dalton	_____	_____	_____	_____
Brittany Skinner	_____	_____	_____	_____
Jacob Thomas	_____	_____	_____	_____
Jeff Williams	_____	_____	_____	_____

Presiding Officer

_____
Heidi Hammond, Mayor, Grantsville

Attest

_____
Alicia Fairbourne, City Recorder, Grantsville

Agenda Item #12

Presentation and consideration of Resolution 2026-36 documenting compliance with truth in taxation statement requirements under 59-2-919 in anticipation of Council's adoption of the tentative Fiscal Year 2027 budget, and establishing a time and place of a public hearing to consider its adoption; and

a. **Statement of Intent:** The Budget Officer intends to state that Grantsville City is considering levying a tax rate that exceeds the Grantsville City certified tax rate

b. **Statement that the tentative budget includes a proposed tax rate increase**

c. **Statement of proposed dollar amount:** The Budget Officer will state the approximate dollar amount of and purpose for additional ad valorem tax revenue that would be generated by the proposed tax rate increase

d. **Statement of approximate percentage increase:** The Budget Officer will state the approximate percentage increase in ad valorem tax revenue for the fiscal year taxing entity based on the proposed tax rate increase

e. **Statement of intended purpose:** The Budget Officer will state the purpose of what the additional tax revenue generated by the tax increase will be used for

f. **Presentation of the proposed property tax impact schedule**

g. **Statement of public notice:** The Budget Officer will state that if Grantsville City proceeds with the proposed tax rate increase, Grantsville City will provide notice of and conduct a public hearing, as required by Utah State Code Annotated 59-2-919(4)(c), at which members of the public will have an opportunity to provide comments on the proposed tax rate increase

FY2027 BUDGET PRESENTATION

Agenda

1. Budget Updates
2. Asks
3. Tentative Budget Outline
4. Q & A

Ask thoughtful questions

Focus on Sustainability

Partner with Staff

GRANTSVILLE CITY – BUDGET UPDATES

New in FY2027

Line Item Reallocations

We have worked to make some adjustments / reallocate some funds to line items that make more sense – IE “CD’s, Books, and Written Materials”

Line Item Standardization

Established “law and order” to items to standardize them across departments – IE “Employee Appreciation - $150.00/employee)

Line Item Amount Adjustment

Adjusted line items to better reflect actual spending in years previous – not a lot of excessive budgeting to make things more accurate & transparent – note

Personnel -

Existing Staff Raises:
3% Raise for Current Staff

Ideally will be conducting a compensation study – want raises to be split between COLA and Merit with employee evaluations

Staff Insurance: 5% Increase across the board due to increase in our cost for insurance / benefits for employees through PEHP

Personnel Asks:

Parks and Recreation:
Additional Staff

Reasoning: Scenic Slopes Park coming online

Cost: $32,428.00
(adjusted for assumption for when park will be completed / additional work will ensue)
*****Parks & Rec additional staffing ask is included in the reasoning for the increase in the property tax rate.***

Police Department:
New Officer + Equipment

Cost: $432,778

Reasoning – “Rule” is to have 1.42 officer per 1,000 people. We are already slightly behind the curve on that, but if the growth hits like everyone is anticipating, additional officer’s will be required. Ideally hiring 2 in July (included in budget currently), then if growth occurs hiring one in January and one in March

Fire Department:
Stipend Increase

Reasoning: Additional funds to award more firefighters for meeting the requirements

Cost: $20,000.00

Office Equipment + Other

Department	Ask	Amount	N,ote
Finance / Recorder	New Printer / Copier	$3,672.00	Lease through LOC – Approximately $306/month
Mayor	Rodeo	$25,000.00	Continuation of City Rodeo – Stock Contractor + Clown
Mayor	Mayor & Council Training	$11,250.00	Previously has been budgeted for in the General / City Hall Budget, simply moving it to be more transparent / accurate
Community Development	Planning Commission Appreciation	$1,050.00	Same amount as Employee Appreciation Amount
Fire Department	100 Year Celebration	$15,000.00	Badges / Firefighter Appreciation & Keepsakes
Garbage	Bulk Waste Haul-Off	$192,528.00	Bulk Haul for Residents (2 Options – more expensive option included here – 2nd option = $104,076)
Human Resources	Compensation Study*	$30,000.00	Compensation / Position Study of Grantsville City

*****HR ask for the compensation study is included in the reasoning for the increase in the property tax rate.***

Capital Equipment & Projects

Department	Ask	Amount	Note
Fire	Apparatus Fund	$200,000.00	Begin saving for new fire truck
Mayor	City Hall Remodel	$140,000.00	Council Chambers + City Hall Entrance / Finance Suite Window
Library	Building Improvements	$20,000.00	Roof Repairs + Server Room
Cemetery	Grounds Improvements	$100,000.00	Widening Roads + Fence Trim Completion
Water	Apple Street	$450,000.00	Apple Street Water Line (roll over from FY2026)
Water	Hale Street	$550,000.00	Hale Street Water Line (per alphabet plan)
Water	Generator Building	$300,000.00	
Animal Control	New Building	$2,000,000.00	Begin preparing/saving/planning for need for new animal shelter upon completion of new WWTP
Sewer	WWTP	$46,000,000.00	Wastewater Treatment Plant (roll over from FY2026+)

Equipment

Department	Ask	Amount	Note
Fire	Extrication Tools	$90,000.00	Hope to find grant assistance
Roads	Parts & Equipment	$15,000.00	Increase on Parts & Equipment budget line (considering new equipment)
Parks & Rec	New Park Signs	$5,000.00	Signage improvements at parks + scenic slopes
Parks & Rec	Autonomous Mower	$50,000.00	Mows park lawns without an employee operating a mower
Parks & Rec	Landscape Trailer	$10,000.00	To store and mobilize mowers + equipment for ease
Parks & Rec	Tables & Trashcans	$40,000.00	Additional Tables +Trashcans at City Parks
Parks & Rec	Drinking Fountains	$32,000.00	4 Drinking Fountains at the Parks ($8k/fountain)
Cemetery	Standing Mower	$10,000.00	Currently borrowing from PAR, with new parks coming, anticipate more usage – just need their own
Cemetery	Driveable Dump Trailer	$28,250.00	Ability to get in to graves & cover them quickly
Cemetery	“Gofer Smoker”	$3,000.00	Eradicate the Gofer Families residing at the Cemetery
Water	Generator	$40,000.00	New Generator for Well

Q & A

GRANTSVILLE CITY CORPORATION
PROPERTY TAX IMPACT SCHEDULE
FISCAL YEAR 2026-2027

Proposed Property Tax Impact Schedule

Grantsville City will consider an increase to its property tax rate from .001368 to .001409, which exceeds the estimated certified tax rate and is estimated to generate an additional $62,428 in property tax revenue. The following information is intended to provide the City Council and the public with an explanation of how the City's operations would be affected if the proposed property tax increase is adopted.

Grantsville City's Current Property Tax Rate	0.001368
Grantsville City's Current Property Tax Revenue	$2,082,977.00
Proposed Revenue with Tax Change (not including new growth)	$2,145,405.00
New Property Tax Revenue to Grantsville City (not including new growth)	**$62,428.00**
Proposed Property Tax Rate	**0.001409**
Estimated percentage increase to property tax rate	**3.00%**

Property Type	Median Sales Price for Grantsville City	Estimated Certified Tax Rate	Proposed Tax Rate	Increase/ (Decrease) per year	Increase/ (Decrease) per month	% Increase/ (Decrease)
Residential	$ 530,088	$ 398.84	$ 410.79	$ 11.95	$ 1.00	3.00%
Commercial	$ 530,088	$ 725.16	$ 746.89	$ 21.73	$ 1.81	3.00%

Affected Department	Proposed Budget	Budget w/out Tax Change	Budget Change	Impact of Tax Increase
General	$ 1,090,484.30	$ 1,060,484.30	$ 30,000.00	Human Resources is requesting $30,000 to conduct a pay and compensation study.
Parks & Recreation	$ 858,072.45	$ 825,644.45	$ 32,428.00	Parks & Recreation is requesting $35,473.62 for additional staff (preparation for Scenic Slopes)
		Total General Fund Change:	**$ 62,428.00**	

GRANTSVILLE CITY
RESOLUTION NO. 2026-36

A RESOLUTION DOCUMENTING COMPLIANCE WITH TRUTH IN TAXATION STATEMENT REQUIREMENTS UNDER 59-2-919 IN ANTICIPATION OF COUNCIL'S ADOPTION OF THE TENTATIVE FISCAL YEAR 2027 BUDGET, AND ESTABLISHING A TIME AND PLACE OF A PUBLIC HEARING TO CONSIDER ITS ADOPTION

Be it resolved by the City Council of Grantsville City, Utah as follows:

WHEREAS, the City Council, in fulfillment of its duty for budgeting the finances of the City for the Fiscal Year 2027, desires to make record of compliance with certain procedures under 59-2-919 Utah Code Annotated in anticipation of the adoption the tentative FY 2027 Budget prepared and presented by the Budget Officer; and

WHEREAS, the City Council desires to tentatively adopt the Budget Officer's tentative budget; and

WHEREAS, during the meeting at which this Resolution is considered, the following items were presented and stated on the record:

WHEREAS, the Budget Officer stated that Grantsville City is considering levying a property tax rate that exceeds the Grantsville City certified tax rate; and

WHEREAS, the Budget Officer stated that the tentative budget includes a proposed tax rate increase; and

WHEREAS, the Budget Officer stated the approximate dollar amount of the additional ad valorem property tax revenue that would be generated by the proposed tax rate increase; and

WHEREAS, the Budget Officer stated the approximate percentage increase in ad valorem property tax revenue for the fiscal year based on the proposed tax rate increase; and

WHEREAS, the Budget Officer stated the purpose of the additional tax revenue, which is to fund additional staffing requirements for Parks and Recreation to support Scenic Slopes coming online and to conduct a compensation study; and

WHEREAS, the Budget Officer presented the proposed property tax impact schedule (attached hereto as Exhibit A); and

WHEREAS, the Budget Officer stated that if Grantsville City proceeds with the proposed tax rate increase, Grantsville City will provide notice of and conduct a public hearing, as required by Utah State Code Annotated 59-2-919(4)(c), at which members of the public will have an opportunity to provide comments on the proposed tax rate increase;

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF GRANTSVILLE CITY, STATE OF UTAH, AS FOLLOWS:

Section 1. Compliance with Tentative Budget Statement Requirements.
The City Council hereby acknowledges and confirms that the statements and presentations required under Utah Code Section 59-2-919 were made on the record in connection with presentation of the tentative Fiscal Year 2027 budget.

Section 2. Continued Compliance During Tentative Budget Discussions.
The City Council hereby directs that, if the tentative Fiscal Year 2027 budget or proposed property tax increase is discussed at additional public meetings prior to final budget adoption, the required property tax impact schedule and applicable statements required by Utah Code Section 59-2-919 shall be presented at each such meeting as required by law.

Section 3. Future Public Hearing and Final Budget Adoption.
The City Council shall hold a public hearing regarding the tentative Fiscal Year 2027 budget, including any proposed property tax increase, prior to final adoption of the Fiscal Year 2027 budget. The date, time, and place of such hearing shall be established by the City Council, and notice shall be provided in accordance with applicable provisions of Utah law, including Truth in Taxation requirements under Utah Code Section 59-2-919.

Section 4. Effective Date.
This Resolution shall take effect immediately upon passage and approval.

ADOPTED AND PASSED BY THE CITY COUNCIL OF GRANTSVILLE CITY, THIS 6TH DAY OF MAY, 2026.

BY THE ORDER OF THE GRANTSVILLE CITY COUNCIL:

_____
By Mayor Heidi Hammond

ATTEST

_____
Alicia Fairbourne, City Recorder

Exhibit A
Property Tax Impact Statement

GRANTSVILLE CITY CORPORATION
PROPERTY TAX IMPACT SCHEDULE
FISCAL YEAR 2026-2027

Proposed Property Tax Impact Schedule

Grantsville City will consider an increase to its property tax rate from .001368 to .001409, which exceeds the estimated certified tax rate and is estimated to generate an additional $62,428 in property tax revenue. The following information is intended to provide the City Council and the public with an explanation of how the City's operations would be affected if the proposed property tax increase is adopted.

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Parks & Recreation	$ 858,072.45	$ 825,644.45	$ 32,428.00	Parks & Recreation is requesting $35,473.62 for additional staff (preparation for Scenic Slopes)
		Total General Fund Change:	**$ 62,428.00**	

Agenda Item # 13

Consideration of Resolution 2026-37 declaring the intent of Grantsville City to consider an increase in property tax revenue above the certified tax rate for Fiscal Year 2027 pursuant to the requirements of Utah House Bill 236 (2026), publishing a property tax impact disclosure and establishing the time and place of a Truth in Taxation public hearing

GRANTSVILLE CITY
RESOLUTION NO. 2026-37

A RESOLUTION DECLARING INTENT TO CONSIDER AN INCREASE IN PROPERTY TAX REVENUE ABOVE THE CERTIFIED TAX RATE FOR FISCAL YEAR 2027; PUBLISHING A PROPERTY TAX IMPACT DISCLOSURE AND ESTABLISHING THE DATE, TIME, AND PLACE OF THE TRUTH IN TAXATION PUBLIC HEARING

BE IT RESOLVED BY THE CITY COUNCIL OF GRANTSVILLE CITY, UTAH, AS FOLLOWS:

WHEREAS, Grantsville City is authorized to levy property taxes in accordance with Utah law; and

WHEREAS, the City Council may determine it is necessary to consider an increase in property tax revenue above the certified tax rate for fiscal year 2027; and

WHEREAS, Utah Code Section 59-2-919 requires a public hearing and public notice before adopting a property tax increase above the certified tax rate;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF GRANTSVILLE CITY, UTAH, AS FOLLOWS:

Section 1. Declaration of Intent.

The City Council hereby declares its intent to consider an increase in property tax revenue above the certified tax rate for fiscal year 2027 in accordance with Utah Code Section 59-2-919.

Section 2. Truth in Taxation Public Hearing.

The City Council hereby establishes a Truth in Taxation public hearing to be held on August 5, 2026, at 7:00 p.m. at Grantsville City Hall, 429 East Main Street, Grantsville, Utah 84029, at which time all interested persons shall be given an opportunity to be heard regarding the proposed property tax increase.

Section 3. Notice and Publication.

The City Recorder and Budget Officer are directed to provide all notices, publications, and filings required by Utah Code Section 59-2-919, including notification to the Utah State Tax Commission and Tooele County Auditor.

Section 4. Effective Date.

This Resolution shall take effect immediately upon passage and approval.

ADOPTED AND PASSED BY THE CITY COUNCIL OF GRANTSVILLE CITY THIS 6TH DAY OF MAY, 2026.

BY THE ORDER OF THE GRANTSVILLE CITY COUNCIL:

_____
By Mayor Heidi Hammond

ATTEST

_____
Alicia Fairbourne, City Recorder

Agenda Item # 14

Presentation of USA RV & Parking Storage site plan, approved by Planning Commission on April 20, 2026

811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

NORTHWEST CORNER OF SECTION 22, TOWNSHIP 2 SOUTH, RANGE 6 WEST SALT LAKE BASE AND MERIDIAN

ELEV = 4362.55'

Grantsville City Development Review
Submittal # 5 04/21/2026

APPROVED
Grantsville City
Engineer
04/21/2026

APPROVED
Grantsville City
Planning Department
04/21/2026

APPROVED
Grantsville City
Fire Department
04/23/2026

APPROVED
Grantsville City
Public Works
04/23/2026

USA RV & PARKING STORAGE

1361 OLD LINCOLN HIGHWAY
GRANTSVILLE CITY, UTAH

DATE PRINTED
April 20, 2026

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NOTICE TO CONTRACTOR

ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT ALL EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS OF THE U.S. DEPARTMENT OF LABOR AND THE STATE OF UTAH DEPARTMENT OF INDUSTRIAL RELATIONS CONSTRUCTION SAFETY ORDERS." THE CIVIL ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE CONTRACTORS AND SUBCONTRACTORS COMPLIANCE WITH SAID REGULATIONS AND ORDERS.

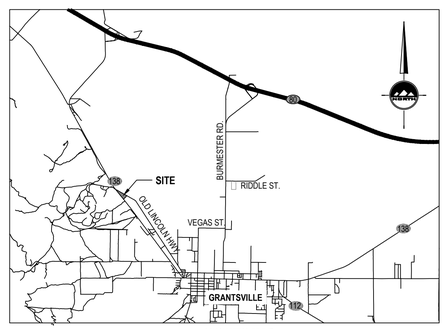
CONTRACTOR FURTHER AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB-SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE CIVIL 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 THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.

NOTICE TO DEVELOPER/CONTRACTOR

UNAPPROVED DRAWINGS REPRESENT WORK IN PROGRESS, ARE SUBJECT TO CHANGE, AND DO NOT CONSTITUTE A FINISHED ENGINEERING PRODUCT. ANY WORK UNDERTAKEN BY DEVELOPER OR CONTRACTOR BEFORE PLANS ARE APPROVED IS UNDERTAKEN AT THE SOLE RISK OF THE DEVELOPER, INCLUDING BUT NOT LIMITED TO BIDS, ESTIMATION, FINANCING, BONDING, SITE CLEARING, GRADING, INFRASTRUCTURE CONSTRUCTION, ETC.

UTILITY DISCLAIMER

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND / OR ELEVATIONS OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS 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 LOCAL UTILITY LOCATION CENTER AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATIONS 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.



VICINITY MAP
NOT TO SCALE

GENERAL NOTES

1. ALL WORK SHALL CONFORM TO GRANTSVILLE CITY STANDARDS & SPECIFICATIONS.
2. CALL BLUE STAKES AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES.
3. NORTHWEST CORNER OF SECTION 22, TOWNSHIP 2 SOUTH, RANGE 6 WEST SALT LAKE BASE AND MERIDIAN ELEV = 4362.55'

ENSIGN
THE STANDARD IN ENGINEERING

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SANDY
Phone: 801.255.0529

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USA RV & PARKING STORAGE
CIVIL DESIGN
1361 OLD LINCOLN HIGHWAY
GRANTSVILLE CITY, UTAH

PROFESSIONAL ENGINEER
10924116-2202
COREY L. CHILD
STATE OF UTAH
2026-04-20

COVER

PROJECT NUMBER 7788D	PRINT DATE 2026-02-03
PROJECT MANAGER C. CHILD	DESIGNED BY C. CHILD

C-000

GENERAL NOTES

1. ALL CONSTRUCTION MUST STRICTLY FOLLOW THE STANDARDS AND SPECIFICATIONS SET FORTH BY: THE DESIGN ENGINEER, LOCAL AGENCY JURISDICTION, APWA (CURRENT EDITION), AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.). THE ORDER LISTED ABOVE IS ARRANGED BY SENIORITY. THE LATEST EDITION OF ALL STANDARDS AND SPECIFICATIONS MUST BE ADHERED TO. IF A CONSTRUCTION PRACTICE IS NOT SPECIFIED BY ANY OF THE LISTED SOURCES, CONTRACTOR MUST CONTACT DESIGN ENGINEER FOR DIRECTION.
2. CONTRACTOR TO STRICTLY FOLLOW THE MOST CURRENT COPY OF THE SOILS REPORT FOR THIS PROJECT. ALL GRADING INCLUDING BUT NOT LIMITED TO CUT, FILL, COMPACTION, ASPHALT SECTION, SUBBASE, TRENCH EXCAVATION/BACKFILL, SITE GRUBBING, AND FOOTINGS MUST BE COORDINATED DIRECTLY WITH SOILS REPORT.
3. CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING, AND BRING UP ANY QUESTIONS BEFORE SUBMITTING BID.
4. CONTRACTOR SHALL PROVIDE A CONSTRUCTION SCHEDULE IN ACCORDANCE WITH THE CITY, STATE, OR COUNTY REGULATIONS FOR WORKING IN THE PUBLIC WAY.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ACCORDING TO GOVERNING AGENCY STANDARDS. WET DOWN DRY MATERIALS AND RUBBISH TO PREVENT BLOWING.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT SURFACE IMPROVEMENTS.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY SETTLEMENT OF OR DAMAGE TO EXISTING UTILITIES.
8. THE CONTRACTOR IS RESPONSIBLE TO FURNISH ALL MATERIALS TO COMPLETE THE PROJECT.
9. ALL EXPOSED SURFACES WILL HAVE A TEXTURED FINISH, RUBBED, OR BROOMED. ANY "PLASTERING" OF NEW CONCRETE WILL BE DONE WHILE IT IS STILL "GREEN".
10. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
11. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE. CONTRACTOR SHALL START INSTALLATION AT LOW POINT OF ALL NEW GRAVITY UTILITY LINES.
12. ALL DIMENSIONS, GRADES, AND UTILITY DESIGN SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES EXIST, PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO THE DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS, IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
13. NO CHANGE IN DESIGN LOCATION OR GRADE WILL BE MADE BY THE CONTRACTOR WITHOUT THE WRITTEN APPROVAL OF THE PROJECT ENGINEER.
14. NATURAL VEGETATION AND SOIL COVER SHALL NOT BE DISTURBED PRIOR TO ACTUAL CONSTRUCTION OF A REQUIRED FACILITY OR IMPROVEMENT. MASS CLEARING OF THE SITE IN ANTICIPATION OF CONSTRUCTION SHALL BE AVOIDED.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, MAINTAINING, OR RESTORING ALL MONUMENTS AND MONUMENT REFERENCE MARKS WITHIN THE PROJECT SITE. CONTACT THE CITY OR COUNTY SURVEYOR FOR MONUMENT LOCATIONS AND CONSTRUCTION DETAILS.
16. EXISTING UTILITY INFORMATION SHOWN IS FOR INFORMATIONAL PURPOSES ONLY. IT IS DERIVED FROM ON-SITE SURVEY AND/OR UTILITY MAPPING PROVIDED TO THE ENGINEER, AND THEREFORE UTILITIES MAY NOT BE LOCATED CORRECTLY, EITHER HORIZONTALLY OR VERTICALLY, AND MAY NOT BE ALL INCLUSIVE. CONTRACTOR IS REQUIRED TO FOLLOW THE PROCEDURE OUTLINED BELOW:
    - 16.1. CONTRACTOR IS REQUIRED TO LOCATE AND POTHOLE ALL EXISTING UTILITY LINES (BOTH HORIZONTALLY AND VERTICALLY) THAT AFFECT THE PROJECT CONSTRUCTION, EITHER ON-SITE OR OFF-SITE, AND DETERMINE IF THERE ARE ANY CONFLICTS WITH THE DESIGN OF THE SITE AS SHOWN ON THE APPROVED PLANS PRIOR TO ANY CONSTRUCTION. IF IT IS DETERMINED THAT CONFLICTS EXIST BETWEEN EXISTING UTILITIES AND DESIGN UTILITIES (OR ANOTHER ASPECT OF PROPOSED CONSTRUCTION) THE ENGINEER MUST BE NOTIFIED IMMEDIATELY TO CORRECT THE CONFLICTS BEFORE ANY WORK CAN BEGIN. IF THE CONTRACTOR FAILS TO FOLLOW THIS ABSOLUTE REQUIREMENT AND CONFLICTS ARISE DURING CONSTRUCTION THE CONTRACTOR WILL BEAR THE SOLE RESPONSIBILITY TO FIX THE CONFLICTS.
    - 16.2. CONTRACTOR IS REQUIRED TO VERIFY THAT PROPER COVER AND PROTECTION OF EXISTING UTILITY LINES IS MAINTAINED OR ATTAINED WITHIN THE DESIGN ONCE VERIFICATION OF THE EXISTING UTILITIES IS COMPLETED AS OUTLINED IN 16.1 ABOVE.
    - 16.3. IN ADDITION TO 16.1 AND 16.2 ABOVE THE CONTRACTOR WILL VERIFY DEPTHS OF UTILITIES IN THE FIELD BY "POTHOLING" A MINIMUM OF 300 FEET AHEAD OF PROPOSED PIPELINE CONSTRUCTION TO AVOID POTENTIAL CONFLICTS WITH DESIGNED PIPELINE ALIGNMENT AND GRADE AND EXISTING UTILITIES.
    - 16.4. IF A CONFLICT ARISES BETWEEN EXISTING UTILITIES AND DESIGN UTILITIES (OR ANOTHER ASPECT OF PROPOSED CONSTRUCTION) AS DETERMINED UNDER 16.1, 16.2 OR 16.3 THE CONTRACTOR WILL NOTIFY THE ENGINEER IMMEDIATELY TO RESOLVE THE CONFLICT.
    - 16.5. IF A CONFLICT ARISES BETWEEN EXISTING UTILITIES AND DESIGN UTILITIES (OR ANOTHER ASPECT OF PROPOSED CONSTRUCTION) RESULTING FROM THE CONTRACTOR'S NEGLIGENCE TO IDENTIFY AND/OR "POTHOLE" EXISTING UTILITIES AS REQUIRED IN 16.1, 16.2 AND 16.3 ABOVE, THE CONTRACTOR WILL BE REQUIRED TO RESOLVE THE CONFLICT WITHOUT ADDITIONAL COST OR CLAIM TO THE OWNER OR ENGINEER.
17. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.
18. CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING CONSTRUCTION.
19. AT ALL LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAWCUT TO A CLEAN, SMOOTH EDGE.
20. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT, ADOPTED EDITION OF ADA ACCESSIBILITY GUIDELINES.
21. CONTRACTOR SHALL, AT THE TIME OF BIDDING AND THROUGHOUT THE PERIOD OF THE CONTRACT, BE LICENSED IN THE STATE OF UTAH AND SHALL BE BONDABLE FOR AN AMOUNT REQUIRED BY THE OWNER.
22. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL WATER, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THE CONTRACTOR'S USE DURING CONSTRUCTION.
23. 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 RE-TESTING AND/OR RE-INSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.
24. 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. THERE WILL BE NO EXTRA COST DUE TO THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS.
25. WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE 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.
26. CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL STRUCTURES AND OTHER FACILITIES. 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. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER ONE SET OF NEATLY MARKED RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.
27. WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.
28. ALL EXISTING GATES AND FENCES TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. PROTECT ALL GATES AND FENCES FROM DAMAGE.
29. ALL EXISTING TREES ARE TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. PROTECT ALL TREES FROM DAMAGE.
30. ASPHALT MIX DESIGN MUST BE SUBMITTED AND APPROVED BY THE GOVERNING AGENCY PRIOR TO THE PLACEMENT.
31. CONTRACTORS ARE RESPONSIBLE FOR ALL OSHA REQUIREMENTS ON THE PROJECT SITE.
32. A UPDES (UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT IS REQUIRED FOR ALL CONSTRUCTION ACTIVITIES 1 ACRE OR MORE AS WELL AS A STORM WATER POLLUTION PREVENTION PLAN.

UTILITY NOTES

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS, CITY AND STATE REQUIREMENTS AND THE MOST RECENT EDITIONS OF THE FOLLOWING: THE INTERNATIONAL PLUMBING CODE, UTAH DRINKING WATER REGULATIONS, APWA MANUAL OF STANDARD PLANS AND SPECIFICATIONS. THE CONTRACTOR IS REQUIRED TO ADHERE TO ALL OF THE ABOVE-MENTIONED DOCUMENTS UNLESS OTHERWISE NOTED AND APPROVED BY THE ENGINEER.
2. CONTRACTOR SHALL COORDINATE LOCATION OF NEW "DRY UTILITIES" WITH THE APPROPRIATE UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO: TELEPHONE & INTERNET SERVICE, GAS SERVICE, CABLE, AND POWER.
3. EXISTING UTILITIES HAVE BEEN SHOWN ON THE PLANS BASED ON ON-SITE SURVEY. PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE, IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY BLUE STAKES AT 1-800-662-4111 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 CONTRACTOR'S SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S 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 CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.
4. CARE SHOULD BE TAKEN IN ALL EXCAVATIONS DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES. EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT CONTRACTOR'S EXPENSE.
5. TRENCH BACKFILL MATERIAL AND COMPACTION TESTS ARE TO BE TAKEN PER APWA STANDARD SPECIFICATIONS (CURRENT EDITION), SECTION 33 05 20 - BACKFILLING TRENCHES, OR AS REQUIRED BY THE GEOTECHNICAL REPORT IF NATIVE MATERIALS ARE USED. NO NATIVE MATERIALS ARE ALLOWED IN THE PIPE ZONE. THE MAXIMUM LIFT FOR BACKFILLING EXCAVATIONS IS DETERMINED BY THE GEOTECHNICAL RECOMMENDATIONS.
6. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFORMING TO LOCAL AND FEDERAL CODES GOVERNING SHORING AND BRACING OF EXCAVATIONS AND TRENCHES AND FOR THE PROTECTION OF WORKERS.
7. THE CONTRACTOR IS REQUIRED TO KEEP ALL CONSTRUCTION ACTIVITIES WITHIN THE APPROVED PROJECT LIMITS. THIS INCLUDES, BUT IS NOT LIMITED TO VEHICLE AND EQUIPMENT STAGING, MATERIAL STORAGE AND LIMITS OF TRENCH EXCAVATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN PERMISSION AND/OR EASEMENTS FROM THE APPROPRIATE GOVERNING ENTITY AND/OR INDIVIDUAL PROPERTY OWNER(S) FOR WORK OR STAGING OUTSIDE OF THE PROJECT LIMITS.
8. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE, CAUSED BY ANY CONDITION INCLUDING SETTLEMENT, TO EXISTING UTILITIES FROM WORK PERFORMED AT OR NEAR EXISTING UTILITIES. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT ALL EXISTING PUBLIC AND PRIVATE ROADWAY AND UTILITY FACILITIES. DAMAGE TO EXISTING FACILITIES CAUSED BY THE CONTRACTOR MUST BE REPAIRED BY THE CONTRACTOR AT HIS/HER EXPENSE TO THE SATISFACTION OF THE OWNER OF SAID FACILITIES.
9. ALL WATER LINE AND SEWER LINE INSTALLATION AND TESTING TO BE IN ACCORDANCE WITH LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
10. ALL MANHOLES, HYDRANTS, VALVES, CLEANOUT BOXES, CATCH BASINS, METERS, ETC. MUST BE RAISED OR LOWERED TO FINAL GRADE PER APWA (CURRENT EDITION) STANDARDS AND INSPECTOR REQUIREMENTS. CONCRETE COLLARS MUST BE CONSTRUCTED ON ALL MANHOLES, CLEANOUT BOXES, CATCH BASINS, AND VALVES PER APWA STANDARDS. ALL MANHOLE, CATCH BASIN, OR CLEANOUT BOX CONNECTIONS MUST BE MADE WITH THE PIPE CUT FLUSH WITH THE INSIDE OF THE BOX AND GROUTED OR SEALED.
11. CONTRACTOR SHALL NOT ALLOW ANY GROUNDWATER OR DEBRIS TO ENTER THE NEW OR EXISTING PIPE DURING CONSTRUCTION.
12. SILT AND DEBRIS ARE TO BE CLEANED OUT OF ALL STORM DRAIN BOXES. CATCH BASINS ARE TO BE MAINTAINED IN A CLEANED CONDITION AS NEEDED UNTIL AFTER THE FINAL BOND RELEASE INSPECTION.
13. CONTRACTOR SHALL CLEAN ASPHALT, TAR OR OTHER ADHESIVES OFF OF ALL MANHOLE LIDS AND INLET GRATES TO ALLOW ACCESS.
14. EACH TRENCH SHALL BE EXCAVATED SO THAT THE PIPE CAN BE LAID TO THE ALIGNMENT AND GRADE AS REQUIRED. THE TRENCH WALL SHALL BE SO BRACED THAT THE WORKMEN MAY WORK SAFELY AND EFFICIENTLY. ALL TRENCHES SHALL BE DRAINED SO THE PIPE LAYING MAY TAKE PLACE IN DEWATERED CONDITIONS.
15. CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES AMPLE MEANS AND DEVICES WITH WHICH TO REMOVE PROMPTLY AND TO PROPERLY DISPOSE OF ALL WATER ENTERING THE TRENCH EXCAVATION.
16. ALL SEWER LINES AND SEWER SERVICES SHALL HAVE A MINIMUM SEPARATION OF 10 FEET, EDGE TO EDGE, FROM THE WATER LINES. IF A 10 FOOT SEPARATION CAN NOT BE MAINTAINED, CONSTRUCT PER GOVERNING AGENCY'S MINIMUM SEPARATION STANDARDS.
17. CONTRACTOR SHALL INSTALL THRUST BLOCKING AT ALL WATERLINE ANGLE POINTS AND TEES.
18. ALL UNDERGROUND UTILITIES SHALL BE IN PLACE PRIOR TO INSTALLATION OF CURB, GUTTER, SIDEWALK AND STREET PAVING.
19. CONTRACTOR SHALL INSTALL MAGNETIC LOCATING TAPE CONTINUOUSLY OVER ALL NONMETALLIC PIPE.

TRAFFIC CONTROL AND SAFETY NOTES

1. TRAFFIC CONTROL AND STRIPING TO CONFORM TO THE CURRENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).
2. BARRICADING AND DETOURING SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE CURRENT M.U.T.C.D.
3. NO STREET SHALL BE CLOSED TO TRAFFIC WITHOUT WRITTEN PERMISSION FROM THE APPROPRIATE AGENCY, EXCEPT WHEN DIRECTED BY LAW ENFORCEMENT OR FIRE OFFICIALS.
4. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROVIDE FOR SMOOTH TRAFFIC FLOW AND SAFETY. ACCESS SHALL BE MAINTAINED FOR ALL PROPERTIES ADJACENT TO THE WORK.
5. DETOURING OPERATIONS FOR A PERIOD OF SIX CONSECUTIVE CALENDAR DAYS, OR MORE, REQUIRE THE INSTALLATION OF TEMPORARY STREET STRIPING AND REMOVAL OF INTERFERING STRIPING BY SANDBLASTING. THE DETOURING STRIPING PLAN OR CONSTRUCTION TRAFFIC CONTROL PLAN MUST BE SUBMITTED TO THE GOVERNING AGENCY FOR REVIEW AND APPROVAL.
6. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE END OF THE WORK TO THE SATISFACTION OF THE GOVERNING AGENCY.
7. TRAFFIC CONTROL DEVICES (TCDs) SHALL REMAIN VISIBLE AND OPERATIONAL AT ALL TIMES.
8. ALL PERMANENT TRAFFIC CONTROL DEVICES CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HEREUNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.
9. THE CONTRACTOR SHALL PROVIDE BARRICADES, SIGNS, FLASHERS, OTHER EQUIPMENT AND FLAG PERSONS NECESSARY TO INSURE THE SAFETY OF WORKERS AND VISITORS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTAH TRANSIT AUTHORITY (UTA) IF THE CONSTRUCTION INTERRUPTS OR RELOCATES A BUS STOP OR HAS AN ADVERSE EFFECT ON BUS SERVICE ON THAT STREET TO ARRANGE FOR TEMPORARY RELOCATION OF STOP.

DEMOLITION NOTES

1. EXISTING UTILITY INFORMATION SHOWN IS FOR INFORMATIONAL PURPOSES ONLY. IT IS DERIVED FROM ON-SITE SURVEY AND MAY NOT BE LOCATED CORRECTLY AND IS NOT ALL INCLUSIVE. CONTRACTOR SHALL FIELD LOCATE ALL UTILITIES WITHIN THE PROJECT LIMITS BEFORE BEGINNING DEMOLITION/CONSTRUCTION.
2. THERE MAY BE BURIED UTILITIES WITHIN THE LIMITS OF DISTURBANCE THAT ARE NOT SHOWN ON THE PLANS DUE TO LACK OF MAPPING OR RECORD INFORMATION. CONTRACTOR SHALL NOTIFY THE ENGINEER WHEN UNEXPECTED UTILITIES ARE DISCOVERED.
3. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR LOCATING AND PROTECTING FROM DAMAGE ALL EXISTING UTILITIES AND IMPROVEMENTS WHETHER OR NOT SHOWN ON THESE PLANS. THE FACILITIES AND IMPROVEMENTS ARE BELIEVED TO BE CORRECTLY SHOWN BUT THE CONTRACTOR IS REQUIRED TO SATISFY HIMSELF AS TO THE COMPLETENESS AND ACCURACY OF THE LOCATIONS. ANY CONTRACTOR PERFORMING WORK ON THIS PROJECT SHALL FAMILIARIZE HIMSELF WITH THE SITE AND SHALL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY, OR INDIRECTLY, FROM HIS OPERATIONS, WHETHER OR NOT SAID FACILITIES ARE SHOWN ON THESE PLANS.

GRADING AND DRAINAGE NOTES

1. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AND ALL RELATED ADDENDUMS.
2. THE CONTRACTOR SHALL STRIP AND CLEAR THE TOPSOIL, MAJOR ROOTS AND ORGANIC MATERIAL FROM ALL PROPOSED BUILDING AND PAVEMENT AREAS PRIOR TO SITE GRADING. (THE TOPSOIL MAY BE STOCKPILED FOR LATER USE IN LANDSCAPED AREAS.)
3. THE CONTRACTOR SHALL REMOVE ALL ORGANIC MATERIAL AND OTHER DELETERIOUS MATERIALS PRIOR TO PLACING GRADING FILL OR BASE COURSE. THE AREA SHOULD BE PROOF-ROLLED TO IDENTIFY ANY SOFT AREAS. WHERE SOFT AREAS ARE ENCOUNTERED, THE CONTRACTOR SHALL REMOVE THE SOIL AND REPLACE WITH COMPACTED FILL.
4. ALL DEBRIS PILES AND BERMS SHOULD BE REMOVED AND HAULED AWAY FROM SITE OR USED AS GENERAL FILL IN LANDSCAPED AREAS.
5. THE CONTRACTOR SHALL GRADE THE PROJECT SITE TO PROVIDE A SMOOTH TRANSITION BETWEEN NEW AND EXISTING ASPHALT, CURB AND GUTTER, AND ADJOINING SITE IMPROVEMENTS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE AND DEBRIS ON ADJACENT STREETS WHEN EQUIPMENT IS TRAVELING THOSE STREETS.
7. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL CONDITIONS AND RECOMMENDATIONS OUTLINED IN THE GEOTECHNICAL REPORT AND TAKE ALL NECESSARY PRECAUTIONS AND RECOMMENDED PROCEDURES TO ASSURE SOUND GRADING PRACTICES.
8. THE CONTRACTOR SHALL TAKE APPROPRIATE GRADING MEASURES TO DIRECT STORM SURFACE RUNOFF TOWARDS CATCH BASINS.
9. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE BASED ON ON-SITE SURVEY. IT SHALL BE THE CONTRACTORS' FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE.
10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES, AND SLOPES SHOWN.
11. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR.
12. THE GRADING CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE OWNER TO PROVIDE FOR THE REQUIREMENTS OF THE PROJECT STORM WATER POLLUTION PREVENTION PLAN (SWPPP) AND ASSOCIATED PERMIT. ALL CONTRACTOR ACTIVITIES 1 ACRE OR MORE IN SIZE ARE REQUIRED TO PROVIDE A STORM WATER POLLUTION PREVENTION PLAN.
13. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.
14. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER FROM GOVERNING AGENCY.
15. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS, AND ALL OTHER PUBLIC RIGHT-OF-WAYS IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PUBLICLY-OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC, SHALL BE MAINTAINED IN A CLEAN, SAFE, AND USABLE CONDITION.

ABBREVIATIONS

APWA	AMERICAN PUBLIC WORKS ASSOCIATION
AR	ACCESSIBLE ROUTE
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BOS	BOTTOM OF STEP
BVC	BEGIN VERTICAL CURVE
C	CURVE
CB	CATCH BASIN
CF	CURB FACE OR CUBIC FEET
CL	CENTER LINE
CO	CLEAN OUT
COMM	COMMUNICATION
CONC	CONCRETE
CONT	CONTINUOUS
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
ELEC	ELECTRICAL
ELEV	ELEVATION
EOA	EDGE OF ASPHALT
EVC	END OF VERTICAL CURVE
EW	EACH WAY
EXIST	EXISTING
FF	FINISH FLOOR
FG	FINISH GRADE
FH	FIRE HYDRANT
FL	FLOW LINE OR FLANGE
GB	GRADE BREAK
GF	GARAGE FLOOR
GV	GATE VALVE
HC	HANDICAP
HP	HIGH POINT
IRR	IRRIGATION
K	RATE OF VERTICAL CURVATURE
LD	LAND DRAIN
LF	LINEAR FEET
LP	LOW POINT
MEX	MATCH EXISTING
MH	MANHOLE
MJ	MECHANICAL JOINT
NG	NATURAL GROUND
NIC	NOT IN CONTRACT
NO	NUMBER
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OHP	OVERHEAD POWER
PC	POINT OF CURVATURE OR PRESSURE CLASS
PCC	POINT OF COMPOUND CURVATURE
PI	POINT OF INTERSECTION
PIV	POST INDICATOR VALVE
PL	PROPERTY LINE
PRC	POINT OF REVERSE CURVATURE
PRO	PROPOSED
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
R	RADIUS
RD	ROOF DRAIN
ROW	RIGHT OF WAY
S	SLOPE
SAN SWR	SANITARY SEWER
SD	STORM DRAIN
SEC	SECONDARY
SS	SANITARY SEWER
STA	STATION
SW	SECONDARY WATER LINE
TBC	TOP BACK OF CURB
TOG	TOP OF GRATE
TOA	TOP OF ASPHALT
TOC	TOP OF CONCRETE
TOF	TOP OF FOUNDATION
TOW	TOP OF WALL
TOS	TOP OF STEP
TYP	TYPICAL
VC	VERTICAL CURVE
WIV	WALL INDICATOR VALVE
W	WATER LINE

NOTE: MAY CONTAIN ABBREVIATIONS THAT ARE NOT USED IN THIS PLAN SET.

LEGEND

SECTION CORNER	EXISTING EDGE OF ASPHALT
EXISTING MONUMENT	PROPOSED EDGE OF ASPHALT
PROPOSED MONUMENT	EXISTING STRIPING
EXISTING REBAR AND CAP	PROPOSED STRIPING
SET ENSIGN REBAR AND CAP	EXISTING FENCE
EXISTING WATER METER	PROPOSED FENCE
PROPOSED WATER METER	EXISTING FLOW LINE
EXISTING WATER MANHOLE	PROPOSED FLOW LINE
PROPOSED WATER MANHOLE	GRADE BREAK
EXISTING WATER BOX	EXISTING STORM DRAIN LINE
EXISTING WATER VALVE	PROPOSED STORM DRAIN LINE
PROPOSED WATER VALVE	ROOF DRAIN LINE
EXISTING FIRE HYDRANT	CATCHMENTS
PROPOSED FIRE HYDRANT	HIGHWATER LINE
PROPOSED FIRE DEPARTMENT CONNECTION	EXISTING SANITARY SEWER
EXISTING SECONDARY WATER VALVE	PROPOSED SANITARY SEWER LINE
PROPOSED SECONDARY WATER VALVE	PROPOSED SAN. SWR. SERVICE LINE
EXISTING IRRIGATION BOX	EXISTING LAND DRAIN LINE
EXISTING IRRIGATION VALVE	PROPOSED LAND DRAIN LINE
PROPOSED IRRIGATION VALVE	PROPOSED LAND DRAIN SERVICE LINE
EXISTING SANITARY SEWER MANHOLE	EXISTING CULINARY WATER LINE
PROPOSED SANITARY SEWER MANHOLE	PROPOSED CULINARY WATER LINE
EXISTING SANITARY CLEAN OUT	PROPO

CHAPTER 1 STANDARD NOTES

The Grantsville City Standard Notes are required to be included as part of all construction plans for residential or commercial development. Plans submitted by public or private entities for all other types of projects within City right-of-way, its easements or property shall reference the Grantsville City Standard Notes and Specifications.

1.1 Grantsville City General Notes

1. All work done or improvements installed within Grantsville City including but not limited to excavation, construction, roadwork and utilities shall conform to the Grantsville City Construction Standards and Specifications, City Municipal Code, the latest edition of the APWA Manual of Standard Specifications and Manual of Standard Plans with City Modifications, the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD) and any state or federal regulations and permit requirements of various governing bodies. The contractor is responsible to have a copy of these specifications and to know and conform to the appropriate codes, regulations, drawings, standards and specifications.
2. Prior to commencement of any work, a preconstruction meeting will be held with the Public Works Director, City Building Official, City inspectors, the contractor and the property owner.
3. The existence and location of any overhead or underground utility lines, pipes, or structures shown on these plans are obtained by research of the available records. Existing utilities are located on plans only for the convenience of the Contractor. The contractor shall bear full responsibility for the protection of utilities and the engineer bears no responsibility for utilities not shown on the plans or not in the location shown on the plans. This includes all service laterals of any kind. The Contractor shall, at his own expense, locate all underground and overhead interferences, which may affect his operation during construction and shall take all necessary precautions to avoid damage of the same. The Contractor shall use extreme caution when working near overhead utilities so as to safely protect all personnel and equipment, and shall be responsible for all cost and liability in connection therewith.
4. The Contractor shall take all precautionary measures necessary to protect existing utility lines, structures, survey monuments and street improvements which are to remain in place, from damage, and all such improvements or structures damaged by the Contractor's operations shall be repaired or replaced satisfactory to the City Engineer and owning utility company at the expense of the Contractor.
5. All construction shall be as shown on these plans, any revisions shall have the prior written approval of the City Engineer and Public Works Director.
6. Permits are required for any work in the public way. The Contractor shall secure all permits and inspections required for this construction.
7. Curb, gutter, and sidewalk, found to be unacceptable per City Standards and APWA shall be removed and replaced.
8. Contractor shall provide all necessary horizontal and vertical transitions between new construction and existing surfaces to provide for proper drainage and for ingress and egress to new construction. The extent of transitions to be as shown on plans.
9. Any survey monuments disturbed shall be replaced and adjusted per Tooele County Surveyors requirements.
10. All privacy walls, new or existing, are only shown on civil plans for the purpose of reviewing grading relationships; flood control and sight distance at intersections. All walls shall have a minimum 2 ft x 2 ft x 30-inch-deep spot footings. Bottom of all footings on all walls shall be a minimum of 30 inches below finished grade. Walls greater than 6 feet require a separate permit and inspection by the Building Department.
11. All construction materials per APWA must be submitted and approved by the City Engineer prior to the placement of asphalt within City Right of Way. Grantsville Public Works will approve pipe zone material to be placed.
12. Request for inspection by the Grantsville City Engineering Dept. shall be made by the contractor at least 48 hours before the inspection services will be required.
13. Work in public way, once begun, shall be prosecuted to completion without delay as to provide minimum inconvenience to adjacent property owners and to the traveling public. Please see Code 17 General Provisions for more details.
14. The Contractor shall take all necessary and proper precautions to protect adjacent properties from any and all damage that may occur from storm water runoff and/or deposition of debris resulting from any and all work in connection with construction.
15. Power poles and/or other existing facilities not in proper location based on proposed improvements shown hereon will be relocated at no expense to the Grantsville City. Power lines and all other aerial utilities are to be buried and poles removed as determined by the City Engineer. If any core is located in concrete, or if a portion of concrete is removed, flow fill to subgrade and the entire concrete section (from joint to joint) must be replaced.
16. Curb and gutter with a grade of less than four-tenths of one percent shall be constructed by forming. Each joint shall be checked for a grade prior to construction and water tested as soon as possible after construction.
17. Contractor to follow Grantsville City Noise Ordinance Standards Code Ordinance 2018-19.
18. Contractors are responsible for all OSHA requirements on the project site.
19. A UPDES (Utah Pollutant Discharge Elimination System) permit is required for all construction activities as per state law as well as providing a Storm Water Pollution Prevention Plan to the City prior to construction.
20. All City maintained utilities including; waterline, fire hydrants, streetlight wiring, and storm drain must be in public right of way or in recorded easements.
21. Contractor shall work Grantsville City regular working hours of Monday through Friday 7:00 am to 4:00 pm
22. Prior to 90% bond release, a legible as-built drawing must be submitted to the Grantsville City in accordance with the most current edition of City Standards. As- built drawings must show all changes and actual field locations of sewer, storm drainage, water, irrigation, street lighting, and power systems. As-builts will be held to the same standard as approved design drawings, no "redlined plans" allowed. In the absence of changes, copies of the approved drawings will be required stating "installed as per drawings". As-built drawings for new developments shall be submitted to the City in the following formats and quantities prior to the 90% bond release: 1 .dxf copy, 1 (full color) .pdf copy, and 1 GIS Shape file containing the same.
23. Filter fabric wrapped around an inlet grate is not an acceptable inlet sediment barrier. See Grantsville City Construction Standards and Specifications for details of approved storm water BMPs which specifically states the utilization of an Oil Water Separator, Snout or approved equal.
24. Asphalt paving is not allowed without a written exception from the Engineering Department and Public Works Department below an ambient temperature of 50 degrees and rising.
25. To ensure proper planting, protection and irrigation of trees, mitigating risk of tree failure or future damage to infrastructure, contractors are required to follow the standards and specifications of the ISA– International Society of Arboriculture.
26. When a proposed development borders a collector, minor collector or arterial street and is required to construct collector street fencing along the back of sidewalk, the development shall also be required put in a concrete mow strip from the back of sidewalk to underneath the fence panels. Concrete mow strips shall also be required between the sidewalk and fencing along the rear of double frontage lots.
27. Concrete for all surface improvements including but not limited to; sidewalk, driveway entrances, pedestrian ramps, curb and gutter, water ways, manhole, vault and valve collars, and any other cast in place surface concrete features shall be constructed with minimum 4,500 psi concrete.
28. All ADA accessible sidewalk ramps will be constructed in accordance with the latest edition of the ADA Standards for Accessible Design, City Standards, and Utah Chapter APWA Plans and Specifications with City modifications.
29. Culinary Water and Sewer service laterals shall be marked on the top back of curb and lip of curb at their actual location of crossing the curb and gutter. Pins or stamps shall be used and must be installed while the concrete is still wet and will readily accept the marker. Grinding marking due to dry cement is not allowed.

1.2 Grantsville City Roadway Notes

1. When a designated "Safe Route To School" is encroached upon by a construction work zone the safe route shall be maintained in a manner acceptable to Grantsville City.
2. If the improvements necessitate the obliteration, temporary obstruction, temporary removal or relocation of any existing traffic pavement marking, such pavement marking shall be restored or replaced with like materials to the satisfaction of the City Engineer, Public Works Director or designee.
3. The street Sign Contractor shall obtain street names and block numbering from the Planning Department prior to construction.
4. The Contractor shall be responsible for providing and installing all permanent signs shown on the plans. Street name signs shall conform in their entirety to current City Standards and the latest Manual of Uniform Traffic Control Devices (MUTCD) manual. All other signs shall be standard size unless otherwise specified on the plans. All sign posts shall be installed in accordance with the current City Standards and the latest Manual of Uniform Traffic Control Devices (MUTCD) manual.
5. All permanent traffic control devices called for hereon shall be in place and in final position prior to allowing any public traffic onto the portions of the road(s) being improved hereunder, regardless of the status of completion of paving or other off-site improvements called for per approved construction drawings unless approved by the City Engineer & Public Works Director.
6. The Contractor shall be responsible for notifying Utah Transit Authority (UTA) if applicable, if the construction interrupts or relocates a bus stop or has an adverse effect on bus service on that street to arrange for temporary relocation of stop.
7. Before any work is started in the right-of-way, the contractor shall install all advance warning signs for the construction zone. The contractor shall install temporary stop signs at all new street encroachments into existing public streets. All construction signing, barricading, and traffic delineation shall conform to the Manual of Uniform Traffic Control Devices (MUTCD) per the current edition adopted by UDOT and be approved by the Grantsville City before construction begins. Traffic control plans shall be submitted as part of the engineering construction package and approved by the Grantsville City Engineer and Public Works Director.
8. All signs larger than 36" X 36" or 1296 square inches per sign pole shall be mounted on a Slip Base system per UDOT standard drawing SN 10B (detail drawing attached to standard drawings) with a "Z" bar backing. Signs of this size are not allowed to be mounted on a yielding pole.
9. Sign components such as sheeting, EC film, inks, letters and borders are all required to be from the same manufacturer. Only EC film may be used to achieve color. Vinyl EC film is not accepted.
10. All new roundabouts, crosswalks, stop bars and legends shall be installed with Paint and Glass Bead.
11. Paving asphalt binder grade shall be PG 58-28 unless otherwise approved by the City Engineer. Asphalt aggregate size shall be ½ inch for residential and collector roads. No more than 15% RAP (reclaimed asphalt pavement) by weight will be allowed in the asphalt mix design for the paving of public and private streets. Up to the 15 percent will be allowed with no change in the specific binder grade. The asphalt mix design shall have no more than 3½ % air voids.
14. Potholing: All potholes must be saw cut square and have a minimum size of 1 square foot or remove and retain round core. When repairing a pothole, sand or pea gravel meeting Grantsville City standard shall be placed over the exposed utility to a depth of 6 inches. The pothole shall be filled with flow fill, and the round core shall be replaced in the flow fill, with epoxy seal applied around the joint. For larger cuts, following the pea gravel will be flowable fill up to 1 inch below the bottom edge of the existing asphalt. The remaining portion of the hole shall be filled with asphalt, which will have an overall thickness of the existing asphalt plus 1 inch.
15. All fill within the public right of way shall be A-1-a 3-inch minus, unless approved by the City Public Works Director or the City Engineer, with the exception of top soil in the park strip for landscaping and trench backfill. Trench backfill material under pavements or surface improvements shall be clean, non-clumping, granular and flowable, 3-inch minus, A-1-a soils according to AASHTO 145 soil Classification System, unless approved by the City Public Works Director or the City Engineer. Lime treated flowable fills, if approved, shall have a 28-day strength of 65 PSI. If the developer chooses to utilize material other than A-1-a 3-inch minus for trench back fill, then a City approved Geotechnical Engineer Company is required to approve the material is suitable for fill. Any fill material used shall be 3 inch minus material. The developer is required to pay the City's contracted independent Geotechnical Engineering Company per the City fee schedule and to be on site at all times during fill placement, compaction, and testing. If the fill being used on the project does not meet A-1-a standards or is not the same material the contracted Geotechnical Engineer approved for the project then the City Inspector can shut down the project with a stop work order. Work shall not resume until unsuitable fill material has been removed and replaced by the developer's contractor at the developer's expense. If the independent Geotechnical Engineering Company observing the fill placement, compaction, and testing is not on site then the City Inspector can shut down the project with a stop work order. Work shall not resume until the independent geotechnical engineering company observing fill placement, compaction, and testing is on site.

GRANTSVILLE - INC. 1867 -

PROJECT:

APPROVAL DATE: 1/9/2026

C-1.1

GRANTSVILLE CITY STANDARD NOTES

APPROVED BY CITY ENGINEER: Barry Bunderson, P.E.

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GRANTSVILLE CITY GENERAL NOTES

PROJECT NUMBER	PRINT DATE
7788D	2026-02-03
PROJECT MANAGER	DESIGNED BY
C. CHILD	C. CHILD

C-002

16. All traffic road closures involving 1 or more lanes of traffic must receive prior approval from the City Engineer, Public Works Director or his/her representative. VMS PCMS boards must be placed a minimum of 7 days in advance of any lane closure on collector, minor collector or arterial street. VMS PCMS boards must also be placed in advance of any lane closures on a subdivision street per the City Engineer's direction.

17. Roundabouts, including their ingress and egress, shall be constructed with concrete pavement. Engineer shall design cross section and submit to the City for review and approval.

1.3 Grantsville City Grading Notes

1. In the event that any unforeseen conditions not covered by these notes are encountered during grading operations, the Owner and City Engineer shall be immediately notified for direction.

2. It shall be the responsibility of the Contractor to perform all necessary cuts and fills within the limits of this project and the related off-site work, so as to generate the desired subgrade, finish grades and slopes shown.

3. Contractor shall take full responsibility for all excavation. Adequate shoring shall be designed and provided by the Contractor to prevent undermining of any adjacent features or facilities and/or caving of the excavation.

4. The Contractor is warned that an earthwork balance was not necessarily the intent of this project. Any additional material required or leftover material following earthwork operations becomes the responsibility of the Contractor.

5. Contractor shall grade the pavement area subgrade to the lines (horizontal) and elevations (vertical) shown on the plans within a tolerance of 0.1 + to 0.1 -.

6. All cut and fill slopes shall be protected until effective erosion control has been established.

7. The Contractor shall obtain all necessary permits for construction water from Grantsville City Engineering and Utilities Department.

8. The Contractor shall maintain the streets, sidewalks and all other public right-of way in a clean, safe and usable condition. All spills of soil, rock or construction debris shall be promptly removed from the publicly owned property during construction and upon completion of the project. All adjacent property, private or public shall be maintained in a clean, safe and usable condition.

9. In the event that any temporary construction item is required that is not shown on these drawings, the Developer agrees to provide and install such item at his own expense and at the direction of the City Engineer. Temporary construction includes ditches, berms, road signs and barricades, etc.

10. All grading work shall conform to the soils report as prepared by the Soils Engineer and approved by the City Engineer, and as shown on these plans.

11. All quality control testing shall be performed by an independent licensed and Certified third-party testing service.

1.4 Grantsville City Recreational Facilities

1. This section includes specifications for playground equipment, pavilions, and other facilities. Playgrounds: Pour-in-place rubber surfaces shall be installed under all playground equipment. The manner and area of installation shall be done according to the approved plans and the manufacturer's recommendations for both the play structure and play surface. Colors must be neutral earth tone colors. Pavilions: Any pavilions installed shall be finished with an architectural powder coated metal or aluminum construction.

1.5 Grantsville City Fire Department Notes

1. On any new home or building installation, accessible fire hydrants shall be installed before combustible construction commences and said fire hydrants shall be in good working order with an adequate water supply.

2. Contractor shall call the Public Works Department and Engineering Department for underground inspection, pressure and flush verification of all fire hydrants and fire lines before back filling.

3. Painting of the curbs and hydrant and any work necessary for protection of hydrants from physical damage shall be approved before being constructed. Hydra-finders will be installed per Grantsville City Standards detail.

4. A flow test must be witnessed by the Fire Department prior to occupancy for verification of required on-site water supply.

5. All on-site fire main materials must be U.L. listed and A.W.W.A. approved.

6. The turning radius for any fire apparatus access road and/or fire lane, public or private, shall be not less than forty-eight feet (48') outside radius equaling 96' or larger and twenty-two feet (22') inside radius and shall be paved.

7. A fire apparatus road shall be required when any portion of an exterior wall of the first story is located more than one-hundred fifty feet (150') from Fire Department vehicle access roads and/or fire lanes, public or private, in excess of one hundred fifty feet (150') in length shall be provided with an approved turn around area. Contractor/Engineer shall follow latest International Fire Code regulations at all times in regards to distance.

8. Access roads shall be marked by placing approved signs at the start of the designated fire lane, one sign at the end of the fire lane and width signs at intervals of one-hundred feet (100') along all designated fire lanes. Signs to be placed on both sides of an access roadway if needed to prevent parking on either side. Signs shall be installed at least 5', measured from the bottom edge of the sign to the near edge of pavement. Where parking or pedestrian movements occur, the clearance to the bottom of the sign shall be at least 7'. The curb along or on the pavement or cement if curb is not present, shall be painted with red weather resistant paint in addition to the signs.

9. Electrically controlled access gates shall be provided with an approved emergency vehicle detector/receiver system. Said system shall be installed in accordance with the Grantsville City F.D. approval. Gates are only allowed with prior approval.

10. All private underground fire lines that service automatic fire sprinkler systems shall be no smaller than eight (8) inches in diameter and have a Post Indicator Valve (PIV) between the water main and the building. If a PIV isn't feasible due to site constraints, a Water Indicator Valve (WIV) may be used with the approval of the City Engineer or Fire Code Official. For a WIV to be allowed, another valve must be installed on the fire service line back at the connection to the water main, which will be maintained by the City as part of its culinary water system. All fire lines material shall be Ductile Iron. (Ductile Iron from the PIV to the building shall be permitted or Ductile Iron from the main water line to the WIV).

11. Post Indicator Valves (PIV) shall be between 6 and 40 feet from buildings not exceeding three stories or equivalent in height and between 30 and 40 feet on buildings in excess of three or more stories in height or equivalent.

12. Roads and accesses shall be designed and maintained to support the imposed loads of fire apparatus. Surface shall be paved before the application of combustible material.

13. All new buildings equipped with a Fire Department Connection (FDC) must have inlets secured with Knox brand locking FDC cap(s) with a swivel collar. All new buildings are also required to have a Knox brand key lock box mounted on the exterior building, such that Fire Department personnel may gain access in case of an emergency.

1.6 Grantsville City Water Notes

1. The following Grantsville City Water Notes are intended for general water standards only and are not all inclusive. The City has included the Culinary Water Design and Construction Standards within the City Construction Standards and Specifications.

2. No work shall begin until the water plans have been released for construction by the Engineering Department. Following water plan approval, forty-eight (48) hour notice shall be given to the Engineering Department and the Public Works Department prior to the start of construction. Notice must be given by 2:00 P.M. the business day prior to an inspection.

3. All work within Grantsville City shall conform to Grantsville City Standards and Specifications, AWWA and APWA.

4. For Residential Developments - The developer shall purchase and install meter boxes and setters according to City Standards on newly developed lots and real property at the time of water main installation. Water meters will be supplied and installed by the Grantsville Utilities Department (at Developer's expense). The developer shall also provide the site address, lot number, meter size and pay meter fees prior to building permit approval. The developer should also pay for rental of a hydrant meter, and/or use the Grantsville City Public Water Standpipe located by the Public Works Building.

5. For Commercial and Condominium Developments - The developer shall purchase and install meter boxes and setters according to City Standards. Water meters will be supplied by Grantsville City Public Works Department (at Developer's expense) and installed by Developer.

6. All water facilities shall be filled, disinfected, pressure tested, flushed, filled and a series of Bac-T testing performed by the City shall be obtained prior to commissioning the new water line to the Grantsville City Culinary Water Distribution System.

7. Grantsville City Utilities Department must approve water shut down which may require evening and weekend shut down as deemed necessary, requiring the contractor to be billed for overtime. 48 hour notice is required.

8. Water stub-out installations will not be construed as a commitment for water service.

9. Conditional Approval of Valved Outlet (6" and Larger): In the event the water plans show one or more valved outlets extending out of paved areas, installations of these outlets is acceptable, however, if the outlets are incorrectly located or not used for any reason when the property is developed, the developer shall abandon the outlets at the connection to the active main in accordance with the city standards and at the developer's expense.

10. All lines to be pressure tested according to Grantsville City and AWWA standards and chlorinated prior to use and final acceptance.

11. All fittings to be coated with poly fm grease and wrapped with 8-mil thick polyethylene.

12. No other utility lines may be placed in the same trench with water line unless approved by the City Engineer.

13. Any conflict with existing utilities shall be immediately called to the attention of the City Engineer or designee.

14. All water vaults will be constructed per Grantsville City standard drawings and specifications. No vaults are allowed in traffic areas without prior approval of the City Engineer.

15. Landscaping and irrigation adjacent to vaults shall drain away from vaults.

16. Once the waterline has been tested, approved and city water is flowing through the pipe, only City personnel are authorized to shut down and charge the waterline.

17. Megalug following ring or an approved equivalent shall be used on all fittings.

18. APWA plan 562, stainless steel tie-down restraints with turnbuckles or 5/8" epoxy green rebar is acceptable. Megalug followers required on all fittings and all dimensions of thrust blocking still apply.

19. Water mains will be hot tapped as called out on the approved plans. Under special circumstances, when a contractor submits a request for a shutdown contrary to the approved plans and the request is approved at the discretion of the City Engineer or designee, the contractor must provide 48-hour notice to neighbors and those affected. If businesses are impacted by the shutdown it will be done after hours and all overtime fees for City personnel, equipment and vehicles must be paid in advance.

20. Contractors are required to write the lot number with a black permanent marker on the inside of the water meter barrels as they are installed.

GRANTSVILLE - INC. 1867 -

PROJECT:

APPROVAL DATE: 1/09/2026

C-1.2

GRANTSVILLE CITY STANDARD NOTES

APPROVED BY CITY ENGINEER: Barry Bunderson, P.E.

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PROFESSIONAL ENGINEER 10924116-2202 COREY CHILD STATE OF UTAH
2026-04-28

GRANTSVILLE CITY GENERAL NOTES

PROJECT NUMBER	PRINT DATE
7788D	2026-02-03
PROJECT MANAGER	DESIGNED BY
C. CHILD	C. CHILD

C-003

Chain of Communication

- First Contact: Cody Christensen, Public Works Inspector (CPII)
- Second Contact: Markus Seat, Deputy Public Works Director; when Cody is not available.
- CC: Christy Montierth, Public Works Director, Markus Seat, Deputy Public Works Director

Please communicate through e-mail to maintain a written record.

Construction Staking

- Surveying & Staking: _____
- Staking must be complete as provided in plans to ensure alignment of utilities.

Geotechnical

- Compaction Geo Technician: _____
- Does the Contractor have a copy of the Geotechnical Report and is he familiar with the requirements?
- Provide the City Inspector a copy of the Geotechnical Report.
- A Geo-tech will be required should the City need additional information on excavations or backfills.

Construction Submittals

- The Contractor shall provide construction submittals for material to the City for approval prior to purchase of materials and installation. Submit to City Inspector Cody Christensen, cc: Christy Montierth, and Markus Seat.
- Refer to Grantsville City's General Notes for additional construction submittal requirements.

Emergency Services

- Clear and install a silt fence 5 feet out around live fire hydrants and electrical transformers. This clear space must be maintained for emergency services during construction.
- Install required temporary signage at the beginning of work on the site.
- Park only on one side of access roads so emergency access is clear.
- Coordinate with Fire Chief for his inspections.

Sewer

- Pipe Material: PVC ASTM D-3034 SDR-35
- Follow OSHA requirements for trenching (4 foot vertical with 1:1 sloping or stepping or use trench boxes).
- Sewer laterals per City standard (APWA 431).

- Utah State requirement of 10-foot horizontal separation between sewer and water laterals.
- 18 inches minimum vertical separation between water and sewer.
- Crushed Rock ¾ inch in pipe zone (pea gravel is not allowed by the City).
- Sewer laterals - gravel bedding to be extended to dwelling.
- **NO** native soils may be used above the pipe zone, A-1-a 3-inch minus soils per Grantsville City's A-1-a specification are to be used for trench backfill unless a Geotechnical Engineering Company approved by the City Public Works Director or the City Engineer, verifies the suitability of an alternative material. (See City General Notes)
- Offset tees for sewer laterals; gasket type.
- Compaction requirements – 95 percent in ROW, 90 percent out of ROW (ASTM D-1557, Modified Proctor).
- Underground Installation of Gravity-Flow Applications as per ASTM D-2321.
- All precast manholes to be provided with rubber boots and stainless-steel bands at pipe penetrations.
- Interior pipe penetrations in all sewer manholes shall be grouted.
- Tracer wire extending from main to lateral stub on all laterals and extended to surface at stub marker. Include an extra 30 feet to extend along the service to the dwelling.
- Stamp (**When Wet**) or pin (**Do Not Grind**) gutter both at the lip and top of curb an "S" at all service laterals located at exact crossing of the curb (two places for each service).
- Extend utility lateral stub markers beyond the 15-foot PU&DE (15 feet behind back of walk).
- End of sewer laterals shall be plugged.

Testing:

- Air Test mandatory – certification required.
- Manhole Vacuum Test mandatory – certification required.
- Video inspection after flushing mandatory – the City does not need to observe the video inspection. Video record to be provided for City review.
- Provide the City 48 hours' notice prior to testing.

Culinary Water

- Pipe Material: PVC C900 DR18
- Use bedding sand for backfill in the pipe zone (sand bedding must be preapproved). Refer to Grantsville City bedding sand (cyclone sand) material specification. The City can provide an example.
- Water laterals - sand bedding shall be extended to the dwelling.
- **NO** native soils may be used above the pipe zone, A-1-a 3-inch minus soils per Grantsville City's A-1-a specification are to be used for trench backfill unless a Geotechnical Engineering Company approved by the City Public Works Director or the City Engineer, verifies the suitability of an alternative material. (See City General Notes)
- Valves shall be clustered in intersections.
- 10-inch valves or smaller are to be gate valves, 12 inches or larger are to be butterfly valves.

- Valves are to be located at the dead-end main of phase lines to allow for flushing, isolation, and continued service to existing connections when future phases are constructed. Blow offs are to be located in the green space.
- Meter and services shall be ¾ inch polyethylene SIDR-7 IPS. Install service laterals and meters within 5 feet of lot lines (as close to lot line as practicable), one on each side of common lot line (alternate with secondary water).
- Use 150# corp stops.
- Hole saw shall be used for dry PVC and Ductile Iron pressure pipe water main tapping for water services.
- Direct, saddle, and sleeve PVC pressure pipe water main wet tapping shall comply with the PVC Pipe Association, PVC Pressure Pipe Tapping Guide and Ductile Iron Pipe (DIP) water main wet tapping shall comply with the Ductile Iron Pipe Research Association (DIPRA), Installation Guide for Ductile Iron Pipe. Applicable ANSI and AWWA standards such as the latest editions of ANSI/AWWA C600, Installation of Ductile-Iron Mains and Their Appurtenances and ANSI/AWWA C900, Polyvinyl Chlorine (PVC) Pressure Pipe and Fabricated Fittings, 4 In. Through 60 In. (100 mm Through 1,500 mm) shall also apply.
- 10-foot horizontal separation of water and sewer lateral per state requirements.
- 18-inch minimum vertical separation between water and sewer and storm drain.
- 10-foot horizontal separation of water and stormwater.
- Meter barrels shall be 21 inch diameter white corrugated polyethylene.
- Developers cannot swing meter boxes to accommodate the driveway. Plan Accordingly.
- Meter to be installed 18 inches to 22 inches below the lid.
- Place sand around the water service setter bases and above to stabilize setter and provide insulation. **Gravel is not allowed.**
- Tapping saddles shall be brass with double stainless steel or brass straps.
- Use dual check and heavy-duty angle valves for all service setters.
- Install tracer wire (on the pipe) and locating tape above the water main.
- Install tracer wire from the main connection through the meter pit to stub marker with 30 feet excess to extend to the dwelling.
- Stamp (**When Wet**) or pin (**Do Not Grind**) gutter both at the lip and top of curb with a "W" at all service laterals located at exact crossing of the curb (two places for each service).
- Thrust blocks need to be inspected by the City prior to backfill. Size based on water pressure and pipe size.
- Fire hydrants shall be installed 18 inches minimum back of curb in green space. Break away must be 4 inches above curb or manufacturer's specifications.
- Paint curb red 10 feet either direction of the fire hydrants (20 feet total).
- 5 foot hydrant markers (whips) shall be installed on all hydrants.

Testing:

- Hydrostatic Pressure Test:
  - Water main without tapping saddles - 200 psi for a minimum of 2 hours.
  - Water main with tapping saddles, corporations, and service laterals - 150 psi for a minimum of 2 hours.

- The water distribution shall be tested in entirety from main line to setter connections.
- Inspector (Cody Christensen or assigned City Inspector) must be present for the entire duration of the test.

Disinfection:

- Hypochlorite powder shall be used.
- Chlorine residuals will be tested by the City before flushing.
- One series of Bac-T testing will be performed by the City to accept water lines.
- Developer shall pay for retests if necessary.
- The City will grab all samples initial or retests.
  - Per AWWA C651, Bac-T testing shall be completed for every 1,200 feet of new water main, at the end of the line, and at each branch. Two consecutive sample sets shall be collected at the aforementioned locations at least 24 hours apart.

Storm Water

Pipe Material:

- Reinforced Concrete (RCP) or High Performance storm polypropylene pipe (HP storm).
- Installation and compaction to follow manufacturer's recommendations.
- All catch basin boxes include a sump. For boxes with snouts the sump depth is based upon the snout model manufacturer's recommendation. For all other catch basins the depth is 12 inches below the flow line of the pipes.
- All storm drains must be video inspected.

Franchise Utilities

- Gas: Dominion Energy
- Power: Rocky Mountain Power
- Cable: Comcast
- Phone: Century Link
- Stubs shall be installed for franchised utilities. New streets and concrete will not be cut. If stubs are missed, only boring will be allowed.

Surface Improvements

Pavement:

- Asphalt paving is allowed when temperatures are 50 degrees Fahrenheit ambient and rising.
- City Standard pavement section is 3 inches asphalt on 6 inches Untreated Base Course (UBC) on 8 inches granular borrow or per approved drawings whichever is greater.
- 58/28 PG mix at maximum, 15 percent RAP ½ inch granulated mix required for paving.
- Untreated base course to meet UDOT's Standard Specifications for Road and Bridge

Construction, Section 02721 latest edition.

- Granular borrow to be A-a-a 3-inch minus soils per Grantsville City's A-1-a specification unless a Geotechnical Engineering Company approved by the City Public Works Director or City Engineer, verifies the suitability of an alternative material. (See City General Notes)
- Road base and cross-section per approved drawings.
- Provide proper signage per Utah MUTCD.
- Provide stops bars at stop signs (retroreflective paint per MUTCD standard).
- Use APWA Detail 255 for pavement T-patch.

Concrete:

- 4,500 psi concrete for all surface improvements.
- Sidewalk section is 6 inches PCC on 6 inches road base.
- ADA Rib Composite Tile (without screws) truncated dome inserts shall be yellow in pedestrian ramps.
- Tile to touch curb line (2-inch max setback) and 5-foot width.
- Air test every 50 yards (5 percent – 7 percent). If out of spec, air test every truck load.
- 3 cylinders every 50 yards.

Earthwork:

- Provide compaction and sieve analysis on all initial proctors and new material.
- Compaction tests every 100 feet of pipe trench. Vary depths to provide results throughout the strata.
- Road structure shall be tested every 200 feet – along both shoulders and centerline (95 percent compaction).
- Proof roll trenches, subgrade, and base to be inspected by City Inspector.
- Minimum of four compaction tests around each manhole and cleanout.
- Compact all fill in 8-inch lifts.

Testing and QA/QC

- 48-hour notice is required prior to any testing. Make sure the test is scheduled.
- Inspector(s) representing the City must be present for all testing including those performed by an independent agency.
- Public Works hours are 7:00 am to 3:30 pm Monday through Friday. If deemed necessary, the City will work with Contractor when working outside these hours. Give 48-hour notice.

Construction Water

- Contractor shall obtain water for construction from a City approved fire hydrant using a hydrant meter rented from the City.
- $1600 refundable deposit, $35 account set up fee, $75 a month rental charge, $6 per 1000 gallons for all water used, $50 buried meter fee if usage is not reported monthly, $1000 theft of service and $50 tampering fee if meter is not used.
- Do not damage the meters or take anything off the meters.

- Contact Emalee Tripp at City Hall, in the Utilities Department 435-884-3411.

Erosion Control / Storm Water System Protection

- Minimize potential for off-site run-off.
- Minimize disturbed areas.
- Keep working area wetted to minimize dust.
- Provide silt fence to prevent sediment transport downstream.
- Contain all sediment on site. Clean roads of sediment tracking.
- Maintain BMPs as per SWPPP.
- SWPPP to be on-site at all times.
- The City will check with the contractor after an event.
- Inspect after rainfall and other events (weather, and construction around BMPs) that may affect BMPs.
- Make sure to follow the SWPPP as shown on the plans.
- Put the SWPPP sign on site and visible so the State can see it on a drive by.
- Show a copy of the Dust Mitigation Plan that was submitted to the Utah Department of Environmental Quality (DEQ).

Construction Debris Disposal

- Maintain a work site that is clean and properly dispose of debris and trash.
- **No garbage pits allowed.**
- Establish or rent a suitable washout area and remove all washout materials from the site at the project's conclusion.

Site Safety

- Conform to OSHA Standards.
- Close trenches at night.
- Secure open trenches and plug lines.

Security

- Secure construction equipment when not in use. Security is the responsibility of the developer.

Sanitation

- Clean and properly maintained portable restrooms on site at all times.

Hazardous Material Storage on Site

- If there are hazardous materials on site, make sure the City has approved it and that it has

secondary containment. The Fire Chief needs to know what is on site, how it is secured, and where it is located.

Site Access

- As shown on the SWPPP do not deviate from it.

Construction Observation

- City personnel will inspect regularly as needed and at the City's discretion.

Construction Drawings

- Provide City with one 24-inch x 36 inch and two 11-inch x 17 inch For Construction prints. (Don't print any plans until all changes have been made and you have received a copy of the signed plans from the city.)
- Keep an accurate set of As-Builts.
- Provide a copy of As-Builts at completion of project prior to occupancy. (Printed 24-inch x 36 inch)
- Changes in as-builts shall be previously approved and in engineering format (not drawn in).
- Provide digital set of As-Builts (PDF and GIS files; GIS standards listed on website) for the City prior to occupancy.
- If there are questions about the plans and conditions on the ground request the design engineer's interpretation first, and bring that interpretation to the City when questions come up. The onsite inspectors cannot make approvals to changes; or document changes.

3/12/2025

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CEDAR CITY
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FOR:
USA RV 7 STORAGE
1361 OLD LINCOLN HIGHWAY
GRANTSVILLE CITY, UTAH 84029

CONTACT:
TRENTON HOMER
PHONE: 435-255-3337

USA RV & PARKING STORAGE
CIVIL DESIGN
1361 OLD LINCOLN HIGHWAY
GRANTSVILLE CITY, UTAH

PROFESSIONAL ENGINEER
10924116-2202
COREY J. CHILD
STATE OF UTAH
02-04-26

PRE CONSTRUCTION GENERAL NOTES

PROJECT NUMBER	PRINT DATE
7788D	2026-02-03
PROJECT MANAGER	DESIGNED BY
C. CHILD	C. CHILD

C-004

811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

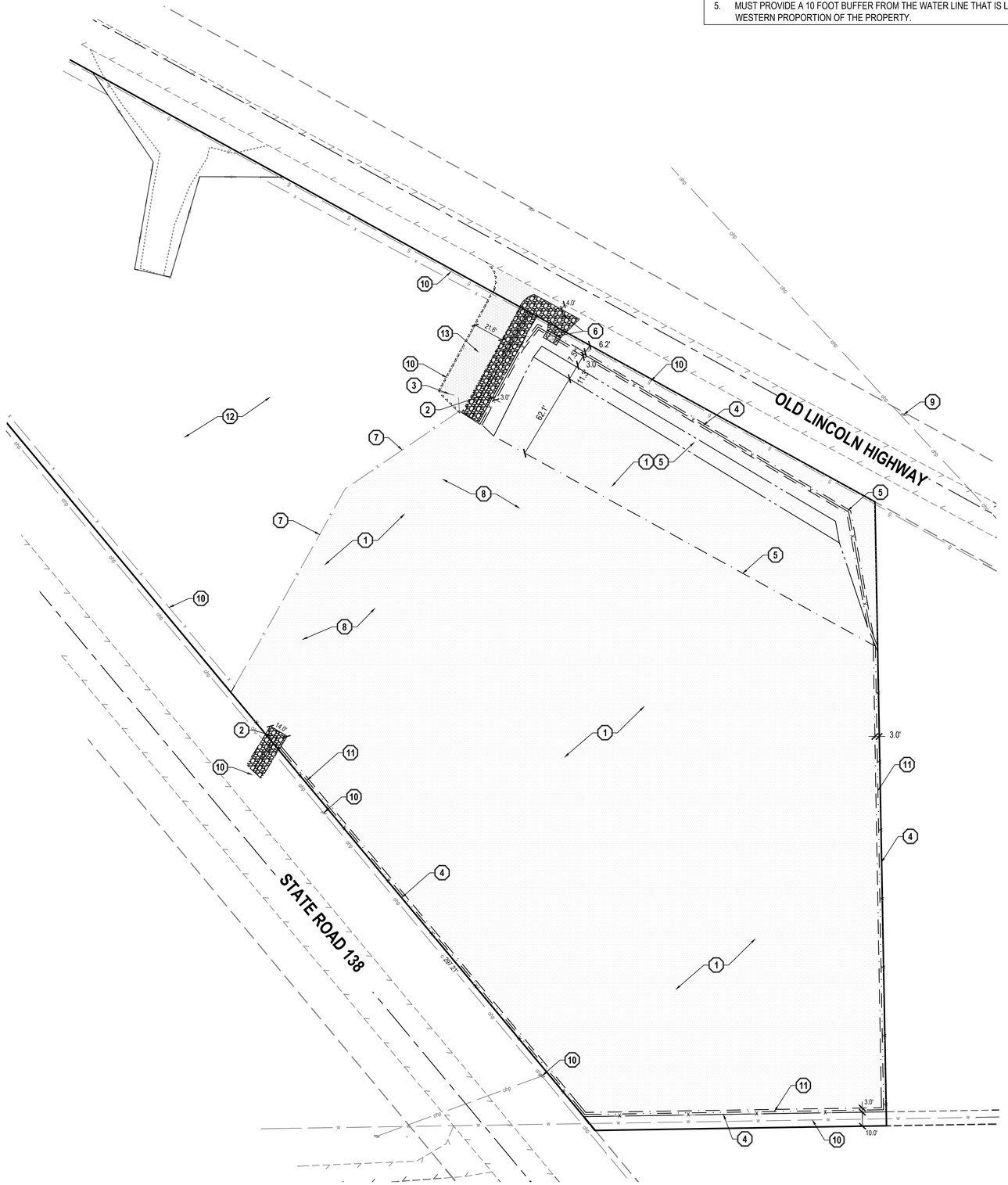
NORTHWEST CORNER OF SECTION 22, TOWNSHIP 2 SOUTH, RANGE 6 WEST SALT LAKE BASE AND MERIDIAN

ELEV = 4362.55'

CONDITIONS & CONCLUSIONS

CONDITIONS OF APPROVAL:

1. EXTEND THE 6 FOOT PRIVACY FENCE ALONG AROUND THE PERIMETER OF THE ENTIRE PROPERTY.
2. ALLOW FOR TWO ACCESS POINTS.
3. HOURS OF PICKUP AND DROP OFF THE STORAGE CONTAINERS ARE FROM 8:00 AM TO 6:00 PM.
4. MUST HAVE A CURRENT BUSINESS LICENSE AT ALL TIMES.
5. MUST PROVIDE A 10 FOOT BUFFER FROM THE WATER LINE THAT IS LOCATED ON THE SOUTH OF THE WESTERN PROPORTION OF THE PROPERTY.



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.

SCOPE OF WORK:

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

1. GRAVEL SECTION PER DETAIL 11/C-400.
2. 14' WIDE DRAINAGE CHANNEL PER DETAIL 9 &10/C-400.
3. EXISTING LOT ENTRANCE.
4. 6' PRIVACY FENCE TO MATCH EXISTING. SEE OWNER FOR ADDITIONAL INFORMATION.
5. DRAINAGE BASIN AREA, SEE GRADING PLAN FOR ADDITIONAL INFORMATION.
6. CONCRETE SPILLWAY WITH RIPPAP PER DETAIL 7/C-400.
7. REMOVE AND PROPERLY DISPOSE OF EXISTING FENCE.
8. REMOVE AND PROPERLY DISPOSE OF EXISTING STRUCTURES, CONCRETE SLABS, ETC. INCLUDING ALL DISCARDED DEBRIS IN THIS AREA WHETHER OR NOT IDENTIFIED ON PLANS. CONTRACTOR TO FILL IN ALL HOLES CREATED DURING DEMOLITION WITH STRUCTURAL FILL TO PROPER SUBGRADE ELEVATION.
9. PROTECT, PRESERVE EXISTING POWER POLES. AND RELOCATE EXISTING GUY WIRES. EXISTING POLE TO REMAIN IN PLACE. COORDINATE WITH LOCAL POWER COMPANY.
10. PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, FENCES, 3" WATER LINE, GAS LINE, SIGNS, ETC. (TYPICAL UNLESS OTHERWISE NOTED).
11. 3' WIDE DRAINAGE CHANNEL ALONG PROPERTY LINE PER DETAIL 8/C-400.
12. EXISTING GRAVEL PARKING LOT.
13. STABILIZED ROCK AND GRAVEL TRUCK ENTRANCE PER DETAIL 7/C-400.

NORTH

HORIZONTAL GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
HORZ: 1 inch = 40 ft.

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USA RV & PARKING STORAGE CIVIL DESIGN

1361 OLD LINCOLN HIGHWAY
GRANTSVILLE CITY, UTAH

PROFESSIONAL ENGINEER
10924116-2202
2026-04-24
COREY L. CHILD
STATE OF UTAH

SITE PLAN

PROJECT NUMBER 7786D	PRINT DATE 2026-02-03
PROJECT MANAGER C. CHILD	DESIGNED BY C. CHILD

C-100

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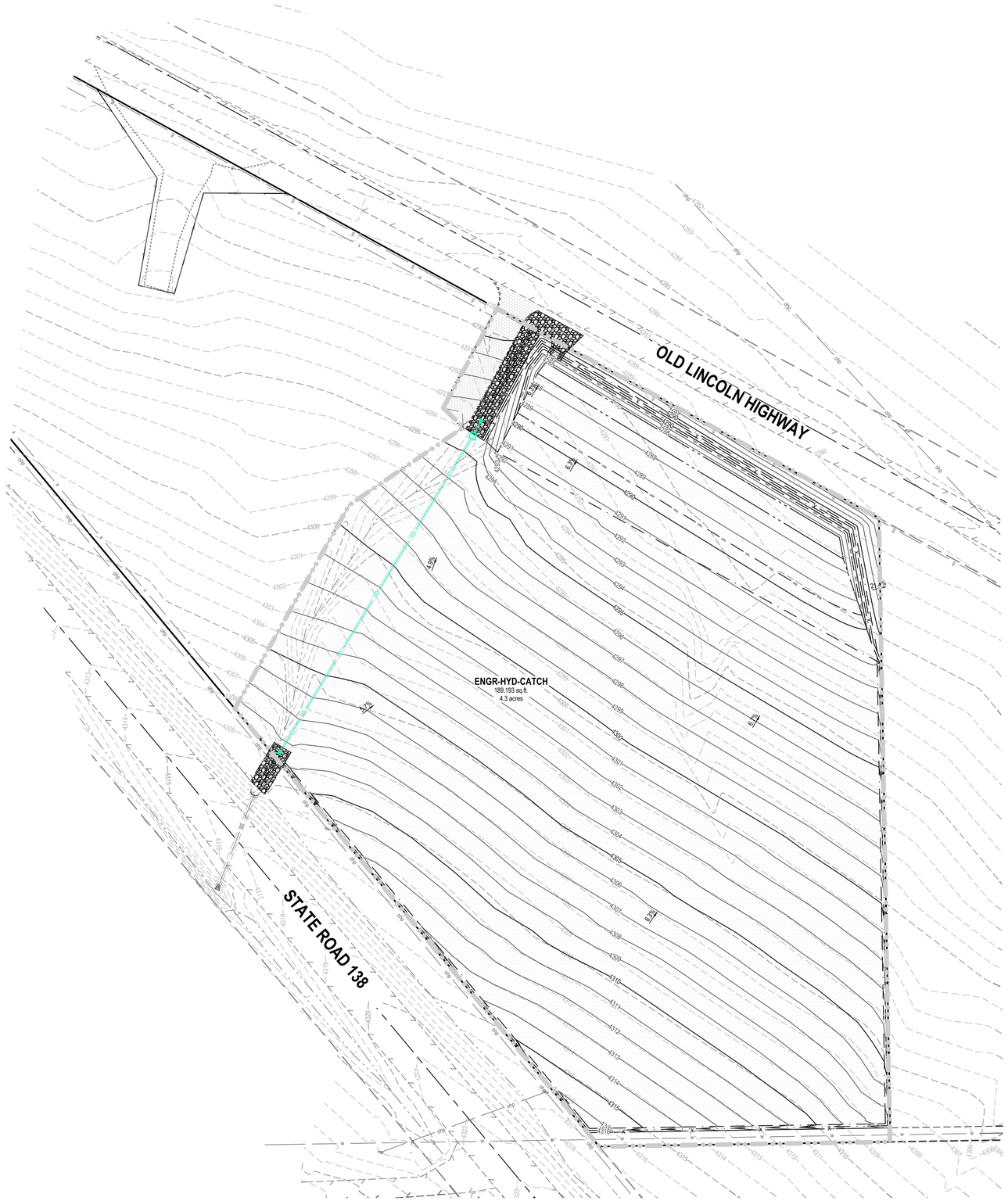
BENCHMARK

NORTHWEST CORNER OF SECTION 22, TOWNSHIP 2 SOUTH, RANGE 6 WEST SALT LAKE BASE AND MERIDIAN

ELEV = 4362.55'



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. ALL WORK SHALL COMPLY WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER POSSIBLY INCLUDING, BUT NOT LIMITED TO, REMOVAL OF UNCONSOLIDATED FILL, ORGANICS, AND DEBRIS, PLACEMENT OF SUBSURFACE DRAIN LINES AND GEOTEXTILE, AND OVEREXCAVATION OF UNSUITABLE BEARING MATERIALS AND PLACEMENT OF ACCEPTABLE FILL MATERIAL.
4. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE EXISTING SOIL CONDITIONS.
5. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
6. ALL STORM DRAIN INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
7. ENSURE MINIMUM COVER OVER ALL STORM DRAIN PIPES PER MANUFACTURER'S RECOMMENDATIONS. NOTIFY ENGINEER IF MINIMUM COVER CANNOT BE ATTAINED.
8. ALL FACILITIES WITH DOWNSPOUTS/ROOF DRAINS SHALL BE CONNECTED TO THE STORM DRAIN SYSTEM. SEE PLUMBING PLANS FOR DOWNSPOUT/ROOF DRAIN LOCATIONS AND SIZES. ALL ROOF DRAINS TO HAVE MINIMUM 1% SLOPE.
9. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
10. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, OR STORM DRAIN STRUCTURES OR PIPES.
11. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

NORTH

HORIZONTAL GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
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PROFESSIONAL ENGINEER
10924116-2202
COREY L. CHILD
STATE OF UTAH
2026-04-2

OVERALL GRADING PLAN

PROJECT NUMBER	PRINT DATE
7788D	2026-02-03
PROJECT MANAGER	DESIGNED BY
C. CHILD	C. CHILD

C-200

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NORTH

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

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VERT: 1 inch = 4 ft.

SCOPE OF WORK:

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1. 14' WIDE DRAINAGE CHANNEL PER DETAIL 9/C-400.
2. DRAINAGE BURM. PER DETAIL 6/C-400.
3. RIPRAP - D50 = 12", 2' DEEP PER CALCULATIONS. PLACE RIPRAP WITH THE FOLLOWING MINIMUM DIMENSIONS: WIDTH OF THE CHANNEL, 10' MIN IN LENGTH @ INLETS AND DISCHARGES, SEE GRADING PLAN.
4. STORM DRAIN CLEANOUT BOX WITH GRATE AND FRAME (INLET) PER APWA STANDARD PLAN 331.1 TYPE A AND 310, (DETAILS 11 &12 ON SHEET C-400) WITH GRANTSVILLE CITY MODIFICATIONS. WATERTIGHT STRUCTURE CONNECTION PER MANUFACTURER'S RECOMMENDATION.
5. SLOPE TO EXISTING GROUND WITH MAXIMUM 3:1 SLOPE.
6. 3' WIDE DRAINAGE CHANNEL PER DETAIL 8/C-400.
7. RETENTION BASIN
   TOP OF POND = 4290.50
   SPILLWAY ELEVATION = 4289.50
   WATER ELEVATION = 4289.50
   BOTTOM OF POND = 4287.50
   WIDTH OF BERM TOP = 3 ft
   VOLUME REQUIRED = 14,564 C.F.
   VOLUME PROVIDED = 15,670 C.F.
8. CONCRETE SPILLWAY WITH RIPPAP PER DETAIL 7/C-400.
9. RIPRAP - D50 = 12", 2' DEEP PER CALLOUTS. PLACE RIPRAP WITH THE FOLLOWING MINIMUM DIMENSIONS: WIDTH OF THE CHANNEL, 20' MIN IN LENGTH TO EDGE OF ROW.
10. RESEED WITH NATIVE GRASS MIXTURE WITHIN 14 CALENDAR DAYS OF ACHIEVEMENT OF FINISH GRADE TO STABILIZE SOILS.

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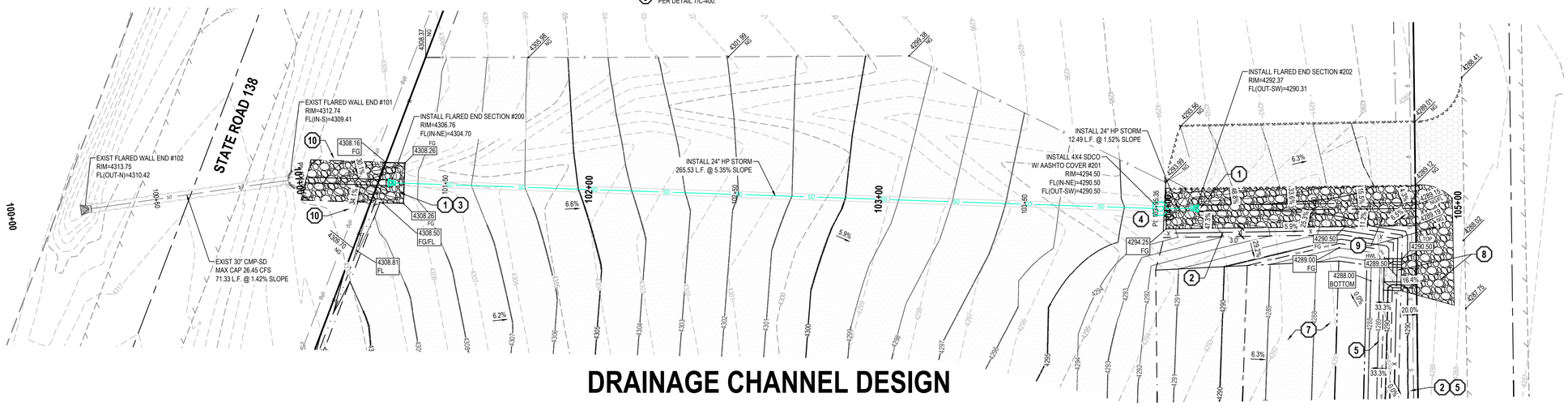
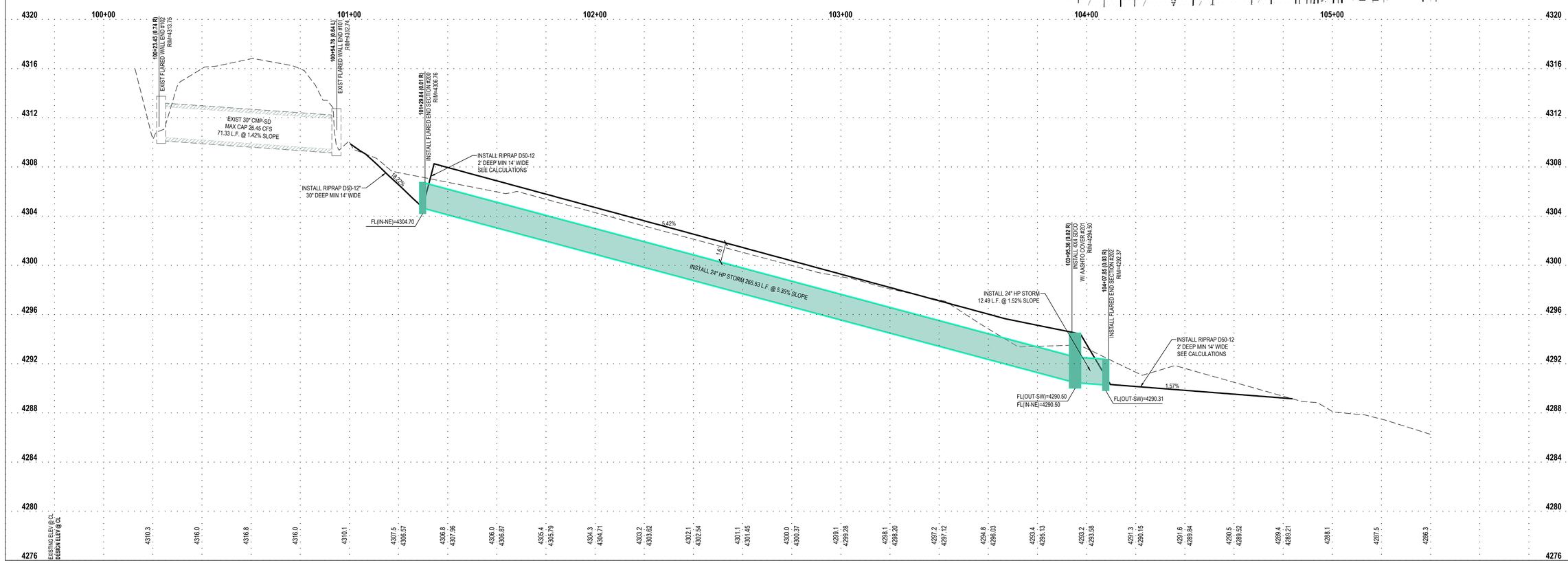
6. ALL STORM DRAIN INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
7. ENSURE MINIMUM COVER OVER ALL STORM DRAIN PIPES PER MANUFACTURER'S RECOMMENDATIONS. NOTIFY ENGINEER IF MINIMUM COVER CANNOT BE ATTAINED.
8. ALL FACILITIES WITH DOWNSPOUTS/ROOF DRAINS SHALL BE CONNECTED TO THE STORM DRAIN SYSTEM. SEE PLUMBING PLANS FOR DOWNSPOUT/ROOF DRAIN LOCATIONS AND SIZES. ALL ROOF DRAINS TO HAVE MINIMUM 1% SLOPE.
9. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
10. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, OR STORM DRAIN STRUCTURES OR PIPES.
11. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.



DRAINAGE CHANNEL DESIGN



ENSIGN
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RICHFIELD
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WWW.ENSIGNENG.COM

FOR:
USA RV 7 STORAGE
1361 OLD LINCOLN HIGHWAY
GRANTSVILLE CITY, UTAH 84029

CONTACT:
TRENTON HOMER
PHONE: 435-255-3337

USA RV & PARKING STORAGE
CIVIL DESIGN

1361 OLD LINCOLN HIGHWAY
GRANTSVILLE CITY, UTAH

PROFESSIONAL ENGINEER
10924116-2202
COREY L. CHILD
STATE OF UTAH
2026-04-24

GRADING AND DRAINAGE PLAN

PROJECT NUMBER	PRINT DATE
7786D	2026-02-03
PROJECT MANAGER	DESIGNED BY
C. CHILD	C. CHILD

C-201

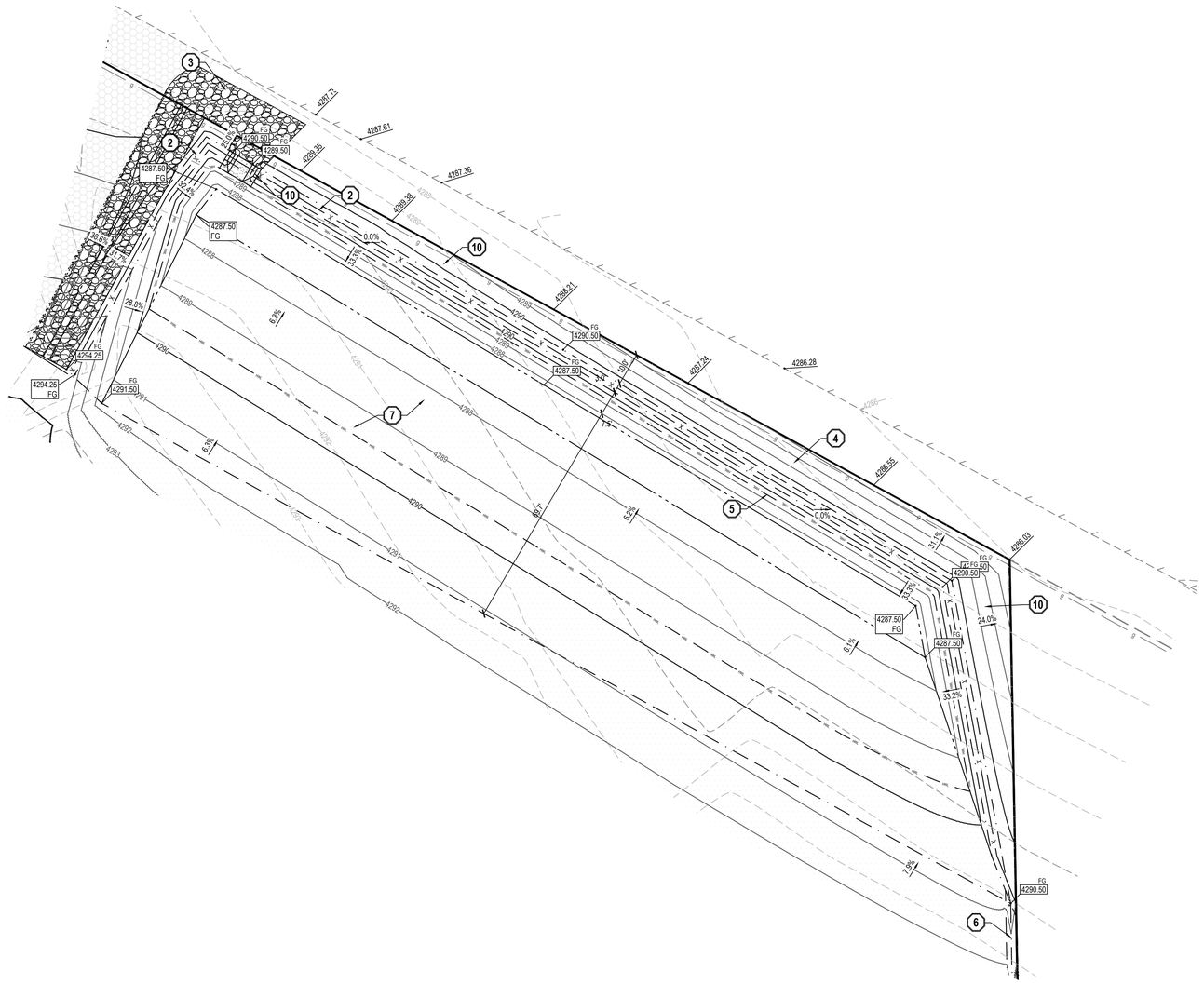
811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

NORTHWEST CORNER OF SECTION 22, TOWNSHIP 2 SOUTH, RANGE 6 WEST SALT LAKE BASE AND MERIDIAN

ELEV = 4362.55'



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. ALL WORK SHALL COMPLY WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER POSSIBLY INCLUDING, BUT NOT LIMITED TO, REMOVAL OF UNCONSOLIDATED FILL, ORGANICS, AND DEBRIS, PLACEMENT OF SUBSURFACE DRAIN LINES AND GEOTEXTILE, AND OVEREXCAVATION OF UNSUITABLE BEARING MATERIALS AND PLACEMENT OF ACCEPTABLE FILL MATERIAL.
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SCOPE OF WORK:

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

1. 14' WIDE DRAINAGE CHANNEL PER DETAIL 9/C-400.
2. DRAINAGE BURM. PER DETAIL 6/C-400.
3. RIPRAP - D50 = 12", 2' DEEP PER CALCULATIONS. PLACE RIPRAP WITH THE FOLLOWING MINIMUM DIMENSIONS: WIDTH OF THE CHANNEL, 10' MIN IN LENGTH @ INLETS AND DISCHARGES, SEE GRADING PLAN.
4. SLOPE TO EXISTING GROUND WITH MAXIMUM 3:1 SLOPE.
5. SLOPE TO EXISTING GROUND WITH MAXIMUM 3:1 SLOPE.
6. 3' WIDE DRAINAGE CHANNEL PER DETAIL 8/C-400.
7. RETENTION BASIN
TOP OF POND = 4290.50
SPILLWAY ELEVATION = 4289.50
HIGH WATER ELEVATION = 4289.50
BOTTOM OF POND = 4287.50
WIDTH OF BERM TOP = 3 ft
VOLUME REQUIRED = 14,564 C.F.
VOLUME PROVIDED = 15,670 C.F.
8. CONCRETE SPILLWAY WITH RIPPAP PER DETAIL 7/C-400.
9. RIPRAP - D50 = 12", 12' DEEP PER CALLOUTS. PLACE RIPRAP WITH THE FOLLOWING MINIMUM DIMENSIONS: WIDTH OF THE CHANNEL, 20' MIN IN LENGTH TO EDGE OF ROW.
10. RESEED DISTURBED LAND WITH NATIVE GRASS MIXTURE WITHIN 14 CALENDAR DAYS OF ACHIEVEMENT OF FINISH GRADE TO STABILIZE SOILS WITHIN 14 CALENDAR DAYS OF THE CESSATION OF CONSTRUCTION ACTIVITIES AT THAT LOCATION.

NORTH

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.

ENSIGN
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USA RV & PARKING STORAGE
CIVIL DESIGN
1361 OLD LINCOLN HIGHWAY
GRANTSVILLE CITY, UTAH

PROFESSIONAL ENGINEER
10924116-2202
2026-04-2
COREY J. CHILD
STATE OF UTAH

GRADING PLAN

PROJECT NUMBER	PRINT DATE
7788D	2026-02-03
PROJECT MANAGER	DESIGNED BY
C. CHILD	C. CHILD

C-202

ENSIGN
THE STANDARD IN ENGINEERING

Project: USA RV & PARKING STORAGE
By: Design Engineer, Corey Child
Date: 2026-03-26

Project No.: 7788D
Checked By: J. Clegg

PRE DEVELOPMENT CALCULATION

AREA CALCULATION

Hardscape Area:	0.00	acres	Runoff Coeff. C :	0.60
Landscape/Native Area:	4.30	acres	Runoff Coeff. C :	0.20
Offsite Area:	0.00	acres	Runoff Coeff. C :	0.75
Total Area:	**4.30**	acres	Weighted C :	**0.20**

RUNOFF CALCULATION

100 Year Design Storm

Infiltration rate	0	in/hr
Total Infiltration Area	187,308	ft^2
Total Infiltration / Allowable Runoff	0.000	cfs

Time (min)	CA (Acres)	Precipitation (in/hr)	Time (sec)	Cumulative Runoff (ft^3)	Allowed Runoff (ft^3)	Storage (ft^3)
5	0.86	6.08	300	1,569	0	1,569
10	0.86	4.63	600	2,389	0	2,389
15	0.86	3.83	900	2,964	0	2,964
30	0.86	2.58	1,800	3,994	0	3,994
60	0.86	1.60	3,600	4,954	0	4,954
120	0.86	0.84	7,200	5,226	0	5,226
180	0.86	0.57	10,800	5,266	0	5,266
360	0.86	0.30	21,600	5,536	0	5,536
720	0.86	0.17	43,200	6,279	0	6,279
1440	0.86	0.10	86,400	7,282	0	7,282
				Pre RUNOFF:		**7,282**

ENSIGN
THE STANDARD IN ENGINEERING

Project: USA RV & PARKING STORAGE
By: Design Engineer, Corey Child
Date: 2026-04-14

Project No.: 7788D
Checked By: J. Clegg

POST DEVELOPMENT RETENTION CALCULATION

AREA CALCULATION

Gravel Parking lot Hardscape Area:	4.3	acres	Runoff Coeff. C :	0.60
Landscape/Native Area:	0.00	acres	Runoff Coeff. C :	0.20
Offsite Area:	0.00	acres	Runoff Coeff. C :	0.75
Total Area:	**4.3**	acres	Weighted C :	**0.60**

RUNOFF CALCULATION

100 Year Design Storm

Infiltration rate	0	in/hr
Total Infiltration Area	88864	ft^2
Total Infiltration / Allowable Runoff	0.000	cfs

Time (min)	CA (Acres)	Precipitation (in/hr)	Time (sec)	Cumulative Runoff (ft^3)	Allowed Runoff (ft^3)	Storage (ft^3)
5	2.58	6.08	300	4,706	0	4,706
10	2.58	4.63	600	7,167	0	7,167
15	2.58	3.83	900	8,893	0	8,893
30	2.58	2.58	1,800	11,982	0	11,982
60	2.58	1.60	3,600	14,861	0	14,861
120	2.58	0.84	7,200	15,678	0	15,678
180	2.58	0.57	10,800	15,799	0	15,799
360	2.58	0.30	21,600	16,607	0	16,607
720	2.58	0.17	43,200	18,836	0	18,836
1440	2.58	0.10	86,400	21,845	0	21,845
				Post Runoff:		**21,845**
				Pre Runoff:		**7,282**
				Storage Required:		**14,564**
				Storage Provided:		**15,670**

ENSIGN
THE STANDARD IN ENGINEERING

Project: USA RV & PARKING STORAGE
By: Design Engineer, Corey Child
Date: 2026-03-04

Project No.: 7788D
Checked By: J. Clegg

MANNING'S PIPE SIZING BY DEPTH OF FLOW

CMP

Input

D =	30.00	in	Pipe diameter.
d =	30.00	in	Depth of flow.
n =	0.024		Assumed Manning's roughness coefficient.
S =	0.0141	ft/ft	Pipe slope.

Output

q =	6.283	rad	
A =	4.91	ft^2	Cross sectional area for given pipe size.
P =	7.85	ft	Perimeter for given pipe size.
A_w =	4.91	ft^2	Wetted area of pipe.
P_w =	7.85	ft	Wetted perimeter of pipe.
R_h =	0.63	ft	Hydraulic radius of pipe.
V =	5.39	ft/s	Velocity of flow through pipe.
Q =	26.45	cfs	Flow at given depth.
	100.00%		Percent full.
Q_{full} =	**26.45**	**cfs**	**Max capacity flowing full.**

11872.9 GPM

ENSIGN
THE STANDARD IN ENGINEERING

Project: USA RV & PARKING STORAGE
By: Design Engineer, Corey Child
Date: 2026-03-26

Project No.: 7788D
Checked By: J. Clegg

MANNING'S PIPE SIZING BY DEPTH OF FLOW

HDPE

Input

D =	24.00	in	Pipe diameter.
d =	24.00	in	Depth of flow.
n =	0.012		Assumed Manning's roughness coefficient.
S =	0.0535	ft/ft	Pipe slope.

Output

q =	6.283	rad	
A =	3.14	ft^2	Cross sectional area for given pipe size.
P =	6.28	ft	Perimeter for given pipe size.
A_w =	3.14	ft^2	Wetted area of pipe.
P_w =	6.28	ft	Wetted perimeter of pipe.
R_h =	0.50	ft	Hydraulic radius of pipe.
V =	18.09	ft/s	Velocity of flow through pipe.
Q =	56.84	cfs	Flow at given depth.
	100.00%		Percent full.
Q_{full} =	**56.84**	**cfs**	**Max capacity flowing full.**

25511.0 GPM

ENSIGN
THE STANDARD IN ENGINEERING

Project: USA RV & PARKING STORAGE
By: Design Engineer, Corey Child
Date: 2026-03-26

Project No.: 7788D
Checked By: J. Clegg

MANNING'S PIPE SIZING BY DEPTH OF FLOW

HDPE

Input

D =	24.00	in	Pipe diameter.
d =	24.00	in	Depth of flow.
n =	0.012		Assumed Manning's roughness coefficient.
S =	0.0160	ft/ft	Pipe slope.

Output

q =	6.283	rad	
A =	3.14	ft^2	Cross sectional area for given pipe size.
P =	6.28	ft	Perimeter for given pipe size.
A_w =	3.14	ft^2	Wetted area of pipe.
P_w =	6.28	ft	Wetted perimeter of pipe.
R_h =	0.50	ft	Hydraulic radius of pipe.
V =	9.89	ft/s	Velocity of flow through pipe.
Q =	31.08	cfs	Flow at given depth.
	100.00%		Percent full.
Q_{full} =	**31.08**	**cfs**	**Max capacity flowing full.**

13951.2 GPM

ENSIGN
THE STANDARD IN ENGINEERING

Project: USA RV & PARKING STORAGE
By: Design Engineer, Corey Child
Date: 2026-03-04

Project No.: 7788D
Checked By: J. Clegg

RIPRAP APRON CALCULATIONS

FEDERAL HIGHWAY ADMINISTRATION
(Taken from HEC 14 Hydraulic Design of Energy Dissapators)

$$D_{50} = 0.2D\left(\frac{Q}{\sqrt{g}\cdot D^{2.5}}\right)^{4/3}\left(\frac{D}{TW}\right)$$

(Recommended for circular pipes less than 60"Ø)
(Assumes rock specific gravity is 2.65)

Input

Q	26.45	(cfs) Design Discharge
D	2.5	(ft) Culvert Diameter
TW	1	(ft) Tailwater Depth (0.4D to 1.0D), if unknown use 0.4D
g	32.2	(ft/s^2) acceleration due to gravity

Results

D_{50}	**0.459**	(ft) riprap size	→	**D50 = 6**

Apron Geometry

Length	**10.00**	ft
Width	**7.50**	ft @ culvert
Width	**14.17**	ft @ riprap end
Depth	**1.61**	ft

ENSIGN
THE STANDARD IN ENGINEERING

Project: USA RV & PARKING STORAGE
By: Design Engineer, Corey Child
Date: 2026-03-26

Project No.: 7788D
Checked By: J. Clegg

RIPRAP APRON CALCULATIONS

FEDERAL HIGHWAY ADMINISTRATION
(Taken from HEC 14 Hydraulic Design of Energy Dissapators)

$$D_{50} = 0.2D\left(\frac{Q}{\sqrt{g}\cdot D^{2.5}}\right)^{4/3}\left(\frac{D}{TW}\right)$$

(Recommended for circular pipes less than 60"Ø)
(Assumes rock specific gravity is 2.65)

Input

Q	26.45	(cfs) Design Discharge
D	2	(ft) Culvert Diameter
TW	0.8	(ft) Tailwater Depth (0.4D to 1.0D), if unknown use 0.4D
g	32.2	(ft/s^2) acceleration due to gravity

Results

D_{50}	**0.7725**	(ft) riprap size	→	**D50 = 12**

Apron Geometry

Length	**10.00**	ft
Width	**6.00**	ft @ culvert
Width	**12.67**	ft @ riprap end
Depth	**1.85**	ft

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THE STANDARD IN ENGINEERING

BASIN RUNOFF

100 Year Design Storm

Catchment Calculations (100-year storm)

Rainfall Intensity I: 2.58 in/hr
Mannings N 0.03

Catchment	Area (SF)	C	Flow (CFS)
Basin	189,193	0.60	6.723

ENSIGN
THE STANDARD IN ENGINEERING

Project: USA RV & PARKING STORAGE
By: Corey Child
Date: 2026-03-27

Project No.: 7788D
Chgecked by: J. Clegg

OUTLET CONTROL - SPILLWAY

Weir Parameters

Weir Type =	Broad Crested	V (ft/s)=	8.02	
Q (cfs) =	14.00	g (ft/s^2) =	32.2	
Coefficient(C) =	2.80	Max Q Entering Basin (cfs) =	10.46	
Effective Length =	5.0	Spillway % Full Flow Capcity		Check
Top of Basin =	4,290.50		75%	OK
FL @ Spillway =	4,289.50			
h @ Spillway (ft) =	1.00			

(Spillway coefficient is taken from: HEC-HMS Technical Manual)

ENSIGN
THE STANDARD IN ENGINEERING

Project: USA RV & PARKING STORAGE
By: Corey Child
Date: 2026-03-27

Project No.: 7788D
Checked By: J. Clegg

RIPRAP SIZING - ISBASH METHOD

Riprap Sizing

Given:

V=	8.02	ft/s
g=	32.20	ft/s^2
C=	0.86	C=0.86 High Turbulence C=1.2 Low Turbulence
S=	2.65	

$$Dia = \frac{V^2}{2\cdot g\cdot(C^2\cdot(S-1))}$$

Riprap D_{50},= **9.83** **in**

Sheet Reference	Rip Rap Selection
C-201	Class II Rip Rap

2/11/26, 9:19 AM Precipitation Frequency Data Server

NOAA Atlas 14, Volume 1, Version 5
Location name: Grantsville, Utah, USA*
Latitude: 40.6377°, Longitude: -112.5203°
Elevation: 4291 ft**
* source: ESRI Maps
** source: USGS

POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]

Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.44 (1.27-1.63)	1.84 (1.64-2.08)	2.54 (2.27-2.88)	3.18 (2.81-3.60)	4.16 (3.61-4.74)	5.04 (4.26-5.77)	6.08 (5.00-7.06)	7.27 (5.78-8.57)	9.14 (6.92-11.0)	10.8 (7.91-13.2)
10-min	1.10 (0.972-1.24)	1.40 (1.25-1.59)	1.93 (1.72-2.20)	2.42 (2.14-2.74)	3.17 (2.74-3.61)	3.84 (3.23-4.40)	4.63 (3.81-5.37)	5.54 (4.40-6.52)	6.95 (5.27-8.35)	8.25 (6.01-10.1)
15-min	0.908 (0.800-1.03)	1.16 (1.03-1.32)	1.60 (1.42-1.82)	2.00 (1.76-2.26)	2.62 (2.27-2.98)	3.18 (2.67-3.64)	3.83 (3.15-4.44)	4.58 (3.64-5.39)	5.75 (4.36-6.90)	6.82 (4.97-8.32)
30-min	0.610 (0.538-0.692)	0.780 (0.696-0.886)	1.08 (0.958-1.22)	1.35 (1.19-1.52)	1.77 (1.53-2.01)	2.14 (1.80-2.45)	2.58 (2.12-2.99)	3.08 (2.45-3.63)	3.87 (2.93-4.85)	4.59 (3.35-5.81)
60-min	0.378 (0.333-0.428)	0.482 (0.430-0.549)	0.666 (0.592-0.756)	0.834 (0.735-0.943)	1.09 (0.945-1.24)	1.32 (1.11-1.52)	1.60 (1.31-1.85)	1.91 (1.52-2.25)	2.40 (1.82-2.88)	2.84 (2.07-3.47)
2-hr	0.226 (0.206-0.252)	0.287 (0.260-0.321)	0.377 (0.344-0.421)	0.459 (0.414-0.512)	0.591 (0.521-0.659)	0.709 (0.610-0.798)	0.844 (0.707-0.961)	1.00 (0.813-1.16)	1.25 (0.984-1.49)	1.48 (1.09-1.79)
3-hr	0.172 (0.159-0.190)	0.213 (0.196-0.236)	0.274 (0.252-0.300)	0.325 (0.298-0.355)	0.408 (0.364-0.447)	0.478 (0.420-0.536)	0.566 (0.485-0.646)	0.669 (0.559-0.780)	0.834 (0.666-0.999)	0.988 (0.756-1.20)
6-hr	0.109 (0.101-0.117)	0.135 (0.126-0.145)	0.164 (0.154-0.177)	0.191 (0.178-0.206)	0.230 (0.211-0.248)	0.262 (0.237-0.284)	0.298 (0.265-0.327)	0.346 (0.301-0.395)	0.428 (0.361-0.506)	0.500 (0.411-0.608)
12-hr	0.067 (0.063-0.072)	0.083 (0.077-0.089)	0.101 (0.094-0.108)	0.115 (0.107-0.124)	0.135 (0.125-0.146)	0.151 (0.139-0.165)	0.168 (0.152-0.185)	0.187 (0.166-0.207)	0.224 (0.194-0.253)	0.254 (0.216-0.305)
24-hr	0.041 (0.038-0.044)	0.050 (0.047-0.055)	0.061 (0.056-0.066)	0.069 (0.064-0.075)	0.080 (0.074-0.087)	0.089 (0.082-0.096)	0.097 (0.089-0.105)	0.106 (0.097-0.115)	0.117 (0.106-0.128)	0.129 (0.113-0.154)
2-day	0.022 (0.020-0.024)	0.027 (0.025-0.029)	0.032 (0.030-0.035)	0.037 (0.034-0.040)	0.043 (0.040-0.046)	0.047 (0.044-0.051)	0.052 (0.048-0.057)	0.057 (0.052-0.062)	0.064 (0.058-0.069)	0.068 (0.062-0.078)
3-day	0.015 (0.014-0.017)	0.019 (0.018-0.020)	0.023 (0.021-0.025)	0.026 (0.024-0.028)	0.031 (0.028-0.033)	0.034 (0.031-0.037)	0.038 (0.035-0.041)	0.041 (0.038-0.045)	0.046 (0.042-0.050)	0.050 (0.045-0.056)
4-day	0.012 (0.011-0.013)	0.015 (0.014-0.016)	0.018 (0.017-0.020)	0.021 (0.019-0.023)	0.025 (0.023-0.027)	0.027 (0.025-0.030)	0.030 (0.028-0.033)	0.034 (0.031-0.036)	0.038 (0.034-0.041)	0.041 (0.037-0.045)
7-day	0.008 (0.007-0.008)	0.010 (0.009-0.011)	0.012 (0.011-0.013)	0.013 (0.012-0.014)	0.016 (0.015-0.017)	0.017 (0.016-0.019)	0.019 (0.018-0.021)	0.021 (0.019-0.023)	0.023 (0.021-0.025)	0.025 (0.023-0.027)
10-day	0.006 (0.006-0.006)	0.007 (0.007-0.008)	0.009 (0.008-0.010)	0.010 (0.010-0.011)	0.012 (0.011-0.013)	0.013 (0.012-0.014)	0.014 (0.013-0.015)	0.015 (0.014-0.017)	0.017 (0.016-0.018)	0.018 (0.016-0.020)
20-day	0.004 (0.003-0.004)	0.005 (0.004-0.005)	0.006 (0.005-0.006)	0.006 (0.006-0.007)	0.007 (0.007-0.008)	0.008 (0.007-0.008)	0.009 (0.008-0.009)	0.009 (0.008-0.010)	0.010 (0.009-0.011)	0.010 (0.010-0.011)
30-day	0.003 (0.003-0.003)	0.004 (0.003-0.004)	0.004 (0.004-0.005)	0.004 (0.005-0.005)	0.005 (0.005-0.006)	0.006 (0.006-0.007)	0.007 (0.006-0.007)	0.007 (0.007-0.008)	0.008 (0.007-0.009)	0.009 (0.008-0.009)
45-day	0.002 (0.002-0.002)	0.003 (0.003-0.003)	0.003 (0.003-0.004)	0.004 (0.004-0.004)	0.004 (0.004-0.005)	0.005 (0.005-0.005)	0.005 (0.005-0.006)	0.006 (0.005-0.006)	0.006 (0.006-0.006)	0.006 (0.006-0.007)
60-day	0.002 (0.002-0.002)	0.002 (0.002-0.003)	0.003 (0.003-0.003)	0.003 (0.003-0.004)	0.004 (0.004-0.004)	0.004 (0.004-0.005)	0.005 (0.004-0.005)	0.005 (0.004-0.005)	0.005 (0.005-0.006)	0.005 (0.005-0.006)

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

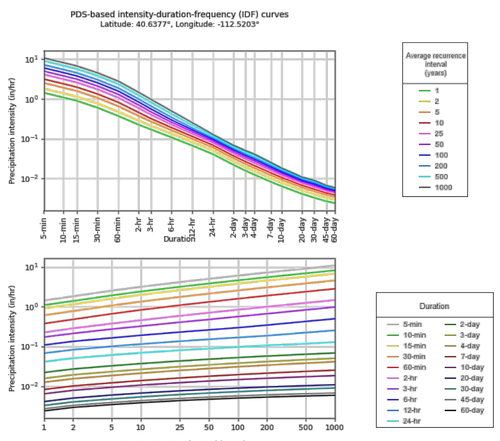
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

Back to Top

PF graphical

2/11/26, 9:19 AM Precipitation Frequency Data Server



NOAA Atlas 14, Volume 1, Version 5 Created (GMT): Wed Feb 11 16:18:16 2026

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Maps & aerials

Small scale terrain

ENSIGN
THE STANDARD IN ENGINEERING

Project: USA RV & PARKING STORAGE
By: Corey Child
Date: 2026-03-26

Project No.: 7788D
Checked By: J. Clegg

ZELLER SCOUR DEPTH

Based on FHWA Hydraulic Engineering Circular No. 15, Third Edition, September 2005.

Given:

Q=	26.45	ft^3/s
B=	2.00	ft, Channel Bottom Width
Z=	2.00	Z:1 (H:V), Side Slope
S_0=	0.18	ft/ft, Channel Slope
d=	3.00	ft, Channel Depth

Step 1. Enter channel characteristics and design discharge above.

Step 2. Assume maximum depth

Ymax=	2.000	ft	
A=	12.000	ft^2	$A = Bd + zd^2$
P=	10.944	ft	$P = B + 2d\sqrt{Z^2+1}$
R=	1.096	ft	$R = A/P$
T=	10.000	ft	$T = B + 2dZ$
Y_h=	1.200	ft	$Y_h = A/T$
Vm=	2.2041667	ft/s^2	$V = Q/A$

Scour Depth=	**-1.601**	ft

$$y_{gs} = y_{max}\left(\left(0.0685 * \frac{V_m^{0.8}}{y_h^{0.4}\varsigma_s^{0.3}}\right) - 1\right)$$

ENSIGN
THE STANDARD IN ENGINEERING

Project: USA RV & PARKING STORAGE
By: Corey Child
Date: 2026-03-26

Project No.: 7788D
Checked By: J. Clegg

ZELLER SCOUR DEPTH

Based on FHWA Hydraulic Engineering Circular No. 15, Third Edition, September 2005.

Given:

Q=	26.45	ft^3/s
B=	2.00	ft, Channel Bottom Width
Z=	2.00	Z:1 (H:V), Side Slope
S_0=	0.02	ft/ft, Channel Slope
d=	3.00	ft, Channel Depth

Step 1. Enter channel characteristics and design discharge above.

Step 2. Assume maximum depth

Ymax=	2.000	ft	
A=	12.000	ft^2	$A = Bd + zd^2$
P=	10.944	ft	$P = B + 2d\sqrt{Z^2+1}$
R=	1.096	ft	$R = A/P$
T=	10.000	ft	$T = B + 2dZ$
Y_h=	1.200	ft	$Y_h = A/T$
Vm=	2.2041667	ft/s^2	$V = Q/A$

Scour Depth=	**-1.167**	ft

$$y_{gs} = y_{max}\left(\left(0.0685 * \frac{V_m^{0.8}}{y_h^{0.4}\varsigma_s^{0.3}}\right) - 1\right)$$

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RICHFIELD
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GRANTSVILLE CITY, UTAH 84029

CONTACT:
TRENTON HOMER
PHONE: 435-255-3337

USA RV & PARKING STORAGE
CIVIL DESIGN

1361 OLD LINCOLN HIGHWAY
GRANTSVILLE CITY, UTAH

PROFESSIONAL ENGINEER
2026-04-24
10924116-2202
COREY J. CHILD
STATE OF UTAH

DRAINAGE CALCULATIONS

PROJECT NUMBER	PRINT DATE
7788D	2026-02-03
PROJECT MANAGER	**DESIGNED BY**
C. CHILD	C. CHILD

C-203

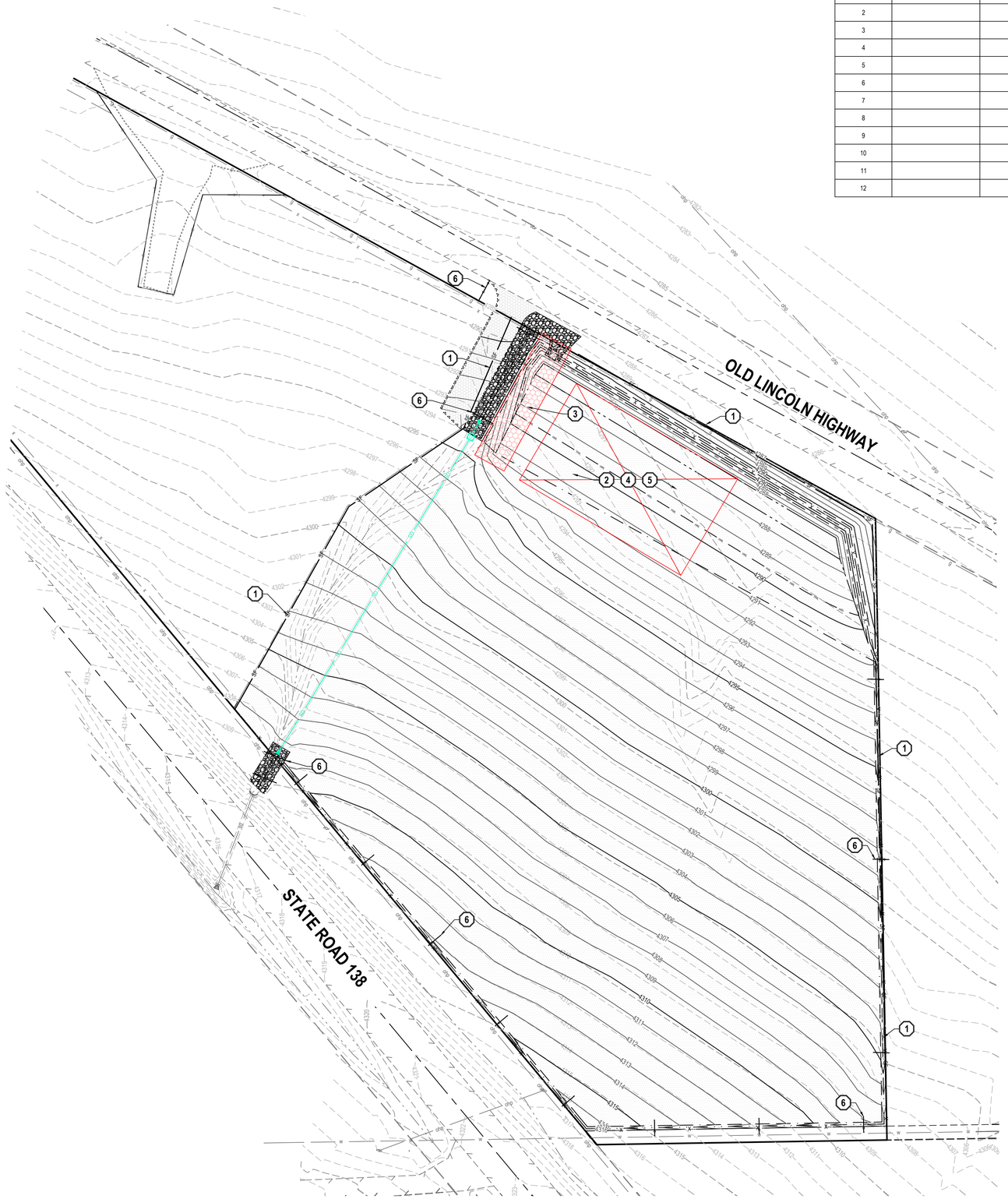
811 Know what's below. Call before you dig.

CALL BLUESTAKES @ 811 AT LEAST 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION.

BENCHMARK

NORTHWEST CORNER OF SECTION 22, TOWNSHIP 2 SOUTH, RANGE 6 WEST SALT LAKE BASE AND MERIDIAN

ELEV = 4362.55'



REVISION SCHEDULE			
NUMBER	DATE	AUTHOR	COMPANY REPRESENTATIVE SIGNATURE
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

GENERAL NOTES

1. THIS PLAN IS DESIGNED AS A FIRST APPRAISAL OF NECESSARY MEANS TO PROTECT THE WATERS OF THE STATE FROM POTENTIAL POLLUTION. IT IS THE RESPONSIBILITY OF THE OWNER/OPERATOR TO ADD WARRANTED BEST MANAGEMENT PRACTICES (BMP'S) AS NECESSARY, MODIFY THOSE SHOWN AS APPROPRIATE, AND DELETE FROM THE PROJECT THOSE FOUND TO BE UNNECESSARY. FEDERAL AND STATE LAW ALLOWS THESE UPDATES TO BE MADE BY THE OWNER/OPERATOR ONSITE AND RECORDED BY THE OWNER/OPERATOR ON THE COPY OF THE SWPPP KEPT ONSITE.
2. DISTURBED LAND SHALL BE KEPT TO A MINIMUM. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. HOWEVER, WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 21 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
3. RESEED DISTURBED LAND WITH NATIVE GRASS MIXTURE WITHIN 14 CALENDAR DAYS OF ACHIEVEMENT OF FINISH GRADE TO STABILIZE SOILS IF LAND IS NOT TO BE RE-WORKED WITHIN 14 CALENDAR DAYS OF THE CESSATION OF CONSTRUCTION ACTIVITIES AT THAT LOCATION.
4. DETAILS SHOWN ARE TO BE EMPLOYED TO PROTECT RUNOFF AS APPROPRIATE DURING CONSTRUCTION. NOT ALL DETAILS ARE NECESSARY AT ALL PHASES OF THE PROJECT. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/OPERATOR TO USE APPROPRIATE BEST MANAGEMENT PRACTICES AT THE APPROPRIATE PHASE OF CONSTRUCTION. SEE SWPPP FOR BMP IMPLEMENTATION SCHEDULE.
5. VARIOUS BEST MANAGEMENT PRACTICES HAVE BEEN SHOWN ON THE PLANS AT SUGGESTED LOCATIONS. THE CONTRACTOR MAY MOVE AND RECONFIGURE THESE BMP'S TO OTHER LOCATIONS IF PREFERRED, PROVIDED THE INTENT OF THE DESIGN IS PRESERVED.
6. NOT ALL POSSIBLE BMP'S HAVE BEEN SHOWN. THE CONTRACTOR IS RESPONSIBLE TO APPLY CORRECT MEASURES TO PREVENT THE POLLUTION OF STORM WATER PER PROJECT SWPPP.
7. A UPDES (UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT IS REQUIRED FOR ALL CONSTRUCTION ACTIVITIES 1 ACRE OR MORE.

SCOPE OF WORK:

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

1. SILT FENCE PER DETAIL 2/C-400.
2. PORTABLE TOILET PER DETAIL 4/C-400.
3. VEHICLE WASHDOWN AND STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 3/C-400.
4. SUGGESTED TEMPORARY CONSTRUCTION SITE PARKING, STAGING, DUMPSTER, AND MATERIAL STORAGE AREA.
5. SUGGESTED STOCKPILE AREA.
6. STRAW WATTLE EVERY 100' PER DETAIL 5/C-400.

NORTH

HORIZONTAL GRAPHIC SCALE

40 0 20 40 80

(IN FEET)
HORZ: 1 inch = 40 ft.

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Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

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FOR:
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1361 OLD LINCOLN HIGHWAY
GRANTSVILLE CITY, UTAH 84029

CONTACT:
TRENTON HOMER
PHONE: 435-255-3337

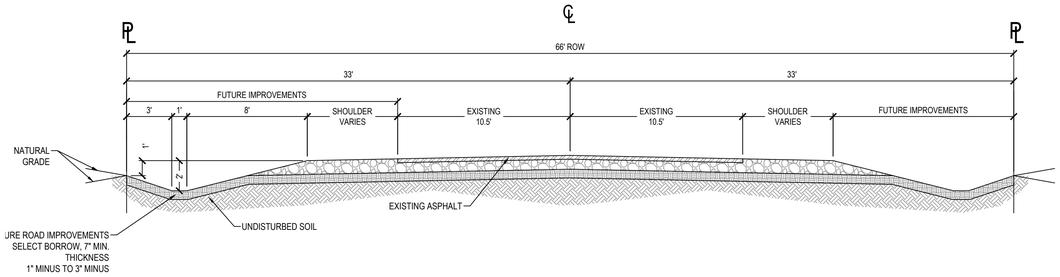
USA RV & PARKING STORAGE
CIVIL DESIGN
1361 OLD LINCOLN HIGHWAY
GRANTSVILLE CITY, UTAH

PROFESSIONAL ENGINEER
10924116-2202
COREY L. CHILD
STATE OF UTAH
2026-02-04

EROSION CONTROL PLAN

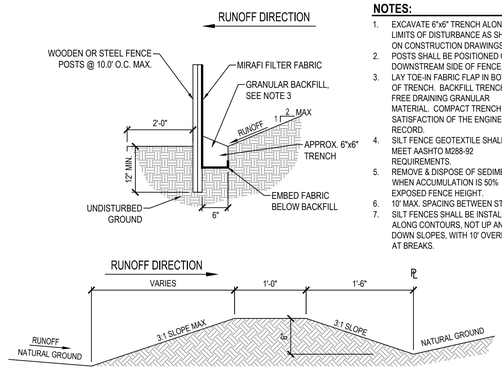
PROJECT NUMBER	PRINT DATE
7788D	2026-02-03
PROJECT MANAGER	DESIGNED BY
C. CHILD	C. CHILD

C-300



1 FUTURE ROAD IMPROVEMENTS OLD LINCON HIGHWAY CROSS SECTION

SCALE: NONE

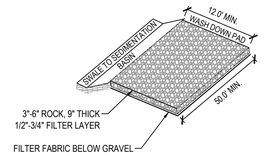


NOTES:

1. EXCAVATE 6"x6" TRENCH ALONG LIMITS OF DISTURBANCE AS SHOWN ON CONSTRUCTION DRAWINGS.
2. POSTS SHALL BE POSITIONED ON DOWNSTREAM SIDE OF FENCE.
3. LAY TOE-IN FABRIC FLAP IN BOTTOM OF TRENCH. BACKFILL TRENCH WITH FREE DRAINING GRANULAR MATERIAL. COMPACT TRENCH TO SATISFACTION OF THE ENGINEER OF RECORD.
4. SILT FENCE GEOTEXTILE SHALL MEET AASHTO M288-92 REQUIREMENTS.
5. REMOVE & DISPOSE OF SEDIMENT WHEN ACCUMULATION IS 50% OF EXPOSED FENCE HEIGHT.
6. 10' MAX. SPACING BETWEEN STAKES.
7. SILT FENCES SHALL BE INSTALLED ALONG CONTOURS, NOT UP AND DOWN SLOPES, WITH 10' OVERLAP AT BREAKS.

2 TEMPORARY SILT FENCE EROSION EARTH DRAINAGE BERM

SCALE: NONE

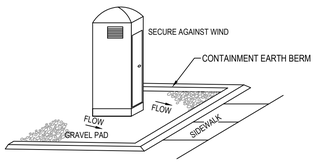


NOTE:

1. PLACE SIGN ADJACENT TO ENTRANCE " CONSTRUCTION TRAFFIC ONLY - ALL CONSTRUCTION TRAFFIC SHALL ENTER AND EXIT SITE AT THIS LOCATION"

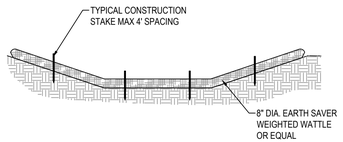
3 STABILIZED CONSTRUCTION ENTRANCE

SCALE: NONE



4 PORTABLE TOILET

SCALE: NONE

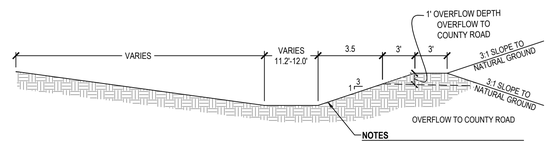


NOTES:

1. PLACE WATTLES OR GRAVEL BAGS TIGHT AGAINST SWELL TO PREVENT SEDIMENT-LADEN WATER FROM GETTING BETWEEN SWELL AND WATTLE/BAG.
2. PLACE WATTLES OR GRAVEL BAGS SUCH THAT FLOW DOES NOT OVERTOP SWALL OR ROAD CENTERLINE.
3. INSPECT WATTLES AFTER EVERY LARGE STORM EVENT AND AT LEAST BI-WEEKLY, OR PER SWPPP REQUIREMENTS, WHICHEVER IS MORE STRINGENT, TO ENSURE THAT SEDIMENT CONTROL IS MEETING ITS DESIGN INTENT. MAINTAIN AND/OR REPLACE AS NEEDED.
4. REMOVE SEDIMENT ACCUMULATED WHEN IT REACHES 50% OF GRAVEL BAG OR WATTLE HEIGHT.
5. CONTRACTOR MAY SUBMIT AN ALTERNATIVE METHOD OF SWELL PROTECTION. THE ALTERNATIVE METHOD SHALL BE APPROVED BY THE COUNTY INSPECTOR AND THE ENGINEER OF RECORD.

5 STRAW WATTLE

SCALE: NONE

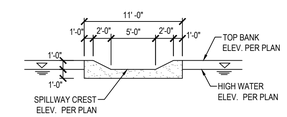


NOTES

- BASIN SIDE SLOPES NEEDS TO BE RE-ESTABLISHED WITH NATIVE SEED/PLANTS.
- OWNERS SHALL NOT BE ALLOWED TO REDUCE THE CAPACITY OF THE RETENTION BASINS IN ANY WAY.

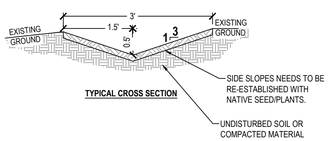
6 RETENTION BASIN LAYOUT

SCALE: NONE



7 CONCRETE SPILLWAY

SCALE: NONE

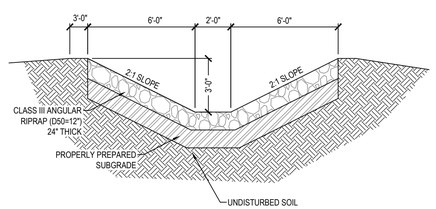


RIPRAP NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE TO RESTORE DAMAGED AREAS ASSOCIATED WITH DELIVERY, PLACEMENT, CAUSED BY EQUIPMENT TO PRE-CONSTRUCTION CONDITION OR BETTER.
2. **SWALE INFORMATION:**
   MIN SLOPE = 0.4%
   MAX SLOPE = 7.5%

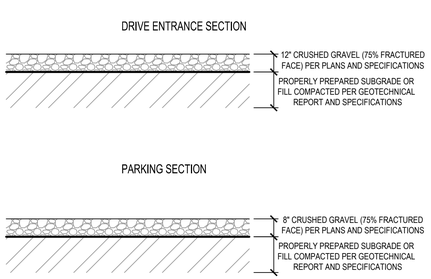
8 3' DRAINAGE SWALE

SCALE: NONE



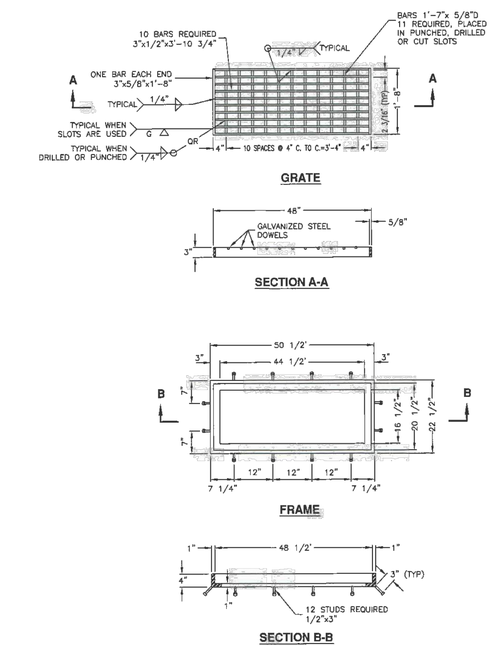
9 RIPRAP DRAINAGE CHANNEL CROSS SECTION

SCALE: NONE



10 GRAVEL SECTION

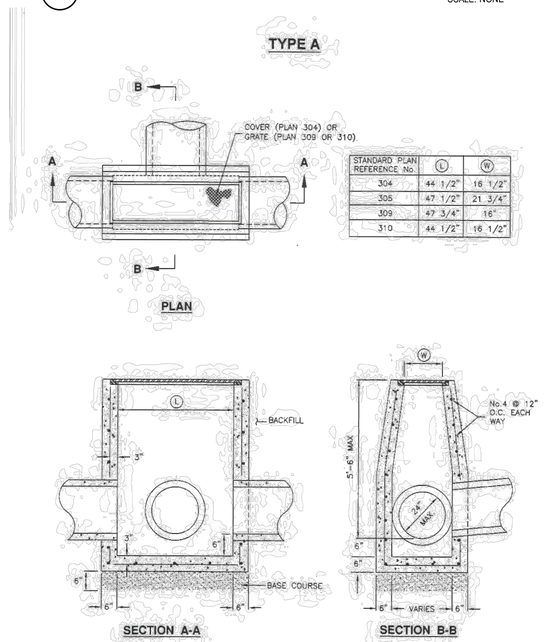
SCALE: NONE



APWA Utah Chapter — *48" Grate and frame* — Plan 310 April 1997

11 APWA PLAN 310 48" GRATE AND FRAME

SCALE: NONE



STANDARD PLAN REFERENCE No.	L	W
304	44 1/2"	16 1/2"
305	47 1/2"	21 3/4"
309	47 3/4"	16"
310	44 1/2"	16 1/2"

APWA Utah Chapter — *Cleanout box* — Plan 331.1 April 2010

12 APWA PLAN 331.1 CLEANOUT BOX

WITH GRANTSVILLE CITY MODIFICATIONS

SCALE: NONE

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CONTACT:
TRENTON HOMER
PHONE: 435-255-3337

USA RV & PARKING STORAGE
CIVIL DESIGN

1361 OLD LINCOLN HIGHWAY
GRANTSVILLE CITY, UTAH

PROFESSIONAL ENGINEER
2026-04-2
10924116-2202
COREY L. CHILD
STATE OF UTAH

SITE DETAILS

PROJECT NUMBER	PRINT DATE
7788D	2026-02-03
PROJECT MANAGER	DESIGNED BY
C. CHILD	C. CHILD

C-400

Agneda Item # 15

Consideration of Resolution 2026-33 approving the selection and appointment of a wastewater treatment plant inspector

GRANTSVILLE CITY
RESOLUTION NO. 2026-33

A RESOLUTION APPROVING THE SELECTION AND APPOINTMENT OF A WASTEWATER TREATMENT PLANT (WWTP) INSPECTOR

Be it resolved by the City Council of Grantsville City, Utah as follows:

WHEREAS, Grantsville City (the "City") issued a Request for Proposals ("RFP") to solicit qualified firms or individuals to provide inspection services for the City's Wastewater Treatment Plant (WWTP); and

WHEREAS, the RFP process closed on May 1, 2026, and proposals were received, reviewed, and evaluated by City staff; and

WHEREAS, based on the evaluation of the proposals, City staff has recommended Kleinfelder as the most qualified proposer to provide WWTP inspection services; and

WHEREAS, the City Council finds that approving the selection and appointment of the recommended WWTP Inspector is in the best interest of the City to ensure proper oversight and compliance with applicable standards and regulations;

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF GRANTSVILLE CITY, STATE OF UTAH, AS FOLLOWS:

Section 1. Approval of WWTP Inspector: The City Council hereby approves the selection and appointment of Kleinfelder as the Wastewater Treatment Plant (WWTP) Inspector for Grantsville City, subject to final contract negotiations and execution.

Section 2. Authorization: The Mayor is hereby authorized to execute any agreements or documents necessary to formalize the engagement of the selected WWTP Inspector.

Section 3. Effective Date: This resolution shall take effect immediately upon its passage and approval as provided by law.

Section 4. Severability clause. If any part or provision of this Resolution is held invalid or unenforceable, such invalidity or unenforceability shall not affect any other portion of this Resolution and all provisions, clauses and words of this Resolution shall be severable.

ADOPTED AND PASSED BY THE CITY COUNCIL OF GRANTSVILLE CITY, THIS (xx) DAY OF (xx), 2026.

BY THE ORDER OF THE GRANTSVILLE CITY COUNCIL:

_____
By Mayor Heidi Hammond

ATTEST

_____
Alicia Fairbourne, City Recorder

2026-2 WWTP Inspector and Testing

	Minimum Mandatory Requirements	Offeror A	Offeror B	Offeror C	Offeror D
1	Company Information	Pass	Pass	Pass	Pass
2	Statement of Qualifications	Pass	Pass	Pass	Pass
3	Three examples of similar projects	Pass	Pass	Pass	Pass
4	List of subconsultants/subcontractors.	Pass	Pass	Pass	Pass
5	Any current and applicable staff certifications.	Pass	Pass	Pass	Pass

Weight	Technical Scores	Offeror A	Offeror B	Offeror C	Offeror D
	Criteria #1 - Responsiveness				
	Evaluator 1	15.0	15.0	15.0	15.0
	Evaluator 2	15.0	15.0	15.0	15.0
	Evaluator 3	12.0	12.0	12.0	12.0
	Total Average Score	14.00	14.00	14.00	14.00
1.0	**Criteria #1 - Total Points (Total Possible Points = 15)**	14.00	14.00	14.00	14.00
	Criteria #2 - Experience				
	Evaluator 1	15.0	25.0	25.0	25.0
	Evaluator 2	20.0	25.0	25.0	25.0
	Evaluator 3	10.0	20.0	20.0	25.0
	Total Average Score	15.00	23.33	23.33	25.00
1.0	**Criteria #2 - Total Points (Total Possible Points = 25)**	15.00	23.33	23.33	25.00
	Criteria #3 - Project Scope & Understanding				
	Evaluator 1	30.0	30.0	30.0	30.0
	Evaluator 2	30.0	24.0	30.0	30.0
	Evaluator 3	18.0	18.0	30.0	18.0
	Total Average Score	26.00	24.00	30.00	26.00
1.0	**Criteria #3 - Total Points (Total Possible Points = 30)**	26.00	24.00	30.00	26.00
	Criteria #4 - Qualifications				
	Evaluator 1	10.0	10.0	10.0	10.0
	Evaluator 2	8.0	8.0	10.0	10.0
	Evaluator 3	10.0	10.0	10.0	10.0
	Total Average Score	9.33	9.33	10.00	10.00
1.0	**Criteria #4 - Total Points (Total Possible Points = 10)**	9.33	9.33	10.00	10.00
	Total Technical Points (Total Possible Points = 80) Minimum Threshold = XX	64.33	70.67	77.33	75.00
Total Cost Points	**Cost Scores**	**Offeror A**	**Offeror B**	**Offeror C**	**Offeror D**
	Cost	$145,023.00	$175,000.00	$266,995.00	$350,000.00
20.0	**Cost Points**	20.00	16.57	10.86	8.29
	Score Summary	**Offeror A**	**Offeror B**	**Offeror C**	**Offeror D**
	Total Technical Points (Total Possible = 80)	64.33	70.67	77.33	75.00
	Total Cost Points (Total Possible = 20)	20.00	16.57	10.86	8.29
	Grand Total Points (Total Possible = 100)	84.33	87.24	88.20	83.29

Request for Proposal

PROJECT:

Special Inspection and Materials Testing Services for
Wastewater Treatment Plant (WWTP)

PREPARED FOR:

Grantsville City
429 East Main Street
Grantsville, UT 84029

April 16, 2026

INTRODUCTION:

Grantsville City is a rapidly growing community dedicated to providing reliable, high-quality utility services to our residents. To support this growth and ensure long-term environmental health, the City is embarking on the construction of a new, state-of-the-art Wastewater Treatment Plant (WWTP). This facility is one of the most significant infrastructure investments in our City's history, featuring complex water-holding tanks and structural systems that must withstand decades of continuous use.

To ensure this plant is built exactly to the engineered specifications, Grantsville City is seeking professional **Geotechnical Inspection, Special Inspection, and Materials Testing** services. We are looking for an independent technical partner to act as the "quality control" for the City, performing essential safety verifications—including subgrade inspection, verification of proper subgrade preparation and stabilization, pre-loading and settlement monitoring and verification, soil compaction, concrete sampling and testing, asphalt density testing, and special instructions as indicated in the accompanying supporting documents —to ensure this municipal asset is durable and built to the highest engineering standards. The testing and inspections provider will be responsible for coordinating testing with the contractor and construction management team, and providing written results to the construction manager and contractor for review and record purposes.

SCOPE OF WORK:

The selected firm shall act as the City's independent, 3rd party technical representative, providing on-call inspections and laboratory testing to ensure all construction meets the approved engineered plans, technical specifications, geotechnical report recommendations, and International Building Code (IBC) requirements.

- **Earthwork and Geotechnical:**
    - Observe and verify subgrade conditions and preparation including periodic observation of proof-rolling, especially when new areas are being prepped or where adverse conditions have been noted.
    - Identify areas of subgrade where additional stabilization or repair (i.e., over excavation, geofabric/geogrid, fill material) are needed for stabilization. <u>Refer to the Geotech report</u> for estimates on the extent of area anticipated to require stabilization and potential repair/remediation methods.
    - Review submittals for proposed backfill, structural fill, and pipe trenching materials including verification of gradation and proctor information. Provide laboratory Proctor tests and gradation/sieve analyses on sample material to confirm properties for backfill and structural fill materials.
    - Monitor pre-loading settlement in areas where finish grade is to be raised above existing/native grade. Monitoring includes placement of temporary monuments or monitoring stations (e.g., rods) to measure and verify settlement and stability. Survey services should be provided twice per week for 2-4 months during placement to monitor settling, and once per week for an additional 3 weeks to

confirm settlement stability. Tester may coordinate with 3rd party surveyor if necessary.

- Provide in-place density (compaction) testing for fill material during site grading, for backfill placed in pipe trenches, for structural fill placed beneath structures, beneath structural fill placed for slabs on grade, and for fill placed beneath paved and graded roadways. Refer to Exhibit A for extents of grading, paving, and graded roadways.
- Provide asphalt compaction/density testing and temperature confirmation for asphalt paving areas.

Refer to Exhibit A for project site civil drawings for extent of grading, yard piping, and size/location of structures.

Refer to Exhibit C for excerpts the design basis project site Geotechnical Report.

- **Structural Concrete:** Conduct field testing (slump, air, temp) and cast compressive strength cylinders for laboratory testing at 7, 28, and 56-day intervals for all water-holding basins and structures including headworks influent screen channels, grit chamber channels and structures, aeration basins, secondary clarifiers, UV disinfection and effluent channels, and solids storage basin. Cylinders must be cast and tested in accordance with **ASTM C31 and C39** and **Shrinkage Testing** (ASTM C157) for the basin walls to prevent leaks. Additional strength cylinder collection and testing for other structures may be requested by the City or engineer. **Refer to Exhibit A for project site civil drawings for extent of grading, yard piping, and size/location of structures.**

  Additional design drawings of the buildings and structures can be furnished upon request.

- **Special Inspections:** Provide visual and non-destructive testing (NDT) special inspections for masonry structures (typical of 4 buildings: Headworks Building, Blower Building, UV Building, and Solids Handling Building), structural concrete reinforcement and reinforcement welding, and compliance with soil inspections as detailed on **drawing 00G015**.

  Refer to Exhibit B for listed Structural Notes, Special Inspections and Building Code Data Tables.

- **Reporting:** Submit daily electronic field reports within 24 hours and provide a final signed/sealed Statement of Special Inspections upon project completion. Provide electronic (PDF file) submittals of Proctor, density (compaction testing), backfill material analysis, concrete cylinder breaks via submittal to the installation contractor and CM team for review and record purposes.

Additional technical specifications and/or detailed design drawings of individual buildings or structures can be provided upon request.

Finally, the contractor's schedule for completing work is still pending. However, it is anticipated that the majority of site grading/raising, subgrade stabilization, and pre-load settling stabilization will be conducted through this summer. Yard piping work and excavation/installation of larger concrete structures will likely start this fall and may continue into Q4 pending site conditions. Concrete and structure placement will continue through 2027. Road grading and asphalt placement will be near the end of the project, likely Q2 or Q3 of 2028. Ultimately, the test will need to coordinate scheduling with the contractor.

I. Mandatory Requirements

Each proposal must include –

Company name, website (if applicable), and name, email and phone number of project manager.

Statement of qualifications that includes professional credentials, experience, and overall qualifications of staff that will provide the various services within the Project Scope stated in this Request for Proposal ("RFP").

Three (3) examples of projects which demonstrate qualifications for providing the Project Scope stated in this RFP.

A list of any subconsultants or subcontractors proposed to be included in work outlined in the Project Scope. Provide a description of their previous work history.

Any current and applicable certifications of the staff to be assigned to this project.

II. Financial Requirements

All proposals must include a complete budget, detailing and itemizing the following factors:

- **Personnel Rates:** Hourly rates for Project Manager, Senior Inspector, and Field Technician.
- **Lab Fees:** Unit costs for concrete cylinders, Proctor tests, and sieve analyses.
- **Administrative Fees:** Mobilization/trip charges and equipment rental fees.
- **Outside Scope Rate:** An "Additional Services" hourly rate for any required inspections or consultations that fall outside the defined Scope of Work

The Not-to-Exceed (NTE) Estimate

The firm must provide a calculated total for the entire 24-month duration. This should be based on an assumed "Level of Effort" derived from the General Contractor's schedule:

- **Estimated Inspection Hours:** Total projected hours multiplied by the hourly rates.
- **Estimated Lab Quantities:** Projected number of cylinders and proctors based on the cubic yardage of concrete and volume of fill in the plant design.

- **Project Contingency:** A suggested 5–10% buffer for unexpected re-testing (needed when a contractor fails a test and the inspector must return).

Proposal should indicate the anticipated number of onsite mobilizations, hours, and expenses/hours for testing and reporting/communication results to the City.

Please complete an itemized cost proposal detailing the information requested. This will be submitted separately from your technical proposal, further details provided in the "Proposal Contents" Section.

III. Schedule

Project is expected to last approximately 24 months. Firm is expected to work and coordinate with the installation contractor, City's construction management team and be available during the duration of the project when tests are needed.

IV. Timeline for RFP Process (times are MDT)

Event / Action	Date
Advertise RFP	April 16, 2026
Bid Site Meeting (*optional)*	April 24, 2026, 9:00 am
Questions Due	April 27, 2026, 4:00 pm
City's Response to Questions	April 28, 2026, 4:00 pm
Deadline for Submission of Proposals	May 1, 2026 by 12:00pm

PROPOSAL CONTENTS:

Proposals submitted for this project shall address all requested information. Firms are encouraged to keep the proposals brief and to the point, while still sufficiently detailed to allow for a fair evaluation. Proposals must include the following:

A) Cover Letter (1 page maximum)

The cover letter shall describe the offeror's business entity (corporation, LLC, partnership, sole proprietorship, etc.), and include: a statement of the offeror's general background, a discussion of the offeror's interest in the project, and the acknowledgement of receipt for any addendums.

B) Project Team

Identify project personnel and define their respective roles.

C) Substantive Content

Describe the offeror's abilities to meet or exceed the qualifications set forth in items I, II, III, and IV above.

D) Protected Information

All protected information must be included in this section of the proposal response. Do not incorporate protected information throughout the proposal, rather, when including protected information, provide a reference in the proposal response directing the reader to this specific section.

E) Project Cost (Separately)

Pursuant to Utah Code Annotated (UCA) § 63G-6a-707(7), the cost proposal will be evaluated independently from the technical proposal; and as such, **must** be submitted separately from the technical proposal. Offerors must not include costs or pricing data in their responses to the Mandatory Minimum Requirements and the Technical Response.

Offeror must include a complete budget on a separate document. If an offeror fails to include a complete budget, then its proposal will be considered non-responsive, and the proposal will be rejected.

F) Signature (Attachment A)

The proposal shall be signed by a representative authorized to bind the team and shall expressly state the proposal is valid until the City Council awards the contract. By signing Attachment A: Certification of Proposal and submitting a proposal, the proposer covenants that the proposer is fully qualified to provide the required services, and that the submitted information is true and accurate and may be relied upon in evaluating the proposal.

G) Non-Collusion Affidavit (Attachment B)

The attached Non-Collusion Affidavit must be completed and returned with proposal.

PROPOSAL SUBMISSION:

Questions must be submitted through the Utah State Purchasing Bonfire Website, and are due no later than ***April 27, 2026, 4:00 pm.*** Exceptions shall not be granted to requests made after the inquiry deadline. Failure to comply with this requirement may result in a disqualification in the selection process.

Submission of the proposal must occur through the Utah State Purchasing BONFIRE Website. Submissions, modifications or corrections received after the closing time on ***May 1, 2026, 12:00 pm*** will be considered late and will not be opened.

If only one submission is received, City will evaluate proposal response to make sure the offer meets the minimum mandatory requirements and the technical RFP requirements stated in the RFP, and will determine if the cost proposal is fair and reasonable to award. Or, if time permits, resolicit submissions for the purpose of obtaining additional submissions.

Grantsville City shall not be obligated to respond to any proposal submitted, nor shall it be legally bound in any manner whatsoever by the receipt of a proposal.

Grantsville City reserves the right to extend or cancel all scheduled proposal due dates. Notice of such extensions or cancellations shall be sent via addendum to this RFP.

PROPOSAL EVALUATION:

Criteria 1 – Responsiveness –

Bid includes all signed cover letters, Non-Collusion Affidavits, and Anti-Boycott Certifications.

Criteria 2 – Experience –

Firm must provide three (3) examples of similar municipal infrastructure or WWTP projects.

Criteria 3 – Project Scope & Understanding –

Does the proposed scope, including proposed hours, demonstrate the parties reasonable understanding of the project and a practical estimate as to the effort and testing costs necessary to ensure the proper site preparation and construction quality to protect the City's interests and investment?

Criteria 4 – Qualifications –

Do the assigned technicians hold current, valid certifications?

Criteria 5 – Project Costs –

Purchasing will use the following cost formula: The points assigned to each offeror's cost proposal will be based on the lowest proposal price. The offeror with the lowest Proposed Price will receive 100% of the price points. All other offerors will receive a portion of the total cost points based on what percentage higher their Proposed Price is than the Lowest Proposed Price. The formula to compute the points is: Cost Points x (Lowest Proposed Price/Proposed Price).

Proposals will be reviewed by a selection committee consisting of at least three persons.

Proposals will be scored as follows:

Technical Criteria:	**Possible Points:**
Criteria 1 – Responsiveness - Did the bidder submit all required forms, including the signed Non-Collusion and Anti-Boycott affidavits?	15
Criteria 2 – Experience – Has the firm successfully completed at least three (3) similar wastewater or large-scale concrete projects?	25
Criteria 3 – Project Scope & Understanding – Does the proposed scope and NTE estimate demonstrate a reasonable and consistent understanding of the project testing requirements, timeline, and scope?	30
Criteria 4 – Qualifications – Do field technicians hold current ACI-ICC certifications and does the lab meet ASTM E329 standards?	10
Criteria 5 – Project Costs	20
Total:	**100**

The City may then enter contract negotiations with the proposer who, in the sole discretion of the selection committee, is determined to have submitted the proposal with the highest score and the most responsive and responsible proposal that meets all the RFP's requirements.

Vendors should be aware that selection committee members will be required to certify that they have not been contacted by any of the vendors to influence the selection process.

PROPOSAL REJECTION:

Grantsville City reserves the right to reject any or all proposals submitted or make modifications to the scope of work, subject to appropriate negotiation. Grantsville City agrees to not discriminate based on age, race, religion, sex, color, national origin, marital status, family status, source of income, sexual preference, mental or physical disability in review of the proposals or execution of agreements to the work. This RFP does not constitute any form of offer to contract. Grantsville City will not pay any costs incurred by the proposer in preparing or submitting the proposal.

PROPOSAL ACCEPTANCE:

Award will be made to the highest scoring responsive and responsible offeror, meeting all RFP stated requirements.

Grantsville City reserves the right to award a contract based on a proposal submitted or to further negotiate with proposer.

By submission of a proposal, proposer agrees to be legally bound, thereby if its proposal is accepted.

Contracts arising out of proposals submitted hereunder (including any negotiations that follow) shall not be binding on Grantsville City, its officers, employees, or agents unless and until formally approved and duly executed by the Grantsville City Manager or Council.

NOTIFICATION:

Due to Grantsville City Policy, we have to present all responses in a City Council Meeting, and get approval on the selected vendor prior to award. This process can take some time, and because of this, the posting will be closed on the State Purchasing Solicitation Bonfire Website. Following the City Council Meeting where the award is approved, all responders will receive an email notification of the results. Attendance of City Council Meeting are also permitted.

PROTECTED INFORMATION:

The Government Records Access and Management Act (GRAMA), Utah Code Ann., Subsection 63G-2-305, provides in part that:

The following records are protected if properly classified by a government entity:

1. Trade secrets as defined in Section 13-24-2 if the person submitting the trade secret has provided the governmental entity with the information specified in Section 63G-2-309 (Business Confidentiality Claims):
2. Commercial information or non-individual financial information obtained from a person if:
    a. Disclosure of the information could reasonably be expected to result in unfair competitive injury to the person submitting the information or would impair the ability of the governmental entity to obtain necessary information in the future,
    b. The person submitting the information has a greater interest in prohibiting access than the public in obtaining access; and
    c. The person submitting the information has provided the governmental entity with the information specified in Section 63G-2-305

Records, the disclosure of which, would impair governmental procurement proceedings or give an unfair advantage to any person proposing to enter into a contract or agreement with a

governmental entity, except that this subsection does not restrict the right of a person to see bids submitted to or by a governmental entity after bidding has closed.

GRAMA provides that trade secrets, commercial information or non-individual financial information may be protected by submitting a Claim of Business Confidentiality.

To protect information under a Claim of Business Confidentiality, the Supplier must:

1. Provide a written Claim of Business Confidentiality at the time the information (proposal) is provided to Grantsville City; and
2. Include a concise statement of the reasons supporting the claim of business confidentiality (Subsection 63G-2-309(1)); and
3. Submit an electronic "redacted" (excluding protected information) copy of your proposal response. Copy must clearly be marked "Redacted Version"

A Claim of Business Confidentiality may be appropriate for information such as client and non-public financial statements. Pricing and service elements may not be protected. The claim of business confidentiality must be submitted with your proposal on the form with may be accessed at: https://archives.utah.gov/recordsmanagement/forms/GRAMA-business-confidentiality.pdf

An entire proposal cannot be identified as "Protected", "Confidential", or "Proprietary" and may be considered non-responsive if marked as such.

To ensure the information is protected, you must include all protected information per Section D of this RFP. Any protected information incorporated in other sections of the proposal response may result in a release of data at no fault of Grantsville City.

All materials submitted become the property of Grantsville City. Materials may be evaluated by anyone designated by Grantsville City as part of the proposal evaluation committee. Materials submitted may be returned only at Grantsville City's option.

Attachment A

CERTIFICATION OF PROPOSAL

The undersigned hereby certifies, represents, and warrants that:

1. **Authority to Bind.** The individual signing this Certification of Proposal is duly authorized to act on behalf of the proposing firm/team and has full legal authority to bind the proposer to the terms, conditions, and commitments contained in the proposal submitted in response to this solicitation.
2. **Validity of Proposal.** The proposal submitted shall remain valid and binding upon the proposer and may be accepted by the City at any time until the City Council formally awards the contract.
3. **Qualifications.** The proposer is fully qualified, experienced, and properly licensed (if required) to provide the services described in the solicitation and to perform the work in accordance with all applicable federal, state, and local laws, regulations, and requirements.
4. **Accuracy of Information.** All information, statements, representations, and documents submitted as part of the proposal are true, complete, and accurate to the best of the proposer's knowledge and belief. The proposer acknowledges that the City may rely upon the submitted information in evaluating the proposal.
5. **No Misrepresentation.** The proposer understands that any false, incomplete, or misleading statements may be grounds for disqualification of the proposal, rejection of the submission, or termination of any resulting contract.

IN WITNESS WHEREOF, the undersigned has executed this Certification of Proposal on behalf of the proposer.

Proposer Name: _____

Authorized Representative Name: _____

Title: _____

Signature: _____

Date: _____

Attachment B

NON-COLLUSION AFFIDAVIT

The undersigned bidder or agent, being duly sworn on oath, says that he/she has not, nor has any other member, representative, or agent of the firm, company, corporation or partnership represented by him, entered into any combination, collusion or agreement with any person relative to the price to be bid by anyone at such letting nor to prevent any person from bidding nor to include anyone to refrain from bidding, and that this bid is made without reference to any other bid and without any agreement, understanding or combination with any other person in reference to such bidding.

He/She further says that no person or persons, firms, or corporation has, have or will receive directly or indirectly, any rebate, fee gift, commission or thing of value on account of such sale.

OATH AND AFFIRMATION

I HEREBY AFFIRM UNDER THE PENALTIES FOR PERJURY THAT THE FACTS AND INFORMATION CONTAINED IN THE FOREGOING BID FOR PUBLIC WORKS ARE TRUE AND CORRECT.

Dated this ___ day of _____, _____

_____
(Name of Organization)

_____
(Title of Person Signing)

_____
(Signature)

ACKNOWLEDGEMENT

STATE OF _____)
) ss
COUNTY OF_____)

Before me, a Notary Public, personally appeared the above named and swore that the statements contained in the foregoing document are true and correct.

Subscribed and sworn to me this _____ day of _____, _____.

_____
Notary Public Signature

My Commission Expires: _____

Exhibit A

ABBREVIATIONS

□	AT
	DIAMETER
□	PERCENTAGE
'	FEET
	INCHES
3PH	THREE PHASE POWER
AB	ANCHOR BOLT
ABUT	ABUTMENT
AC	ASBESTOS CEMENT PIPE OR ASPHALT CONCRETE
ADT	AVERAGE DAILY TRAFFIC
APPROX	APPROXIMATELY
APWA	AMERICAN PUBLIC WORKS ASSOCIATION
AL	AIR LINE
ALUM	ALUMINUM
AR	ACCESSIBLE ROUTE
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
A□	A□MUTH
BAL	BALANCE
BEG	BEGINNING / BEGIN
BFC	BACK FACE OF CURB
BLD FLG	BLIND FLANGE
BLDG	BUILDING
BLM	BUREAU OF LAND MANAGEMENT
BM	BENCHMARK
BLK	BLOCK
BOD	BIOCHEMICAL OXYGEN DEMAND
BOS	BOTTOM OF STEP
BOT	BOTTOM
BRG	BEARING
BSMT	BASEMENT
BTWN	BETWEEN
BVC	BEGIN VERTICAL CURVE
C	CURVE
C□G	CURB AND GUTTER
CALC	CALCULATED
CB	CATCH BASIN
C-C	CENTER TO CENTER
CCW	COUNTER CLOCKWISE
CF	CURB FACE
CFS	CUBIC FEET PER SECOND
CIP	CAST IRON PIPE
CJ	CONSTRUCTION JOINT
CL	CENTER LINE
CLR	CLEARANCE
CMP	CORRUGATED METAL PIPE
CMP-A	CORRUGATED METAL PIPE - ARCH
CO	CLEAN OUT
COB	CLEAN OUT BOX
COL	COLUMN
COMM	COMMUNICATION
CONC	CONCRETE
CONN	CONNECT
CONT	CONTINUOUS
COR	CORNER
CTR	CENTER
CU FT	CUBIC FEET
CU YD	CUBIC YARD
CULV	CULVERT
CW	CLOCKWISE
D	DEGREE
DET	DETAIL
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DIST	DISTANCE
DL	DRAIN LINE
DMH	DRAINAGE MANHOLE
DN	DOWN
DW	DRINKING WATER
DWG	DRAWINGS
DWV	DRAIN WASTE VENT
E	EAST
EA	EACH
EB	ELECTRICAL BOX
EG	EDGE OF GRAVEL
ELEC	ELECTRIC / ELECTRICAL
ELEV	ELEVATION
EMB	EMBANKMENT
EMH	ELECTRICAL MANHOLE
ENGR	ENGINEER
ENT	ENTRANCE
EO	EDGE OF OIL
EOA	EDGE OF ASPHALT
EQUIP	EQUIPMENT
ES	EDGE OF SHOULDER
EST	ESTIMATE
EVC	END OF VERTICAL CURVE
EW	EACH WAY
EXC	EXCAVATION
EX	EXISTING
EXIST	EXISTING
FD	FLOOR DRAIN
FDN	FOUNDATION
FEN COR	FENCE CORNER
FE	FIRE EXTINGUISHER
FF	FINISH FLOOR
FFC	FRONT FACE OF CURB
FG	FINISH GRADE
FH	FIRE HYDRANT
FIN	FINISH
FL	FLOW LINE / FLANGE
FLR	FLOOR
FRP	FIBERGLASS REINFORCED PIPE
FT	FEET
FTG	FOOTING
G	GAS
GA	GAGE / GAUGE
GALV	GALVANI□ED
GB	GRADE BREAK
GEN	GENERAL
GF	GARAGE FLOOR
GLB	GLUED LAMINATED BEAM
GM	GAS METER
GSP	GALVANI□ED STEEL PIPE
GV	GATE VALVE
HC	HANDICAP / HYPOCHLORITE
HDG	HOT DIPPED GALVANI□ED
HDWL	HEADWALL
H□T	HUB □ TACK
HORI□	HORI□ONTAL
HP	HIGH POINT
HSS	HOLLOW STRUCTURAL SECTION
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
HX	HEAT EXCHANGER
HYD	HYDRANT
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
IJ	ISOLATION JOINT
IN	INCH
INFO	INFORMATION
INV	INVERT
IRR	IRRIGATION
JCT	JUNCTION
K	RATE OF VERTICAL CURVATURE
L	LENGTH
LB	POUND
LD	LAND DRAIN
LF	LINEAR FEET
LIC	LICENSE
LIN	LINEAR / LINEAL
LP	LOW POINT / LIGHT POLE
LS	LAND SURVEYOR
LT	LEFT
LWL	LOW WATER LEVEL
MAG	MAGNETIC
MAINT	MAINTENANCE
MATL	MATERIAL
MAX	MAXIMUM
MB	MACHINE BOLT
MH	MANHOLE
MI	MILE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MKR	MARKER
ML	MATCH LINE
MON	MONUMENT
MPH	MILES PER HOUR
N	NORTH
NG	NATURAL GROUND
NIC	NOT IN CONTRACT
NPW	NON-POTABLE WATER
NO OR #	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
OFF REV	OFFICE REVISION
O-O	OUTSIDE TO OUTSIDE
OHP	OVERHEAD POWER
ORIG	ORIGINAL
OSB	ORIENTED STRAND BOARD
PC	POINT OF CURVATURE / PRESSURE CLASS
PCC	POINT OF COMPOUND CURVATURE
PD	POND EFFLUENT
PE	PLANT EFFLUENT
PERT	PERFORATED
PI	POINT OF INTERSECTION / PRIMARY INFLUENT
PIV	POST INDICATOR VALVE
PL	PROPERTY LINE
PLCS	PLACES
POB	POINT OF BEGINNING
POC	POINT ON CURVATURE
PP	POWER POLE
PRC	POINT OF REVERSE CURVATURE
PRO	PROPOSED
PROJ	PROJECT
PROP	PROPERTY
PS	PUMP STATION
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	POINT OF TANGENCY
PVC	POINT OF VERTICAL CURVATURE / POLYVINYL CHLORINE
PVI	POINT OF VERTICAL INTERSECTION
PVMT	PAVEMENT
PVT	POINT OF VERTICAL TANGENCY
PW	POTABLE WATER
QTY	QUANTITY
R	RADIUS / RANGE
RAS	RETURN ACTIVATED SLUDGE
RCP	REINFORCED CONCRETE PIPE
RCCP	REINFORCED CONCRETE CYLINDER PIPE
RD	ROOF DRAIN
REF	REFERENCE
REINF	REINFORCED
REQ'D	REQUIRED
REV	REVISION
ROW	RIGHT OF WAY
RP	REFERENCE POINT
RR	RAILROAD
RT	RIGHT / ROUTE
R/W	RIGHT OF WAY
S	SLOPE / SOUTH
SAN	SANITARY
SAN SWR	SANITARY SEWER
SCH	SCHEDULE
SD	STORM DRAIN
SE	SECONDARY EFFLUENT
SEC	SECONDARY
SEC COR	SECTION CORNER
SHT	SHEET
SJ	SAWED JOINT
SKT	SOCKET
SL	SOLIDS LINE
SOVFL	SURFACE OVERFLOW
SPECS	SPECIFICATIONS
SQ	SQUARE
SQ FT	SQUARE FEET
SQ YD	SQUARE YARDS
SS	SANITARY SEWER / STAINLESS STEEL
ST	STREET
STA	STATION
STD	STANDARD
STL	STEEL
STN STL	STAINLESS STEEL
STRUCT	STRUCTURE
SW	SIDEWALK
SWR	SEWER
SWL	SECONDARY WATER LINE
T	TOWNSHIP / TELEPHONE
TAN	TANGENT
TBC	TOP BACK OF CURB
TEMP	TEMPORARY
TELE	TELEPHONE / TELEGRAM
THD	THREADED
THK	THICK
TKN	TOTAL KJELDAHL NITROGEN
TOA	TOP OF ASPHALT
TOC	TOP OF CONCRETE
TOF	TOP OF FOUNDATION / TOP OF FOOTING
TOG	TOP OF GRATE / TOP OF GRAVEL
TOP	TOP OF PIER
TOW	TOP OF WALL
TOS	TOP OF STEP / TOP OF SLAB
TSS	TOTAL SUSPENDED SOLIDS
TYP	TYPICAL
UB	UTILITY BOX
UG	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
UW	UTILITY WATER
VC	VERTICAL CURVE
VERT	VERTICAL
VIC	VIC COUPLING
VOL	VOLUME
VPI	VERTICAL POINT OF INTERSECTION
VPC	VERTICAL POINT OF CURVE
VPT	VERTICAL POINT OF TANGENCY
VSS	VOLATILE SUSPENDED SOLIDS
W	WEST / WATER
WAS	WASTE ACTIVATED SLUDGE
WIV	WALL INDICATOR VALVE
WL	WATER LINE
WM	WATER METER
WO	WEIR OVERFLOW
W/	WITH
W/O	WITHOUT
XING	CROSSING
X-SEC	CROSS SECTION
YH	YARD HYDRANT

LEGEND

SECTION CORNER	EXISTING EDGE OF ASPHALT
EXISTING MONUMENT	PROPOSED EDGE OF ASPHALT
PROPOSED MONUMENT	EXISTING STRIPING
EXISTING REBAR AND CAP	PROPOSED STRIPING
SET ENSIGN REBAR AND CAP	EXISTING FENCE
EXISTING WATER METER	PROPOSED FENCE
PROPOSED WATER METER	EXISTING FLOW LINE
EXISTING WATER MANHOLE	PROPOSED FLOW LINE
PROPOSED WATER MANHOLE	GRADE BREAK
EXISTING WATER BOX	EXISTING STORM DRAIN LINE
EXISTING WATER VALVE	PROPOSED STORM DRAIN LINE
PROPOSED WATER VALVE	ROOF DRAIN LINE
EXISTING FIRE HYDRANT	CATCHMENTS
PROPOSED FIRE HYDRANT	HIGHWATER LINE
PROPOSED FIRE DEPARTMENT CONNECTION	EXISTING SANITARY SEWER
EXISTING SECONDARY WATER VALVE	PROPOSED SANITARY SEWER LINE
PROPOSED SECONDARY WATER VALVE	PROPOSED SAN. SWR. SERVICE LINE
EXISTING IRRIGATION BOX	EXISTING LAND DRAIN LINE
EXISTING IRRIGATION VALVE	PROPOSED LAND DRAIN LINE
PROPOSED IRRIGATION VALVE	PROPOSED LAND DRAIN SERVICE LINE
EXISTING SANITARY SEWER MANHOLE	EXISTING CULINARY WATER LINE
PROPOSED SANITARY SEWER MANHOLE	PROPOSED CULINARY WATER LINE
EXISTING SANITARY CLEAN OUT	PROPOSED CULINARY WATER SERVICE LINE
EXISTING STORM DRAIN CLEAN OUT BOX	EXISTING SECONDARY WATER LINE
PROPOSED STORM DRAIN CLEAN OUT BOX	PROPOSED SECONDARY WATER LINE
EXISTING STORM DRAIN INLET BOX	PROPOSED SEC. WATER SERVICE LINE
EXISTING STORM DRAIN CATCH BASIN	EXISTING IRRIGATION LINE
PROPOSED STORM DRAIN CATCH BASIN	PROPOSED IRRIGATION LINE
EXISTING STORM DRAIN COMBO BOX	EXISTING OVERHEAD POWER LINE
PROPOSED STORM DRAIN COMBO BOX	EXISTING ELECTRICAL LINE
EXISTING STORM DRAIN CLEAN OUT	EXISTING GAS LINE
EXISTING STORM DRAIN CULVERT	EXISTING TELEPHONE LINE
PROPOSED STORM DRAIN CULVERT	ACCESSIBLE ROUTE
TEMPORARY SAG INLET PROTECTION	SAW CUT LINE
TEMPORARY IN-LINE INLET PROTECTION	STRAW WATTLE
ROOF DRAIN	TEMPORARY BERM
EXISTING ELECTRICAL MANHOLE	TEMPORARY SILT FENCE
EXISTING ELECTRICAL BOX	LIMITS OF DISTURBANCE
EXISTING TRANSFORMER	EXISTING WALL
EXISTING UTILITY POLE	PROPOSED WALL
EXISTING LIGHT	EXISTING CONTOURS
PROPOSED LIGHT	PROPOSED CONTOURS
EXISTING GAS METER	BUILDABLE AREA WITHIN SETBACKS
EXISTING GAS MANHOLE	PUBLIC DRAINAGE EASEMENT
EXISTING GAS VALVE	EXISTING ASPHALT TO BE REMOVED
EXISTING TELEPHONE MANHOLE	PROPOSED ASPHALT
EXISTING TELEPHONE BOX	EXISTING CURB AND GUTTER
EXISTING TRAFFIC SIGNAL BOX	PROPOSED CURB AND GUTTER
EXISTING CABLE BOX	PROPOSED REVERSE PAN CURB AND GUTTER
EXISTING BOLLARD	TRANSITION TO REVERSE PAN CURB
PROPOSED BOLLARD	CONCRETE TO BE REMOVED
EXISTING SIGN	EXISTING CONCRETE
PROPOSED SIGN	PROPOSED CONCRETE
EXISTING SPOT ELEVATION	BUILDING TO BE REMOVED
PROPOSED SPOT ELEVATION	EXISTING BUILDING
EXISTING FLOW DIRECTION	PROPOSED BUILDING
EXISTING TREE	
DENSE VEGETATION	

NOTE: MAY CONTAIN SYMBOLS THAT ARE NOT USED IN THIS PLAN SET.

PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2026
12/15/2025
STATE OF UTAH

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
B	12/15/2025	-	-	-

REVISIONS

GRANTSVILLE CITY
GRANTSVILLE WWTP

ABBREVIATIONS AND LEGEND

ENSIGN
THE STANDARD IN ENGINEERING

AQUA ENGINEERING

DRAWING NO.
01C001
SHEET

12/15/2025 □:\SANDY\SANDY 12000\12535\MUNICIPAL\DRAWINGS\01C001 AL.DWG

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Exhibit A

GENERAL NOTES

1. ALL CONSTRUCTION MUST STRICTLY FOLLOW THE STANDARDS AND SPECIFICATIONS SET FORTH BY: DESIGN ENGINEER, LOCAL AGENCY JURISDICTION, APWA (LATEST EDITION), THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.), AND OTHER REGULATORY AGENCIES EXERCISING AUTHORITY OVER ANY PORTION OF THE WORK WHERE APPLICABLE. THE ORDER LISTED ABOVE IS ARRANGED BY SENIORITY. THE LATEST EDITION OF ALL STANDARDS AND SPECIFICATIONS MUST BE ADHERED TO. IF A CONSTRUCTION PRACTICE IS NOT SPECIFIED BY ANY OF THE LISTED SOURCES, CONTRACTOR MUST CONTACT DESIGN ENGINEER FOR DIRECTION.

2. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS, LOCAL JURISDICTION OF AUTHORITY AND STATE REQUIREMENTS AND THE MOST RECENT EDITIONS OF THE FOLLOWING: THE INTERNATIONAL PLUMBING CODE, UTAH DIVISION OF DRINKING WATER REGULATIONS, AND APWA MANUAL OF STANDARD PLANS AND SPECIFICATIONS. THE CONTRACTOR IS REQUIRED TO ADHERE TO ALL OF THE ABOVE-MENTIONED DOCUMENTS UNLESS OTHERWISE NOTED AND APPROVED BY THE ENGINEER.

3. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES, TYPICAL DETAILS, AND SPECIFICATIONS.

4. THE CONTRACTOR SHALL REFER TO THE TECHNICAL PROVISIONS FOR INFORMATION NOT COVERED BY THESE GENERAL NOTES OR DRAWINGS.

5. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE SUBMITTING A BID OR PRICE TO THE OWNER AND SHALL NOTIFY OWNER OF ANY DISCREPANCIES OR CONFLICTS BEFORE PROCEEDING WITH THE WORK OR SUBMITTING THE BID.

6. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.

7. ALL DIMENSIONS, GRADES, AND UTILITY DESIGN SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES EXIST BETWEEN THE ACTUAL CONDITIONS AND INFORMATION SHOWN ON THE DRAWINGS, PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO THE DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS, IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.

8. CONTRACTOR SHALL PROVIDE A CONSTRUCTION SCHEDULE IN ACCORDANCE WITH LOCAL AGENCY JURISDICTION, STATE, OR COUNTY REGULATIONS FOR WORKING IN THE PUBLIC WAY.

9. THE CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR THE TEMPORARY ERECTION OF BRACING AND SHORING AS REQUIRED FOR STABILITY OF STRUCTURES AND EXCAVATIONS DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFORMING TO LOCAL AND FEDERAL CODES GOVERNING SHORING AND BRACING OF EXCAVATIONS AND TRENCHES AND FOR THE PROTECTION OF WORKERS.

10. THE CONTRACTOR IS REQUIRED TO KEEP ALL CONSTRUCTION ACTIVITIES WITHIN THE APPROVED PROJECT LIMITS. THIS INCLUDES, BUT IS NOT LIMITED TO VEHICLE AND EQUIPMENT STAGING, MATERIAL STORAGE AND LIMITS OF TRENCH EXCAVATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN PERMISSION AND/OR EASEMENTS FROM THE APPROPRIATE GOVERNING ENTITY AND/OR INDIVIDUAL PROPERTY OWNER(S) FOR WORK OR STAGING OUTSIDE OF THE PROJECT LIMITS.

11. PROJECT HORIZONTAL AND VERTICAL DATUM ARE SHOWN ON SHEET 01C101.

12. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT SURFACE IMPROVEMENTS.

13. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY SETTLEMENT OF OR DAMAGE TO EXISTING UTILITIES.

14. THE CONTRACTOR IS RESPONSIBLE TO FURNISH ALL MATERIALS TO COMPLETE THE PROJECT.

15. THE LOCATIONS OF UNDERGROUND FACILITIES SHOWN ON THESE PLANS ARE BASED ON FIELD SURVEYS AND LOCAL UTILITY COMPANY RECORDS. IT SHALL BE THE CONTRACTOR'S FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE. CONTRACTOR SHALL START INSTALLATION AT LOW POINT OF ALL NEW GRAVITY UTILITY LINES.

16. NO CHANGE IN DESIGN LOCATION OR GRADE WILL BE MADE BY THE CONTRACTOR WITHOUT THE WRITTEN APPROVAL OF THE PROJECT ENGINEER.

17. NATURAL VEGETATION AND SOIL COVER SHALL NOT BE DISTURBED PRIOR TO ACTUAL CONSTRUCTION OF A REQUIRED FACILITY OR IMPROVEMENT. MASS CLEARING OF THE SITE IN ANTICIPATION OF CONSTRUCTION SHALL BE AVOIDED.

18. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, MAINTAINING, OR RESTORING ALL MONUMENTS AND MONUMENT REFERENCE MARKS WITHIN THE PROJECT SITE. CONTACT THE CITY OR COUNTY SURVEYOR FOR MONUMENT LOCATIONS AND CONSTRUCTION DETAILS.

19. CONTRACTOR TO LAYOUT AND POTHOLE FOR ALL POTENTIAL CONFLICTS WITH UTILITY LINES ON- OR OFF-SITE AS REQUIRED PRIOR TO ANY CONSTRUCTION, AND THE CONTRACTOR WILL VERIFY DEPTHS OF UTILITIES IN THE FIELD BY POTHOLING A MINIMUM OF 300 FEET AHEAD OF PIPELINE CONSTRUCTION TO AVOID CONFLICTS WITH DESIGNED PIPELINE GRADE AND ALIGNMENT. IF A CONFLICT ARISES RESULTING FROM THE CONTRACTOR'S NEGLIGENCE TO POTHOLE UTILITIES, THE CONTRACTOR WILL BE REQUIRED TO RESOLVE THE CONFLICT WITHOUT ADDITIONAL COST OR CLAIM TO THE OWNER OR ENGINEER.

20. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO OWNER.

21. CONSULT ALL OF THE DRAWINGS AND SPECIFICATIONS FOR COORDINATION REQUIREMENTS BEFORE COMMENCING CONSTRUCTION.

22. AT ALL LOCATIONS WHERE EXISTING PAVEMENT ABUTS NEW CONSTRUCTION, THE EDGE OF THE EXISTING PAVEMENT SHALL BE SAWCUT TO A CLEAN, SMOOTH EDGE.

23. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT, ADOPTED EDITION OF ADA ACCESSIBILITY GUIDELINES.

24. CONTRACTOR SHALL, AT THE TIME OF BIDDING AND THROUGHOUT THE PERIOD OF THE CONTRACT, BE LICENSED IN THE STATE OF UTAH AND SHALL BE BONDABLE FOR AN AMOUNT REQUIRED BY THE OWNER.

25. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE ALL WATER, POWER, SANITARY FACILITIES AND TELEPHONE SERVICES AS REQUIRED FOR THE CONTRACTOR'S USE DURING CONSTRUCTION.

26. 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 RE-TESTING AND/OR RE-INSPECTION SHALL BE PAID FOR BY THE CONTRACTOR.

27. 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. THERE WILL BE NO EXTRA COST DUE TO THE CONTRACTOR FOR REPLACING OR REPAIRING EXISTING IMPROVEMENTS.

28. WHENEVER EXISTING FACILITIES ARE REMOVED, DAMAGED, BROKEN, OR CUT IN THE INSTALLATION OF THE WORK COVERED BY THESE PLANS OR SPECIFICATIONS, SAID FACILITIES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE 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.

29. CONTRACTOR SHALL MAINTAIN A NEATLY MARKED SET OF FULL-SIZE RECORD DRAWINGS SHOWING THE FINAL LOCATION AND LAYOUT OF ALL STRUCTURES AND OTHER FACILITIES. 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. PRIOR TO ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL DELIVER TO THE ENGINEER ONE SET OF NEATLY MARKED RECORD DRAWINGS SHOWING THE INFORMATION REQUIRED ABOVE. RECORD DRAWINGS SHALL BE REVIEWED AND THE COMPLETE RECORD DRAWING SET SHALL BE CURRENT WITH ALL CHANGES AND DEVIATIONS REDLINED AS A PRECONDITION TO THE FINAL PROGRESS PAYMENT APPROVAL AND/OR FINAL ACCEPTANCE.

30. WHERE THE PLANS OR SPECIFICATIONS DESCRIBE PORTIONS OF THE WORK IN GENERAL TERMS BUT NOT IN COMPLETE DETAIL, IT IS UNDERSTOOD THAT ONLY THE BEST GENERAL PRACTICE IS TO PREVAIL AND THAT ONLY MATERIALS AND WORKMANSHIP OF THE FIRST QUALITY ARE TO BE USED.

31. ALL EXISTING GATES AND FENCES TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. PROTECT ALL GATES AND FENCES FROM DAMAGE.

32. ALL EXISTING TREES ARE TO REMAIN UNLESS OTHERWISE NOTED ON PLANS. PROTECT ALL TREES FROM DAMAGE.

33. CONTRACTORS ARE RESPONSIBLE FOR ALL OSHA REQUIREMENTS ON THE PROJECT SITE.

34. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND MAINTAIN ANY EQUIPMENT NECESSARY TO DEWATER EXCAVATIONS AS NOTED ON THE PROJECT DRAWINGS.

35. CONTRACTOR SHALL NOTIFY BLUESTAKES 1-800-662-4111 48 HOURS PRIOR TO BEGINNING EXCAVATION. CONTRACTOR SHALL LOCATE EXISTING WATER LINE AND OTHER UTILITIES BOTH VERTICALLY AND HORIZONTALLY. IF DISCREPANCIES, CONFLICTS OR UNFORESEEN CONDITIONS ARE DISCOVERED, CONTRACTOR SHALL IMMEDIATELY CONTACT ENGINEER FOR RESOLUTION.

36. ALL CONSTRUCTION SHALL CONFORM TO APPLICABLE SECTIONS OF THE UTAH DIVISION OF DRINKING WATER SERIES 500 RULES, DRINKING WATER FACILITY CONSTRUCTION, DESIGN AND OPERATION.

UTILITY NOTES

1. PRIOR TO COMMENCING ANY WORK, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO HAVE EACH UTILITY COMPANY LOCATE, IN THE FIELD, THEIR MAIN AND SERVICE LINES. THE CONTRACTOR SHALL NOTIFY BLUE STAKES AT 1-800-662-4111 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 CONTRACTOR'S SOLE RESPONSIBILITY TO DIRECTLY CONTACT ANY OTHER UTILITY COMPANIES THAT ARE NOT MEMBERS OF BLUE STAKES. IT SHALL BE THE CONTRACTOR'S 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 CONTRACTOR. THE CONTRACTOR SHALL BE REQUIRED TO COOPERATE WITH OTHER CONTRACTORS AND UTILITY COMPANIES INSTALLING NEW STRUCTURES, UTILITIES AND SERVICE TO THE PROJECT.

2. CARE SHOULD BE TAKEN IN ALL EXCAVATIONS DUE TO POSSIBLE EXISTENCE OF UNRECORDED UTILITY LINES. EXCAVATION REQUIRED WITHIN PROXIMITY OF EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT CONTRACTOR'S EXPENSE.

3. TRENCH BACKFILL MATERIAL AND COMPACTION TESTS ARE TO BE TAKEN PER APWA STANDARD SPECIFICATIONS (LATEST EDITION), SECTION 02221 - BACKFILLING TRENCHES, OR AS REQUIRED BY THE GEOTECHNICAL REPORT IF NATIVE MATERIALS ARE USED. NO NATIVE MATERIALS ARE ALLOWED IN THE PIPE ZONE. THE MAXIMUM LIFT FOR BACKFILLING EXCAVATIONS IS 8 INCHES.

4. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE, CAUSED BY ANY CONDITION INCLUDING SETTLEMENT, TO EXISTING UTILITIES FROM WORK PERFORMED AT OR NEAR EXISTING UTILITIES. THE CONTRACTOR SHALL TAKE ALL MEASURES NECESSARY TO PROTECT ALL EXISTING PUBLIC AND PRIVATE ROADWAY AND UTILITY FACILITIES. DAMAGE TO EXISTING FACILITIES CAUSED BY THE CONTRACTOR MUST BE REPAIRED BY THE CONTRACTOR AT HIS/HER EXPENSE TO THE SATISFACTION OF THE OWNER OF SAID FACILITIES.

5. ALL WATER LINE AND SEWER LINE INSTALLATION AND TESTING TO BE IN ACCORDANCE WITH LOCAL GOVERNING AGENCY'S OR APWA STANDARDS AND SPECIFICATIONS.

6. ALL MANHOLES, HYDRANTS, VALVES, CLEANOUT BOXES, CATCH BASINS, METERS, ETC. MUST BE RAISED OR LOWERED TO FINAL GRADE PER APWA (LATEST EDITION) STANDARDS AND INSPECTOR REQUIREMENTS. CONCRETE COLLARS MUST BE CONSTRUCTED ON ALL MANHOLES, CLEANOUT BOXES, CATCH BASINS, AND VALVES PER APWA STANDARDS. ALL MANHOLE, CATCH BASIN, OR CLEANOUT BOX CONNECTIONS MUST BE MADE WITH THE PIPE CUT FLUSH WITH THE INSIDE OF THE BOX AND GROUTED OR SEALED.

7. CONTRACTOR SHALL NOT ALLOW ANY GROUNDWATER OR DEBRIS TO ENTER THE NEW OR EXISTING PIPE DURING CONSTRUCTION.

8. SILT AND DEBRIS ARE TO BE CLEANED OUT OF ALL STORM DRAIN BOXES. CATCH BASINS ARE TO BE MAINTAINED IN A CLEANED CONDITION AS NEEDED UNTIL AFTER THE FINAL BOND RELEASE INSPECTION.

9. CONTRACTOR SHALL CLEAN ASPHALT, TAR OR OTHER ADHESIVES OFF OF ALL MANHOLE LIDS AND INLET GRATES TO ALLOW ACCESS.

10. EACH TRENCH SHALL BE EXCAVATED SO THAT THE PIPE CAN BE LAID TO THE ALIGNMENT AND GRADE AS REQUIRED. THE TRENCH WALL SHALL BE SO BRACED THAT THE WORKMEN MAY WORK SAFELY AND EFFICIENTLY. ALL TRENCHES SHALL BE DRAINED SO THE PIPE LAYING MAY TAKE PLACE IN DEWATERED CONDITIONS.

11. CONTRACTOR SHALL PROVIDE AND MAINTAIN AT ALL TIMES AMPLE MEANS AND DEVICES WITH WHICH TO REMOVE PROMPTLY AND TO PROPERLY DISPOSE OF ALL WATER ENTERING THE TRENCH EXCAVATION.

12. UTAH STATE REGULATIONS ON THE SEPARATION OF DRINKING WATER AND SEWER LINES SHALL BE FOLLOWED. THESE ARE LISTED UNDER UAC R317-3-2.9.B TO UAC R309-550-7.

13. ALL DUCTILE IRON PIPE SHALL BE PRESSURE CLASS OR SPECIAL THICKNESS CLASS CONFORMING TO ANSI/AWWA C150/A21.50 & C151/A21.51 AND AWWA C600 WITH 8 MIL. POLYETHYLENE WRAP FOR BURIED INSTALLATIONS.

14. ALL DUCTILE IRON FITTINGS SHALL BE RATED FOR WORKING PRESSURES AS SPECIFIED ON THE DRAWINGS.

15. POLYVINYL CHLORINE PIPE SHALL CONFORM TO AWWA C900 (12-INCH DIAMETER OR LESS) OR AWWA C905 (DIAMETER LARGER THAN 12-INCHES) WITH A DIMENSION RATIO (DR) OF 18 OR LESS AND CONFORM TO ASTM D2774 AND AWWA M23.

16. ALL GATE VALVES SHALL BE RESILIENT WEDGE GATE VALVES AND SHALL CONFORM TO AWWA C-509 OR C-515. GATE VALVES INSTALLED IN VAULTS SHALL BE FURNISHED WITH HANDWHEEL OPERATORS. VALVES INSTALLED IN DIRECT BURY APPLICATIONS SHALL BE FURNISHED WITH A TWO-INCH SQUARE OPERATING NUT AND SLIP TYPE, CAST IRON VALVE BOX.

17. ALL BUTTERFLY VALVES FOR STANDARD PRESSURE APPLICATIONS SHALL BE TIGHT-CLOSING RUBBER SEAT BUTTERFLY VALVES AND SHALL MEET THE REQUIREMENTS OF AWWA C-504 FOR CLASS 150 B VALVES AND RATED FOR WORKING PRESSURE OF 150 PSI. HIGH PRESSURE BUTTERFLY VALVES SHALL BE RATED FOR WORKING PRESSURES AS SPECIFIED ON THE DRAWINGS.

18. ALL BOLTS FOR DIRECT BURY FITTINGS SHALL BE COATED WITH FM GREASE, AND THE ENTIRE FITTING SHALL BE WRAPPED WITH 8 MIL. POLYETHYLENE PRIOR TO BACKFILLING.

19. CONTRACTOR SHALL INSTALL TRACER WIRE AND MAGNETIC LOCATING TAPE CONTINUOUSLY OVER ALL PIPE UNLESS NOTED ON THE DRAWINGS.

20. ALL DRINKING WATER LINES, TANKS, WELLS, FITTINGS AND APPURTENANCES SHALL BE INSTALLED, TESTED, AND DISINFECTED PER R309-500 THRU 550 PUBLIC DRINKING WATER FACILITY DESIGN AND OPERATION RULES. ALL MATERIAL THAT MAY CONTACT DRINKING WATER, INCLUDING PIPES, GASKETS, LUBRICANTS, O-RINGS, SHALL BE CERTIFIED PER ANSI/NSF 61, CERTIFIED DRINKING WATER SYSTEM COMPONENTS - HEALTH EFFECTS. TO PERMIT FIELD VERIFICATION OF THIS COMPLIANCE, ALL SUCH COMPONENTS SHALL BE APPROPRIATELY STAMPED WITH THE NSF LOGO. FLUSHING AND DISINFECTION OF DRINKING WATER LINES, TANKS, WELLS, FITTINGS AND APPURTENANCES SHALL BE IN ACCORDANCE WITH AWWA STANDARD C651. PRESSURE AND LEAK TESTING SHALL COMPLY WITH AWWA C600.

21. ALL BURIED MECHANICAL JOINTS SHALL BE RESTRAINED

22. ALL OPEN ENDS OF PIPE SHALL BE EFFECTIVELY SEALED AT THE END OF THE DAY'S WORK AND PIPE SHALL NOT BE DROPPED INTO TRENCH.

23. PVC PIPE SHALL BE PRESSURE TESTED ACCORDING TO AWWA C605.

24. WATER LINE TO BE LAID WITHOUT HIGH POINTS OR LOW POINTS, EXCEPT WHERE SHOWN ON THE PLAN AND PROFILE SHEETS.

25. DRINKING WATER LINES TO BE INSTALLED WITH MINIMUM OF 48-INCHES OF COVER.

26. HIGH DENSITY POLYETHYLENE PIPE (HDPE) SHALL CONFORM TO AWWA M55 AND ASTM D2774.

27. CONTRACTOR TO OBSERVE REQUIRED SEPARATION BETWEEN WATER AND SEWER PIPELINES PER UAC R317-3-2.

28. ALL ELBOWS, TEES, CROSSES, CAPPED ENDS, VALVES AND OTHER APPURTENANCES SHALL BE FULLY RESTRAINED USING THRUST BLOCKS AND RESTRAINED JOINTS OR OTHER ACCEPTED METHODS UNLESS NOTED ON THE PROJECT DRAWINGS. CONTRACTOR SHALL NOTIFY ENGINEER IF A THRUST BLOCK CANNOT BE POURED FOR A FITTING.

29. ENGINEER WILL PROVIDE ELECTRONIC FILE SHOWING PIPELINE ALIGNMENT IN COORDINATES TO USE FOR PIPELINE STAKING.

30. CONTRACTOR SHALL COORDINATE ALL RESTORATION EFFORTS WITH THE OWNER AND AGENCIES HAVING JURISDICTION.

31. CONTRACTOR SHALL COORDINATE LOCATION OF NEW "DRY UTILITIES" WITH THE APPROPRIATE UTILITY COMPANY, INCLUDING BUT NOT LIMITED TO: TELEPHONE & INTERNET SERVICE, GAS SERVICE, CABLE, AND POWER.

32. ALL UNDERGROUND UTILITIES SHALL BE IN PLACE PRIOR TO INSTALLATION OF CURB, GUTTER, SIDEWALK AND STREET PAVING.

CONCRETE NOTES

1. UNLESS OTHERWISE NOTED, ALL ON-GRADE CONCRETE WILL BE PLACED ON A MINIMUM 6-INCH GRAVEL BASE OVER A WELL COMPACTED (95% DENSITY PER ASTM D-1557) SUB GRADE.

2. REFER TO GENERAL STRUCTURAL NOTES FOR ADDITIONAL CONCRETE NOTES.

TRAFFIC CONTROL AND SAFETY NOTES

1. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ALL FLAGGING, BARRICADES, AND TRAFFIC CONTROL AS MAY BE NECESSARY TO ENSURE SAFETY TO THE GENERAL PUBLIC DURING CONSTRUCTION. A TRAFFIC CONTROL PLAN SHALL BE DEVELOPED BY THE CONTRACTOR AND SUBMITTED TO THE AGENCIES HAVING JURISDICTION.

2. TRAFFIC CONTROL, BARRICADES, DETOURING, AND STRIPING TO CONFORM TO THE CURRENT MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.).

3. NO STREET SHALL BE CLOSED TO TRAFFIC WITHOUT WRITTEN PERMISSION FROM THE APPROPRIATE AGENCY, EXCEPT WHEN DIRECTED BY LAW ENFORCEMENT OR FIRE OFFICIALS.

4. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROVIDE FOR SMOOTH TRAFFIC FLOW AND SAFETY. ACCESS SHALL BE MAINTAINED FOR ALL PROPERTIES ADJACENT TO THE WORK.

5. DETOURING OPERATIONS FOR A PERIOD OF SIX CONSECUTIVE CALENDAR DAYS, OR MORE, REQUIRE THE INSTALLATION OF TEMPORARY STREET STRIPING AND REMOVAL OF INTERFERING STRIPING BY SANDBLASTING. THE DETOURING STRIPING PLAN OR CONSTRUCTION TRAFFIC CONTROL PLAN MUST BE SUBMITTED TO THE CITY TRAFFIC ENGINEER OR LOCAL JURISDICTION OF AUTHORITY FOR REVIEW AND APPROVAL.

6. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE END OF THE WORK TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER OR LOCAL JURISDICTION OF AUTHORITY.

7. TRAFFIC CONTROL DEVICES (TCDS) SHALL REMAIN VISIBLE AND OPERATIONAL AT ALL TIMES.

8. ALL PERMANENT TCDS CALLED FOR HEREON SHALL BE IN PLACE AND IN FINAL POSITION PRIOR TO ALLOWING ANY PUBLIC TRAFFIC ONTO THE PORTIONS OF THE ROAD(S) BEING IMPROVED HEREUNDER, REGARDLESS OF THE STATUS OF COMPLETION OF PAVING OR OTHER OFF-SITE IMPROVEMENTS CALLED FOR BY THESE PLANS.

9. THE CONTRACTOR SHALL PROVIDE BARRICADES, SIGNS, FLASHERS, OTHER EQUIPMENT AND FLAG PERSONS NECESSARY TO ENSURE THE SAFETY OF WORKERS AND VISITORS.

GRADING AND DRAINAGE NOTES

1. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE GEOTECHNICAL REPORT AND ALL RELATED ADDENDUMS.

2. THE CONTRACTOR SHALL STRIP AND CLEAR THE TOPSOIL, MAJOR ROOTS AND ORGANIC MATERIAL FROM ALL PROPOSED BUILDING, PIPELINES, AND PAVEMENT AREAS PRIOR TO SITE GRADING. (THE TOPSOIL MAY BE STOCKPILED FOR LATER USE IN LANDSCAPED AREAS.)

3. THE CONTRACTOR SHALL REMOVE ALL ORGANIC MATERIAL AND OTHER DELETERIOUS MATERIALS PRIOR TO PLACING GRADING FILL OR BASE COURSE. THE AREA SHOULD BE PROOF-ROLLED TO IDENTIFY ANY SOFT AREAS. WHERE SOFT AREAS ARE ENCOUNTERED, THE CONTRACTOR SHALL REMOVE THE SOIL AND REPLACE WITH COMPACTED FILL.

4. ALL DEBRIS PILES AND BERMS SHOULD BE REMOVED AND HAULED AWAY FROM SITE OR USED AS GENERAL FILL IN LANDSCAPED AREAS.

5. THE CONTRACTOR SHALL CONSTRUCT THE BUILDING PAD TO THESE DESIGN PLANS AS PART OF THE SITE GRADING CONTRACT.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE AND DEBRIS ON ADJACENT STREETS WHEN EQUIPMENT IS TRAVELING THOSE STREETS.

7. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PERFORM ALL NECESSARY CUTS AND FILLS WITHIN THE LIMITS OF THIS PROJECT AND THE RELATED OFF-SITE WORK, SO AS TO GENERATE THE DESIRED SUBGRADE, FINISH GRADES, AND SLOPES SHOWN.

8. THE CONTRACTOR IS WARNED THAT AN EARTHWORK BALANCE WAS NOT NECESSARILY THE INTENT OF THIS PROJECT. ANY ADDITIONAL MATERIAL REQUIRED OR LEFTOVER MATERIAL FOLLOWING EARTHWORK OPERATIONS BECOMES THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE UTILIZED ONSITE AT LOCATIONS COORDINATED WITH OWNER.

9. ALL CUT AND FILL SLOPES SHALL BE PROTECTED UNTIL EFFECTIVE EROSION CONTROL HAS BEEN ESTABLISHED.

10. THE USE OF POTABLE WATER WITHOUT A SPECIAL PERMIT FOR BUILDING OR CONSTRUCTION PURPOSES INCLUDING CONSOLIDATION OF BACKFILL OR DUST CONTROL IS PROHIBITED. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FOR CONSTRUCTION WATER FROM GOVERNING AGENCY.

11. THE CONTRACTOR SHALL MAINTAIN THE STREETS, SIDEWALKS, AND ALL OTHER PUBLIC RIGHTS-OF-WAY IN A CLEAN, SAFE AND USABLE CONDITION. ALL SPILLS OF SOIL, ROCK OR CONSTRUCTION DEBRIS SHALL BE PROMPTLY REMOVED AND DISPOSED OF IN A LAWFUL MANNER FROM THE PUBLICLY-OWNED PROPERTY DURING CONSTRUCTION AND UPON COMPLETION OF THE PROJECT. ALL ADJACENT PROPERTY, PRIVATE OR PUBLIC, SHALL BE MAINTAINED IN A CLEAN, SAFE, AND USABLE CONDITION.

12. TOPSOIL SHALL BE REPLACED AND GRADED PRIOR TO REVEGETATION. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE DEPTH OF EXISTING TOPSOIL AND REPLACING AND THE EXISTING TOPSOIL DEPTH. DISTURBED AREAS SHALL BE RESEEDED USING A SEED MIX SPECIFIED ON THE EROSION CONTROL PLAN AND DETAILS.

13. IMPROVEMENT ELEVATION LABELS AND ELEVATION CONTOURS REFERENCE FINISH ELEVATIONS. REFER TO ABBREVIATIONS AND SYMBOL LEGEND INCLUDED HEREIN.

EROSION CONTROL NOTES

1. PER UDEQ, STORM WATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES GENERAL PERMIT NO. UTR 300000, CONSTRUCTION ACTIVITY INCLUDING CLEARING, GRADING, EXCAVATION, AND DEMOLITION THAT DISTURBS ONE OR MORE ACRES OF LAND SHALL REQUIRE INCLUSION IN THE GENERAL PERMIT AND COMPLY WITH THE REQUIREMENTS THEREIN.

2. THE TOTAL PROJECT AREA OF DISTURBANCE IS GREATER THAN 1 ACRE; THEREFORE, AN UPDES STORM WATER PERMIT IS REQUIRED.

3. THE CONTRACTOR SHALL OBTAIN A STORM WATER PERMIT FOR THIS PROJECT, IF APPLICABLE, AND MAINTAIN A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) ON SITE DURING ALL PHASES OF CONSTRUCTION.

4. THE PRIME CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR COMPLIANCE WITH GENERAL PERMIT.

5. THE EROSION CONTROL PLAN HEREIN IS FOR PERMITTING PURPOSES ONLY. THE CONTRACTOR SHALL REVISE THE EROSION CONTROL PLAN TO FIT SPECIFIC SITE CONDITIONS AS REQUIRED TO MEET THE REQUIREMENTS AND CONDITIONS OF THE PERMIT.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT THROUGHOUT CONSTRUCTION AND UNTIL THE NOTICE OF TERMINATION (NOT) IS ISSUED BY UDEQ. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL PERMIT REQUIREMENTS.

7. MAINTAIN DUST CONTROL WITH WATER AND/OR DUST PALLIATIVE AT ALL TIMES. PROVIDE SUFFICIENT LABOR, EQUIPMENT, AND MATERIALS ONSITE TO MAINTAIN DUST CONTROL WHEN CONDITIONS REQUIRE.

SPECIAL INSPECTION AS PER IBC

1. REFER TO STRUCTURAL SPECIAL INSPECTION SHEET FOR SPECIAL INSPECTIONS REQUIRED BY THE INTERNATIONAL BUILDING CODE.

DESIGN CRITERIA

1. REFER TO GENERAL STRUCTURAL NOTES SHEET FOR PROJECT DESIGN CRITERIA.

PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2025
12/15/2024
STATE OF UTAH

0 1/2 1 DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

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GRANTSVILLE CITY
GRANTSVILLE WWTP

GENERAL NOTES

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THE STANDARD IN ENGINEERING

AQUA ENGINEERING

DRAWING NO.
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Exhibit A

CHAPTER 1 STANDARD NOTES

The Grantsville City Standard Notes are required to be included as part of all construction plans for residential or commercial development. Plans submitted by public or private entities for all other types of projects within City right-of-way, its easements or property shall reference the Grantsville City Standard Notes and Specifications.

1.1 Grantsville City General Notes

1. All work done or improvements installed within Grantsville City including but not limited to excavation, construction, roadwork and utilities shall conform to the Grantsville City Construction Standards and Specifications, City Municipal Code, the latest edition of the APWA Manual of Standard Specifications and Manual of Standard Plans, the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD) and any state or federal regulations and permit requirements of various governing bodies. The contractor is responsible to have a copy of these specifications and to know and conform to the appropriate codes, regulations, drawings, standards and specifications.

2. The existence and location of any overhead or underground utility lines, pipes, or structures shown on these plans are obtained by research of the available records. Existing utilities are located on plans only for the convenience of the Contractor. The contractor shall bear full responsibility for the protection of utilities and the engineer bears no responsibility for utilities not shown on the plans or not in the location shown on the plans. This includes all service laterals of any kind. The Contractor shall, at his own expense, locate all underground and overhead interferences, which may affect his operation during construction and shall take all necessary precautions to avoid damage of the same. The Contractor shall use extreme caution when working near overhead utilities so as to safely protect all personnel and equipment, and shall be responsible for all cost and liability in connection therewith.

3. The Contractor shall take all precautionary measures necessary to protect existing utility lines, structures, survey monuments and street improvements which are to remain in place, from damage, and all such improvements or structures damaged by the Contractor´s operations shall be repaired or replaced satisfactory to the City Engineer and owning utility company at the expense of the Contractor.

4. All construction shall be as shown on these plans, any revisions shall have the prior written approval of the City Engineer and Public Works Director.

5. Permits are required for any work in the public way.The Contractor shall secure all permits and inspections required for this construction.

6. Curb, gutter, and sidewalk, found to be unacceptable per City Standards and APWA shall be removed and replaced.

7. Contractor shall provide all necessary horizontal and vertical transitions between new construction and existing surfaces to provide for proper drainage and for ingress and egress to new construction. The extent of transitions to be as shown on plans.

8. Any survey monuments disturbed shall be replaced and adjusted per Tooele County Surveyors requirements.

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9. All privacy walls, new or existing, are only shown on civil plans for the purpose of reviewing grading relationships; flood control and sight distance at intersections. All walls shall have a minimum 2 ft x 2 ft x 30-inch-deep spot footings. Bottom of all footings on all walls shall be a minimum of 30 inches below finished grade. Walls greater than 6 feet require a separate permit and inspection by the Building Department.

10. All construction materials per APWA must be submitted and approved by the City Engineer prior to the placement of asphalt within City Right of Way. Grantsville Public Works will approve pipe zone material to be placed.

11. Request for inspection by the Grantsville City Engineering Dept. shall be made by the contractor at least 48 hours before the inspection services will be required.

12. Work in public way, once begun, shall be prosecuted to completion without delay as to provide minimum inconvenience to adjacent property owners and to the traveling public. Please see Code 17 General Provisions for more details.

13. The Contractor shall take all necessary and proper precautions to protect adjacent properties from any and all damage that may occur from storm water runoff and/or deposition of debris resulting from any and all work in connection with construction.

14. Power poles and/or other existing facilities not in proper location based on proposed improvements shown hereon will be relocated at no expense to the Grantsville City. Power lines and all other aerial utilities are to be buried and poles removed as determined by the City Engineer. If any core is located in concrete, or if a portion of concrete is removed, flow fill to subgrade and the entire concrete section (from joint to joint) must be replaced.

15. Curb and gutter with agrade of less than four-tenths of one percent shall be constructed by forming. Each joint shall be checked for a grade prior to construction and water tested as soon as possible after construction.

16. Contractor to follow Grantsville City Noise Ordinance Standards Code Ordinance 2018-19

17. Contractors are responsible for all OSHA requirements on the project site.

18. A UPDES (Utah Pollutant Discharge Elimination System) permit is required for all construction activities as per state law as well as providing a Storm Water Pollution Prevention Plan to the City.

19. All City maintained utilities including; waterline, fire hydrants, streetlight wiring, and storm drain must be in public right of way or in recorded easements.

20. Contractor shall work Grantsville City regular working hours of Monday through Friday 7:00 am to 4:00 pm

21. Prior to 90% bond release, a legible as-built drawing must be submitted to the Grantsville City. As-builts must show all changes and actual field locations of storm drainage, waterlines, irrigation, street lighting, and power. As-builts will be held to the same standard as approved design drawings, no "redlined plans" allowed. In the absence of changes, copies of the approved drawings will be required stating "installed as per drawings". As-built drawings for new developments shall be submitted to the City in the following formats and quantities prior to the 90% bond release: 1 .dxf copy, 1 .pdf copy, and 1 GIS Shape file containing the same.

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22. Filter fabric wrapped around an inlet grate is not an acceptable inlet sediment barrier. See Grantsville City Construction Standards and Specifications for details of approved storm water BMPs which specifically states the utilization of an Oil Water Snout Separator.

23. Asphalt paving is not allowed without a written exception from the Engineering Department and Public Works Department below an ambient temperature of 50 degrees and rising.

24. To ensure proper planting, protection and irrigation of trees, mitigating risk of tree failure or future damage to infrastructure, contractors are required to follow the standards and specifications ofthe ISA – International Society of Arboriculture.

NOT APPLICABLE TO PROJECT

25. When a proposed development borders a collector, minor collector or arterial street and is required to construct collector street fencing along the back of sidewalk, the development shall also be required put in a concrete mow strip from the back of sidewalk to underneath the fence panels. Concrete mow strips shall also be required between the sidewalk and fencing along the rear of double frontage lots.

26. Concrete for all surface improvements including but not limited to; sidewalk, driveway entrances, pedestrian ramps, curb and gutter, water ways, manhole, vault and valve collars, and any other cast in place surface concrete features shall be constructed with minimum 4,500 psi concrete.

27. Culinary Water and Sewer service laterals shall be marked on the top back of curb and lip of curb at their actual location of crossing the curb and gutter. Pins or stamps shall be used and must be installed while the concrete is still wet and will readily accept the marker. Grinding marking due to dry cement is not allowed.

Revision 12/24/2024

1.2 Grantsville City Traffic Notes

1. When a designated "Safe Route To School" is encroached upon by a construction work zone the safe route shall be maintained in a manner acceptable to Grantsville City.

2. If the improvements necessitate the obliteration, temporary obstruction, temporary removal or relocation of any existing traffic pavement marking, such pavement marking shall be restored or replaced with like materials to the satisfaction of the City Engineer, Public Works Director or designee.

NOT APPLICABLE TO PROJECT

3. The street Sign Contractor shall obtain street names and block numbering from thePlanning Department prior to construction.

4. The Contractor shall be responsible for providing and installing all permanent signs shown on the plans. Street name signs shall conform in their entirety to current City Standards and the latest Manual of Uniform Traffic Control Devices (MUTCD) manual. All other signs shall be standard size unless otherwise specified on the plans. All sign posts shall be installed in accordance with the current City Standards and the latest Manual of Uniform Traffic Control Devices (MUTCD) manual.

5. All permanent traffic control devices called for hereon shall be in place and in final position prior to allowing any public traffic onto the portions of the road(s) being improved hereunder, regardless of the status of completion of paving or other off-site improvements called for per approved construction drawings unless approved by the City Engineer & Public Works Director.

6. The Contractor shall be responsible for notifying Utah Transit Authority (UTA) if applicable, if the construction interrupts or relocates a bus stop or has an adverse effect on bus service on that street to arrange for temporary relocation of stop.

7. Before any work is started in the right-of-way, the contractor shall install all advance warning signs for the construction zone. The contractor shall install temporary stop signs at all new street encroachments into existing public streets. All construction signing, barricading, and traffic delineation shall conform to the Manual of Uniform Traffic Control Devices (MUTCD) per the current edition adopted by UDOT and be approved by the Grantsville City before construction begins. Traffic control plans shall be submitted as part of the engineering construction package and approved by the Grantsville City Engineer and Public Works Director.

8. All signs larger than 36" X 36" or 1296 square inches per sign pole shall be mounted on a Slip Base system per UDOT standard drawing SN 10B (detail drawing attached to standard drawings) with a "Z" bar backing. Signs of this size are not allowed to be mounted on a yielding pole.

9. Sign components such as sheeting, EC film, inks, letters and borders are all required to be from the same manufacturer. Only EC film may be used to achieve color. Vinyl EC film is not accepted.

10. All new roundabouts, crosswalks, stop bars and legends shall be installed with Paint and Glass Bead.

11. Paving asphalt binder grade shall be PG 58-28 unless otherwise approved by the City Engineer. Asphalt aggregate size shall be ½ inch for residential and collector roads. No more than 15% RAP (reclaimed asphalt pavement) by weight will be allowed in the asphalt mix design for the paving of public and private streets. Up to the 15 percent will be allowed with no change in the specific binder grade. The asphalt mix design shall have no more than 3½ % air voids.

Revision 12/24/2024

14. Potholing: All potholes must be saw cut square and have a minimum size of 1 square foot or remove and retain round core. When repairing a pothole, sand or pea gravel meeting Grantsville City standard shall be placed over the exposed utility to a depth of 6 inches. The pothole shall be filled with flow fill, and the round core shall be replaced in the flow fill, with epoxy seal applied around the joint. For larger cuts, following the pea gravel will be flowable fill up to 1 inch below the bottom edge of the existing asphalt. The remaining portion of the hole shall be filled with asphalt, which will have an overall thickness of the existing asphalt plus 1 inch.

15. All fill within the public right of way shall be A-1-a 3-inch minus, unless approved by the City Public Works Director or the City Engineer. with the exception of top soil in the park strip for landscaping and trench backfill. Trench backfill material under pavements or surface improvements shall be clean, nonclumping, granular and flowable, 3-inch minus, A-1-a soils according to AASHTO 145 soil Classification System, unless approved by the City Public Works Director or the City Engineer. Lime treated flowable fills, if approved, shall have a 28-day strength of 65 PSI. If the developer chooses to utilize material other than A-1-a 3-inch minus for trench back fill, then a City approved Geotechnical Engineer Company is required to approve the material is suitable for fill. Any fill material used shall be 3 inch minus material. The developer is required to pay the City's contracted independent Geotechnical Engineering Company per the City fee schedule and to be on site at all times during fill placement, compaction, and testing. If the fill being used on the project does not meet A-1-a standards or is not the same material the contracted Geotechnical Engineer approved for the project then the City Inspector can shut down the project with a stop work order. Work shall not resume until unsuitable fill material has been removed and replaced by the developer's contractor at the developer's expense. If the independent Geotechnical Engineering Company observing the fill placement, compaction, and testing is not on site then the City Inspector can shut down the project with a stop work order. Work shall not resume until the independent geotechnical engineering company observing fill placement, compaction, and testing is on site.

16. All traffic road closures involving 1 or more lanes of traffic must receive prior approval from the City Engineer, Public Works Director or his/her representative. VMS PCMS boards must be placed a minimum of 7 days in advance of any lane closure on collector, minor collector or arterial street. VMS PCMS boards must also be placed in advance of any lane closures on a subdivision street per the City Engineer's direction.

17.Roundabouts, including their ingress and egress, shall be constructed with concretepavement. Engineer shall design cross section and submit to the City for review and approval.

Revision 12/24/2024

1.3 Grantsville City Grading Notes

1. In the event that any unforeseen conditions not covered by these notes are encountered during grading operations, the Owner and City Engineer shall be immediately notified fordirection.

2. It shall be the responsibility of the Contractor to perform all necessary cuts and fills within the limits of this project and the related off-site work, so as to generate the desired subgrade, finish grades and slopes shown.

3. Contractor shall take full responsibility for all excavation. Adequate shoring shall be designed and provided by the Contractor to prevent undermining of any adjacent features or facilities and/or caving of the excavation.

4. The Contractor is warned that an earthwork balance was not necessarily the intent of this project. Any additional material required or leftover material following earthwork operations becomes the responsibility of the Contractor.

5. Contractor shall grade the pavement area subgrade to the lines (horizontal) and elevations (vertical) shown on the plans within a tolerance of 0.1 + to 0.1-.

6. All cut and fill slopes shall be protected until effective erosion control has been established.

7. The Contractor shall obtain all necessary permits for construction water from Grantsville City Engineering and Utilities Department.

8. The Contractor shall maintain the streets, sidewalks and all other public right-of way in a clean, safe and usable condition. All spills of soil, rock or construction debris shall be promptly removed from the publicly owned property during construction and upon completion of the project. All adjacent property, private or public shall be maintained in a clean, safe and usable condition.

9. In the event that any temporary construction item is required that is not shown on these drawings, the Developer agrees to provide and install such item at his own expense and at the direction of the City Engineer. Temporary construction includes ditches, berms, road signs and barricades, etc.

10. All grading work shall conform to the soils report as prepared by the Soils Engineer and approved by the City Engineer, and as shown on these plans.

11. All quality control testing shall be performed by an independent licensed and Certified third-party testing service.

Revision 12/24/2024

1.5 Grantsville City Fire Department Notes

1. On any new home or building installation, accessible fire hydrants shall be installed before combustible construction commences and said fire hydrants shall be in good working order with an adequate water supply.

2. Contractor shall call the Public Works Department and Engineering Department for underground inspection, pressure and flush verification of all fire hydrants and fire lines before backfilling.

3. Painting of the curbs and hydrant and any work necessary for protection of hydrants from physical damage shall be approved before being constructed. Hydra-finders will be installed per Grantsville City Standards detail.

4. A flow test must be witnessed by the Fire Department prior to occupancy for verification of required on-site water supply.

5. All on-site fire main materials must be U.L. listed and A.W.W.A. approved.

6. The turning radius for any fire apparatus access road and/or fire lane, public or private, shall be not less than forty-eight feet (48') outside radius equaling 96' or larger and twenty-two feet (22') inside radius and shall be paved.

7. A fire apparatus road shall be required when any portion of an exterior wall of the first story is located more than one-hundred fifty feet (150') from Fire Department vehicle access roads and/or fire lanes, public or private, in excess of one hundred fifty feet (150') in length shall be provided with an approved turn around area. Contractor/Engineer shall follow latest International Fire Code regulations at all times in regards to distance.

8. Access roads shall be marked by placing approved signs at the start of the designated fire lane, one sign at the end of the fire lane and width signs at intervals of one-hundred feet (100') along all designated fire lanes. Signs to be placed on both sides of an access roadway if needed to prevent parking on either side. Signs shall be installed at least 5', measured from the bottom edge of the sign to the near edge of pavement. Where parking or pedestrian movements occur, the clearance to the bottom of the sign shall be at least 7'. The curb along or on the pavement or cement if curb is not present, shall be painted with red weather resistant paint in addition to the signs.

9. Electrically controlled access gates shall be provided with an approved emergency vehicle detector/receiver system. Said system shall be installed in accordance with the Grantsville City F.D. approval. Gates are only allowed with prior approval.

10. All private underground fire lines that service automatic fire sprinkler systems shall be no smaller than eight (8) inches in diameter and have a Post Indicator Valve (PIV) between the water main and the building. If a PIV isn't feasible due to site constraints, a Water Indicator Valve (WIV) may be used with the approval of the City Engineer or Fire Code Official. For a WIV to be allowed, another valve must be installed on the fire service line back at the connection to the water main, which will be maintained by the City as part of its culinary water system. All fire lines material shall be Ductile Iron. (Ductile Iron from the PIV to the building shall be permitted or Ductile Iron from the main water line to the WIV).

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11. Post Indicator Valves (PIV) shall be between 6 and 40 feet from buildings not exceeding three stories or equivalent in height and between 30 and 40 feet on buildings in excess of three or more stories in height or equivalent.

12. Roads and accesses shall be designed and maintained to support the imposed loads of fire apparatus. Surface shall be paved before the application of combustible material.

13. All new buildings equipped with a Fire Department Connection (FDC) must have inlets secured with Knox brand locking FDC cap(s) with a swivel collar. All new buildings are also required to have a Knox brand key lock box mounted on the exterior building, such that Fire Department personnel may gain access in case of an emergency.

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PROFESSIONAL ENGINEER
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EXP. 3/31/2026
12/15/2025
STATE OF UTAH

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE
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1.6 Grantsville City Water Notes

1. The following Grantsville City Water Notes are intended for general water standards only and are not all inclusive. The City has included the Culinary Water Design and Construction Standards within the City Construction Standards and Specifications.

2. No work shall begin until the water plans have been released for construction by the Engineering Department. Following water plan approval, forty-eight (48) hour notice shall be given to the Engineering Department and the Public Works Department prior to the start of construction. Notice must be given by 2:00 P.M. the business day prior to an inspection.

3. All work within Grantsville City shall conform to Grantsville City Standards and Specifications, AWWA and APWA.

NOT APPLICABLE TO PROJECT

4. For Residential Developments - The developer shall purchase and install meter boxes and setters according to City Standards on newly developed lots and real property at the time of water main installation. Water meters will be supplied and installed by the Grantsville Utilities Department (at Developer's expense). The developer shall also provide the site address, lot number, meter size and pay meter fees prior to building permit approval. The developer should also pay for rental of a hydrant meter, and/or use the Grantsville City Public Water Standpipe located by the Public Works Building.

5. For Commercial and Condominium Developments - The developer shall purchase and install meter boxes and setters according to City Standards. Water meters will be supplied by Grantsville City Public Works Department (at Developer's expense) and installed by Developer.

6. All water facilities shall be filled, disinfected, pressure tested, flushed, filled and a series of Bac-T testing performed by the City shall be obtained prior to commissioning the new water line to the Grantsville City Culinary Water Distribution System.

7. Grantsville City Utilities Department must approve water shut down which may require evening and weekend shut down as deemed necessary, requiring the contractor to be billed for overtime. 48 hour notice is required.

NOT APPLICABLE TO PROJECT

8. Water stub-out installations will not be construed as a commitment for water service.

9. Conditional Approval of Valved Outlet (6" and Larger): In the event the water plans show one or more valved outlets extending out of paved areas, installations of these outlets is acceptable, however, if the outlets are incorrectly located or not used for any reason when the property is developed, the developer shall abandon the outlets at the connection to the active main in accordance with the city standards and at the developer's expense.

10. All lines to be pressure tested according to Grantsville City and AWWA standards and chlorinated prior to use and final acceptance.

11. All fittings to be coated with poly fm grease and wrapped with 8-mil thick polyethylene.

12. No other utility lines may be placed in the same trench with water line unless approved by the City Engineer.

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13. Any conflict with existing utilities shall be immediately called to the attention of the City Engineer or designee.

NOT APPLICABLE TO PROJECT

14. All water vaults will be constructed per Grantsville City standard drawings and specifications. No vaults are allowed in traffic areas without prior approval of the City Engineer.

15. Landscaping and irrigation adjacent to vaults shall drain away from vaults.

16. Once the waterline has been tested, approved and city water is flowing through the pipe, only City personnel are authorized to shut down and charge the waterline.

17. Megalug following ring or an approved equivalent shall be used on all fittings.

18. APWA plan 562, stainless steel tie-down restraints with turnbuckles or 5/8" epoxy green rebar is acceptable. Megalug followers required on all fittings and all dimensions of thrust blocking still apply.

19. Water mains will be hot tapped as called out on the approved plans. Under special circumstances, when a contractor submits a request for a shutdown contrary to the approved plans and the request is approved at the discretion of the City Engineer or designee, the contractor must provide 48-hour notice to neighbors and those affected. If businesses are impacted by the shutdown it will be done after hours and all overtime fees for City personnel, equipment and vehicles must be paid in advance.

NOT APPLICABLE TO PROJECT

20. Contractors are required to write the lot number with a black permanent marker on the inside of the water meter barrels as they are installed.

Revision 12/24/2024

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PROFESSIONAL ENGINEER 7885569-2202 ROBERT J. ROUSSELLE EXP. 3/31/2026 12/15/2025 STATE OF UTAH

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

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REVISIONS

GRANTSVILLE CITY

GRANTSVILLE WWTP

GRANTSVILLE CITY GENERAL NOTES

ENSIGN THE STANDARD IN ENGINEERING

AQUA ENGINEERING

DRAWING NO.

01C004

SHEET

Exhibit A

Chain of Communication

- First Contact: Public Works Inspector (CPII)
- Second Contact: Deputy Public Works Director; when Inspector is not available.
- CC: Public Works Director and Deputy Public Works Director.

Please communicate through email to maintain a written record.

Construction Staking

- Surveying & Staking: _____
- Staking must be complete as provided in plans to ensure alignment of utilities.

Geotechnical

- Compaction Geo Technician: _____
- Does the Contractor have a copy of the Geotechnical Report and is the contractor familiar with the requirements?
- Provide the City Inspector a copy of the Geotechnical Report.
- A Geo-tech will be required should the City need additional information on excavations or backfills.

Construction Submittals

- The Contractor shall provide construction submittals for material to the City for review for design conformity and general conformance to Grantsville City Standards and the contract documents prior to purchase of materials and installation. Submit to City Inspector, cc: Public Works Director and Deputy Public Works Director.
- Refer to Grantsville City's General Notes for additional construction submittal requirements.

Emergency Services

- Clear and install a silt fence 5 feet out around live fire hydrants and electrical transformers. This clear space must be maintained for emergency services during construction.
- Install required temporary signage at the beginning of work on the site.
- Park only on one side of access roads so emergency access is clear.
- Coordinate with Fire Chief for his inspections.

Sewer

- Pipe Material: PVC ASTM D-3034 SDR-35
- Follow OSHA requirements for trenching (4 foot vertical with 1:1 sloping or stepping or use trench boxes).
- Sewer laterals per Grantsville City Standard Detail 4-31.

08/25/2025

- Utah State requirement of 10-foot horizontal separation between sewer and water laterals.
- 18 inches minimum vertical separation between water and sewer.
- Crushed Rock ¾ inch in pipe zone (pea gravel is not allowed by the City).
- Sewer laterals - gravel bedding to be extended to dwelling.
- **NO** native soils may be used above the pipe zone, A-1-a 3-inch minus soils per Grantsville City's A-1-a specification are to be used for trench backfill unless a Geotechnical Engineering Company approved by the City Public Works Director or the City Engineer, verifies the suitability of an alternative material. (See City General Notes)
- Offset tees for sewer laterals; gasket type.
- Compaction requirements – 95 percent in ROW, 90 percent out of ROW (ASTM D-1557, Modified Proctor).
- Underground Installation of Gravity-Flow Applications as per ASTM D-2321.
- All precast manholes to be provided with rubber boots and stainless-steel bands at pipe penetrations.
- Interior pipe penetrations in all sewer manholes shall be grouted.
- Tracer wire extending from main to lateral stub on all laterals and extended to surface at stub marker. Include an extra 30 feet to extend along the service to the dwelling.
- Stamp (**When Wet**) or pin (**Do Not Grind**) gutter both at the lip and top of curb an "S" at all service laterals located at exact crossing of the curb (two places for each service).
- Extend utility lateral stub markers beyond the 15-foot PU&DE (15 feet behind back of walk).
- Stamp all Sanitary Sewer concrete collars to specify pipe diameter and line type per Grantsville City Standard Detail 4-11.1
- End of sewer laterals shall be plugged.

Testing:

- Air Test mandatory – certification required.
- Manhole Vacuum Test mandatory – certification required.
- Video inspection after flushing mandatory – the City does not need to observe the video inspection. Video record to be provided for City review.
- Provide the City 48 hours' notice prior to testing.

Culinary Water

- Pipe Material: PVC C900 DR18
- Use bedding sand for backfill in the pipe zone (sand bedding must be preapproved). Refer to Grantsville City bedding sand (cyclone sand) material specification. The City can provide an example.
- Water laterals - sand bedding shall be extended to the dwelling.
- **NO** native soils may be used above the pipe zone, A-1-a 3-inch minus soils per Grantsville City's A-1-a specification are to be used for trench backfill unless a Geotechnical Engineering Company approved by the City Public Works Director or the City Engineer, verifies the suitability of an alternative material. (See City General Notes)

08/25/2025

- Valves shall be clustered in intersections.
- 10-inch valves or smaller are to be gate valves, 12 inches or larger are to be butterfly valves.
- Valves are to be located at the dead-end main of phase lines to allow for flushing, isolation, and continued service to existing connections when future phases are constructed. Blow offs are to be located in the green space.
- Meter and services shall be ¾ inch polyethylene CTS SDR 9 Install service laterals and meters within 5 feet of lot lines (as close to lot line as practicable), one on each side of common lot line (alternate with secondary water).
- Use 150# corp stops.
- Hole saw shall be used for dry PVC and Ductile Iron pressure pipe water main tapping for water services.
- Direct, saddle, and sleeve PVC pressure pipe water main wet tapping shall comply with the PVC Pipe Association, PVC Pressure Pipe Tapping Guide and Ductile Iron Pipe (DIP) water main wet tapping shall comply with the Ductile Iron Pipe Research Association (DIPRA), Installation Guide for Ductile Iron Pipe. Applicable ANSI and AWWA standards such as the latest editions of ANSI/AWWA C600, Installation of Ductile-Iron Mains and Their Appurtenances and ANSI/AWWA C900, Polyvinyl Chlorine (PVC) Pressure Pipe and Fabricated Fittings, 4 In. Through 60 In. (100 mm Through 1,500 mm) shall also apply.
- 10-foot horizontal separation of water and sewer lateral per state requirements.
- 18-inch minimum vertical separation between water and sewer and storm drain.
- 10-foot horizontal separation of water and stormwater.
- Meter barrels shall be 21 inch diameter white corrugated polyethylene.
- Developers cannot swing meter boxes to accommodate the driveway. Plan Accordingly.
- Meter to be installed 18 inches to 22 inches below the lid.
- Place sand around the water service setter bases and above to stabilize setter and provide insulation. **Gravel is not allowed.**
- Tapping saddles shall be brass with double stainless steel or brass straps.
- Use dual check and heavy-duty angle valves for all service setters.
- Install tracer wire (on the pipe) and locating tape above the water main.
- Install tracer wire from the main connection through the meter pit to stub marker with 30 feet excess to extend to the dwelling.
- Stamp (**When Wet**) or pin (**Do Not Grind**) gutter both at the lip and top of curb with a "W" at all service laterals located at exact crossing of the curb two places for each service.
- Stamp valve box concrete collar per Grantsville City Standard Detail 6-43..
- Thrust blocks need to be inspected by the City prior to backfill. Size based on water pressure and pipe size.
- Fire hydrants shall be installed 18 inches minimum back of curb in green space. Break away must be 4 inches above curb or manufacturer's specifications.
- Paint curb red 10 feet either direction of the fire hydrants (20 feet total).
- 5 foot hydrant markers (whips) shall be installed on all hydrants.

Testing:

- Hydrostatic Pressure Test:

08/25/2025

- Water main without tapping saddles - 200 psi for a minimum of 2 hours.
- Water main with tapping saddles, corporations, and service laterals - 150 psi for a minimum of 2 hours.
- The water distribution shall be tested in entirety from main line to setter connections.
- Inspector (City Inspector) must be present for the entire duration of the test.

Disinfection:

- Hypochlorite powder shall be used.
- Chlorine residuals will be tested by the City before flushing.
- One series of Bac-T testing will be performed by the City to accept water lines.
- Developer shall pay for retests if necessary.
- The City will grab all samples initial or retests.
  - Per AWWA C651, Bac-T testing shall be completed for every 1,200 feet of new water main, at the end of the line, and at each branch. Two consecutive sample sets shall be collected at the aforementioned locations at least 24 hours apart.

Storm Water

Pipe Material:

- Reinforced Concrete (RCP) or High Performance storm polypropylene pipe (HP storm).
- Installation and compaction to follow manufacturer's recommendations.
- All catch basin boxes include a sump. For boxes with snouts the sump depth is based upon the snout model manufacturer's recommendation. For all other catch basins the depth is 12 inches below the flow line of the pipes.
- All storm drains must be video inspected.
- Stamp all storm drain concrete collars to specify pipe diameter and line type per Grantsville City Standard Detail 4-11.1

Franchise Utilities

- Gas: Dominion Energy
- Power: Rocky Mountain Power
- Cable: Comcast
- Phone: Century Link
- Stubs shall be installed for franchised utilities. New streets and concrete will not be cut. If stubs are missed, only boring will be allowed.

Surface Improvements

Pavement:

- Asphalt paving is allowed when temperatures are 50 degrees Fahrenheit ambient and rising.

08/25/2025

- City Standard pavement section is 3 inches asphalt on 6 inches Untreated Base Course (UBC) on 8 inches granular borrow or per approved drawings whichever is greater.
- 58/28 PG mix at maximum, 15 percent RAP ½ inch granulated mix required for paving.
- Untreated base course to meet UDOT's Standard Specifications for Road and Bridge Construction, Section 02721 latest edition.
- Granular borrow to be A-a-a 3-inch minus soils per Grantsville City's A-1-a specification unless a Geotechnical Engineering Company approved by the City Public Works Director or City Engineer, verifies the suitability of an alternative material. (See City General Notes)
- Road base and cross-section per approved drawings.
- Provide proper signage per Utah MUTCD.
- Provide stops bars at stop signs (retroreflective paint per MUTCD standard).
- Use Grantsville City Standard Detail 2-55 for pavement T-patch.

Concrete:

- 4,500 psi concrete for all surface improvements.
- Sidewalk section is 6 inches PCC on 6 inches road base.
- ADA Rib Composite Tile (without screws) truncated dome inserts shall be yellow in pedestrian ramps.
- Tile to touch curb line (2-inch max setback) and 5-foot width.
- Air test every 50 yards (5 percent – 7 percent). If out of spec, air test every truck load.
- 3 cylinders every 50 yards.

Earthwork:

- Provide compaction and sieve analysis on all initial proctors and new material.
- Compaction tests every 100 feet of pipe trench. Vary depths to provide results throughout the strata.
- Road structure shall be tested every 200 feet – along both shoulders and centerline (95 percent compaction).
- Proof roll trenches, subgrade, and base to be inspected by City Inspector.
- Minimum of four compaction tests around each manhole and cleanout.
- Compact all fill in 8-inch lifts.

Testing and QA/QC

- 48-hour notice is required prior to any testing. Make sure the test is scheduled.
- Inspector(s) representing the City must be present for all testing including those performed by an independent agency.
- Public Works hours are 7:00 am to 3:30 pm Monday through Friday. If deemed necessary, the City will work with Contractor when working outside these hours. Give 48-hour notice.

Construction Water

- Contractor shall obtain water for construction from a City approved fire hydrant using a hydrant meter rented from the City.

08/25/2025

- $1600 refundable deposit, $35 account set up fee, $75 a month rental charge, $6 per 1000 gallons for all water used, $50 buried meter fee if usage is not reported monthly, $1000 theft of service and $50 tampering fee if meter is not used.
- Do not damage the meters or take anything off the meters.
- Contact City Hall, Utilities Department 435-884-3411.

Erosion Control / Storm Water System Protection

- Minimize potential for off-site run-off.
- Minimize disturbed areas.
- Keep working area wetted to minimize dust.
- Provide silt fence to prevent sediment transport downstream.
- Contain all sediment on site. Clean roads of sediment tracking.
- Maintain BMPs as per SWPPP.
- SWPPP to be on-site at all times.
- The City will check with the contractor after an event.
- Inspect after rainfall and other events (weather, and construction around BMPs) that may affect BMPs.
- Make sure to follow the SWPPP as shown on the plans.
- Put the SWPPP sign on site and visible so the State can see it on a drive by.
- Show a copy of the Dust Mitigation Plan that was submitted to the Utah Department of Environmental Quality (DEQ).

Construction Debris Disposal

- Maintain a work site that is clean and properly dispose of debris and trash.
- **No garbage pits allowed.**
- Establish or rent a suitable washout area and remove all washout materials from the site at the project's conclusion.

Site Safety

- Conform to OSHA Standards.
- Close trenches at night.
- Secure open trenches and plug lines.

Security

- Secure construction equipment when not in use. Security is the responsibility of the developer.

Sanitation

- Clean and properly maintained portable restrooms on site at all times.

08/25/2025

Hazardous Material Storage on Site

- If there are hazardous materials on site, make sure the City has approved it and that it has secondary containment. The Fire Chief needs to know what is on site, how it is secured, and where it is located.

Site Access

- As shown on the SWPPP do not deviate from it.

Construction Observation

- City personnel will inspect regularly as needed and at the City's discretion.

Construction Drawings

- Provide City with one 24-inch x 36 inch and two 11-inch x 17 inch For Construction prints. (Don't print any plans until all changes have been made and you have received a copy of the signed plans from the city.)
- Keep an accurate set of As-Builts.
- Provide a copy of As-Builts at completion of project prior to occupancy. (Printed 24-inch x 36 inch)
- Changes in as-builts shall be previously approved and in engineering format (not drawn in).
- Provide digital set of As-Builts (PDF and GIS files; GIS standards listed on website) for the City prior to occupancy.
- If there are questions about the plans and conditions on the ground request the design engineer's interpretation first, and bring that interpretation to the City when questions come up. The onsite inspectors cannot make approvals to changes; or document changes.

PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2026
12/15/2025
STATE OF UTAH

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE
0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
B	12/15/2025	-	-	-

REVISIONS

GRANTSVILLE CITY
GRANTSVILLE WWTP
GRANTSVILLE CITY PRECONSTRUCTION NOTES

ENSIGN
THE STANDARD IN ENGINEERING

AQUA ENGINEERING

DRAWING NO.
01C005
SHEET

Z:\SANDY\SANDY 12000\12535\MUNICIPAL\DRAWINGS\01C005 CN.DWG
12/15/2025

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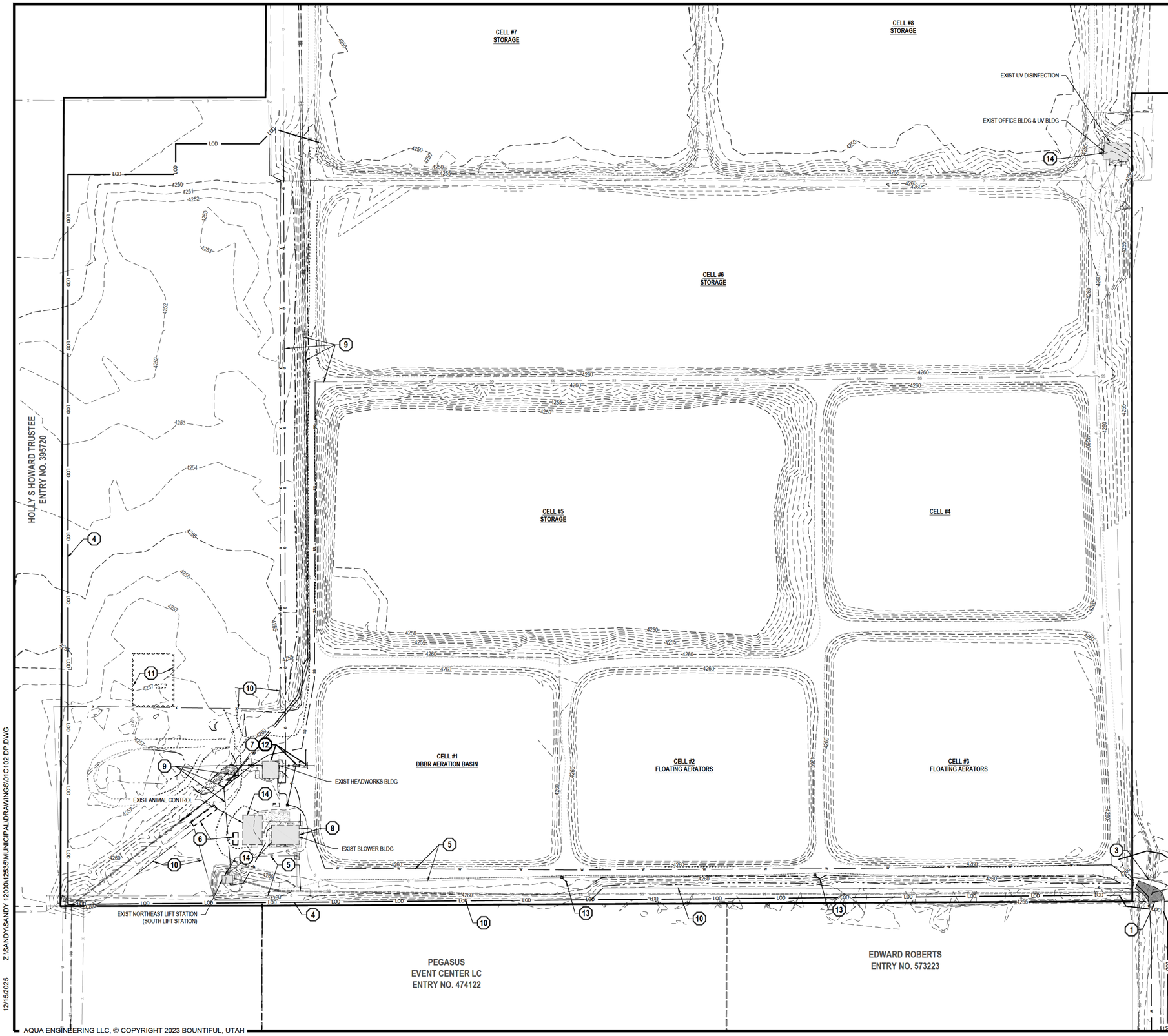
Exhibit A



NOTES:

1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
3. 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.
4. ALL CONSTRUCTION SIGNAGE, BARRICADES, TRAFFIC CONTROL DEVICES, ETC. SHALL CONFORM TO THE LATEST EDITION OF THE M.U.T.C.D. THE CONTRACTOR WILL MAINTAIN SUCH SO THAT THEY ARE PROPERLY PLACED AND VISIBLE AT ALL TIMES.
5. SIDEWALKS AND CURBS DESIGNATED TO BE DEMOLISHED SHALL BE DEMOLISHED TO THE NEAREST EXPANSION JOINT, MATCHING THESE PLANS AS CLOSELY AS POSSIBLE.
6. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

KEYNOTES:

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

1. SAWCUT EXISTING ASPHALT PAVEMENT TO PROVIDE A CLEAN EDGE FOR THE TRANSITION BETWEEN EXISTING AND PROPOSED ASPHALT PAVEMENT.
2. REMOVE AND PROPERLY DISPOSE OF EXISTING ASPHALT PAVEMENT.
3. REMOVE AND SALVAGE FOR RE-USE EXISTING BARBED WIRE FENCE AND GATE PANELS.
4. LIMIT OF DISTURBANCE.
5. PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, SIGNS, ETC. (TYPICAL UNLESS OTHERWISE NOTED).
6. RELOCATE EXISTING SHIPPING CONTAINERS AND TRUCK TRAILER. COORDINATE NEW LOCATION WITH CITY PERSONNEL.
7. DISCONNECT POWER AT HEADWORKS BUILDING. REFER TO ELECTRICAL DRAWINGS. HEADWORKS BUILDING TO REMAIN DURING CONSTRUCTION.
8. DISCONNECT POWER AT BLOWER BUILDING. REFER TO ELECTRICAL DRAWINGS. BLOWER BUILDING TO REMAIN THROUGHOUT CONSTRUCTION.
9. REMOVE OR PROTECT AND RECONNECT EXISTING UTILITIES AND REROUTE PER YARD PIPING PLANS.
10. REMOVE EXISTING CHAIN LINK FENCE. REFER TO SITE AND PLAN AND PROFILE SHEETS FOR LOCATION AND TIE IN OF NEW CHAIN LINK SECURITY FENCE.
11. APPROXIMATE LOCATION OF DEAD ANIMAL PIT. IF ANY ANIMAL REMAINS ARE EXCAVATED RELOCATE TO NEW ANIMAL PIT AS SHOWN NORTHWEST OF NEW WWTF SITE. REFER TO GEOTECHNICAL ENGINEERING REPORT FOR RECOMMENDATIONS.
12. COORDINATE PHASING OF IMPROVEMENTS WITH CITY PERSONNEL AND ENGINEER.
13. REMOVE EXISTING STREET LIGHT AND RECONNECT WIRING PER ELECTRICAL DRAWINGS. SALVAGE LIGHT POLES TO OWNER.
14. PROTECT EXISTING OFFICE/UV BUILDING, ANIMAL CONTROL, BLOWER, AND SOUTH (NORTHEAST) LIFT STATION BUILDINGS TO REMAIN THROUGHOUT CONSTRUCTION.

PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2026
12/15/2025
STATE OF UTAH

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE
0 1/2 1

ORIGINAL

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REVISIONS

GRANTSVILLE CITY
GRANTSVILLE WWTP

EXSITING TOPOGRAPHY AND DEMOLITON PLAN

ENSIGN
THE STANDARD IN ENGINEERING

AQUA ENGINEERING

DRAWING NO.
01C102
SHEET

Z:\SANDY\SANDY 12000\12535\MUNICIPAL\DRAWINGS\01C102 DP.DWG
12/15/2025

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Exhibit A

HORIZONTAL GRAPHIC SCALE

80 0 40 80 160

(IN FEET)
HORZ. 1 inch = 80 ft.

PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2026
12/15/2025
STATE OF UTAH

DRAWING IS TO SCALE
IF BAR MEASURES:
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0 1/2 1

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REVISIONS

GRANTSVILLE CITY

GRANTSVILLE WWTP

OVERALL GRADING PLAN

ENSIGN
THE STANDARD IN ENGINEERING

AQUA
ENGINEERING

DRAWING NO.

01C206

SHEET

Z:\SANDY\SANDY 12000\12535\MUNICIPAL\DRAWINGS\01C206 OGP.DWG

12/15/2025

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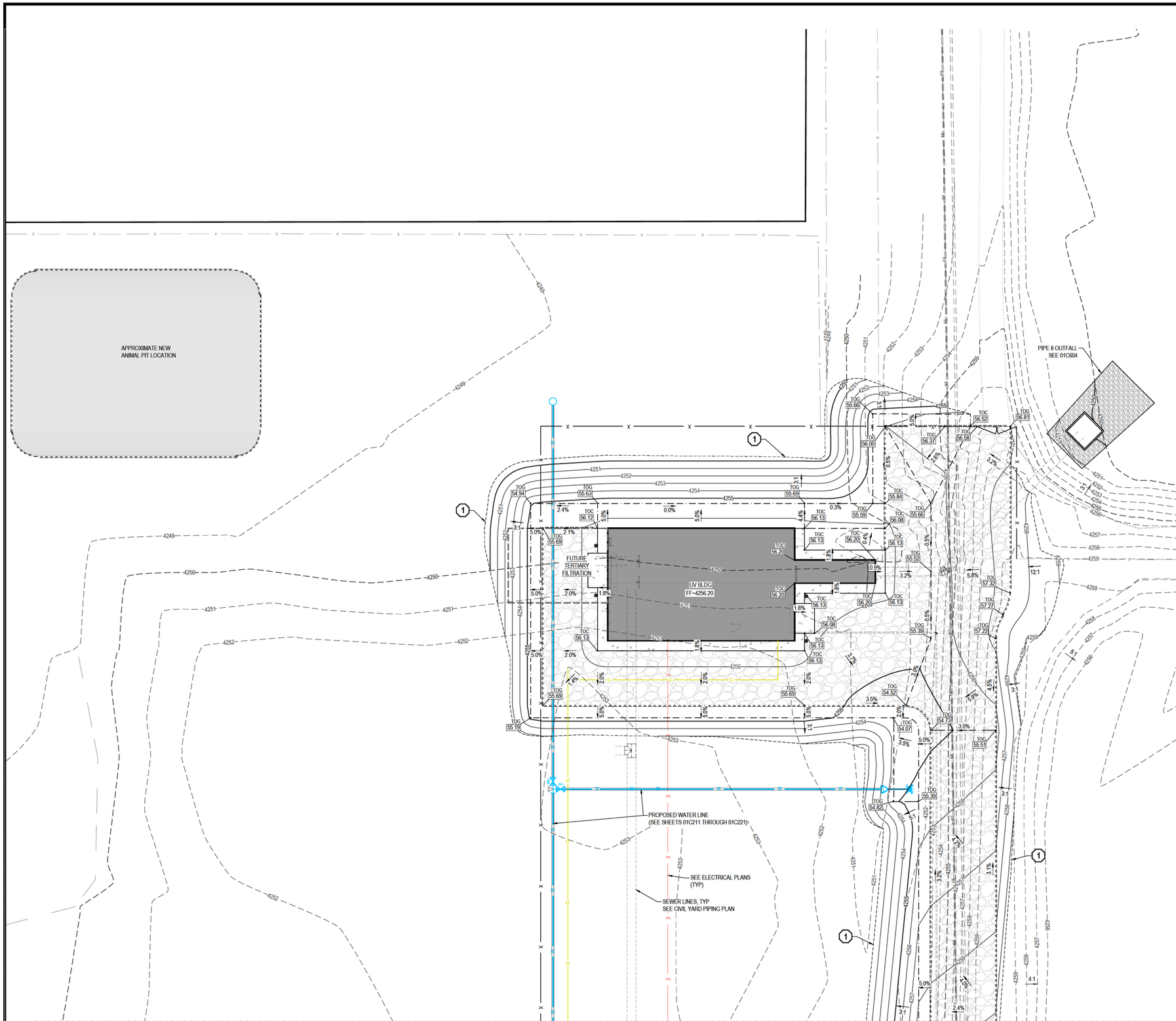
Exhibit A



NOTES:

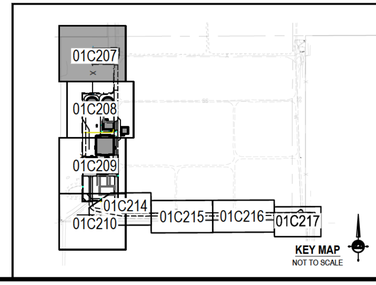
1. ALL WORK TO COMPLY WITH THE GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
2. ALL IMPROVEMENTS MUST COMPLY WITH ADA STANDARDS AND RECOMMENDATIONS.
3. ALL WORK SHALL COMPLY WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER POSSIBLY INCLUDING, BUT NOT LIMITED TO, REMOVAL OF UNCONSOLIDATED FILL, ORGANICS, AND DEBRIS, PLACEMENT OF SUBSURFACE DRAIN LINES AND GEOTEXTILE, AND OVEREXCAVATION OF UNSUITABLE BEARING MATERIALS AND PLACEMENT OF ACCEPTABLE FILL MATERIAL.
4. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE EXISTING SOIL CONDITIONS.
5. ELEVATIONS HAVE BEEN TRUNCATED FOR CLARITY. XX.XX REPRESENTS AN ELEVATION OF 4X0X.XX ON THESE PLANS.
6. LANDSCAPED AREAS REQUIRE SUBGRADE TO BE MAINTAINED AT A SPECIFIC ELEVATION BELOW FINISHED GRADE AND REQUIRE SUBGRADE TO BE PROPERLY PREPARED AND SCARIFIED. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.
7. SLOPE ALL LANDSCAPED AREAS AWAY FROM BUILDING FOUNDATIONS TOWARD CURB AND GUTTER OR STORM DRAIN INLETS.
8. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
9. ALL STORM DRAIN INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
10. ENSURE MINIMUM COVER OVER ALL STORM DRAIN PIPES PER MANUFACTURER'S RECOMMENDATIONS. NOTIFY ENGINEER IF MINIMUM COVER CANNOT BE ATTAINED.
11. ALL FACILITIES WITH DOWNSPOUTS/ROOF DRAINS SHALL BE CONNECTED TO THE STORM DRAIN SYSTEM. SEE PLUMBING PLANS FOR DOWNSPOUT/ROOF DRAIN LOCATIONS AND SIZES. ALL ROOF DRAINS TO HAVE MINIMUM 1% SLOPE.
12. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
13. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, OR STORM DRAIN STRUCTURES OR PIPES.
14. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

KEYNOTES:

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

1. LIMITS OF GRADING OR DISTURBANCE (TOP / BOTTOM OF SLOPE).
2. STORM DRAIN CLEANOUT BOX (SDCO) WITH COVER AND FRAME AND CONCRETE COLLAR PER APWA STD PLAN 331.1 TYPE A, 304, AND 362, GRANTSVILLE STANDARD DETAIL 4-11.1, WITH GRANTSVILLE CITY MODIFICATIONS, SEE SHEET 01C906 AND 01C904. WATER TIGHT PIPE TO STRUCTURE CONNECTION PER MANUFACTURER'S RECOMMENDATION. SEE DETAIL 7 ON SHEET 01C902.
3. STORM DRAIN CLEANOUT BOX WITH GRATE AND FRAME (INLET) AND CONCRETE COLLAR PER APWA STD PLAN 331.1 TYPE A, 310, AND 362, GRANTSVILLE STANDARD DETAIL 4-11.1, WITH GRANTSVILLE CITY MODIFICATIONS, SEE SHEET 01C906 AND 01C904. WATER TIGHT PIPE TO STRUCTURE CONNECTION PER MANUFACTURER'S RECOMMENDATIONS. SEE DETAIL 7 ON SHEET 01C902.
4. STORM DRAIN CATCH BASIN (SDCB) PER APWA STD PLAN 315.1, WITH GRANTSVILLE CITY MODIFICATIONS, SEE SHEET 01C906. WATER TIGHT PIPE TO STRUCTURE CONNECTION PER MANUFACTURER'S RECOMMENDATIONS. SEE DETAIL 7 ON SHEET 01C902.
5. TRENCH BACKFILL PER APWA STD PLAN 381, GRANTSVILLE STANDARD DETAILS 3-82 AND 4-81 WITH GRANTSVILLE MODIFICATIONS. SEE SHEET 01C907.
6. FIELD LOCATE AND CORE CATCH BASIN FOR BUILDING GUTTER DRAIN. MATCH PIPE CROWNS. REFER TO YARD PIPING DRAWINGS
7. MINIMUM 2000 PSI FLOW FILL BETWEEN UTILITY CROSSINGS, 6-INCHES HORIZONTALLY BEYOND PIPE OUTSIDE EDGE AND DEPTH OF DISTURBED AREA TO PIPE HAUNCHES.

HORIZONTAL GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
HORZ: 1 inch = 20 ft.



PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2025
12/15/2024
STATE OF UTAH

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE
0 1/2 1

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REVISIONS

GRANTSVILLE CITY
GRANTSVILLE WWTP

GRADING PLAN

ENSIGN
THE STANDARD IN ENGINEERING

AQUA ENGINEERING

DRAWING NO.
01C207
SHEET

12/15/2025 Z:\SANDY\SANDY 12000\12535\MUNICIPAL\DRAWINGS\01C207 GP.DWG

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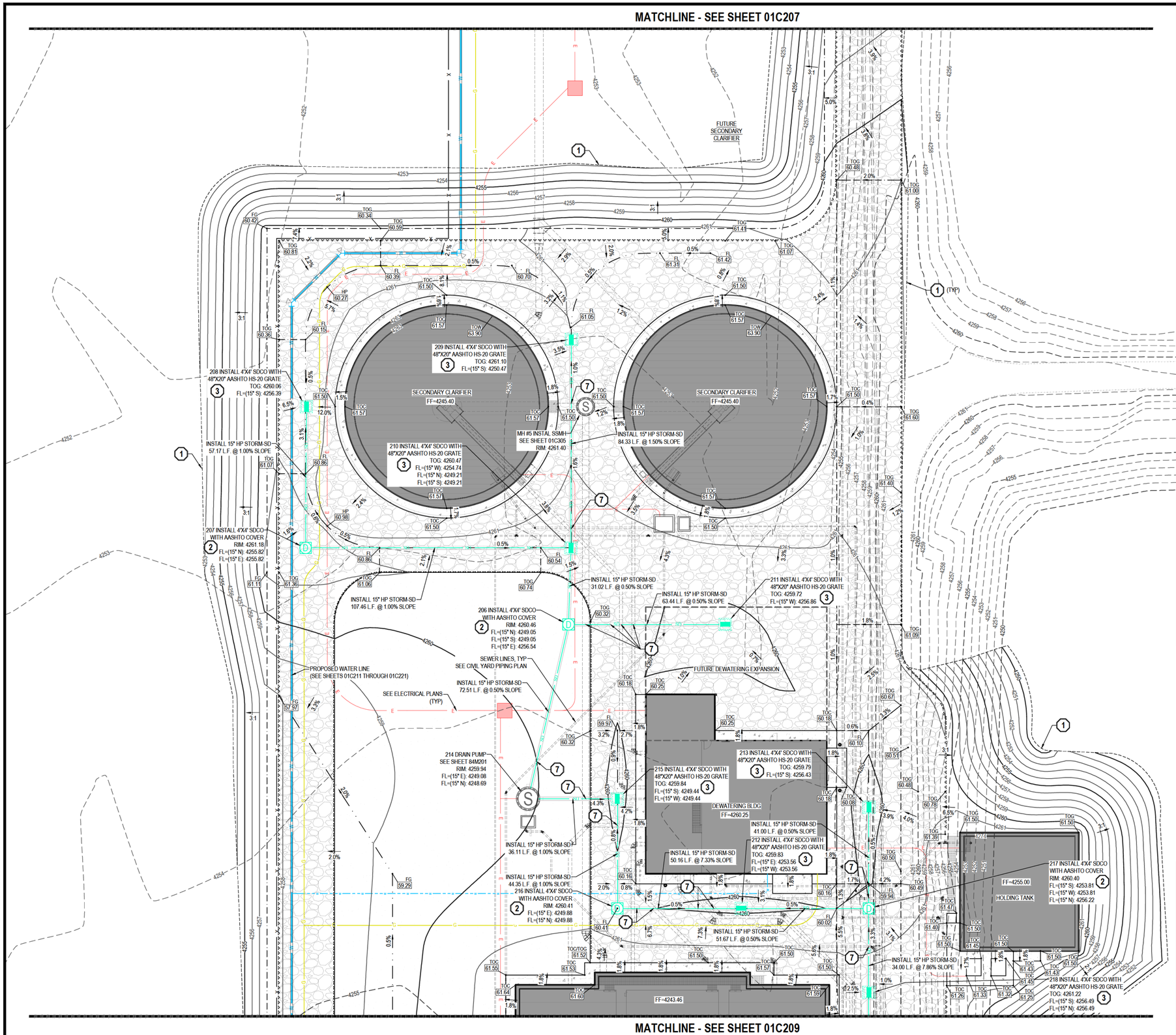
Exhibit A



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3. ALL WORK SHALL COMPLY WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER POSSIBLY INCLUDING, BUT NOT LIMITED TO, REMOVAL OF UNCONSOLIDATED FILL, ORGANICS, AND DEBRIS, PLACEMENT OF SUBSURFACE DRAIN LINES AND GEOTEXTILE, AND OVEREXCAVATION OF UNSUITABLE BEARING MATERIALS AND PLACEMENT OF ACCEPTABLE FILL MATERIAL.
4. THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE EXISTING SOIL CONDITIONS.
5. ELEVATIONS HAVE BEEN TRUNCATED FOR CLARITY. XX.XX REPRESENTS AN ELEVATION OF 48XX.XX ON THESE PLANS.
6. LANDSCAPED AREAS REQUIRE SUBGRADE TO BE MAINTAINED AT A SPECIFIC ELEVATION BELOW FINISHED GRADE AND REQUIRE SUBGRADE TO BE PROPERLY PREPARED AND SCARIFIED. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION.
7. SLOPE ALL LANDSCAPED AREAS AWAY FROM BUILDING FOUNDATIONS TOWARD CURB AND GUTTER OR STORM DRAIN INLETS.
8. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED UPON RECORD INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS. LOCATIONS MAY NOT HAVE BEEN VERIFIED IN THE FIELD AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF THE CONTRACTOR'S FAILURE TO VERIFY THE LOCATIONS OF EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED IN THE CONTRACT. THE CONTRACTOR IS TO VERIFY ALL CONNECTION POINTS WITH THE EXISTING UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE CAUSED TO THE EXISTING UTILITIES AND UTILITY STRUCTURES THAT ARE TO REMAIN. IF CONFLICTS WITH EXISTING UTILITIES OCCUR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO CONSTRUCTION TO DETERMINE IF ANY FIELD ADJUSTMENTS SHOULD BE MADE.
9. ALL STORM DRAIN INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
10. ENSURE MINIMUM COVER OVER ALL STORM DRAIN PIPES PER MANUFACTURER'S RECOMMENDATIONS. NOTIFY ENGINEER IF MINIMUM COVER CANNOT BE ATTAINED.
11. ALL FACILITIES WITH DOWNSPOUTS/ROOF DRAINS SHALL BE CONNECTED TO THE STORM DRAIN SYSTEM. SEE PLUMBING PLANS FOR DOWNSPOUT/ROOF DRAIN LOCATIONS AND SIZES. ALL ROOF DRAINS TO HAVE MINIMUM 1% SLOPE.
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13. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING CONCRETE, ASPHALT, OR STORM DRAIN STRUCTURES OR PIPES.
14. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.

KEYNOTES:

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

1. LIMITS OF GRADING OR DISTURBANCE (TOP / BOTTOM OF SLOPE).
2. STORM DRAIN CLEANOUT BOX (SDCO) WITH COVER AND FRAME AND CONCRETE COLLAR PER APWA STD PLAN 331.1 TYPE A, 304, AND 362, GRANTSVILLE STANDARD DETAIL 4-11.1, WITH GRANTSVILLE CITY MODIFICATIONS, SEE SHEET 01C306 AND 01C904. WATER TIGHT PIPE TO STRUCTURE CONNECTION PER MANUFACTURER'S RECOMMENDATION. SEE DETAIL 7 ON SHEET 01C902.
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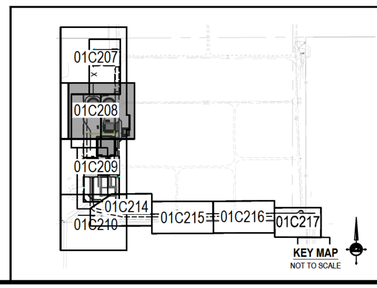
HORIZONTAL GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
HORZ: 1 inch = 20 ft.



PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2025
12/15/2025
STATE OF UTAH

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE
0 1/2 1

NO.	DATE	DESIGN	DRAWN	CHECKED
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B	12/15/2025	-	-	-
REVISIONS				

GRANTSVILLE CITY
GRANTSVILLE WWTP
GRADING PLAN

ENSIGN
THE STANDARD IN ENGINEERING

AQUA ENGINEERING

DRAWING NO.
01C208
SHEET

12/15/2025 Z:\SANDYSANDY 120000\2535\MUNICIPAL\DRAWINGS\01C208 GP.DWG

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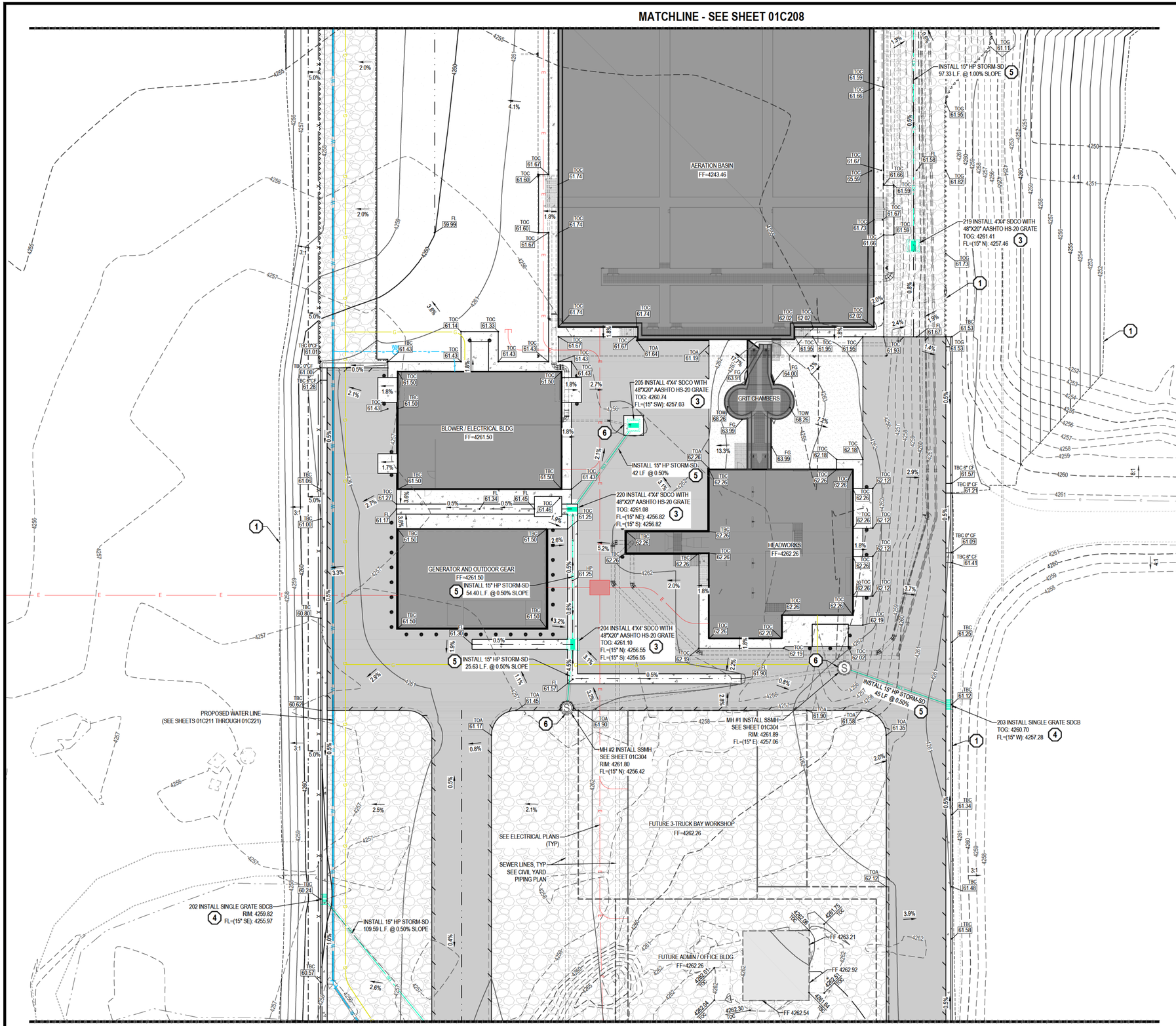
Exhibit A



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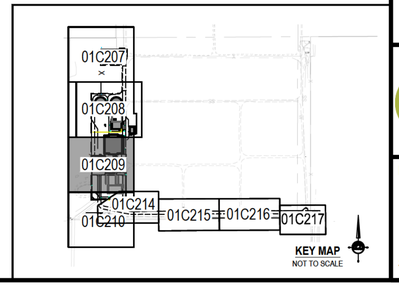

PROFESSIONAL ENGINEER
7885569-2202
ROBERT J. ROUSSELLE
EXP. 3/31/2025
12/15/2024
STATE OF UTAH

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REVISIONS

GRANTSVILLE CITY
GRANTSVILLE WWTP
GRADING PLAN

ENSIGN
THE STANDARD IN ENGINEERING

AQUA ENGINEERING

DRAWING NO.
01C209
SHEET

12/15/2025 Z:\SANDY\SANDY 12000\12535\MUNICIPAL\DRAWINGS\01C209 GP.DWG

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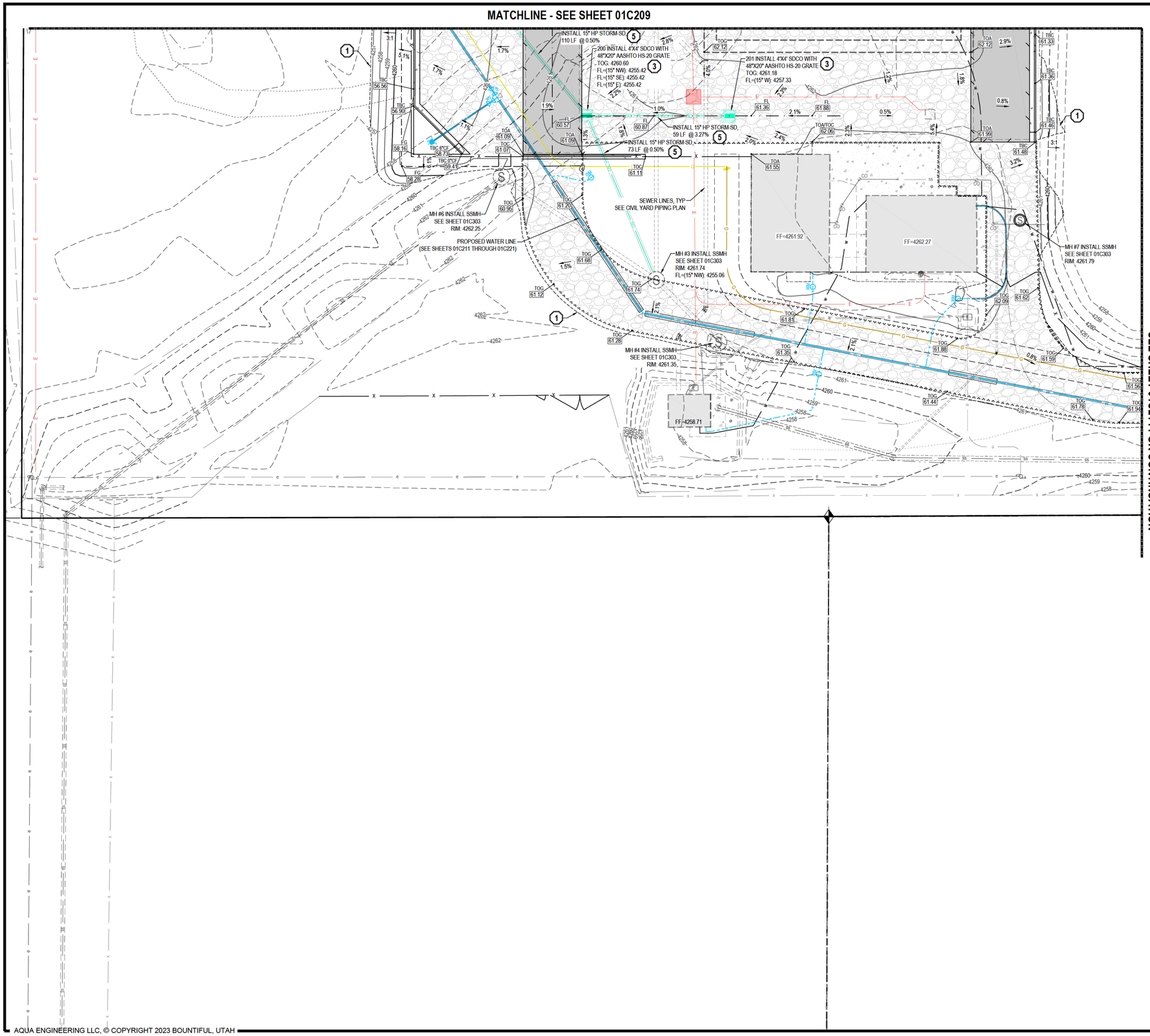
Exhibit A



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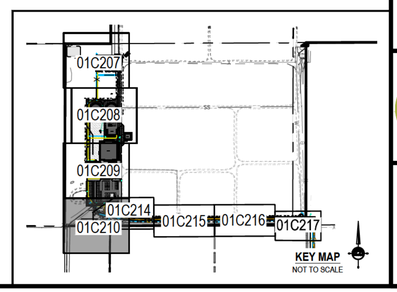
20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.



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0 1/2 1

ORIGINAL

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B	12/15/2025	-	-	-

REVISIONS

GRANTSVILLE CITY
GRANTSVILLE WWTP

GRADING PLAN

ENSIGN
THE STANDARD IN ENGINEERING

AQUA ENGINEERING

DRAWING NO.
01C210
SHEET

12/15/2025 Z:\SANDY\SANDY 12000\12535\MUNICIPAL\DRAWINGS\01C210 GP.DWG

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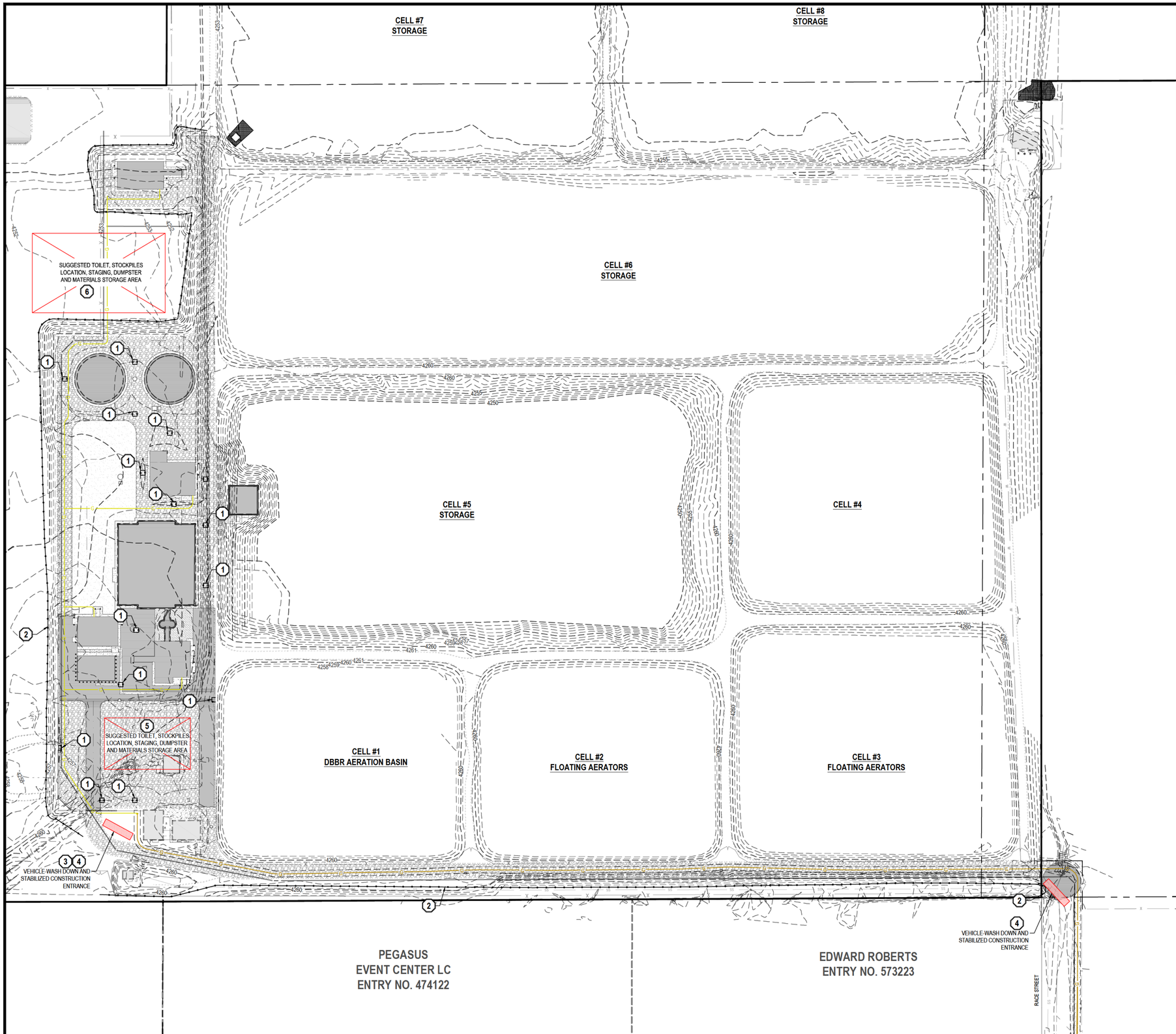

NOTES:

1. THIS PLAN IS DESIGNED AS A FIRST APPRAISAL OF NECESSARY MEANS TO PROTECT THE WATERS OF THE STATE FROM POTENTIAL POLLUTION. IT IS THE RESPONSIBILITY OF THE OWNER/OPERATOR TO ADD WARRANTED BEST MANAGEMENT PRACTICES (BMP'S) AS NECESSARY, MODIFY THOSE SHOWN AS APPROPRIATE, AND DELETE FROM THE PROJECT THOSE FOUND TO BE UNNECESSARY. FEDERAL AND STATE LAW ALLOWS THESE UPDATES TO BE MADE BY THE OWNER/OPERATOR ONSITE AND RECORDED BY THE OWNER/OPERATOR ON THE COPY OF THE SWPPP KEPT ONSITE.
2. DISTURBED LAND SHALL BE KEPT TO A MINIMUM. STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. HOWEVER, WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 21 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE.
3. RESEED DISTURBED LAND WITH NATIVE GRASS MIXTURE WITHIN 14 CALENDAR DAYS OF ACHIEVEMENT OF FINISH GRADE TO STABILIZE SOILS IF LAND IS NOT TO BE RE-WORKED WITHIN 14 CALENDAR DAYS OF THE CESSATION OF CONSTRUCTION ACTIVITIES AT THAT LOCATION.
4. DETAILS SHOWN ARE TO BE EMPLOYED TO PROTECT RUNOFF AS APPROPRIATE DURING CONSTRUCTION. NOT ALL DETAILS ARE NECESSARY AT ALL PHASES OF THE PROJECT. IT SHALL BE THE RESPONSIBILITY OF THE OWNER/OPERATOR TO USE APPROPRIATE BEST MANAGEMENT PRACTICES AT THE APPROPRIATE PHASE OF CONSTRUCTION. SEE SWPPP FOR BMP IMPLEMENTATION SCHEDULE.
5. VARIOUS BEST MANAGEMENT PRACTICES HAVE BEEN SHOWN ON THE PLANS AT SUGGESTED LOCATIONS. THE CONTRACTOR MAY MOVE AND RECONFIGURE THESE BMP'S TO OTHER LOCATIONS IF PREFERRED, PROVIDED THE INTENT OF THE DESIGN IS PRESERVED.
6. NOT ALL POSSIBLE BMP'S HAVE BEEN SHOWN. THE CONTRACTOR IS RESPONSIBLE TO APPLY CORRECT MEASURES TO PREVENT THE POLLUTION OF STORM WATER PER PROJECT SWPPP.
7. A UPDES (UTAH POLLUTANT DISCHARGE ELIMINATION SYSTEM) PERMIT IS REQUIRED FOR ALL CONSTRUCTION ACTIVITIES 1 ACRE OR MORE.

KEYNOTES:

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1. INLET PROTECTION PER DETAIL 3/01C901.
2. STRAW WATTLE PER DETAIL 4/01C901.
3. PORTABLE TOILET PER DETAIL 1/01C901.
4. VEHICLE WASHDOWN AND STABILIZED CONSTRUCTION ENTRANCE PER DETAIL2/01C901.
5. SUGGESTED TEMPORARY CONSTRUCTION SITE PARKING, STAGING, DUMPSTER, AND MATERIAL STORAGE AREA.
6. SUGGESTED STOCKPILE AREA.

HORIZONTAL GRAPHIC SCALE
80 0 40 80 160
(IN FEET)
HORZ. 1 inch = 80 ft.

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EROSION CONTROL PLAN

ENSIGN
THE STANDARD IN ENGINEERING

AQUA ENGINEERING

DRAWING NO.
01C222
SHEET

12/15/2025 Z:\SANDY\SANDY 12000\12535\MUNICIPAL\DRAWINGS\01C222 EROSION CONTROL PLAN.DWG

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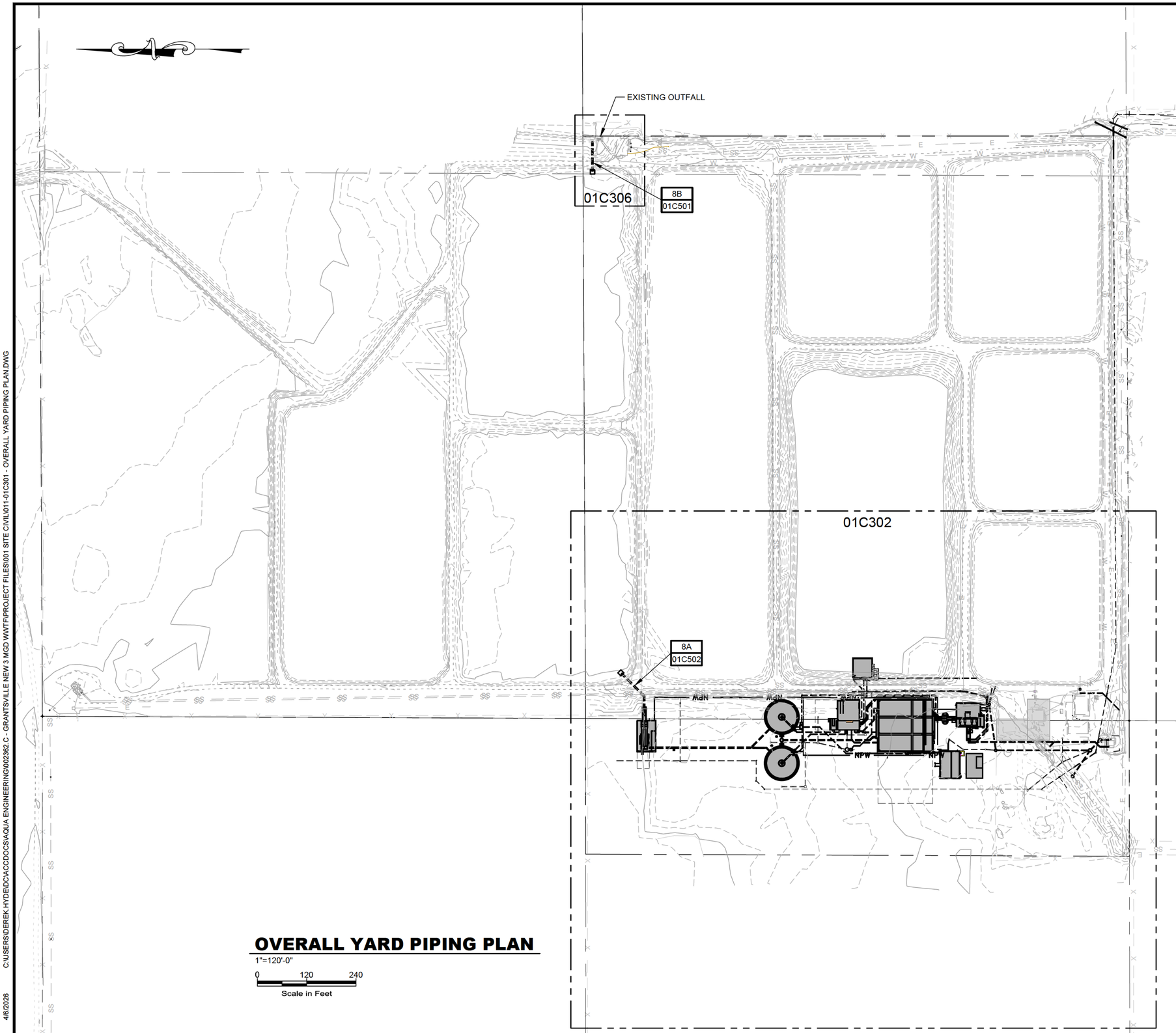

OVERALL YARD PIPING PLAN

1"=120'-0"

0 120 240

Scale in Feet

NOTES:

1. SEE SHEET 01C801 FOR YARD PIPING SCHEDULE.
2. CONTRACTOR TO VERIFY LOCATION, AND DEPTH, SI E, AND MATERIAL OF EXISTING PIPING AND UTILITIES.
3. CONTRACTOR TO COORDINATE TIE-INS TO EXISTING, ACTIVE LINES WITH OPERATORS.
4. SEE PIPE PROFILE SHEETS FOR ADDITIONAL DETAILS.
5. SEE SITE UTILITY PLAN ON SHEET 01C201 FOR POTABLE WATER AND NATURAL GAS PIPING ROUTING.
6. SEE SITE GRADING PLANS FOR STORM DRAIN CATCH BASIN AND PIPING DETAILS.
7. SEE DETAILED YARD PIPING PLANS FOR REMOVAL OF EXISTING PIPING.
8. SEE ELECTRICAL SITE PLANS FOR DETAILS ON SITE CONDUIT AND DUCTBANK LAYOUTS.

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	04/06/2026	EES	DCH	BMR

REVISIONS

GRANTSVILLE CITY

GRANTSVILLE WWTP

CIVIL

OVERALL YARD PIPING PLAN

AQUA ENGINEERING

DRAWING NO.

01C301

SHEET

C:\USERS\DEREK.HYDE\DC\ACCDOCS\AQUA ENGINEERING\002362.C - GRANTSVILLE NEW 3 MGD WWTF\PROJECT FILES\001 SITE CIVIL\011-01C301 - OVERALL YARD PIPING PLAN.DWG

4/6/2026

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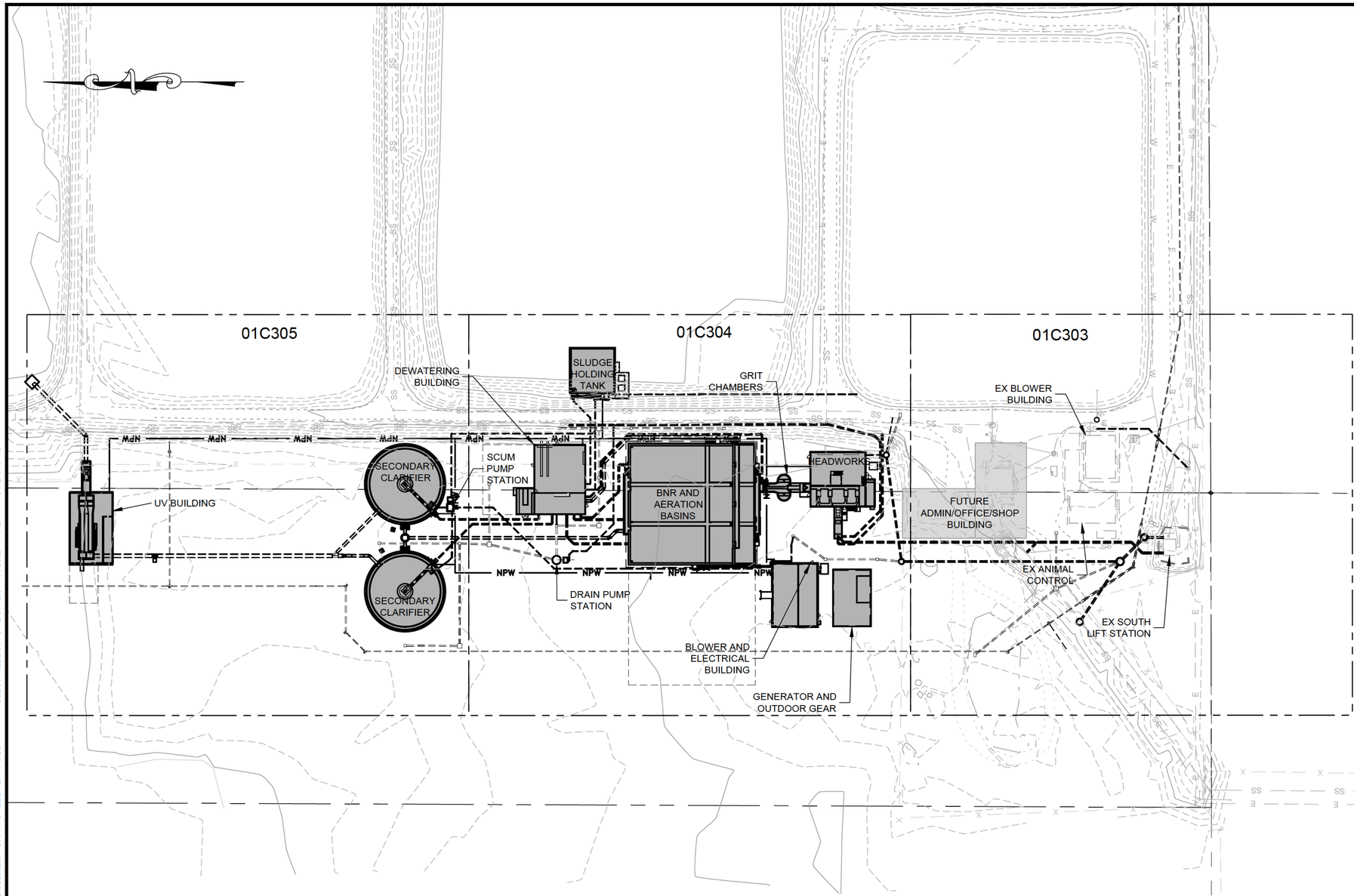
Exhibit A



YARD PIPING PLAN

1"=60'-0"

0 60 120

Scale in Feet

NOTES:

1. SEE SHEET 01C801 FOR YARD PIPING AND MANHOLE SCHEDULES.
2. CONTRACTOR TO VERIFY LOCATION, AND DEPTH, SI E, AND MATERIAL OF EXISTING PIPING AND UTILITIES.
3. CONTRACTOR TO COORDINATE TIE-INS TO EXISTING, ACTIVE LINES WITH OPERATORS.
4. SEE PIPE PROFILE SHEETS FOR ADDITIONAL DETAILS.
5. SEE SITE UTILITY PLAN ON SHEET 01C201 FOR POTABLE WATER AND NATURAL GAS PIPING ROUTING.
6. SEE SITE GRADING PLANS FOR STORM DRAIN CATCH BASIN AND PIPING DETAILS.
7. SEE DETAILED YARD PIPING PLANS FOR REMOVAL OF EXISTING PIPING.
8. SEE ELECTRICAL SITE PLANS FOR DETAILS ON SITE CONDUIT AND DUCTBANK LAYOUTS.

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

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C	04/06/2026	EES	DCH	BMR

REVISIONS

GRANTSVILLE CITY

GRANTSVILLE WWTP

CIVIL

YARD PIPING PLAN

AQUA ENGINEERING

DRAWING NO.

01C302

SHEET

C:\USERS\DEREK.HYDE\DC\ACCDOCS\AQUA ENGINEERING\002362.C - GRANTSVILLE NEW 3 MGD WWTF\PROJECT FILES\001 SITE CIVIL\011-01C302 - YARD PIPING PLAN.DWG

4/7/2026

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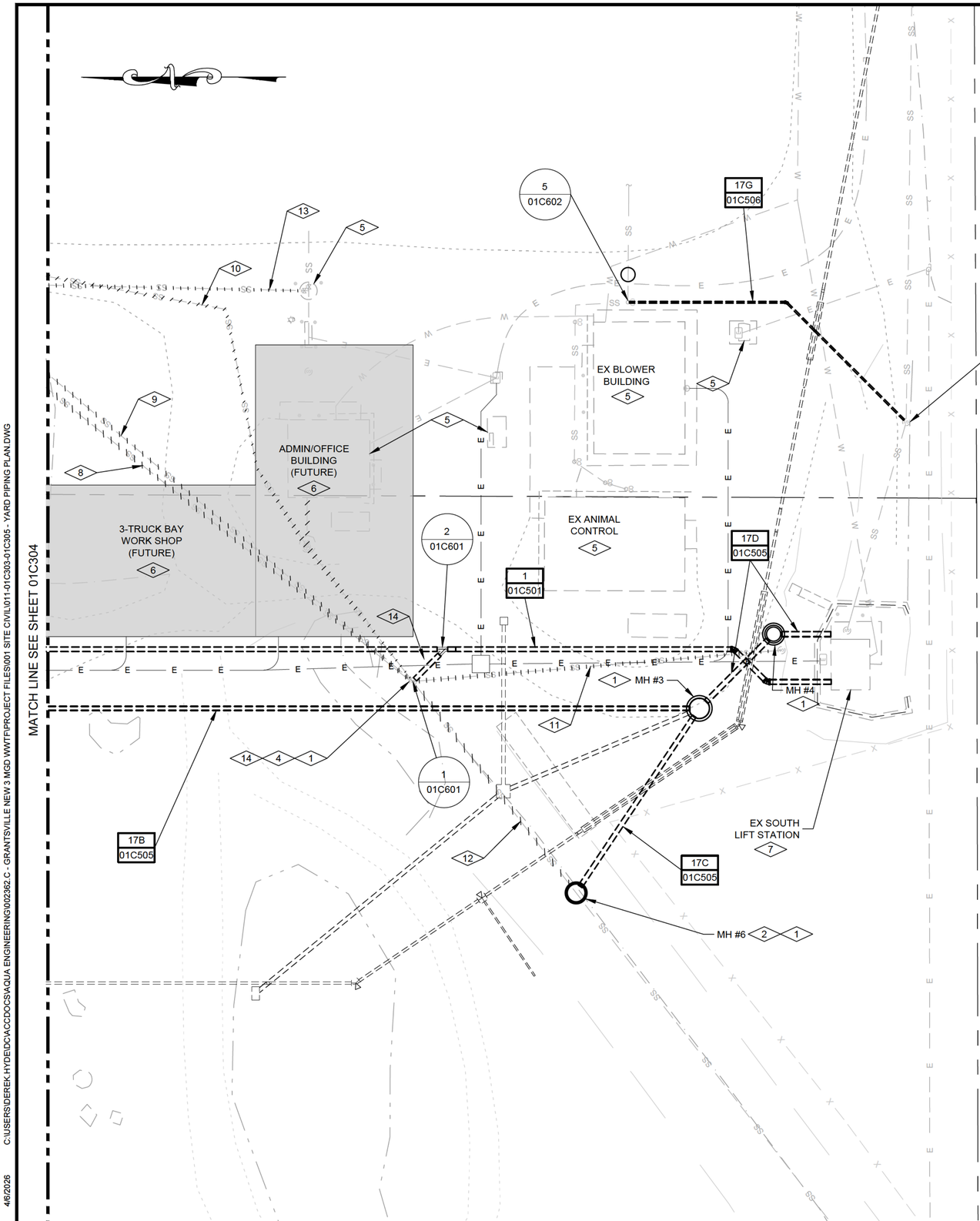
Exhibit A



YARD PIPING PLAN

1"=20'-0"

0 20 40

Scale in Feet

NOTES:

1. SEE SHEET 01C801 FOR YARD PIPING AND MANHOLE SCHEDULES.
2. CONTRACTOR TO VERIFY LOCATION, AND DEPTH, SI E, AND MATERIAL OF EXISTING PIPING AND UTILITIES.
3. CONTRACTOR TO COORDINATE TIE-INS TO EXISTING, ACTIVE LINES WITH OPERATORS.
4. SEE PIPE PROFILE SHEETS FOR ADDITIONAL DETAILS.
5. SEE SITE UTILITY PLAN ON SHEET 01C201 FOR POTABLE WATER, STORM WATER AND NATURAL GAS PIPING ROUTING.
6. SEE SITE GRADING PLANS FOR STORM DRAIN CATCH BASIN AND PIPING DETAILS.
7. SEE DETAIL C103 FOR ADDITIONAL DETAILS AND REQUIREMENTS FOR MANHOLES.

KEYNOTES:

1 SEE MANHOLE SCHEDULE ON SHEET 01C801.

2 SEE DETAIL 3 ON SHEET 01C601.

3 SEE DETAIL 4 ON SHEET 01C602.

4 EXISTING MANHOLE. FIELD VERIFY LOCATION AND CONDITIONS.

5 EXISTING STRUCTURE TO REMAIN. PRESERVE AND PROTECT. SEE ELECTRICAL DEMO DRAWINGS FOR ELECTRICAL WIRE AND GEAR REMOVAL REQUIREMENTS.

6 APPROXIMATE FOOTPRINT OF FUTURE ADMINISTRATION BUILDING SHOWN FOR REFERENCE.

7 SEE SHEET 06D101 AND 06M101 FOR REMOVAL PLAN AND MODIFICATIONS TO SOUTH LIFT STATION.

8 REMOVE AND DISPOSE OF ABANDONED 6" HDPE PIPE ONCE NEW PIPING IS CONNECTED. SEE CONNECTION DETAIL 6.

9 REMOVE AND DISPOSE OF ABANDONED 10" HDPE PIPE ONCE NEW PIPING IS CONNECTED. SEE CONNECTION DETAIL 7.

10 REMOVE AND DISPOSE OF ABANDONED 1-1/4" HDPE PIPE ONCE NEW PIPING IS CONNECTED TO MH #1. SEE CONNECTION DETAIL 8.

11 REMOVE AND DISPOSE OF ABANDONED 8" HDPE PIPE ONCE NEW 18" PIPE #1 PUMP DISCHARGE PIPE IS INSTALLED.

12 REMOVE ABANDONED 18" PVC ONCE CONNECTION DETAIL #2 AND #3 ARE COMPLETE AND MANHOLE #6 IS INSTALLED.

13 REMOVE 18" PVC BYPASS PIPING WHERE INDICATED. PRESERVE AND PROTECT THE ISOLATION VALVES.

14 REMOVE 14" HDPE CONNECTION AND EXISTING MANHOLE ONCE PIPE #1 IS CONNECTED TO THE NEW HEADWORKS BUILDING AND NEW HEADWORKS IS OPERATIONAL.

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	04/06/2026	EES	DCH	BMR

REVISIONS

GRANTSVILLE CITY

GRANTSVILLE WWTP

CIVIL
YARD PIPING PLAN

AQUA ENGINEERING

DRAWING NO.

01C303

SHEET

C:\USERS\DEREK.HYDE\DC\ACCDOCS\AQUA ENGINEERING\002362.C - GRANTSVILLE NEW 3 MGD WWTP\PROJECT FILES\001 SITE CIVIL\011-01C303-01C305 - YARD PIPING PLAN.DWG

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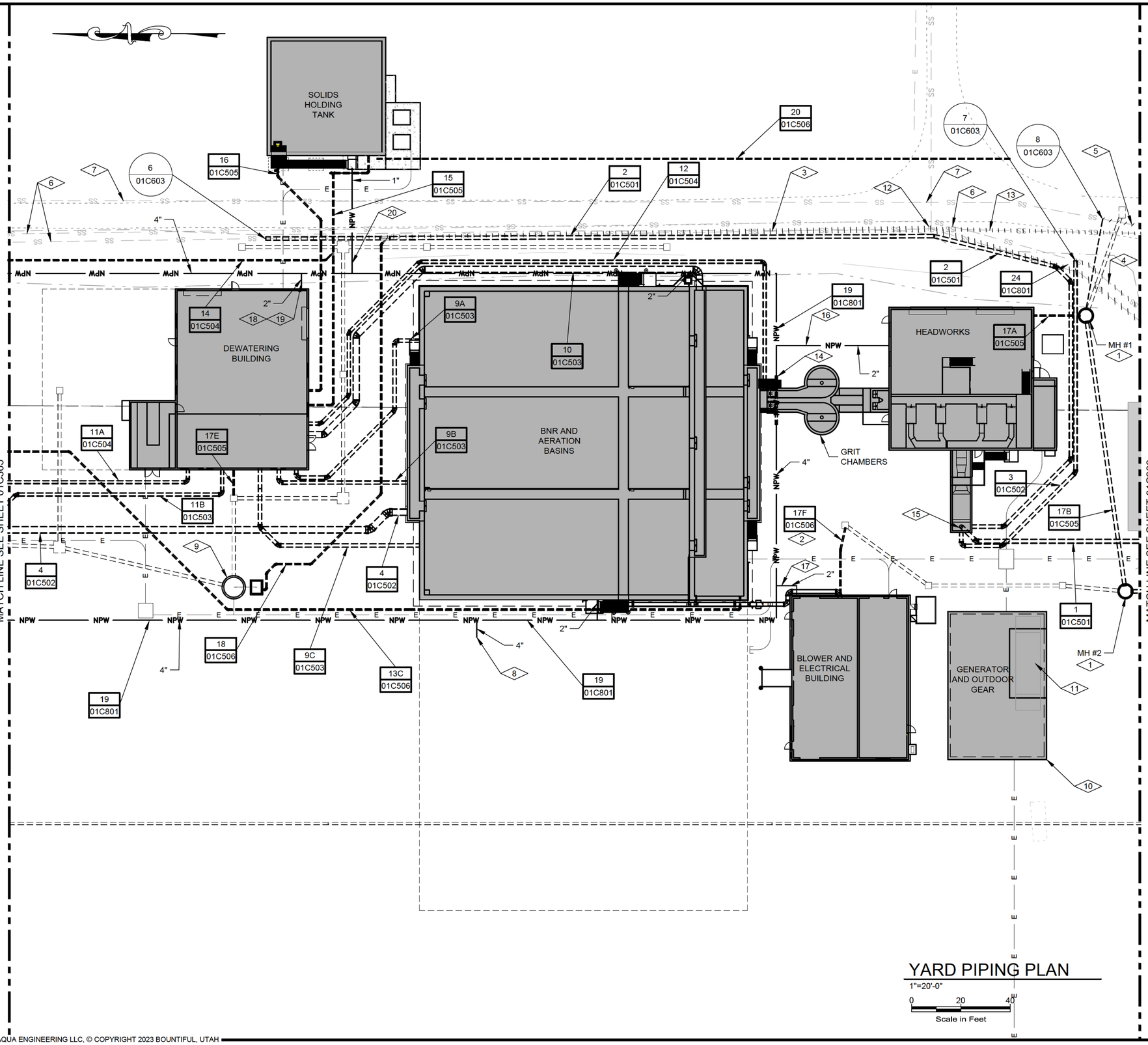
Exhibit A



NOTES:

1. SEE SHEET 01C801 FOR YARD PIPING AND MANHOLE SCHEDULES.
2. CONTRACTOR TO VERIFY LOCATION, AND DEPTH, SI E, AND MATERIAL OF EXISTING PIPING AND UTILITIES.
3. CONTRACTOR TO COORDINATE TIE-INS TO EXISTING, ACTIVE LINES WITH OPERATORS.
4. SEE PIPE PROFILE SHEETS FOR ADDITIONAL DETAILS.
5. SEE SITE UTILITY PLAN ON SHEET 01C201 FOR POTABLE WATER, STORM WATER AND NATURAL GAS PIPING ROUTING.
6. SEE SITE GRADING PLANS FOR STORM DRAIN CATCH BASIN AND PIPING DETAILS.
7. PROVIDE MINIMUM 3'0" COVER FOR ALL BURIED NPW PIPING.
8. SEE DETAIL C103 FOR ADDITIONAL DETAILS AND REQUIREMENTS FOR MANHOLES.

KEYNOTES:

1 SEE MH SCHEDULE ON SHEET 01C801.

2 ROUTE 6" BLOWER BUILDING FLOOR DRAINS TO CATCH BASIN.

3 REMOVE AND DISPOSE OF ABANDONED 6" HDPE PIPE ONE NEW PIPING IS CONNECTED. SEE CONNECTION DETAIL 6.

4 REMOVE AND DISPOSE OF ABANDONED 10" HDPE PIPE ONCE NEW PIPING IS CONNECTED. SEE CONNECTION DETAIL 7.

5 REMOVE AND DISPOSE OF ABANDONED 1-1/4" HDPE PIPE ONCE NEW PIPING IS CONNECTED. SEE CONNECTION DETAIL 8.

6 EXISTING 6" 10" PRESSURE SEWER MAINS. PRESERVE PROTECT MAINTAIN IN OPERATION.

7 EXISTING 1-1/4" SEWER PRESSURE LINE. PRESERVE AND PROTECT AND MAINTAIN IN OPERATION.

8 PROVIDE 4" HDPE FLANGE FITTING WITH 4" BLIND FLANGE FOR FUTURE CONNECTION TO IRRIGATION. ALL HARDWARE AND FLANGE BACKER RING TO BE 316 SS.

9 DRAIN PUMP STATION. SEE SHEET 84S201.

10 ELECTRICAL GEAR PAD. SEE DETAIL 1 ON SHEET 01C701.

11 GENERATOR PAD. SEE DETAIL 1 ON SHEET01C701.

12 REMOVE BYPASS MANHOLE AND ASSOCIATED PIPING TO THE SOUTH.

13 REMOVE 18" PVC BYPASS PIPING WHERE INDICATED. PRESERVE AND PROTECT THE ISOLATION VALVE.

14 ROUTE 4" NPW THROUGH 10" PVC SLEEVE BENEATH GRIT STRUCTURE.

15 CAP OR PLUG 18" PIPE #1 AT OR NEAR HEADWORKS TO DIRECT FLOW TO EXISTING MH (SEE DETAIL 1 ON SHEET 01C601). REMOVE 18" CAP OR PLUG ONCE NEW HEADWORKS IS OPERATIONAL AND CAP 14" STUB TO EXISTING MH (SEE DETAIL 2 ON SHEET 01C601).

16 INSTALL BURIED 2" GATE VALVE V-011001 TO ISOLATE HEADWORKS BUILDING FROM NPW LOOP. SEE VALVE SCHEDULE.

17 INSTALL BURIED 2" GATE VALVE V-014001 TO ISOLATE BLOWER BUILDING FROM NPW LOOP. SEE VALVE SCHEDULE.

18 INSTALL BURIED 2" GATE VALVE V-018001 TO ISOLATE DEWATERING BUILDING FROM NPW LOOP. SEE VALVE SCHEDULE.

19 INSTALL BURIED 2" GATE VALVE V-018002 TO ISOLATE DEWATERING BUILDING FROM PW LOOP. SEE VALVE SCHEDULE.

20 INSTALL BURIED 1" GATE VALVE V-018501 TO ISOLATE SOLIDS STORAGE TANK NPW PIPING FROM NPW LOOP. SEE VALVE SCHEDULE.

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	04/06/2026	EES	DCH	BMR

REVISIONS

GRANTSVILLE CITY
GRANTSVILLE WWTP

CIVIL
YARD PIPING PLAN

AQUA ENGINEERING

DRAWING NO.
01C304

SHEET

C:\USERS\DEREK.HYDE\DC\ACCDOCS\AQUA ENGINEERING\002362.C - GRANTSVILLE NEW 3 MGD WWTF\PROJECT FILES\001 SITE CIVIL\011-01C303-01C305 - YARD PIPING PLAN.DWG

4/6/2026

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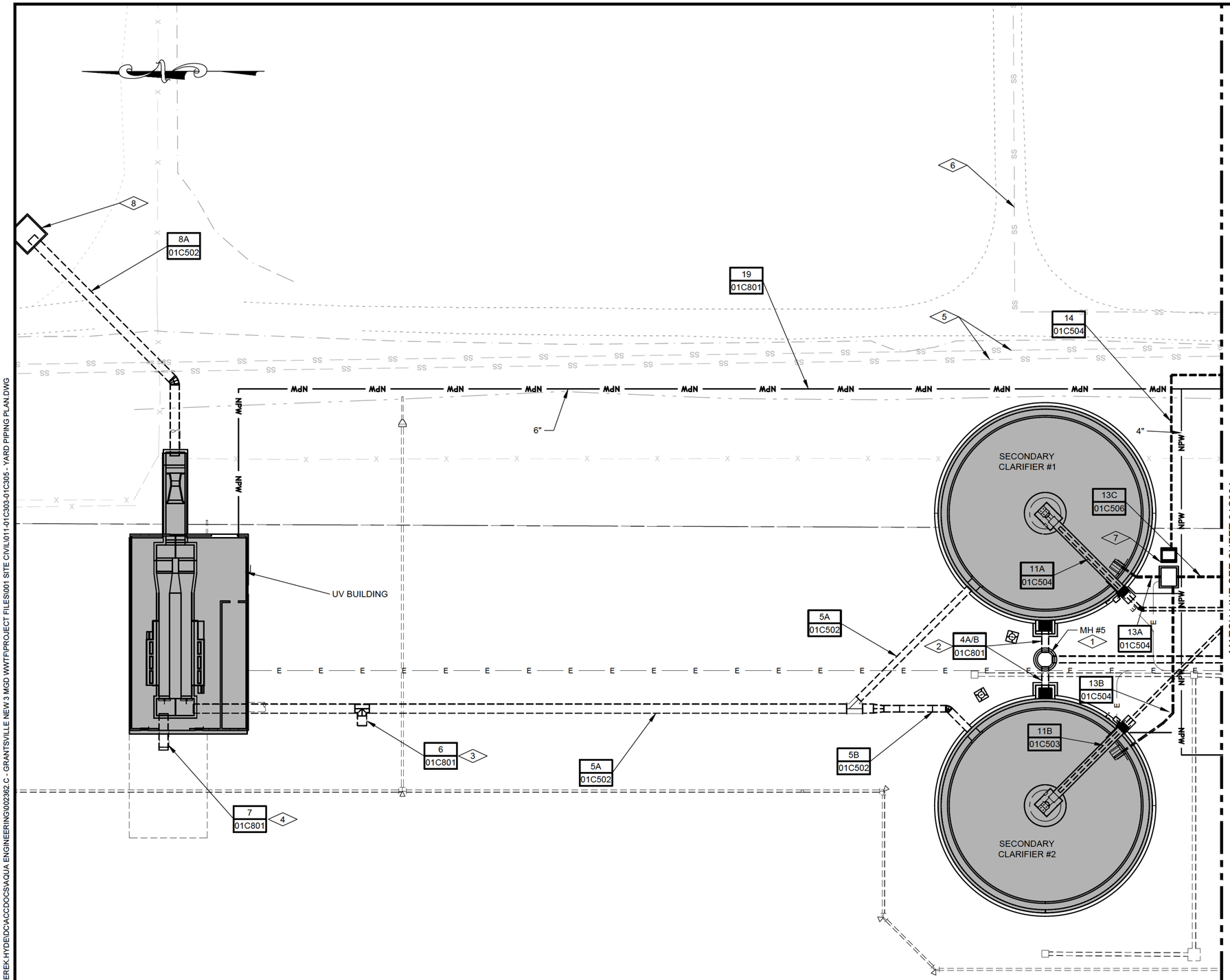
Exhibit A



YARD PIPING PLAN

1"=20'-0"

0 20 40

Scale in Feet

NOTES:

1. SEE SHEET 01C801 FOR YARD PIPING AND MANHOLE SCHEDULES.
2. CONTRACTOR TO VERIFY LOCATION, AND DEPTH, SI E, AND MATERIAL OF EXISTING PIPING AND UTILITIES.
3. CONTRACTOR TO COORDINATE TIE-INS TO EXISTING, ACTIVE LINES WITH OPERATORS.
4. SEE PIPE PROFILE SHEETS FOR ADDITIONAL DETAILS.
5. SEE SITE UTILITY PLAN ON SHEET 01C201 FOR POTABLE WATER, STORM WATER AND NATURAL GAS PIPING ROUTING.
6. SEE SITE GRADING PLANS FOR STORM DRAIN CATCH BASIN AND PIPING DETAILS.
7. PROVIDE MINIMUM 3'0" COVER FOR ALL BURIED NPW PIPING.
8. SEE DETAIL C103 FOR ADDITIONAL DETAILS AND REQUIREMENTS FOR MANHOLES.

KEYNOTES:

1 SEE MANHOLE SCHEDULE ON SHEET 01C801.

2 SEE SHEET 50S201 FOR DEPTH OF 30" CLARIFIER INFLUENT PIPE.

3 PROVIDE 42" HDPE TEE WITH 42" FUSED HDPE CAP ON STUB. STUB PIPE 5'-0" BEYOND TEE.

4 STUB AND CAP 42" HDPE. SEE SHEET 70M201.

5 EXISTING 6" AND 10" PRESSURE SEWER MAINS. PRESERVE AND PROTECT AND MAINTAIN IN OPERATION.

6 EXISTING 1-1/4" SEWER PRESSURE LINE. PRESERVE AND PROTECT AND MAINTAIN IN OPERATION.

7 SCUM PUMP STATION. SEE SHEET 55S201.

8 OUTLET ENERGY DISSIPATION FOR PIPE 8A. SEE DETAIL 1 ON SHEET 01C604.

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	04/06/2026	EES	DCH	BMR

REVISIONS

GRANTSVILLE CITY

GRANTSVILLE WWTP

CIVIL

YARD PIPING PLAN

AQUA ENGINEERING

DRAWING NO.

01C305

SHEET

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4/6/2026

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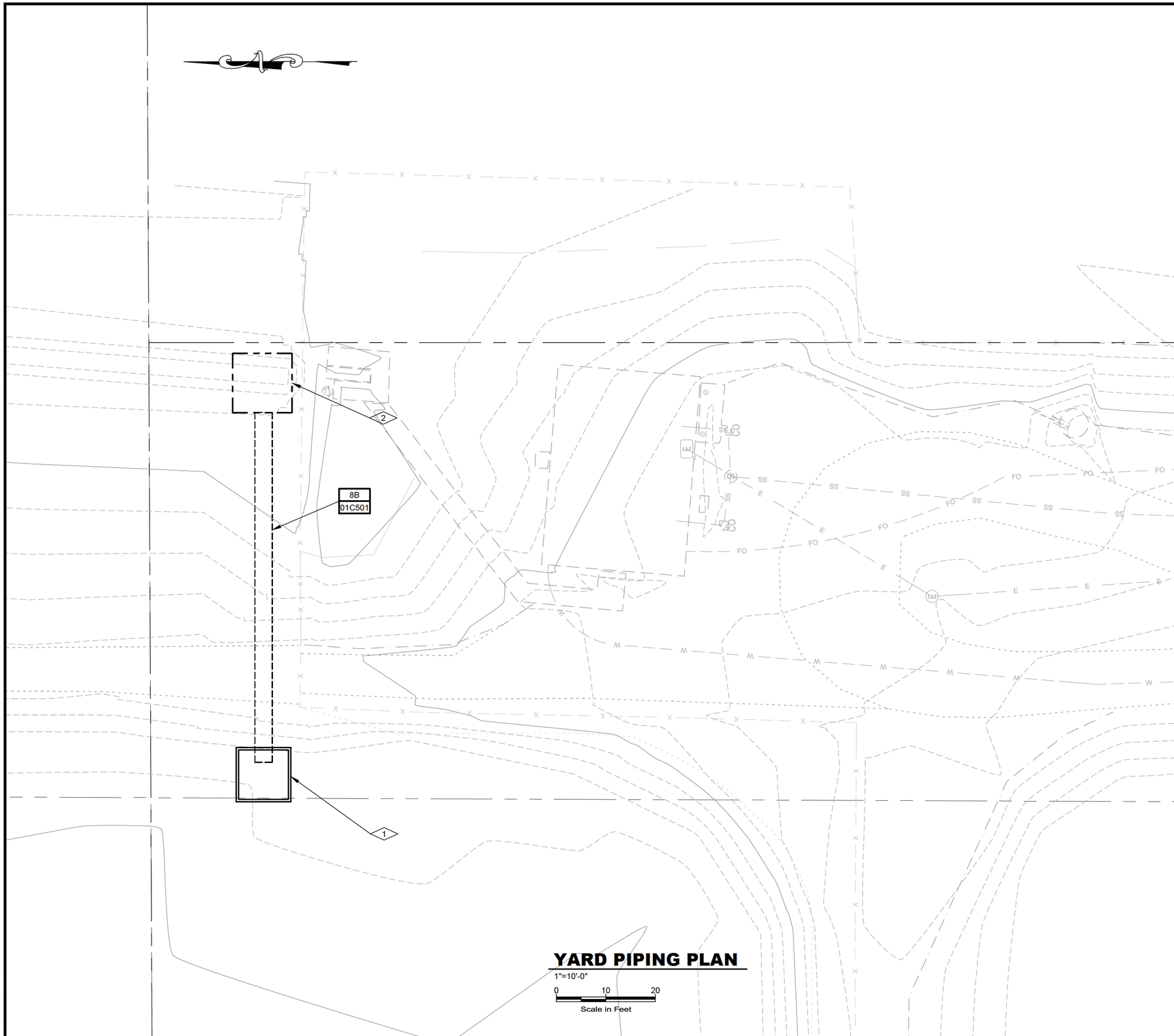
Exhibit A



YARD PIPING PLAN

1"=10'-0"

0 10 20

Scale in Feet

NOTES:

1. SEE SHEET 01C801 FOR YARD PIPING SCHEDULE.
2. CONTRACTOR TO VERIFY LOCATION, AND DEPTH, SI E, AND MATERIAL OF EXISTING PIPING AND UTILITIES.
3. CONTRACTOR TO COORDINATE TIE-INS TO EXISTING, ACTIVE LINES WITH OPERATORS.
4. SEE PIPE PROFILE SHEETS FOR ADDITIONAL DETAILS.
5. SEE SITE UTILITY PLAN ON SHEET 01C201 FOR POTABLE WATER, STORM WATER AND NATURAL GAS PIPING ROUTING.
6. SEE SITE GRADING PLANS FOR STORM DRAIN CATCH BASIN AND PIPING DETAILS.
7. SEE DETAILED YARD PIPING PLANS FOR REMOVAL OF EXISTING PIPING.

KEYNOTES:

1 OUTLET LEVEL CONTROL BOX. SEE DETAIL 1 ON SHEET 01C703.

2 OUTFALL ENERGY DISSIPATION FOR PIPE OUTFALL 8B SEE DETAIL 2 ON SHEET 01C604.

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE

0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	04/06/2026	EES	DCH	BMR

REVISIONS

GRANTSVILLE CITY

GRANTSVILLE WWTP

CIVIL
YARD PIPING PLAN

AQUA ENGINEERING

DRAWING NO.

01C306

SHEET

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4/6/2026

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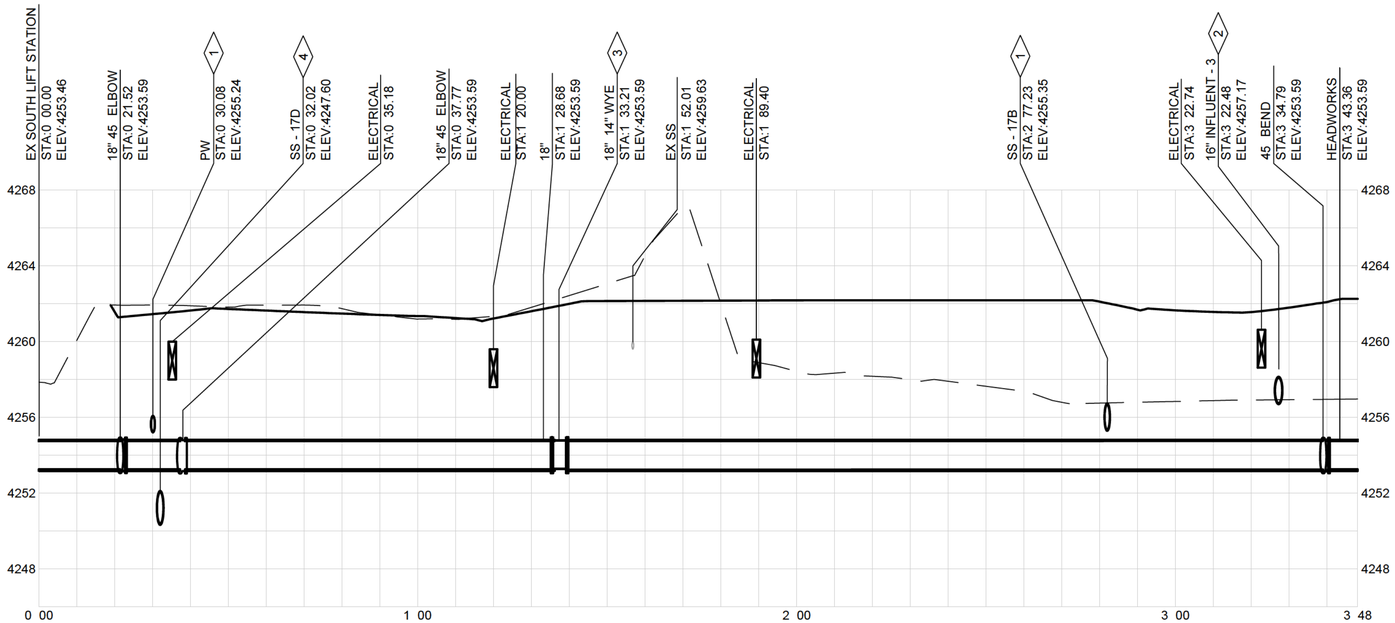
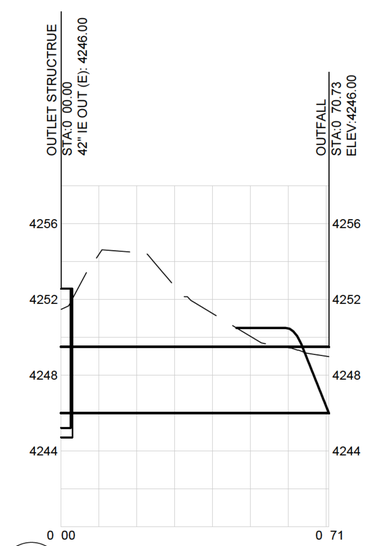
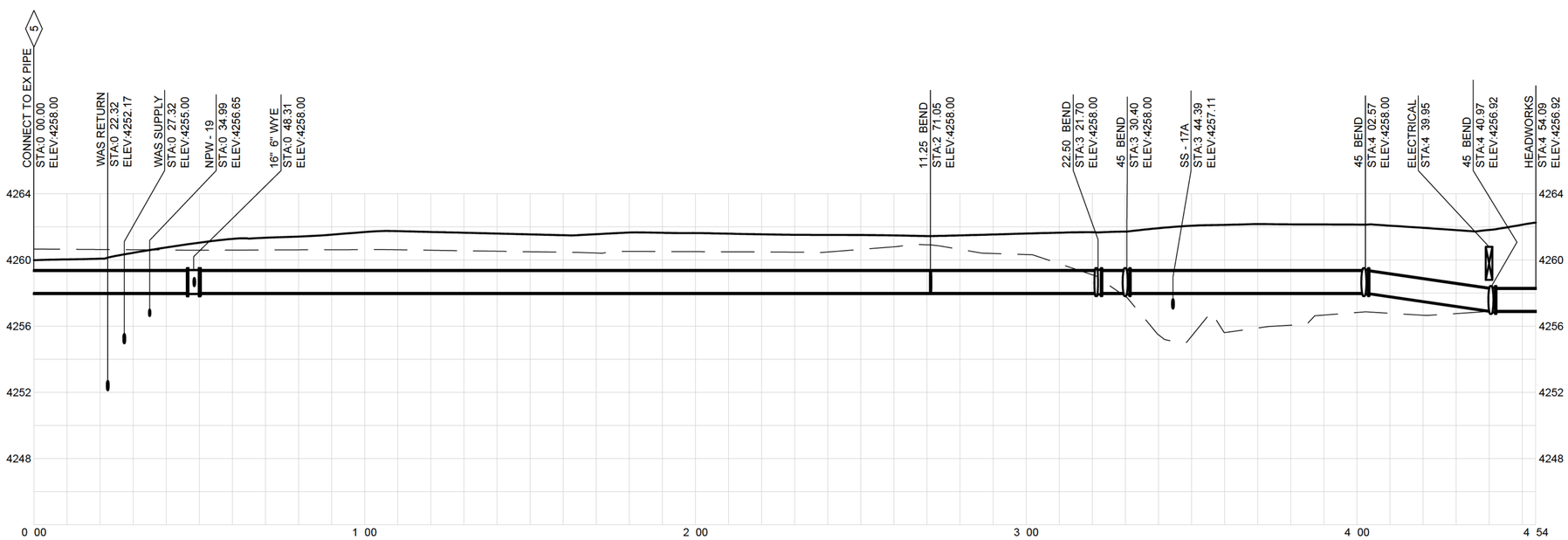
Exhibit A



1 / 01C303 **SOUTH LIFT STATION RAW INFLUENT**
NTS



8B / 01C306 **EFFLUENT TO OUTFALL**
NTS



2 / 01C304 **NORTH INTERCEPTOR RAW INFLUENT**
NTS

NOTES:

1. SEE SHEET 01C801 FOR YARD PIPING SCHEDULE.
2. CONTRACTOR TO VERIFY LOCATION, AND DEPTH, SI E, AND MATERIAL OF EXISTING PIPING AND UTILITIES.
3. CONTRACTOR TO COORDINATE TIE-INS TO EXISTING, ACTIVE LINES WITH OPERATORS.
4. SEE ELECTRICAL SITE PLAN AND DRAWINGS FOR DETAILS ON DUCT BANKS.

KEYNOTES:

1 SEE SITE UTILITY PLAN ON SHEET 01C201 FOR POTABLE WATER,STORM DRAIN, AND NATURAL GAS PIPING ROUTING.

2 SEE PROFILE #3.

3 SEE CONNECTION DETAIL #2 ON SHEET 01C601.

4 SEE PROFILE #17D.

5 SEE CONNECTION DETAIL #6 ON SHEET 01C603. CONFIRM LOCATION AND DEPTH OF EXISTING PIPE.

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

NO.	DATE	DESIGN	DRAWN	CHECKED
ORIGINAL				
C	04/06/2026	EES	DCH	BMR
REVISIONS				

GRANTSVILLE CITY
GRANTSVILLE WWTP

CIVIL
PIPE PROFILES

AQUA ENGINEERING

DRAWING NO.
01C501
SHEET

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4/6/2026

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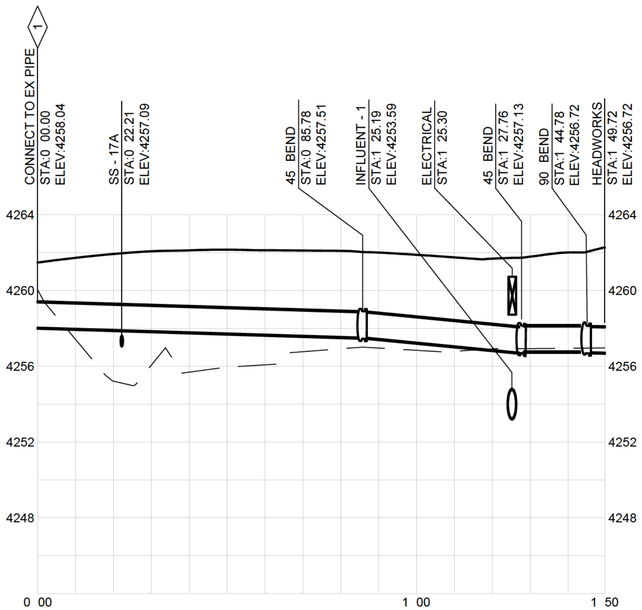
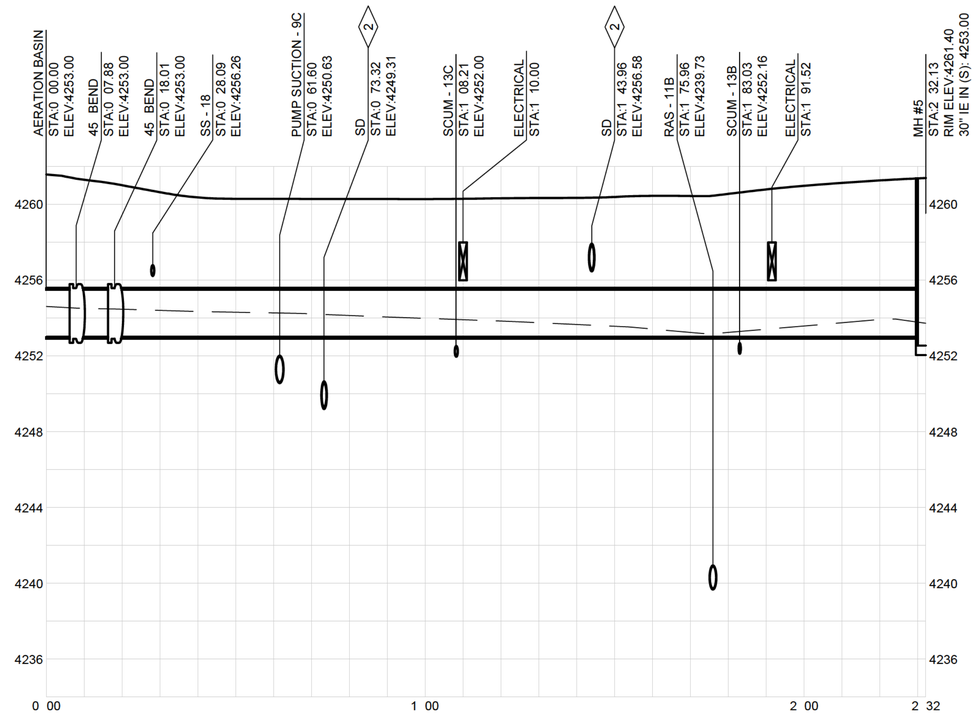
Exhibit A



3 / 01C304 **NORTH INTERCEPTOR RAW INFLUENT**
NTS



4 / 01C304 **SECONDARY CLARIFIER INFLUENT**
NTS

NOTES:

1. SEE SHEET 01C801 FOR YARD PIPING SCHEDULE.
2. CONTRACTOR TO VERIFY LOCATION, AND DEPTH, SI E, AND MATERIAL OF EXISTING PIPING AND UTILITIES.
3. CONTRACTOR TO COORDINATE TIE-INS TO EXISTING, ACTIVE LINES WITH OPERATORS.
4. SEE ELECTRICAL SITE PLAN AND DRAWINGS FOR DETAILS ON DUCT BANKS.

KEYNOTES:

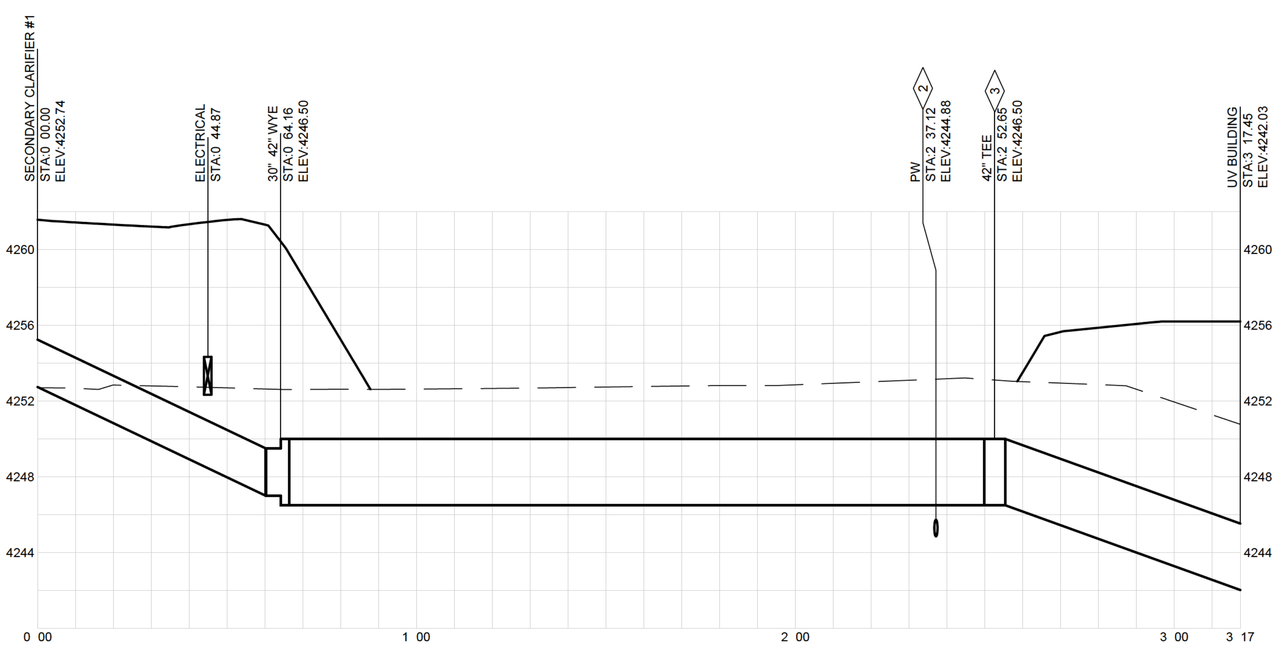
1 SEE CONNECTION DETAIL #7 ON SHEET 01C603. CONTRACTOR TO CONFIRM LOCATION AND DEPTH OF EXISTING PIPE.

2 SEE SITE UTILITY PLAN ON SHEET 01C201 FOR POTABLE WATER, STORM DRAIN, AND NATURAL GAS PIPING ROUTING.

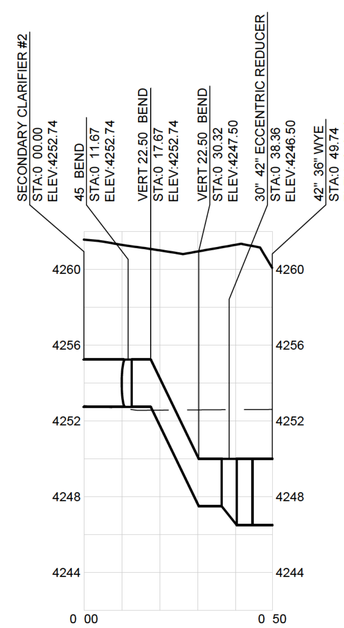
3 PROVIDE 42" HDPE TEE WITH 42" FUSED HDPE CAP ON STUB. STUB PIPE 5'0" BEYOND TEE.

4 SEE DETAIL 1 ON SHEET 01C604.

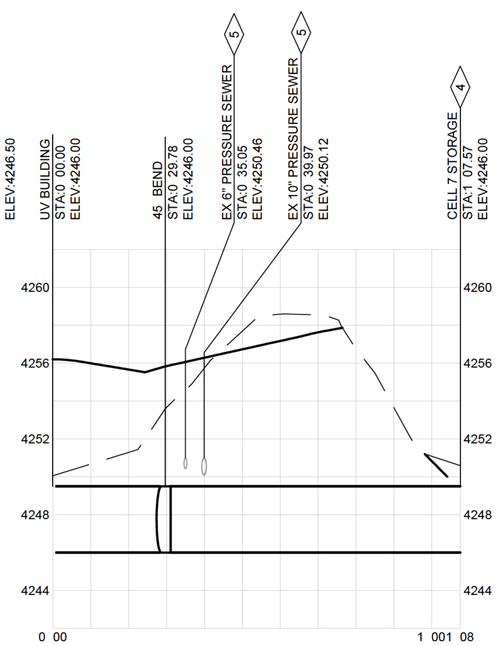
5 DEPTH OF EXISTING PIPING HAS NOT BEEN CONFIRMED.



5A / 01C305 **SC #1 EFFLUENT**
NTS



5B / 01C305 **SC #2 EFFLUENT**
NTS



8A / 01C305 **UV EFFLUENT TO POND & OUTFALL**
NTS

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

NO.	DATE	DESIGN	DRAWN	CHECKED
C	04/06/2026	EES	DCH	BMR

ORIGINAL

REVISIONS

GRANTSVILLE CITY
GRANTSVILLE WWTP

CIVIL
PIPE PROFILES

AQUA ENGINEERING

DRAWING NO.
01C502

SHEET

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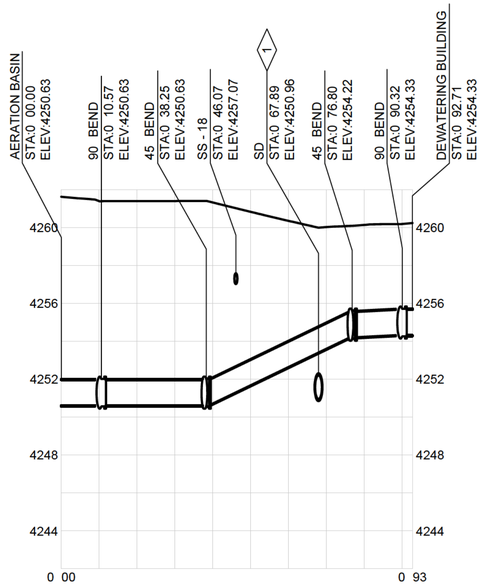
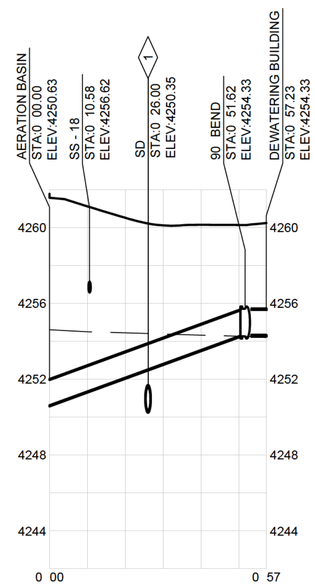
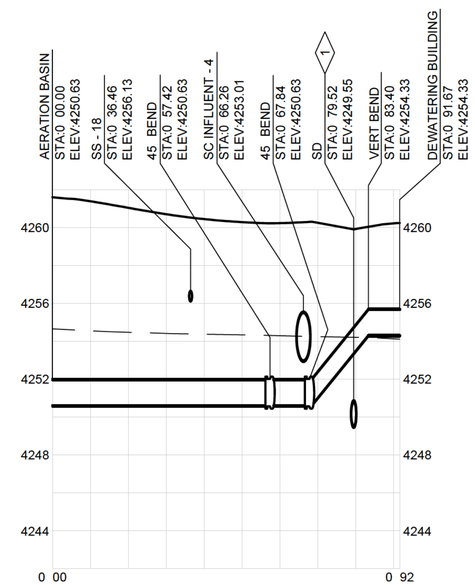
Exhibit A



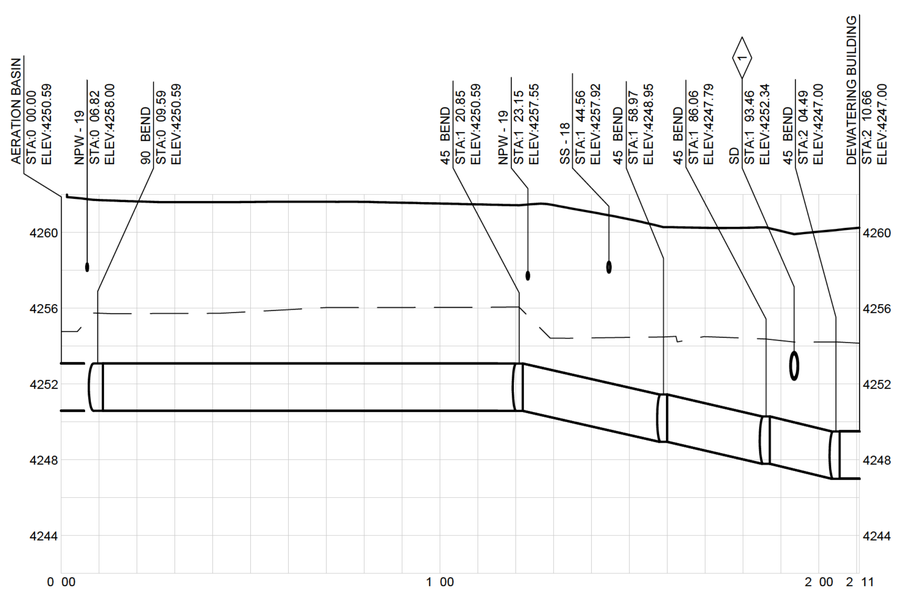
9A 01C304 **INTERNAL RECYCLE PUMP SUCTION**
NTS



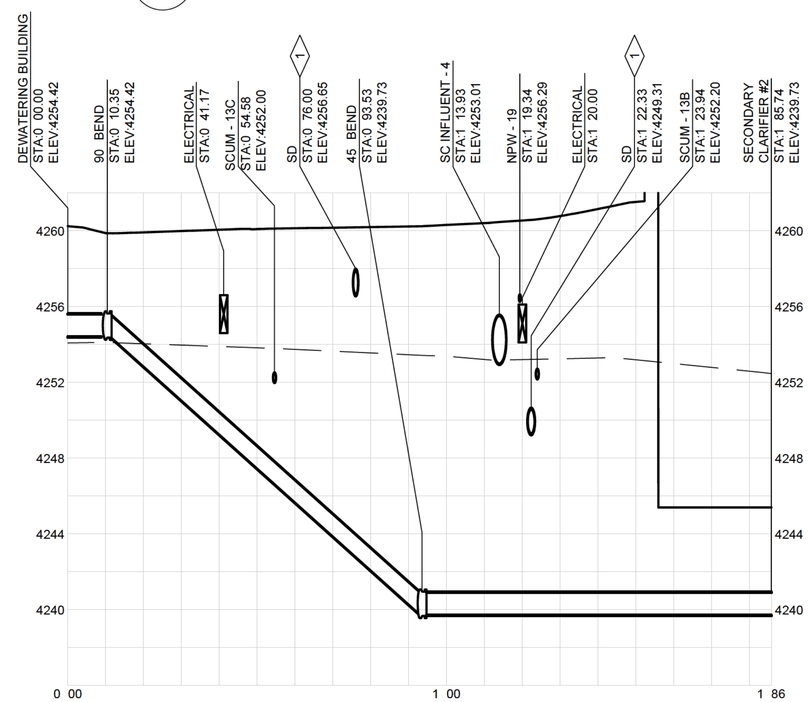
9B 01C304 **INTERNAL RECYCLE PUMP SUCTION**
NTS



9C 01C304 **INTERNAL RECYCLE PUMP SUCTION**
NTS



10 01C304 **INTERNAL RECYCLE PUMP DISCHARGE TO ANOXIC**
NTS



11B 01C304 **RAS PUMP SUCTION**
NTS

NOTES:

1. SEE SHEET 01C801 FOR YARD PIPING SCHEDULE.
2. CONTRACTOR TO VERIFY LOCATION, AND DEPTH, SI E, AND MATERIAL OF EXISTING PIPING AND UTILITIES.
3. CONTRACTOR TO COORDINATE TIE-INS TO EXISTING, ACTIVE LINES WITH OPERATORS.
4. SEE ELECTRICAL SITE PLAN AND DRAWINGS FOR DETAILS ON DUCT BANKS.

KEYNOTES:

1 SEE SITE UTILITY PLAN ON SHEET 01C201 FOR POTABLE WATER, STORM DRAIN, AND NATURAL GAS PIPING ROUTING.

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE
0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	04/06/2026	EES	DCH	BMR

REVISIONS

GRANTSVILLE CITY
GRANTSVILLE WWTP

CIVIL
PIPE PROFILES

AQUA ENGINEERING

DRAWING NO.
01C503
SHEET

C:\USERS\DEREK.HYDE\DC\ACCDOCS\AQUA ENGINEERING\002362.C - GRANTSVILLE NEW 3 MGD WWTF\PROJECT FILES\001 SITE CIVIL\011-01C501 - 01C506 - PIPE PROFILES.DWG
4/6/2026

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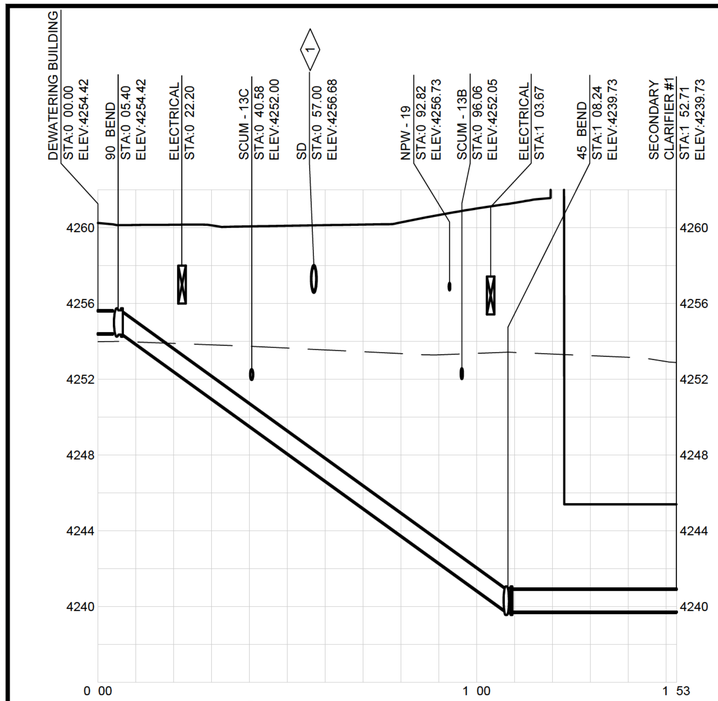
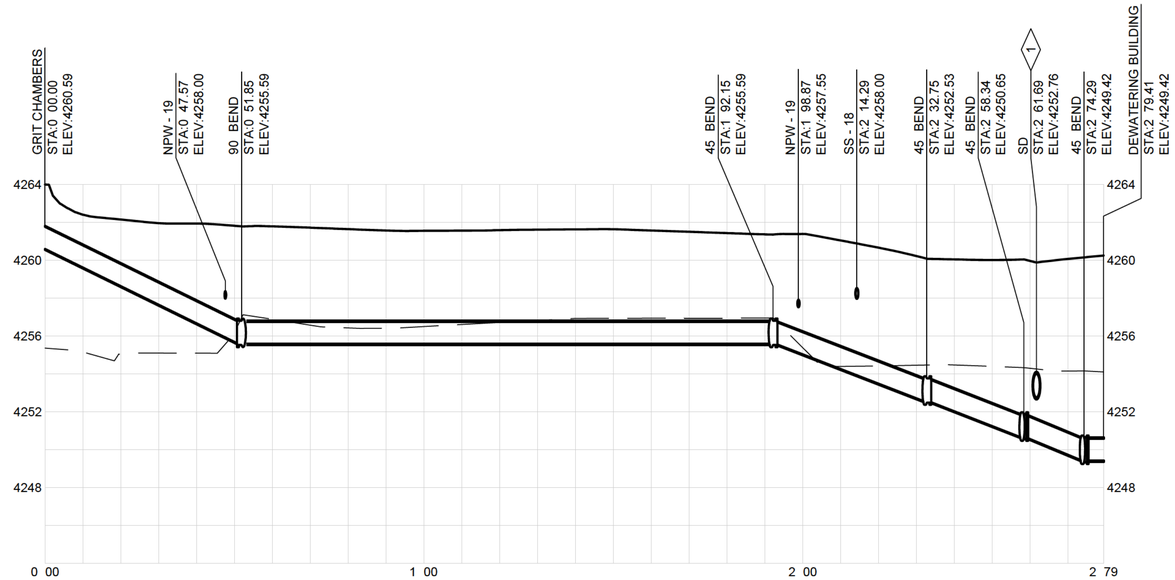
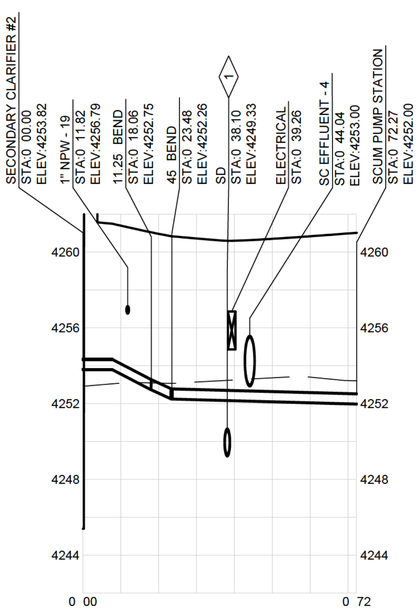


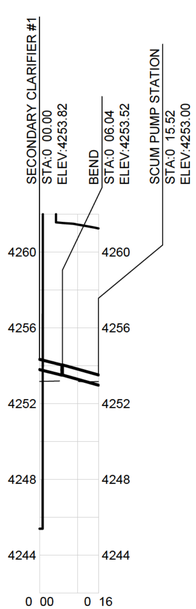
11A / 01C303 **RAS PUMP SUCTION**
NTS



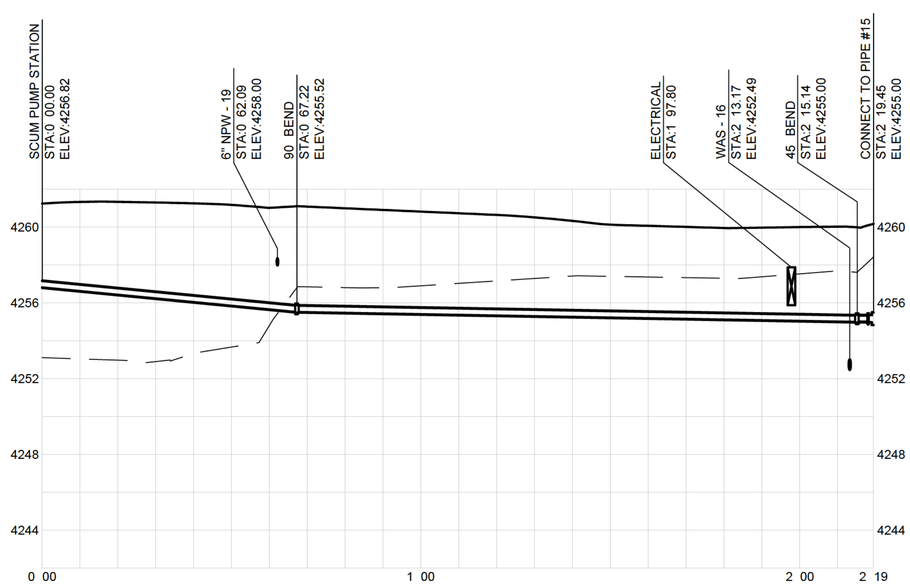
12 / 01C304 **RAS PUMP DISCHARGE TO ANAEROBIC BASINS**
NTS



13B / 01C305 **SC #2 SCUM TO PS**
NTS



13A / 01C305 **SC #1 SCUM TO PS**
NTS



14 / 01C305 **SCUM PS TO SOLIDS HANDLING**
NTS

NOTES:

1. SEE SHEET 01C801 FOR YARD PIPING SCHEDULE.
2. CONTRACTOR TO VERIFY LOCATION, AND DEPTH, SI E, AND MATERIAL OF EXISTING PIPING AND UTILITIES.
3. CONTRACTOR TO COORDINATE TIE-INS TO EXISTING, ACTIVE LINES WITH OPERATORS.
4. SEE ELECTRICAL SITE PLAN AND DRAWINGS FOR DETAILS ON DUCT BANKS.

KEYNOTES:

1 SEE SITE UTILITY PLAN ON SHEET 01C201 FOR POTABLE WATER, STORM DRAIN, AND NATURAL GAS PIPING ROUTING.

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

NO.	DATE	DESIGN	DRAWN	CHECKED
ORIGINAL				
C	04/06/2026	EES	DCH	BMR
REVISIONS				

GRANTSVILLE CITY
GRANTSVILLE WWTP
CIVIL
PIPE PROFILES

AQUA ENGINEERING

DRAWING NO.
01C504
SHEET

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4/6/2026

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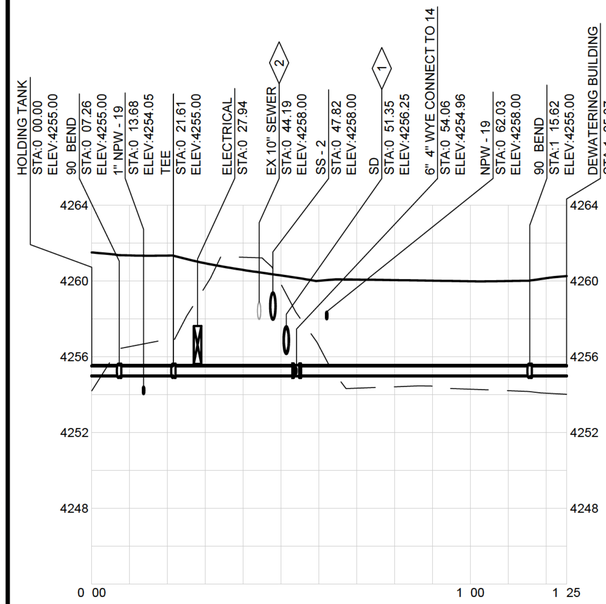
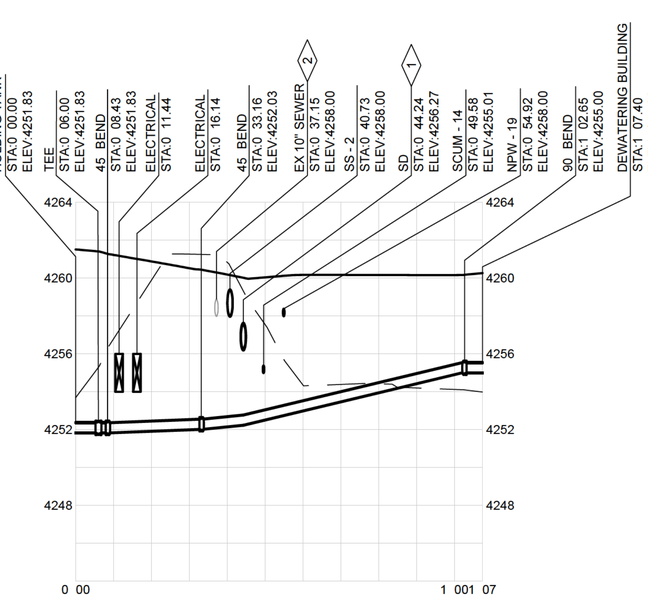
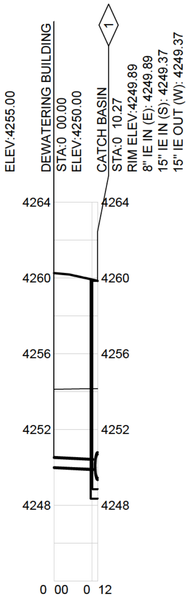
Exhibit A



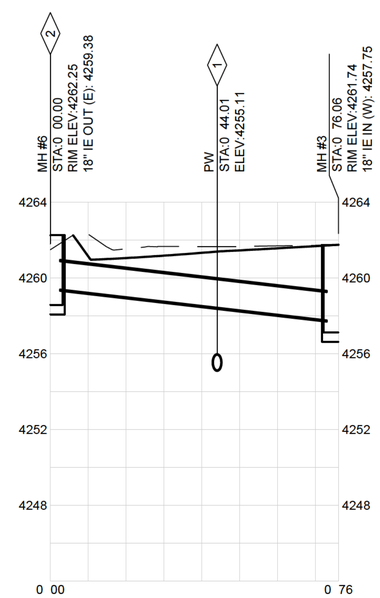
15 / 01C304 **WAS PUMP DISCHARGE TO SOLIDS HOLDING**
NTS



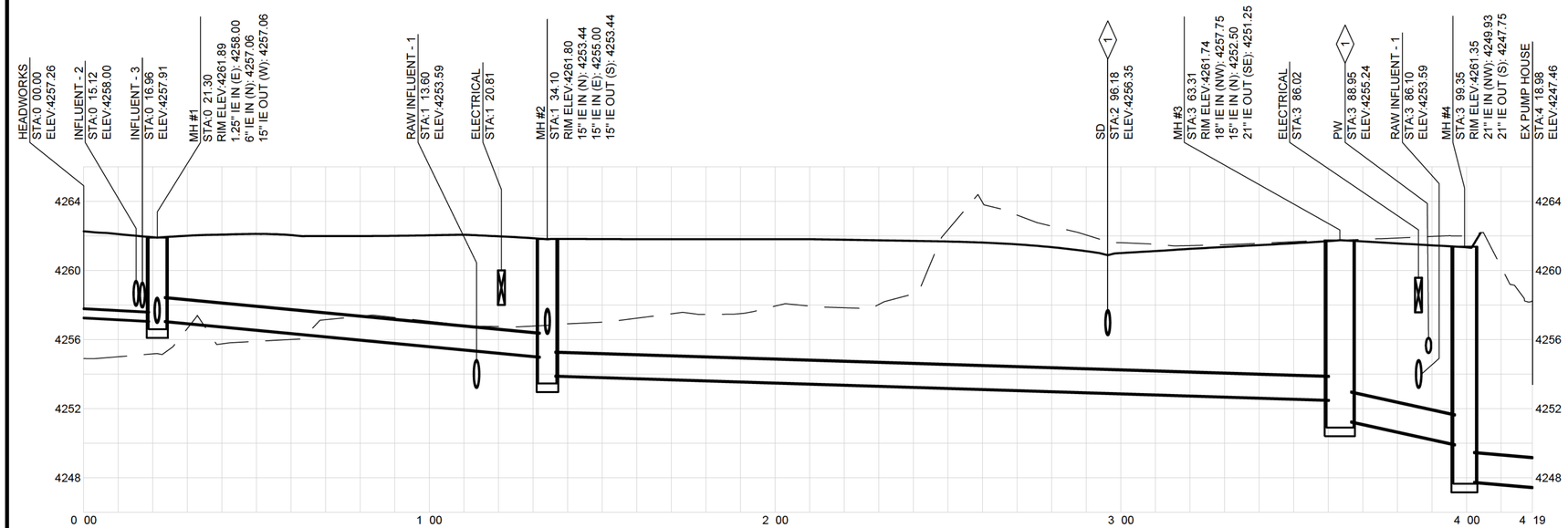
16 / 01C304 **WAS PUMP SUCTION FROM SOLIDS HOLDING**
NTS



17E / 01C304 **SITE GRAVITY SS**
NTS



17C / 01C303 **SITE GRAVITY SS**
NTS



17A / 01C304 | 17B / 01C304 | 17D / 01C303 **SITE GRAVITY SS**
NTS

NOTES:

1. SEE SHEET 01C801 FOR YARD PIPING SCHEDULE.
2. CONTRACTOR TO VERIFY LOCATION, AND DEPTH, SI E, AND MATERIAL OF EXISTING PIPING AND UTILITIES.
3. CONTRACTOR TO COORDINATE TIE-INS TO EXISTING, ACTIVE LINES WITH OPERATORS.
4. SEE ELECTRICAL SITE PLAN AND DRAWINGS FOR DETAILS ON DUCT BANKS.

KEYNOTES:

1 SEE SITE UTILITY PLAN ON SHEET 01C201 FOR POTABLE WATER, STORM DRAINS AND NATURAL GAS PIPING ROUTING.

2 DEPTH OF EXISTING PIPING HAS NOT BEEN CONFIRMED.

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE
0 1/2 1

ORIGINAL

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C	04/06/2026	EES	DCH	BMR

REVISIONS

GRANTSVILLE CITY
GRANTSVILLE WWTP

CIVIL
PIPE PROFILES

AQUA ENGINEERING

DRAWING NO.
01C505

SHEET

C:\USERS\DEREK.HYDE\DC\ACCDOCS\AQUA ENGINEERING\002362.C - GRANTSVILLE NEW 3 MGD WWTF\PROJECT FILES\001 SITE CIVIL\011-01C501 - 01C506 - PIPE PROFILES.DWG

4/6/2026

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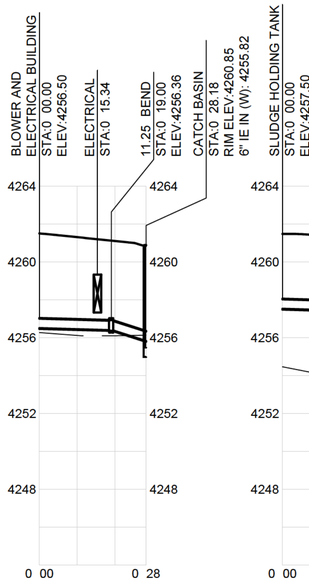
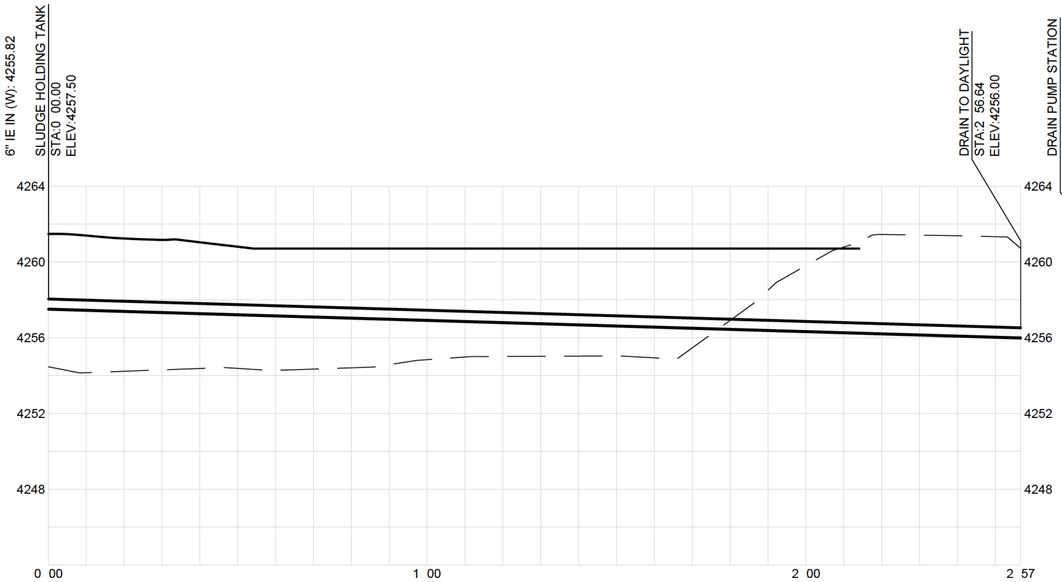
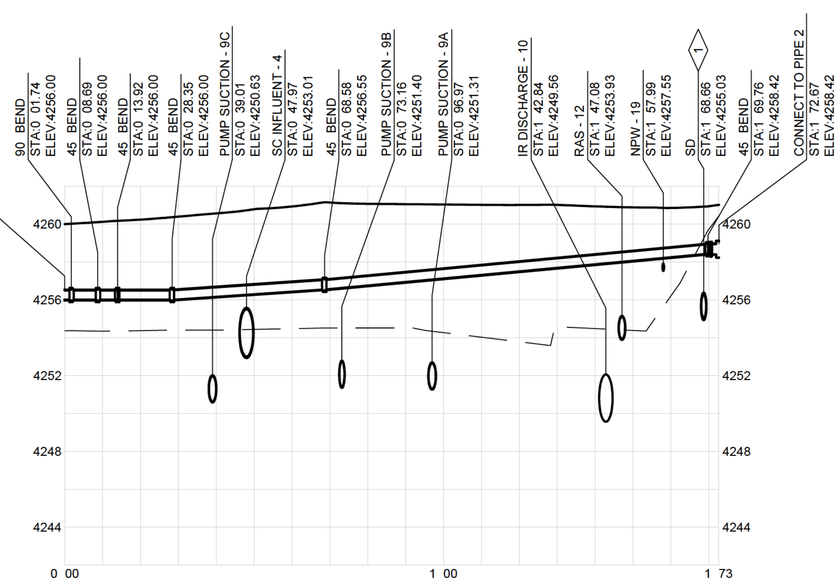
Exhibit A



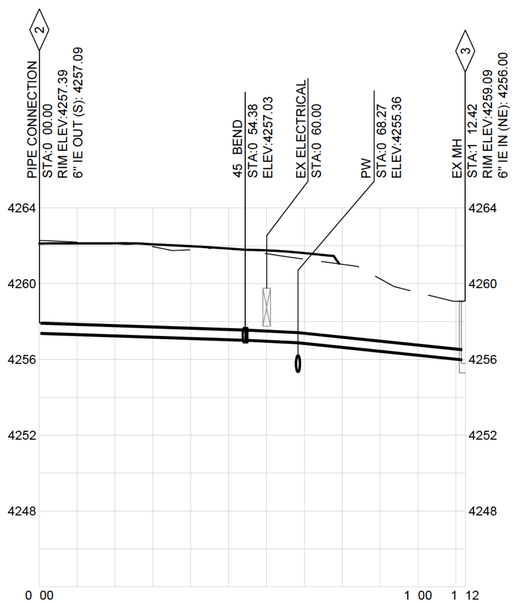
17F 01C304 **SITE GRAVITY SS**
NTS



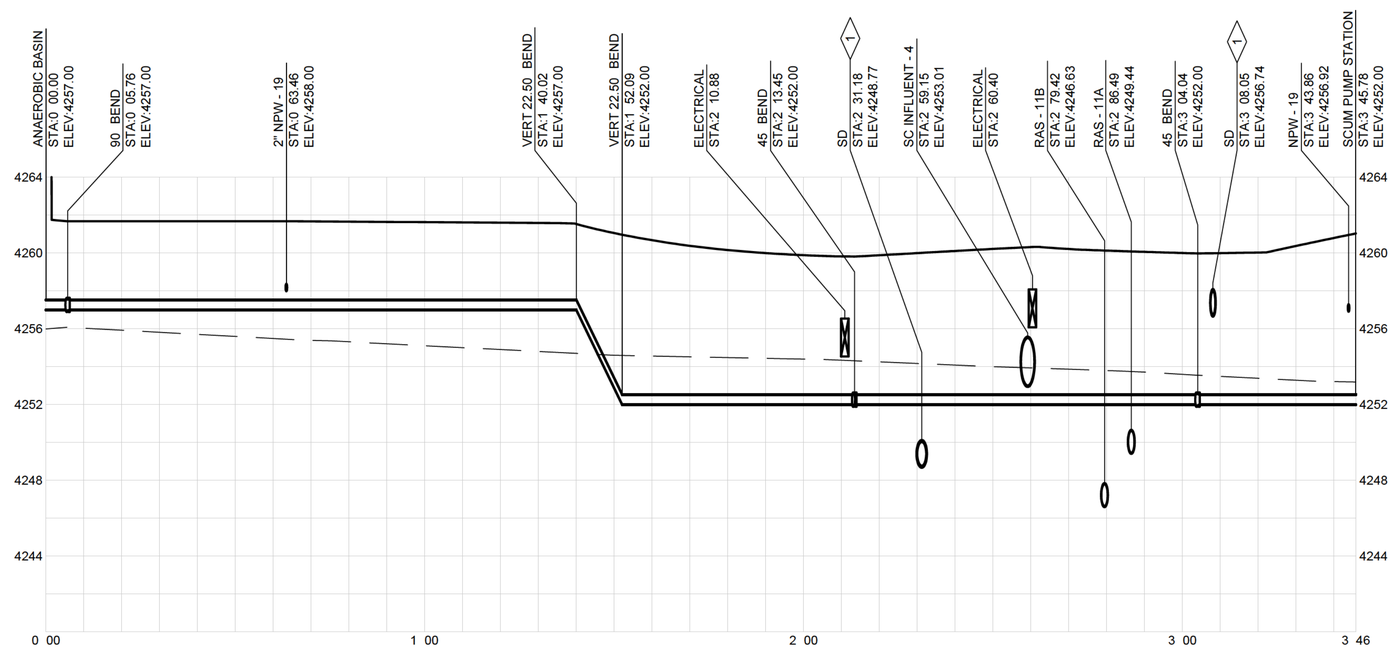
20 01C304 **SLUDGE HOLDING TANK OVERFLOW**
NTS



18 01C304 **SD AND SS PUMP STATION**
NTS



17G 01C303 **SANITARY SEWER**
NTS



13C 01C304 **ANAEROBIC BASIN SCUM TO PUMP STATION**
NTS

NOTES:

1. SEE SHEET 01C801 FOR YARD PIPING SCHEDULE.
2. CONTRACTOR TO VERIFY LOCATION, AND DEPTH, SI E, AND MATERIAL OF EXISTING PIPING AND UTILITIES.
3. CONTRACTOR TO COORDINATE TIE-INS TO EXISTING, ACTIVE LINES WITH OPERATORS.
4. SEE ELECTRICAL SITE PLAN AND DRAWINGS FOR DETAILS ON DUCT BANKS.

KEYNOTES:

1. SEE SITE UTILITY PLAN ON SHEET 01C201 FOR POTABLE WATER, STORM DRAIN, AND NATURAL GAS PIPING ROUTING.
2. SEE DETAIL 5 ON SHEET 01C602.
3. SEE DETAIL 4 ON SHEET 01C602.

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

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C	04/06/2026	EES	DCH	BMR

ORIGINAL
REVISIONS

GRANTSVILLE CITY
GRANTSVILLE WWTP

CIVIL
PIPE PROFILES

AQUA ENGINEERING

DRAWING NO.
01C506
SHEET

C:\USERS\DEREK.HYDE\DC\ACCDOCS\AQUA ENGINEERING\002362 C - GRANTSVILLE NEW 3 MGD WWTF\PROJECT FILES\001 SITE CIVIL\011-01C501 - 01C506 - PIPE PROFILES.DWG
4/6/2026

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Exhibit A

PIPE NO.	SIZE	SERVICE	MATERIAL	PRESSURE (PSI)	
				OPERATING	TEST
1	18"	SOUTH LIFT STATION RAW INFLUENT TO HEADWORKS	HDPE DR-17	< 15	25 HL
2	16"	NORTH INTERCEPTOR INFLUENT TO HEADWORKS	HDPE DR-17	< 15	25 HL
3	16"	NORTH INTERCEPTOR INFLUENT TO HEADWORKS	HDPE DR-17	< 15	25 HL
4	30"	SECONDARY CLARIFIER COMBINED INFLUENT	HDPE DR-17	<10	10 HL
4A	30"	SECONDARY CLARIFIER #1 INFLUENT	HDPE DR-17	<10	10 HL
4B	30"	SECONDARY CLARIFIER #2 INFLUENT	HDPE DR-17	<10	10 HL
5A	30"	SECONDARY CLARIFIER #1 EFFLUENT	HDPE DR-17	<10	10 HL
5B	30"	SECONDARY CLARIFIER #2 EFFLUENT	HDPE DR-17	<10	10 HL
5C	42"	COMBINED SECONDARY CLARIFIER EFFLUENT	HDPE DR-17	<10	10 HL
6	42"	TERTIARY FILTRATION INFLUENT (FUTURE)	FUTURE	-	-
7	42"	TERTIARY FILTRATION EFFLUNET TO UV (FUTURE)	FUTURE	-	-
8A	42"	UV EFFLUENT TO OUTFALL	HDPE DR-17	<10	10 HL
8B	42"	UV EFFLUENT TO OUTFALL	HDPE DR-17	<10	10 HL
9A	16"	AERATION BASIN #1 INTERNAL RECYCLE PUMP SUCTION	HDPE DR-17	<10	10 HL
9B	16"	AERATION BASIN #2 INTERNAL RECYCLE PUMP SUCTION	HDPE DR-17	<10	10 HL
9C	16"	AERATION BASIN #3 INTERNAL RECYCLE PUMP SUCTION	HDPE DR-17	<10	10 HL
10	30"	INTERNAL RECYCLE PUMP DISCHARGE TO ANOXIC	HDPE DR-17	< 15	25 HL
11A	14"	SECONDARY CLARIFIER #1 RAS PUMP SUCTION	HDPE DR-17	<10	10 HL
11B	14"	SECONDARY CLARIFIER #2 RAS PUMP SUCTION	HDPE DR-17	<10	10 HL
12	14"	RAS PUMP DISCHARGE TO ANAEROBIC BASINS	HDPE DR-17	< 15	25 HL
13A	6"	SECONDARY CLARIFIER #1 SCUM TO SCUM PUMP STATION	HDPE DR-17	G	G
13B	6"	SECONDARY CLARIFIER #2 SCUM TO SCUM PUMP STATION	HDPE DR-17	G	G
13C	6"	BNR/AERATION BASIN SCUM TO SCUM PUMP STATION	HDPE DR-17	G	G
14	4"	SCUM PUMP STATION DISCHARGE TO SOLIDS HANDLING	HDPE DR-17	< 15	25 HL
15	6"	WAS PUMP DISCHARGE TO SOLIDS STORAGE	HDPE DR-17	50.0000	HH
16	6"	WAS PUMP SUCTION FROM SOLIDS STORAGE TO DEWATERING	HDPE DR-17	50.0000	HH
17A	6"	SITE GRAVITY SANITARY SEWER	SDR 35	G	G
17B	15"	SITE GRAVITY SANITARY SEWER	SDR 35	G	G
17C	18"	SITE GRAVITY SANITARY SEWER	SDR 35	G	G
17D	21"	SITE GRAVITY SANITARY SEWER	SDR 35	G	G
17E	8"	SITE GRAVITY SANITARY SEWER	SDR 35	G	G
17F	6"	SITE GRAVITY SANITARY SEWER	SDR 35	G	G
17G	6"	SITE GRAVITY SANITARY SEWER	SDR 35	G	G
18	6"	SITE STORM AND SANITARY SEWER PUMP STATION DISCHARGE	HDPE DR-17	< 15	25 HL
19	1" - 6"	SITE NON-POTABLE WATER DISTRIBUTION	HDPE DR-11	80.0000	150 HH
20	6"	SOLIDS HOLDING TANK OVERFLOW	HDPE DR-11	G	G
21	VARIES	STORM WATER COLLECTION	DWV 35	G	G
22	1" - 2"	POTABLE WATER DISTRIBUTION	SEE UTILITY PLANS	80.0000	150 HH
23	1" - 4"	SITE NATURAL GAS DISTRIBUTION	SEE UTILITY PLANS	< 5	SEE GAS REQ'S
24	1-1/4"	SITE PRESSURE SEWER	HDPE DR-11	< 15	25 HL

MANHOLE	RIM	MANHOLE	MANHOLE	PIPE CONNECTIONS											
NO.	ELEVATION	DIAMETER	STYLE	SIZE	INVERT	POSITION	SIZE	INVERT	POSITION	SIZE	INVERT	POSITION	SIZE	INVERT	POSITION
1	4261.89	5 FT	PRECAST	6"	4257.06	N	15"	4257.06	SE	15"	4257.06	W	1.25"*	4258.00*	E
2	4261.80	5 FT	PRECAST	15"	4256.42	N	15"	4255.00	E-NE	15"	4253.44	S	-	-	-
3	4261.74	7 FT	PRECAST	15"	4252.50	N	18"	4257.75	NW	21"	4251.25	SE	15"	4255.06	N-NW
4	4261.35	6 FT	PRECAST	21"	4249.93	NW	21"	4247.75	S	-	-	-	-	-	-
5	4261.40	6 FT	PRECAST	30"	4253.00	S	30"	4251.17	E	30"	4251.17	W	-	-	-
6	4262.25	6 FT	DOG HOUSE	18"**	4259.88**	NE	18"†	4259.88**	SW	18"	4259.38	SE	-	-	-

* EXISTING SEWER PRESSURE LINE. FIELD VERIFY LOCATION AND DEPTH AND ROUTE NEW PIPING AS REQUIRED TO MANHOLE #1

** EXISTING PIPE, CONTRACTOR TO FIELD VERIFY INVERT ELEVATION

† EXISTING PIPE TO BE PLUGGED AFTER CONNECTION TO NEW PIPING IS COMPLETE. FIELD VERIFY EXISTING INVERT ELEVATION

NOTES:

1. SEE DETAIL C103 FOR ADDITIONAL DETAILS AND REQUIREMENTS FOR MANHOLES.

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE
0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
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REVISIONS

GRANTSVILLE CITY
GRANTSVILLE WWTP
CIVIL
YARD PIPING SCHEDULE

AQUA ENGINEERING

DRAWING NO.
01C801
SHEET

C:\USERS\BRETT.PRATT\DCVACCDOCS\AQUA ENGINEERING\002362.C - GRANTSVILLE NEW 3 MGD WWTF\PROJECT FILES\001 SITE CIVIL\011-01C801 - YARD PIPING SCHEDULE.DWG
4/6/2026

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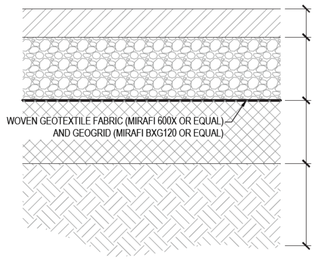
Exhibit A

ASPHALT NOTES

1. ALL PAVING TO BE PLACED OVER PROPERLY PREPARED NATURAL SOILS AND/OR PROPERLY PREPARED EXISTING FILL SOILS AND PROPERLY COMPACTED STRUCTURAL FILL WHERE SPECIFIED.
2. ALL STRUCTURAL FILL TO BE PLACED AND COMPACTED PER THE PROJECT GEOTECHNICAL REPORT OR TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE AASHTO T-180 (D-1557) METHOD OF COMPACTION. LIFTS SHOULD BE PLACED PER GEOTECHNICAL RECOMMENDATIONS BUT SHOULD NOT EXCEED 8" IN LOOSE THICKNESS.
3. REMOVE SURFACE VEGETATION AND OTHER DELETERIOUS MATERIALS OVER THE ENTIRE SITE PER THE PROJECT GEOTECHNICAL REPORT IN PREPARATION OF PROPOSED IMPROVEMENTS.

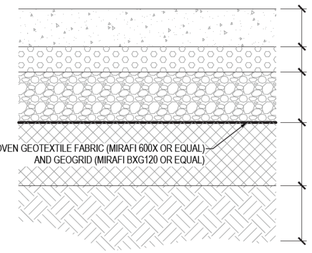


1 ASPHALT PAVED SECTION

SCALE: NONE

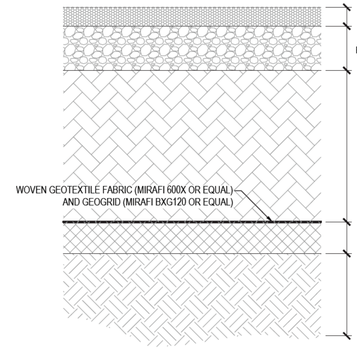
CONCRETE NOTES

1. ALL PAVING TO BE PLACED IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE MANUAL (ACI, 2019) AND CONFORMING TO UTAH DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR PORTLAND CEMENT CONCRETE PAVEMENT OVER PROPERLY PREPARED NATURAL SOILS AND/OR PROPERLY PREPARED EXISTING FILL SOILS AND PROPERLY COMPACTED STRUCTURAL FILL WHERE SPECIFIED.
2. ALL STRUCTURAL FILL TO BE PLACED AND COMPACTED PER THE PROJECT GEOTECHNICAL REPORT OR TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE AASHTO T-180 (D-1557) METHOD OF COMPACTION. LIFTS SHOULD BE PLACED PER GEOTECHNICAL RECOMMENDATIONS BUT SHOULD NOT EXCEED 8" IN LOOSE THICKNESS.
3. REMOVE SURFACE VEGETATION AND OTHER DELETERIOUS MATERIALS OVER THE ENTIRE SITE PER THE PROJECT GEOTECHNICAL REPORT IN PREPARATION OF PROPOSED IMPROVEMENTS.
4. FREE DRAINING GRAVEL WHERE REQUIRED PER IBC (2021), OR FOR PERMANENT DEWATERING SYSTEMS. SEPARATION FABRIC SHOULD BE INCLUDED BETWEEN FREE DRAINING GRAVEL AND ADJACENT SOIL BELOW GROUNDWATER SURFACE OR WHEN USED IN EXTERIOR AREAS.



2 CONCRETE PAVED SECTION

SCALE: NONE

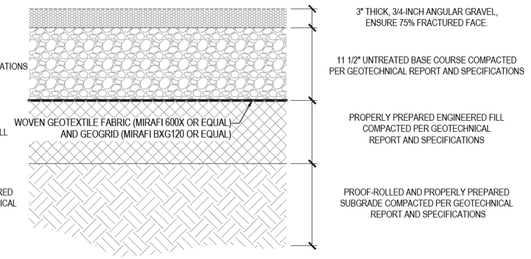


3 UNPAVED ROAD/PARKING SECTION

SCALE: NONE

NOTES

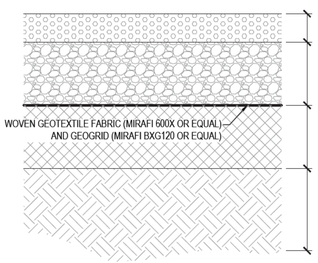
1. ALL PAVING TO BE PLACED OVER PROPERLY PREPARED NATURAL SOILS AND/OR PROPERLY PREPARED EXISTING FILL SOILS AND PROPERLY COMPACTED STRUCTURAL FILL WHERE SPECIFIED.
2. ALL STRUCTURAL FILL TO BE PLACED AND COMPACTED PER THE PROJECT GEOTECHNICAL REPORT OR TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE AASHTO T-180 (D-1557) METHOD OF COMPACTION. LIFTS SHOULD BE PLACED PER GEOTECHNICAL RECOMMENDATIONS BUT SHOULD NOT EXCEED 8" IN LOOSE THICKNESS.
3. REMOVE SURFACE VEGETATION AND OTHER DELETERIOUS MATERIALS OVER THE ENTIRE SITE PER THE PROJECT GEOTECHNICAL REPORT IN PREPARATION OF PROPOSED IMPROVEMENTS.



4 SHOULDER SECTION

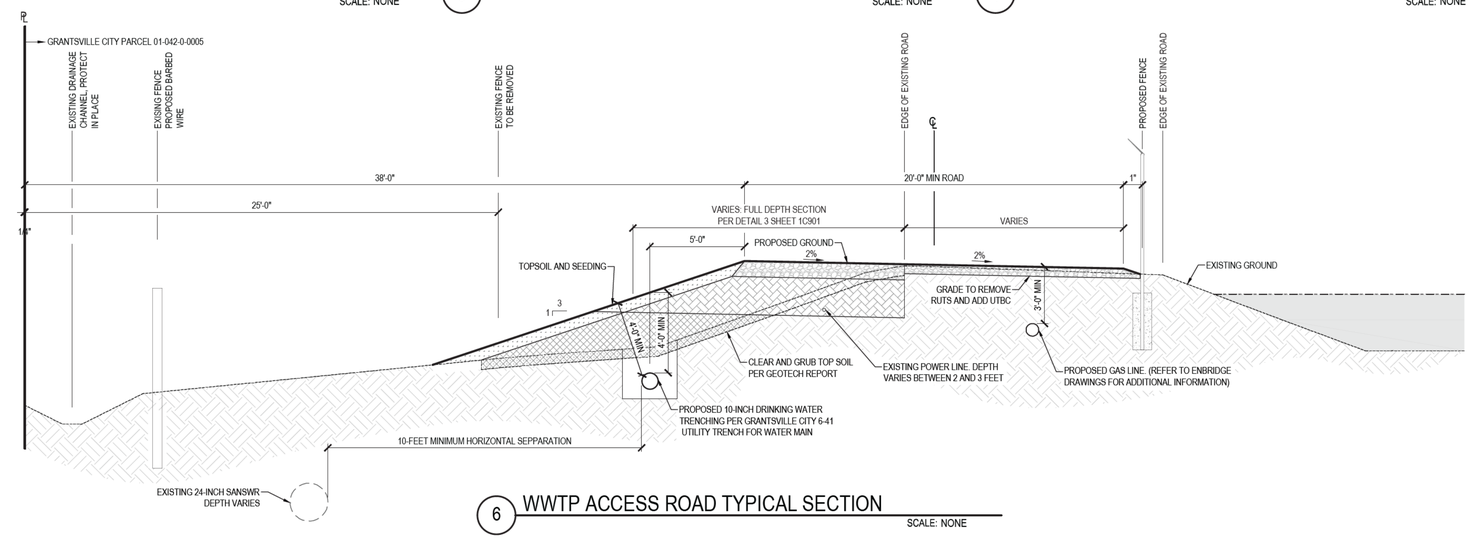
SCALE: NONE

1. ALL PAVING TO BE PLACED OVER PROPERLY PREPARED NATURAL SOILS AND/OR PROPERLY PREPARED EXISTING FILL SOILS AND PROPERLY COMPACTED STRUCTURAL FILL WHERE SPECIFIED.
2. ALL STRUCTURAL FILL TO BE PLACED AND COMPACTED PER THE PROJECT GEOTECHNICAL REPORT OR TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY THE AASHTO T-180 (D-1557) METHOD OF COMPACTION. LIFTS SHOULD BE PLACED PER GEOTECHNICAL RECOMMENDATIONS BUT SHOULD NOT EXCEED 8" IN LOOSE THICKNESS.
3. REMOVE SURFACE VEGETATION AND OTHER DELETERIOUS MATERIALS OVER THE ENTIRE SITE PER THE PROJECT GEOTECHNICAL REPORT IN PREPARATION OF PROPOSED IMPROVEMENTS.



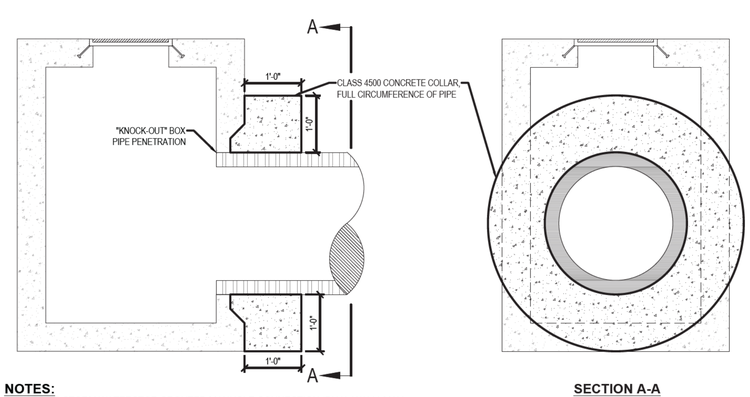
5 CRUSHER FINES SECTION

SCALE: NONE



6 WWTP ACCESS ROAD TYPICAL SECTION

SCALE: NONE



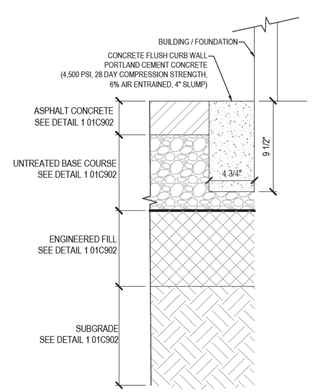
NOTES:

1. ADS HP STORM WATERSTOP GROUTED MANHOLE CONNECTION (DUAL WALL) MAY BE USED WITH CORE-DRILLED PIPE PENETRATIONS.

SECTION A-A

7 STORM DRAIN PIPE SEAL CONCRETE COLLAR

SCALE: NONE



8 CONCRETE FLUSH CURB

SCALE: NONE

Site Name	Fitting Type	Nominal Size	Bend Angle	Branch Size	Length Along Run	Reduced Size	Lowside Depth	Restraint Length
1+00	Dead End	10						65 ft.
2+56(141L)-HYDRANT REDUCER	Reducer	10				6		40 ft.
2+56(152L)-HYDRANT	Dead End	6						41 ft.
2+56-HYDRANT	Tee	10		10	10			1 ft.
2+56-ISOLATION VALVE	Dead End	10						65 ft.
4+10	Vertical Offset	10	11				4	7 ft.
4+41	Horizontal Bend	10	90					21 ft.
4+41-ISOLATION VALVE	Dead End	10						65 ft.
4+89	Horizontal Bend	10	45					9 ft.
5+18	Horizontal Bend	10	45					9 ft.
11+92	Horizontal Bend	10	45					9 ft.
12+44-HYDRANT	Tee	10		6	10			1 ft.
12+44-ISOLATION VALVE	Dead End	10						65 ft.
13+50	Horizontal Bend	10	45					9 ft.
16+10	Horizontal Bend	10	11					3 ft.
28+97	Horizontal Bend	10	45					9 ft.
29+12	Horizontal Bend	10	45					9 ft.
29+40-HYDRANT	Tee	10		6	10			1 ft.
29+40-ISOLATION VALVE	Dead End	10						65 ft.
34+32-HYDRANT	Tee	10		6	10			1 ft.
39+26-HYDRANT	Tee	10		6	10			1 ft.
44+21-CONNECTION VALVE	Dead End	8						54 ft.

Pipe Material	PVC	
Soil Type	SW	
Safety Factor	2	
Trench Type	5	
Depth of Bury	4	ft
Test Pressure	180	psi

9 RESTRAINT JOINT TABLE

SCALE: NONE

PROFESSIONAL ENGINEER 7885569-2202 ROBERT J. ROUSSELLE EXP. 3/31/2025 12/15/2024 STATE OF UTAH

DRAWING IS TO SCALE IF BAR MEASURES: 1" = FULL SCALE 1/2" = HALF SCALE

NO.	DATE	DESIGN	DRAWN	CHECKED
ORIGINAL				
B	12/15/2025	-	-	-
REVISIONS				

GRANTSVILLE CITY
GRANTSVILLE WWTP

CIVIL DETAILS

ENSIGN
THE STANDARD IN ENGINEERING

AQUA ENGINEERING

DRAWING NO.
01C902

SHEET

Z:\SANDY\SANDY 12000\12535\MUNICIPAL\DRAWINGS\01C902 DT.DWG

12/15/2025

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STRUCTURAL DESIGN CRITERIA:

DESIGN BASIC:

CODE: 2021 IBC (INTERNATIONAL BUILDING CODE)

RISK CATEGORY: III

GRAVITY LOADS:

ROOF LIVE LOAD: 20 PSF

FLOOR LIVE LOAD: 125 PSF

GROUND SNOW LOAD, Pg: 24 PSF

SNOW LOAD:

THERMAL FACTOR = 1.1

EXPOSURE FACTOR = 1.0

SLOPE FACTOR (C_S) = 1.0

IMPORTANCE FACTOR (I_S) = 1.1

FLAT ROOF SNOW LOAD, Pf = 20.3 PSF

MIN ROOF SNOW LOAD, Pm = 22 PSF

DRIFT SURCHARGE LOAD, Pd = SEE PLANS FOR MAGNITUDE AND WIDTH

LATERAL LOADS:

EARTHQUAKE DESIGN DATA:

SEISMIC DESIGN CATEGORY = D
SEISMIC SITE CLASS = D
S_S = 0.617 g
S_1 = 0.223 g
Sds = 0.537
Sd1 = 0.309
SEISMIC IMPORTANCE FACTOR = 1.25
Cs = 0.202 (ALL BUILDINGS)
SEISMIC RESPONSE COEFFICIENT
DESIGN METHOD = EQUIVALENT LATERAL FORCE
LATERAL FORCE - RESISTING SYSTEM: SPECIAL REINFORCED MASONRY SHEAR WALL (ALL BUILDINGS)
R-VALUE = 5

WIND DESIGN SPEED:

ULTIMATE DESIGN WIND SPEED = 109 MPH (3-SEC GUST)
ADS WIND SPEED = 84 MPH
WIND EXPOSURE: C

GCps: +/- 0.18

BUILDING	ENCLOSURE CLASSIFICATION	Gcpi
HEADWORKS -MAIN	PARTIALLY-ENCLOSED	±0.55
HEADWORKS, ELECTRICAL ROOM	ENCLOSED	±0.18
BLOWER BUILDING	PARTIALLY-ENCLOSED	±0.55
UV BUILDING	PARTIALLY-ENCLOSED	±0.55
DEWATERING BUILDING-MAIN	PARTIALLY ENCLOSED	±0.55
DEWATERING BUILDING-ELECTRICAL ROOM	ENCLOSED	±0.18

SOILS:

GEOTECHNICAL REPORT PREPARED BY:

KLEINFELDER - #25000002.001A

ALLOW BEARING PRESSURE = 2,300-3,500 PSF
(VARIES BASED ON LOCATION)

FROST PROTECTION:
MINIMUM EMBEDMENT DEPTH FOR ALL EXTERIOR FOOTINGS IS 30"
MINIMUM EMBEDMENT DEPTH FOR ALL OTHER FOOTINGS IS 18" (U.N.O)

GENERAL STRUCTURAL NOTES:

1. CONTRACTOR SHALL FIELD-VERIFY ALL EXISTING CONDITIONS, INCLUDING ALL EXISTING AND NEW DIMENSIONS, PRIOR TO THE START OF WORK. ANY APPROVAL OF SUBMITTALS OR SHOP DRAWINGS BY THE ENGINEER AND/ OR CITY REPRESENTATIVE SHALL NOT RELIEVE CONTRACTOR OF HIS RESPONSIBILITIES. IT IS CONTRACTOR'S SOLE RESPONSIBILITY TO MEET ALL REQUIREMENTS OF CONTRACT PLANS, CONTRACT SPECIFICATIONS, CURRENT CODES, INDUSTRY STANDARDS AND PRACTICES, AND ALL OTHER APPLICABLE STANDARDS.

2. CONTRACTOR SHALL COORDINATE STRUCTURAL DRAWINGS WITH OTHER DRAWINGS PRIOR TO THE START OF WORK. CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY. DO NOT PROCEED WITH WORK UNTIL DISCREPANCY HAS BEEN RESOLVED.

3. UNLESS OTHERWISE NOTED, USE TYPICAL DETAILS WHERE APPLICABLE.

4. SHEET NOTES AND DETAILS SHOWN ON A PARTICULAR STRUCTURAL SHEET SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. THE GEOTECHNICAL REPORT RECOMMENDATIONS TAKE PRECEDENCE OVER ALL DRAWINGS AND SPECIFICATIONS.

5. DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALES SHOWN ON DRAWINGS. TYPICAL DETAILS AND GENERAL NOTES ARE MINIMUM REQUIREMENTS TO BE USED WHEN CONDITIONS ARE NOT SHOWN OTHERWISE.

6. CONTRACTOR SHALL SUBMIT THE FOLLOWING SHOP DRAWINGS TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO START OF FABRICATION:

   A. STRUCTURAL STEEL
   B. REINFORCING BARS
   C. CONCRETE MIX DESIGN
   D. PRE-ENGINEERED STEEL OR WOOD TRUSS
   E. EQUIPMENT ANCHORING
   F. METAL STAIRS
   G. ALUMINUM HANDRAIL

7. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE SAFETY OF ALL PERSONNEL AND THE PROTECTION OF ALL PROPERTY ON THE PROJECT SITE AT ALL TIMES. THE PRESENCE OF CITY REPRESENTATIVE SHALL NOT RELIEVE CONTRACTOR OF HIS RESPONSIBILITIES. SHOULD ANY DAMAGE TO EXISTING PROPERTY OCCUR, CONTRACTOR SHALL SUBMIT PROPOSED REMEDY TO THE CITY FOR REVIEW AND APPROVAL, AND REPAIR THE DAMAGE TO THE SATISFACTION OF CITY REPRESENTATIVE AT NO COST TO THE CITY.

8. CONTRACTOR SHALL SUBMIT ANY SUBSTITUTION OF SPECIFIED MATERIAL TO THE CITY FOR REVIEW AND APPROVAL PRIOR TO INSTALLATION. SEE GENERAL CONDITION OF CONTRACT SPECIFICATION FOR MINIMUM NUMBER OF DAYS REQUIRED FOR CITY REPRESENTATIVE'S REVIEW AND APPROVAL. ANY DELAY AS A RESULT OF NONCONFORMANCE TO THIS REQUIREMENT SHALL BE THE SOLE RESPONSIBILITY OF CONTRACTOR.

9. ALL WORK SHALL CONFORM TO THE 2021 INTERNATIONAL BUILDING CODE STANDARDS, AND THE REGULATIONS OF THE STATE OF UTAH, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES.

10. THE STRUCTURAL DOCUMENTS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, THE CONTRACTOR WILL BE REQUIRED TO CORRECT AT HIS OWN EXPENSE ANY SUBSIDENCE, STRUCTURAL DAMAGE OR OTHER OBJECTIONABLE CONDITIONS CAUSED BY HIS OPERATIONS.

11. STRUCTURAL DRAWINGS, AS PART OF CONTRACT DOCUMENTS, INDICATE INFORMATION SUFFICIENT TO CONVEY DESIGN INTENT. IF ERRORS, INCONSISTENCIES OR OMISSIONS ARE DISCOVERED, PROMPTLY NOTIFY STRUCTURAL ENGINEER BEFORE PROCEEDING WITH WORK.

12. THESE NOTES AND SPECIFICATION ON STRUCTURAL DRAWINGS GOVERN IN CASE OF CONFLICT WITH OTHER SPECIFICATION. NOTIFY ENGINEER OF CONFLICTS WITH OTHER SPECIFICATIONS IMMEDIATELY.

13. NO PORTION OF STRUCTURAL RELATED WORK, INCLUDING SHOP DRAWING DEVELOPMENT, SHALL BE PERFORMED WITHOUT CONSIDERING REQUIREMENTS OF CONTRACT DOCUMENTS IN THEIR ENTIRETY.

14. CONDITIONS SHOWN OR NOTED AS EXISTING ARE BASED ON INFORMATION CURRENTLY AVAILABLE WHEN DRAWINGS WERE PREPARED. NO WARRANTY IS IMPLIED AS TO ACCURACY OF THESE EXISTING CONDITIONS.

15. CONTRACTOR SHALL INVESTIGATE THE SITE DURING CLEARING AND EARTHWORK OPERATIONS FOR FILLED EXCAVATIONS OR BURIED STRUCTURES SUCH AS CESSPOOLS, CISTERNS, FOUNDATIONS ETC. IF ANY SUCH STRUCTURES ARE FOUND, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.

16. TAKE FIELD MEASUREMENTS AND VERIFY FIELD CONDITIONS AND COMPARE WITH CONTRACT DOCUMENTS. IF ERRORS, INCONSISTENCIES OR OMISSIONS ARE DISCOVERED, PROMPTLY NOTIFY STRUCTURAL ENGINEER BEFORE PROCEEDING WITH WORK.

17. CONTRACT DOCUMENTS DO NOT INDICATE METHOD OF CONSTRUCTION. CONTRACTOR SHALL PROVIDE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AS REQUIRED. CONTRACTOR SHALL PROVIDE ADEQUATE PROCEDURES, SHORING, BRACING, AND ERECTION PROCEDURES COMPLYING WITH NATIONAL, STATE AND LOCAL SAFETY ORDINANCES.

18. MODIFICATIONS OR SUBSTITUTIONS: DESIGN, MATERIALS, EQUIPMENT AND PRODUCTS OTHER THAN THOSE INDICATED OR SPECIFIED MAY BE CONSIDERED FOR USE PROVIDED A WRITTEN REQUEST, SUBJECT TO REVIEW, IS SUBMITTED TO OWNER, STRUCTURAL ENGINEER AND GOVERNING CODE AUTHORITY PRIOR TO USE OR INCLUSION ON ANY SHOP DRAWING.

19. ANY CHANGE, MODIFICATION OR ALTERATION OF THESE PLANS SHALL BE AT THE SOLE RISK OF THE PERSON MAKING OR CAUSING THE SAME. ALL CHANGE, MODIFICATION, AND/OR ALTERATION TO THE APPROVED CONSTRUCTION DOCUMENT SHALL BE REVIEWED AND APPROVED BY A LICENSED STRUCTURAL ENGINEER, ARCHITECT OF RECORD AND BY BUILDING AND SAFETY PRIOR TO FABRICATION AND INSTALLATION.

20. SHOP DRAWING SUBMITTALS:
   A. SUBMIT SHOP DRAWINGS TO STRUCTURAL ENGINEER AS INDICATED OR SPECIFIED FOR REVIEW AND ACCEPTANCE PRIOR TO FABRICATION. REVIEW WILL BE FOR GENERAL CONFORMANCE WITH DESIGN INTENT CONVEYED IN CONTRACT DOCUMENTS.
   B. SHOP DRAWINGS ARE NOT A PART OF CONTRACT DOCUMENTS. THEREFORE, STRUCTURAL ENGINEER'S REVIEW DOES NOT CONSTITUTE AN AUTHORIZATION TO DEVIATE FROM TERMS AND CONDITIONS OF THE CONTRACT.
   C. SUBMIT SHOP DRAWINGS AND CALCULATIONS TO GOVERNING CODE AUTHORITY WHEN SPECIFICALLY INDICATED OR REQUESTED.
   D. MAINTAIN ALL REVIEWED SHOP DRAWINGS ACCEPTED AT THE SITE DURING CONSTRUCTION.

21. CONSTRUCTION MATERIAL SHALL BE SPREAD OUT IF PLACED ON ROOF. LOAD SHALL NOT EXCEED THE DESIGN LIVE LOAD PER SQUARE FOOT. CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BRACING.

22. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.

STRUCTURAL AND MISCELLANEOUS STEEL NOTES:

1. ALL STRUCTURAL AND MISCELLANEOUS STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE AISC 303 CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES, LATEST EDITION.

2. STRUCTURAL SHAPES AND PLATES SHALL CONFORM TO THE FOLLOWING U.N.O.:

W, S, M, HP, AND WT SHAPES	ASTM A 992 OR A 572, GRADE 50
PIPE	ASTM A 53, GRADE B
HSS	ASTM A 500, GRADE C
CHANNELS, ANGLES, AND PLATES	ASTM A 36
MISC STEEL	ASTM A 36
HEADED STUDS	ASTM A 108

3. ERECTION AND SHOP DETAIL DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION AND ERECTION. SUBMIT AS REQUIRED BY TECHNICAL SPECIFICATION SECTION 013300 - CONTRACTOR SUBMITTALS.

4. ALL STRUCTURAL STEEL SHALL BE FABRICATED IN THE SHOP OF A LICENSED FABRICATOR AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER THROUGH THE ARCHITECT FOR APPROVAL PRIOR TO FABRICATION.

5. ALL BOLTS SHALL CONFORM TO ASTM A325 BOLTS SHALL HAVE SPECIAL INSPECTION.

6. ALL BOLT HOLES FOR STEEL MEMBERS SHALL BE TRUE, BURNING OF HOLES FOR CONNECTIONS WILL NOT BE PERMITTED. BOLT HOLES SHALL BE MAXIMUM 1/16" OVERSIZED, UNLESS NOTED OTHERWISE.

7. PROVIDE FULL BEARING ON UNTHREADED PORTION OF BOLT SHANK FOR ALL STEEL CONNECTIONS.

8. ALL BOLT SPACING IN STRUCTURAL STEEL CONNECTIONS TO BE 3" MIN. BETWEEN BOLTS AND 1 1/2" MIN. EDGE DISTANCE, UNLESS NOTED OTHERWISE.

9. ALL NUTS FOR STRUCTURAL STEEL CONNECTIONS SHALL BE ASTM A563 HEAVY HEXAGONAL NUTS, UNLESS NOTED OTHERWISE.

10. PROVIDE BEVELED WASHERS UNDER NUTS AT STEEL CONNECTIONS, WHEN THE BEVEL EXCEEDS 1:2.

11. PROVIDE LEVELING NUTS FOR ALL BOLTS AT BEAM SEATS AND COLUMN BASE PLATES, UNLESS NOTED OTHERWISE.

12. ALL WELDING SHALL COMPLY WITH AWS D1.1 AND SHALL BE DONE BY WELDERS CERTIFIED FOR THE TYPE OF WELDING TO BE PERFORMED. WELDING OF REBAR SHALL CONFORM TO AWS D1.4. WELDING OF STAINLESS STEEL SHALL COMPLY WITH AWS D1.6.

13. ALL SHOP WELDING SHALL BE DONE BY A FABRICATOR APPROVED BY THE DEPARTMENT OF BUILDING AND SAFETY, PER IBC SECTION 2205.1. IN LIEU OF FABRICATOR APPROVAL, THE OWNER MAY EMPLOY A SPECIAL INSPECTOR, WHICH IS TO BE APPROVED BY THE DEPARTMENT OF BUILDING AND SAFETY, WHO WILL INSPECT ALL PHASES OF SHOP WELDING DURING SUCH THEIR CREDENTIALS FOR REVIEW AND APPROVAL BY THE DEPARTMENT OF BUILDING AND SAFETY PRIOR TO THE START OF FABRICATION OR INSPECTION.

14. ALL WELDS USED ON STRUCTURAL MEMBERS AND CONNECTIONS SHALL BE DONE WITH E70XX ELECTRODES OR E7XT-X WIRE THAT CAN PRODUCE WELDS WITH A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LBS @ 0° F, AS DETERMINED BY THE APPROPRIATE AWS CLASSIFICATION TEST METHOD OR MANUFACTURER CERTIFICATION.

15. WHERE WELDS SHOWN ON THE DESIGN DRAWINGS ARE DESIGNATED AS "DEMAND CRITICAL", THE E70XX ELECTRODES OR E7XT-X WIRE MUST PROVIDE A MINIMUM CHARPY V-NOTCH TOUGHNESS OF 20 FT-LBS @ -20° F AS DETERMINED BY THE APPROPRIATE AWS CLASSIFICATION TEST METHOD OR MANUFACTURER CERTIFICATION AND 40 FT-LBS @ 70° F AS DETERMINED BY AISC SEISMIC DESIGN MANUAL, AWS D1.8 OR OTHER APPROVED METHOD.

16. ALL FIELD WELDING EXCEPT MINOR OR TACK WELDING SHALL BE DONE BY CERTIFIED WELDERS UNDER THE OBSERVATION OF AN APPROVED SPECIAL INSPECTOR, SUCH INSPECTOR SHALL SUBMIT HIS.HER CREDENTIALS FOR REVIEW OF APPROVAL BY THE DEPARTMENT OF BUILDING AND SAFETY PRIOR TO REPORTING TO THE JOBSITE.

17. ALL STUDS WELDED TO STEEL BEAMS AND COLUMNS SHALL BE NELSON STUDS OR OTHER APPROVED MFG.

18. STRUCTURAL STEEL MEMBERS REQUIRED TO BE FIREPROOFED, NEED NOT BE PAINTED.

19. EXCEPT WHERE NOTED, ALL CARBON STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A 123 AND, IF DAMAGED, SHALL BE TOUCHED UP WITH GALVANOX, AS MANUFACTURED BY CARBOLINE COMPANY, OR APPROVED EQUIVALENT.

20. ALL SPECIAL INSPECTIONS FOR STRUCTURAL AND MISCELLANEOUS STEEL AND THE FREQUENCY OF INSPECTION SHALL BE AS REQUIRED BY IBC SECTION 1705 AND AISC 360, LATEST EDITION, AS PRESENTED ON VERIFICATION AND INSPECTION NOTES AND TABLES.

DEFERRED SUBMITTALS

1. THE FOLLOWING PORTIONS OF THE PROJECT ARE DEFERRED SUBMITTAL ITEMS AND HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD.

   A. STAIRS
   B. GRATING AND SUPPORTS
   C. HANDRAILS AND GUARDRAILS
   D. MECHANICAL UNITS/COMPONENTS/AND ANCHORAGE (EXCEPT AS INDICATED ON PLANS)
   E. ROOF TRUSSES
   F. FIBER REINFORCED POLYMER (FRP) CONCRETE STRENGTHENING

2. DEFERRED SUBMITTAL ITEMS SHALL BE DESIGNED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF UTAH. STRUCTURAL CALCULATION AND SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW.

3. DEFERRED SUBMITTAL ITEMS SHALL NOT BE INSTALLED UNTIL THE ENGINEER OF RECORD HAS REVIEWED THE SUBMITTAL DOCUMENTS AND INDICATED THAT THEY HAVE BEEN REVIEWED AND THAT THEY HAVE BEEN FOUND TO BE IN GENERAL CONFORMANCE WITH THE DESIGN DOCUMENTS.

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE
0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	04/06/2026	EES	CAL	BMR

REVISIONS

GRANTSVILLE CITY
GRANTSVILLE WWTP

GENERAL
STRUCTURAL GENERAL NOTES

AQUA ENGINEERING

DRAWING NO.
00G012
SHEET

C:\USERS\BRETT.PRATTDC\ACCDOCS\AQUA ENGINEERING\002362.C - GRANTSVILLE NEW 3 MGD WWTF\PROJECT FILES\000 GENERAL\000-00G012 STRUCTURAL GENERAL NOTES.DWG
4/6/2026

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CONCRETE NOTES:

1. ALL WORK PERTAINING TO CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318-19, ACI 350, ACI 301-16, AND THE PROJECT SPECIFICATIONS.
2. ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4500 PSI. ALL CONCRETE FOR THRUST RESTRAINT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 2500 PSI.
3. NO CONCRETE SHALL BE PLACED WITH A SLUMP IN EXCESS OF 4 INCHES.
4. THE CONTRACTOR SHALL SUBMIT A CONCRETE MIX DESIGN FOR APPROVAL AT LEAST 5 WORKING DAYS BEFORE PLACING ANY CONCRETE PRODUCED WITH THAT MIX DESIGN.
5. AGGREGATE FOR CONCRETE SHALL CONFORM TO ALL THE REQUIREMENTS AND TESTS OF ASTM C33 AND PROJECT SPECIFICATIONS. MAXIMUM AGGREGATE SIZE SHALL BE 1 INCH.
6. ANY USE OF HIGH-EARLY CONCRETE SHALL BE CONTINGENT ON ENGINEER'S APPROVAL WHICH SHALL BE BASED ON TIMELY SUBMITTAL OF MIX DESIGN PRIOR TO PLACEMENT.
7. ALL CONCRETE PLACEMENTS SHALL BE SCHEDULED AT LEAST 24 HOURS IN ADVANCE TO ALLOW SCHEDULING OF FIELD TESTING. ALL CONCRETE TESTING SHALL BE PROVIDED BY THE CONTRACTOR. THE OWNER MAY ELECT TO PERFORM SUPPLEMENTARY TESTING.
8. EXCEPT AS OTHERWISE NOTED, EXPOSED CONCRETE CORNERS AND EDGES SHALL HAVE 3/4" CHAMFERS.
9. ALL REINFORCING STEEL DOWELS, ANCHOR BOLTS, AND OTHER INSERTS OR EMBEDMENTS SHALL BE SECURED IN POSITION PRIOR TO PLACING CONCRETE.
10. CONCRETE SHALL NOT BE ALLOWED TO DROP MORE THAN 6 FEET VERTICALLY DURING PLACEMENT. TREMIE HOSES AND CHUTE EXTENSIONS SHALL BE USED TO ALLOW CONCRETE TO BE PLACED AS CLOSE TO ITS FINAL RESTING POSITION AS POSSIBLE.
11. INTERNAL VIBRATORS SHALL BE USED TO CONSOLIDATE ALL PLACED CONCRETE. VIBRATORS SHALL NOT BE USED TO TRANSPORT CONCRETE.
12. ALL CONCRETE WALLS SHALL BE ALLOWED TO CURE A MINIMUM OF 21 DAYS OR REACH A MINIMUM COMPRESSIVE STRENGTH OF 3500 PSI BEFORE BACKFILLING.
13. ALL CONCRETE THRUST BLOCKS, COLLARS, OR RESTRAINTS SHALL BE ALLOWED TO CURE A MINIMUM OF 3 DAYS BEFORE BACKFILLING. ALL THRUST RESTRAINTS MUST BE INSPECTED AND APPROVED BY THE ENGINEER BEFORE BACKFILLING.
14. ALL CONCRETE SHALL BE PROPERLY AND ADEQUATELY PROTECTED AND CURED AS FOLLOWS:

    TEMPERATURE - THE TEMPERATURE OF THE CONCRETE SHALL BE MAINTAINED BETWEEN 50 AND 70 DEGREES FAHRENHEIT FOR A MINIMUM OF 7 DAYS. THIS MAY REQUIRE HEATING AND/OR COOLING OF CONCRETE.

    MOISTURE - ALL CONCRETE SURFACES, HORIZONTAL AND VERTICAL SHALL BE KEPT MOIST FOR A MINIMUM OF 7 DAYS AFTER PLACEMENT. CURING COMPOUNDS MAY ONLY BE USED WITH WRITTEN PERMISSION OF THE ENGINEER.
15. CONSTRUCTION JOINTS NOT SHOWN ON THE DRAWINGS BUT PROPOSED BY THE CONTRACTOR SHALL BE LOCATED AND DETAILED ON CONTRACTOR DRAWINGS AND SUBMITTED TO THE ENGINEER FOR REVIEW AND ACCEPTANCE.

EARTHWORK NOTES

1. THE SITE SHALL BE CLEARED OF ALL GRASSES, SHRUBS, TREES, AND ROOTS. TOPSOIL SHALL BE STRIPPED AND STOCKPILED FOR REUSE ON FILL SLOPES, AND DISTURBED NON-TRAFFIC\ AREAS. SIDE SLOPES SHALL BE LAID BACK AT SLOPES NO STEEPER THAN 3:1 UNLESS SPECIFICALLY NOTED.
2. SEE THE PROJECT SPECIFICATIONS FOR GRADATION AND COMPACTION REQUIREMENTS FOR BEDDING, BACKFILL, BASE COURSE, A.C. PAVEMENT AND CRUSHED ROCK SURFACE COURSES.
3. ALL TRENCHES AND EXCAVATIONS SHALL BE CUT, PROTECTED AND SUPPORTED AS PRESCRIBED BY OSHA.
4. THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE AND MAINTAIN ANY EQUIPMENT NECESSARY TO DEWATER EXCAVATIONS.
5. DEWATERING OF TRENCHES MAY BE REQUIRED. THE CONTRACTOR IS RESPONSIBLE TO KEEP ALL EXCAVATIONS FREE OF STANDING WATER.
6. STOCKPILE AND STAGING AREAS MUST BE ESTABLISHED AND RESERVED BY THE CONTRACTOR.

ADHESIVE ANCHORS FOR CONCRETE:

1. ANCHOR EMBEDMENT AND NOMINAL DIAMETER OF STUD SHALL BE AS SHOWN ON DRAWINGS.
2. ADHESIVE STUD ASSEMBLIES SHALL CONSIST OF A THREADED STUD, FLAT WASHER, AND HEX NUT.
3. OTHER ADHESIVE ANCHORING SYSTEMS SHALL ONLY BE USED WITH THE APPROVAL OF THE ENGINEER.
4. HILTI ADHESIVE SYSTEMS:
   A. FAST CURE: HIT HY-200 PER ICC ESR-3187
   B. SLOW CURE: HIT RE-500-SD PER ICC ESR-2322
   C. STUD MATERIAL SHALL BE THREADED ROD CONFORMING TO ASTM F568M, CLASS 5.8, FOR CARBON STEEL APPLICATIONS AND ASTM F593 CW2 (316) FOR STAINLESS STEEL APPLICATIONS, U.N.O.
5. NUTS SHALL CONFORM TO ASTM A 563, AMERICAN STANDARD HEAVY HEX, OR ASTM F594 FOR STAINLESS STEEL APPLICATIONS.
6. FLAT WASHERS SHALL CONFORM TO ASTM F 435.
7. GALVANIZED STUDS, WHERE CALLED FOR, SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A 123. UNLESS NOTED OTHERWISE NUTS AND WASHERS SHALL BE SUPPLIED WITH A HOT DIP GALVANIZED FINISH. BOLTS AND NUTS SHALL HAVE THEIR THREADS CHASED AFTER GALVANIZING.
8. STUD PROTECTION FROM FACE OF CONCRETE SHALL BE DETERMINED BY THE CONTRACTOR, CONSIDERING THE THICKNESS OF THE GROUT, THICKNESS OF THE MATERIAL THROUGH WHICH THE BOLT MUST PROJECT, WASHER THICKNESS, NUT THICKNESS, PLUS A MINIMUM OF 1/4" PROJECTION BEYOND THE FACE OF NUT.
9. DRILL TYPE, HOLE DIAMETER AND PREPARATION SHALL BE AS REQUIRED BY THE ADHESIVE SYSTEM MANUFACTURER.
10. SPECIAL INSPECTION, IN ACCORDANCE WITH THE REQUIREMENTS OF IBC 2021, IS REQUIRED DURING INSTALLATION OF ALL STUD BOLTS.
11. CONCRETE SHALL HAVE THE DESIGNATED COMPRESSIVE STRENGTH OR HIGHER AT THE TIME ANCHORS ARE INSTALLED.

CONCRETE REINFORCING STEEL:

1. REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60. ALL REINFORCING BARS TO BE WELDED SHALL BE ASTM A706 GRADE 60.
2. ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE," ACI 318, THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315, AND ACI 350.
3. ALL REINFORCING SHALL BE SECURELY TIED AND BRACED IN PLACE PRIOR TO POURING CONCRETE.
4. UNO PROVIDE CONTINUOUS REINFORCEMENT WHERE POSSIBLE. REINFORCING BARS MARKED CONTINUOUS SHALL BE SPLICED WITH A LAP OF 48 BAR DIAMETERS IN CONCRETE (24" MIN.).
5. BAR SUPPORTS IN CONTACT WITH EXPOSED SURFACES SHALL BE PLASTIC TIPPED.
6. BEAM AND SLAB REINFORCING SHALL NOT BE SLEEVED OR OTHERWISE INTERRUPTED EXCEPT AS SHOWN ON THE STRUCTURAL DRAWINGS.
7. CONTRACTOR SHALL SUBMIT REINFORCEMENT MILL TEST REPORTS FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT.
8. CONTRACTOR SHALL SUBMIT REINFORCING BAR LAYOUTS AND DETAILS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. REINFORCEMENT AND EMBEDMENTS SHALL BE ACCURATELY POSITIONED AND SECURED AGAINST DISPLACEMENT PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO PREVENT DAMAGE OR DISPLACEMENT DUE TO CONSTRUCTION TRAFFIC ON REINFORCEMENT.
9. IT IS THE RESPONSIBILITY OF THE REINFORCING BARS SUBCONTRACTOR TO REVIEW THE CONTRACT DRAWINGS. SHOP DRAWINGS MUST INDICATE ALL PENETRATIONS LARGER THAN 6 INCH DIAMETER AND PROVIDE THE NECESSARY TRIM REINFORCEMENT.
10. BEFORE ANY CONCRETE IS PLACED, IN-PLACE REINFORCING STEEL SHALL BE INSPECTED BY THE OWNER'S REPRESENTATIVE. ANY ERRORS OR DISCREPANCIES SHALL BE CORRECTED BEFORE CONCRETE IS PLACED. NOTIFY THE ENGINEER OR OWNER'S REPRESENTATIVE NOT LESS THAN 72 HOURS BEFORE REINFORCING STEEL INSPECTION IS REQUIRED.
11. USE LOW HYDROGEN ELECTRODES, GRADE E-70 FOR WELDED REINFORCING BARS.
12. PROVIDE THE FOLLOWING MINIMUM COVERING OF CONCRETE:
    BELOW GRADE (UNFORMED).....3" CLR.
    BELOW GRADE (FORMED).....2" CLR.

MASONRY NOTES:

1. DESIGN, MATERIALS, CONSTRUCTION AND WORKMANSHIP SHALL CONFORM TO TMS 402/602.
2. COMPRESSIVE DESIGN STRENGTH OF THE MASONRY SYSTEM SHALL BE 2500 PSI MINIMUM AT 28 DAYS.
3. MORTAR SHALL BE TYPE "S" OR "M", MECHANICALLY MIXED 3 TO 10 MINUTES, KEPT ELASTIC, USED WITHIN 2.5 HOURS OF INTRODUCING WATER AND CONFORM TO ASTM C270. JOINTS SHALL BE 3/8 INCHES WIDE WITH FULL COVERAGE AND TOOLED.
4. GROUT SHALL HAVE 8" TO 10" SLUMP WITH 3/8" MAXIMUM COARSE AGGREGATE, COMPRESSIVE STRENGTH OF 4000 PSI MINIMUM AT 28 DAYS AND CONFORM TO ASTM C476. GROUT SHALL BE PLACED IN ALL UNIT CELLS (GROUTED SOLID) AND BE MECHANICALLY VIBRATED IN 4'-0" MAXIMUM LIFTS WITH JOINTS 1 1/2" BELOW MORTAR JOINTS.
5. REINFORCING STEEL (REBAR) SHALL BE NEW STOCK DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60. REBAR SHALL BE CONTINUOUS AT INTERSECTIONS AND CORNERS. SPLICES SHALL BE 72 BAR DIAMETER UNLESS NOTED OTHERWISE. PLACEMENT TOLERANCES SHALL BE ±1/2" FOR 8" UNITS ±3/4" FOR WIDER UNITS. MINIMUM CLEAR SPACING BETWEEN REBAR AND BASE OF UNIT SHALL BE 1/2".
6. ANCHOR RODS (BOLTS) SHALL CONFORM TO ASTM F1554, GRADE 36, HAVE A WASHER AND NUT EXPOSED AND A HEAD OR NUT EMBEDDED. OTHER EMBEDDED ITEMS SHALL CONFORM TO ASTM A36. EXPOSED EMBEDDED METALS SHALL BE GALVANIZED PER ASTM A123.
7. VERTICAL WALL CONTROL JOINTS AS SHOWN ON DRAWINGS. MASONRY JOINT SEALANT SHALL BE DYMERIC 511 BY TREMCO OR EQUAL.
8. COLD WEATHER (BELOW 40 DEGREES F) AND HOT WEATHER (ABOVE 90 DEGREES F) MASONRY CONSTRUCTION SHALL CONFORM TO "SPECIFICATION FOR MASONRY STRUCTURES" BY MSJC, SECTION 1.8. HOT AND COLD WEATHER CONTRACTOR SUBMITTED PROCEDURES SHALL BE APPROVED PRIOR TO PLACEMENT.
9. VARIATION TOLERANCES: SURFACE PLUMB - 1/4" IN 10 FEET AND 1/2 INCH IN 40 FEET. COURSE LEVELNESS - 1/4" INCH IN 20 FEET AND 1/2 INCH IN 40 FEET. BUILDING LINES - 1/2 INCH IN 20 FEET AND 3/4 INCH IN 40 FEET.
10. SURFACE RESIDUE SHALL BE REMOVED PROMPTLY ALLOWING NO LASTING MARKS.
11. ALL REINFORCING SHALL BE PLACED ON CENTERLINE OF CELL UNLESS NOTED OTHERWISE.
12. CLEAR COVER IS 2" TO OUTSIDE OF MASONRY FOR CELLS AND COURSES WITH TWO BARS.

LUMBER NOTES:

1. DOUG FIR/LARCH LUMBER #2 (OR BETTER).
2. DOUG FIR/LARCH LUMBER #2 (OR BETTER) PRESSURE TREATED SILL PLATES.
3. USE COMMON NAILS, UNLESS NOTED OTHERWISE.
4. USE SHEATHING GRADE OSB (OR PLYWOOD) WITH EXTERIOR GLUE, EXPOSURE 1, UNLESS NOTED OTHERWISE.
5. INSTALL SIMPSON TIES, STRAPS AND ANCHORS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS FOR MAXIMUM LOADING.
6. NAIL AND FRAMING SCHEDULE ACCORDING TO THE IBC 2021 CODE, UNLESS NOTED OTHERWISE.
7. WALL AND CEILING SHEETING: USE 1/2" OSB OR PLYWOOD, NAILED WITH 1 1/2" 16 GA STAPLES (WITH 7/16" CROWN) @ 6" EDGES, 12 " FIELD, FULLY BLOCKED UNO.

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE
0 1/2 1

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FIBER REINFORCED POLYMER (FRP) STRENGTHENING NOTES:

GENERAL:

1. FIBER REINFORCED POLYMER (FRP) COMPOSITE STRENGTHENING SYSTEM SHALL BE THE CSS V-WRAP SYSTEM (ICC ESR 3403) PROVIDED BY SIMPSON STRONG TIE, INC. (5956 WEST LAS POSITAS BLVD, PLEASANTON, CA. TEL: 619-904-3306, FAX: 925-847-1597) OR APPROVED EQUAL. ALTERNATE SYSTEMS MUST DEMONSTRATE EQUIVALENCE IN TERMS OF ExA STIFFNESS.

2. MINIMUM FRP DESIGN COMPOSITE PROPERTIES FOR THE CSS V-WRAP SYSTEM OR APPROVED EQUAL SHALL BE THE FOLLOWING:
   a. TENSILE STRENGTH: 128 KSI
   b. MODULUS OF ELASTICITY: 14,200 KSI
   c. ELONGATION AT BREAK: 0.9%

3. FRP STRENGTHENING SYSTEM SHALL HAVE A CURRENT ICC EVALUATION REPORT COMPLIANT WITH THE IBC.

4. FRP STRENGTHENING SHALL BE DESIGNED PER ACI 440.2R-17 AND BASED ON DESIGN VALUES PUBLISHED IN THE MANUFACTURER'S ICC ES REPORT.

5. PROPOSED APPLICATOR TO HAVE A MINIMUM OF TWENTY (20) PREVIOUSLY COMPLETED PROJECTS USING THE PROPOSED COMPOSITE SYSTEM WITHIN THE LAST TWO-YEARS.

6. PROPOSED APPLICATOR TO HAVE A MINIMUM OF (2) EMPLOYEES WITHIN THE SPECIFIED EXPERIENCE AND WHO ARE CERTIFIED IN WRITING BY THE MANUFACTURER AS BEING TRAINED TO INSTALL THE COMPOSITE SYSTEM. CONTRACTOR SHALL SUBMIT WRITTEN VERIFICATION FROM THE MANUFACTURER DESCRIBING THE TRAINING COURSE. TRAINING COURSE SHALL AT A MINIMUM COVER THE SCOPE OF WORK BEING DONE ON THE PROJECT.

7. CONTRACTOR SHALL HAVE A MINIMUM OF THREE (3) YEARS OF EXPERIENCE PERFORMING FRP COMPOSITE INSTALLATIONS.

8. IF REQUIRED, CLASS 1/A FLAME AND SMOKE SPREAD FINISH SHALL BE PROVIDED.

SUBMITTALS:

1. MANUFACTURER'S PRODUCT AND SAFETY DATA SHEETS FOR PROPOSED SYSTEM.

2. MANUFACTURER'S INSTALLATION MANUAL.

3. MANUFACTURER'S QA/QC MANUAL.

4. ICC EVALUATION SERVICE REPORT COMPLIANT WITH 2018 IBC.

5. MANUFACTURER APPROVED TESTING LABORATORY THAT CAN PERFORM ASTM D7565/D3039 TESTS.

6. CERTIFIED APPLICATOR TRAINING CERTIFICATIONS.

7. CONTRACTOR SHALL PROVIDE STAMPED AND SIGNED DRAWINGS AND CACULATIONS BY A REGISTERED PROFESSIONAL CIVIL OR STRUCTURAL ENGINEER LICENSED IN UTAH. DESIGN SHALL BE BASED ON THE WRITTEN PERFORMANCE AND/OR DESIGN CRITERIA PROVIDED ON THE STRUCTURAL DRAWINGS.

   a. DRAWINGS SHALL DETAIL THE TYPE, LOCATIONS, DIMENSIONS, ANCHORAGE, NUMBER OF LAYERS AND ORIENTATION OF ALL FRP MATERIALS AND COATINGS TO BE INSTALLED.

8. PROVIDE TEST REPORT FOR TENSILE PROPERTIES OF THE COMPOSITE MATERIALS AS DETERMINED BASED ON 50 TESTS PERFORMED BY INDEPENDENT TESTING LABORATORY IN ACCORDANCE WITH ASTM D7565/D3039 (TENSILE MODULUS, STRESS AND STRAIN). DESIGN TENSILE PROPERTIES OF THE COMPOSITE MATERIALS SHALL BE COMPUTED IN ACCORDANCE WITH ACI 440.2R-17 BASED ON AVERAGE VALUE MINUS THREE TIMES THE STANDARD DEVIATION TEST RESULTS.

9. TENSILE PROPERTIES (TENSILE MODULUS, STRESS AND STRAIN) OF THE FIBER ANCHORS (IF USED ON THE PROJECT) AS DETERMINED BY INDEPENDENT LABORATORY TESTING PER ASTM D7205. A MINIMUM OF 20 SPECIMENS SHALL BE SUBMITTED.

10. INDEPENDENT TESTING LABORATORY ANCHOR TESTING PER ACI 355.4 SHALL BE SUBMITTED TO VALIDATE THE MINIMUM BOND SHEAR STRENGTH OF THE FIBER ANCHORS EMBEDDED INTO CONCRETE.

11. PERFORMANCE OF COMPOSITE ANCHORS MUST BE VERIFIED THROUGH LARGE-SCALE TESTING FOR SIMILAR APPLICATIONS. COMPATIBILITY BETWEEN THE COMPOSITE ANCHORS MUST BE VERIFIED THROUGH LARGE-SCALE STRUCTURAL TESTING.

12. CERTIFICATION BY THE MANUFACTURER THAT THE SUPPLIED PRODUCTS COMPLY WITH LOCAL REGULATIONS CONTROLLING USED OF VOLATILE ORGANIC COMPOUNDS (VOC'S). PRODUCTS THAT REQUIRE THE USE OF RESPIRATORS DO NOT COMPLY WITH LOCAL REGULATIONS CONTROLLING THE USE OF VOC'S AND SHALL NOT BE ALLOWED.

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DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE
0 1/2 1

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MASONRY - SPECIAL INSPECTION REQUIREMENTS					
MINIMUM SPECIAL INSPECTION					
INSPECTION TASK	FREQUENCY (a)			REFERENCE FOR CRITERIA	
	LEVEL 1	LEVEL 2	LEVEL 3	TMS 402	TMS 602
1. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:					
A. PROPORTIONS OF SITE-PREPARED MORTAR	NR	P	P		ART. 2.1, 2.6 A, & 2.6 C
B. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES	NR	P	P		ART. 2.4 B & 2.4 H
C. GRADE, TYPE AND SIZE OF REINFORCEMENT, CONNECTORS, ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES	NR	P	P		ART. 3.4 & 3.6 A
D. PRESTRESSING TECHNIQUE	NR	P	P		ART. 3.6 B
E. SAMPLE PANEL CONSTRUCTION	NR	P	C		ART. 1.6 D
2. PROR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:					
A. GROUT SPACE	NR	P	C		ART. 3.2 D & 3.2 F
B. PLACEMENT OF PRESTRESSING TENDONS AND ANCHORAGES	NR	P	P	SEC. 10.8 & 10.9	ART. 2.4 & 3.6
C. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	NR	P	C	SEC. 6.1, 6.3.1, 6.3.6 & 6.3.7	ART. 3.2 E & 3.4
D. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	NR	P	P		ART. 2.6 B & 2.4 G.1.b
3. VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION:					
A. MATERIALS AND PROCEDURES WITH TH APPROVED SUBMITTALS	NR	P	P		ART. 1.5
B. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION	NR	P	P		ART. 3.3 B
C. SIZE AND LOCATION OF STRUCTURAL MEMBERS	NR	P	P		ART. 3.3 F
D. TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MAONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	NR	P	C	SEC. 1.2.2(e), 6.2.1 &6.3.1	
E. WELDING OF REINFORCEMENT	NR	C	C	SEC. 6.1.6.1.2	
F. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASORY DURING COLD WEATHER (TEMPERATURE BELOW 40°F (4.4°C)) OR HOT WEATHER (TEMPERATURE ABOVE 90°F (32.2°C))	NR	P	P		ART. 1.8 C & 1.8 D
G. APPLICATION AND MEASURMENT OF PRESTRESSING FORCE	NR	C	C		ART. 3.6 B
H. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED ENDONS IS IN COMPLIANCE	NR	C	C		ART. 3.5 & 3.6 C
4. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS	NR	P	C		ART. 1.4 B.2.a.3, 1.4 B.2.b.3, 1.4 B.2.c.3, 1.4 B.3, & 1.4 B.4

STRUCTURAL - CONCRETE CONSTRUCTION SECTION		
CONCRETE CONSTRUCTION, INCLUDING COMPOSITE DECK – VERIFY THE FOLLOWING ARE IN COMPLIANCE IBC TABLE 1705.3 (ACI 318 REFERENCES NOTED IN IBC TABLE)		
TASK	INSPECTION TYPE	DESCRIPTION
1. Inspect reinforcement, including prestressing tendons, and verify placement.	OBSERVE	Verify prior to placing concrete that reinforcing is of specified type, grade and size; that it is free of oil, dirt and unacceptable rust; that it is located and spaced properly; that hooks, bends, ties, stirrups and supplemental reinforcement are placed correctly; that lap lengths, stagger and offsets are provided; and that all mechanical connections are installed per the manufacturer's instructions and/or evaluation report.
2. Reinforcing bar welding	OBSERVE	Verify weldability of reinforcing bars other than ASTM A 706 Inspect single-pass fillet welds, maximum 5/16" in accordance with AWS D1.4
3. All other welding	CONTINUOUS	Visually inspect all welds in accordance with AWS D1.4
4. Cast in place anchors and post installed drilled anchors (downward inclined)	OBSERVE	Verify prior to placing concrete that cast in place anchors and post installed drilled anchors have proper embedment, spacing and edge distance.
5. Post-installed adhesive anchors in horizontal or upward inclined orientations	CONTINUOUS AND DOCUMENT	Inspect as required per approved ICC-ES report Verify that installer is certified for installation of horizontal and overhead installation applications Inspect proof loading as required by the contract documents
6. Verify use of required mix design	OBSERVE	Verify that all mixes used comply with the approved construction documents
7. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete	CONTINUOUS	At the time fresh concrete is sampled to fabricate specimens for strength test verify these tests are performed by qualified technicians.
8. Inspect concrete and/or shotcrete placement for proper application techniques	CONTINUOUS	Verify proper application techniques are used during concrete conveyance and depositing avoids segregation or contamination. Verify that concrete is properly consolidated.
9. Verify maintenance of specified curing temperature and technique	OBSERVE	Inspect curing, cold weather protection, and hot weather protection procedures.
10. Pre-stressed concrete	CONTINUOUS	Verify application of prestressing forces and grouting of bonded prestressing tendons.
11. Inspect erection of precast concrete members	OBSERVE	
12. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	OBSERVE	
13. Inspect formwork for shape, location and dimensions of the concrete member being formed.	OBSERVE	

GEOTECHNICAL - SOILS INSPECTION SECTION		
SOILS INSPECTION – VERIFY THE FOLLOWING ARE IN COMPLIANCE IBC 1705.6		
TASK	INSPECTION TYPE	DESCRIPTION
1. Materials below shallow foundations are adequate to achieve the design bearing capacity.	OBSERVE	
2. Excavations are extended to proper depth and have reached proper material	OBSERVE	
3. Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill	CONTINUOUS	
4. Prior to placement of compacted fill, inspect subgrade and verify that site has been prepared properly.	OBSERVE	During fill placement, the special inspector shall verify that proper materials and procedures are used in accordance with the provisions of the approved geotechnical report

NOTES:

A. THE SPECIAL INSPECTIONS LISTED ARE IN ADDITION TO THE CALLED INSPECTIONS REQUIRED IN THE SPECIFICATIONS. THE SPECIAL INSPECTIONS IDENTIFIED ON PLANS ARE IN ADDITION TO, AND NOT SUBSTITUTE FOR, THOSE INSPECTIONS REQUIRED TO BE PERFORMED BY THE AUTHORITY'S BUILDING INSPECTOR.

B. THE SPECIAL INSPECTORS MUST BE CERTIFIED BY THE LOCAL GOVERNING AGENCIES DEVELOPMENT SERVICES, TO PERFORM THE TYPE OF INSPECTION SPECIFIED.

C. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE SPECIAL INSPECTOR OR INSPECTION AGENCY AT LEAST ONE WORKING DAY PRIOR TO PERFORMING ANY WORK THAT REQUIRES SPECIAL INSPECTION.

D. SPECIALLY INSPECTED WORK THAT IS INSTALLED OR COVERED WITHOUT THE APPROVAL OF THE INSPECTOR IS SUBJECT TO REMOVAL OR EXPOSURE.

E. THE CONSTRUCTION MATERIALS TESTING LABORATORY MUST BE APPROVED BY LOCAL GOVERNING AGENCIES, FOR TESTING OF MATERIALS, SYSTEMS, COMPONENTS AND EQUIPMENTS.

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE
0 1/2 1

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4/6/2026

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BUILDING CODE DATA TABLE: HEADWORKS BUILDING	
BUILDING CODE	2021 IBC
OCCUPANCY GROUP	U
TYPE OF CONTRUCTION	II B
MAXIMUM STORIES ALLOWED	2
ACTUAL NUMBER OF STORIES	1
MAXIMUM HEIGHT ALLOWED	55 FT
ACTUAL HEIGHT	25 FT
MAXIMUM AREA ALLOWED	8500 SF
ACTUAL AREA	3,480 SF
ALLOWABLE NUMBER OF OCCUPANTS	5
ACTUAL NUMBER OF OCCUPANTS	NORMALLY NOT OCCUPIED
TRAVEL DISTANCE ALLOWED	300 FT
OCCUPANCY/SEPARATION/FIRE RATING	N/A
FIRE RESISTANCE RATING FOR BUILDING ELEMENTS	0 HR
STRUCTURAL FRAME	0 HR
BEARING WALLS	0 HR
NON BEARING WALLS (INTERIOR)	0 HR
FLOOR CONSTRUCTION	0 HR
ROOF ENCLOSURES	0 HR
SHAFT ENCLOSURES	0 HR
STAIRWAY ENCLOSURE	0 HR
CORRIDOR	0 HR
EXTERIOR WALL FIRE RESISTANCE BASED ON FIRE SEPARATION DISTANCE	0 HR
EQUIP EACH OCCUPANCY GROUP WITH A HANDHELD FIRE EXTINGUISHER	

BUILDING CODE DATA TABLE: UV DISINFECTION BUILDING	
BUILDING CODE	2021 IBC
OCCUPANCY GROUP	U
TYPE OF CONTRUCTION	III B
MAXIMUM STORIES ALLOWED	2
ACTUAL NUMBER OF STORIES	1
MAXIMUM HEIGHT ALLOWED	55 FT
ACTUAL HEIGHT	20 FT
MAXIMUM AREA ALLOWED	8500 SF
ACTUAL AREA	3,250 SF
ALLOWABLE NUMBER OF OCCUPANTS	5
ACTUAL NUMBER OF OCCUPANTS	NORMALLY NOT OCCUPIED
TRAVEL DISTANCE ALLOWED	300 FT
OCCUPANCY/SEPARATION/FIRE RATING	N/A
FIRE RESISTANCE RATING FOR BUILDING ELEMENTS	0 HR
STRUCTURAL FRAME	0 HR
BEARING WALLS	0 HR
NON BEARING WALLS (INTERIOR)	0 HR
FLOOR CONSTRUCTION	0 HR
ROOF ENCLOSURES	0 HR
SHAFT ENCLOSURES	0 HR
STAIRWAY ENCLOSURE	0 HR
CORRIDOR	0 HR
EXTERIOR WALL FIRE RESISTANCE BASED ON FIRE SEPARATION DISTANCE	0 HR
EQUIP EACH OCCUPANCY GROUP WITH A HANDHELD FIRE EXTINGUISHER	

BUILDING CODE DATA TABLE: BLOWER BUILDING	
BUILDING CODE	2021 IBC
OCCUPANCY GROUP	MIXED - U/B
TYPE OF CONTRUCTION	III B
MAXIMUM STORIES ALLOWED	2
ACTUAL NUMBER OF STORIES	1
MAXIMUM HEIGHT ALLOWED	55 FT
ACTUAL HEIGHT	20 FT
MAXIMUM AREA ALLOWED	8500 SF
UTILITY AREA	2,700 SF
ALLOWABLE NUMBER OF OCCUPANTS	5
ACTUAL NUMBER OF OCCUPANTS	NORMALLY NOT OCCUPIED
TRAVEL DISTANCE ALLOWED	300 FT
OPERATIONS ROOM	280 SF
ALLOWABLE NUMBER OF OCCUPANTS	3
ACTUAL NUMBER OF OCCUPANTS	2
TRAVEL DISTANCE ALLOWED	100 FT
OCCUPANCY/SEPARATION/FIRE RATING	1 HR
FIRE RESISTANCE RATING FOR BUILDING ELEMENTS	0 HR
STRUCTURAL FRAME	0 HR
BEARING WALLS	0 HR
NON BEARING WALLS (INTERIOR)	1 HR *
FLOOR CONSTRUCTION	0 HR
ROOF ENCLOSURES	1 HR *
SHAFT ENCLOSURES	0 HR
STAIRWAY ENCLOSURE	0 HR
CORRIDOR	0 HR
EXTERIOR WALL FIRE RESISTANCE BASED ON FIRE SEPARATION DISTANCE	0 HR
EQUIP EACH OCCUPANCY GROUP WITH A HANDHELD FIRE EXTINGUISHER	

* FOR INTERIOR CEILINGS AND WALLS SEPARATING OPERATIONS ROOM FROM UTILITY ROOMS

BUILDING CODE DATA TABLE: DEWATERING BUILDING	
BUILDING CODE	2021 IBC
OCCUPANCY GROUP	U
TYPE OF CONTRUCTION	II B
MAXIMUM STORIES ALLOWED	2
ACTUAL NUMBER OF STORIES	1
MAXIMUM HEIGHT ALLOWED	55 FT
ACTUAL HEIGHT	25 FT
MAXIMUM AREA ALLOWED	8500 SF
ACTUAL AREA	4,300 SF
ALLOWABLE NUMBER OF OCCUPANTS	5
ACTUAL NUMBER OF OCCUPANTS	NORMALLY NOT OCCUPIED
TRAVEL DISTANCE ALLOWED	300 FT
OCCUPANCY/SEPARATION/FIRE RATING	N/A
FIRE RESISTANCE RATING FOR BUILDING ELEMENTS	0 HR
STRUCTURAL FRAME	0 HR
BEARING WALLS	0 HR
NON BEARING WALLS (INTERIOR)	0 HR
FLOOR CONSTRUCTION	0 HR
ROOF ENCLOSURES	0 HR
SHAFT ENCLOSURES	0 HR
STAIRWAY ENCLOSURE	0 HR
CORRIDOR	0 HR
EXTERIOR WALL FIRE RESISTANCE BASED ON FIRE SEPARATION DISTANCE	0 HR
EQUIP EACH OCCUPANCY GROUP WITH A HANDHELD FIRE EXTINGUISHER	

DRAWING IS TO SCALE
IF BAR MEASURES:
1" = FULL SCALE
1/2" = HALF SCALE
0 1/2 1

ORIGINAL

NO.	DATE	DESIGN	DRAWN	CHECKED
C	04/06/2026	EES	CAL	BMR

REVISIONS

GRANTSVILLE CITY
GRANTSVILLE WWTP

GENERAL
BUILDING CODE DATA TABLES

AQUA ENGINEERING

DRAWING NO.
00G016
SHEET

C:\USERS\BRETT.PRATT\DC\ACCDOCS\AQUA ENGINEERING\002362.C - GRANTSVILLE NEW 3 MGD WWTF\PROJECT FILES\000 GENERAL\000-00G016 BUILDING CODE DATE TABLES.DWG
4/6/2026

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Exhibit C

GEOTECHNICAL ENGINEERING REPORT
PROPOSED GRANTSVILLE CITY
WASTEWATER TREATMENT PLANT
GRANTSVILLE, UTAH
KLEINFELDER PROJECT NO: 25000002.001A

JULY 2, 2024

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3 SITE CONDITIONS

3.1 SURFACE

The site is located in Grantsville, Utah west of the existing city wastewater facility. The site is currently undeveloped and sparsely vegetated with desert brush and grasses. Based on topographic data from the Utah Automated Geographic Reference Center, existing grades in the vicinity of the site are about EL. 4252 to 4258, with the ground sloping gently to the north.

Shallow excavations containing animal carcasses were observed along the southern boundary of the site, near the Grantsville City animal shelter. Ponding water was observed in the northern portion of the site, near boring 24-B-06 and CPT sounding CPT-03.

3.2 SUBSURFACE CONDITIONS

The subsurface soils consist generally of fine-grained alluvial and lacustrine deposits. Subsurface conditions generally consist of very loose to very dense and medium stiff to hard sand, clay, and silt mixtures, overlying very soft to very stiff clay with interbedded sand layers. The generalized soil stratigraphy is summarized below in Table 3-1.

The boring and CPT logs presented in Appendix B and the laboratory test results presented in Appendix C should be referred to for more detailed information regarding the subsurface soil conditions at the site.

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Table 3-1: Site Generalized Soil Stratigraphy

Stratigraphic Unit	Approximate Depth to Bottom of Unit (feet bgs)
Interbedded Clayey to Silty **SAND**, and Sandy SILT to Sandy Lean CLAY, loose to very dense, medium stiff to hard	15 to 20
Lean to Fat **CLAY** with varying amounts of sand, very soft to very stiff, medium to high plasticity	50
Clayey to Silty **SAND**, loose to medium dense	59
Lean **CLAY** with varying amounts of sand, very soft to hard, low to medium plasticity	85
Clayey **SAND** to Clayey **GRAVEL**, loose	90
Lean to Silty **CLAY**, with varying amounts of sand, low plasticity	135
SAND with Clay and Gravel, dense	150 (Maximum explored depth)

3.3 GROUNDWATER

Groundwater was observed in borings at the site. The presence of groundwater was estimated based on water observed in samples during drilling activities. Water levels were sounded using a water level meter within the hollow stem auger following drilling activities at select borings. Pore pressure dissipation tests were conducted in CPT soundings to measure pore water pressures and estimate static groundwater levels. Groundwater levels are summarized in Table 3-2.

Table 3-2: Groundwater Levels

Exploration Number	Approximate Depth to Water (feet bgs)
24-B-01	5.0
24-B-02	7.5
24-B-03	2.0
24-B-04	1.6
24-B-05	3.8
24-B-06	1.5
SCPT-01	6.3
CPT-02	4.8

Groundwater levels are dependent on a number of factors, including seasonal precipitation, nearby bodies of water, land use, and runoff conditions. Groundwater levels may fluctuate during dryer and wetter seasons of the year. A detailed study of site hydrogeologic conditions, including the potential for fluctuations in groundwater levels, was beyond the scope of work of this investigation.

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3.4 GEOLOGIC SETTING

The site is located in Tooele Valley. The Tooele Valley is within the Basin and Range Physiographic Province, which is characterized by approximately north-trending valleys and mountain ranges which have been formed by extensional tectonics and displacement along normal faults (Hunt, 1967). This valley is a deep, sediment-filled structural basin of Cenozoic age flanked by two uplifted blocks, the Oquirrh Mountains to the east and the Stansbury Mountains to the west. The Great Salt Lake, a remnant of ancient Lake Bonneville, bounds Tooele Valley on the north.

The near-surface geology of the valley is dominated by sediments deposited within the past 30,000 years (Currey and Oviatt, 1985). As Lake Bonneville receded, streams began to incise through large deltas formed at the mouths of major canyons in the mountain ranges bounding the valley. The eroded material was deposited in shallow lakes and marshes in the basin, as well as in a series of recessional deltas, alluvial fans, and terraces. Toward the center of the valley and near the Great Salt Lake, deep-water deposits of clay, silt and fine sand are predominant.

The southern half of the site is mapped as Holocene to upper Pleistocene lacustrine fine-grained deposits associated with Lake Bonneville, while the northern portion of the site is mapped as Holocene spring and marsh deposits (Clark, Oviatt, and Dinter, 2020). These deposits are generally described as mixtures of clay, silt, and sand with thin surficial eolian deposits. Soils encountered in our borings generally agreed with mapped units.

3.5 GEOLOGIC HAZARDS

3.5.1 Seismicity and Faulting

The proposed project site is located within the Intermountain Seismic Belt – a seismically-active region that extends from Arizona to Montana (Smith and Arabasz, 1991). Active faults in the region are potential sources for seismic loading hazards for the site. Active earthquake faults are typically considered as faults that have moved during the past 10,000 years. A trace of the active Oquirrh fault zone is mapped by the USGS approximately 9.8 miles to the east of the site.

Seismic design parameters consistent with the 2021 International Building Code (IBC) are based on the American Society of Civil Engineers (ASCE) 7-16 Minimum Design Loads and Associated Criteria for Buildings and Other Structures. Based on our site investigation, shear-wave velocity testing (shown in Appendix B), and subsequent analysis, the underlying soil at the site corresponds with a Site Class D per

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Table 20.3-1 of ASCE 7-16. The general seismic design parameters were obtained per 2021 IBC/ ASCE 7-16 based on the site class, site coordinates, and the risk category of the structure using California's Office of Statewide Health Planning and Development (OSHPD) U.S. Seismic Design Maps tool (https://www.seismicmaps.org). The non-site-specific design parameters for the site are summarized in Table 3-3.

Table 3-3: General Ground Motion Parameters Based on ASCE 7-16

Parameter	Value	ASCE 7-16 Reference
Latitude (degrees)	N 40.6164°	N/A
Longitude (degrees)	W 112.4483°	N/A
Assumed Building Risk Category	II	N/A
S_S	0.617 g	Fig 22-1
S_1	0.223 g	Fig 22-2
Site Class	D – Stiff Soil	Table 20.3-1
F_a	1.306	Table 11.4-1
F_v	N/A – Note 1	Table 11.4-2
C_{RS}	0.903	Fig 22-18A
C_{R1}	0.910	Fig 22-19A
S_{MS}	0.806 g	Eq. 11.4-1
S_{M1}	N/A – Note 2	Eq. 11.4-2
S_{DS}	0.538 g	Eq. 11.4-3
S_{D1}	N/A – Note 2	Eq. 11.4-4
PGA	0.267 g	Fig 22-9
F_{pga}	1.333	Table 11.8-1
PGA_M	0.356 g	Eq. 11.8-1

Notes:

1. Refer to Section 11.4.8 of ASCE 7-16. Since $S_1 > 0.2$ g and Site Class is D – Stiff Soil, site specific analysis is needed unless exception is taken per Section 11.4.8.
2. Refer to requirements for site-specific ground motions in Section 11.4.8.

3.5.2 Liquefaction and Lateral Spreading

Liquefaction is a phenomenon whereby loose, saturated, granular soil deposits lose a significant portion of their shear strength due to excess pore water pressure buildup resulting from dynamic loading, such as that caused by an earthquake. Among other effects, liquefaction can result in densification of such deposits causing settlements of overlying layers after an earthquake as excess pore water pressures are dissipated. Horizontally continuous liquefied layers may also have a potential to spread laterally where sufficient slope or free-face conditions exist. The primary factors affecting liquefaction potential of a soil

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deposit are: (1) magnitude and duration of seismic ground motions; (2) soil type and consistency; (3) degree of soil saturation; (4) geologic age and origin; and (5) depth below ground surface.

Our analysis indicates that total vertical settlements due to liquefaction are estimated to be on the order of one to two inches under the design seismic event. Based on soil conditions observed in our explorations, we estimate that differential settlements will be approximately one-half of the total vertical liquefaction settlement.

Due to the presence of shallow and laterally continuous liquefiable soils at the site, there is a risk of lateral spread. Existing site grades are generally less than 2 percent, and therefore the magnitude of lateral spread is estimated to be low.

Site fills may create a free-face condition, where the risk and magnitude of lateral spread is higher. Additionally, existing free face conditions exist east of the proposed structures near the existing lagoons. We recommend structures are setback a minimum of 20 feet from slopes and existing berms to mitigate lateral spread hazard.

3.5.3 Moisture Sensitive Soils

Near surface soils at the time of our field explorations were observed to have high natural water contents. Groundwater at the time of our field explorations was observed to range from 1.5 to 7.5 feet bgs. The shallow groundwater level at the site contributes to the relatively high moisture contents of soils above the groundwater elevation.

It is anticipated that the groundwater level as measured in April reflects near seasonal-high conditions and we anticipate that the moisture content of the near-surface soils will decrease somewhat during the drier summer and early fall months. However, it is also anticipated that these soils would likely become very moist to wet during the winter and spring months. Given the fine-grained nature of these soils, they will be difficult to dry to a workable condition and will likely become unstable under construction traffic loads, especially in wet weather or winter conditions. Conventional wet weather earthwork practices should be employed, and the construction schedule should account for weather related delays associated with rain and snow if earthwork is planned for the late fall, winter, or early spring.

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4 CONCLUSIONS AND RECOMMENDATIONS

4.1 GENERAL CONCLUSIONS

Based on the results of our field exploration and laboratory testing, it is our opinion that the site is suitable for the construction of the proposed project provided that the recommendations contained in this report are followed. These opinions, conclusions, and recommendations are based on our field exploration, engineering analysis, the properties of the materials encountered in our borings, the results of the laboratory testing program, and our understanding of the proposed development of the site.

This report is intended to support design of the project elements at the current level of project development. The recommendations presented herein are based on information provided by AQUA Engineering at the time this report was prepared. As development plans are finalized, it is possible that design information, including structure location, loading, and design grade may change. Where changes occur, Kleinfelder should be notified to re-evaluate our recommendations considering the refined design information and modify our recommendations, as warranted.

In general, native near-surface soils at the site have high natural water contents and have fines contents greater than 15%. As a result, these soils are not anticipated to be suitable for use as structural or embankment fill, or below parking areas but may be used for general site/common fills in landscaping and softscape areas.

Further discussion of material requirements and the suitability of the native soils to meet these requirements are more specifically discussed in Section 4.2.5. The existing surficial soils below proposed structures and fills may be loose or soft and accordingly may require over-excavation to expose competent soil and/or stabilization with geotextile fabric or geogrid. Specific recommendations to address this issue are presented in Section 4.2.2.

The following sections of this report present our recommendations for general site preparation and grading, structural fill material requirements and compaction, design of foundations and slabs-on-grade, and design and construction of pavements.

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4.2 EARTHWORK

4.2.1 General Site Preparation and Grading

Prior to commencing site-grading operations, planned building, pavement, parking areas, and areas to receive site grading fill should be stripped of all vegetation, topsoil, loose/soft surficial soils, and other debris/deleterious materials to expose competent native soils. The required stripping depth will vary across the site depending on the amount of vegetation, topsoil, loose/soft surficial soils, and debris/deleterious materials present. Based on our site observations and field exploration, we anticipate required stripping depths of 4 to 24 inches depending on the type of vegetation and loose soils present. Appendix figure A-3 shows areas where deeper stripping depths are anticipated based on our field explorations and site observations. Locally deeper stripping depths may be required to remove deeper root systems of larger brush. The earthwork contractor should be aware of the potential to encounter buried animal carcasses during grubbing and grading activities.

Care should be taken by the contractor to prevent loosening of subgrades. Due to the presence of shallow groundwater, we recommend overexcavation and replacement be limited when possible. Excavations near or below the groundwater surface will present constructability and stabilization challenges and possible delays to construction scheduling. The contractor should take care and satisfy themselves in their ability to properly prepare subgrades for footings, fills, and pavement.

Following stripping, exposed native soils should be proof-rolled with a fully loaded tandem-axle dump truck or fully loaded water truck and observed by the geotechnical engineer or his representative to identify soft, loose, or unstable areas.

Additionally, we anticipate that site grading fill will likely constitute the majority of pavement subgrades and will likely serve as the working grades through winter and wet weather conditions. Dependent on fill quality, weather conditions and construction activities, the grading fills may become unstable or disturbed and be unsuitable for pavement subgrades. Therefore, we recommend that the subgrade be proof-rolled and repaired as needed prior to placement of additional fill or UTBC placement. Section 4.8 of this report contains pavement subgrade preparation recommendations.

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4.2.2 Subgrade Stabilization Recommendations

During our field explorations, soft and unstable soils prone to rutting were encountered in the northern portion of the site. We anticipate stabilization measures will be required for a portion or all the site. The contractor should budget and schedule for stabilization measures prior to placing site grading fills. Based on surface conditions encountered during our field activities**, we anticipate that 30% to 40% the site may need stabilization.** Figure 4-1 shows rutting caused by the truck-mounted drill rig during field activities.

Figure 4-1: Rutting and Soft Ground Encountered During Field Activities on April 30, 2024.

Where encountered, unstable soils should be stabilized using one of the methods described below under the observation of the geotechnical engineer. The methods described below are only suitable for stabilization in general site work areas such as pavement, parking areas, and driveways. Not all of these methods are suitable for the support of structures. Overexcavation and replacement with either approved structural fill and geotextile or flowable fill (e.g. mud mat), should be used if instability is encountered below structures.

Typical remedial measures for addressing unstable subgrades include the following:

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- Removal and Replacement with Structural Fill and Geotextile Fabric and/or Geogrid: Where encountered during proof-rolling, unstable subgrade could be over-excavated below existing grade and replaced with approved structural fill underlain by geotextile fabric and/or geogrid, overexcavation depth will depend on the severity of the instability. The overexcavated areas should be backfilled with structural fill in accordance with Section 4.2.5. Geotextile fabric and/or geogrid should be placed in accordance with the manufacturer's recommendations.
    - The geotextile fabric should consist of a woven geotextile, such as Mirafi 600X or equivalent and as needed, combined with a geogrid, such as Mirafi BXG120 or equivalent, should be included as needed. Alternatively, a combined separation/reinforcing fabric may be used, such as Mirafi RS-380i or equivalent.
    - Overexcavation depth of between 12 to 18 inches may be needed, but the final depth of removal will depend upon conditions observed in the field once overexcavation begins and should be assessed by the geotechnical engineer.
- Drying: Drying of subgrade soils that are unstable due to excess moisture involves discing or ripping wet subgrade to a depth of approximately 12 to 18 inches and allowing the exposed soil to dry. Multiple passes of the equipment (likely on a daily basis) will be needed because as the surface of the soil dries, a crust forms that reduces further evaporation. Frequent discing will help prevent the formation of a crust and will promote drying. This process could take several days to several weeks depending on the depth of ripping, the number of passes, and the weather. The material should be recompacted in accordance with Section 4.2.5.
- Portland Cement Treatment: Unstable subgrade could be stabilized by mixing the upper approximately 8 to 12 inches of the subgrade with Portland cement. For estimating purposes, an application rate of approximately 4 to 6 percent Portland cement (by weight) may be used. Final application rates should be determined in the field at the time of construction in consultation with the geotechnical engineer. The cement may be added in dry form or as a hydrated slurry, depending on the moisture content of the soil and site considerations (e.g., potential spreading of dry cement due to wind, etc.), and will require the use of discing or ripping equipment to break up the ground surface and mix the cement into the soil evenly. Since cement treatment uses the on-site soil, the expense of importing material can be avoided. The cement treated material should be compacted in accordance with Section 4.2.5.

Following all stabilization activities, the stabilized areas should be proof-rolled with similar equipment used during the initial proof-rolling to confirm that the stabilization methods have repaired the unstable areas.

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4.2.3 Wet Weather Construction

If exposed to excess moisture and repeated construction traffic, native fine-grained near surface soils will become unstable, especially during wet weather. The use of track-mounted equipment with low ground pressure tracks and/or the use of dump and spread techniques to place material should be considered, particularly if construction occurs during the wet seasons of the year. Subgrade soils that become unstable or disturbed due to exposure to excess moisture will require replacement or remedial measures as outlined in Section 4.2.2.

We recommend that earthwork be performed in the summer and early fall to the greatest extent practical.

4.2.4 Excavatability

We anticipate that excavation of the on-site materials can generally be performed using conventional earth-moving equipment. The contractor should conduct their own evaluation of site conditions, the potential difficulties involved, and the type of equipment needed.

4.2.5 Structural Fill and Compaction

Structural fill placed below and adjacent to foundations, floor slabs, utilities, earth retaining structures, and any other infrastructure deemed critical should be comprised of imported material that meets the specifications outlined in Table 4-1, or untreated base course (UTBC) meeting the requirements outlined in Table 4-2.

Table 4-1: Criteria for use of Structural Fill

Gradation Requirements	
Standard Sieve Size	Percent Passing
4 inch	100
¾ inch	100-70
Standard Sieve Size	Percent Passing
No. 40	10-60
No. 200	0-15[1]
Plasticity Requirements of Fines (Atterberg Limits)	
Plasticity Index	6 or less

Note 1: Fill with more than 15 percent fines may be acceptable as approved by Kleinfelder.

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Table 4-2: Criteria for Untreated Base Course

Gradation Requirements	
Standard Sieve Size	Percent Passing
1-1/2 inch	100
1 inch	90-100
¾ inch	70-85
½ inch	65-80
3/8 inch	55-75
No. 4	40-65
No. 16	25-40
No. 200	7-11
Plasticity Requirements of Fines (Atterberg Limits)	
Plasticity Index	6 or less

Untreated base course material should be comprised of Untreated Base Course Aggregate Class "C" per Section 02721 of the Utah Department of Transportation Standard Specifications for Untreated Base Course.

Native soils encountered within practical excavation depths on the site contain significant amounts of fine-grained material, are high in native water content, and generally do not meet the gradation or plasticity requirements set forth in Tables 4-1 and 4-2 and are not suitable for use as structural fill. They may be considered for use in landscaping areas. However, these soils will be very sensitive to moisture and will be more difficult to place and compact and the contractor should satisfy themselves with their ability to reuse the on-site soils.

Imported fill materials should be approved by the geotechnical engineer prior to importing. Also, prior to placing structural fill, the excavation should be observed by the geotechnical engineer to note that unsuitable material has been removed and the exposed soil is in a firm and unyielding condition.

Structural fill should be placed in maximum eight-inch-thick loose lifts and compacted to at least 95 percent of the maximum dry density as determined by ASTM-D1557 (Modified Proctor). The contractor will need to moisture condition the soils to be within the range outlined in Table 4-3 at the time of compaction.

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Table 4-3: Structural Fill Placement and Compaction Criteria

Fill Location	Material Type	Percent Compaction (ASTM D1557)	Moisture Content	Minimum Compaction Testing Frequency Per Lift
Below interior and exterior concrete slabs	Imported Gravel or Granular Structural Fill / UTBC	95 minimum	-2% to +2% of optimum	5,000 Square Feet
Below foundation bearing level	Granular Structural Fill	95 minimum	-2% to +2% of optimum	5,000 Square Feet
Site grading fills placed below building areas (extending 1H:1V beyond outside perimeter footings)	Granular Structural Fill	95 minimum	-2% to +2% of optimum	5,000 Square Feet
Below roadway pavement subgrade and exterior flatwork areas	Granular Structural Fill / UTBC	95 minimum	+2% to +2% of optimum	10,000 Square Feet
Foundation wall backfill	Granular Structural Fill	95 minimum	-2% to +2% of optimum	500 Square Feet
Utility trench backfill outside of the pipe zone.	Granular Structural Fill or Approved Trench Backfill Material	95 minimum	-2% to +2% of optimum	100 Linear Feet
Landscape/Undeveloped Areas	On-site soil / Granular Structural Fill	85 minimum	-2% to +3% of optimum	15,000 Square Feet

4.2.6 Temporary Excavation Stability

Stability of construction excavations is the contractor's responsibility. If stability of an excavation becomes questionable, the excavation should be evaluated promptly by Kleinfelder. The soils classification and strength properties presented in this report may be used for the planning of excavations and trench slopes in accordance with OSHA requirements or for the design of excavation slopes, shoring, and/or the use of trench boxes. Construction personnel should be aware that soil conditions may change rapidly if soil moisture conditions change or if soils that have been disturbed by previous excavations are encountered. Measures should be taken to protect construction personnel from raveling of trench sidewalls. If sloughing or free water is encountered, it may be necessary to reduce trench slopes beyond OSHA requirements or provide shoring. All excavations should comply with current OSHA safety requirements. If unstable conditions, or conditions other than those described in the geotechnical explorations are encountered during construction, excavation slopes should immediately be evaluated by the contractor's Competent Person.

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All temporary excavations should be backfilled using structural fill that meets the requirements of Section 4.2.5 of this report and compacted in accordance with Table 4-3 in section 4.2.5 of this report.

4.2.7 Utility Trenches

The Contractor is responsible for the safety of all personnel working in utility trenches. All utility trenches should be excavated in accordance with Section 4.2.6 of this report and applicable OSHA standards. Prior to placement of pipe bedding material, the trench bed should be inspected to identify soft or unstable soils. If soft or unstable soils are identified, subgrade stabilization or over-excavation and replacement should be performed in accordance with the recommendations of Sections 4.2.2 and 4.2.5. Pipe bedding material should conform to the pipe manufacturer's recommendations. Bedding or fill material should be properly placed and compacted to provide adequate support for the pipe. Trench backfill should be placed and compacted according to the requirements of Section 4.2.5.

4.3 SETTLEMENTS ASSOCIATED WITH SITE GRADE RAISE

Based on preliminary information provided by AQUA Engineering, we understand final site grades will be approximately two to six feet higher than existing elevations. We have analyzed the settlement associated with the grade raise. Our analysis assumes that the site grade raise is placed and compacted entirely prior to the construction of structures, pavements, and other site improvements. If construction sequencing or final site grades differ from our assumptions, Kleinfelder should be notified immediately to reevaluate our recommendations.

We anticipate settlements associated with the site grade raise will be on the order of 2.5 to 3 inches. Based on our experience with similar site conditions, we anticipate that settlement associated with the site grade raise will occur relatively quickly, usually during fill placement. However, there is some risk that the settlements may extend beyond the placement of the fill, maybe up to one to two weeks. We understand that to limit construction costs, shallow foundations are desired to support the structures. As such, we recommend that settlement monuments be installed prior to placement of site grading fills and surveyed periodically for vertical displacements to verify that an acceptable magnitude of the settlements from the grade raise have occurred, and the settlement rate is acceptable prior to construction of foundations and site improvements.

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4.4 SHALLOW FOUNDATIONS

The recommendations provided herein were developed using preliminary structure information provided by AQUA Engineering. In developing our recommendations for foundation designs, we have assumed that proposed site grades will not change by more than one to two feet from those contained in preliminary plans. If planned fill heights or building elevations are changed significantly as the design progresses, Kleinfelder should be notified to evaluate and confirm the applicability of the recommendations provided herein.

Based on the information provided by AQUA Engineering, we understand that the project desires to support the structures at the site on conventional cast-in-place concrete mat and spread footing foundations. We have estimated the anticipated bearing pressures based on preliminary maximum water depth, wall heights, and finished floor elevations provided during our proposal. Shallow foundations may be proportioned in accordance with Table 4-4 and related notes. Estimated settlements for the expected shallow foundations are presented in Table 4-5.

We estimate that the small and lightly loaded structures will experience less than one inch of total settlement, assuming the grade raise settlements have finished before completion of construction. However, the process basins, clarifiers and other large tanks are estimated to experience greater than one inch of settlement. Based on our discussions with AQUA Engineering, larger total and differential settlements may be tolerable to the structure and connected utilities, depending on the construction staging and timing of the settlements (e.g., “when the settlement matters”). As such, we have broken the estimated settlements in Table 4-5 into three anticipated stages:

1. Settlement due to the construction of the concrete walls and mat foundations.
2. Settlement “post-construction” after filling the structures.
3. Heave when the structures are emptied in the future for cleaning and maintenance (assuming the area around the structure has been dewatered).

The presented values are the incremental value from stage to stage, so depending on when the particular design component is constructed will determine how much settlement the component will experience.

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As with the settlements due to the grade raise, the design team should consider establishing survey points on the structures to confirm that settlements are complete before constructing settlement sensitive components. This decision will likely be dependent on the tolerance of the structure and various components.

Table 4-4: Shallow Foundation Analysis

Structure Name	Anticipated Foundation Bearing Depth (ft)[1]	Anticipated Grade Raise Below/Around Structure (ft)	Required Bearing Stratum[2]	Assumed Applied Bearing Pressures Walls (psf) / Slab (psf)[3]	Maximum Foundation Dimensions (ft)
Headworks	2.5	6	Min. 12 inches of Structural Fill over Undisturbed Native Soil	2,500 / 500	Isolated: 12x12 Continuous: 4.5
Process Basins	16	5	Undisturbed Native Soil or Min. 12 inches of Structural Fill over Undisturbed Native Soil	3,500 / 1,050	Continuous: 5
Blower / UV Building	2.5	2	12 inches of Structural Fill over Undisturbed Native Soil	2,300 / 500	Isolated: 11x11 Continuous: 3
Secondary Clarifiers	12.5	6	Undisturbed Native Soil or Min. 12 inches of Structural Fill over Undisturbed Native Soil	2,500 / 1,500	Continuous: 5
Future Clarifier	12.5	4	Undisturbed Native Soil or Min. 12 inches of Structural Fill over Undisturbed Native Soil	2,500 / 1,500	Continuous: 5
Solids Dewatering	2.5	2	Min. 12 inches of Structural Fill over Undisturbed Native Soil	2,300 / 500	Isolated: 11x11 Continuous: 3
Waste Sludge Storage Tank	4	2	Min. 12 inches of Structural Fill over Undisturbed Native Soil	3,000 / 2,000	Continuous: 4

1. Exterior footings, or footings in unheated areas, should be established a minimum of 30 inches below the lowest adjacent final grade for frost protection and confinement and a minimum of 18 inches for interior footings in heated areas.
2. When required, structural fill should be placed within the zone of influence of the foundation defined by a 1Horizontal:1Vertical (1H:1V) plane extending downward from the edge of the foundations, schematically shown in Figure 4-2. This will facilitate proper distribution of the applied foundation pressures within the structural fill and meet the requirements for bearing capacity.
3. The assumed bearing pressures were applied to settlement models and the estimated total and differential settlements are provided in Table 4-5. Where structural loading is controlled by dead and sustained live loads, the footings should be sized in accordance with Table 4-4. Where structural loading is controlled by transient loading (i.e. wind or earthquake loading), the footings should be sized for an allowable bearing pressure of 3,500 psf (i.e. the strength-based capacity of the soil).
4. The minimum allowable footing size should not be less than 4 x 4 ft for isolated footings and 2 ft for continuous footings. If footing sizes are needed outside the recommended maximum and minimum values, Kleinfelder should be contacted to evaluate the desired sizes.

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Table 4-5: Shallow Foundations Predicted Settlement[1]

Structure Name	Settlement Due to Applied Bearing Pressure listed in Table 4-4 (in)[1]	Additional Settlement Post-Construction Due to Fluid Weight (in)[1]	Heave Due to Emptying Fluid (in)[1]
Headworks	Total: 1 Differential: ½	N/A	N/A
Process Basins	Total: 1 ¾ Differential: ¾	Slab Pressure: 1,050 psf Total: 1 Differential: ¾	Total: ¾ Differential: ½
Blower / UV Building	Total: 1 Differential: ½	N/A	N/A
Secondary Clarifiers	Total: 1 ¼ Differential: ½	Slab Pressure: 1,500 Total: 1 ½ Differential: 1	Total: 1 Differential: ¾
Future Clarifier	Total: 1 ¼ Differential: ½	Slab Pressure: 1,500 Total: 1 ½ Differential: 1	Total: 1 Differential: ¾
Solids Dewatering	Total: 1 Differential: ½	N/A	N/A
Waste Sludge Storage Tank	Total: 2 Differential: ½	Slab Pressure: 2,000 Total: 1 ¼ Differential: ¾	Total: 1 Differential: ½

1. Due to proposed footing embedment depths, loads from shallow footings may contribute to settlement of adjacent structures with less than 20 feet of setback. Settlements presented in Table 4-5 assumed adjacent structures will have at least 20 feet of horizontal separation and dewatering will not occur following construction of structure.

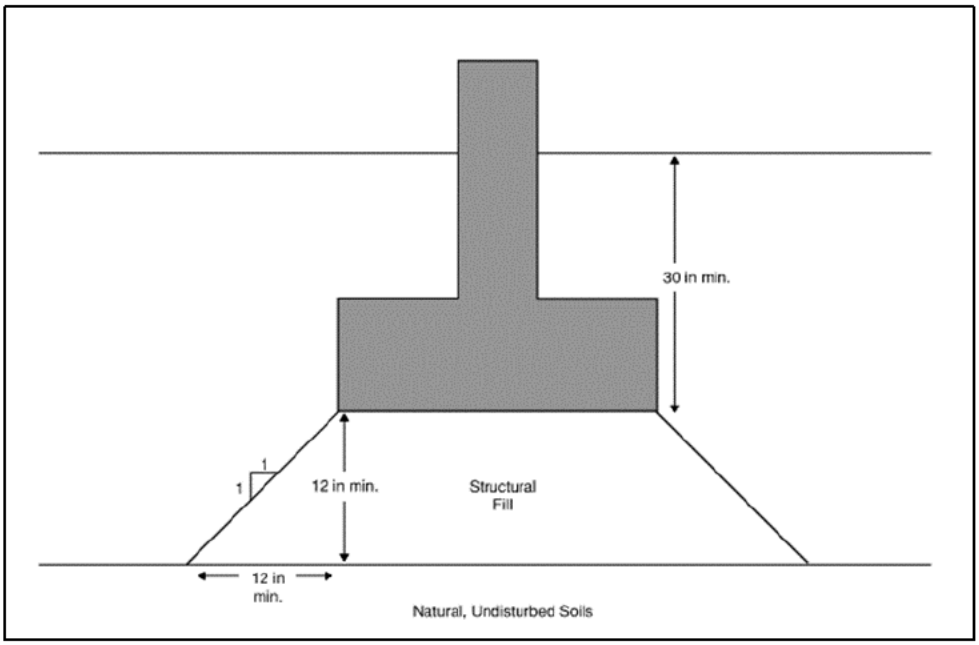

Figure 4-2: Foundation Zone Influence

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Horizontal loads acting on foundations formed in open excavations will be resisted by friction acting at the base of foundations and by passive earth pressures. The recommended lateral resistance parameters can be found in Section 4.6. If design makes use of passive earth pressures, it is important that any backfill below or around footings is placed and compacted properly. Therefore, we recommend the geotechnical engineer, or his representative is present during any footing backfill placement.

4.5 DEEP FOUNDATIONS AND GROUND IMPROVEMENT

We understand that predicted differential settlements for shallow foundations may exceed tolerances for the proposed structures, pending further evaluation from the design team. As such, deep foundations or ground improvement may be required to support structural loads and mitigate excessive settlement. Appendix Figure D-1 contains a matrix of potential deep foundation and ground improvement options, and their estimated relative costs based on our experience with local projects. It is important to note that construction costs may vary, and that deep foundations and/or ground improvement design will be performed by others as the project design progresses.

We anticipate that concrete filled pipe piles will be most economical to support anticipated structural loads for the clarifiers and process basin if estimated shallow foundation settlements are unacceptable. We have analyzed the axial capacity of 12.75-inch-diameter driven pipe piles, concrete filled, with 0.5-inch-thick sidewalls and embedment lengths of up to 100 feet. We have provided pile capacities assuming pile cap elevations will be ten feet below the existing ground surface elevation.

4.5.1 Driven Pipe Pile Axial Capacity

Axial analysis of piles was conducted using the computer software APILE, by Ensoft, Inc, using the FHWA computational method. We have presented several geotechnical capacities for pipe piles in Table 4-7 using soil properties presented in Table 4-6. Appendix D contains unfactored axial capacity and settlement plots. The allowable geotechnical capacities include a factor of safety of 2 for side resistance, and 2 for end resistance, with the assumption that pile load tests (in accordance with IBC 2021) will be performed prior to and during production pile driving. We have assumed the pile cap elevation and pile head will be approximately ten feet below existing grade and the piles will be driven to a maximum depth of 80 feet below this elevation. At this project stage, we understand preliminary pile loads and pile cap elevations have not been developed and as such, the value presented should be considered preliminary for estimating purposes only.

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Table 4-6: Generalized Soil Properties for APILE and LPILE

Depth below Assumed Pile Cap Elevation (ft)	L-Pile p-y Curve Type	Effective Unit Weight [γ] (psf)	Cohesion [c] (psf)	Drained Friction Angle [ϕ'] (degrees)
0-7	Sand (Reese)[1,2]	57.6	-	33
7-40	Stiff Clay w/o Free Water (Reese)[3]	57.6	1,500	-
40-49	Sand (Reese)[2]	57.6	-	35
49-75	Stiff Clay w/o Free Water (Reese)[3]	57.6	2,000	-
75-80	Sand (Reese)[2]	57.6	-	35
80-125	Stiff Clay w/o Free Water (Reese)[3]	57.6	2,600	-
125-140	Sand (Reese)[2]	57.6	-	23

1. Use Liquefied Soil P-Y curve for extreme event.
2. Use LPILE default value for lateral subgrade modulus (k).
3. Use LPILE Default value for E50.

Table 4-7: Estimated Axial Capacities for 12.75-inch Pipe Piles with Pile Cap 10 ft Below Existing Grade

Pile Embedment (ft)	Side Resistance (kips)	Toe Resistance (kips)	Ultimate Axial Capacity (kips)	Allowable Axial Capacity[1] (kips)	Uplift Capacity (kips)	Allowable Uplift Capacity[2] (kips)	Downdrag Load due to Liquefaction (kips)
40	148	51	199	99	148	98	2
60	235	16	251	125	235	156	2
80	337	58	395	197	337	224	2

1. Factor of safety of 2 with the assumption that load testing will be performed in accordance with IBC 2021.
2. Factor of safety of 1.5 with the assumption that load testing will be performed in accordance with IBC 2021.

4.5.2 Driven Pipe Pile Axial Group Effects

Depending on pile diameter, spacing, and group arrangement, the axial capacity may need to be reduced. Compression group effects are predominantly controlled by the settlement of the pile group and are best determined after initial pile sizing and group pile spacing. Generally, if piles are spaced at least three pile diameters, axial group effects are negligible for compression. If large pile groups are planned, pile group settlement will need to be evaluated once a pile layout is available. Pile spacing may be reduced dependent on the tolerable pile displacements and groupings. Group effects should be determined in accordance with Section 1810 of IBC (2021).

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4.5.3 Driven Pipe Pile Lateral Resistance and Group Effects

Lateral analysis of piles was not performed by Kleinfelder as part of this geotechnical report. It is our understanding that lateral analysis of piles will be performed by the structural designer using soil information and parameters provided by Kleinfelder. Soil parameters for use in analyzing lateral pile response can be found in Table 4-5. Lateral loads acting on the foundations may be resisted in one of three ways: 1) the pile cap can resist lateral loads due to passive earth pressures, 2) piles can be battered, or 3) the lateral capacity of vertical piles can be used. Lateral capacity group effects should be analyzed in accordance with Section 1810 of IBC (2021).

A nominal/ultimate lateral passive earth pressure in accordance with Table 4-8 in section 4.6 may be used for passive pressure resistance on the side of pile caps/grade beams against properly prepared and compacted structural fill. A factor of safety of at least 2 should be applied to the passive earth pressures. The passive pressure can be assumed to act starting at the top of the lowest adjacent grade in paved areas and at a depth of one foot below grade in unpaved areas. The passive resistance values are only applicable where the concrete for pile caps/grade beams are either placed directly against soil or that the voids created from the use of formwork are backfilled with properly compacted soil. Friction along the base of the pile cap should be neglected. The geotechnical engineer's site representative should observe and test the backfilling of the pile caps. The structural engineer should also evaluate the strain compatibility between passive earth pressure and the resistance developed by the piles themselves as passive pressures can require larger lateral displacements to fully mobilize resistance.

4.5.4 Driven Pipe Pile Construction Considerations

Due to the presence of granular layers, drivability analyses should be performed in accordance with Section 1810 of IBC (2021). Predrilling may be required if piles are driven through granular site grading fills. The foundations should be constructed only by qualified contractors experienced in this type of construction, and under strict construction monitoring and quality control. The pile contractor should carefully review the boring logs and perform their own assessment of potential construction difficulties associated with drivability and site conditions.

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4.6 LATERAL EARTH PRESSURES

4.6.1 Shallow Foundations

Horizontal loads acting on shallow foundations formed in open excavations will be resisted by friction acting at the base of foundations and by passive earth pressures acting on the embedded face of the foundation. If design makes use of passive earth pressures, it is important that any backfill below or around footings is properly placed and compacted structural fill as described in the geotechnical report. In this case, we would recommend the geotechnical engineer, or his representative be present during any footing backfill placement.

The friction acting along the base of footings, founded on granular structural fill, may be computed by using a nominal/ultimate coefficient of friction of 0.45 with the normal dead load. A nominal/ultimate lateral passive earth pressure may be computed by using an equivalent lateral fluid weighing 400 pounds per cubic feet (pcf) for the side of footings placed against properly compacted granular structural fill. The structural designer should refer to Section 1807.2.3 of IBC 2021 for appropriate factors of safety for use in the foundation sliding analysis. Lateral earth pressures may be computed using the equivalent fluid pressures presented in Table 4-8.

Table 4-8: Recommended Equivalent Fluid Pressures (EFP)

Unit	Active[1,2,4] (EFP_A)	At-rest[1] (EFP_o)	Seismic[1,3,4] (EFP_{AE})	Passive (EFP_P)
	pounds per cubic foot (pcf)			
Granular Fill ϕ'=32°, γ'=130 pcf K_a=0.31, K_{ae}=0.38	40 (21)[5]	61 (32)[5]	55 (22)[5]	400 (337)[5]

1. Assumes fully drained granular structural fill soil, level conditions at toe and crest of wall, and a vertical wall back face.
2. Assumes deflection at crest of wall is 0.001H for active condition, where H is the wall height.
3. Seismic combines the active and dynamic increment earth pressures and is distributed analogous to the active earth pressure (Site Class D – Stiff Soil).
4. Neglects soil-wall interface friction.
5. Equivalent fluid pressure value for submerged conditions.

4.6.2 Deep Excavation and Shoring

We understand deep excavations are planned for several proposed structures. Due to site constraints and adjacent structures, we expect a shoring system and dewatering will be required for deep excavations. The configuration and final design of temporary shoring are the responsibility of the

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contractor and/or shoring designer. We have provided recommended soil properties for use in lateral earth pressure computations in Table 4-9. The shoring designer will be responsible for determining appropriate hydrostatic pressures following dewatering, if applicable.

Table 4-9: Recommended Soil Properties for Lateral Earth Pressure Computation

Soil Unit	Approximate Depth Below Existing Grade (ft)	Drained Friction Angle [ϕ'] (degrees)	Drained Cohesion [c'] (psf)	Total Unit Weight [γ] (psf)
Granular Structural Fill	Varies	32	0	130
Clayey Sand	0-8	33	100	110
Silty Sand	8-17	33	100	120
Lean to Fat Clay	17-50	23	150	120

It is the contractor's responsibility to properly install and shore any excavations. The shoring system should be designed for the applicable apparent earth pressure and consider appropriate hydrostatic pressure and surcharge pressures including, but not limited to, construction and traffic surcharges. Earth pressures acting on the excavation support system should be calculated based on each stage (cantilevered, braced) of the excavation. Anchors or bracing of the system should be used as needed to keep lateral movement of the excavation support system within tolerable limits as determined by the shoring designer. Lateral deflection of the support system at each stage of construction, including initial cantilever and during removal of bracing, should be considered.

Additionally, the deep excavations will require temporary dewatering due to the presence of shallow groundwater. Dewatering may cause additional settlement to site fills and any structures constructed prior to dewatering activities. The contractor should be aware that silt and sand soils were observed in our explorations at the approximate bottom elevations of the excavations. These soil types are highly susceptible to basal instability (including piping soils). Such conditions are not suitable for supporting footings or pile caps and will result in unacceptable settlements and dangerous working conditions. Piping is fundamentally caused by an unbalanced hydraulic head that causes excavations to fill with water and soil. Properly designed dewatering systems are an effective method of mitigating the cause of piping, although piping may still occur if the dewatering system fails or not enough time elapses between beginning dewatering and digging the excavation. Piping soils may be stabilized by the following methods:

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- Overexcavation and Replacement with Geotextile: If loose/piping conditions are encountered at the base of excavations, the loose soils may be overexcavated by 12 to 18 inches, and a separation and reinforcing geotextile may be installed (Mirafi RS-280i or similar).
- Sacrificial Slab or Mud Slab: Loose soils may be overexcavated and replaced with a sacrificial unreinforced concrete slab of appropriate thickness to resist uplift pressures.
- Increasing Shoring Length: If a sheet piling shoring system is used, the embedded length may be increased resulting in a longer seepage path length.

The contractor should avoid end dumping gravel into unstable excavations. Due to the soil conditions observed in our explorations, loose gravel is not an effective stabilization measure. Clean graded gravel, if used, should be separated from naturally deposited soils using a separation geotextile to prevent the migration of fines.

4.7 CONCRETE SLABS-ON-GRADE

Concrete slabs-on-grade should be designed according to Table 4-10 and IBC (2021) requirements for moisture protection. Prior to placement of the free-draining gravel or base course layer below the slab, the native soil should be prepared as recommended in Section 4.2.1 of this report.

Table 4-10: Slab Support Recommendations

Item	Minimum Thickness (in)
Free Draining Gravel [1]	**4**
UTBC	**8**

1. Free draining gravel where required per IBC (2021), or for permanent dewatering systems. Separation fabric should be included between free draining gravel and adjacent soil below groundwater surface or when used in exterior areas.

All concrete slabs should be designed to minimize cracking as a result of shrinkage. Special precautions must be taken during the placement and curing of all concrete slabs. Excessive slump (high water-cement ratio) of the concrete and/or improper curing procedures used during either hot or cold weather conditions could lead to excessive shrinkage, cracking, or curling in the slabs. We recommend that all concrete placement and curing operations be performed in accordance with the American Concrete Institute Manual (ACI, 2019).

The structural designer should consider hydrostatic and buoyancy forces where slabs are planned below the static groundwater elevation.

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As a basis for designing concrete slab thickness, soil subgrade moduli (kv1) may be proportioned according to Table 4-11. These values correspond to a 1-foot square plate and should be adjusted for the designed slab geometry.

Table 4-11: Soil Subgrade Modulus Values for a One-Foot Square Plate

Soil Condition	Soil Subgrade Modulus, kv1 (pci)
Areas underlain by at least one foot of Structural Fill	**250**
Native soils	**125**

4.8 PAVEMENT DESIGN AND CONSTRUCTION

Kleinfelder's roadway designs were performed in general accordance with the AASHTO Guide for Design of Pavement Structures (1993). Our recommendations are based on an assumed daily truck traffic of ten five-axle trailer trucks (AASHTO Class 10) and a design life of 20 years, resulting in 230,000 equivalent single axle loads (ESALs). We understand that the site will contain a mixture of asphalt-surfaced parking, drive lanes, and truck turnaround areas. We have provided recommendations for both asphalt and Portland cement concrete (PCC) sections. Kleinfelder should be notified if the actual traffic and material conditions differ from our assumptions.

A California Bearing Ratio (CBR) of 3 percent was used in analysis, based on the results of both DCP tests and correlations with laboratory index testing and grain size analyses.

4.8.1 Asphaltic Concrete Pavement

Table 4-12 contains our recommended asphalt concrete (AC) pavement sections.

Table 4-12: Asphalt Concrete Pavement Section Recommendations

Material	Material Thickness (in.)
Asphalt Concrete	4.5
Untreated Base Course	10

All AC pavement section material quality and construction requirements should conform to UDOT specifications.

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4.8.2 PCC Pavement Design

Using the same methodology to design the AC pavement and based on the same assumed traffic loads, a minimum concrete pavement thickness of six inches is recommended. All PCC pavements should be underlain by at least eight inches of untreated base course. PCC pavement materials quality and construction requirements should conform to the Utah Department of Transportation Specifications for Portland Cement Concrete Pavement, Section 02752.

4.8.3 Pavement Subgrade Preparation

Prior to pavement construction, planned parking/roadway areas should be stripped and proof-rolled under observation of the geotechnical engineer or his representative and any over-excavation and replacement of soft or loose material completed as outlined in Section 4.2.2 of this report. The final subgrade should be graded to provide positive drainage and prevent ponding and/or moisture infiltration.

Once the subgrade has been proof-rolled, compacted, and approved, untreated base course should be placed. The untreated base course should be compacted to a minimum of 95 percent of the maximum dry density as determined in accordance with ASTM D1557 (Modified Proctor). Moisture content at the time of compaction should be within 2 percent of optimum.

4.9 MOISTURE PROTECTION AND SURFACE DRAINAGE

Precautions should be taken during and after construction to eliminate, or at least reduce the potential for saturation of fill and subgrade soils. Over-wetting of the native soils prior to or during construction may result in softening and pumping, causing equipment mobility problems and difficulty in achieving compaction. Fill and adjacent areas should be graded to allow water to drain away from proposed site improvements and to prevent ponding on the site.

4.10 SOIL CORROSION AND REACTIVITY

Kleinfelder has completed laboratory testing to provide data regarding corrosivity of onsite soils. Our services do not include corrosion engineering and, therefore, a detailed analysis of corrosion test results is not included in this report. A qualified corrosion engineer should be retained to review the test results, perform additional testing as required, and design protective systems that may be required. Kleinfelder may be able to provide those services.

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Laboratory resistivity, water-soluble sulfate, water-soluble chloride, and pH tests were performed on soil samples from site. Results of these tests are listed in Appendix C and summarized in Section 2.2.2 of this report. If fill materials will be imported to the project site, similar corrosion potential laboratory testing should be completed on the imported material.

Metal and concrete elements in contact with soil are subject to degradation due to corrosion or chemical attack. Therefore, buried metal and concrete elements should be designed to resist corrosion and degradation based on accepted practices.

Laboratory resistivity values ranging from 310 to 1,570 ohm-cm were obtained from analytical tests performed on the native soils. Based on the "10-point" method developed by the American Water Works Association (AWWA) in standard AWWA C105/A21.5, we recommend that **the site be considered corrosive for buried ferrous metal piping, cast iron pipes, or other objects made of these materials**. We recommend that a corrosion engineer be consulted to recommend appropriate protective measures, as needed.

The degradation of concrete or cement grout can be caused by chemical agents in the soil or groundwater that react with concrete to either dissolve the cement paste or precipitate larger compounds within the concrete, causing cracking and flaking. The concentration of water-soluble sulfates in the soils is a good indicator of the potential for chemical attack of concrete or cement grout. The American Concrete Institute (ACI) in their publication *Guide to Durable Concrete* (ACI 201.2R-08) provides guidelines for this assessment. The concentrations of soluble sulfates indicate subsurface soils generally represent a **Class S0** exposure to sulfate attack.

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Agenda Item # 16

Consideration of Resolution 2026-35 authorizing the execution of an equipment lease purchase agreement for the acquisition of a Vactor truck; and other related matters

GRANTSVILLE CITY
RESOLUTION NO. 2026-35

A RESOLUTION AUTHORIZING THE EXECUTION OF AN EQUIPMENT LEASE PURCHASE AGREEMENT FOR THE ACQUISITION OF A VACTOR TRUCK; AND RELATED MATTERS

Be it resolved by the City Council of Grantsville City, Utah as follows:

WHEREAS, Grantsville City (the "City") is a municipal corporation duly organized and existing under the laws of the State of Utah; and

WHEREAS, the City finds it necessary and in the best interest of the public health, safety, and welfare to acquire a Vactor truck for use by the City's Public Works Department; and

WHEREAS, the City has received financing proposals for the acquisition of such equipment through an equipment lease purchase agreement; and

WHEREAS, the City desires to enter into an equipment lease purchase agreement in a principal amount not to exceed $549,199.17, with an interest rate of approximately 4.62%, and a term of approximately five (5) years, subject to final pricing and approval; and

WHEREAS, the City Council has reviewed the preliminary financing numbers, including the estimated debt service schedule, and finds the terms to be reasonable and in the best interest of the City;

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF GRANTSVILLE CITY, STATE OF UTAH, AS FOLLOWS:

Section 1. Approval of Financing: The City Council hereby approves the acquisition of a Vactor truck through an equipment lease purchase agreement, in a principal amount not to exceed $549,199.17, and further approves and adopts the preliminary financing summary attached hereto as Exhibit A, which is incorporated herein by this reference, with such minor adjustments as may be necessary to reflect final pricing.

Section 2. Authorization of Execution: The Mayor is hereby authorized to execute, and the City Recorder to attest, any and all agreements, certificates, and documents necessary to finalize the equipment lease purchase agreement, including any documents required by the lender, with such minor modifications as may be approved by the City Attorney.

Section 3. Final Terms: The final terms of the equipment lease purchase agreement, including payment schedule and interest rate, shall be consistent with the parameters approved herein and may be adjusted as necessary to reflect final pricing at closing.

Section 4. Funding Source: Debt service payments under the agreement shall be paid from legally available funds of the City, as determined appropriate by the City.

Section 2. Effective Date: This resolution shall take effect immediately upon its passage and approval as provided by law.

Section 3. Severability clause: If any part or provision of this Resolution is held invalid or unenforceable, such invalidity or unenforceability shall not affect any other portion of this Resolution and all provisions, clauses and words of this Resolution shall be severable.

ADOPTED AND PASSED BY THE CITY COUNCIL OF GRANTSVILLE CITY, THIS (xx) DAY OF (xx), 2026.

BY THE ORDER OF THE GRANTSVILLE CITY COUNCIL:

_____
By Mayor Heidi Hammond

ATTEST

_____
Alicia Fairbourne, City Recorder

EXHIBIT “A”

Preliminary Financing Summary

Grantsville City, Utah

$549,199 Equipment Lease Purchase

Dated June 1, 2026

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Report

Debt Service Schedule 1

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Sources & Uses 3

Grantsville City, Utah

$549,199 Equipment Lease Purchase

Dated June 1, 2026

Debt Service Schedule

Date	Principal	Coupon	Interest	Total P+I	Fiscal Total
06/01/2026	-	-	-	-	-
06/01/2027	100,148.61	4.620%	25,373.00	125,521.61	125,521.61
06/01/2028	104,775.48	4.620%	20,746.14	125,521.62	125,521.62
06/01/2029	109,616.11	4.620%	15,905.51	125,521.62	125,521.62
06/01/2030	114,680.37	4.620%	10,841.24	125,521.61	125,521.61
06/01/2031	119,978.60	4.620%	5,543.01	125,521.61	125,521.61
Total	**$549,199.17**	**-**	**$78,408.90**	**$627,608.07**	**-**

Yield Statistics

Bond Year Dollars	$1,697.16
Average Life	3.090 Years
Average Coupon	4.6199999%
Net Interest Cost (NIC)	4.6199999%
True Interest Cost (TIC)	4.6199999%
Bond Yield for Arbitrage Purposes	4.6199999%
All Inclusive Cost (AIC)	4.6199999%

IRS Form 8038

Net Interest Cost	4.6199999%
Weighted Average Maturity	3.090 Years

Grantsville City, Utah

$549,199 Equipment Lease Purchase

Dated June 1, 2026

Pricing Summary

Maturity	Type of Bond	Coupon	Yield	Maturity Value	Price	Dollar Price
06/01/2031	Term 1 Coupon	4.620%	4.620%	549,199.17	100.000%	549,199.17
Total	-	-	-	**$549,199.17**	-	**$549,199.17**

Bid Information

Par Amount of Bonds	$549,199.17
Gross Production	$549,199.17
Bid (100.000000%)	549,199.17
Total Purchase Price	$549,199.17
Bond Year Dollars	$1,697.16
Average Life	3.090 Years
Average Coupon	4.6199999%
Net Interest Cost (NIC)	4.6199999%
True Interest Cost (TIC)	4.6199999%

Grantsville City, Utah

$549,199 Equipment Lease Purchase

Dated June 1, 2026

Sources & Uses

Dated 06/01/2026 | Delivered 06/01/2026

Sources Of Funds	
Par Amount of Bonds	$549,199.17
Total Sources	**$549,199.17**

Uses Of Funds	
Deposit to Project Construction Fund	549,199.17
Total Uses	**$549,199.17**

Agenda Item # 17

Consideration of Resolution 2026-28 approving amendments to the Grantsville City Fee Schedule to increase the Zoning plan check and permit fees, and adding Right of Way Permit fees, Sidewalk or Driveway Replacement fees, Water or Sewer Connection fees, and Asphalt Repairs fees to the Zoning Fees Section

GRANTSVILLE CITY
RESOLUTION NO. 2026-28

A RESOLUTION APPROVING AMENDMENTS TO THE FEE SCHEDULE

Be it resolved by the City Council of Grantsville City, Utah as follows:

WHEREAS, Grantsville City (the "City") has adopted a Fee Schedule to establish fees for various City services and permits; and

WHEREAS, the City periodically reviews and updates its Fee Schedule to ensure clarity, proper administration, and alignment with current operational practices; and

WHEREAS, the City desires to amend portions of the Fee Schedule to improve administration and reflect updated costs; and

WHEREAS, the proposed amendments are set forth in Exhibit A, attached hereto and incorporated by this reference.

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF GRANTSVILLE CITY, STATE OF UTAH, AS FOLLOWS:

Section 1. Approval of Amendments: The amendments to the Grantsville City Consolidated Fee Schedule, as outlined in Exhibit A, are hereby approved.

Section 2. Incorporation: The approved amendments shall be incorporated into the City's Consolidated Fee Schedule and reflected in the most current version maintained by the City.

Section 3. Effective Date: This resolution shall take effect immediately upon its passage and approval as provided by law.

Section 4. Severability clause: If any part or provision of this Resolution is held invalid or unenforceable, such invalidity or unenforceability shall not affect any other portion of this Resolution and all provisions, clauses and words of this Resolution shall be severable.

ADOPTED AND PASSED BY THE CITY COUNCIL OF GRANTSVILLE CITY, THIS 6TH DAY OF MAY, 2026.

BY THE ORDER OF THE GRANTSVILLE CITY COUNCIL:

_____
By Mayor Heidi Hammond

ATTEST

_____
Alicia Fairbourne, City Recorder

EXHIBIT “A”

Fee Schedule Amendments

Before

Building Fees

General Building Fees
Single Family Dwelling Permit Fees
Multi-Family Building Permit Fees
Commercial/Industrial Building Permit Fees

HISTORY
Approved by Ord. 2024-30 on 11/6/2024

General Building Fees

Building Permit Fee	Minimum of $150.00
State Surcharge	1% of Building Permit Fee
Right of Way Permit:	
more than 100 lineal feet or a series or exploratory or repair holes	$50.00 for each 100 lineal feet or fraction thereof, plus any applicable inspection or service fees. (Performance Bond is required)
Sidewalk or Driveway Replacement	$50.00 Per Lot.
Water or Sewer Connection	$100.00 Per Connection.
Asphalt Repairs	$100.00 Per Repair.
Demolition Permits	$150 + 1% State Surcharge
Plan Check Fee:	
Total permit value <$15,000	$100.00 fee
Total permit value >$15,000	.0052 x total permit value (minimum of $100.00)
Re-Inspection Fee	$50.00 (after two)

Work Without a Permit	Double the standard permit fee
Zoning Inspection Fee:	
Plan Check	$25.00
Permit Fee	$25.00

Notwithstanding the above schedule of fees, should the plan check, inspection, or other related cost of the City exceed those fees identified herein, the applicant shall be required to pay the actual costs incurred by the City, when said additional costs are determined and documented to exceed the fees paid by the applicant.

*TOTAL PERMIT VALUE WILL BE DETERMINED USING BUILDING VALUATION DATA FROM THE ICC (International Code Council) — UPDATED ANUALLY ON JANUARY 1ST.

HISTORY
Amended by Ord. 2020-28 on 10/7/2020
Amended by Ord. 2024-04 on 1/17/2024
Approved by Ord. 2024-30 on 11/6/2024
Amended by Ord. 2025-17 on 7/9/2025

After

Building Fees

General Building Fees
Single Family Dwelling Permit Fees
Multi-Family Building Permit Fees
Commercial/Industrial Building Permit Fees

HISTORY
Approved by Ord. 2024-30 on 11/6/2024

General Building Fees

Building Permit Fee	Minimum of $150.00
State Surcharge	1% of Building Permit Fee
Demolition Permits	$150 + 1% State Surcharge
Plan Check Fee:	

Total permit value <$15,000	$100.00 fee
Total permit value >$15,000	.0052 x total permit value (minimum of $100.00)
Re-Inspection Fee	$50.00 (after two)
Work Without a Permit	Double the standard permit fee
Zoning Inspection Fee:	
Plan Check	$100.00
Permit Fee	$100.00

Notwithstanding the above schedule of fees, should the plan check, inspection, or other related cost of the City exceed those fees identified herein, the applicant shall be required to pay the actual costs incurred by the City, when said additional costs are determined and documented to exceed the fees paid by the applicant.

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Approved by Ord. 2024-30 on 11/6/2024
Amended by Ord. 2025-17 on 7/9/2025

Before

Zoning Fees

Commercial Tower (Small Wireless Facilities)

Annexation Application Fee	$1,000.00
Board of Adjustment Fee	$500.00 per application
Boundary Line Adjustment Fee	$700.00 per application

Commercial Preliminary Site Plan – Small (0-3 acres)	$2,000.00 plus $100 per acre
Commercial Final Site Plan – Small (0-3 acres)	$3,000.00 plus $100.00 per acre
Commercial Preliminary Site Plan - Large (greater than 3 acres)	$4,285.00 plus $300.00 per acre
Commercial Plan and Final Plat Review (greater than 3)	$6,100.00 base plus $310.00 per acre for 3.01 to 25 acres plus $245.00 per acre for 25.1 or more acres
Concept Plan (Discussion Only)	$200.00 Per application for Planning staff only $500.00 per application for DRC Staff Consultation $700.00 per application for Planning Commission
Conditional Use Permits (CUP):	
Commercial/Industrial Site Plan	$1000.00 plus $200 per unit
Commercial/Industrial Amendment to Site Plan	$800.00 plus $200.00 per unit
Commercial/Industrial Tenant Change Application	$300.00 per application
Home Occupational Use	$100.00 (if only Zoning Official approval) / $200.00 (if Planning Commission approval)
Mining, Sand, Quarry, or Gravel	$1,040.00 per application
Miscellaneous Conditional Use Amendment	$500.00 per application
Miscellaneous Conditional Use Permits	$650.00 (Planning Commission approval)
Sign Permit	$200.00 (permanent sign) / $25.00 (temporary sign)
Sportsman, Kennel or Animal Permit	$100.00 (if only Zoning Official approval) / $200.00 (if Planning Commission approval)
Solar	$825.00 per application

Temporary Construction Living Unit	$200.00 per application
Temporary Construction Office	$200.00 per application
Work Meeting	$700.00 per meeting with Planning Commission $700.00 per meeting with City Council
Development Agreement	$2,600.00
Development Agreement Major Changes	$2,300.00
Development Agreement Minor Changes	$1,800.00
Pioneering Agreement and Interlocal Agreements	$2,600.00 plus $3,000.00 retainer for Pioneering Agreement Attorney
General Plan Amendment	$1,350.00 per application
Planned Unit Development (Multi-Use, Commercial, Industrial)	$5,700.00 plus: $180.00 per acre for the first 20 acres $135.00 per acre for the next 30 acres $100.00 per acre for each acre over 50 acres
Planned Unit Development (Residential)	$5,500.00 plus $133.00 per dwelling unit per application
Final Plat Amendment (Map)	Final Plat: $725.00 plus $55.00 per affected lot
Public Infrastructure Districts (PID):	
Letter of Intent	$1,000.00
Governing Documents:	$1,000.00
Subdivision Preliminary Plat/Plan	
Single Lot Process (Preliminary and Final Fees Combined)	See Final Fees
Two (2) to four (4) lots w/no street improvements needed	See Final Fees

Two (2) to four (4) lots with street improvements needed	See Final Fees
Five (5) and greater	$2,000.00 plus $112.00 per lot
Subdivision Final Review	
Single Lot Process (Preliminary and Final Fees Combined)	$1,320.00
Two (2) to four (4) lots w/no street improvements needed	$1,325.00
Two (2) to four (4) lots with street improvements needed	$1,330.00 + $100.00 per lot
Five (5) and greater	$2,000.00 base plus $163.00 per lot
Rezone Application	$1,365.00 per application
Street Dedication/ Vacation	$340.00 per application
Water Dedication Retainer	$3,000.00 (any additional costs will be billed by Grantsville City's water attorney)
External ADU	See Single Lot Fees
ADU	$154.00
Electronic Recording (Mylar, Development Agreements etc)	$150.00
Public Hearing Notice - Signage	$100.00
SR-138 Waterline Connection Fee	$500.00 per dwelling
Open Space Fee-in-lieu	10% of the pre-developed land value of the total parcel acreage.
Floodplain Review Fees	3rd Party Incurred Cost (consultant)
Fire Hydrant Testing	$50.00 per hydrant
Infrastructure Reimbursement Application	$1,000.00 per application

HISTORY
Amended by Ord. 2020-19 on 7/15/2020
Amended by Ord. 2021-01 on 1/20/2021
Amended by Ord. 2022-04 on 1/19/2022
Amended by Ord. 2022-47 on 5/4/2022
Amended by Ord. 2024-06 on 1/31/2024
Amended by Res. 2024-30 on 5/15/2024
Amended by Ord. 2024-39 on 12/4/2024
Amended by Ord. 2025-15 on 8/6/2025

After

Zoning Fees

Commercial Tower (Small Wireless Facilities)

Annexation Application Fee	$1,000.00
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Commercial Preliminary Site Plan – Small (0-3 acres)	$2,000.00 plus $100 per acre
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Commercial Preliminary Site Plan - Large (greater than 3 acres)	$4,285.00 plus $300.00 per acre
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General Plan Amendment	$1,350.00 per application
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	$100.00 per acre for each acre over 50 acres
Planned Unit Development (Residential)	$5,500.00 plus $133.00 per dwelling unit per application
Final Plat Amendment (Map)	Final Plat: $725.00 plus $55.00 per affected lot
Public Infrastructure Districts (PID):	
Letter of Intent	$1,000.00
Governing Documents:	$1,000.00
Subdivision Preliminary Plat/Plan	
Single Lot Process (Preliminary and Final Fees Combined)	See Final Fees
Two (2) to four (4) lots w/no street improvements needed	See Final Fees
Two (2) to four (4) lots with street improvements needed	See Final Fees
Five (5) and greater	$2,000.00 plus $112.00 per lot
Subdivision Final Review	
Single Lot Process (Preliminary and Final Fees Combined)	$1,320.00
Two (2) to four (4) lots w/no street improvements needed	$1,325.00
Two (2) to four (4) lots with street improvements needed	$1,330.00 + $100.00 per lot
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ADU	$154.00
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Open Space Fee-in-lieu	10% of the pre-developed land value of the total parcel acreage.
Floodplain Review Fees	3rd Party Incurred Cost (consultant)
Fire Hydrant Testing	$50.00 per hydrant
Infrastructure Reimbursement Application	$1,000.00 per application
Right of Way Permit:	
more than 100 lineal feet or a series or exploratory or repair holes	$50.00 for each 100 lineal feet or fraction thereof, plus any applicable inspection or service fees. (Performance Bond is required)
Sidewalk or Driveway Replacement	$50.00 Per Lot.
Water or Sewer Connection	$100.00 Per Connection.
Asphalt Repairs	$100.00 Per Repair.

HISTORY
Amended by Ord. 2020-19 on 7/15/2020
Amended by Ord. 2021-01 on 1/20/2021
Amended by Ord. 2022-04 on 1/19/2022
Amended by Ord. 2022-47 on 5/4/2022
Amended by Ord. 2024-06 on 1/31/2024
Amended by Res. 2024-30 on 5/15/2024
Amended by Ord. 2024-39 on 12/4/2024
Amended by Ord. 2025-15 on 8/6/2025

Agenda Item # 18

Consideration of Resolution 2026-32 approving rodeo arena light and water fees in the Grantsville City Fee Schedule

GRANTSVILLE CITY
RESOLUTION NO. 2026-32

A RESOLUTION APPROVING RODEO ARENA LIGHT AND WATER FEES IN THE CITY FEE SCHEDULE

Be it resolved by the City Council of Grantsville City, Utah as follows:

WHEREAS, Grantsville City has adopted a Fee Schedule establishing rates and charges for various City services, facilities, and programs; and

WHEREAS, the City Council has authority to amend the Fee Schedule from time to time as necessary to reflect operational needs and cost recovery; and

WHEREAS, the use of the rodeo arena for special events and rentals may include additional utility and facility costs not currently accounted for in the Fee Schedule; and

WHEREAS, the City desires to amend the Special Event and Rental Fees section of the Fee Schedule to include fees for the use of arena lights and arena water in connection with rodeo arena reservations; and

WHEREAS, the proposed fees are intended to offset operational costs associated with providing these services and to ensure equitable use of City resources;

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF GRANTSVILLE CITY, STATE OF UTAH, AS FOLLOWS:

Section 1. Approval of Fee Schedule Amendments: The City Council hereby approves amendments to the Grantsville City Fee Schedule under the Special Event and Rental Fees section to include the following fees for rodeo arena use, which shall be incorporated into and become part of the official Fee Schedule:

- Arena Lights: $25.00 per hour
- Arena Water: $15.00 per reservation

Section 2. Effective Date: This resolution shall take effect immediately upon its passage and approval as provided by law.

Section 3. Severability clause. If any part or provision of this Resolution is held invalid or unenforceable, such invalidity or unenforceability shall not affect any other portion of this Resolution and all provisions, clauses and words of this Resolution shall be severable.

ADOPTED AND PASSED BY THE CITY COUNCIL OF GRANTSVILLE CITY, THIS (xx) DAY OF (xx), 2026.

BY THE ORDER OF THE GRANTSVILLE CITY COUNCIL:

_____
By Mayor Heidi Hammond

ATTEST

_____
Alicia Fairbourne, City Recorder

Agenda Item # 19

Adjourn