Staff Report

PLANNING DIVISION
DEPARTMENT of COMMUNITY and NEIGHBORHOODS

To: Salt Lake City Planning Commission

From: Sara Javoronok, Senior Planner
(801) 535-7625 or sara.javoronok@slcgov.com

Date: April 22, 2020

Re: PLNSUB2018-00869

Planned Development

PROPERTY ADDRESSES: Sydney: 906 South 200 West and 922 South 200 West;
Slate: 221 West 900 South, 231 West 900 South, 909 S Washington Street, 915 S Washington Street, 919 S Washington Street, and 917 S Washington Street
PARCEL IDs: Sydney: 15-12-258-015 and 15-12-258-016
Slate: 15-12-258-001, 15-12-258-003, 15-21-258-004, 15-12-258-005, 15-12-258-006, and 15-12-258-007
MASTER PLAN: Downtown Plan
ZONING DISTRICT: FB-UN2 Urban Neighborhood 2 Subdistrict

REQUEST: A request by the Alfandre Family Foundation, Inc. and Urban 9th, LLC, represented by James Alfandre of Urban Alfandre, for approval of two buildings containing a total of approximately 275 residential units, 8,900 square feet of commercial space, and 156 parking spaces. The subject properties are located in the FB-UN2 zoning district. The applicant is requesting Planned Development approval for relief from several zoning standards. The modifications requested relate to façade length, ground floor uses, habitable space, ground floor transparency, and building entrances.

RECOMMENDATION: Based on the information in this staff report, Planning Staff recommends that the Planning Commission approve the proposal as proposed and subject to complying with all applicable regulations and the conditions below:

1. Final approval of the plans shall be delegated to planning staff to ensure compliance with the zoning standards and conditions of approval.
2. Approval is for the specific items discussed and identified in the staff report. All other applicable zoning regulations and requirements from other city departments still apply.
3. Final approval of the details for wall murals, screening, lighting, and materials shall be delegated to planning staff.
4. Applicant shall coordinate right-of-way improvements with the Salt Lake City Redevelopment Agency (RDA) and the planned 900 South streetscape improvements.

5. The involved lots shall be consolidated through the Lot Consolidation process as per Chapter 20.32 of the Subdivision and Condominium ordinance.

ATTACHMENTS:

- **A.** Vicinity Map
- **B.** Property & Vicinity Photographs
- **C.** Applicant Submittal
- **D.** Existing Conditions
- **E.** FB-UN2 Zone Standards Summary
- **F.** Analysis of Planned Development Standards
- **G.** Public Process & Comments
- **H.** Department Review Comments
- **I.** Remedial Action Plan

PROJECT DESCRIPTION:
The project covers an area approximately 1.5 acres (68,345 square feet) in size. The subject properties are located on the south side of 900 South between 200 West and Washington Street. The proposal includes frontages on 900 South, 200 West, and Washington Street. The proposal is for two buildings, Slate will be located on the western parcels and Sydney will be located on the eastern parcels. The parcels are divided by a public alley. Through a subsequent lot consolidation process, six parcels will be consolidated into a single parcel for Slate, and two parcels will be consolidated for Sydney. The main entrances of both buildings will face 900 South or will be in close proximity to the front façade. The buildings will be built to the property line or within four feet of it. The Slate site is currently six parcels that are occupied by a closed commercial structure (Chuckles) and duplex that face 900 South, and two residences and a parking area that face Washington Street. The proposed building wraps the structure at 227 West 900 South (Central Water). Currently, the Sydney site contains two parcels with a closed dry cleaner (Henrie's) and parking.

This corner is a key intersection at the heart of the Central 9th Neighborhood. It is zoned FB-UN2, one of the city's form-based zones that has served as a catalyst for redevelopment in this transitioning neighborhood. The neighborhood has a high level of transit services – it is served by all three of the UTA Trax light rail lines and a frequent service bus route. There are a number of recently approved and constructed projects. These include the SpyHop project across 900 South, which is under construction and was reviewed by the Planning Commission in 2019. In addition, the project to the northeast, now Alinea, formerly Central 9th Lofts, was constructed in 2018, and reviewed by the Planning Commission in 2016. A four-story residential building is under construction on the property to the south of Slate and others are planned in the area. These proposals are consistent with the vision for the area in the *Downtown Plan* and *Plan Salt Lake*. This is described in greater detail in Issue 1.

BACKGROUND INFORMATION:
In 2019, the City Council adopted a text amendment (PLNPCM2017-00590) that modified the height requirements in the FB-UN2 zone specifically for the parcels where Slate is to be constructed. Prior to the text amendment, development was limited to four stories with a maximum height of 50'. The text amendment increased the maximum height for these parcels to 65'. This is consistent with the height permitted for buildings at the major intersections (200 West and 700, 800, or 900 South, etc.) that were permitted a height of 65', while other intersections were limited to the 50' or four stories.

Aerial photograph with the subject properties outlined in yellow.

Rendering showing 900 South façade of Slate in context with existing The Shop SLC/Central Water at 227 & 229 West 900 South

The proposed Slate building has 150 residential units, 3,530 square feet of commercial area, 58 parking spaces, and is 65' in height. It has commercial uses along the 900 South façade that extend

approximately 80' deep. Garage parking is located to the rear of these uses and along the Washington Street elevation. There is a single entry for the garage that is accessed from Washington Street. The primary exterior building materials on the street facing facades are brick and fiber cement lap siding. A small percentage is stucco. Except for amenity areas, the upper four floors will be occupied by residential units. Amenities for residents are to be located on the second floor and include a courtyard with a spa, two-level clubhouse, and fitness and wellness areas.

900 South façade of the Sydney building

The proposed Sydney building has 125 residential units, 5,375 square feet of commercial area, 100 parking spaces, and is 65' in height. Similar to Slate, the proposed Sydney building has commercial uses towards the front of the building (approximately 50 feet deep on the 900 South elevation and 30 feet on the 200 West elevation) and garage parking on the first floor. There is a single entry for the garage that is accessed from 200 West. The primary exterior building materials are brick and fiber cement siding, with a small percentage of stucco. The second floor has a courtyard along with a large clubhouse and fitness area. The remainder of the upper four floors are occupied by residential units.

The applicant is requesting relief from the following the following zoning standards:

Slate – Washington Street Facade

- Building entries at least every 75' (95' span without entry)
- Ground floor transparency of at least 60% (Glass, art, and metal mesh total 53%)
- Façade length in excess of 200' (Length is approximately 227')
- Ground floor uses other than parking occupy at least 75% of the street frontage (Parking occupies 55%)
- Street level facing façade of parking structure wrapped with habitable space occupied by a use that is allowed in the zone as a permitted or conditional use.

Slate –Washington Street Elevation

The applicant is requesting relief from the following the following zoning standards:

Sydney – 200 West Facade

- Building entries at least every 75' (Two spans in excess – approximately 85' and 95' distances)
- Ground floor transparency of at least 60% (Glass – 42.6% and wall murals – 21.9%, total – 64.5%)
- Façade length in excess of 200' (Length is approximately 235')
- Ground floor uses other than parking occupy at least 75% of the street frontage (Parking occupies 65%)
- Street level facing façade of parking structure wrapped with habitable space occupied by a use that is allowed in the zone as a permitted or conditional use.

Sydney –200 West Elevation. The white areas reflect location of wall murals, see material boards for general depiction.

The modifications and waivers that are requested as part of the Planned Development are related to environmental contamination from the former dry-cleaning site that also extends to the applicant's western parcels. This is detailed in Issue 2: Environmental Remediation, Attachment E: FB-UN2 Zone Standards Summary, and Attachment I: Remedial Action Plan, which was submitted by the applicant. The applicant's remediation of the site will be to U.S. EPA soil and air screening levels that permit residential units on the upper floors of the buildings, but not the ground floors of the buildings.

KEY ISSUES:
The key issues listed below have been identified through the analysis of the project, neighbor and community input and department review comments.

1. Compliance with Adopted Master Plans
2. Environmental Remediation
3. Requested Modifications

Issue 1: Compliance with Adopted Master Plans
The proposed project is consistent with the citywide *Plan Salt Lake*, and the *Downtown Plan*. Two guiding principles are applicable as are initiatives in several chapters. The applicable guiding principles in *Plan Salt Lake* are the following:

- Neighborhoods that provide a safe environment, opportunity for social interaction, and services needed for the well-being of the community therein.
- Access to a wide variety of housing types for all income levels throughout the City, providing the basic human need for safety and responding to changing demographics

The proposed project's residential units and commercial spaces have the potential to provide the opportunity for social interaction and services needed for the well-being of the community.

Initiatives from the growth, housing, and transportation and mobility chapters are also applicable. Growth initiatives are as follows:

- Locate new development in areas with existing infrastructure and amenities, such as transit and transportation corridors.
- Encourage a mix of land uses.
- Promote infill and redevelopment of underutilized land.

The proposed project is located adjacent to high capacity transit (200 West Station, which is serviced by all three UTA light rail lines) and along a frequent service bus route on 900 South (UTA Route 9). The RDA has proposed significant improvements to the public infrastructure along 900 South in conjunction with 9-Line Trail improvements. See the conceptual image below:

REDEVELOPMENT PROJECT PROFILE

900 SOUTH STREETSCAPE & UNDERGROUNDING

VISION

The project would enhance portions of the 900 South right-of-way to foster redevelopment of the area via creation of the Central Ninth neighborhood center.

It would also improve the pedestrian and 9 Line trail environments, eliminate obstructions to development that may prevent maximization of the allowed building height under the FBUN-2 zoning district, and standardize parking within the right-of-way to maximize space and increase available parking for businesses.

BACKGROUND

Upon 2011 direction from the RDA Board to address the lack of amenities in the West Temple Gateway Project Area, the RDA researched potential amenities and conducted a preference survey of local residents and businesses, in which the community identified streetscape improvements as its preferred amenity.

Additionally, the proposed project would have a mix of uses with commercial space and residential units. The proposal, with a total of approximately 275 units and the remediation of a contaminated site, is an excellent example of the infill and redevelopment of underutilized land.

The housing initiative to, "Promote high density residential in areas served by transit," is applicable since Slate has a density of approximately 200 dwelling units per acre and Sydney has a density of approximately 150 dwelling units per acre, and the proposed project is located in close proximity to the Trax line and a frequent service bus route.

Similarly, the proposal's location near the Trax lines, a high-frequency bus route, and along the 9-Line, it is consistent with several initiatives in the Transportation and Mobility chapter that call for connecting residents with transit, pedestrian and bicycle networks, and reducing automobile dependency and single occupancy vehicle trips. The initiatives are as follows:

- Create a complete circulation network and ensure convenient equitable access to a variety of transportation options by:
  - Having a public transit stop within 1/4 mile of all residents.
  - Expanding pedestrian and bicycle networks and facilities in all areas of the City.
  - Providing incentives for the use of transit.

    - Increase the frequency and service hours of transit in neighborhoods.
    - Enhancing the regional transportation network.
    - Creating a system of connections so that residents may easily access employment, goods and services, neighborhood amenities, and housing.
- Prioritize connecting residents to neighborhood, community, regional, and recreation nodes by improved routes for walking, biking and transit.
- Prioritize connecting nodes located throughout the City to each other with improved walking, biking and transit.
- Reduce automobile dependency and single occupancy vehicle trips.
- Make walking and cycling viable, safe, and convenient transportation options in all areas of the City.
- Encourage transit-oriented development (TOD).

The initiative, "Support the growth of small businesses, entrepreneurship and neighborhood business nodes," in the economy chapter is applicable to the proposal's location in Central 9th District and the availability of commercial space in the project.

The proposed project is also consistent with the *Downtown Plan* and several Central 9th District initiatives with the following:

- It provides housing choice and supports transit-oriented development since it is located adjacent to the Trax line and station on 200 West.
- The first-floor commercial spaces will enhance the small neighborhood business node at 900 South and 200 West
- It is walkable and will further develop the small neighborhood service nodes

Issue 2: Environmental Remediation
Per the *Wasatch Environmental Remedial Action Plan* (*Remedial Action Plan* - Attachment I), the Henrie's site was the location of a dry cleaner for over 90 years. The first building was constructed in 1919 in the northeast portion of the site and expanded in 1962 and in 1971 to its current size and configuration. Several different dry cleaners occupied the site over a period of 90 years. The most recent was Henrie's, which closed in 2015. Several studies in the 1990s-2010s identified various sources of contamination on the site.

The *Remedial Action Plan* details these studies and how the applicant will address the impacts to the soil and groundwater and remediate the site to U.S. EPA standards. As described in the *Remedial Action Plan*, the applicant anticipates completing environmental remediation of the contaminated site to a level that allows for commercial occupation of the first floor and residential occupation of the upper floors. This restriction prohibits residential units on the first floor and the applicant states it is not feasible to have retail on the street facing facades to a degree that meets the underlying zoning requirements. Nearly all the requested modifications, discussed in depth in Issue 3, relate to this restriction.

Issue 3: Requested Modifications
As outlined in the Project Description and Issue 2 above, the applicant is requesting several modifications. Nearly all the modifications are related to the restrictions that would be placed on the property following environmental remediation of the site.

Both buildings are located on corners – Slate on 900 South and Washington Street and Sydney on 900 South and 200 West – both meet the design requirements for their 900 South façades. The requested modifications are on their secondary facades. Staff has worked with the applicant to make changes

that increase compliance or otherwise add elements such that the buildings better meet the intent of the underlying zoning requirements. The modifications made by the applicant are also consistent with the recommendations of the Central 9th Community Council, which generally supported the proposal, but encouraged the applicant to use Crime Prevention through Environmental Design strategies and include additional active storefront use (Attachment G: Public Process and Comments). The requested modifications are detailed below by site.

Slate

The applicant is requesting relief from five of the underlying zoning requirements on the Washington Street façade. These are detailed above and in Attachment E: FB-UN2 Zone Standards Summary. The applicant anticipates an environmental remediation of the site to a standard that does not allow for residential units on the first floor. Based on this, the applicant proposes commercial spaces along the 900 South façade and approximately the first 50' of the Washington Street façade. Staff is amenable to this proposal since Washington Street is narrower than 200 West and it is further away from the more concentrated area of commercial uses at 200 West and 900 South. Commercial space along the entire façade is unlikely to be viable, and, while not required, there are concerns with the lack of parking in the neighborhood, and there is likely to be a demand for parking from the potential tenants. As such, the remainder of this elevation will be occupied by parking.

Staff and the applicant have worked to meet the intent of these requirements – breaking up the façade, providing visual interest for those passing by, pedestrian comfort, and perceived safety and well-being – with art murals and metal mesh screening along the southern half of the façade that is also coordinated with other metal elements on the remainder of the west façade and also on the north façade.

The applicant is also requesting relief from the standard requiring building entries every 75' for a section of the Washington Street façade. The area behind this façade is where the parking is located. Rather than an extra entry into the parking garage, staff and the applicant worked, as described above, to break up the length of this façade with art murals and metal mesh screening. This is shown in the graphic below.

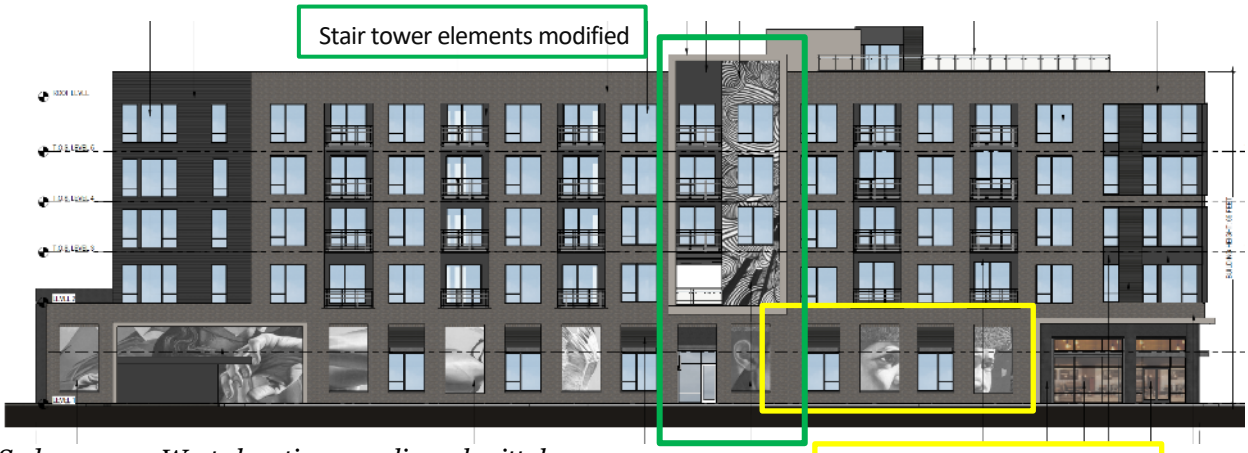
Current proposal with wall murals and metal mesh screening

The only requested modification that is not directly tied to the elements outlined above is the request for façade length in excess of 200'. The proposed façade length is 227'. This is 13.5% in excess of the maximum permitted. The purpose of establishing a maximum building façade length is to break up

large expanses of a building and to create spaces which are more human scale and comfortable to the pedestrian. The zone encourages buildings with no or small setbacks, and the proposal maximizes use of the property. This form will meet the purposes of the underlying zone by creating people-oriented places and providing a housing type that is desired in this high amenity area that is heavily served by transit. Additionally, the façade length does not exceed the maximum to a significant degree.

Sydney

Similar to Slate, the applicant is requesting relief from five of the underlying zoning requirements on the 200 West façade due to environmental remediation requirements. These are detailed in Attachment E: FB-UN2 Zone Standards Summary. For this façade, which originally had storefronts extending approximately 35' feet, staff worked with the applicant to extend this further to the south by approximately 50' feet, for a total of 85'. Additionally, the applicant enlarged the wall mural and extended the vertical metal panel element on the stair tower to the first floor.



Sydney – 200 West elevation – earlier submittal

Sydney –200 West Elevation – revised, see material boards for potential wall mural design. . The white areas reflect location of wall murals, see material boards for general depiction. Final selection is delegated to staff with Condition of Approval 3.

The applicant is also requesting relief from the standard requiring building entries every 75' for two sections of the 200 West façade – the northern length (on the right nd in blue on the above graphic) is

approximately 85' and the southern length (on the left and in blue on the above graphic) is approximately 95'). The area behind this façade is where the parking is located. On the area to the north, staff supports the extension of the storefront area, which has the potential for an additional entry, and also provides visual interest and pedestrian comfort. For the area to the south, rather than an extra entry into the parking garage, staff supports the mix of windows and wall murals to break up the façade and provide visual interest in this area.

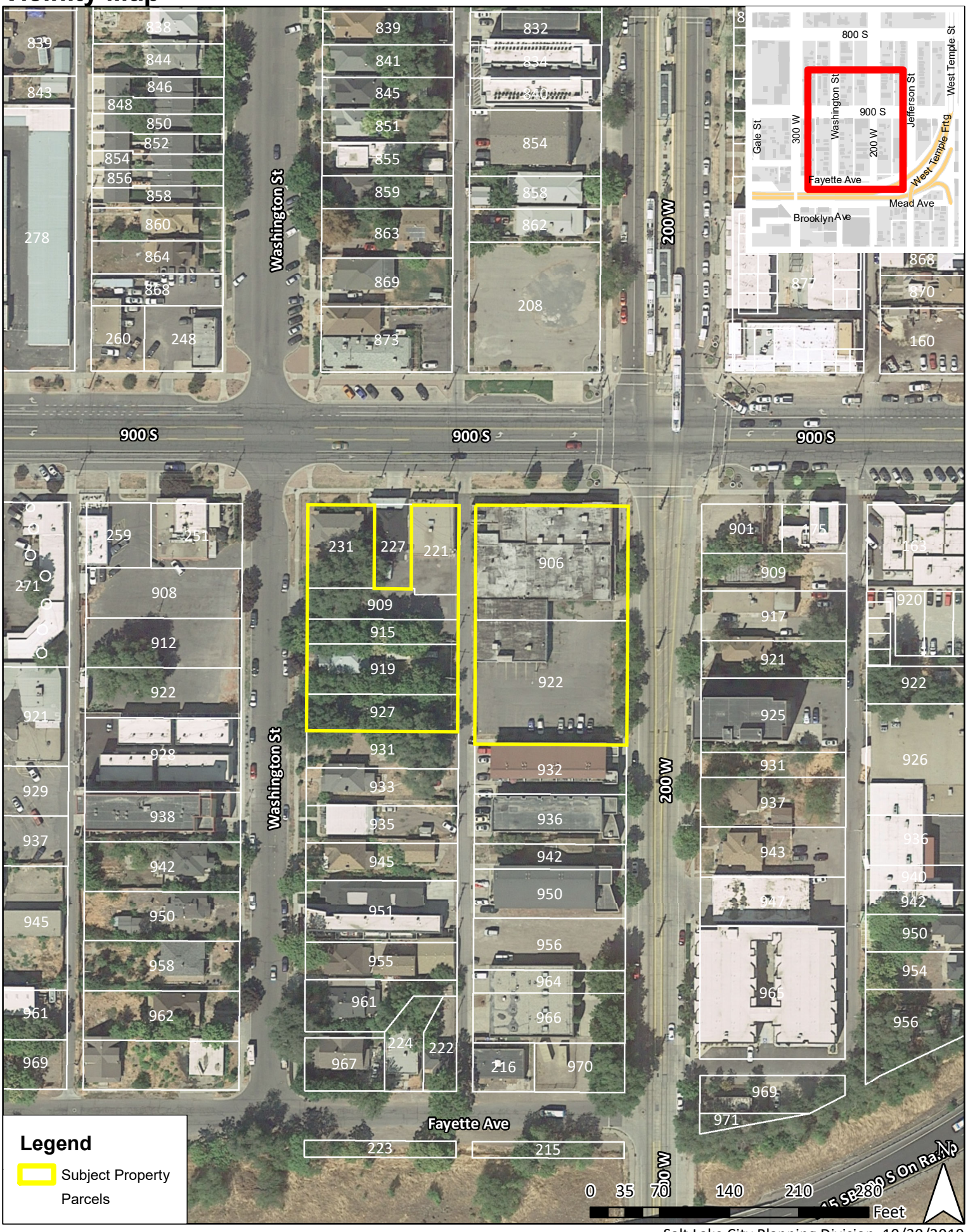
As with Slate, the only requested modification that is not directly tied to the elements outlined above is the request for façade length in excess of 200'. The proposed façade length is 238'. This is 19% in excess of the maximum permitted. Similar to what was detailed above, the zone encourages buildings with no or small setbacks, and the proposal maximizes use of the property. The proposed commercial space, particularly as it extends further south on 200 West, will meet the purposes of the underlying zone by creating people-oriented places, and the residential units on the upper floors are providing a housing type that is desired in this high amenity area that is heavily served by transit. The additional commercial space, the wall murals, and the extension of the metal panel and wall mural along the stair tower will provide breaks in the façade and create visual interest.

DISCUSSION:
The applicant is seeking modifications from several standards related to the location of building entries, ground floor transparency, façade length, ground floor uses other than parking, and habitable space wrapping parking. Nearly all these requests are linked to the required environmental remediation of the site that will not allow for ground floor residential uses. The applicant's proposal meets several of the Planned Development objectives – most relevant, the remediation of a brownfield site. Additionally, it would provide improvements that encourage the use of transportation other than the automobile, and it is consistent with the *Downtown Plan*. As the applicant has demonstrated, the proposal meets the requirements for a Planned Development. The proposal is for a challenging development site and the applicant substantially meets the required standards and has worked with staff and the Community Council's requests to make the proposal more compliant with the purposes and standards of the Planned Development chapter and the underlying FB-UN2 zoning district.

NEXT STEPS:
If the Planned Development is approved, the applicant will need to need to comply with any conditions of approval, including any of the conditions required by City departments and the Planning Commission. The applicant will then be able to submit for building permits for the development. The applicant will need to consolidate the properties into one property. Final certificates of occupancy for the buildings will not be issued until the conditions are met and the property is consolidated.

ATTACHMENT A: VICINITY MAP

Vicinity Map



Salt Lake City Planning Division, 10/30/2019

ATTACHMENT B: SITE & VICINITY PHOTOS

Slate site - Existing conditions on 900 South – The proposal would remove the existing Chuckles building (left) and duplex (right) and wrap the middle building – The Shop SLC and Central Water.

Slate site – Existing conditions on Washington St., side of duplex

Slate site – Existing conditions on Washington St., existing residence

Slate site – Existing conditions on Washington St., existing residence

Sydney site – Existing conditions on 900 South

Sydney site – Existing conditions on 200 West

Sydney site – Existing conditions to the rear of Henrie's building.

Slate - View across on 900 South

Slate – View across Washington Street

Sydney – View across 900 South – SpyHop building under construction

Sydney – View across 200 West

ATTACHMENT B: APPLICANT SUBMITTAL

urban alfandre
urban living. vibrant neighborhoods.

February 19, 2020

Attn: Sara Javoronok
451 S State Street, Room 215
Tel: 801-535-7700

RE: Planned Development Application for Sydney & Slate Projects

Sara,

We are pleased to submit this Planned Development application for the Sydney and Slate project.

Project Description:

The proposed planned development is called Sydney & Slate — a redevelopment project at the former Henrie's dry cleaner site and adjacent properties at the main intersection in the Central Ninth neighborhood. Sydney & Slate consists of efficient studios, one and two-bedroom residential units and 10,000 square feet of ground floor commercial space. Sydney & Slate are two buildings that will be separated by an alley, and will leverage the alley to create a unique, urban community gathering space.

Sydney and Slate will be transit-rich communities that leverage the location and urban amenities of the Central Ninth neighborhood to provide a way for residents to live a vibrant, urban, and car-free lifestyle.

Sydney and Slate will also provide unique housing options by creating smaller units, with a material amount being one-bedrooms, which will be more affordable than larger one-bedroom units found throughout most of the city.

The vibrancy and transit-oriented nature of the Central Ninth neighborhood make smaller, more efficient and affordable units possible.

Zoning Requests:

Urban Alfandre is requesting relief from the City's zoning ordinance through the planned development process for:

1. 21A.27.030: BUILDING CONFIGURATION AND DESIGN STANDARDS 4a., Façade Length: All of the parcels that make up the land assemblages for Sydney and Slate are severely environmentally contaminated and to prevent legal battles, Urban Alfandre assembled all of the contaminated properties to remediate them all at once, making the redevelopment of these blighted parcels a reality. It just so happens that the length of these parcels are greater than 200' along 200 W and S Washington St. The design incorporates creative architecture and high quality durable materials to create interest and variety in these longer façades.

   We are asking for relief for 35'6" for Sydney and 27'2" for Slate.

2. 21A.27.030: BUILDING CONFIGURATION AND DESIGN STANDARDS 4e., Ground Floor Uses: The contaminated soil, per State remediation regulations, restricts residential uses on the ground floor of Sydney and Slate limiting our ability to implement this zoning provision.

   Our intent is to provide as much retail along 900 S and realistically activate 200 W and S Washington St, but it is not feasible to run retail along the length of 200 W and S Washington, leaving us with the only option to maximize the parking structure, where shown on the attached plans, to provide as much on-site parking as possible — something the neighborhood has expressed support for. We believe we are achieving a great balance of maximizing ground floor uses that are preferred, while adding something the neighborhood wants and designing the building in a way that achieves the intent of this zoning provision, considering the State-imposed limitations.

   We are extending ground floor habitable space further down 200 W per Ms. Javoronok's request. We believe this is a good compromise and helps the project further achieve ground floor transparency and use goals.

3. 21A.27.030: BUILDING CONFIGURATION AND DESIGN STANDARDS 4f(8): Due to the State-imposed environmental limitations on this project, we are not able to fulfill this requirement in its entirety. However, we are still maximizing preferred ground-floor uses

on these project and creating a vibrant ground floor that is designed in a thoughtful way that improves the street activation on all public streets.

4. 21A.27.030: BUILDING CONFIGURATION AND DESIGN STANDARDS 6 a,b: Due to the State-imposed environmental limitations on this project, and the desire for the neighborhood to maximize on-site parking, we are not able to fulfill this requirement in its entirety. Where we can have habitable space on this project, we maximize the transparency by utilizing store-front glass to make an inviting, vibrant street façade along the main commercial corridor of 900 S. Along S Washington and 200 W we extend the habitable space down those streets as far as we can. We made a substantial change by extending ground floor habitable space further down 200 W per Ms. Javoronok's request.

5. 21A.27.030: BUILDING CONFIGURATION AND DESIGN STANDARDS 6 1,d: We do not meet the building entry requirements on the 200 W façade and are asking for relief on this. However, we did add more commercial space along 200 W to activate that street more and to get closer to the transparency and use requirements, but have the entrance closer to the main corner of 900 S and 200 W which keeps us from achieving the building entry requirements.

Sydney & Slate is only possible if the site is remediated. The site is currently saddled by large amounts of contamination from a former dry cleaner facility. This site has been a large blight on the Central Ninth neighborhood for years and is on one of the most prominent corners in the neighborhood, directly adjacent to the TRAX stop. We have spent a lot of at-risk money and have taken on a lot of liability to purchase these sites before clean-up has occurred and this Planned Development request will help make this project a reality and success.

Planned Development Objectives:

We believe we meet the following City objectives for this Planned Development.

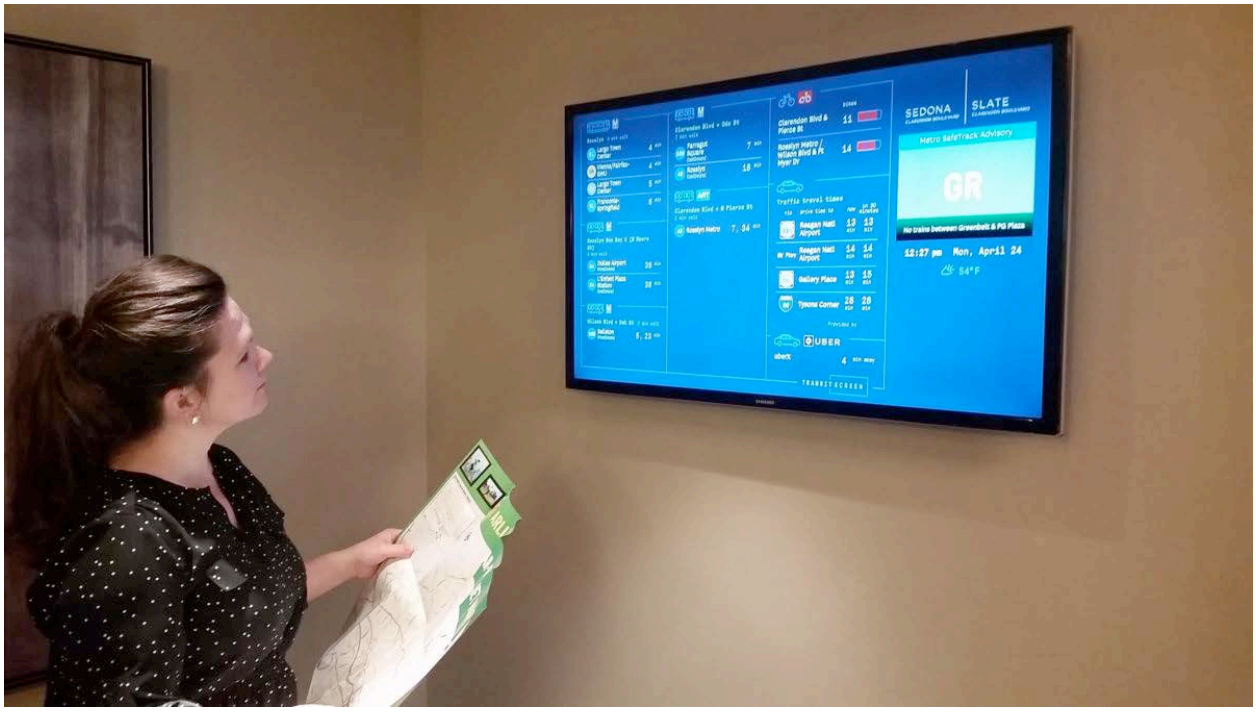
C. Housing (2): Our proposal includes housing types that aren't commonly found in the neighborhood or city. We have designed the project to have a material amount of one-bedroom efficiencies that are in the 400-500 sq ft range. These units provide one bedroom living in a much smaller space. They are much more livable than micro-units and more affordable than standard one-bedroom units.

We are leveraging the transportation and urban amenities of the Central Ninth neighborhood to provide unique housing options.

D. Mobility (2): We are also leveraging the transportation and urban amenities of the Central Ninth neighborhood to create a transit-rich project — one where someone can truly live a car-free lifestyle. Here's how:

- Located steps from TRAX
- Bike storage
- Adding 10,000 sq ft of neighborhood retail and services

- Providing transportation planning screen in lobbies for residents
    - These screens show schedule and location of the following to help residents plan alternative transportation option:
        - TRAX trains
        - Buses
        - Uber/ Lyft
        - Scooters
        - Bike share



We are also providing a dedicated co-working space in the project so residents can work from home to cut down on car trips.

E. Sustainability (2):

The Redevelopment Agency of Salt Lake City has identified this site as a ‘priority site’ because of its location on a prominent corner in the Central Ninth neighborhood and its severe contamination from its past as a dry cleaner.

We are required to remediate the site before it can be redeveloped which will be a huge undertaking, but we are currently working with the State to do so.

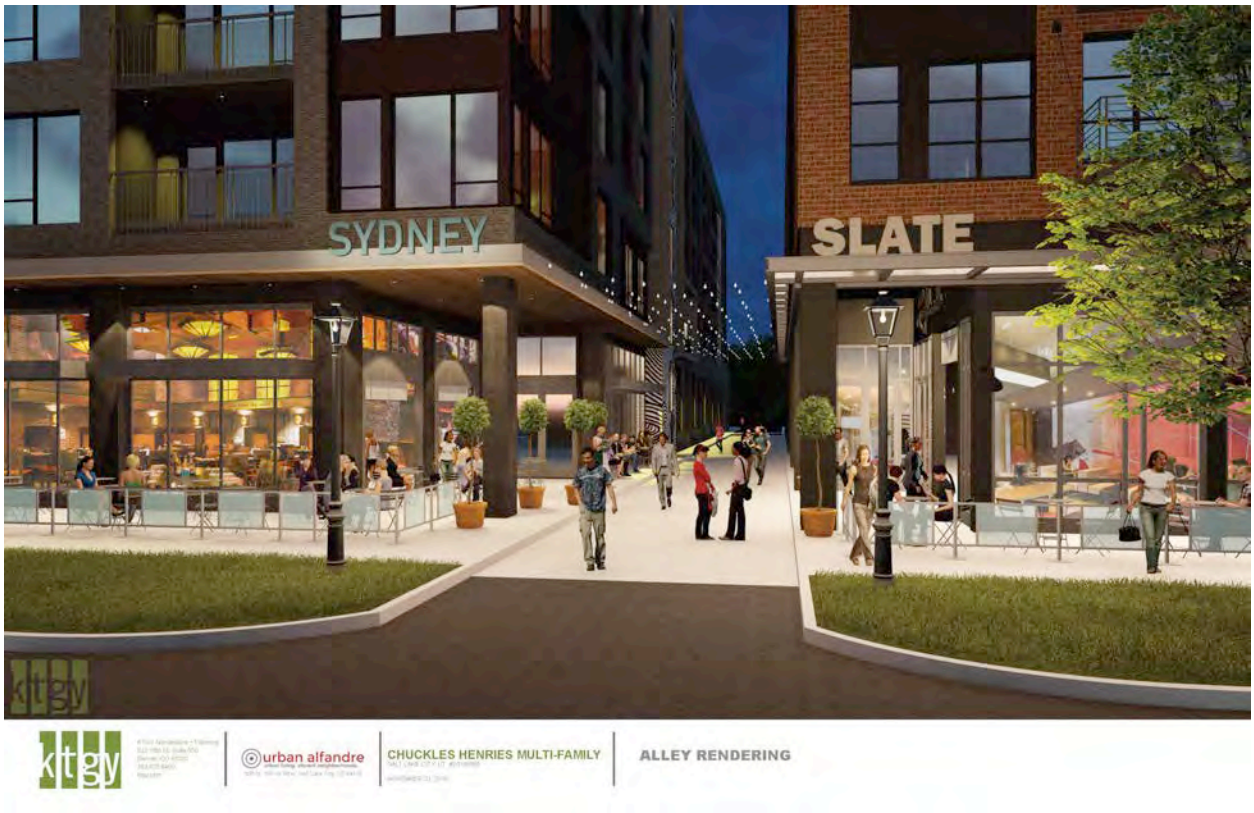
This site has been a blight on the Central Ninth neighborhood for years and the redevelopment of it would go a long way in bringing more density and vibrancy to this wonderful, urban neighborhood.

The redevelopment of this site would completely satisfy this City objective.

F. Master Plan Implementation (1):

This project is very consistent with the master plan of this neighborhood which clusters higher, buildings on major corners and corridors, which this does by being on the TRAX corner of 900 S and 200 West. This project also fronts 10,000 sq ft of retail along the major corridor of 900 S which is compatible with the master plan.

The alley activation will also mesh well with the City-planned 9 Line project while creating a pedestrian focused amenity and community gathering space.



We are very excited for the opportunity to achieve city objective through this Planned Development and to create a catalytic project in this burgeoning neighborhood.

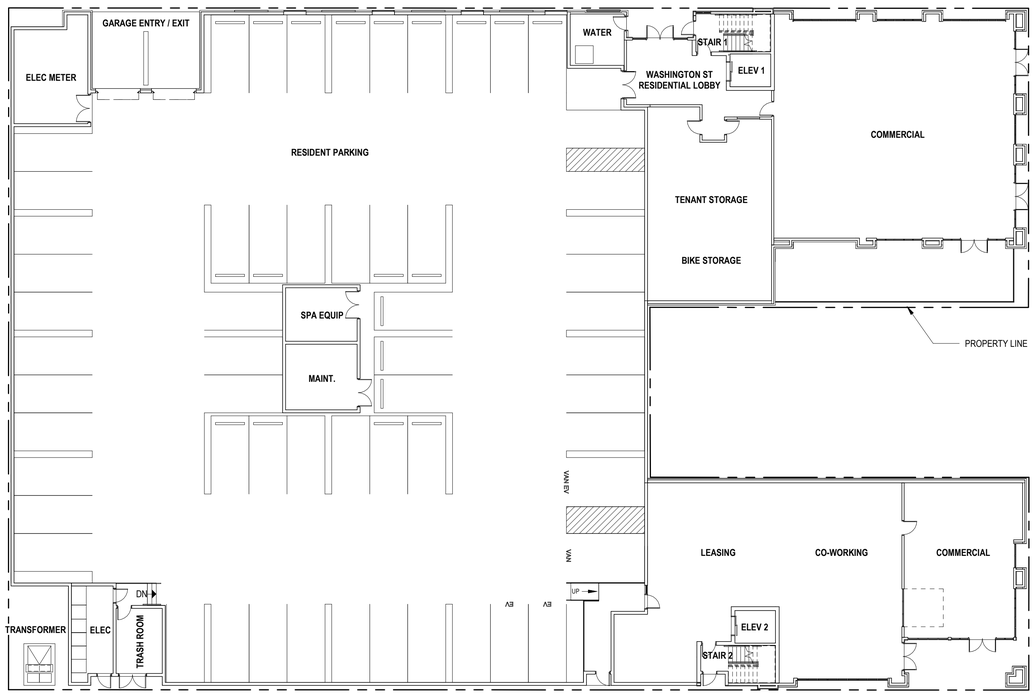
Kindest regards,

James Alfandre

James Alfandre
Urban Alfandre

THIRD FLOOR PLAN | SCALE: 1/16" = 1'-0" | 3

SECOND FLOOR PLAN | SCALE: 1/16" = 1'-0" | 2



FIRST FLOOR PLAN | SCALE: 1/16" = 1'-0" | 1

PROJECT SUMMARY

TOTAL DWELLING UNITS	150
DENSITY	204 DU/ACRE
COMMERCIAL SQ FT	3,530 SF

PARKING SUMMARY

STANDARD PARKING	52
ELECTRIC VEHICLE PARKING	3
ACCESSIBLE PARKING	3
TOTAL PARKING	**58**

BIKE SUMMARY

TOTAL BIKE RACKS	**22**

ktgy

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SLATE MULTI-FAMILY

900 SOUTH 300 WEST
SALT LAKE CITY, UTAH

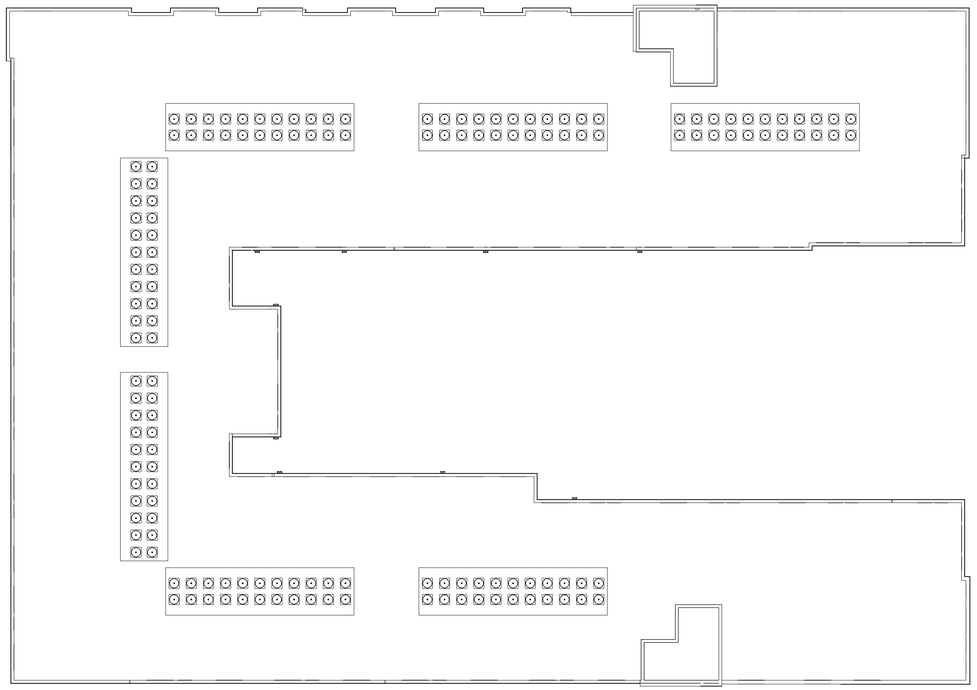
DATE:	ISSUED FOR:
10.11.19	SITE PLAN 01
12.12.19	SITE PLAN 02
01.21.20	SITE PLAN 03
02.21.20	SITE PLAN 04
03.13.20	SITE PLAN 05

PLANS - SLATE

N

PROJECT NUMBER
2019.0747

A - 01



ROOF PLAN | SCALE: 1/16" = 1'-0" | 3

FIFTH FLOOR PLAN | SCALE: 1/16" = 1'-0" | 2

FOURTH FLOOR PLAN | SCALE: 1/16" = 1'-0" | 1

KTGY - ARCHITECTURE + PLANNING
820 16TH STREET, SUITE 500
DENVER, CO. 80202
(303) 825-6400

CONTACT:
KATE MILLENSON
(303) 389 6006
KMILLENSON@KTGY.COM

FOR:
URBAN ALFANDRE
825 N 300 W #N141
SALT LAKE CITY, UT 84103

CONTACT:
JAMES ALFANDRE
JAMES@URBANALFANDRE.COM

SLATE MULTI-FAMILY

900 SOUTH 300 WEST
SALT LAKE CITY, UTAH

DATE:	ISSUED FOR:
10.11.19	SITE PLAN 01
12.12.19	SITE PLAN 02
01.21.20	SITE PLAN 03
02.21.20	SITE PLAN 04
03.13.20	SITE PLAN 05

PLANS - SLATE

N

PROJECT NUMBER
2019.0747

A - 02

MATERIAL CALCUALTIONS:

SIDING	332 SF.	12%
BRICK	1,448 SF.	53%
GLAZING	965 SF.	35%
TOTAL	2,745 SF.	100%

MATERIAL CALCUALTIONS:

SIDING	850 SF.	25%
BRICK	1,328 SF.	38%
GLAZING	1,260 SF.	37%
TOTAL	3,438 SF.	100%

LEVEL 5 - TRANSPARENCY — GLAZING: 471 SF; WALL AREA 1,065 SF
TRANSPARENCY: 471 / 1,065 = 44 %

LEVEL 4 - TRANSPARENCY — GLAZING: 471 SF; WALL AREA 1,065 SF
TRANSPARENCY: 471 / 1,065 = 44 %

LEVEL 3 - TRANSPARENCY — GLAZING: 471 SF; WALL AREA 1,065 SF
TRANSPARENCY: 471 / 1,065 = 44 %

LEVEL 2 - TRANSPARENCY — GLAZING: 471 SF; WALL AREA 1,065 SF
TRANSPARENCY: 471 / 1,065 = 44 %

LEVEL 1 - TRANSPARENCY BETWEEN 2 FEET AND 8 FEET — GLAZING: 384 SF; WALL AREA 602 SF
TRANSPARENCY: 384 / 602 = 64 %

900 S ELEVATION

SCALE: 3/32" = 1'-0" | 2

ELEVATION NOTES

1. ALL CONDENSERS WILL BE ROOF MOUNTED, AS ALLOWED BY CODE, AND WILL BE SCREENED FROM VIEW AT THE PUBLIC RIGHT OF WAY.

KEYNOTES - SITE PLAN

#	
1	BRICK - RUNNING - COLOR 1
2	BRICK - STACKED - COLOR 2
4	FIBER CEMENT LAP SIDING - COLOR 1
5	FIBER CEMENT PANEL - COLOR 1
6	PAINTED CONCRETE - COLOR 1
7	DECORATIVE PAINTED MURAL
8	AWNING
9	METAL GUARDRAIL
10	OVERHEAD GARAGE DOOR
11	VINYL WINDOW
12	BUILDING ENTRY
13	EXTERIOR MECHANICAL VENTS - PAINT TO MATCH ADJACENT ELEVATION
14	STOREFRONT
15	BUILDING SIGNAGE - TO BE DESIGNED AT A LATER DATE
16	CONCRETE MASONRY UNIT
17	STUCCO - COLOR 1
18	DECORATIVE METAL MESH
20	BRICK RUNNING - COLOR 3
21	STUCCO - COLOR 2
22	FIBER CEMENT LAP SIDING - COLOR 2
24	METAL PANEL - COLR 1
25	STUCCO - COLOR 3
26	METAL PANEL - COLOR 2

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LEVEL 5 - TRANSPARENCY — GLAZING: 772 SF; WALL AREA: 2,277 SF
TRANSPARENCY: 772 / 2,277 = 34 %

LEVEL 4 - TRANSPARENCY — GLAZING: 772 SF; WALL AREA: 2,277 SF
TRANSPARENCY: 772 / 2,277 = 34 %

LEVEL 3 - TRANSPARENCY — GLAZING: 772 SF; WALL AREA: 2,277 SF
TRANSPARENCY: 772 / 2,277 = 34 %

LEVEL 2 - TRANSPARENCY — GLAZING: 772 SF; WALL AREA: 2,277 SF
TRANSPARENCY: 772 / 2,277 = 34 %

LEVEL 1 - TRANSPARENCY BETWEEN 2 FEET AND 8 FEET

GLAZING:	323 SF
ARTWORK:	281 SF
METAL MESH:	120 SF
OPEN GARAGE DOOR:	135 SF
TOTAL:	859 SF
WALL AREA	1,362 SF

TRANSPARENCY: 859 / 1,362 = 63 %

MATERIAL CALCULATIONS:

STUCCO	1,307 SF.	10%
SIDING	3,258 SF.	23%
BRICK	5,412 SF.	38%
GLAZING	4,113 SF.	29%
TOTAL	14,090 SF.	100%

WASHINGTON STREET ELEVATION

SCALE: 3/32" = 1'-0" | 1

SLATE MULTI-FAMILY

900 SOUTH 300 WEST
SALT LAKE CITY, UTAH

DATE:	ISSUED FOR:
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12.12.19	SITE PLAN 02
01.21.20	SITE PLAN 03
02.21.20	SITE PLAN 04
03.13.20	SITE PLAN 05

ELEVATIONS - SLATE

PROJECT NUMBER
2019.0747

A - 03

SOUTH ELEVATION | SCALE: 3/32" = 1'-0" | 2

EAST ELEVATION | SCALE: 3/32" = 1'-0" | 1

ELEVATION NOTES

1. ALL CONDENSERS WILL BE ROOF MOUNTED, AS ALLOWED BY CODE, AND WILL BE SCREENED FROM VIEW AT THE PUBLIC RIGHT OF WAY.

KEYNOTES - SITE PLAN

1	BRICK - RUNNING - COLOR 1
2	BRICK - STACKED - COLOR 2
4	FIBER CEMENT LAP SIDING - COLOR 1
5	FIBER CEMENT PANEL - COLOR 1
6	PAINTED CONCRETE - COLOR 1
7	DECORATIVE PAINTED MURAL
8	AWNING
9	METAL GUARDRAIL
10	OVERHEAD GARAGE DOOR
11	VINYL WINDOW
12	BUILDING ENTRY
13	EXTERIOR MECHANICAL VENTS - PAINT TO MATCH ADJACENT ELEVATION
14	STOREFRONT
15	BUILDING SIGNAGE - TO BE DESIGNED AT A LATER DATE
16	CONCRETE MASONRY UNIT
17	STUCCO - COLOR 1
18	DECORATIVE METAL MESH
20	BRICK RUNNING - COLOR 3
21	STUCCO - COLOR 2
22	FIBER CEMENT LAP SIDING - COLOR 2
24	METAL PANEL - COLOR 1
25	STUCCO - COLOR 3
26	METAL PANEL - COLOR 2

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SLATE MULTI-FAMILY

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02.21.20	SITE PLAN 04
03.13.20	SITE PLAN 05

ELEVATIONS - SLATE

PROJECT NUMBER
2019.0747

A - 04

COURTYARD - EAST ELEVATION | SCALE: 3/32" = 1'-0" | 2

ELEVATION NOTES

1. ALL CONDENSERS WILL BE ROOF MOUNTED, AS ALLOWED BY CODE, AND WILL BE SCREENED FROM VIEW AT THE PUBLIC RIGHT OF WAY.

KEYNOTES - SITE PLAN

1	BRICK - RUNNING - COLOR 1
2	BRICK - STACKED - COLOR 2
4	FIBER CEMENT LAP SIDING - COLOR 1
5	FIBER CEMENT PANEL - COLOR 1
6	PAINTED CONCRETE - COLOR 1
7	DECORATIVE PAINTED MURAL
8	AWNING
9	METAL GUARDRAIL
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17	STUCCO - COLOR 1
18	DECORATIVE METAL MESH
20	BRICK RUNNING - COLOR 3
21	STUCCO - COLOR 2
22	FIBER CEMENT LAP SIDING - COLOR 2
24	METAL PANEL - COLOR 1
25	STUCCO - COLOR 3
26	METAL PANEL - COLOR 2

COURTYARD - WEST ELEVATION | SCALE: 3/32" = 1'-0" | 1

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SLATE MULTI-FAMILY

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SALT LAKE CITY, UTAH

DATE:	ISSUED FOR:
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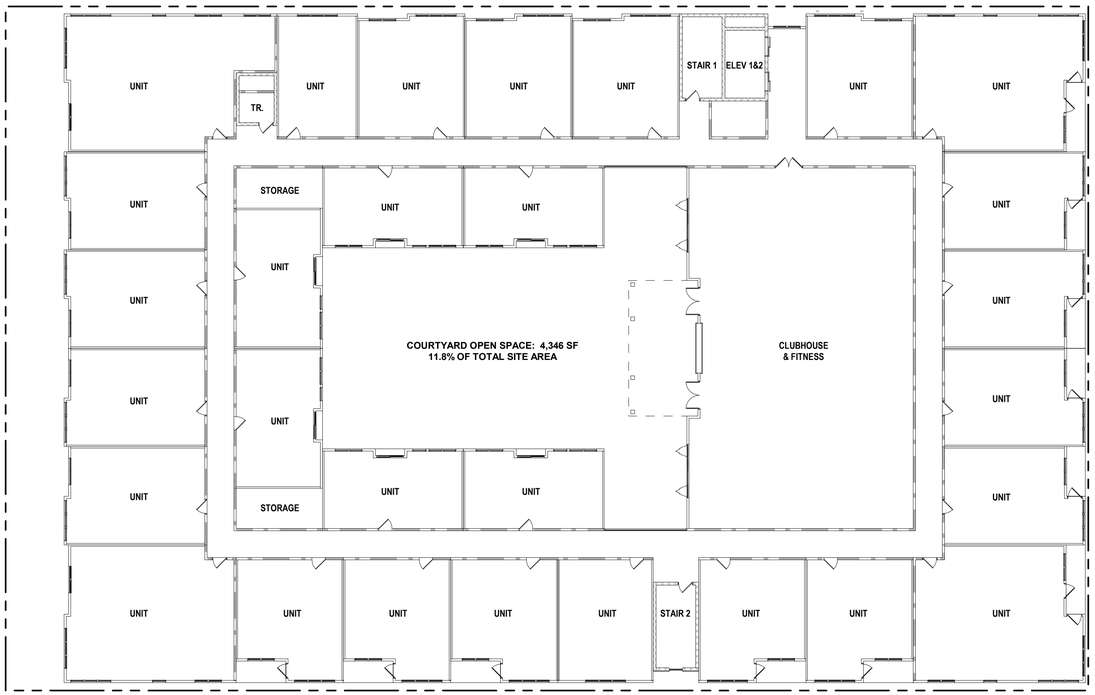
01.21.20	SITE PLAN 03
02.21.20	SITE PLAN 04
03.13.20	SITE PLAN 05

ELEVATIONS - SLATE

PROJECT NUMBER
2019.0747

A - 05



SECOND FLOOR PLAN | SCALE: 1/16" = 1'-0" | 3

PROJECT SUMMARY

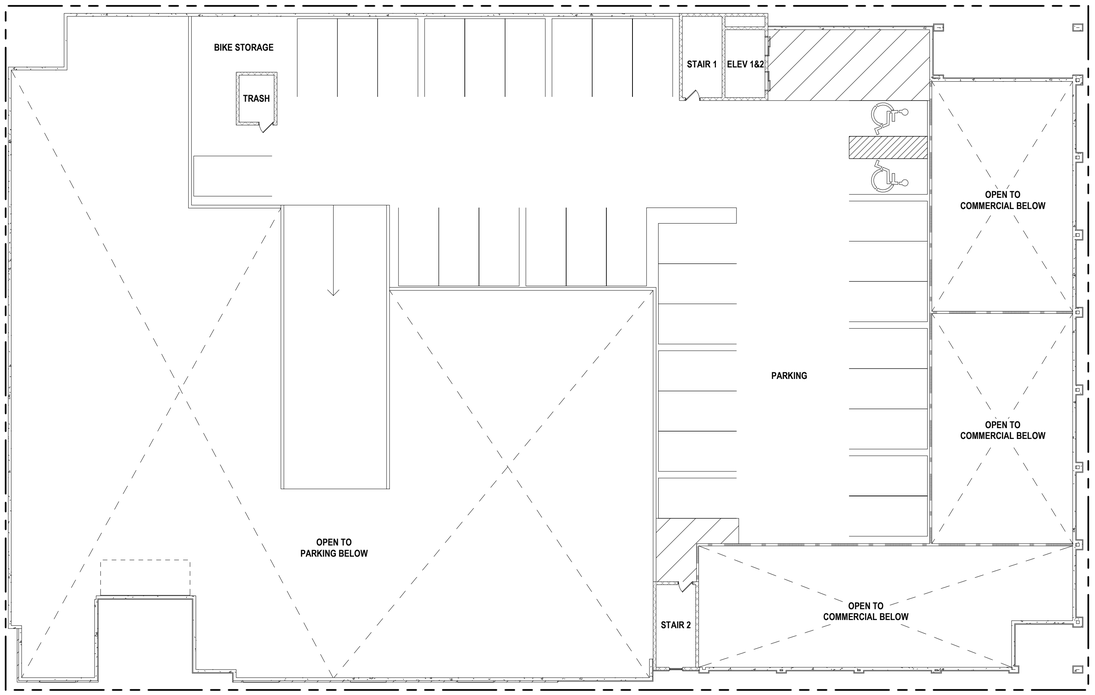
TOTAL DWELLING UNITS	125
DENSITY	149 DU/ACRE
COMMERCIAL SQ FT	5,374 SF

PARKING SUMMARY

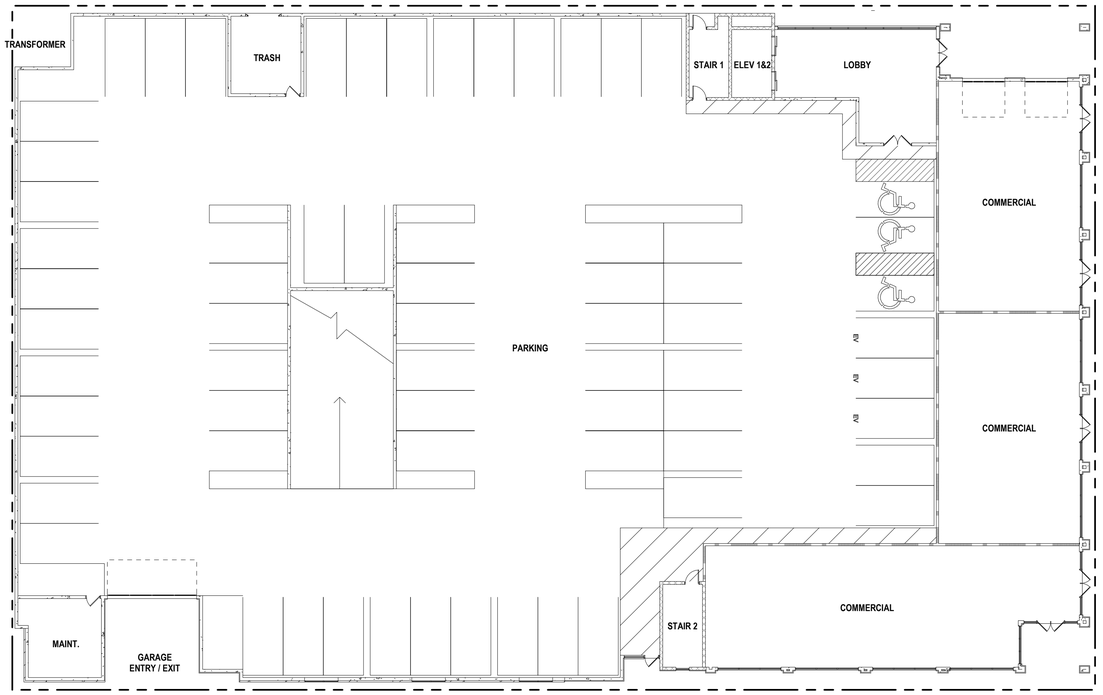
STANDARD PARKING	90
ELECTRIC VEHICLE PARKING	3
ACCESSIBLE PARKING	5
TOTAL PARKING	**98**

BIKE SUMMARY

TOTAL BIKE RACKS	**32**



MEZZANINE FLOOR PLAN | SCALE: 1/16" = 1'-0" | 2



FIRST FLOOR PLAN | SCALE: 1/16" = 1'-0" | 1

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SYDNEY MULTI-FAMILY

900 SOUTH 200 WEST
SALT LAKE CITY, UTAH

DATE:	ISSUED FOR:
10.11.19	SITE PLAN 01
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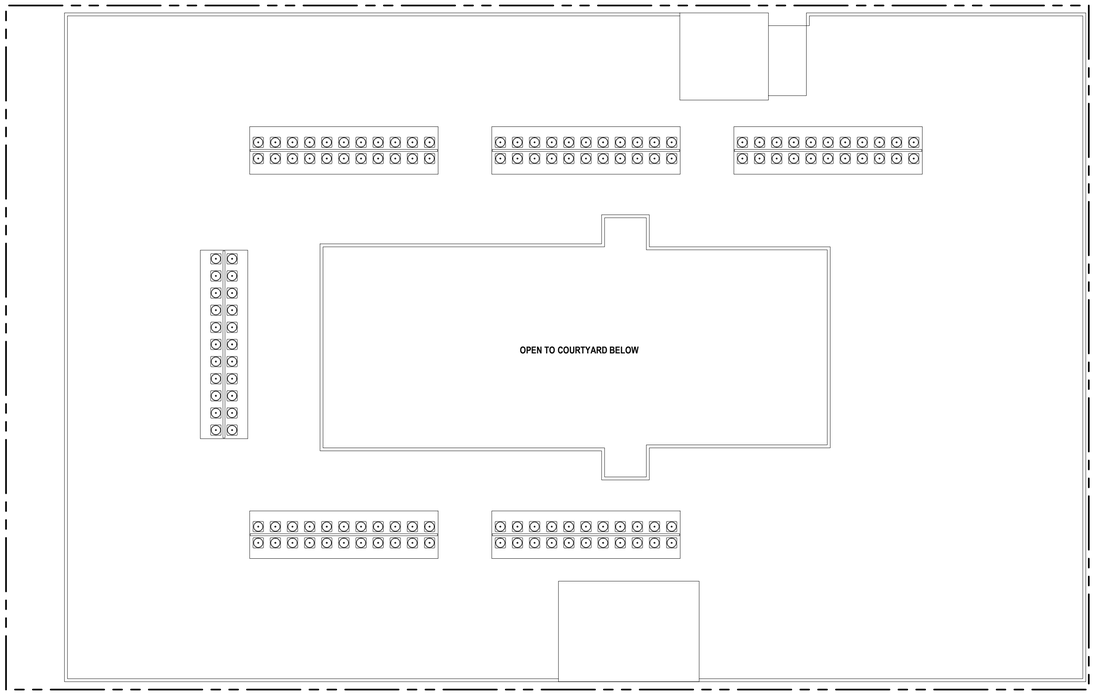
02.21.20	SITE PLAN 04
03.13.20	SITE PLAN 05

PLANS - SYDNEY

N

PROJECT NUMBER
2019.0747

A - 06



ROOF PLAN | SCALE: 1/16" = 1'-0" | 4

FIFTH FLOOR PLAN | SCALE: 1/16" = 1'-0" | 3

FOURTH FLOOR PLAN | SCALE: 1/16" = 1'-0" | 2

THIRD FLOOR PLAN | SCALE: 1/16" = 1'-0" | 1

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PLANS - SYDNEY

N

PROJECT NUMBER
2019.0747

A - 07

900 S ELEVATION

SCALE: 3/32" = 1'-0"

2

ELEVATION NOTES

1. ALL CONDENSERS WILL BE ROOF MOUNTED, AS ALLOWED BY CODE, AND WILL BE SCREENED FROM VIEW AT THE PUBLIC RIGHT OF WAY.

KEYNOTES - SITE PLAN

1	BRICK - RUNNING - COLOR 1
2	BRICK - STACKED - COLOR 2
4	FIBER CEMENT LAP SIDING - COLOR 1
5	FIBER CEMENT PANEL - COLOR 1
6	PAINTED CONCRETE - COLOR 1
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17	STUCCO - COLOR 1
18	DECORATIVE METAL MESH
20	BRICK RUNNING - COLOR 3
21	STUCCO - COLOR 2
22	FIBER CEMENT LAP SIDING - COLOR 2
24	METAL PANEL - COLOR 1
25	STUCCO - COLOR 3
26	METAL PANEL - COLOR 2

LEVEL 5 - TRANSPARENCY — GLAZING: 805 SF; WALL AREA: 1,559 SF

TRANSPARENCY: 805 / 1,559 = 52 %

LEVEL 4 - TRANSPARENCY — GLAZING: 805 SF; WALL AREA: 1,559 SF

TRANSPARENCY: 805 / 1,559 = 52 %

LEVEL 3 - TRANSPARENCY — GLAZING: 805 SF; WALL AREA: 1,559 SF

TRANSPARENCY: 805 / 1,559 = 52 %

LEVEL 2 - TRANSPARENCY — GLAZING: 805 SF; WALL AREA: 1,559 SF

TRANSPARENCY: 805 / 1,559 = 52 %

LEVEL 1 - TRANSPARENCY BETWEEN 2 FEET AND 8 FEET — GLAZING: 678 SF; WALL AREA: 856 SF

TRANSPARENCY: 678 / 856 = 79 %

MATERIAL CALCULATIONS:

FIBER CEMENT	1,617 SF.	17%
BRICK	2,514 SF.	27%
GLAZING	4,380 SF.	46%
METAL	985 SF.	10%
TOTAL	9,496 SF.	100%

200 W ELEVATION

SCALE: 3/32" = 1'-0"

1

LEVEL 5 - TRANSPARENCY — GLAZING: 1,018 SF; WALL AREA 2,349 SF

TRANSPARENCY: 1,018 / 2,349 = 43 %

LEVEL 4 - TRANSPARENCY — GLAZING: 1,018 SF; WALL AREA 2,349 SF

TRANSPARENCY: 1,018 / 2,349 = 43 %

LEVEL 3 - TRANSPARENCY — GLAZING: 1,018 SF; WALL AREA 2,349 SF

TRANSPARENCY: 1,018 / 2,349 = 43 %

LEVEL 2 - TRANSPARENCY — GLAZING: 1,018 SF; WALL AREA 2,349 SF

TRANSPARENCY: 1,018 / 2,349 = 43 %

LEVEL 1 - TRANSPARENCY BETWEEN 2 FEET AND 8 FEET — GLAZING: 597 SF; OPEN GARAGE DOOR 103 SF; TOTAL: 700 SF; WALL AREA 1,400 SF

TRANSPARENCY: 700 / 1,400= 50 %

MATERIAL CALCULATIONS:

STUCCO	773 SF.	5%
FIBER CEMENT	2,976 SF.	20%
BRICK	5,160 SF.	35%
GLAZING	5,138 SF.	35%
METAL	609 SF.	5%
TOTAL	14,656 SF.	100%

ktgy

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SYDNEY MULTI-FAMILY

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DATE:	ISSUED FOR:
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03.13.20	SITE PLAN 05

ELEVATIONS - SYDNEY

PROJECT NUMBER
2019.0747

A - 08

SOUTH ELEVATION | SCALE: 3/32" = 1'-0" | 2

WEST ELEVATION | SCALE: 3/32" = 1'-0" | 1

ELEVATION NOTES

1. ALL CONDENSERS WILL BE ROOF MOUNTED, AS ALLOWED BY CODE, AND WILL BE SCREENED FROM VIEW AT THE PUBLIC RIGHT OF WAY.

KEYNOTES - SITE PLAN

1	BRICK - RUNNING - COLOR 1
2	BRICK - STACKED - COLOR 2
4	FIBER CEMENT LAP SIDING - COLOR 1
5	FIBER CEMENT PANEL - COLOR 1
6	PAINTED CONCRETE - COLOR 1
7	DECORATIVE PAINTED MURAL
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03.13.20	SITE PLAN 05

ELEVATIONS - SYDNEY

PROJECT NUMBER
2019.0747

A - 09

811 Know what's below. Call before you dig.

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

BENCHMARK

OFFSET MONUMENT
INTERSECTION OF
300 WEST STREET &
900 SOUTH STREET

ELEV = 4231.08'

SLATE MULTI-FAMILY

900 SOUTH 300 WEST
SALT LAKE CITY, UTAH

INDEX OF DRAWINGS

1 OF 1	ALTA
C-001	GENERAL NOTES
C-100	DEMOLITION PLAN
C-200	SITE PLAN
C-300	UTILITY PLAN
C-400	GRADING PLAN
C-500	EROSION CONTROL PLAN
C-600	DETAILS
A-01	PLANS - SLATE
A-02	PLANS - SLATE
A-03	ELEVATIONS - SLATE
A-04	ELEVATIONS - SLATE
A-05	ELEVATIONS - SLATE

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.

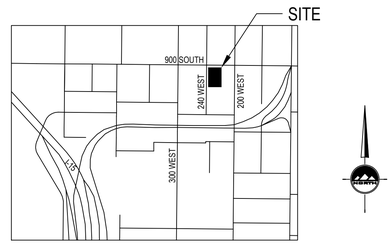
NOTICE TO DEVELOPER/ CONTRACTOR

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



NO SCALE

GENERAL NOTES

1. ALL CONSTRUCTION OF PUBLIC IMPROVEMENTS MUST CONFORM TO THE STANDARDS AND SPECIFICATIONS SET FORTH BY: (1) SALT LAKE CITY CONSTRUCTION STANDARDS AND SPECIFICATIONS. (2) THE MOST CURRENT EDITION OF THE APWA MANUAL OF STANDARD SPECIFICATIONS, MANUAL STANDARD PLANS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.). (3) THE APPROVED CONSTRUCTION DRAWINGS PROVIDED BY THE DESIGN ENGINEER. THE ORDER OF PRECEDENCE IN CASE OF CONFLICT SHALL BE AS SPECIFIED WITH THE NUMBERING ABOVE. THE LATEST EDITION OF ALL STANDARDS AND SPECIFICATIONS MUST BE ADHERED TO. THE CONTRACTOR IS RESPONSIBLE TO HAVE A COPY OF THESE SPECIFICATIONS. IF A CONSTRUCTION PRACTICE IS NOT SPECIFIED BY ANY OF THE LISTED SOURCES, CONTRACTOR MUST CONTACT DESIGN ENGINEER FOR DIRECTION.
2. CALL BLUE STAKES 48 HOURS PRIOR TO DIGGING.
3. BENCHMARK ELEVATION = NORTHEAST QUARTER OF SECTION 12 T1S, R1W SALT LAKE BASE & MERIDIAN
4. ELEV. = 4231.08
5. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL EXISTING MANHOLES AND OTHER UTILITIES BEFORE CONSTRUCTING ANY IMPROVEMENTS.
6. ALL TRASH ENCLOSURES WILL MEET CITY STANDARDS.

ENSIGN
THE STANDARD IN ENGINEERING

SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

WWW.ENSIGNENG.COM

FOR:
URBAN ALFANDRE
825 N 300 W #N141
SALT LAKE CITY, UT 84103
CONTACT:
JAMES ALFANDRE
PHONE: 202-251-5059

SLATE MULTI-FAMILY
900 SOUTH WASHINGTON STREET
SALT LAKE CITY, UTAH

COVER SHEET

PROJECT NUMBER	PRINT DATE
8671A	2/26/20
DRAWN BY	CHECKED BY
MAM	QE
PROJECT MANAGER	
QE	

C-000

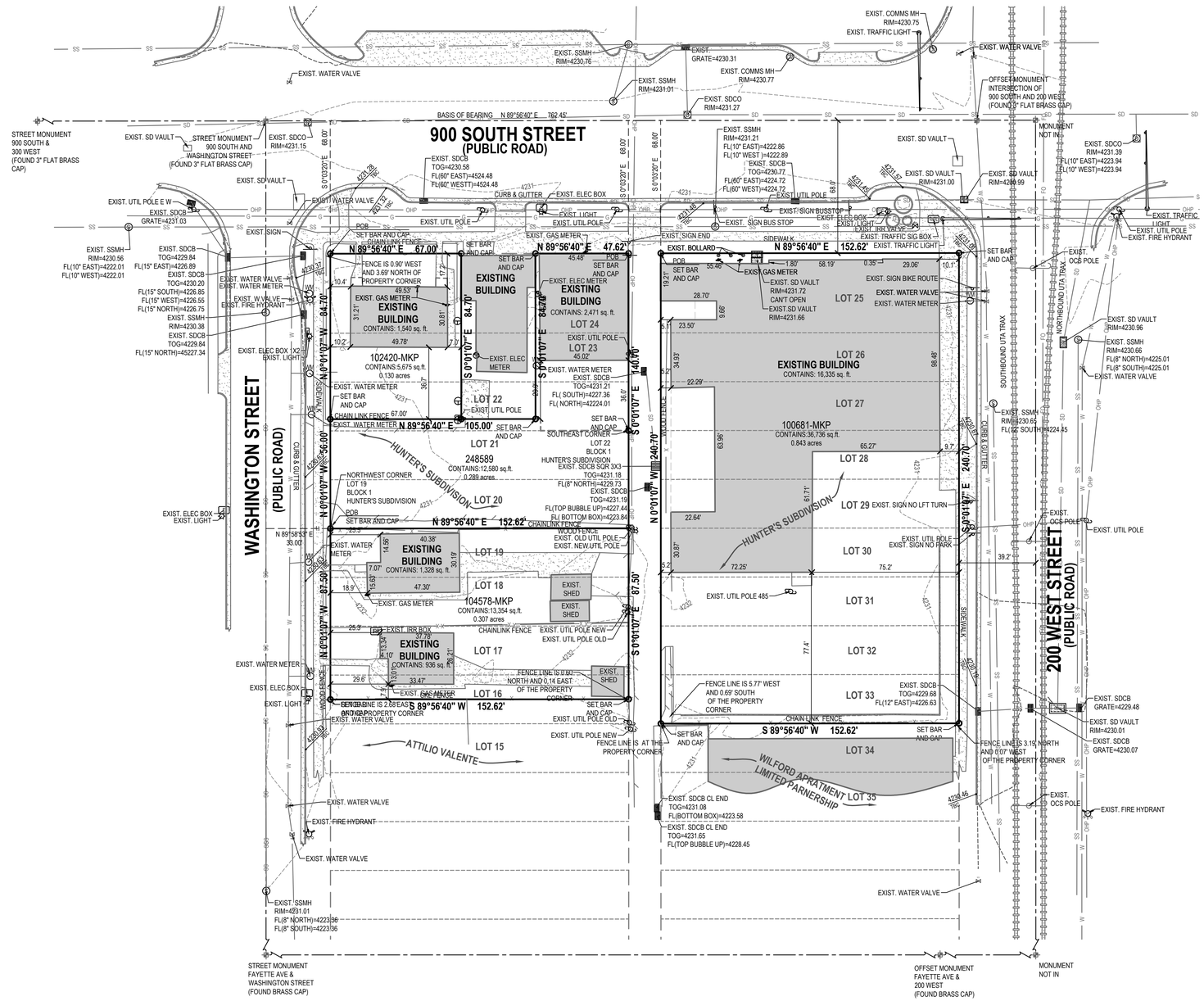
Know what's below. Call before you dig.

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

BENCHMARK

OFFSET MONUMENT
INTERSECTION OF
300 WEST STREET &
900 SOUTH STREET

ELEVATION = 4231.08



LEGEND

SECTION CORNER	STORM DRAIN CATCH BASIN	MINOR CONTOURS 1' INCREMENT	DEED LINE	SW	SECONDARY WATERLINE
MONUMENT	STORM DRAIN COMBO BOX	MAJOR CONTOURS 5' INCREMENT	TANGENT LINE	IRR	IRRIGATION LINE
EXIST REBAR AND CAP	STORM DRAIN CULVERT	CONCRETE	EXIST DITCH FLOW LINE		CENTERLINE
SET ENSIGN REBAR AND CAP	SIGN	ELECTRIC METER	FENCE		PROPERTY LINE
SET RIVET	UTILITY MANHOLE	STORM DRAIN CLEAN OUT	EDGE OF ASPHALT		ADJACENT PROPERTY LINE
WATER METER	UTILITY POLE	SANITARY SEWER MANHOLE	SANITARY SEWER	E	ELECTRIC POWERLINE
WATER MANHOLE	GAS METER	WATER LINE	STORM DRAIN LINE	T	TELEPHONE LINE
WATER VALVE	TREE	ADJACENT RIGHT OF WAY	GAS LINE		IRRIGATION VALVE
FIRE HYDRANT	OVERHEAD POWER LINE	RIGHT OF WAY	BUILDING PRIMARY	#	SCHEDULE B-2 REFERENCE NUMBER

ENSIGN ENG. LAND SURV.

Note to the client, insurer and lender- With regard to Table A, item 11 source information from plans and markings will be combined with observed evidence of utilities pursuant to Section 5.E.iv. to develop a view of the underground utilities. However, lacking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted. In addition, in some jurisdictions, 811 or other similar utility locate requesters from surveyors may be ignored or result in an incomplete response, in which case the surveyor shall note on the plat or map how this affected the surveyor's assessment of the location of the utilities. Where additional or more detailed information is required, the client is advised that excavation and/or private utility locate request may be necessary.

SURVEYOR'S NARRATIVE

I, Patrick M. Harris do hereby state that I am a Professional Land Surveyor and that I hold certificate no. 286882 as prescribed by the laws of the State of Utah and represent that I have made a survey of the following described property. The Purpose of this survey is to provide an ALTA/NSPS Land Title Survey for use by the client. The Basis of Bearing is the line between the Offset Monument at the Intersection of 900 South Street and 200 West Street and the Street Monument at the Intersection of 900 South Street and 300 West Street, measuring North 89°56'40" East 762.45 feet.

COMMITMENT DESCRIPTIONS

Commitment No. 102420-MKP

Beginning at the Northwest corner of Lot 24, Block 1, HUNTER'S SUBDIVISION OF BLOCK 23, 5 Acre Plat "A", Big Field Survey; thence South 74.7 feet; thence East 67 feet; thence North 84.7 feet; thence West 67 feet; thence South 10 feet to the beginning.

Commitment No. 100681-MKP

PARCEL 1:

Lots 25, 26, 27 and 28. Also beginning at the Northeast corner of said Lot 25 and running thence North 10 feet to the South line of the Ninth South Street; thence West 152.65 feet; thence South 10 feet to the Northwest corner of said Lot 25; thence East 152.65 feet to the place of beginning; all in Block 1, HUNTER'S SUBDIVISION of Lots 10 and 11, and part of Lot 9, Block 23, Five Acre Plat "A", Big Field Survey.

PARCEL 2:

Lots 29, 30, 31, 32 and 33, Block 1, HUNTER'S SUBDIVISION of Block 23, Five Acre Plat "A", Big Field Survey.

Commitment No. 104578-MKP

PARCEL 1:

Lots 18 and 19, Block 1, HUNTER'S SUBDIVISION, according to the official plat thereof, recorded in the office of the Salt Lake County Recorder, State of Utah.

PARCEL 2:

Lot 17 and the North half of Lot 16, Block 1, HUNTER'S SUBDIVISION, according to the plat thereof, recorded in the office of the Salt Lake County Recorder, State of Utah.

Schedule B-2 Exceptions

File Number 102420-MKP

10. Said property lies within the boundaries of Salt Lake City, Salt Lake Metropolitan Water District, Salt Lake City Mosquito Abatement District, Central Utah Water Conservancy District and the West Temple Gateway Neighborhood Development Plan, and is subject to any and all charges and assessments levied thereunder.

11. The effects, if any, of easements and rights-of-way for existing roads, streets, alleys, ditches, reservoirs, utilities, canals, pipelines and power, telephone, sewer, gas or water lines, which may be ascertained by an inspection or survey of the subject property.

12. Certificate of Present Condition, dated February 13, 2007 and recorded February 16, 2007 as Entry No. 10006432 in Book 9423 at Page 3440.

13. Certificate of Noncompliance wherein said property does not conform to the zoning provisions of Salt Lake City's Revised Ordinances, dated November 4, 2008 and recorded November 7, 2008 as Entry No. 10557774 in Book 9657 at Page 3555.

File Number 100681-MKP

11. Said property lies within the boundaries of Salt Lake City, Salt Lake Metropolitan Water District, Salt Lake City Mosquito Abatement District, Central Utah Water Conservancy District and the West Temple Gateway Neighborhood Development Plan, and is subject to any and all charges and assessments levied thereunder.

12. Minerals of whatsoever kind, subsurface and surface substances, including but not limited to coal, lignite, oil, gas, uranium, clay, rock, sand and gravel in, on, under and that may be produced from the Land, together with all rights, privileges, and immunities relating thereto, whether or not appearing in the Public Records or listed in Schedule B. The Company makes no representation as to the present ownership of any such interests. There may be leases, grants, exceptions or reservations of interests that are not listed.

13. Claim, right, title or interest to water or water rights whether or not shown by the public records.

14. Right of Way and Utility Easement, including any presumed right, privilege and authority benefiting the corresponding Utility Company for overhead transmission lines (including all appurtenant posts, poles, anchors, cables, guy wires and fixtures), to construct, operate, maintain and remove equipment and other facilities, from time to time, upon, over and across the North boundary of the subject property, as evidenced by a visual inspection.

15. Notwithstanding those items described herein-above, the land is also subject to any additional discrepancies, conflicts in the boundary lines, shortage in area, encroachments, or any other facts which an ALTA/NSPS Survey, (made in accordance with the current Minimum Standard Detail Requirements for Land Title Surveys jointly established and adopted by (ALTA) American Land Title Association and (NSPS) National Society of Professional Surveyors) may disclose.

16. Rights of tenants in possession, as tenants only, under unrecorded leases.

File Number 104578-MKP

11. Said property lies within the boundaries of Salt Lake City, Salt Lake Metropolitan Water District, Salt Lake City Mosquito Abatement District, Central Utah Water Conservancy District and the West Temple Gateway Neighborhood Development Plan, and is subject to any and all charges and assessments levied thereunder.

12. The effects, if any, of easements and rights-of-way for existing roads, streets, alleys, ditches, reservoirs, utilities, canals, pipelines and power, telephone, sewer, gas or water lines, which may be ascertained by an inspection or survey of the subject property.

13. Deed of Trust (with Future Advance Clause) to secure an indebtedness in the amount shown below, and any other obligations secured thereby. Trustor: Gregg B. Chamberlain; Trustee: Preferred Title; Beneficiary: First Indiana Bank, N.A.; Amount: $69,600.00; Dated: June 7, 2004; Recorded: June 11, 2004 as Entry Number 9087529 in Book 9000 at Page 330. (affects Parcel 1)

The above stated Deed of Trust was assigned to First Tennessee Bank, N.A., dated July 15, 2004 and Recorded December 7, 2004 as Entry No. 9242276 in Book 9069 at Page 7395.

14. Revolving Credit Deed of Trust to secure an indebtedness in the amount shown below, and any other obligations secured thereby: Trustor: G B Chamberlain; Trustee: JPMorgan Chase Bank, National Association; Beneficiary: JPMorgan Chase Bank, N.A.; Amount: $50,000.00; Dated: October 10, 2007; Recorded: November 1, 2007 as Entry Number 10264952 in Book 9532 at Page 8933. (affects Parcel 2)

File Number: 248589

10. Said property is located within the boundaries of Salt Lake City Corporation, Metropolitan Water District of Salt Lake and Sandy and Central Utah Water Conservancy District and is subject to the charges and assessments levied thereunder.

11. Claim, right, title or interest to water or water rights whether or not shown by the public records.

12. Rights of Way, Easements, Ditches, Canals, Utility Poles and Power Lines or any other adverse matters which may be disclosed by Inspection or Survey of said Property.

13. Rights of tenant(s) in the land, if any, and rights of all parties claiming by, through or under said tenant(s).

TABLE A

1) All monuments used and set are shown on survey.
2) 906 South 200 West, 221 West 900 South, 231-233 West 900 South, 909-927 Washington Street, Salt Lake City, Utah.
3) Subject parcels are located in Flood Zone "X" per FEMA FIRM map 49035C0282H, effective August 2, 2012.
4) Gross land area of parcels are shown on survey.
5) 1 foot contours are shown on survey.
7(a) Exterior dimensions of buildings are shown on survey.
7(b)(1) Square footage of buildings are shown on survey.
8) Substantial features are shown on survey.
11) Existing utilities are shown on survey.
13) Adjoining owners are shown on survey.
16) No building construction observed on site at time of survey.
17) There are no known changes to street right-of-way at time of survey.
18) There were no delineated wetlands at time of survey.
19) No plottable easements to shown on survey.

Date

Patrick M. Harris
License No. 286882

Note: For conditions of record not shown hereon as well as specific references to items in the title report, please refer to a title report supplied by Cottonwood Title Insurance Agency, Inc., of Salt Lake City, Utah under Commitment No.102420-MKP, dated effective April 23, 2018, Commitment No.104578-MKP, dated effective June 26, 2018, & Commitment No. 100681-MKP, dated effective March 15, 2018 and from title report supplied by Meridian Title Company, of Salt Lake City, Utah under Commitment No. 248589, dated effective February 6, 2017.

Commitment No. 248589

Parcel 1:

Commencing at the Southeast corner of Lot 22, Block 1, HUNTER'S SUBDIVISION of Block 23, 5 Acre Plat "A", Big Field Survey; thence North 90.7 feet; thence West 47.62 feet; thence South 84.7 feet; thence East 2.62 feet; thence South 6.0 feet; thence East 45.0 feet to the point of beginning.

Parcel 2:

All of Lot 21, Block 1, HUNTER'S SUBDIVISION, of Block 23, 5 Acre Plat "A", Big Field Survey, according to the official plat thereof.

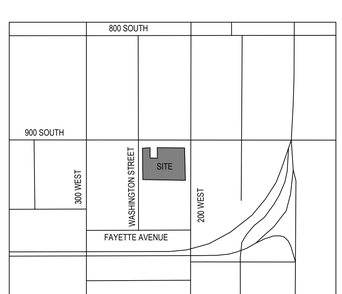
Also:
Commencing 74.7 feet South of the Northwest Corner of Lot 24, Block 1, HUNTER'S SUBDIVISION, of Block 23, 5 Acre Plat "A", Big Field Survey; thence East 107.62 feet; thence South 6 feet; thence West 107.62 feet; thence North 6 feet to the point of beginning.

To: (i)Urban 9th, LLC, a Utah limited liability company; (ii)221 Chuckles, LLC; (iii)First America Title Insurance Company; (iv)Urban Alfandre LLC, a Utah limited liability company; (v)Meridian Title company; (vi)Cottonwood Title Insurance Company; (vii)Fidelity Title Insurance Company.

This is to certify that this map or plat and the survey on which it is based were made in accordance with 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 5, 7(a), 7(b), 8, 11, 13, 16, 17, 18 and 19 of Table A hereof.

The field work was completed on September 25, 2018.

Date of Plat or Map: November 6, 2018.



VICINITY MAP
(NOT TO SCALE)

NORTH

HORIZONTAL GRAPHIC SCALE

30 0 15 30 60
(IN FEET)
HORZ: 1 inch = 30 ft.

LOCATED IN THE NORTHEAST QUARTER OF SECTION 12 TOWNSHIP 1 SOUTH, RANGE 1 WEST SALT LAKE BASE AND MERIDIAN SALT LAKE CITY, SALT LAKE COUNTY, UTAH

ENSIGN
THE STANDARD IN ENGINEERING

SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

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FOR:
URBAN ALFANDRE
825 NORTH, 300 WEST, SUITE N 141
SALT LAKE CITY, UTAH 84103
CONTACT:
JAMES ALFANDRE
PHONE: 201-251-5059

CHUKCLES HENRIES
ALTA -NSPS LAND TITLE & TOPOGRAPHY SURVEY
900 SOUTH 300 WEST
SALT LAKE CITY, UTAH

ALTA-NSPS
LAND TITLE &
TOPOGRAPHY
SURVEY

PROJECT NUMBER 8671
PRINT DATE 2/26/20
DRAWN BY J. JEAN PIERRE
CHECKED BY
PROJECT MANAGER P. HARRIS

1 OF 1

SALT LAKE CITY PUBLIC UTILITIES GENERAL NOTES

1. **COMPLIANCE:**
ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS AND THE MOST RECENT EDITIONS OF THE FOLLOWING: THE INTERNATIONAL PLUMBING CODE, UTAH DRINKING WATER REGULATIONS, APWA MANUAL OF STANDARD PLANS AND SPECIFICATIONS, AND SLC PUBLIC UTILITIES MODIFICATIONS TO APWA STANDARD PLANS AND APPROVED MATERIALS AND SLC PUBLIC UTILITIES APWA SPECIFICATIONS MODIFICATIONS. THE CONTRACTOR IS REQUIRED TO ADHERE TO ALL OF THE ABOVE-MENTIONED DOCUMENTS UNLESS OTHERWISE NOTED AND APPROVED IN WRITING BY THE SALT LAKE CITY DIRECTOR OF PUBLIC UTILITIES.

2. **COORDINATION:**
THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL APPROPRIATE GOVERNMENT AND PRIVATE ENTITIES ASSOCIATED WITH THE PROJECT. THE FOLLOWING MUST BE CONTACTED 48-HOURS PRIOR TO CONSTRUCTION AS APPLICABLE TO THE PROJECT:

PUBLIC UTILITIES:
BACKFLOW PREVENTION - 483-6795
DEVELOPMENT REVIEW ENGINEERING - 483-6781
INSPECTIONS, PERMITS, CONTRACTS & AGREEMENTS - 483-6727
PRETREATMENT - 799-4002
STORM WATER - 483-6751

SLC DEPARTMENTS:
ENGINEERING - PUBLIC WAY PERMITS AND ISSUES - 535-6248
ENGINEERING - SUBDIVISIONS - 535-6159
FIRE DEPARTMENT - 535-6636
PERMITS AND LICENSING (BLDG SERVICES) - 535-7752
PLANNING AND ZONING - 535-7700
TRANSPORTATION - 535-6630

- ALL OTHER POTENTIALLY IMPACTED GOVERNING AGENCIES OR ENTITIES
- ALL WATER USERS INVOLVED IN WATER MAIN SHUTDOWNS
- APPLICABLE SEWER, WATER AND DRAINAGE DISTRICTS
- BLUESTAKES LOCATING SERVICES - 532-5000
- COUNTY FIRE DEPARTMENT - 743-7231
- COUNTY FLOOD CONTROL - 468-2779
- COUNTY HEALTH DEPARTMENT - 385-468-3913
- COUNTY PUBLIC WAY PERMITS - 468-2241
- HOLLADAY CITY - 272-9450
- SALT LAKE COUNTY HIGHWAY DEPARTMENT - 468-3705 OR 468-2156
- THE UTAH TRANSIT AUTHORITY FOR RE-ROUTING SERVICE - 262-5626
- UNION PACIFIC RAILROAD CO., SUPERINTENDENTS OFFICE - 595-3405
- UTAH DEPARTMENT OF TRANSPORTATION, REGION #2 - 975-4800
- UTAH STATE ENGINEER - 538-7240

3. **SCHEDULE**
PRIOR TO CONSTRUCTION THE CONTRACTOR WILL PROVIDE, AND WILL UPDATE AS CHANGES OCCUR, A CONSTRUCTION SCHEDULE IN ACCORDANCE WITH THE SPECIFICATIONS AND SALT LAKE CITY ENGINEERING OR SALT LAKE COUNTY REGULATIONS AS APPLICABLE FOR WORKING WITHIN THE PUBLIC WAY.

4. **PERMITS, FEES AND AGREEMENTS**
CONTRACTOR MUST OBTAIN ALL THE NECESSARY PERMITS AND AGREEMENTS AND PAY ALL APPLICABLE FEES PRIOR TO ANY CONSTRUCTION ACTIVITIES. CONTACT SALT LAKE CITY ENGINEERING (535-6248) FOR PERMITS AND INSPECTIONS REQUIRED FOR ANY WORK CONDUCTED WITHIN SALT LAKE CITY'S PUBLIC RIGHT-OF-WAY. APPLICABLE UTILITY PERMITS MAY INCLUDE MAINLINE EXTENSION AGREEMENTS AND SERVICE CONNECTION PERMITS. ALL UTILITY WORK MUST BE BONDED. ALL CONTRACTORS MUST BE LICENSED TO WORK ON CITY UTILITY MAINS.

CONSTRUCTION SITES MUST BE IN COMPLIANCE WITH THE UTAH POLLUTION DISCHARGE ELIMINATION SYSTEM (UPDES) STORM WATER PERMIT FOR CONSTRUCTION ACTIVITIES (S38-6396). A COPY OF THE PERMIT'S STORM WATER POLLUTION PREVENTION PLAN MUST BE SUBMITTED TO PUBLIC UTILITIES FOR REVIEW AND APPROVAL. ADDITIONAL WATER QUALITY AND EROSION CONTROL MEASURES MAY BE REQUIRED. THE CONTRACTOR MUST ALSO COMPLY WITH SALT LAKE CITY'S CLEAN WHEEL ORDINANCE.

5. **ASPHALT AND SOIL TESTING**
THE CONTRACTOR IS TO PROVIDE MARSHALL AND PROCTOR TEST DATA 24-HOURS PRIOR TO USE. CONTRACTOR IS TO PROVIDE COMPACTION AND DENSITY TESTING AS REQUIRED BY SALT LAKE CITY ENGINEERING, UDOT, SALT LAKE COUNTY OR OTHER GOVERNING ENTITY. TRENCH BACKFILL MATERIAL AND COMPACTION TESTS ARE TO BE TAKEN PER APWA STANDARD SPECIFICATIONS, SECTION 330520 - BACKFILLING TRENCHES, OR AS REQUIRED BY THE SLC PROJECT ENGINEER IF NATIVE MATERIALS ARE USED. **NO NATIVE MATERIALS ARE ALLOWED WITHIN THE PIPE ZONE.** THE MAXIMUM LIFTS FOR BACKFILLING EXCAVATIONS IS 8-INCHES. ALL MATERIALS AND COMPACTION TESTING IS TO BE PERFORMED BY A LAB RECOGNIZED AND ACCEPTED BY SALT LAKE COUNTY PUBLIC WORKS AND/OR SALT LAKE CITY ENGINEERING.

6. **TRAFFIC CONTROL AND HAUL ROUTES**
TRAFFIC CONTROL MUST CONFORM TO THE MOST CURRENT EDITION OF SALT LAKE CITY TRAFFIC CONTROL MANUAL - PART 6 OF "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" FOR SALT LAKE COUNTY AND STATE ROADS. SLC TRANSPORTATION MUST APPROVE ALL PROJECT HAUL ROUTES (S35-7129). THE CONTRACTOR MUST ALSO CONFORM TO UDOT, SALT LAKE COUNTY OR OTHER APPLICABLE GOVERNING ENTITIES REQUIREMENTS FOR TRAFFIC CONTROL.

7. **SURVEY CONTROL**
CONTRACTOR MUST PROVDE A REGISTERED LAND SURVEYOR OR PERSONS UNDER SUPERVISION OF A REGISTERED LAND SURVEYOR TO SET STAKES FOR ALIGNMENT AND GRADE OF EACH MAIN AND/OR FACILITY AS APPROVED. THE STAKES SHALL BE MARKED WITH THE HORIZONTAL LOCATION (STATION) AND VERTICAL LOCATION (GRADE) WITH CUTS AND/OR FILLS TO THE GRADE OF THE MAIN AND/OR FACILITY AS APPROVED. IN ADDITION, THE CONTRACTOR AND/OR SURVEYOR SHALL PROVIDE TO SALT LAKE CITY PUBLIC UTILITIES CUT SHEETS FILLED OUT COMPLETELY AND CLEARLY SHOWING THE PERTINENT GRADES, ELEVATIONS AND CUT/FILLS ASSOCIATED WITH THE FIELD STAKING OF THE MAIN AND/OR FACILITY. THE CUT SHEET FORM IS AVAILABLE AT THE CONTRACTS AND AGREEMENTS OFFICE AT PUBLIC UTILITIES. ALL MAINS AND LATERALS NOT MEETING MINIMUM GRADE REQUIREMENTS AS SPECIFIED BY ORDINANCE OR AS REQUIRED TO MEET THE MINIMUM REQUIRED FLOWS OR AS APPROVED MUST BE REMOVED AND RECONSTRUCTED TO MEET DESIGN GRADE. THE CONTRACTOR SHALL PROTECT ALL STAKES AND MARKERS UNTIL PUBLIC UTILITY SURVEYORS COMPLETE FINAL MEASUREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR FURNISHING, MAINTAINING, OR RESTORING ALL MONUMENTS AND REFERENCE MARKS WITHIN THE PROJECT SITE. CONTACT THE COUNTY SURVEYOR (468-2028) FOR MONUMENT LOCATIONS AND CONSTRUCTION REQUIREMENTS. ALL ELEVATIONS SHALL BE REFERENCED TO SALT LAKE CITY DATUM UNLESS NOTED OTHERWISE ON THE PLANS.

8. **ASPHALT GUARANTEE**
THE CONTRACTOR SHALL REMOVE, DISPOSE OF, FURNISH AND PLACE PERMANENT ASPHALT PER SALT LAKE CITY ENGINEERING, UDOT, COUNTY, OR OTHER GOVERNMENT STANDARDS AS APPLICABLE TO THE PROJECT. THE CONTRACTOR SHALL GUARANTEE THE ASPHALT RESTORATION FOR A PERIOD AS REQUIRED BY THE GOVERNING ENTITY.

9. **TEMPORARY ASPHALT**
IF THE CONTRACTOR CHOOSES TO WORK WITHIN THE PUBLIC WAY WHEN HOT MIX ASPHALT IS NOT AVAILABLE, THE CONTRACTOR MUST OBTAIN APPROVAL FROM THE APPROPRIATE GOVERNING ENTITY PRIOR TO INSTALLING TEMPORARY ASPHALT SURFACING MATERIAL. WITHIN SALT LAKE CITY, WHEN PERMANENT ASPHALT BECOMES AVAILABLE, THE CONTRACTOR SHALL REMOVE THE TEMPORARY ASPHALT, FURNISH AND INSTALL THE PERMANENT ASPHALT. THE CONTRACTOR SHALL GUARANTEE THE ASPHALT RESTORATION FOR A PERIOD AS REQUIRED BY THE GOVERNING ENTITY FROM THE DATE OF COMPLETION.

10. **SAFETY**
THE CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF SAFETY OF THE PROJECT AND SHALL MEET ALL OSHA, STATE, COUNTY AND OTHER GOVERNING ENTITY REQUIREMENTS.

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.

11. **DUST CONTROL**
THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL ACCORDING TO THE GOVERNING ENTITY STANDARDS. USE OF HYDRANT WATER OR PUMPING FROM CITY-OWNED CANALS OR STORM DRAINAGE FACILITIES IS NOT ALLOWED FOR DUST CONTROL ACTIVITIES WITHOUT WRITTEN APPROVAL OF THE PUBLIC UTILITIES DIRECTOR.

12. **DEWATERING**
ALL ON-SITE DEWATERING ACTIVITIES MUST BE APPROVED IN WRITING BY PUBLIC UTILITIES. PROPOSED OUTFALL LOCATIONS AND ESTIMATED FLOW VOLUME CALCULATIONS MUST BE SUBMITTED TO PUBLIC UTILITIES FOR REVIEW AND APPROVAL. ADEQUATE MEASURES MUST BE TAKEN TO REMOVE ALL SEDIMENT PRIOR TO DISCHARGE. PUBLIC UTILITIES MAY REQUIRE ADDITIONAL MEASURES FOR SEDIMENT CONTROL AND REMOVAL.

13. **PROJECT LIMITS**
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 CONTRACTORS 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.

14. **WATER, FIRE, SANITARY SEWER AND STORM DRAINAGE UTILITIES**
A. INSPECTIONS -
IT IS THE CONTRACTOR'S RESPONSIBILITY TO SCHEDULE ANY WATER, SEWER, BACKFLOW AND DRAINAGE INSPECTION 48-HOURS IN ADVANCE TO WHEN NEEDED. CONTACT 483-6727 TO SCHEDULE INSPECTIONS.

B. DAMAGE TO EXISTING UTILITIES -
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.

C. UTILITY LOCATIONS -
CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING AND AVOIDING ALL UTILITIES AND SERVICE LATERALS, AND FOR REPAIRING ALL DAMAGE THAT OCCURS TO THE UTILTIES DUE TO THE CONTRACTOR'S ACTIVITIES. CONTRACTOR IS TO VERIFY LOCATION, DEPTH, SIZE, MATERIAL AND OUTSIDE DIAMETERS OF UTILITIES IN THE FIELD BY POTHOLING A MINIMUM OF 300-FEET AHEAD OF SCHEDULED CONSTRUCTION IN ORDER TO IDENTIFY POTENTIAL CONFLICTS AND PROBLEMS WITH FUTURE CONSTRUCTION ACTIVITIES. EXISTING UTILITY INFORMATION OBTAINED FROM SLC PUBLIC UTILITIES' MAPS MUST BE ASSUMED AS APPROXIMATE AND REQUIRING FIELD VERIFICATION. CONTACT BLUE STAKES OR APPROPRIATE OWNER FOR COMMUNICATION LINE LOCATIONS.

D. UTILITY RELOCATIONS -
FOR UTILITY CONFLICTS REQUIRING MAINLINE RELOCATIONS, THE CONTRACTOR MUST NOTIFY THE APPLICABLE UTILITY COMPANY OR USER A MINIMUM OF 2-WEEKS IN ADVANCE. A ONE-WEEK MINIMUM NOTIFICATION IS REQUIRED FOR CONFLICTS REQUIRING THE RELOCATION OF SERVICE LATERALS. ALL RELOCATIONS ARE SUBJECT TO APPROVAL FROM THE APPLICABLE UTILITY COMPANY AND/OR USER.

E. FIELD CHANGES -
NO ROADWAY, UTILITY ALIGNMENT OR GRADE CHANGES ARE ALLOWED FROM THE APPROVED CONSTRUCTION PLANS/DOCUMENTS WITHOUT WRITTEN APPROVAL FROM THE SLC PUBLIC UTILITIES DIRECTOR. CHANGES TO HYDRANT LOCATIONS AND/OR FIRE LINES MUST BE REVIEWED AND APPROVED BY THE SALT LAKE CITY OR SALT LAKE COUNTY FIRE DEPARTMENT (AS APPLICABLE TO THE PROJECT) AND PUBLIC UTILITIES.

F. PUBLIC NOTICE TO PROJECTS IN THE PUBLIC WAY-
FOR APPROVED PROJECTS THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AND DISTRIBUTE WRITTEN NOTICE TO ALL RESIDENTS LOCATED WITHIN THE PROJECT AREA AT LEAST 72-HOURS PRIOR TO CONSTRUCTION. WORK TO BE CONDUCTED WITHIN COMMERCIAL OR INDUSTRIAL AREAS MAY REQUIRE A LONGER NOTIFICATION PERIOD AND ADDITIONAL CONTRACTOR COORDINATION WITH PROPERTY OWNNERS. THE WRITTEN NOTICE IS TO BE APPROVED BY THE SLC PUBLIC UTILITIES PROJECT ENGINEER.

G. PUBLIC NOTICE FOR WATER MAIN SHUT DOWNS -
THROUGH THE SLC PUBLIC UTILITIES INSPECTOR AND WITH THE PUBLIC UTILITIES PROJECT ENGINEER APPROVAL, SLC PUBLIC UTILITIES MUST BE CONTACTED AND APPROVE ALL WATER MAIN SHUTDOWNS. ONCE APPROVED THE CONTRACTOR MUST NOTIFY ALL EFFECTED USERS BY WRITTEN NOTICE A MINIMUM OF 48-HOURS (RESIDENTIAL) AND 72-HOURS (COMMERCIAL/INDUSTRIAL) PRIOR TO THE WATER MAIN SHUT DOWN. PUBLIC UTILITIES MAY REQUIRE LONGER NOTICE PERIODS.

H. WATER AND SEWER SEPARATION -
IN ACCORDANCE WITH UTAH'S DEPARTMENT OF HEALTH REGULATIONS, A MINIMUM TEN-FOOT HORIZONTAL AND 1.5-FOOT VERTICAL (WITH WATER ON TOP) SEPARATION IS REQUIRED. IF THESE CONDITIONS CANNOT BE MET, STATE AND SLC PUBLIC UTILITIES APPROVAL IS REQUIRED. ADDITIONAL CONSTRUCTION MEASURES WILL BE REQUIRED FOR THESE CONDITIONS.

I. SALVAGE -
ALL METERS MUST BE RETURNED TO PUBLIC UTILITIES, AND AT PUBLIC UTILITIES REQUEST ALL SALVAGED PIPE AND/OR FITTINGS MUST BE RETURNED TO SLC PUBLIC UTILTIES (483-6727) LOCATED AT 1530 SOUTH WEST TEMPLE.

J. SEWER MAIN AND LATERAL CONSTRUCTION REQUIREMENTS -
SLC PUBLIC UTILITIES MUST APPROVE ALL SEWER CONNECTIONS. ALL SEWER LATERALS 6-INCHES AND SMALLER MUST WYE INTO THE MAINS PER SLC PUBLIC UTILITIES REQUIREMENTS. ALL 8-INCH AND LARGER SEWER CONNECTIONS MUST BE PETITIONED FOR AT PUBLIC UTILTIES (483-6762) AND CONNECTED AT A MANHOLE. **INSIDE DROPS IN MANHOLES ARE NOT ALLOWED.** A MINIMUM 4-FOOT BURY DEPTH IS REQUIRED ON ALL SEWER MAINS AND LATERALS. CONTRACTOR SHALL INSTALL INVERT COVERS IN ALL SEWER MANHOLES WITHIN THE PROJECT AREA.

CONTRACTOR TO PROVIDE AIR PRESSURE TESTING OF SEWER MAINS IN ACCORDANCE WITH PIPE MANUFACTURERS RECOMMENDATIONS AND SALT LAKE CITY PUBLIC UTILITIES REQUIREMENTS. ALL PVC SEWER MAIN AND LATERAL TESTING SHALL BE IN ACCORDANCE WITH UNI-BELL UN-B-6-98 RECOMMENDED PRACTICE FOR LOW PRESSURE AIR TESTING OF INSTALLED SEWER PIPE. CONTRACTOR SHALL PROVIDE SEWER LATERAL WATER TESTING AS REQUIRED BY THE SALT LAKE CITY PUBLIC UTILITIES PROJECT ENGINEER OR INSPECTOR. A MINIMUM OF 9-FEET OF HEAD PRESSURE IS REQUIRED AS MEASURED VERTICALLY FROM THE HIGH POINT OF THE PIPELINE AND AT OTHER LOCATIONS ALONG THE PIPELINE AS DETERMINED BY THE SLC PUBLIC UTILITIES PROJECT ENGINEER OR INSPECTOR. TESTING TIME WILL BE NO LESS THAN AS SPECIFIED FOR THE AIR TEST DURATION IN TABLE I ON PAGE 12 OF UNI-B-6-98. ALL PIPES SUBJECT TO WATER TESTING SHALL BE FULLY VISIBLE TO THE INSPECTOR DURING TESTING. TESTING MUST BE PERFORMED IN THE PRESENCE OF A SLC PUBLIC UTILITIES REPRESENTATIVE. ALL VISIBLE LEAKAGE MUST BE REPAIRED TO THE SATISFACTION OF THE SLC PUBLIC UTILITIES ENGINEER OR INSPECTOR.

K. WATER AND FIRE MAIN AND SERVICE CONSTRUCTION REQUIREMENTS -
SLC PUBLIC UTILITIES MUST APPROVE ALL FIRE AND WATER SERVICE CONNECTIONS. A MINIMUM 3-FOOT SEPARATION IS REQUIRED BETWEEN ALL WATER AND FIRE SERVICE TAPS INTO THE MAIN. ALL CONNECTIONS MUST BE MADE MEETING SLC PUBLIC UTILITIES REQUIREMENTS. A 5-FOOT MINIMUM BURY DEPTH (FINAL GRADE TO TOP OF PIPE) IS REQUIRED ON ALL WATER/FIRE LINES UNLESS OTHERWISE APPROVED BY PUBLIC UTILITIES. WATER LINE THRUST BLOCK AND RESTRAINTS ARE AS PER SLC APPROVED DETAIL DRAWINGS AND SPECIFICATIONS. ALL EXPOSED NUTS AND BOLTS WILL BE COATED WITH CHEVRON FM1 GREASE PLUS MINIMUM 8 MIL THICKNESS PLASTIC. PROVIDE STAINLESS STEEL NUTS, BOLTS AND WASHERS FOR HIGH GROUNDWATER/ SATURATED CONDITIONS AT FLANGE FITTINGS, ETC.

ALL WATERLINES INSTALLATIONS AND TESTING TO BE IN ACCORDANCE WITH AWWA SECTIONS C600, C601, C651, C206, C200, C900, C303 AWWA MANUAL M11 AND ALL OTHER APPLICABLE AWWA, UPWS, ASTM AND ANSI SPECIFICATIONS RELEVANT TO THE INSTALLATION AND COMPLETION OF THE PROJECT. AMENDMENT TO SECTION C600 SECTION 4.1.1; DOCUMENT TO READ MINIMUM TEST PRESSURE SHALL NOT BE LESS THAN 200 P.S.I. GAUGED TO A HIGH POINT OF THE PIPELINE BEING TESTED. ALL MATERIALS USED FOR WATERWORKS PROJECTS TO BE RATED FOR 150 P.S.I. MINIMUM OPERATING PRESSURE.

CONTRACTOR IS TO INSTALL WATER SERVICE LINES, METER YOKES AND/OR ASSEMBLIES AND METER BOXS WITH LIDS LOCATED AS APPROVED ON THE PLANS PER APPLICABLE PUBLIC UTILITIES DETAIL DRAWINGS. METER BOXES ARE TO BE PLACED IN THE PARK STRIPS PERPENDICULAR TO THE WATERMAIN SERVICE TAP CONNECTION. ALL WATER METERS, CATCH BASINS, CLEANOUT BOXES, MANHOLES, DOUBLE CHECK VALVE DETECTOR ASSEMBLIES, REDUCED PRESSURE DETECTOR ASSEMBLIES AND BACKFLOW PREVENTION DEVICES MUST BE LOCATED OUTSIDE OF ALL APPROACHES, DRIVEWAYS, PEDESTRIAN WALKWAYS AND OTHER TRAVELED WAYS UNLESS OTHERWISE APPROVED ON PLANS.

BACKFLOW PREVENTORS ARE REQUIRED ON ALL IRRIGATION AND FIRE SPRINKLING TAPS PER PUBLIC UTILITIES AND SLC FIRE DEPARTMENT REQUIREMENTS. CONTRACTORS SHALL INSTALL BACKFLOW PREVENTION DEVICES ON FIRE SPRINKLER CONNECTIONS. DOUBLE CHECK VALVE ASSEMBLIES SHALL BE INSTALLED ON CLASS 1, 2 AND 3 SYSTEMS. REDUCED PRESSURE PRINCIPLE VALVES SHALL BE INSTALLED ON CLASS 4 SYSTEMS. ALL FIRE SPRINKLING BACKFLOW ASSEMBLIES SHALL CONFORM TO ASSE STANDARD 1048, 1013, 1047 AND 1015. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM BACKFLOW PREVENTION TESTS PER SALT LAKE CITY STANDARDS AND SUBMIT RESULTS TO PUBLIC UTILITIES. ALL TESTS MUST BE PERFORMED AND SUBMITTED TO PUBLIC UTILITIES WITHIN 10 DAYS OF INSTALLATION OR WATER TURN-ON. BACKFLOW TEST FORMS ARE AVAILABLE AT PUBLIC UTILITIES' CONTRACTS AND AGREEMENTS OFFICE.

L. GENERAL WATER, SEWER AND STORM DRAIN REQUIREMENTS -
ALL WATER, FIRE AND SEWER SERVICES STUBBED TO A PROPERTY MUST BE USED OR WATER AND FIRE SERVICES MUST BE KILLED AT THE MAIN AND SEWER LATERALS CAPPED AT PROPERTY LINE PER PUBLIC UTILITIES REQUIREMENTS. ALLOWABLE SERVICES TO BE KEPT WILL BE AS DETERMINED BY THE PUBLIC UTILITIES PROJECT ENGINEER. ALL WATER AND FIRE SERVICE KILLS AND SEWER LATERAL CAPS ARE TO BE KILLED AND CAPPED AS DETERMINED AND VISUALLY VERIFIED BY THE ON-SITE PUBLIC UTILITIES INSPECTOR.

ALL MANHOLES, HYDRANTS, VALVES, CLEAN-OUT BOXES, CATCH BASINS, METERS, ETC. MUST BE RAISED OR LOWERED TO FINAL GRADE PER PUBLIC UTILITIES STANDARDS AND INSPECTOR REQUIREMENTS. CONCRETE COLLARS MUST BE CONSTRUCTED ON ALL MANHOLES, CLEANOUT BOXES, CATCH BASINS AND VALVES PER PUBLIC UTILITIES 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 AS REQUIRED BY THE PUBLIC UTILITIES INSPECTOR. ALL MANHOLE, CLEANOUT BOX OR CATCH BASIN DISCONNECTIONS MUST BE REPAIRED AND GROUTED AS REQUIRED BY THE ON-SITE PUBLIC UTILITIES INSPECTOR.

CONTRACTOR SHALL NOT ALLOW ANY GROUNDWATER OR DEBRIS TO ENTER THE NEW OR EXISTING PIPE DURING CONSTRUCTION. UTILITY TRENCHING, BACKFILL, AND PIPE ZONE AS PER SLC PUBLIC UTILITIES, "UTILITY INSTALLATION DETAIL."

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
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
MH	MANHOLE
MIN	MINIMUM
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
PIP	PLASTIC IRRIGATION PIPE
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	SIDEWALK
SWL	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
WL	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	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.

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SLATE MULTI-FAMILY

900 SOUTH WASHINGTON STREET
SALT LAKE CITY, UTAH

LICENSED PROFESSIONAL ENGINEER
No. 7675714-2202
JARED K. FORD
02-26-2020
STATE OF UTAH

GENERAL NOTES

PROJECT NUMBER 8671A
PRINT DATE 2/26/20
DRAWN BY MAM
CHECKED BY QE
PROJECT MANAGER QE

C-001

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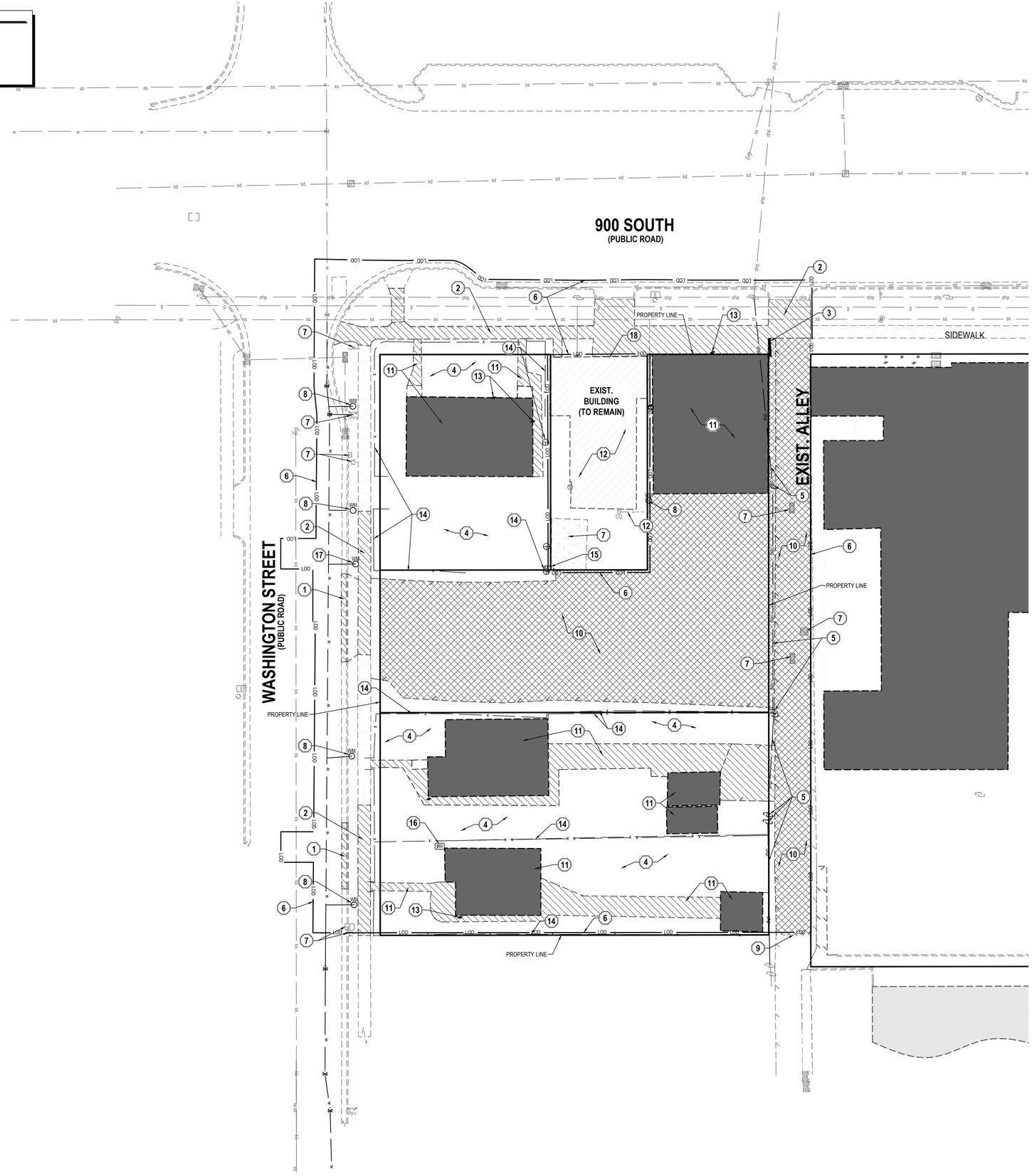

GENERAL NOTES

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.
7. PRIOR TO WORKING IN THE PUBLIC WAY, A LICENSED, INSURED, AND BONDED CONTRACTOR, WHO HAS SAID INFORMATION ON FILE WITH SLC ENGINEERING, MUST OBTAIN A PUBLIC WAY PERMIT FROM SLC ENGINEERING AND PERHAPS A TRANSPORTATION PERMIT. ALL WORK IN THE PUBLIC WAY SHALL FOLLOW APWA STANDARDS.

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, REMOVE, AND PROPERLY DISPOSE OF EXISTING CONCRETE CURB AND GUTTER.
2. SAWCUT, REMOVE, AND PROPERLY DISPOSE OF EXISTING CONCRETE SIDEWALK.
3. REMOVE AND PROPERLY DISPOSE OF EXISTING SIGN.
4. REMOVE AND PROPERLY DISPOSE OF EXISTING TREES IN THIS AREA. CONTRACTOR TO FILL IN ALL HOLES CREATED DURING DEMOLITION WITH STRUCTURAL FILL TO PROPER SUBGRADE ELEVATION.
5. REMOVE EXISTING POWER POLES AND OVERHEAD POWER LINES. COORDINATE WITH LOCAL POWER COMPANY AND ELECTRICAL ENGINEER.
6. LIMITS OF DISTURBANCE.
7. PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, SIGNS, ETC. (TYPICAL UNLESS OTHERWISE NOTED).
8. WATER SERVICE TO BE ABANDONED IN PLACE. DISCONNECT WATERLINE AT MAIN PER SALT LAKE CITY PUBLIC UTILITIES STANDARDS.
9. SAWCUT EXISTING ASPHALT PAVEMENT TO PROVIDE A CLEAN EDGE FOR THE TRANSITION BETWEEN EXISTING AND PROPOSED PAVEMENT.
10. REMOVE AND PROPERLY DISPOSE OF EXISTING ASPHALT PAVEMENT.
11. REMOVE AND PROPERLY DISPOSE OF EXISTING STRUCTURES, CONCRETE SLABS, STAIRS, ETC., INCLUDING ALL ELECTRICAL APPURTENANCES, 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.
12. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING UTILITIES THAT SERVICE THE EXISTING BUILDING THAT IS TO REMAIN. UTILITIES AND SERVICES FOR EXISTING BUILDING REMAIN IN PLACE. IF NEW BUILDING INTERFERES OR DISTURBS EXISTING SERVICES TO THIS BUILDING REROUTE SERVICES AS NECESSARY AND CONNECT TO MAIN LINES ON 900 SOUTH.
13. REMOVE AND PROPERLY DISPOSE OF EXISTING GAS METER. CONTRACTOR TO COORDINATE WITH GAS COMPANY.
14. REMOVE AND PROPERLY DISPOSE OF EXISTING FENCE.
15. REMOVE AND PROPERLY DISPOSE OF EXISTING UTILITY POLE.
16. REMOVE AND PROPERLY DISPOSE OF EXISTING IRRIGATION BOX AND IRRIGATION LINE.
17. CONTRACTOR TO FIELD VERIFY AND LOCATE EXISTING WATER METER THAT SERVICES THE EXISTING BUILDING THAT IS TO REMAIN. WATER SERVICE FOR EXISTING BUILDING REMAINS IN PLACE. REROUTE CONNECTION IF NECESSARY.
18. CONTRACTOR TO COORDINATE WITH OWNER REGARDING ACCESS TO EXISTING BUILDING DURING CONSTRUCTION.

NORTH

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.

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900 SOUTH WASHINGTON STREET
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LICENSED PROFESSIONAL ENGINEER
No. 7675714-2202
JARED K. FORD
02-26-2020
STATE OF UTAH

DEMOLITION PLAN

PROJECT NUMBER	PRINT DATE
8671A	2/26/20
DRAWN BY	CHECKED BY
MAM	QE
PROJECT MANAGER	
QE	

C-100

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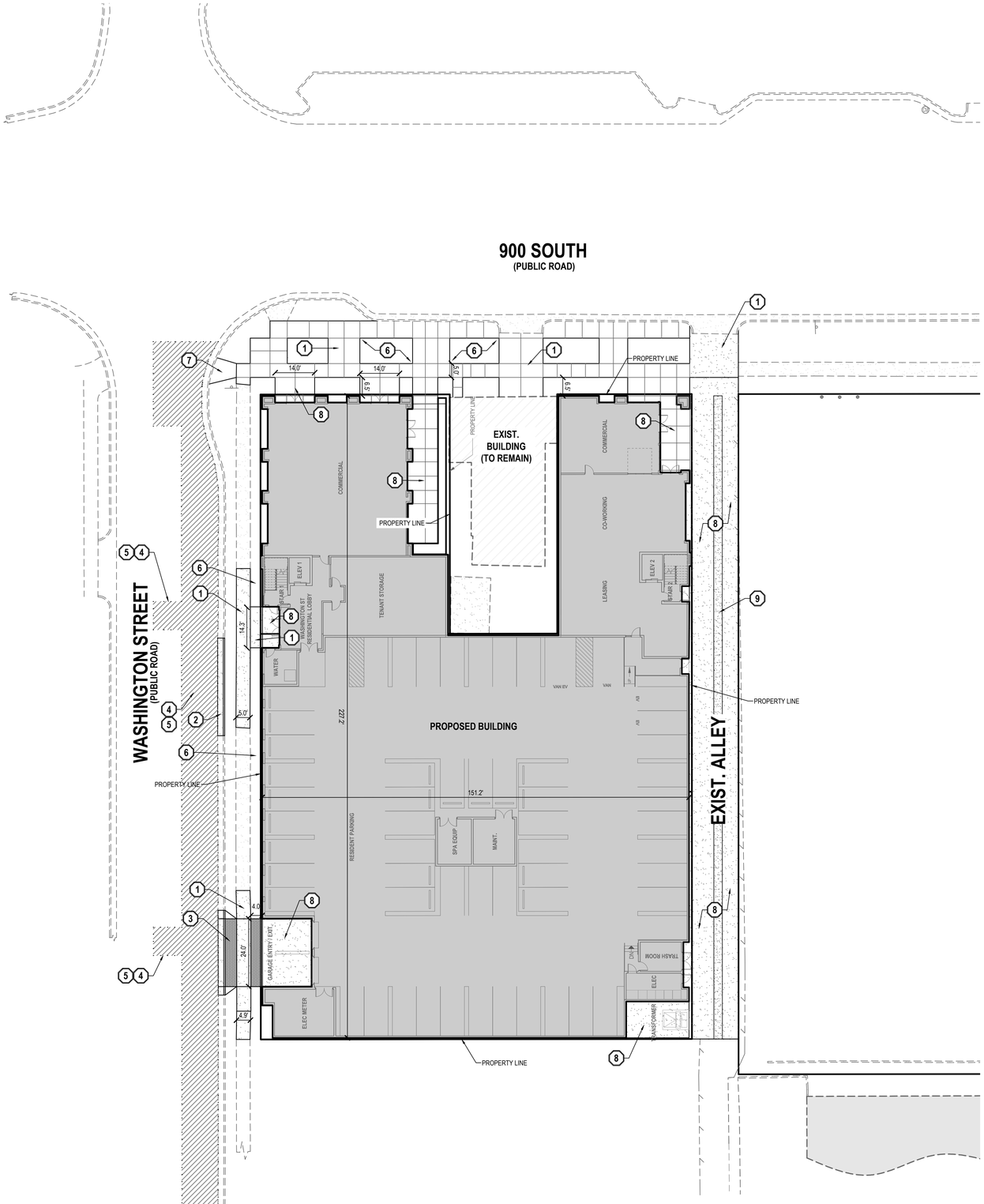

SITE GENERAL NOTES

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.

SITE PLAN 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. 5" THICK CONCRETE SIDEWALK PER APWA STANDARD PLAN NO. 231 AND SPECIFICATIONS.
2. 30" TYPE "A" CURB AND GUTTER PER APWA STANDARD PLAN NO. 205 AND SPECIFICATIONS.
3. INSTALL DRIVE APPROACH PER APWA STANDARD PLAN NO. 221.1 AND SPECIFICATIONS. (DRIVEWAY ON BOTH SIDES MUST BE A DIFFERENT COLOR, TEXTURE, OR PAVING MATERIAL THAN THE SIDEWALK. MATERIAL, COLOR, AND/ OR TEXTURE TO BE DETERMINED BY THE OWNER.)
4. SAWCUT AND PATCH ASPHALT FOR UTILITY INSTALLATION PER APWA STANDARD PLAN NO. 255 AND SPECIFICATIONS.
5. PATCH ASPHALT PER SALT LAKE CITY STANDARDS AND SPECIFICATIONS. MATCH EXISTING PAVEMENT SECTION AS A MINIMUM.
6. LANDSCAPE. SEE LANDSCAPE AND IRRIGATION PLANS FOR DESIGN.
7. ACCESSIBLE ACCESS RAMP PER APWA STANDARD PLAN NO. 236 AND SPECIFICATIONS.
8. CONCRETE PAVEMENT: 6" THICK CONCRETE WITH 6" UNTREATED BASE COURSE PER GEOTECHNICAL REPORT AND DETAIL 3/C-600.
9. 3' CONCRETE WATERWAY PER DETAIL 4/C-600.

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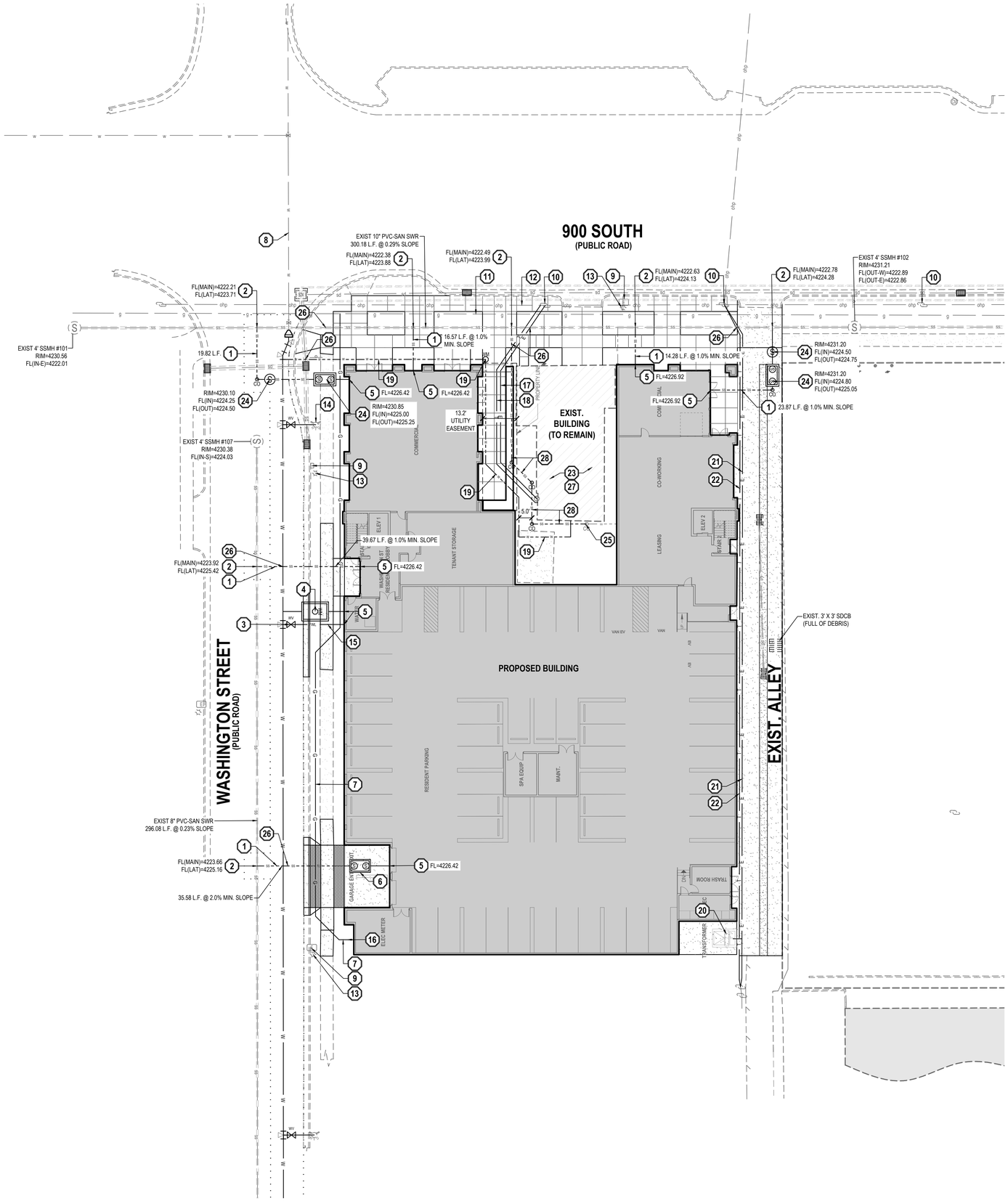

UTILITY GENERAL NOTES

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 SANITARY SEWER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY STANDARD PLANS AND SPECIFICATIONS.
4. ALL WATER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
5. DEFLECT OR LOOP ALL WATERLINES TO AVOID CONFLICTS WITH OTHER UTILITIES PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
6. PROJECT SHALL COMPLY WITH ALL UTAH DIVISION OF DRINKING WATER RULES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE PERTAINING TO BACKFLOW PROTECTION AND CROSS CONNECTION PREVENTION.
7. THE CONTRACTOR IS TO COORDINATE ALL UTILITIES WITH MECHANICAL/PLUMBING PLANS.
8. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING UTILITY STRUCTURES OR PIPES.
9. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
10. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.
11. PRIOR TO WORKING IN THE PUBLIC WAY, A LICENSED, INSURED, AND BONDED CONTRACTOR, WHO HAS SAID INFORMATION ON FILE WITH SLC ENGINEERING, MUST OBTAIN A PUBLIC WAY PERMIT FROM SLC ENGINEERING AND PERHAPS A TRANSPORTATION PERMIT. ALL WORK IN THE PUBLIC WAY SHALL FOLLOW APWA STANDARDS.

SITE PLAN 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. 6" SDR-35 PVC SANITARY SEWER LATERAL, INCLUDING CLEANOUTS AT MAXIMUM 100-FOOT SPACING. INSTALLATION AND TRENCHING PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS. LENGTH AND SLOPE PER PLAN.
2. CONNECT TO EXISTING SEWER MAIN PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
3. 6" C-900 PVC FIRE LINE, INCLUDING ALL THRUST BLOCKING AND FITTINGS PER SALT LAKE CITY STANDARDS AND SPECIFICATIONS. INSTALLATION AND TRENCHING PER APWA STANDARDS AND SPECIFICATIONS. HOT TAP EXISTING 6" WATER LINE WITH 6" GATE VALVE PER SALT LAKE CITY PUBLIC UTILITIES STANDARDS AND SPECIFICATIONS.
4. 3" CULINARY WATER METER PER SALT LAKE CITY STANDARD AND SPECIFICATIONS. INSTALL 3" CTS POLY PIPE FROM MAIN TO METER AND 4" CTS POLY FROM METER TO BUILDING. METER IN CONCRETE VAULT PER APWA STANDARD PLAN NO. 505, 522, AND SPECIFICATIONS.
5. SEE MECHANICAL/PLUMBING PLANS FOR CONTINUATION.
6. SAND/OIL SEPARATOR. SEE PLUMBING PLANS FOR MORE INFORMATION.
7. UNDERGROUND GAS LINE TO BE DESIGNED BY SERVICE PROVIDER. LAYOUT SHOWN IS SCHEMATIC IN NATURE AND MAY VARY IN THE FIELD.
8. EXISTING 6" WATER LINE.
9. EXISTING ELECTRICAL BOX.
10. EXISTING POWER POLE.
11. EXISTING GAS LINE.
12. EXISTING OVERHEAD POWER LINE.
13. EXISTING LIGHT POLE.
14. EXISTING FIRE HYDRANT.
15. FIRE LINE TO BE BROUGHT 5' FROM THE BUILDING.
16. GAS METERS BY SERVICE PROVIDER. SEE MECHANICAL/PLUMBING PLANS FOR ADDITIONAL INFORMATION.
17. NEW POWER SERVICE TO BE PROVIDED TO EXISTING BUILDING. DESIGN BY SERVICE PROVIDER. LAYOUT SHOWN IS SCHEMATIC IN NATURE AND MAY VARY IN THE FIELD.
18. NEW UNDERGROUND COMMUNICATION LINE TO EXISTING BUILDING TO BE DESIGNED BY SERVICE PROVIDER. LAYOUT SHOWN IS SCHEMATIC IN NATURE AND MAY VARY IN THE FIELD.
19. CULINARY WATER METER AND SERVICE LATERAL TO EXISTING BUILDING. INSTALL 1" CTS POLY WATER SERVICE LATERAL, 1" (OR MATCH SIZE) SERVICE TAP AND CONNECT TO EXISTING WATER MAIN, AND 1" (OR MATCH SIZE) WATER METER PER APWA PLAN 521, 551, AND SPECIFICATIONS. (PROVIDE GROUND SLEEVE TWO TIMES THE DIAMETER OF THE SERVICE LINE)
20. S.A.D. S.M.P. ELECTRICAL TRANSFORMER. SEE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION. INSTALL ON PROVIDED CONCRETE PAD.
21. UNDERGROUND POWER LINE TO BE DESIGNED BY SERVICE PROVIDER. LAYOUT SHOWN IS SCHEMATIC IN NATURE AND MAY VARY IN THE FIELD.
22. TELECOMMUNICATIONS LINE TO BE DESIGNED BY SERVICE PROVIDER. LAYOUT SHOWN IS SCHEMATIC IN NATURE AND MAY VARY IN THE FIELD.
23. CONTRACTOR TO FIELD VERIFY THE CONNECTION POINTS OF THE EXISTING UTILITY SERVICES AT THE EXISTING BUILDING MATCH THE DESIGN. CONTACT DESIGN ENGINEER IF A CONFLICT IS FOUND.
24. GREASE INTERCEPTOR AND SAMPLING MANHOLE. A FOUR FOOT DIAMETER SAMPLING MANHOLE MUST BE LOCATED DOWNSTREAM OF THE GREASE INTERCEPTOR AND UPSTREAM OF ANY OTHER CONNECTIONS. SEE PLUMBING PLANS FOR MORE INFORMATION.
25. EXISTING SANITARY SEWER CLEAN OUT. CONTINUATION OF SERVICE LATERAL TO THE EXISTING BUILDING AND SEWER MAIN IS UNKNOWN. CONTRACTOR TO FIELD VERIFY ALIGNMENT OF EXISTING LATERAL AND CONTACT DESIGN ENGINEER IF CONFLICT IS FOUND.
26. POTHOLE EXISTING UTILITIES AT CROSSING PRIOR TO CONSTRUCTION. FOR WATERLINES 12" MINIMUM VERTICAL SEPARATION FROM NON SEWER UTILITIES IS REQUIRED. CONTACT ENGINEER WITH ANY CONFLICTS.
27. CONTRACTOR TO COORDINATE WITH OWNER REGARDING ACCESS TO EXISTING BUILDING DURING CONSTRUCTION.
28. 4" SDR-35 PVC SANITARY SEWER LATERAL, INCLUDING CLEANOUTS AT MAXIMUM 100-FOOT SPACING. INSTALLATION AND TRENCHING PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS. LENGTH AND SLOPE PER PLAN. (PROVIDE GROUND SLEEVE TWO TIMES THE DIAMETER OF THE SERVICE LINE)

NORTH

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.

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SLATE MULTI-FAMILY

900 SOUTH WASHINGTON STREET
SALT LAKE CITY, UTAH

LICENSED PROFESSIONAL ENGINEER
No. 7675714-2202
JARED K. FORD
02-26-2020
STATE OF UTAH

UTILITY PLAN

PROJECT NUMBER	PRINT DATE
8671A	2/28/20
DRAWN BY	CHECKED BY
MAM	QE
PROJECT MANAGER	
QE	

C-300

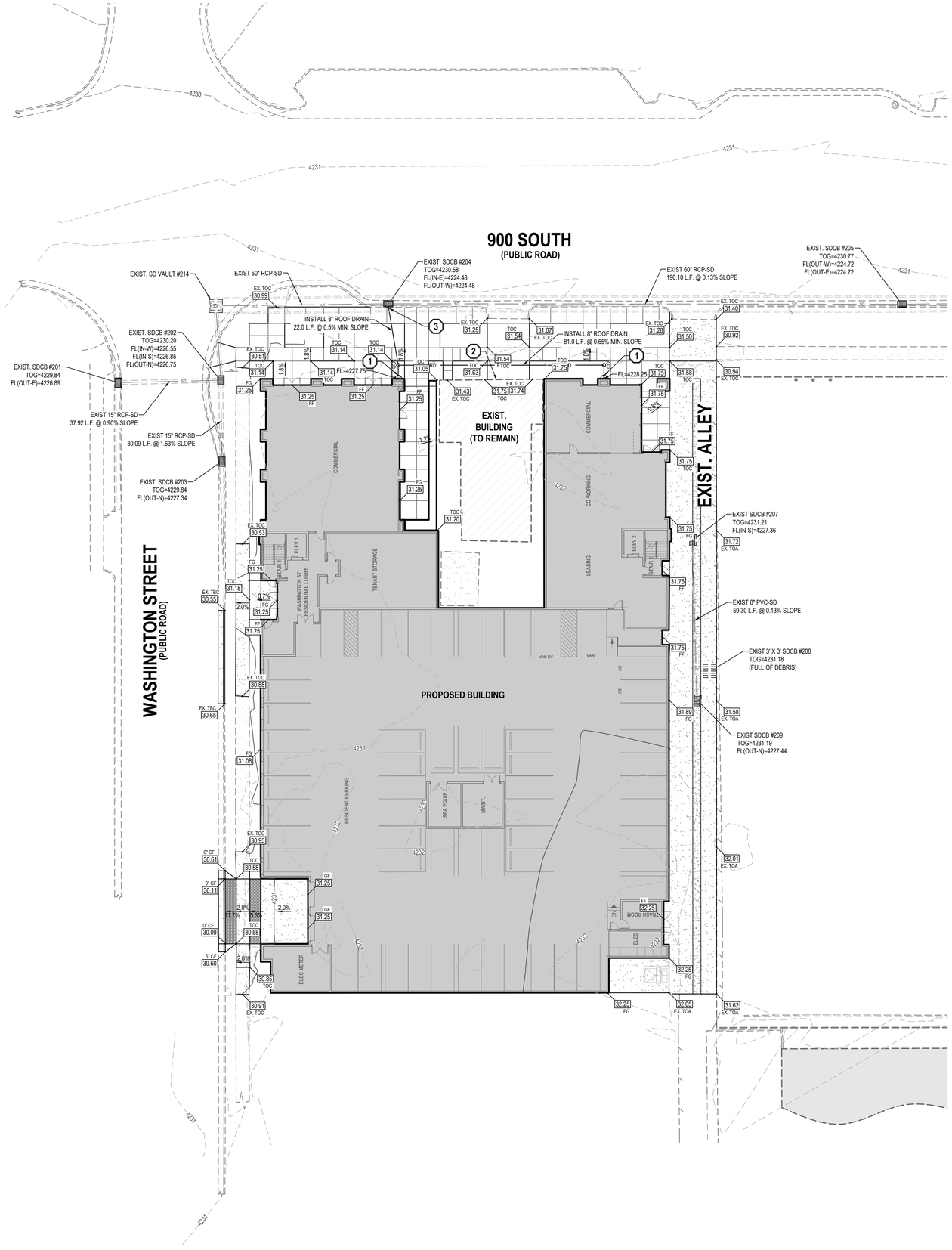
811 Know what's below. Call before you dig.

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

BENCHMARK

OFFSET MONUMENT
INTERSECTION OF
300 WEST STREET &
900 SOUTH STREET

ELEV = 4231.08'



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. ELEVATIONS HAVE BEEN TRUNCATED FOR CLARITY. XX.XX REPRESENTS AN ELEVATION OF 42XX.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 MECHANICAL/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.
15. PRIOR TO WORKING IN THE PUBLIC WAY, A LICENSED, INSURED, AND BONDED CONTRACTOR, WHO HAS SAID INFORMATION ON FILE WITH SLC ENGINEERING, MUST OBTAIN A PUBLIC WAY PERMIT FROM SLC ENGINEERING AND PERHAPS A TRANSPORTATION PERMIT. ALL WORK IN THE PUBLIC WAY SHALL FOLLOW APWA STANDARDS.

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. 8" N12 HDPE ROOF DRAIN CONNECTION. INSTALLATION AND TRENCHING PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS. LENGTH AND SLOPE PER PLAN. SEE MECHANICAL PLANS FOR CONTINUATION.
2. CONTRACTOR TO ENSURE GRADING ALONG FRONTAGE OF EXISTING BUILDING MEETS SALT LAKE CITY AND ADA STANDARDS AND SPECIFICATIONS.
3. CONNECT TO EXISTING 60" RCP. CORE-CUT EXISTING PIPE, INSERT 8" PVC, AND SOLID GROUT AROUND PIPE. ENSURE INVERT ELEVATION OF 8" PIPE IS ABOVE SPRINGLINE OF EXISTING 60" RCP.

NORTH

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.

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SLATE MULTI-FAMILY

900 SOUTH WASHINGTON STREET
SALT LAKE CITY, UTAH

LICENSED PROFESSIONAL ENGINEER
No. 7675714-2202
JARED K. FORD
02-26-2020
STATE OF UTAH

GRADING PLAN

PROJECT NUMBER	PRINT DATE
8671A	2/26/20
DRAWN BY	CHECKED BY
MAM	QE
PROJECT MANAGER	
QE	

C-400

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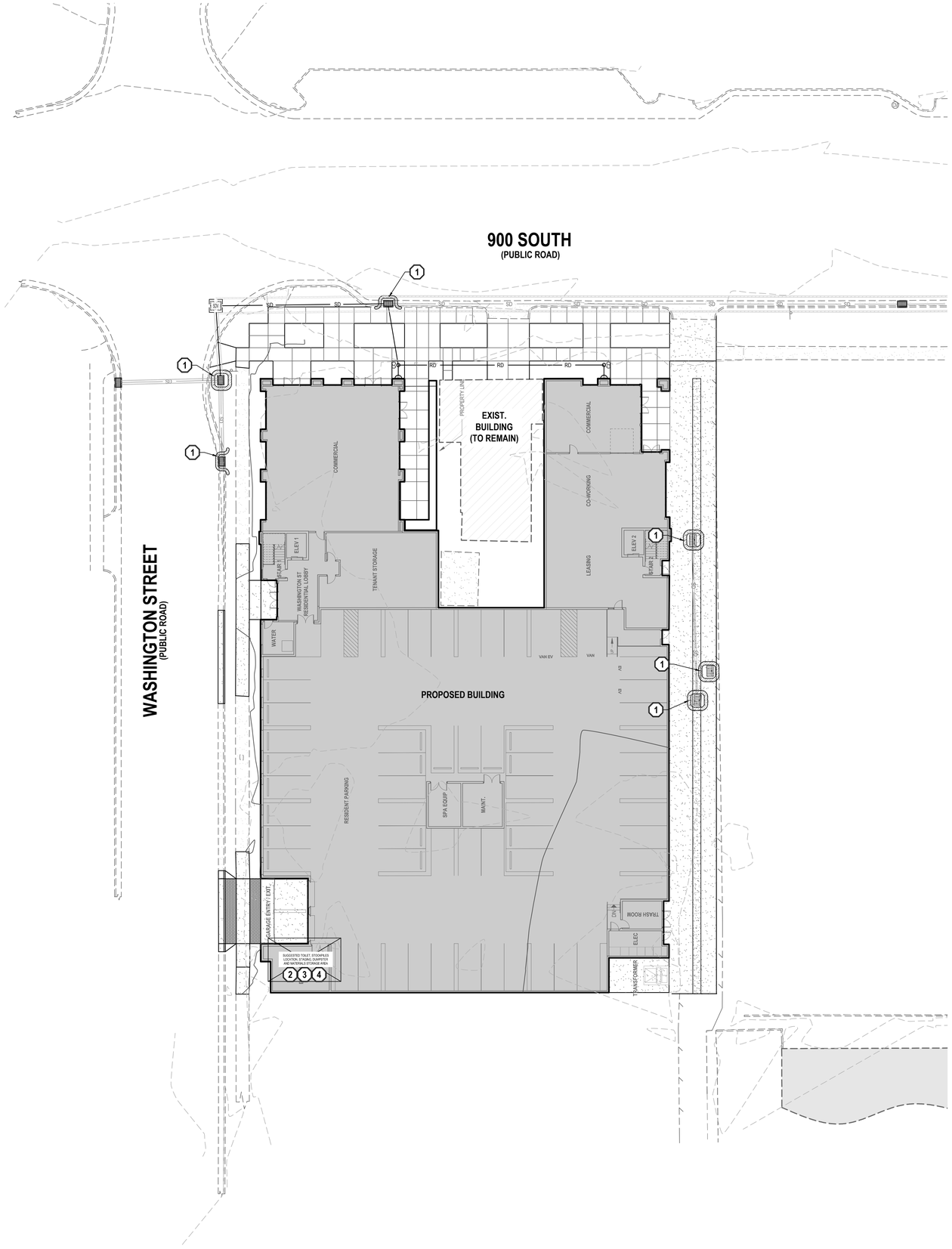
BENCHMARK

OFFSET MONUMENT
INTERSECTION OF
300 WEST STREET &
900 SOUTH STREET

ELEV = 4231.08'



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. INLET PROTECTION PER DETAIL 1/C-500.
2. PORTABLE TOILET PER DETAIL 2/C-500.
3. SUGGESTED TEMPORARY CONSTRUCTION SITE PARKING, STAGING, DUMPSTER, AND MATERIAL STORAGE AREA.
4. SUGGESTED STOCKPILE AREA.

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.

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SLATE MULTI-FAMILY

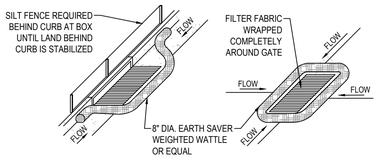
900 SOUTH WASHINGTON STREET
SALT LAKE CITY, UTAH

LICENSED PROFESSIONAL ENGINEER
No. 7675714-2202
JARED K. FORD
02-26-2020
STATE OF UTAH

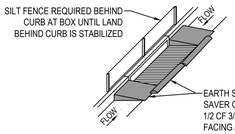
EROSION CONTROL PLAN

PROJECT NUMBER	PRINT DATE
8671A	2/26/20
DRAWN BY	CHECKED BY
MAM	QE
PROJECT MANAGER	
QE	

C-500



WATTLE OPTION



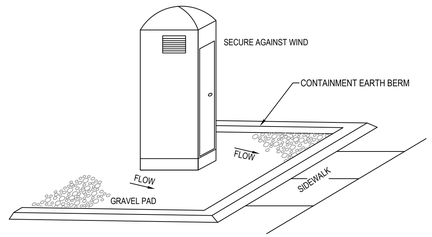
SANDBAG OPTION

NOTES:

1. PLACE WATTLES OR GRAVEL BAGS TIGHT AGAINST CURB TO PREVENT SEDIMENT-LADEN WATER FROM GETTING BETWEEN CURB AND WATTLE/BAG.
2. PLACE WATTLES OR GRAVEL BAGS SUCH THAT FLOW DOES NOT OVERTOP CURB OR ROAD CENTERLINE.
3. INSPECT INLET PROTECTION 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 INLET PROTECTION. THE ALTERNATIVE METHOD SHALL BE APPROVED BY THE CITY INSPECTOR AND THE ENGINEER OF RECORD.
6. BEFORE PLACEMENT OF CURB, STABILIZATION OF LAND BEHIND CURB, AND/OR PAVING, MAINTAIN TOP OF INLET AT 6" ABOVE GRADE, AND SURROUND WITH SILT FENCE FOR SEDIMENTATION AROUND BOX. MAINTAIN SILT FENCE BEHIND BOX UNTIL LAND BEHIND CURB IS STABILIZED.

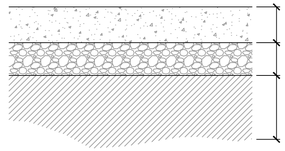
1 SAG INLET PROTECTION

SCALE: NONE



2 PORTABLE TOILET

SCALE: NONE



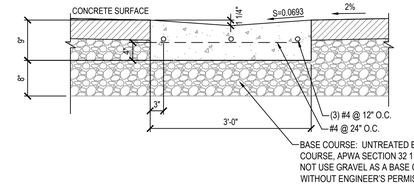
6" PORTLAND CEMENT CONCRETE (4,000 PSI, 28 DAY COMPRESSION STRENGTH, 6% AIR ENTRAINED, 4" SLUMP)

6" UNTREATED AGGREGATE BASE COURSE COMPACTED PER GEOTECHNICAL REPORT

PROPERLY PREPARED SUBGRADE OR FILL COMPACTED PER GEOTECHNICAL REPORT AND SPECIFICATIONS

3 CONCRETE PAVEMENT SECTION

SCALE: NONE



NOTE:

1. CONSTRUCT PER NOTES AND SPECIFICATIONS ASSOCIATED WITH APWA STANDARD PLAN NO. 211.

4 3' WATERWAY

SCALE: NONE

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LICENSED PROFESSIONAL ENGINEER
No. 7675714-2202
JARED K. FORD
02-26-2020
STATE OF UTAH

CIVIL DETAILS

PROJECT NUMBER 8671A
PRINT DATE 2/26/20
DRAWN BY MAM
CHECKED BY QE
PROJECT MANAGER QE

C-600

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BENCHMARK

OFFSET MONUMENT
INTERSECTION OF
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900 SOUTH STREET

ELEV = 4231.08'

SYDNEY MULTI-FAMILY

900 SOUTH 200 WEST
SALT LAKE CITY, UTAH

INDEX OF DRAWINGS

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C-100	DEMOLITION PLAN
C-200	SITE PLAN
C-300	UTILITY PLAN
C-400	GRADING PLAN
C-500	EROSION CONTROL PLAN
C-600	DETAILS
A-04	OPEN SPACE
A-05	ELEVATIONS
A-06	ELEVATIONS

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.

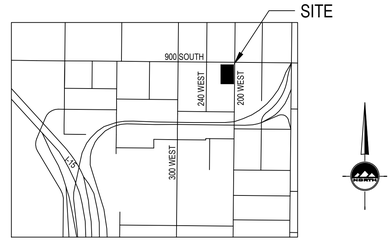
NOTICE TO DEVELOPER/ CONTRACTOR

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



NO SCALE

GENERAL NOTES

1. ALL CONSTRUCTION OF PUBLIC IMPROVEMENTS MUST CONFORM TO THE STANDARDS AND SPECIFICATIONS SET FORTH BY: (1) SALT LAKE CITY CONSTRUCTION STANDARDS AND SPECIFICATIONS. (2) THE MOST CURRENT EDITION OF THE APWA MANUAL OF STANDARD SPECIFICATIONS, MANUAL STANDARD PLANS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.). (3) THE APPROVED CONSTRUCTION DRAWINGS PROVIDED BY THE DESIGN ENGINEER. THE ORDER OF PRECEDENCE IN CASE OF CONFLICT SHALL BE AS SPECIFIED WITH THE NUMBERING ABOVE. THE LATEST EDITION OF ALL STANDARDS AND SPECIFICATIONS MUST BE ADHERED TO. THE CONTRACTOR IS RESPONSIBLE TO HAVE A COPY OF THESE SPECIFICATIONS. IF A CONSTRUCTION PRACTICE IS NOT SPECIFIED BY ANY OF THE LISTED SOURCES, CONTRACTOR MUST CONTACT DESIGN ENGINEER FOR DIRECTION.
2. CALL BLUE STAKES 48 HOURS PRIOR TO DIGGING.
3. BENCHMARK ELEVATION = NORTHEAST QUARTER OF SECTION 12 T1S, R1W SALT LAKE BASE & MERIDIAN
4. ELEV. = 4231.08
5. CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL EXISTING MANHOLES AND OTHER UTILITIES BEFORE CONSTRUCTING ANY IMPROVEMENTS.
6. ALL TRASH ENCLOSURES WILL MEET CITY STANDARDS.

ENSIGN
THE STANDARD IN ENGINEERING

SALT LAKE CITY
45 W. 10000 S., Suite 500
Sandy, UT 84070
Phone: 801.255.0529

LAYTON
Phone: 801.547.1100

TOOELE
Phone: 435.843.3590

CEDAR CITY
Phone: 435.865.1453

RICHFIELD
Phone: 435.896.2983

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FOR:
URBAN ALFANDRE
825 N 300 W #N141
SALT LAKE CITY, UT 84103
CONTACT:
JAMES ALFANDRE
PHONE: 202-251-5059

SYDNEY MULTI-FAMILY
900 SOUTH 200 WEST
SALT LAKE CITY, UTAH

COVER SHEET

PROJECT NUMBER 8671B
PRINT DATE 2/26/20
DRAWN BY MAM
CHECKED BY QE
PROJECT MANAGER QE

C-000

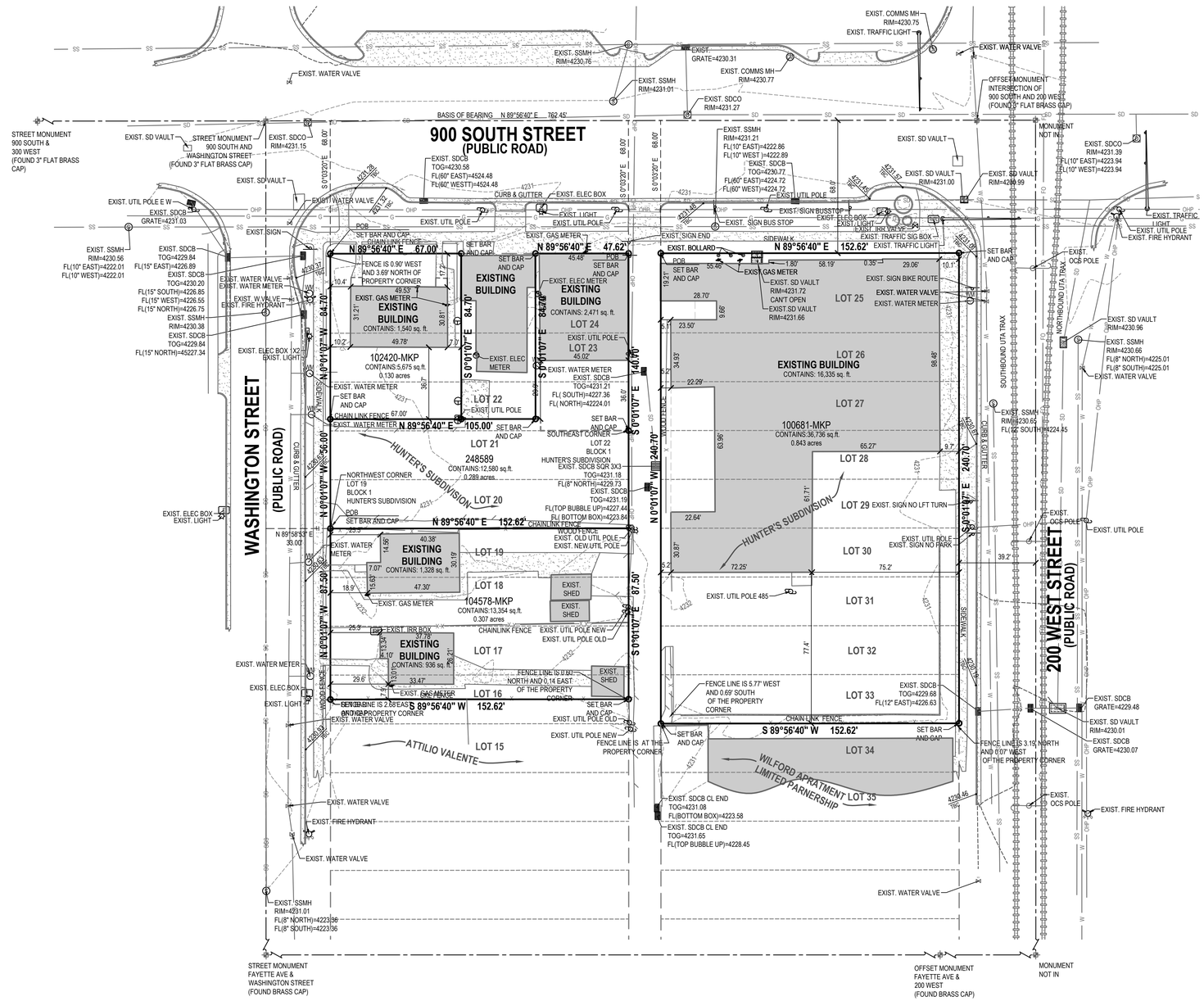
Know what's below. Call before you dig.

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

BENCHMARK

OFFSET MONUMENT
INTERSECTION OF
300 WEST STREET &
900 SOUTH STREET

ELEVATION = 4231.08



LEGEND

SECTION CORNER	STORM DRAIN CATCH BASIN	MINOR CONTOURS 1' INCREMENT	DEED LINE	SW	SECONDARY WATERLINE
MONUMENT	STORM DRAIN COMBO BOX	MAJOR CONTOURS 5' INCREMENT	TANGENT LINE	IRR	IRRIGATION LINE
EXIST REBAR AND CAP	STORM DRAIN CULVERT	CONCRETE	EXIST DITCH FLOW LINE		CENTERLINE
SET ENSIGN REBAR AND CAP	SIGN	ELECTRIC METER	FENCE		PROPERTY LINE
SET RIVET	UTILITY MANHOLE	STORM DRAIN CLEAN OUT	EDGE OF ASPHALT		ADJACENT PROPERTY LINE
WATER METER	UTILITY POLE	SANITARY SEWER MANHOLE	SANITARY SEWER	E	ELECTRIC POWERLINE
WATER MANHOLE	GAS METER	WATER LINE	STORM DRAIN LINE	T	TELEPHONE LINE
WATER VALVE	TREE	ADJACENT RIGHT OF WAY	GAS LINE		IRRIGATION VALVE
FIRE HYDRANT	OVERHEAD POWER LINE	RIGHT OF WAY	BUILDING PRIMARY	#	SCHEDULE B-2 REFERENCE NUMBER

ENSIGN ENG. LAND SURV.

Note to the client, insurer and lender- With regard to Table A, item 11 source information from plans and markings will be combined with observed evidence of utilities pursuant to Section 5.E.iv. to develop a view of the underground utilities. However, lacking excavation, the exact location of underground features cannot be accurately, completely and reliably depicted. In addition, in some jurisdictions, 811 or other similar utility locate requesters from surveyors may be ignored or result in an incomplete response, in which case the surveyor shall note on the plat or map how this affected the surveyor's assessment of the location of the utilities. Where additional or more detailed information is required, the client is advised that excavation and/or private utility locate request may be necessary.

SURVEYOR'S NARRATIVE

I, Patrick M. Harris do hereby state that I am a Professional Land Surveyor and that I hold certificate no. 286882 as prescribed by the laws of the State of Utah and represent that I have made a survey of the following described property. The Purpose of this survey is to provide an ALTA/NSPS Land Title Survey for use by the client. The Basis of Bearing is the line between the Offset Monument at the Intersection of 900 South Street and 200 West Street and the Street Monument at the Intersection of 900 South Street and 300 West Street, measuring North 89°56'40" East 762.45 feet.

COMMITMENT DESCRIPTIONS

Commitment No. 102420-MKP

Beginning at the Northwest corner of Lot 24, Block 1, HUNTER'S SUBDIVISION OF BLOCK 23, 5 Acre Plat "A", Big Field Survey; thence South 74.7 feet; thence East 67 feet; thence North 84.7 feet; thence West 67 feet; thence South 10 feet to the beginning.

Commitment No. 100681-MKP

PARCEL 1:

Lots 25, 26, 27 and 28. Also beginning at the Northeast corner of said Lot 25 and running thence North 10 feet to the South line of the Ninth South Street; thence West 152.65 feet; thence South 10 feet to the Northwest corner of said Lot 25; thence East 152.65 feet to the place of beginning; all in Block 1, HUNTER'S SUBDIVISION of Lots 10 and 11, and part of Lot 9, Block 23, Five Acre Plat "A", Big Field Survey.

PARCEL 2:

Lots 29, 30, 31, 32 and 33, Block 1, HUNTER'S SUBDIVISION of Block 23, Five Acre Plat "A", Big Field Survey.

Commitment No. 104578-MKP

PARCEL 1:

Lots 18 and 19, Block 1, HUNTER'S SUBDIVISION, according to the official plat thereof, recorded in the office of the Salt Lake County Recorder, State of Utah.

PARCEL 2:

Lot 17 and the North half of Lot 16, Block 1, HUNTER'S SUBDIVISION, according to the plat thereof, recorded in the office of the Salt Lake County Recorder, State of Utah.

Schedule B-2 Exceptions

File Number 102420-MKP

10. Said property lies within the boundaries of Salt Lake City, Salt Lake Metropolitan Water District, Salt Lake City Mosquito Abatement District, Central Utah Water Conservancy District and the West Temple Gateway Neighborhood Development Plan, and is subject to any and all charges and assessments levied thereunder.

11. The effects, if any, of easements and rights-of-way for existing roads, streets, alleys, ditches, reservoirs, utilities, canals, pipelines and power, telephone, sewer, gas or water lines, which may be ascertained by an inspection or survey of the subject property.

12. Certificate of Present Condition, dated February 13, 2007 and recorded February 16, 2007 as Entry No. 10006432 in Book 9423 at Page 3440.

13. Certificate of Noncompliance wherein said property does not conform to the zoning provisions of Salt Lake City's Revised Ordinances, dated November 4, 2008 and recorded November 7, 2008 as Entry No. 10557774 in Book 9657 at Page 3555.

File Number 100681-MKP

11. Said property lies within the boundaries of Salt Lake City, Salt Lake Metropolitan Water District, Salt Lake City Mosquito Abatement District, Central Utah Water Conservancy District and the West Temple Gateway Neighborhood Development Plan, and is subject to any and all charges and assessments levied thereunder.

12. Minerals of whatsoever kind, subsurface and surface substances, including but not limited to coal, lignite, oil, gas, uranium, clay, rock, sand and gravel in, on, under and that may be produced from the Land, together with all rights, privileges, and immunities relating thereto, whether or not appearing in the Public Records or listed in Schedule B. The Company makes no representation as to the present ownership of any such interests. There may be leases, grants, exceptions or reservations of interests that are not listed.

13. Claim, right, title or interest to water or water rights whether or not shown by the public records.

14. Right of Way and Utility Easement, including any presumed right, privilege and authority benefiting the corresponding Utility Company for overhead transmission lines (including all appurtenant posts, poles, anchors, cables, guy wires and fixtures), to construct, operate, maintain and remove equipment and other facilities, from time to time, upon, over and across the North boundary of the subject property, as evidenced by a visual inspection.

15. Notwithstanding those items described herein-above, the land is also subject to any additional discrepancies, conflicts in the boundary lines, shortage in area, encroachments, or any other facts which an ALTA/NSPS Survey, (made in accordance with the current Minimum Standard Detail Requirements for Land Title Surveys jointly established and adopted by (ALTA) American Land Title Association and (NSPS) National Society of Professional Surveyors) may disclose.

16. Rights of tenants in possession, as tenants only, under unrecorded leases.

File Number 104578-MKP

11. Said property lies within the boundaries of Salt Lake City, Salt Lake Metropolitan Water District, Salt Lake City Mosquito Abatement District, Central Utah Water Conservancy District and the West Temple Gateway Neighborhood Development Plan, and is subject to any and all charges and assessments levied thereunder.

12. The effects, if any, of easements and rights-of-way for existing roads, streets, alleys, ditches, reservoirs, utilities, canals, pipelines and power, telephone, sewer, gas or water lines, which may be ascertained by an inspection or survey of the subject property.

13. Deed of Trust (with Future Advance Clause) to secure an indebtedness in the amount shown below, and any other obligations secured thereby. Trustor: Gregg B. Chamberlain; Trustee: Preferred Title; Beneficiary: First Indiana Bank, N.A.; Amount: $69,600.00; Dated: June 7, 2004; Recorded: June 11, 2004 as Entry Number 9087529 in Book 9000 at Page 330. (affects Parcel 1)

The above stated Deed of Trust was assigned to First Tennessee Bank, N.A., dated July 15, 2004 and Recorded December 7, 2004 as Entry No. 9242276 in Book 9069 at Page 7395.

14. Revolving Credit Deed of Trust to secure an indebtedness in the amount shown below, and any other obligations secured thereby: Trustor: G B Chamberlain; Trustee: JPMorgan Chase Bank, National Association; Beneficiary: JPMorgan Chase Bank, N.A.; Amount: $50,000.00; Dated: October 10, 2007; Recorded: November 1, 2007 as Entry Number 10264952 in Book 9532 at Page 8933. (affects Parcel 2)

File Number: 248589

10. Said property is located within the boundaries of Salt Lake City Corporation, Metropolitan Water District of Salt Lake and Sandy and Central Utah Water Conservancy District and is subject to the charges and assessments levied thereunder.

11. Claim, right, title or interest to water or water rights whether or not shown by the public records.

12. Rights of Way, Easements, Ditches, Canals, Utility Poles and Power Lines or any other adverse matters which may be disclosed by Inspection or Survey of said Property.

13. Rights of tenant(s) in the land, if any, and rights of all parties claiming by, through or under said tenant(s).

TABLE A

1) All monuments used and set are shown on survey.
2) 906 South 200 West, 221 West 900 South, 231-233 West 900 South, 909-927 Washington Street, Salt Lake City, Utah.
3) Subject parcels are located in Flood Zone "X" per FEMA FIRM map 49035C0282H, effective August 2, 2012.
4) Gross land area of parcels are shown on survey.
5) 1 foot contours are shown on survey.
7(a) Exterior dimensions of buildings are shown on survey.
7(b)(1) Square footage of buildings are shown on survey.
8) Substantial features are shown on survey.
11) Existing utilities are shown on survey.
13) Adjoining owners are shown on survey.
16) No building construction observed on site at time of survey.
17) There are no known changes to street right-of-way at time of survey.
18) There were no delineated wetlands at time of survey.
19) No plottable easements to shown on survey.

Date

Patrick M. Harris
License No. 286882

Note: For conditions of record not shown hereon as well as specific references to items in the title report, please refer to a title report supplied by Cottonwood Title Insurance Agency, Inc., of Salt Lake City, Utah under Commitment No.102420-MKP, dated effective April 23, 2018, Commitment No.104578-MKP, dated effective June 26, 2018, & Commitment No. 100681-MKP, dated effective March 15, 2018 and from title report supplied by Meridian Title Company, of Salt Lake City, Utah under Commitment No. 248589, dated effective February 6, 2017.

Commitment No. 248589

Parcel 1:

Commencing at the Southeast corner of Lot 22, Block 1, HUNTER'S SUBDIVISION of Block 23, 5 Acre Plat "A", Big Field Survey; thence North 90.7 feet; thence West 47.62 feet; thence South 84.7 feet; thence East 2.62 feet; thence South 6.0 feet; thence East 45.0 feet to the point of beginning.

Parcel 2:

All of Lot 21, Block 1, HUNTER'S SUBDIVISION, of Block 23, 5 Acre Plat "A", Big Field Survey, according to the official plat thereof.

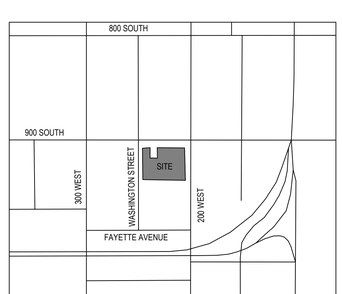
Also:
Commencing 74.7 feet South of the Northwest Corner of Lot 24, Block 1, HUNTER'S SUBDIVISION, of Block 23, 5 Acre Plat "A", Big Field Survey; thence East 107.62 feet; thence South 6 feet; thence West 107.62 feet; thence North 6 feet to the point of beginning.

To: (i)Urban 9th, LLC, a Utah limited liability company; (ii)221 Chuckles, LLC; (iii)First America Title Insurance Company; (iv)Urban Alfandre LLC, a Utah limited liability company; (v)Meridian Title company; (vi)Cottonwood Title Insurance Company; (vii)Fidelity Title Insurance Company.

This is to certify that this map or plat and the survey on which it is based were made in accordance with 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1, 2, 3, 4, 5, 7(a), 7(b), 8, 11, 13, 16, 17, 18 and 19 of Table A hereof.

The field work was completed on September 25, 2018.

Date of Plat or Map: November 6, 2018.



VICINITY MAP
(NOT TO SCALE)

NORTH

HORIZONTAL GRAPHIC SCALE

30 0 15 30 60
(IN FEET)
HORZ: 1 inch = 30 ft.

LOCATED IN THE NORTHEAST QUARTER OF SECTION 12 TOWNSHIP 1 SOUTH, RANGE 1 WEST SALT LAKE BASE AND MERIDIAN SALT LAKE CITY, SALT LAKE COUNTY, UTAH

ENSIGN
THE STANDARD IN ENGINEERING

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FOR:
URBAN ALFANDRE
825 NORTH, 300 WEST, SUITE N 141
SALT LAKE CITY, UTAH 84103
CONTACT:
JAMES ALFANDRE
PHONE: 201-251-5059

CHUKCLES HENRIES
ALTA -NSPS LAND TITLE & TOPOGRAPHY SURVEY
900 SOUTH 300 WEST
SALT LAKE CITY, UTAH

ALTA-NSPS
LAND TITLE &
TOPOGRAPHY
SURVEY

PROJECT NUMBER 8671
PRINT DATE 2/26/20
DRAWN BY J. JEAN PIERRE
CHECKED BY
PROJECT MANAGER P. HARRIS

1 OF 1

SALT LAKE CITY PUBLIC UTILITIES GENERAL NOTES

1. **COMPLIANCE:**
ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THESE CONTRACT DOCUMENTS AND THE MOST RECENT EDITIONS OF THE FOLLOWING: THE INTERNATIONAL PLUMBING CODE, UTAH DRINKING WATER REGULATIONS, APWA MANUAL OF STANDARD PLANS AND SPECIFICATIONS, AND SLC PUBLIC UTILITIES MODIFICATIONS TO APWA STANDARD PLANS AND APPROVED MATERIALS AND SLC PUBLIC UTILITIES APWA SPECIFICATIONS MODIFICATIONS. THE CONTRACTOR IS REQUIRED TO ADHERE TO ALL OF THE ABOVE-MENTIONED DOCUMENTS UNLESS OTHERWISE NOTED AND APPROVED IN WRITING BY THE SALT LAKE CITY DIRECTOR OF PUBLIC UTILITIES.

2. **COORDINATION:**
THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL APPROPRIATE GOVERNMENT AND PRIVATE ENTITIES ASSOCIATED WITH THE PROJECT. THE FOLLOWING MUST BE CONTACTED 48-HOURS PRIOR TO CONSTRUCTION AS APPLICABLE TO THE PROJECT:

PUBLIC UTILITIES:
BACKFLOW PREVENTION - 483-6795
DEVELOPMENT REVIEW ENGINEERING - 483-6781
INSPECTIONS, PERMITS, CONTRACTS & AGREEMENTS - 483-6727
PRETREATMENT - 799-4002
STORM WATER - 483-6751

SLC DEPARTMENTS:
ENGINEERING - PUBLIC WAY PERMITS AND ISSUES - 535-6248
ENGINEERING - SUBDIVISIONS - 535-6159
FIRE DEPARTMENT - 535-6636
PERMITS AND LICENSING (BLDG SERVICES) - 535-7752
PLANNING AND ZONING - 535-7700
TRANSPORTATION - 535-6630

- ALL OTHER POTENTIALLY IMPACTED GOVERNING AGENCIES OR ENTITIES
- ALL WATER USERS INVOLVED IN WATER MAIN SHUTDOWNS
- APPLICABLE SEWER, WATER AND DRAINAGE DISTRICTS
- BLUESTAKES LOCATING SERVICES - 532-5000
- COUNTY FIRE DEPARTMENT - 743-7231
- COUNTY FLOOD CONTROL - 468-2779
- COUNTY HEALTH DEPARTMENT - 385-468-3913
- COUNTY PUBLIC WAY PERMITS - 468-2241
- HOLLADAY CITY - 272-9450
- SALT LAKE COUNTY HIGHWAY DEPARTMENT - 468-3705 OR 468-2156
- THE UTAH TRANSIT AUTHORITY FOR RE-ROUTING SERVICE - 262-5626
- UNION PACIFIC RAILROAD CO., SUPERINTENDENTS OFFICE - 595-3405
- UTAH DEPARTMENT OF TRANSPORTATION, REGION #2 - 975-4800
- UTAH STATE ENGINEER - 538-7240

3. **SCHEDULE**
PRIOR TO CONSTRUCTION THE CONTRACTOR WILL PROVIDE, AND WILL UPDATE AS CHANGES OCCUR, A CONSTRUCTION SCHEDULE IN ACCORDANCE WITH THE SPECIFICATIONS AND SALT LAKE CITY ENGINEERING OR SALT LAKE COUNTY REGULATIONS AS APPLICABLE FOR WORKING WITHIN THE PUBLIC WAY.

4. **PERMITS, FEES AND AGREEMENTS**
CONTRACTOR MUST OBTAIN ALL THE NECESSARY PERMITS AND AGREEMENTS AND PAY ALL APPLICABLE FEES PRIOR TO ANY CONSTRUCTION ACTIVITIES. CONTACT SALT LAKE CITY ENGINEERING (535-6248) FOR PERMITS AND INSPECTIONS REQUIRED FOR ANY WORK CONDUCTED WITHIN SALT LAKE CITY'S PUBLIC RIGHT-OF-WAY. APPLICABLE UTILITY PERMITS MAY INCLUDE MAINLINE EXTENSION AGREEMENTS AND SERVICE CONNECTION PERMITS. ALL UTILITY WORK MUST BE BONDED. ALL CONTRACTORS MUST BE LICENSED TO WORK ON CITY UTILITY MAINS.

CONSTRUCTION SITES MUST BE IN COMPLIANCE WITH THE UTAH POLLUTION DISCHARGE ELIMINATION SYSTEM (UPDES) STORM WATER PERMIT FOR CONSTRUCTION ACTIVITIES (S38-6396). A COPY OF THE PERMIT'S STORM WATER POLLUTION PREVENTION PLAN MUST BE SUBMITTED TO PUBLIC UTILITIES FOR REVIEW AND APPROVAL. ADDITIONAL WATER QUALITY AND EROSION CONTROL MEASURES MAY BE REQUIRED. THE CONTRACTOR MUST ALSO COMPLY WITH SALT LAKE CITY'S CLEAN WHEEL ORDINANCE.

5. **ASPHALT AND SOIL TESTING**
THE CONTRACTOR IS TO PROVIDE MARSHALL AND PROCTOR TEST DATA 24-HOURS PRIOR TO USE. CONTRACTOR IS TO PROVIDE COMPACTION AND DENSITY TESTING AS REQUIRED BY SALT LAKE CITY ENGINEERING, UDOT, SALT LAKE COUNTY OR OTHER GOVERNING ENTITY. TRENCH BACKFILL MATERIAL AND COMPACTION TESTS ARE TO BE TAKEN PER APWA STANDARD SPECIFICATIONS, SECTION 330520 - BACKFILLING TRENCHES, OR AS REQUIRED BY THE SLC PROJECT ENGINEER IF NATIVE MATERIALS ARE USED. **NO NATIVE MATERIALS ARE ALLOWED WITHIN THE PIPE ZONE.** THE MAXIMUM LIFTS FOR BACKFILLING EXCAVATIONS IS 8-INCHES. ALL MATERIALS AND COMPACTION TESTING IS TO BE PERFORMED BY A LAB RECOGNIZED AND ACCEPTED BY SALT LAKE COUNTY PUBLIC WORKS AND/OR SALT LAKE CITY ENGINEERING.

6. **TRAFFIC CONTROL AND HAUL ROUTES**
TRAFFIC CONTROL MUST CONFORM TO THE MOST CURRENT EDITION OF SALT LAKE CITY TRAFFIC CONTROL MANUAL - PART 6 OF "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" FOR SALT LAKE COUNTY AND STATE ROADS. SLC TRANSPORTATION MUST APPROVE ALL PROJECT HAUL ROUTES (S35-7129). THE CONTRACTOR MUST ALSO CONFORM TO UDOT, SALT LAKE COUNTY OR OTHER APPLICABLE GOVERNING ENTITIES REQUIREMENTS FOR TRAFFIC CONTROL.

7. **SURVEY CONTROL**
CONTRACTOR MUST PROVDE A REGISTERED LAND SURVEYOR OR PERSONS UNDER SUPERVISION OF A REGISTERED LAND SURVEYOR TO SET STAKES FOR ALIGNMENT AND GRADE OF EACH MAIN AND/OR FACILITY AS APPROVED. THE STAKES SHALL BE MARKED WITH THE HORIZONTAL LOCATION (STATION) AND VERTICAL LOCATION (GRADE) WITH CUTS AND/OR FILLS TO THE GRADE OF THE MAIN AND/OR FACILITY AS APPROVED. IN ADDITION, THE CONTRACTOR AND/OR SURVEYOR SHALL PROVIDE TO SALT LAKE CITY PUBLIC UTILITIES CUT SHEETS FILLED OUT COMPLETELY AND CLEARLY SHOWING THE PERTINENT GRADES, ELEVATIONS AND CUT/FILLS ASSOCIATED WITH THE FIELD STAKING OF THE MAIN AND/OR FACILITY. THE CUT SHEET FORM IS AVAILABLE AT THE CONTRACTS AND AGREEMENTS OFFICE AT PUBLIC UTILITIES. ALL MAINS AND LATERALS NOT MEETING MINIMUM GRADE REQUIREMENTS AS SPECIFIED BY ORDINANCE OR AS REQUIRED TO MEET THE MINIMUM REQUIRED FLOWS OR AS APPROVED MUST BE REMOVED AND RECONSTRUCTED TO MEET DESIGN GRADE. THE CONTRACTOR SHALL PROTECT ALL STAKES AND MARKERS UNTIL PUBLIC UTILITY SURVEYORS COMPLETE FINAL MEASUREMENTS. THE CONTRACTOR WILL BE RESPONSIBLE FOR FURNISHING, MAINTAINING, OR RESTORING ALL MONUMENTS AND REFERENCE MARKS WITHIN THE PROJECT SITE. CONTACT THE COUNTY SURVEYOR (468-2028) FOR MONUMENT LOCATIONS AND CONSTRUCTION REQUIREMENTS. ALL ELEVATIONS SHALL BE REFERENCED TO SALT LAKE CITY DATUM UNLESS NOTED OTHERWISE ON THE PLANS.

8. **ASPHALT GUARANTEE**
THE CONTRACTOR SHALL REMOVE, DISPOSE OF, FURNISH AND PLACE PERMANENT ASPHALT PER SALT LAKE CITY ENGINEERING, UDOT, COUNTY, OR OTHER GOVERNMENT STANDARDS AS APPLICABLE TO THE PROJECT. THE CONTRACTOR SHALL GUARANTEE THE ASPHALT RESTORATION FOR A PERIOD AS REQUIRED BY THE GOVERNING ENTITY.

9. **TEMPORARY ASPHALT**
IF THE CONTRACTOR CHOOSES TO WORK WITHIN THE PUBLIC WAY WHEN HOT MIX ASPHALT IS NOT AVAILABLE, THE CONTRACTOR MUST OBTAIN APPROVAL FROM THE APPROPRIATE GOVERNING ENTITY PRIOR TO INSTALLING TEMPORARY ASPHALT SURFACING MATERIAL. WITHIN SALT LAKE CITY, WHEN PERMANENT ASPHALT BECOMES AVAILABLE, THE CONTRACTOR SHALL REMOVE THE TEMPORARY ASPHALT, FURNISH AND INSTALL THE PERMANENT ASPHALT. THE CONTRACTOR SHALL GUARANTEE THE ASPHALT RESTORATION FOR A PERIOD AS REQUIRED BY THE GOVERNING ENTITY FROM THE DATE OF COMPLETION.

10. **SAFETY**
THE CONTRACTOR IS RESPONSIBLE FOR ALL ASPECTS OF SAFETY OF THE PROJECT AND SHALL MEET ALL OSHA, STATE, COUNTY AND OTHER GOVERNING ENTITY REQUIREMENTS.

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.

11. **DUST CONTROL**
THE CONTRACTOR IS RESPONSIBLE FOR DUST CONTROL ACCORDING TO THE GOVERNING ENTITY STANDARDS. USE OF HYDRANT WATER OR PUMPING FROM CITY-OWNED CANALS OR STORM DRAINAGE FACILITIES IS NOT ALLOWED FOR DUST CONTROL ACTIVITIES WITHOUT WRITTEN APPROVAL OF THE PUBLIC UTILITIES DIRECTOR.

12. **DEWATERING**
ALL ON-SITE DEWATERING ACTIVITIES MUST BE APPROVED IN WRITING BY PUBLIC UTILITIES. PROPOSED OUTFALL LOCATIONS AND ESTIMATED FLOW VOLUME CALCULATIONS MUST BE SUBMITTED TO PUBLIC UTILITIES FOR REVIEW AND APPROVAL. ADEQUATE MEASURES MUST BE TAKEN TO REMOVE ALL SEDIMENT PRIOR TO DISCHARGE. PUBLIC UTILITIES MAY REQUIRE ADDITIONAL MEASURES FOR SEDIMENT CONTROL AND REMOVAL.

13. **PROJECT LIMITS**
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 CONTRACTORS 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.

14. **WATER, FIRE, SANITARY SEWER AND STORM DRAINAGE UTILITIES**
A. INSPECTIONS -
IT IS THE CONTRACTOR'S RESPONSIBILITY TO SCHEDULE ANY WATER, SEWER, BACKFLOW AND DRAINAGE INSPECTION 48-HOURS IN ADVANCE TO WHEN NEEDED. CONTACT 483-6727 TO SCHEDULE INSPECTIONS.

B. DAMAGE TO EXISTING UTILITIES -
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.

C. UTILITY LOCATIONS -
CONTRACTOR WILL BE RESPONSIBLE FOR LOCATING AND AVOIDING ALL UTILITIES AND SERVICE LATERALS, AND FOR REPAIRING ALL DAMAGE THAT OCCURS TO THE UTILTIES DUE TO THE CONTRACTOR'S ACTIVITIES. CONTRACTOR IS TO VERIFY LOCATION, DEPTH, SIZE, MATERIAL AND OUTSIDE DIAMETERS OF UTILITIES IN THE FIELD BY POTHOLING A MINIMUM OF 300-FEET AHEAD OF SCHEDULED CONSTRUCTION IN ORDER TO IDENTIFY POTENTIAL CONFLICTS AND PROBLEMS WITH FUTURE CONSTRUCTION ACTIVITIES. EXISTING UTILITY INFORMATION OBTAINED FROM SLC PUBLIC UTILITIES' MAPS MUST BE ASSUMED AS APPROXIMATE AND REQUIRING FIELD VERIFICATION. CONTACT BLUE STAKES OR APPROPRIATE OWNER FOR COMMUNICATION LINE LOCATIONS.

D. UTILITY RELOCATIONS -
FOR UTILITY CONFLICTS REQUIRING MAINLINE RELOCATIONS, THE CONTRACTOR MUST NOTIFY THE APPLICABLE UTILITY COMPANY OR USER A MINIMUM OF 2-WEEKS IN ADVANCE. A ONE-WEEK MINIMUM NOTIFICATION IS REQUIRED FOR CONFLICTS REQUIRING THE RELOCATION OF SERVICE LATERALS. ALL RELOCATIONS ARE SUBJECT TO APPROVAL FROM THE APPLICABLE UTILITY COMPANY AND/OR USER.

E. FIELD CHANGES -
NO ROADWAY, UTILITY ALIGNMENT OR GRADE CHANGES ARE ALLOWED FROM THE APPROVED CONSTRUCTION PLANS/DOCUMENTS WITHOUT WRITTEN APPROVAL FROM THE SLC PUBLIC UTILITIES DIRECTOR. CHANGES TO HYDRANT LOCATIONS AND/OR FIRE LINES MUST BE REVIEWED AND APPROVED BY THE SALT LAKE CITY OR SALT LAKE COUNTY FIRE DEPARTMENT (AS APPLICABLE TO THE PROJECT) AND PUBLIC UTILITIES.

F. PUBLIC NOTICE TO PROJECTS IN THE PUBLIC WAY-
FOR APPROVED PROJECTS THE CONTRACTOR IS RESPONSIBLE TO PROVIDE AND DISTRIBUTE WRITTEN NOTICE TO ALL RESIDENTS LOCATED WITHIN THE PROJECT AREA AT LEAST 72-HOURS PRIOR TO CONSTRUCTION. WORK TO BE CONDUCTED WITHIN COMMERCIAL OR INDUSTRIAL AREAS MAY REQUIRE A LONGER NOTIFICATION PERIOD AND ADDITIONAL CONTRACTOR COORDINATION WITH PROPERTY OWNERS. THE WRITTEN NOTICE IS TO BE APPROVED BY THE SLC PUBLIC UTILITIES PROJECT ENGINEER.

G. PUBLIC NOTICE FOR WATER MAIN SHUT DOWNS -
THROUGH THE SLC PUBLIC UTILITIES INSPECTOR AND WITH THE PUBLIC UTILITIES PROJECT ENGINEER APPROVAL, SLC PUBLIC UTILITIES MUST BE CONTACTED AND APPROVE ALL WATER MAIN SHUTDOWNS. ONCE APPROVED THE CONTRACTOR MUST NOTIFY ALL EFFECTED USERS BY WRITTEN NOTICE A MINIMUM OF 48-HOURS (RESIDENTIAL) AND 72-HOURS (COMMERCIAL/INDUSTRIAL) PRIOR TO THE WATER MAIN SHUT DOWN. PUBLIC UTILITIES MAY REQUIRE LONGER NOTICE PERIODS.

H. WATER AND SEWER SEPARATION -
IN ACCORDANCE WITH UTAH'S DEPARTMENT OF HEALTH REGULATIONS, A MINIMUM TEN-FOOT HORIZONTAL AND 1.5-FOOT VERTICAL (WITH WATER ON TOP) SEPARATION IS REQUIRED. IF THESE CONDITIONS CANNOT BE MET, STATE AND SLC PUBLIC UTILITIES APPROVAL IS REQUIRED. ADDITIONAL CONSTRUCTION MEASURES WILL BE REQUIRED FOR THESE CONDITIONS.

I. SALVAGE -
ALL METERS MUST BE RETURNED TO PUBLIC UTILITIES, AND AT PUBLIC UTILITIES REQUEST ALL SALVAGED PIPE AND/OR FITTINGS MUST BE RETURNED TO SLC PUBLIC UTILITIES (483-6727) LOCATED AT 1530 SOUTH WEST TEMPLE.

J. SEWER MAIN AND LATERAL CONSTRUCTION REQUIREMENTS -
SLC PUBLIC UTILITIES MUST APPROVE ALL SEWER CONNECTIONS. ALL SEWER LATERALS 6-INCHES AND SMALLER MUST WYE INTO THE MAINS PER SLC PUBLIC UTILITIES REQUIREMENTS. ALL 8-INCH AND LARGER SEWER CONNECTIONS MUST BE PETITIONED FOR AT PUBLIC UTILTIES (483-6762) AND CONNECTED AT A MANHOLE. **INSIDE DROPS IN MANHOLES ARE NOT ALLOWED.** A MINIMUM 4-FOOT BURY DEPTH IS REQUIRED ON ALL SEWER MAINS AND LATERALS. CONTRACTOR SHALL INSTALL INVERT COVERS IN ALL SEWER MANHOLES WITHIN THE PROJECT AREA.

CONTRACTOR TO PROVIDE AIR PRESSURE TESTING OF SEWER MAINS IN ACCORDANCE WITH PIPE MANUFACTURERS RECOMMENDATIONS AND SALT LAKE CITY PUBLIC UTILITIES REQUIREMENTS. ALL PVC SEWER MAIN AND LATERAL TESTING SHALL BE IN ACCORDANCE WITH UNI-BELL UN-B-6-98 RECOMMENDED PRACTICE FOR LOW PRESSURE AIR TESTING OF INSTALLED SEWER PIPE. CONTRACTOR SHALL PROVIDE SEWER LATERAL WATER TESTING AS REQUIRED BY THE SALT LAKE CITY PUBLIC UTILITIES PROJECT ENGINEER OR INSPECTOR. A MINIMUM OF 9-FEET OF HEAD PRESSURE IS REQUIRED AS MEASURED VERTICALLY FROM THE HIGH POINT OF THE PIPELINE AND AT OTHER LOCATIONS ALONG THE PIPELINE AS DETERMINED BY THE SLC PUBLIC UTILITIES PROJECT ENGINEER OR INSPECTOR. TESTING TIME WILL BE NO LESS THAN AS SPECIFIED FOR THE AIR TEST DURATION IN TABLE I ON PAGE 12 OF UNI-B-6-98. ALL PIPES SUBJECT TO WATER TESTING SHALL BE FULLY VISIBLE TO THE INSPECTOR DURING TESTING. TESTING MUST BE PERFORMED IN THE PRESENCE OF A SLC PUBLIC UTILITIES REPRESENTATIVE. ALL VISIBLE LEAKAGE MUST BE REPAIRED TO THE SATISFACTION OF THE SLC PUBLIC UTILITIES ENGINEER OR INSPECTOR.

K. WATER AND FIRE MAIN AND SERVICE CONSTRUCTION REQUIREMENTS -
SLC PUBLIC UTILITIES MUST APPROVE ALL FIRE AND WATER SERVICE CONNECTIONS. A MINIMUM 3-FOOT SEPARATION IS REQUIRED BETWEEN ALL WATER AND FIRE SERVICE TAPS INTO THE MAIN. ALL CONNECTIONS MUST BE MADE MEETING SLC PUBLIC UTILITIES REQUIREMENTS. A 5-FOOT MINIMUM BURY DEPTH (FINAL GRADE TO TOP OF PIPE) IS REQUIRED ON ALL WATER/FIRE LINES UNLESS OTHERWISE APPROVED BY PUBLIC UTILITIES. WATER LINE THRUST BLOCK AND RESTRAINTS ARE AS PER SLC APPROVED DETAIL DRAWINGS AND SPECIFICATIONS. ALL EXPOSED NUTS AND BOLTS WILL BE COATED WITH CHEVRON FM1 GREASE PLUS MINIMUM 8 MIL THICKNESS PLASTIC. PROVIDE STAINLESS STEEL NUTS, BOLTS AND WASHERS FOR HIGH GROUNDWATER/ SATURATED CONDITIONS AT FLANGE FITTINGS, ETC.

ALL WATERLINES INSTALLATIONS AND TESTING TO BE IN ACCORDANCE WITH AWWA SECTIONS C600, C601, C651, C206, C200, C900, C303 AWWA MANUAL M11 AND ALL OTHER APPLICABLE AWWA, UPWS, ASTM AND ANSI SPECIFICATIONS RELEVANT TO THE INSTALLATION AND COMPLETION OF THE PROJECT. AMENDMENT TO SECTION C600 SECTION 4.1.1; DOCUMENT TO READ MINIMUM TEST PRESSURE SHALL NOT BE LESS THAN 200 P.S.I. GAUGED TO A HIGH POINT OF THE PIPELINE BEING TESTED. ALL MATERIALS USED FOR WATERWORKS PROJECTS TO BE RATED FOR 150 P.S.I. MINIMUM OPERATING PRESSURE.

CONTRACTOR IS TO INSTALL WATER SERVICE LINES, METER YOKES AND/OR ASSEMBLIES AND METER BOXS WITH LIDS LOCATED AS APPROVED ON THE PLANS PER APPLICABLE PUBLIC UTILITIES DETAIL DRAWINGS. METER BOXES ARE TO BE PLACED IN THE PARK STRIPS PERPENDICULAR TO THE WATERMAIN SERVICE TAP CONNECTION. ALL WATER METERS, CATCH BASINS, CLEANOUT BOXES, MANHOLES, DOUBLE CHECK VALVE DETECTOR ASSEMBLIES, REDUCED PRESSURE DETECTOR ASSEMBLIES AND BACKFLOW PREVENTION DEVICES MUST BE LOCATED OUTSIDE OF ALL APPROACHES, DRIVEWAYS, PEDESTRIAN WALKWAYS AND OTHER TRAVELED WAYS UNLESS OTHERWISE APPROVED ON PLANS.

BACKFLOW PREVENTORS ARE REQUIRED ON ALL IRRIGATION AND FIRE SPRINKLING TAPS PER PUBLIC UTILITIES AND SLC FIRE DEPARTMENT REQUIREMENTS. CONTRACTORS SHALL INSTALL BACKFLOW PREVENTION DEVICES ON FIRE SPRINKLER CONNECTIONS. DOUBLE CHECK VALVE ASSEMBLIES SHALL BE INSTALLED ON CLASS 1, 2 AND 3 SYSTEMS. REDUCED PRESSURE PRINCIPLE VALVES SHALL BE INSTALLED ON CLASS 4 SYSTEMS. ALL FIRE SPRINKLING BACKFLOW ASSEMBLIES SHALL CONFORM TO ASSE STANDARD 1048, 1013, 1047 AND 1015. THE CONTRACTOR SHALL BE RESPONSIBLE TO PERFORM BACKFLOW PREVENTION TESTS PER SALT LAKE CITY STANDARDS AND SUBMIT RESULTS TO PUBLIC UTILITIES. ALL TESTS MUST BE PERFORMED AND SUBMITTED TO PUBLIC UTILITIES WITHIN 10 DAYS OF INSTALLATION OR WATER TURN-ON. BACKFLOW TEST FORMS ARE AVAILABLE AT PUBLIC UTILITIES' CONTRACTS AND AGREEMENTS OFFICE.

L. GENERAL WATER, SEWER AND STORM DRAIN REQUIREMENTS -
ALL WATER, FIRE AND SEWER SERVICES STUBBED TO A PROPERTY MUST BE USED OR WATER AND FIRE SERVICES MUST BE KILLED AT THE MAIN AND SEWER LATERALS CAPPED AT PROPERTY LINE PER PUBLIC UTILITIES REQUIREMENTS. ALLOWABLE SERVICES TO BE KEPT WILL BE AS DETERMINED BY THE PUBLIC UTILITIES PROJECT ENGINEER. ALL WATER AND FIRE SERVICE KILLS AND SEWER LATERAL CAPS ARE TO BE KILLED AND CAPPED AS DETERMINED AND VISUALLY VERIFIED BY THE ON-SITE PUBLIC UTILITIES INSPECTOR.

ALL MANHOLES, HYDRANTS, VALVES, CLEAN-OUT BOXES, CATCH BASINS, METERS, ETC. MUST BE RAISED OR LOWERED TO FINAL GRADE PER PUBLIC UTILITIES STANDARDS AND INSPECTOR REQUIREMENTS. CONCRETE COLLARS MUST BE CONSTRUCTED ON ALL MANHOLES, CLEANOUT BOXES, CATCH BASINS AND VALVES PER PUBLIC UTILITIES 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 AS REQUIRED BY THE PUBLIC UTILITIES INSPECTOR. ALL MANHOLE, CLEANOUT BOX OR CATCH BASIN DISCONNECTIONS MUST BE REPAIRED AND GROUTED AS REQUIRED BY THE ON-SITE PUBLIC UTILITIES INSPECTOR.

CONTRACTOR SHALL NOT ALLOW ANY GROUNDWATER OR DEBRIS TO ENTER THE NEW OR EXISTING PIPE DURING CONSTRUCTION. UTILITY TRENCHING, BACKFILL, AND PIPE ZONE AS PER SLC PUBLIC UTILITIES, "UTILITY INSTALLATION DETAIL."

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
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
MH	MANHOLE
MIN	MINIMUM
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
PIP	PLASTIC IRRIGATION PIPE
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	SIDEWALK
SWL	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
WL	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	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.

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SYDNEY MULTI-FAMILY
900 SOUTH 200 WEST
SALT LAKE CITY, UTAH

LICENSED PROFESSIONAL ENGINEER
No. 767514-2202
JARED K. FORD
02-26-2020
STATE OF UTAH

GENERAL NOTES

PROJECT NUMBER 8671B
PRINT DATE 2/26/20
DRAWN BY MAM
CHECKED BY QE
PROJECT MANAGER QE

C-001

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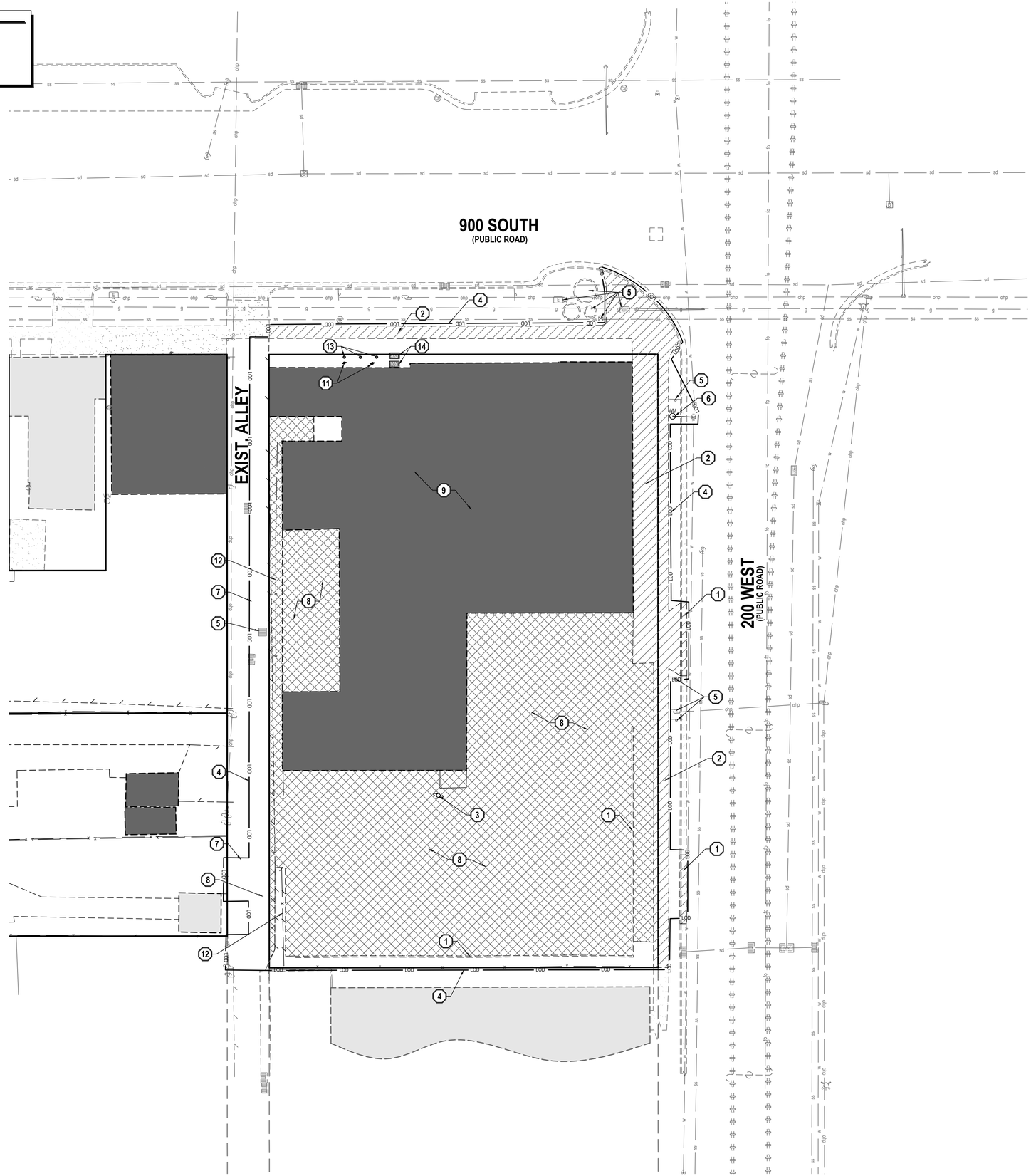
BENCHMARK

OFFSET MONUMENT
INTERSECTION OF
300 WEST STREET &
900 SOUTH STREET

ELEV = 4231.08'



GENERAL 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.
7. PRIOR TO WORKING IN THE PUBLIC WAY, A LICENSED, INSURED, AND BONDED CONTRACTOR, WHO HAS SAID INFORMATION ON FILE WITH SLC ENGINEERING, MUST OBTAIN A PUBLIC WAY PERMIT FROM SLC ENGINEERING AND PERHAPS A TRANSPORTATION PERMIT. ALL WORK IN THE PUBLIC WAY SHALL FOLLOW APWA STANDARDS.

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, REMOVE, AND PROPERLY DISPOSE OF EXISTING CONCRETE CURB AND GUTTER.
2. SAWCUT, REMOVE, AND PROPERLY DISPOSE OF EXISTING CONCRETE SIDEWALK.
3. REMOVE AND PROPERLY DISPOSE OF UTILITY POLE.
4. LIMIT OF DISTURBANCE.
5. PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, SIGNS, ETC. (TYPICAL UNLESS OTHERWISE NOTED).
6. WATER SERVICE TO BE ABANDONED IN PLACE. DISCONNECT WATERLINE AT MAIN PER SALT LAKE CITY PUBLIC UTILITIES STANDARDS.
7. SAWCUT EXISTING ASPHALT PAVEMENT TO PROVIDE A CLEAN EDGE FOR THE TRANSITION BETWEEN EXISTING AND PROPOSED ASPHALT PAVEMENT.
8. REMOVE AND PROPERLY DISPOSE OF EXISTING ASPHALT PAVEMENT.
9. REMOVE AND PROPERLY DISPOSE OF EXISTING STRUCTURES, CONCRETE SLABS, STAIRS, ETC., INCLUDING ALL ELECTRICAL APPURTENANCES, 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.
10. SEWER SERVICE TO BE ABANDONED IN PLACE. DISCONNECT AT MAIN PER SALT LAKE CITY PUBLIC UTILITIES STANDARDS.
11. REMOVE AND PROPERLY DISPOSE OF EXISTING GAS METER.
12. REMOVE AND PROPERLY DISPOSE OF EXISTING FENCE.
13. REMOVE AND PROPERLY DISPOSE OF EXISTING BOLLARD.
14. REMOVE AND PROPERLY DISPOSE OF EXISTING STORM DRAIN VAULT.

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.

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LICENSED PROFESSIONAL ENGINEER
No. 7675714-2202
JARED K. FORD
02-26-2020
STATE OF UTAH

DEMOLITION PLAN

PROJECT NUMBER	PRINT DATE
8671B	2/26/20
DRAWN BY	CHECKED BY
MAM	QE
PROJECT MANAGER	
QE	

C-100

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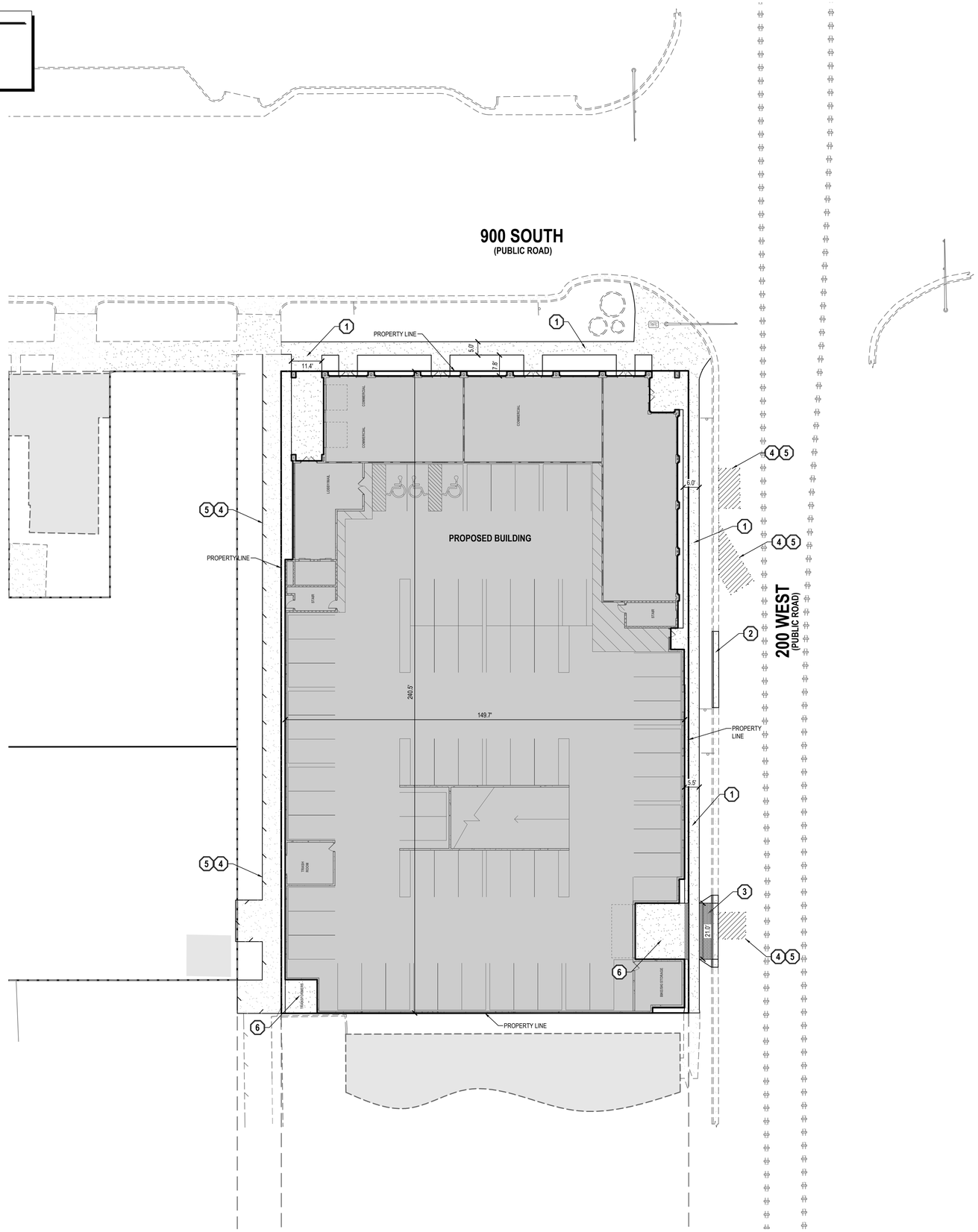

SITE GENERAL NOTES

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.

SITE PLAN 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. 5" THICK CONCRETE SIDEWALK PER APWA STANDARD PLAN NO. 231 AND SPECIFICATIONS.
2. 30" TYPE "A" CURB AND GUTTER PER APWA STANDARD PLAN NO. 205 AND SPECIFICATIONS.
3. INSTALL DRIVE APPROACH PER APWA STANDARD PLAN NO. 221.1 AND SPECIFICATIONS. (DRIVEWAY MUST BE A DIFFERENT COLOR, TEXTURE, OR PAVING MATERIAL THAN THE SIDEWALK. MATERIAL, COLOR, AND/ OR TEXTURE TO BE DETERMINED BY THE OWNER.)
4. SAWCUT AND PATCH ASPHALT FOR UTILITY INSTALLATION PER APWA STANDARD PLAN NO. 255 AND SPECIFICATIONS.
5. PATCH ASPHALT MATCHING EXISTING PAVEMENT THICKNESS. 3" ASPHALT CONCRETE OVER 8" BASE COURSE MINIMUM.
6. CONCRETE PAVEMENT: 6" THICK CONCRETE WITH 6" UNTREATED BASE COURSE PER GEOTECHNICAL REPORT AND DETAIL 3/C-500.

NORTH

HORIZONTAL GRAPHIC SCALE

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(IN FEET)
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RICHFIELD
Phone: 435.896.2983

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FOR:
URBAN ALFANDRE
825 N 300 W #N141
SALT LAKE CITY, UT 84103

CONTACT:
JAMES ALFANDRE
PHONE: 202-251-5059

SYDNEY MULTI-FAMILY

900 SOUTH 200 WEST
SALT LAKE CITY, UTAH

LICENSED PROFESSIONAL ENGINEER
No. 7675714-2202
JARED K. FORD
02-26-2020
STATE OF UTAH

SITE PLAN

PROJECT NUMBER	PRINT DATE
8671B	2/26/20
DRAWN BY	CHECKED BY
MAM	QE
PROJECT MANAGER	
QE	

C-200

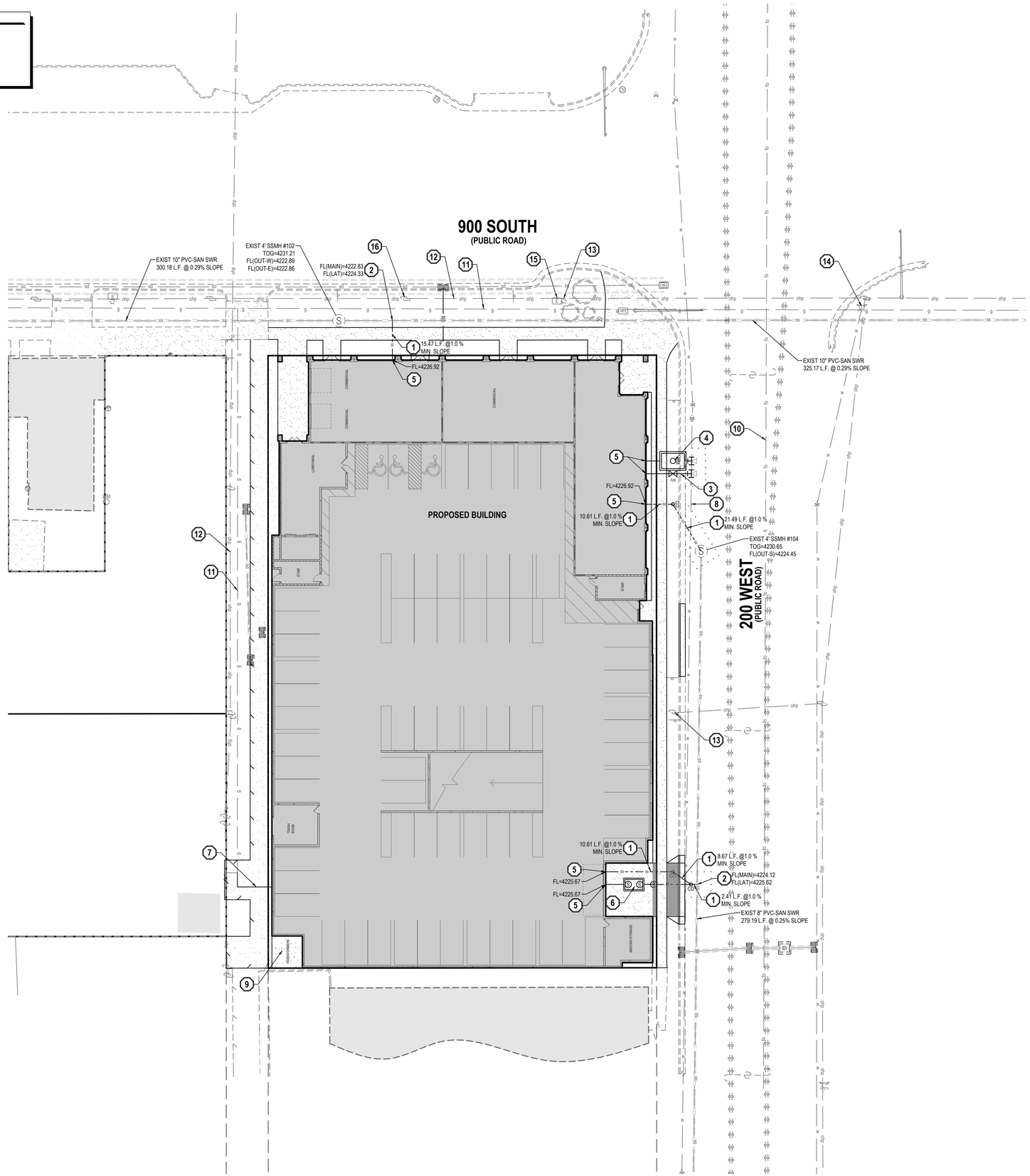
811 Know what's below. Call before you dig.

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

BENCHMARK

OFFSET MONUMENT
INTERSECTION OF
300 WEST STREET &
900 SOUTH STREET

ELEV = 4231.08'



UTILITY GENERAL 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 SANITARY SEWER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY STANDARD PLANS AND SPECIFICATIONS.
4. ALL WATER INFRASTRUCTURE TO BE INSTALLED PER GOVERNING AGENCY OR APWA STANDARD PLANS AND SPECIFICATIONS.
5. DEFLECT OR LOOP ALL WATERLINES TO AVOID CONFLICTS WITH OTHER UTILITIES PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
6. PROJECT SHALL COMPLY WITH ALL UTAH DIVISION OF DRINKING WATER RULES AND REGULATIONS INCLUDING, BUT NOT LIMITED TO, THOSE PERTAINING TO BACKFLOW PROTECTION AND CROSS CONNECTION PREVENTION.
7. THE CONTRACTOR IS TO COORDINATE ALL UTILITIES WITH MECHANICAL/PLUMBING PLANS.
8. NOTIFY ENGINEER OF ANY DISCREPANCIES IN DESIGN OR STAKING BEFORE PLACING UTILITY STRUCTURES OR PIPES.
9. THE CONTRACTOR SHALL ADJUST TO GRADE ALL EXISTING UTILITIES AS NEEDED PER LOCAL GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
10. THE CONTRACTOR IS TO PROTECT AND PRESERVE ALL EXISTING IMPROVEMENTS, UTILITIES, AND SIGNS, ETC. UNLESS OTHERWISE NOTED ON THESE PLANS.
11. PRIOR TO WORKING IN THE PUBLIC WAY, A LICENSED, INSURED, AND BONDED CONTRACTOR, WHO HAS SAID INFORMATION ON FILE WITH SLC ENGINEERING, MUST OBTAIN A PUBLIC WAY PERMIT FROM SLC ENGINEERING AND PERHAPS A TRANSPORTATION PERMIT. ALL WORK IN THE PUBLIC WAY SHALL FOLLOW APWA STANDARDS.

SITE PLAN 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. 6" SDR-35 PVC SANITARY SEWER LATERAL, INCLUDING CLEANOUTS AT MAXIMUM 100-FOOT SPACING. INSTALLATION AND TRENCHING PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS. LENGTH AND SLOPE PER PLAN.
2. CONNECT TO EXISTING SEWER MAIN PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS.
3. 6" C-900 PVC FIRE LINE, INCLUDING ALL THRUST BLOCKING AND FITTINGS, PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS. INSTALLATION AND TRENCHING PER APWA STANDARDS AND SPECIFICATIONS. HOT TAP EXISTING 12" WATERLINE WITH 6" GATE VALVE PER SALT LAKE CITY PUBLIC UTILITIES STANDARDS.
4. 3" CULINARY WATER METER PER SALT LAKE CITY STANDARDS AND SPECIFICATIONS. INSTALL 3" CTS POLY PIPE FROM MAIN TO METER AND 4" CTS POLY FROM METER TO BUILDING. TRANSITION FROM 3" TO 4" NEEDS TO TAKE PLACE OUTSIDE OF METER BARREL ON 'COLD SIDE'. METER IN CONCRETE VAULT PER APWA STANDARD PLAN NO. 505, 523, AND SPECIFICATIONS.
5. SEE MECHANICAL/PLUMBING PLANS FOR CONTINUATION.
6. SAND/OIL SEPARATOR AND SAMPLING MANHOLE. A FOUR FOOT DIAMETER SAMPLING MANHOLE MUST BE LOCATED DOWNSTREAM OF THE SAND/OIL SEPARATOR AND UPSTREAM OF ANY OTHER CONNECTIONS. SEE PLUMBING PLANS FOR MORE INFORMATION.
7. UNDERGROUND GAS LINE TO BE DESIGNED BY SERVICE PROVIDER. LAYOUT SHOWN IS SCHEMATIC IN NATURE AND MAY VARY IN THE FIELD.
8. EXISTING WATER LINE.
9. S.A.D. S.M.P. ELECTRICAL TRANSFORMER. SEE ELECTRICAL PLANS FOR ADDITIONAL INFORMATION. INSTALL ON PROVIDED CONCRETE PAD.
10. EXISTING FIBER OPTIC/COMMUNICATIONS LINE.
11. EXISTING GAS LINE.
12. EXISTING OVERHEAD POWER LINE.
13. EXISTING LIGHT POLE.
14. EXISTING FIRE HYDRANT.
15. EXISTING ELECTRICAL BOX.
16. EXISTING POWER POLE.

NORTH

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.

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SALT LAKE CITY, UTAH

LICENSED PROFESSIONAL ENGINEER
No. 767514-2202
JARED K. FORD
02-26-2020
STATE OF UTAH

UTILITY PLAN

PROJECT NUMBER	PRINT DATE
8671B	2/26/20
DRAWN BY	CHECKED BY
MAM	QE
PROJECT MANAGER	
QE	

C-300

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BENCHMARK

OFFSET MONUMENT
INTERSECTION OF
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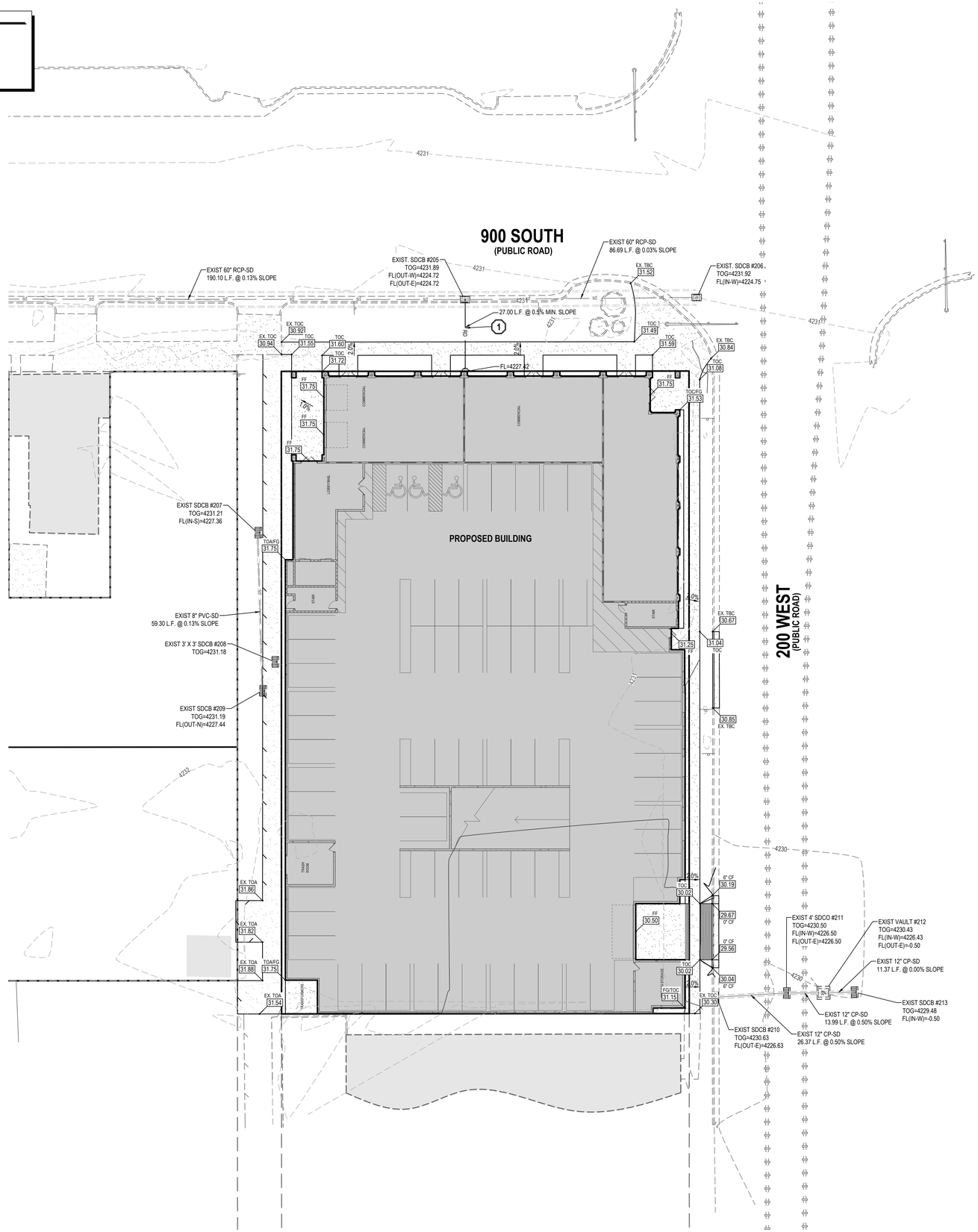

GENERAL NOTES

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. ELEVATIONS HAVE BEEN TRUNCATED FOR CLARITY. XX.XX REPRESENTS AN ELEVATION OF 42XX.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 MECHANICAL/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.
15. PRIOR TO WORKING IN THE PUBLIC WAY, A LICENSED, INSURED, AND BONDED CONTRACTOR, WHO HAS SAID INFORMATION ON FILE WITH SLC ENGINEERING, MUST OBTAIN A PUBLIC WAY PERMIT FROM SLC ENGINEERING AND PERHAPS A TRANSPORTATION PERMIT. ALL WORK IN THE PUBLIC WAY SHALL FOLLOW APWA STANDARDS.

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. 8" N12 HDPE ROOF DRAIN CONNECTION. INSTALLATION AND TRENCHING PER GOVERNING AGENCY'S STANDARDS AND SPECIFICATIONS. LENGTH AND SLOPE PER PLAN. SEE MECHANICAL PLANS FOR CONTINUATION.

NORTH

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
HORZ: 1 inch = 20 ft.

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SYDNEY MULTI-FAMILY

900 SOUTH 200 WEST
SALT LAKE CITY, UTAH

LICENSED PROFESSIONAL ENGINEER
No. 7675714-2202
JARED K. FORD
02-26-2020
STATE OF UTAH

GRADING PLAN

PROJECT NUMBER 8671B
PRINT DATE 2/26/20
DRAWN BY MAM
CHECKED BY QE
PROJECT MANAGER QE

C-400

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BENCHMARK

OFFSET MONUMENT
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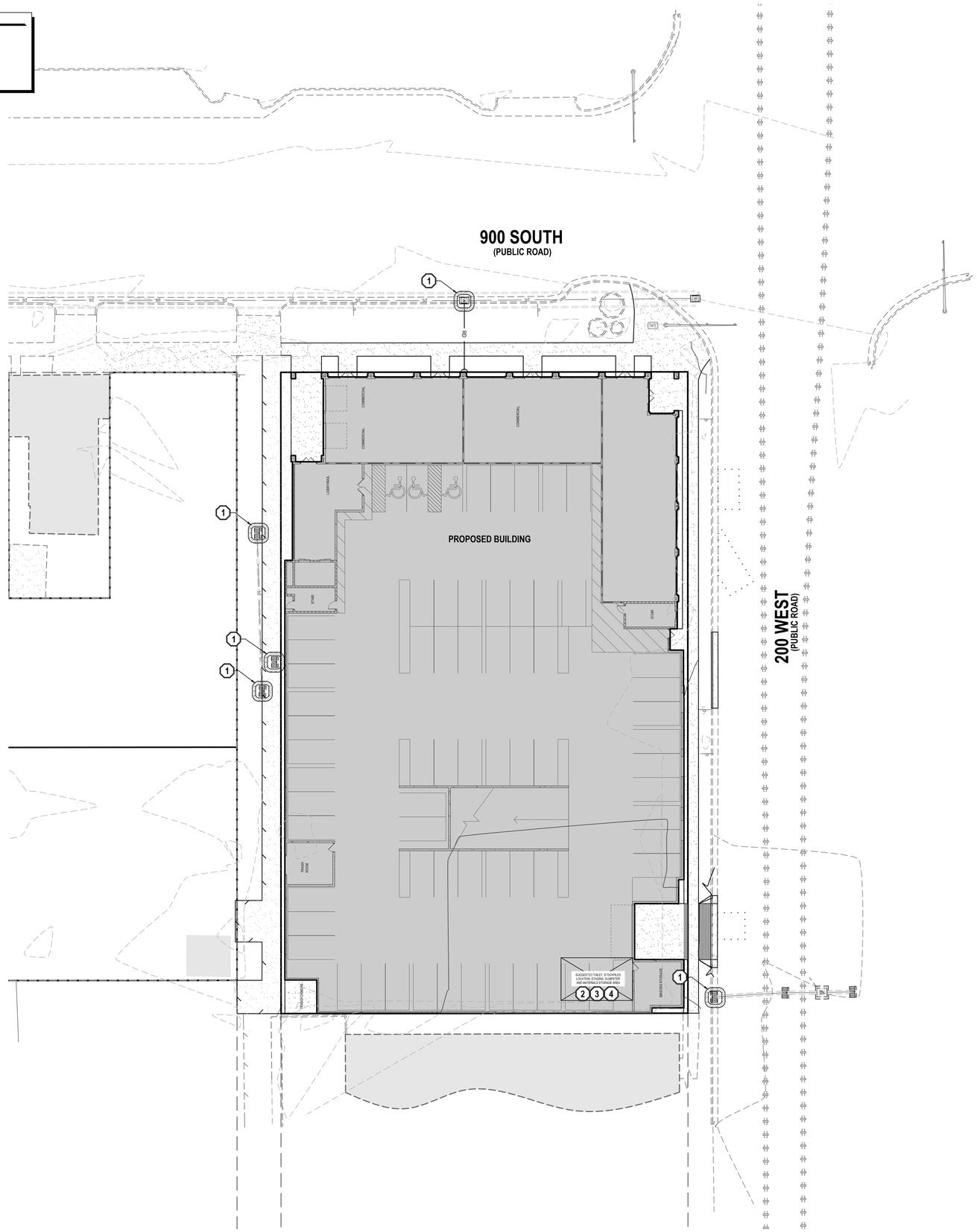

GENERAL NOTES

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. INLET PROTECTION PER DETAIL 1/C-500.
2. PORTABLE TOILET PER DETAIL 2/C-500.
3. SUGGESTED TEMPORARY CONSTRUCTION SITE PARKING, STAGING, DUMPSTER, AND MATERIAL STORAGE AREA.
4. SUGGESTED STOCKPILE AREA.

NORTH

HORIZONTAL GRAPHIC SCALE

20 0 10 20 40

(IN FEET)
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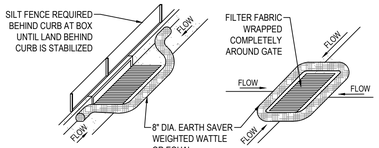
LICENSED PROFESSIONAL ENGINEER
No. 7675714-2202
JARED K. FORD
02-26-2020
STATE OF UTAH

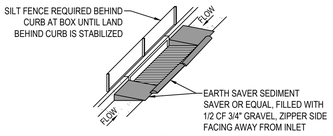
EROSION CONTROL PLAN

PROJECT NUMBER	PRINT DATE
8671B	2/26/20
DRAWN BY	CHECKED BY
MAM	QE
PROJECT MANAGER	
QE	

C-500



WATTLE OPTION



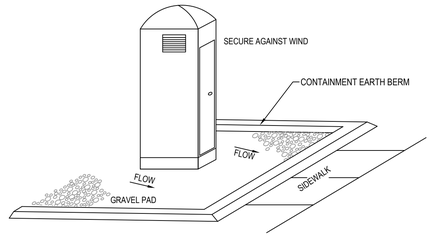
SANDBAG OPTION

NOTES:

1. PLACE WATTLES OR GRAVEL BAGS TIGHT AGAINST CURB TO PREVENT SEDIMENT-LADEN WATER FROM GETTING BETWEEN CURB AND WATTLE/BAG.
2. PLACE WATTLES OR GRAVEL BAGS SUCH THAT FLOW DOES NOT OVERTOP CURB OR ROAD CENTERLINE.
3. INSPECT INLET PROTECTION 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 INLET PROTECTION. THE ALTERNATIVE METHOD SHALL BE APPROVED BY THE CITY INSPECTOR AND THE ENGINEER OF RECORD.
6. BEFORE PLACEMENT OF CURB, STABILIZATION OF LAND BEHIND CURB, AND/OR PAVING, MAINTAIN TOP OF INLET AT 6" ABOVE GRADE, AND SURROUND WITH SILT FENCE FOR SEDIMENTATION AROUND BOX. MAINTAIN SILT FENCE BEHIND BOX UNTIL LAND BEHIND CURB IS STABILIZED.

1 SAG INLET PROTECTION

SCALE: NONE



2 PORTABLE TOILET

SCALE: NONE

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JARED K. FORD
02-26-2020
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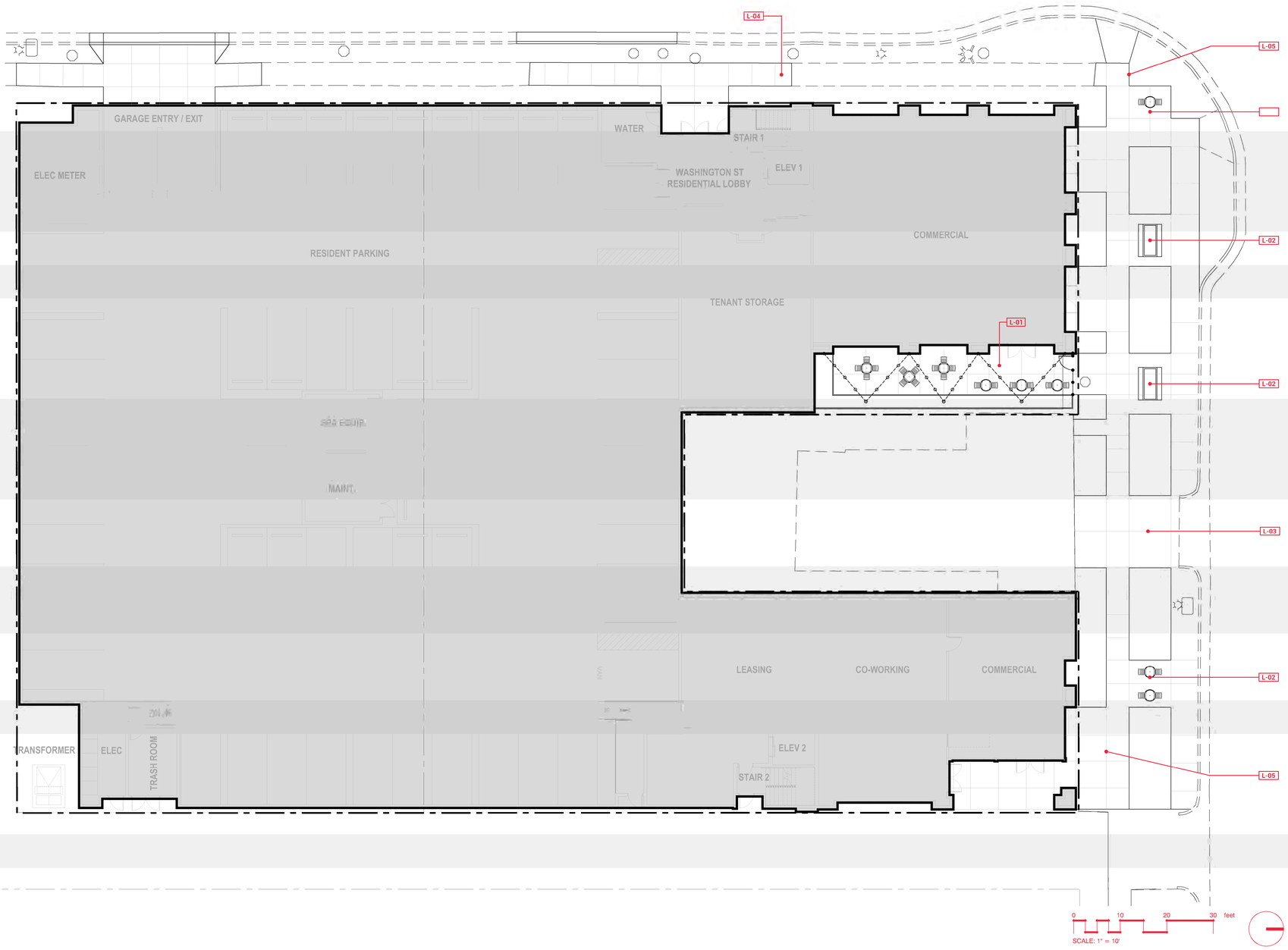
CIVIL DETAILS

PROJECT NUMBER 8671B
PRINT DATE 2/26/20
DRAWN BY MAM
CHECKED BY QE
PROJECT MANAGER QE

C-600

REFERENCE NOTES SCHEDULE

SYMBOL	SITE LAYOUT DESCRIPTION	QTY	DETAIL
L-01	"SECRET" BACK PATIO WITH BISTRO LIGHTS AND TABLES		
L-02	URBAN PATIOS		
L-03	EXISTING DRIVEWAY - PROTECT-IN-PLACE		
L-04	EXISTING CONCRETE WALKWAY		
L-05	PROPOSED CONCRETE WALKWAY - CONTRACTOR TO MEET EXISTING WALKWAY		



Architecture + Planning
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ktgy.com
303.825.6400

KTGY Project No: 2019-0747

PROJECT CONTACT: KATE MILLENSON
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PRINCIPAL: NATHAN SCIARRA
PROJECT DESIGNER: ENA SIVCEVIC

Developer

URBAN ALFANDRE
825 N. 300 W. N141
Salt Lake City, UT 84103
202.251.5059

Landscape Architect

LOFTSIXFOUR DESIGNING OUTDOOR LIVING EXPERIENCES

SLATE

SALT LAKE CITY, UTAH

No	Date	Description
	10/18/19	100% SD
	12/17/19	100% DD

NOT FOR CONSTRUCTION

SITE LAYOUT PLAN

LS101

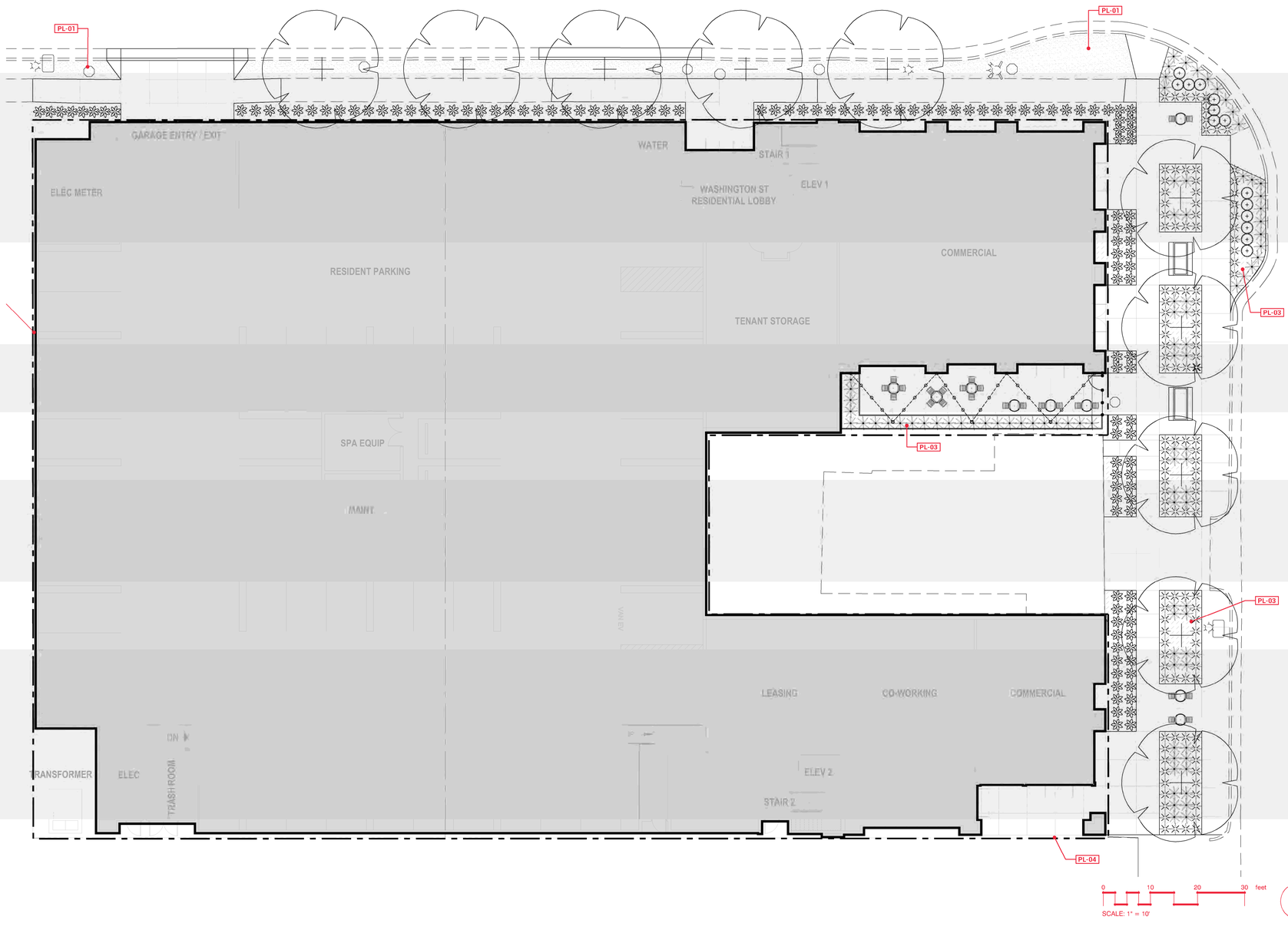
PLOT DATE: 12/5/2019 10:32:09 AM

REFERENCE NOTES SCHEDULE

SYMBOL	PLANTING DESCRIPTION	QTY	DETAIL
PL-01	TURF AREA (TYP.)		
PL-03	PLANTING AREA (TYP.)		
PL-04	PROPERTY LINE (TYP.)		

PLANT SCHEDULE

TREES	BOTANICAL / COMMON NAME	SIZE	CONT.	HZONE	QTY
	ZELKOVA SERRATA `CITY SPRITE` / CITY SPRITE ZELKOVA	2" CAL.	B&B	TD3	10
SHRUBS	**BOTANICAL / COMMON NAME**	**SIZE**	**HZONE**		**QTY**
	BUXUS X `GREEN MOUNTAIN` / GREEN MOUNTAIN BOXWOOD -PLANT AND TRIM SO AS TO FORM DENSE HEDGE	5 GAL.	SE4		14
ORNAMENTAL GRASSES	**BOTANICAL / COMMON NAME**	**SIZE**	**HZONE**		**QTY**
	CALAMAGROSTIS X ACUTIFLORA `KARL FORESTER` / KARL FORESTER GRASS	1 GAL.	TW2		88
	PENNISETUM ALOPECUROIDES `KARLEY ROSE` / KARLEY ROSE GRASS	1 GAL.	TW2		126
PERENNIALS	**BOTANICAL / COMMON NAME**	**SIZE**	**HZONE**		**QTY**
	IRIS SIBIRICA / SIBERIAN IRIS	1 GAL.	P4		120
ROCK MULCH	**BOTANICAL / COMMON NAME**	**CONT**	**HZONE**	**SPACING**	**QTY**
	1" WASATCH GRAY LANDSCAPE ROCK	ROCK MULCH	N/A		2,811 SF
TURF/SOD	**BOTANICAL / COMMON NAME**	**CONT**	**HZONE**	**SPACING**	**QTY**
	TURF SOD	SOD	N/A		933 SF



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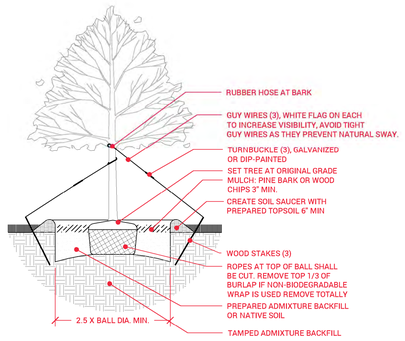
PLANTING PLAN

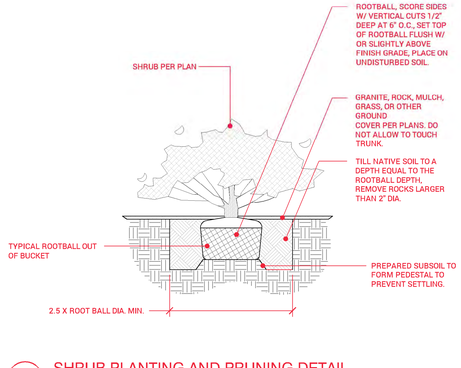
LS101

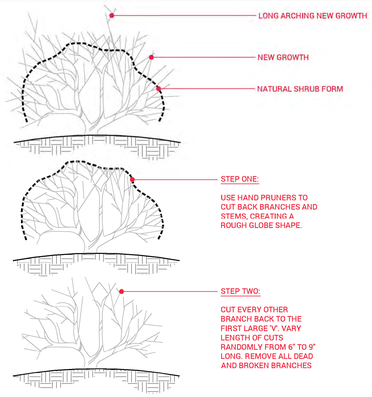
PLOT DATE: 12/5/2019 10:32:09 AM



1 DECIDUOUS TREE PLANTING

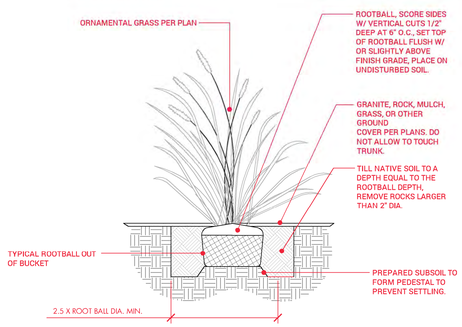
1" = 1'-0"

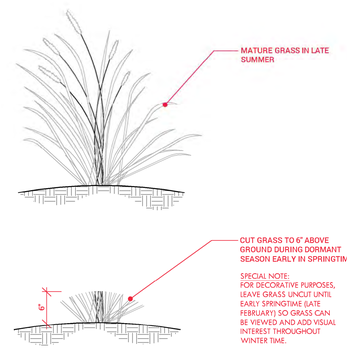




2 SHRUB PLANTING AND PRUNING DETAIL

SCALE: NOT TO SCALE





3 GRASS PLANTING AND PRUNING

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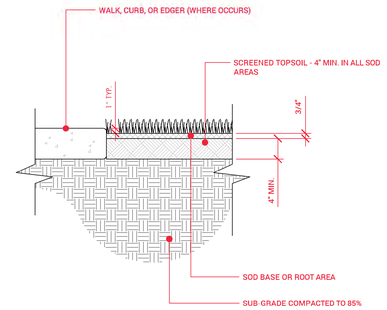

SOD LAYING NOTE:

AFTER AMENDING GROUND; LEVEL, SMOOTH, AND RAKE ALL AREAS TO RECEIVE SOD. SODDED AREAS MUST BE FREE OF ANY LUMPS, DEPRESSIONS, IRREGULAR AREAS OF ROCKS GREATER THAN 1/4" DIAMETER, ALL MOUNDS MUST BLEND SMOOTHLY INTO LEVEL GRADE.

INTALLATION PROCESS:
1. LAY SOD WITHING 24 HOURS OF BEING LIFTED.
2. LAY SOD IN ROWS WITH STAGGERED JOINTS. BUTT SECTIONS CLOSELY WITHOUT OVERLAPPING OR LEAVING GAPS BETWEEN SECTIONS. CUT OUT IRREGULAR OR THIN SECTIONS WITH A SHARP KNIFE.
3. FINISH GRADE FOR SODDED AREAS SHALL BE 2 INCHES BELOW FINISH GRADE OF ADJACENT PAVEMENT (TYP.)
4. AFTER SODDING HAS BEEN COMPLETED, ROLL HORIZONTAL SURFACE AREAS IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER WITH A 150 LB. SOD ROLLER.
5. REPAIR AND RE-ROLL AREAS WITH DEPRESSIONS, LUMPS, OR OTHER IRREGULARITIES.
6. HEAVY ROLLING TO CORRECT IRREGULARITIES IN GRADE IS NOT PERMITTED.
7. WATER ALL SODDED AREAS IMMEDIATELY AFTER SOD LAYING TO OBTAIN MOISTURE PENETRATION THROUGH SOD INTO TOP 3" OF TOPSOIL.
8. PROVIDE ADEQUATE PROTECTION OF SODDED AREAS AGAINST TRESPASSING, EROSION, AND DAMAGE OF ANY KIND. REMOVE THIS PROTECTION AFTER SODDED AREAS HAVE BEEN ACCEPTED BY THE OWNERS REPRESENTATIVE.
9. REPLACE DAMAGED AREAS AT NO ADDITIONAL COST TO OWNER.

4 SOD PLANTING AND LAYING

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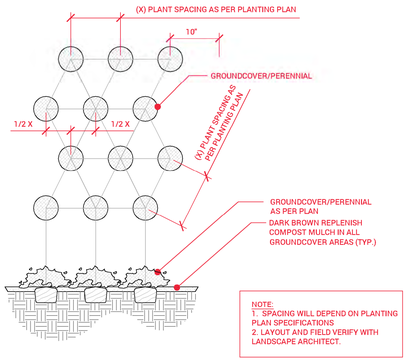
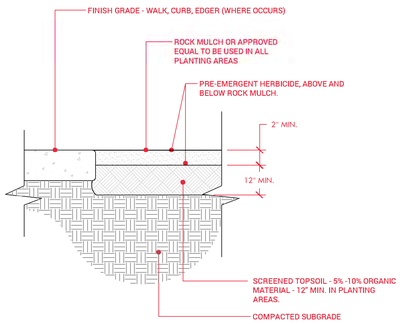


NOTE:
1. SPACING WILL DEPEND ON PLANTING PLAN SPECIFICATIONS
2. LAYOUT AND FIELD-VERIFY WITH LANDSCAPE ARCHITECT.

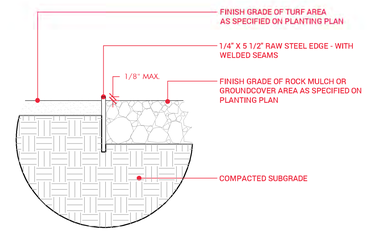
5 GROUNDCOVER PLANTING

SCALE: NOT TO SCALE



6 2" ROCK MULCH PLANTING AREA

SCALE: NOT TO SCALE



SECTION VIEW

7 1/4" THICK RAW STEEL EDGING

1" = 1'-0"

PROJ-RO-SLA-PLAN-41

8 GENERAL LANDSCAPE NOTES

1. ALL LANDSCAPING SHALL BE IN CONFORMANCE WITH LANDSCAPE REGULATIONS, 2004 EDITION, ORDINANCE NO. 3133, SERIES OF 2004, AND THE AAN (AMERICAN ASSOCIATION OF NURSERYMEN) SPECIFICATIONS FOR NUMBER ONE GRADE.
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3. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING HIMSELF FAMILIAR WITH ALL UNDERGROUND UTILITIES, PIPES AND STRUCTURES. CONTRACTOR SHALL TAKE SOLE RESPONSIBILITY FOR ANY COSTS INCURRED DUE TO DAMAGE OF SAID UTILITIES.
4. CONTRACTOR SHALL NOT WILLFULLY PROCEED WITH CONSTRUCTION AS DESIGNED WHEN IT IS OBVIOUS THAT UNKNOWN OBSTRUCTIONS AND/OR GRADE DIFFERENCES EXIST THAT MAY NOT HAVE BEEN KNOWN DURING DESIGN. SUCH CONDITIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL ASSUME FULL RESPONSIBILITY FOR ALL NECESSARY REVISIONS DUE TO FAILURE TO GIVE SUCH NOTIFICATION.
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6. ALL TURF AREAS TO BE SPRAY IRRIGATED. ALL SHRUB BEDS TO BE DRIP IRRIGATED. SHRUBS AND PERENNIALS MUST BE IRRIGATED BY A SEPARATE ZONE THAN SOD/GRASS. THIS SYSTEM IS AN UNDERGROUND AUTOMATIC IRRIGATION SYSTEM.
7. ALL TREE AND SHRUB LOCATIONS SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE LANDSCAPE ARCHITECT.
8. PLANT SUBSTITUTIONS WILL NOT BE PERMITTED WITHOUT APPROVAL BY LANDSCAPE ARCHITECT AND DEVELOPER.
9. ALL FLATS OF GROUND COVERS AND PERENNIALS SHALL BE PLANTED ON A TRIANGLE FORMATION TO ALLOW FOR MAXIMUM GROWTH PATTERN - NOTE O.C. PLANTINGS
10. FOR TREES IN TURF GRASS, ALLOW A 2' DIAMETER BED WITHOUT TURF GRASS AROUND ROOT COLLAR.
11. TURF GRASS TO BE 100% FROM SINGLE GROWER. SEE LANDSCAPE PLANS FOR SPECIFIC TURF GRASS TYPES.
12. PLANTS SHALL BE INSTALLED IMMEDIATELY UPON DELIVERY TO SITE, IF THIS IS NOT POSSIBLE, PLANTS SHALL BE HEELED IN AND WATERED TO PREVENT DEHYDRATION.
13. PLANTING PITS SHALL BE EXCAVATED TO A MINIMUM OF TWICE THE WIDTH OF THE ROOTBALL. DO NOT DISTURB SOIL AT THE BOTTOM OF PIT BUT SCARIFY SIDES TO PREVENT GLAZING.
14. AFTER PLANT INSTALLATION, ALL PLANT MATERIAL SHALL BE PLACED WITH THEIR ROOT COLLARS SLIGHTLY HIGHER THAN FINISH GRADE. (3" HIGHER FOR TREES)
15. LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR ONE YEAR FROM DATE OF FINAL INSPECTION.
16. ALL LANDSCAPE SHOWN ON THESE PLANS SHALL BE MAINTAINED IN A NEAT AND ADEQUATE MANNER. REQUIRED MAINTENANCE ACTIVITIES SHALL INCLUDE, BUT BE NOT LIMITED TO, MOWING OF LAWNS, TRIMMING OF HEDGES, ADEQUATE IRRIGATION, REPLACEMENT OF DEAD, DISEASED, OR UNSIGHTLY LANDSCAPING, REMOVAL OF WEEDS FROM PLANTING AREAS, AND APPROPRIATE PRUNING OF PLANT MATERIALS.
17. SEE LANDSCAPE PLANS FOR LANDSCAPE AND SITE DETAILS.
18. SEE CIVIL AND ARCHITECTURAL DRAWINGS FOR ALL STRUCTURES, HARDSCAPE, GRADING, AND DRAINAGE INFO.

PLOT DATE: 12/5/2019 10:32:09 AM

ktgy

Architecture + Planning
820 16th Street, Suite 500
Denver, CO 80202
ktgy.com
303.825.6400

KTGY Project No: 2019-0747

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PRINCIPAL:	NATHAN SCIARRA
PROJECT DESIGNER:	ENA SIVCEVIC

Developer

URBAN ALFANDRE
825 N. 300 W. N141
Salt Lake City, UT 84103
202.251.5059

Landscape Architect

LOFTSIXFOUR DESIGNING OUTDOOR LIVING EXPERIENCES

SLATE

SALT LAKE CITY, UTAH

No	Date	Description
	10/18/19	100% SD
	12/17/19	100% DD

NOT FOR CONSTRUCTION

PLANTING DETAILS

LP501

TREE INVENTORY SPREAD SHEET						NUMBER
TREE SPECIES	TREES SIZE (dbh)	LOCATION	CONDITION	STATUS	JUSTIFICATION	
CALLERY PEAR	5 IN.	PUBLIC	GOOD	REMOVAL	ADJACENCY TO NEW 900 S. STREETSCAPE IMPROVEMENTS	1
CALLERY PEAR	6 IN.	PUBLIC	GOOD	REMOVAL	ADJACENCY TO NEW 900 S. STREETSCAPE IMPROVEMENTS	2
CRABAPPLE	14 IN.	PUBLIC	GOOD	REMOVAL	ADJACENCY TO NEW BUILDING AND NEW WALKWAY	3
CRABAPPLE	17 IN.	PUBLIC	GOOD	REMOVAL	ADJACENCY TO NEW BUILDING AND NEW WALKWAY	4
CRABAPPLE	18 IN.	PUBLIC	GOOD	REMOVAL	ADJACENCY TO NEW BUILDING AND NEW WALKWAY	5
CRABAPPLE	18 IN.	PUBLIC	GOOD	REMOVAL	ADJACENCY TO NEW BUILDING AND NEW WALKWAY	6
CRABAPPLE	14 IN.	PUBLIC	GOOD	REMOVAL	ADJACENCY TO NEW BUILDING AND NEW WALKWAY	7
CRABAPPLE	17 IN.	PUBLIC	GOOD	REMOVAL	ADJACENCY TO NEW BUILDING AND NEW WALKWAY	8
TOTALS INCHES REMOVED	109 IN.					8
TOTALS INCHES PROPOSED	20 IN.	*SEE LANDSCAPE PLAN SHEET PL101				
INCHES LEFT TO MITIGATE	89 IN.					

GENERAL LANDSCAPE NOTES:

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2. ALL TREE AND SHRUB LOCATIONS SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE LANDSCAPE ARCHITECT.
3. PLANT SUBSTITUTIONS WILL NOT BE PERMITTED WITHOUT APPROVAL BY LANDSCAPE ARCHITECT AND DEVELOPER.
4. FOR TREES IN SOD, ALLOW A 2' DIAMETER BED WITHOUT SOD AROUND ROOT COLLAR. APPLY 4" DEPTH OF WOOD MULCH OVER 2' DIAMETER.
5. AFTER PLANT INSTALLATION, ALL PLANT MATERIAL SHALL BE PLACED WITH THEIR ROOT COLLARS SLIGHTLY HIGHER THAN FINISH GRADE. (3" HIGHER FOR TREES)
6. ALL LANDSCAPE SHOWN ON THESE PLANS SHALL BE MAINTAINED IN A NEAT AND ADEQUATE MANNER. REQUIRED MAINTENANCE ACTIVITIES SHALL INCLUDE, BUT BE NOT LIMITED TO, MOWING OF LAWNS, TRIMMING OF HEDGES, ADEQUATE IRRIGATION, REPLACEMENT OF DEAD, DISEASED, OR UNSIGHTLY LANDSCAPING, REMOVAL OF WEEDS FROM PLANTING AREAS, AND APPROPRIATE PRUNING OF PLANT MATERIALS.

PLANT SCHEDULE

EXISTING TREES	BOTANICAL / COMMON NAME	SIZE	CONT.	QTY
	EXISTING TREES / TO BE REMOVED	EXISTING	N/A	8

0 10 20 30 feet
SCALE: 1" = 10'

KTGY - ARCHITECTURE + PLANNING
820 16TH STREET, SUITE 500
DENVER, CO. 80202
(303) 825-6400

CONTACT:
KATE MILLENSON
(303) 389.6006
KMILLENSON@KTGY.COM

FOR:
URBAN ALFANDRE
825 N 300 W #N141
SALT LAKE CITY, UT 84103

CONTACT:
JAMES ALFANDRE
JAMES@URBANALFANDRE.COM

LOFTSIXFOUR / DESIGNING OUTDOOR LIVING EXPERIENCES

SYDNEY MULTI-FAMILY

900 SOUTH 200 WEST
SALT LAKE CITY, UTAH

DATE:	ISSUED FOR:
10.11.19	SITE PLAN 01
12.12.19	SITE PLAN 02
01.21.20	SITE PLAN 03

TREE DEMO PLAN

PLANS - SYDNEY

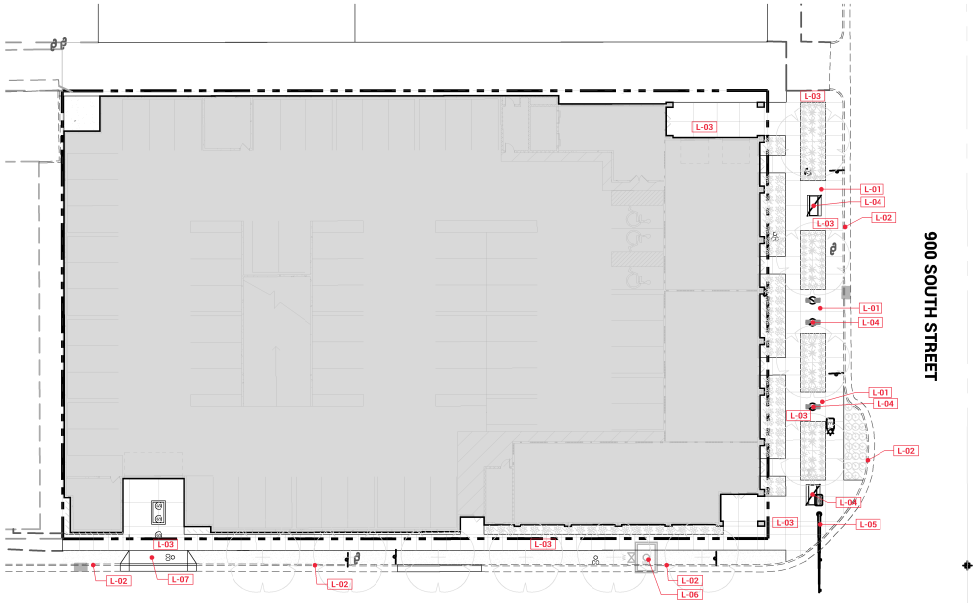
N

PROJECT NUMBER
2019-0747

LT101

REFERENCE NOTES SCHEDULE

SYMBOL	SITE LAYOUT DESCRIPTION	QTY	DETAIL
L-01	URBAN PATIOS		
L-02	EXISTING CURB AND GUTTER - PROTECT-IN-PLACE		
L-03	PLAIN GRAY - CONCRETE WALKWAY - SCORING PER PLAN		
L-04	SITE FURNISHINGS - PER OWNERS		
L-05	EXISTING STREET LIGHT - PROTECT-IN-PLACE		
L-06	WATER METER LOCATION - PER CIVIL PLANS		
L-07	NEW GARAGE DRIVEWAY - PER CIVIL PLANS		



0 20 40 60 feet

SCALE: 1" = 20'

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SALT LAKE CITY, UTAH

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SITE LAYOUT PLAN

PLANS - SYDNEY

N

PROJECT NUMBER
2019-0747

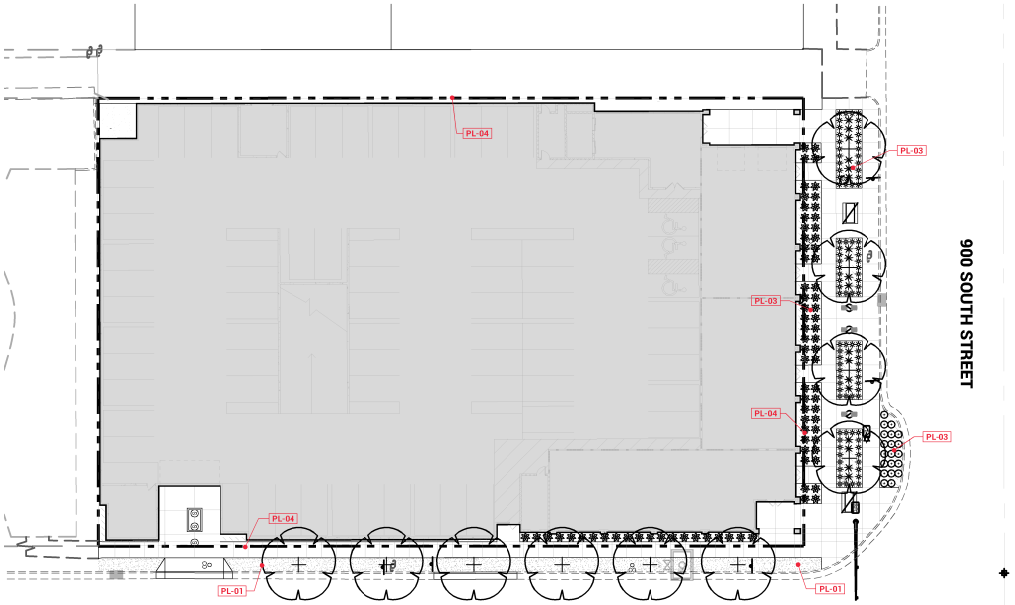
LS101

PLANT SCHEDULE

TREES	BOTANICAL / COMMON NAME	SIZE	CONT.		QTY
	ZELKOVA SERRATA `CITY SPRITE` / CITY SPRITE ZELKOVA	2" CAL.	B&B		10
EVERGREEN SHRUBS	**BOTANICAL / COMMON NAME**	**SIZE**	**HZONE**		**QTY**
	BUXUS X `GREEN VELVET` / BOXWOOD	5 GAL.			20
GRASSES	**BOTANICAL / COMMON NAME**	**SIZE**	**HZONE**		**QTY**
	CALAMAGROSTIS X ACUTIFLORA `KARL FORESTER` / KARL FORESTER GRASS	1 GAL.			18
	PENNISETUM ALOPECUROIDES `KARLEY ROSE` / KARLEY ROSE GRASS	5 GAL.			77
PERENNIALS	**BOTANICAL / COMMON NAME**	**SIZE**	**HZONE**		**QTY**
	IRIS SIBIRICA / SIBERIAN IRIS	5 GAL.			90
ROCK MULCH	**BOTANICAL / COMMON NAME**	**CONT**	**HZONE**	**SPACING**	**QTY**
	1" WASATCH GRAYLANDSCAPE ROCK	N/A			2,160 SF
SOD/SEED	**BOTANICAL / COMMON NAME**	**CONT**	**HZONE**	**SPACING**	**QTY**
	TURF GRASS	SOD			1,068 SF

REFERENCE NOTES SCHEDULE

SYMBOL	PLANTING DESCRIPTION	QTY	DETAIL
PL-01	TURF AREA (TYP.)		
PL-03	PLANTING AREA (TYP.)		
PL-04	PROPERTY LINE (TYP.)		



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PLANTING PLAN

PLANS - SYDNEY

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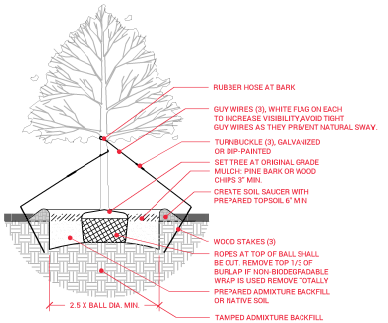

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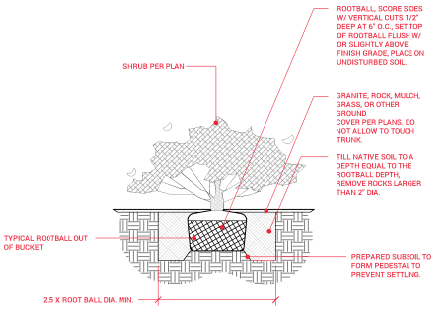

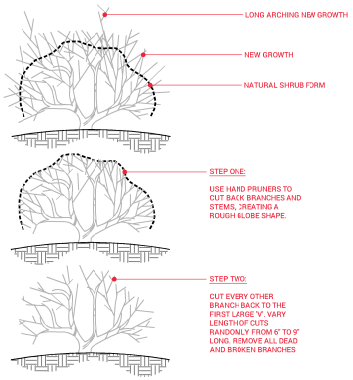

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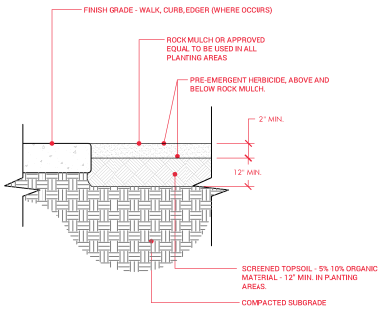

3 2" ROCK MULCH PLANTING AREA

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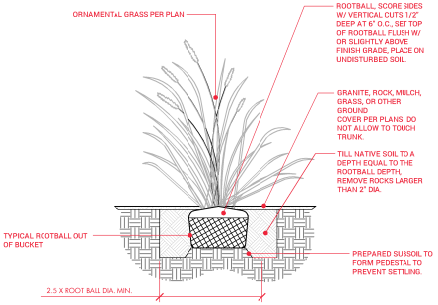

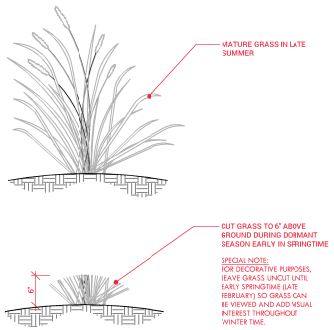

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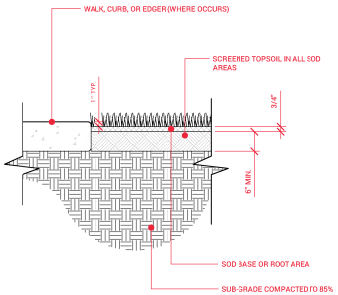

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7. ALL TREE AND SHRUB LOCATIONS SHALL BE STAKED BY THE CONTRACTOR AND APPROVED BY THE LANDSCAPE ARCHITECT.
8. PLANT SUBSTITUTIONS WILL NOT BE PERMITTED WITHOUT APPROVAL BY LANDSCAPE ARCHITECT AND DEVELOPER.
9. ALL FLATS OF GROUND COVERS AND PERENNIALS SHALL BE PLANTED ON A TRIANGLE FORMATION TO ALLOW FOR MAXIMUM GROWTH PATTERN - NOTE O.C. PLANTINGS
10. FOR TREES IN TURF GRASS, ALLOW A 2' DIAMETER BED WITHOUT TURF GRASS AROUND ROOT COLLAR.
11. TURF GRASS TO BE 100% FROM SINGLE GROWER. SEE LANDSCAPE PLANS FOR SPECIFIC TURF GRASS TYPES.
12. PLANTS SHALL BE INSTALLED IMMEDIATELY UPON DELIVERY TO SITE, IF THIS IS NOT POSSIBLE, PLANTS SHALL BE HEELED IN AND WATERED TO PREVENT DEHYDRATION.
13. PLANTING PITS SHALL BE EXCAVATED TO A MINIMUM OF TWICE THE WIDTH OF THE ROOTBALL. DO NOT DISTURB SOIL AT THE BOTTOM OF PIT BUT SCARIFY SIDES TO PREVENT GLAZING.
14. AFTER PLANT INSTALLATION, ALL PLANT MATERIAL SHALL BE PLACED WITH THEIR ROOT COLLARS SLIGHTLY HIGHER THAN FINISH GRADE. (3" HIGHER FOR TREES)
15. LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIAL FOR ONE YEAR FROM DATE OF FINAL INSPECTION.
16. ALL LANDSCAPE SHOWN ON THESE PLANS SHALL BE MAINTAINED IN A NEAT AND ADEQUATE MANNER. REQUIRED MAINTENANCE ACTIVITIES SHALL INCLUDE, BUT BE NOT LIMITED TO, MOWING OF LAWNS, TRIMMING OF HEDGES, ADEQUATE IRRIGATION, REPLACEMENT OF DEAD, DISEASED, OR UNSIGHTLY LANDSCAPING, REMOVAL OF WEEDS FROM PLANTING AREAS, AND APPROPRIATE PRUNING OF PLANT MATERIALS.
17. SEE LANDSCAPE PLANS FOR LANDSCAPE AND SITE DETAILS.
18. SEE CIVIL AND ARCHITECTURAL DRAWINGS FOR ALL STRUCTURES, HARDSCAPE, GRADING, AND DRAINAGE INFO.

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LOFTSIXFOUR / DESIGNING OUTDOOR LIVING EXPERIENCES

SYDNEY MULTI-FAMILY

900 SOUTH 200 WEST
SALT LAKE CITY, UTAH

DATE:	ISSUED FOR:
10.11.19	SITE PLAN 01
12.12.19	SITE PLAN 02
01.21.20	SITE PLAN 03

PLANTING DETAILS

PLANS - SYDNEY

N

PROJECT NUMBER
2019-0747

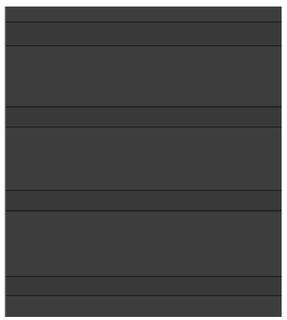
LP501

PUBLIC ART
ARTIST TBD
SAMPLE ONLY

DECORATIVE METAL SCREEN
DESIGN TBD
SAMPLE ONLY

FIBER CEMENT PANEL
James Hardie
Reveal Panel with Surround Trim

FIBER CEMENT PANEL
James Hardie
Reveal Panel with Surround Trim



FIBER CEMENT LAP SIDING
James Hardie (Hardieplank 4" exposure)
Color: Iron Ore SW8069

DARK STUCCO - 2 COAT
Color: Iron Ore SW8069

LIGHT STUCCO - 2 COAT
Color: Snowbound SW 7004

BLACK BRICK
Interstate Brick
Color: Obsidian

RED BRICK
General Shale
Color: Old Chicago

ktgy
Architecture + Planning
820 16th Street, Suite 500
(303) 825-6400
ktgy.com

urban alfandre
urban living. vibrant neighborhoods.
825 N. 300 W. N141 Salt Lake City, UT 84103

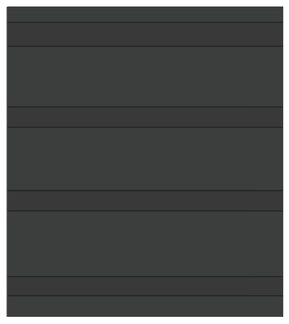
SLATE / SYDNEY
Apartments
SALT LAKE CITY, UT #20190747

SLATE MATERIAL BOARD (EXAMPLES)

MARCH 12, 2019

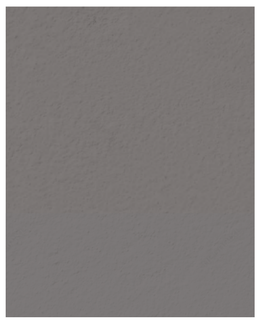
PUBLIC ART
ARTIST TBD
SAMPLE ONLY

FIBER CEMENT PANEL
James Hardie
Reveal Panel with Surround Trim
Color: Argos SW7065



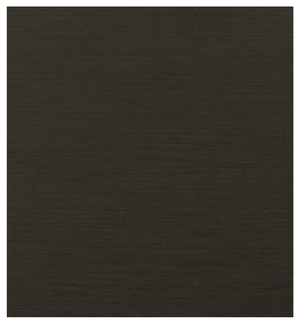
FIBER CEMENT LAP SIDING
James Hardie (Hardieplank 4" exposure)
Color: Black Magic 6991

DARK STUCCO - 2 COAT
Color: Black Magic 6991



MEDIUM STUCCO - 2 COAT
Color: Software SW 7074

LIGHT STUCCO - 2 COAT
Color: Snowbound SW 7004



ANODIZED METAL PANEL
ATAS Composite metal
Color: Dark Bronze Anodized

GRAY BRICK
Interstate Brick
Color: Ironstone

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Apartments
SALT LAKE CITY, UT #20190747

SYDNEY MATERIAL BOARD (EXAMPLES)

MARCH 12, 2019

ATTACHMENT D: EXISTING CONDITIONS

Zoning and Uses in the Immediate Vicinity of the Property

East: (FB-UN2), Adjacent to 900 South is a vacant lot with billboard.

West: (FB-UN2), Commercial building (Try-Angles) adjacent to the street and parking located to the rear.

North: (FB-UN2), Commercial building (Vertical Diner) and under construction Spy Hop building.

South: (FB-UN2), 2-3 story 14-unit apartment building (Wilford Apartments) and under construction 4-story condo building.

ATTACHMENT E: FB-UN2 ZONE STANDARDS SUMMARY

Slate (west building)

Building Regulation		Building Form Multi-Family Residential	Proposal	Complies?
Building height and placement:				
H	Height	4 stories with a maximum of 50'. 5 stories with a maximum of 65' on parcels located on the corners of West Temple at 800 or 900 South, 200 West at 700, 800 or 900 South, 200 West at Fayette Avenue, 300 West at 800 or 900 South, and in the area identified on Figure 21A.27.050.C.1. All heights measured from established grade.	65', additional height for mechanical equipment parapet wall and the elevator/ stairway tower or bulkhead as permitted by Table 21A.36.020.C.	Yes
F	Front and corner side yard setback	No minimum Maximum 10'	900 South façade is at the property line. 95% of Washington Street facade is at the property line. The remainder is set back 4'.	Yes
B	Required build-to	Minimum of 50% of street facing facade shall be built to the minimum setback line	100% of the 900 South façade and 95% of the Washington Street facade is at the property line.	Yes
S	Interior side yard	Minimum of 15' along a side property line adjacent to FB-UN1 or any residential zoning district that has a maximum building height of 35' or less, otherwise no setback required	Building wraps another FB-UN2 property on three sides and is at the property line. East façade is adjacent to an alley and is set back approximately 1'	Yes
R	Rear yard	Minimum of 20' along a rear property line adjacent to FB-UN1 or any residential zoning district that has a maximum building height of 35' or less	Rear yard (south) is adjacent to FB-UN2, building is at the property line.	Yes

U	Upper level step back	When adjacent to lot in the FB-UN1, buildings shall be stepped back 1 additional foot for every foot of building height above 35'. When a parcel in the FB-UN2 district is separated from a parcel in the FB-UN1 district by an alley, the width of the alley may be counted toward the upper level step back	Building is not adjacent to FB-UN1 zoned parcels.	Yes
L	Minimum lot size	4,000 sq. ft.; not to be used to calculate density	With lot consolidation, exceeds 4,000 sq. ft.	Yes, with conditions
W	Minimum lot width	30'	Exceeds 30'.	Yes
DU	Dwelling units per building form	No minimum or maximum	150 units	Yes
BF	Number of building forms per lot	1 building form permitted for every 4,000 sq. ft. of lot area	1 building form	Yes
Parking:				
	Surface parking in front and corner side yards	Not permitted	None proposed.	NA
	Vehicle access	If property is less than 30' wide, vehicle access from an alley is required when property is served by a public or private alley with access rights. If no alley access exists, only 1 vehicle access point from a street may be permitted If property is 30' wide or more, only 1 vehicle access point from a street may be permitted. If property is served by a public or private alley, ingress shall be from street and egress onto alley unless otherwise permitted by this section Corner lots with a minimum width of 120', may have 1 vehicle access point per street frontage. Vehicle access may be one-way or multi-directional	Corner lot with a width exceeding 120'. Vehicle access is provided from a single multidirectional access point on Washington Street.	Yes
	Vehicle access width at street	When a one-way vehicle drive is included in a development, no vehicle drive or curb cut may exceed 12' in width. When a multi-directional vehicle drive is	No one-way drive proposed	NA

		included, a curb cut may not exceed 24' in width		
	Vehicle access from street design standards	If vehicle access is from a street, the following additional design standards shall apply: garage entry shall have a minimum 20' setback from property line; garage entry may not exceed 50% of first floor building width; one-way garage entry may not exceed 14' in width; multiway garage entry may not exceed 26' in width; garage door or gate shall be constructed of durable building materials and compatible with building design	Garage entry is at property line. Entry door is set back approximately 20'. Two one-way entries are proposed, each 10' in width. Material is not identified.	Yes, with conditions.
	Driveway location	The minimum distance between curb cuts shall be 12'. Driveways shall be at least 6' from abutting property lines for a depth of 10' unless shared. Driveways shall be at least 12' from property lines adjacent to a street corner or 5' from the point of tangency of the curb return, whichever is greater. Abandoned curb cuts shall be removed and replaced with city standard curb.	One driveway proposed. Driveway is greater than 6' from abutting properties.	Yes
	Vehicle access and parking compliance	All new drive approaches, driveways, and parking lots shall comply with form based urban neighborhood regulations, and all other applicable sections of this code. Existing drive approaches, driveways, and parking lots shall be made compliant with form based urban neighborhood regulations upon change of use, increase in parking, or building additions greater than 25% of the footprint of the structure or 1,000 sq. ft., whichever is less	Existing approach to be removed.	Yes
	Parking on separate lots	Parking may be provided on an adjacent lot, or in a common area associated with the development, or within 500' of the property. If located on an adjacent parcel or on a parcel within 500', the proposed location of the parking shall contain a principal building and the parking shall be located behind a principal building	Parking on the same lot, not applicable.	NA
Additional Design Standards:				
	Façade length	The maximum length of any building facade facing a street is two hundred feet (200')	Total length of façade facing 900 South is	No, Washington Street façade does not comply and is part of

			151'5" and Washington Street façade is 227'2" in length	Planned Development request.
	Stepback Requirement	Floors rising above thirty feet (30') in height shall be stepped back fifteen (15) horizontal feet from the building foundation at grade for building elevations that are adjacent to a public street, public trail, or public open space. This stepback does not apply to buildings that have balconies on floors rising above thirty feet (30') in height.	All elevations are greater than 30' in overall height and all elevations that are street facing have balconies on floors that rise about 30'.	Yes
	Glass	For all floors or levels above the ground floor, a minimum of fifteen percent (15%) of all street facing facades must be glass.	The upper floors on the 900 South elevation have 44% glass and the upper floor elevations on Washington Street have 34% glass.	Yes
	Ground Floor Uses	On the ground floor, a permitted use other than parking shall occupy at least seventy five percent (75%) of the width of any street-facing building facade. All portions of such ground floor spaces shall extend a minimum of twenty five feet (25') into the structure of all building forms with the exception of row houses, two-family dwellings, and cottage developments, which shall extend a minimum of ten feet (10'). Parking may be located behind these spaces.	Commercial uses extend between approximately 50' (eastern section) and 80' (western section) along the 900 South façade. A use other than parking extends approximately the first 100' of the Washington Street façade; approximately 44% of the width. Parking occupies the remaining approximately 125'.	No, 900 South elevation complies, Washington Street elevation does not comply and is part of Planned Development request.
	Parking Structure	(1) Parking structures shall have an external skin designed to improve visual character when adjacent to a public street or other public space. (2) The architectural design of the facades should express the internal function of the structure. Facade elements shall align to	Approximately 125' of the length of the Washington Street façade is parking and is not wrapped with habitable space. The	No, part of Planned Development request. The Washington Street façade is not fully wrapped with habitable space or a use allowed in the zone. The applicant states that the

		parking levels and there shall be no sloped surfaces visible from a public street, public trail, or public open space. (3) Internal circulation must be designed such that parking surfaces are level (or without any slopes) along all primary facades. All ramping between levels need to be placed along the secondary facade or to the center of the structure. Parking structures shall be designed to conceal the view of all parked cars and drive ramps from public spaces. (4) Elevator and stairs shall be highlighted architecturally so visitors, internally and externally, can easily access these entry points. (5) Signage and way-finding shall be integrated with the architecture of the parking structure and be architecturally compatible with the design. Public parking structure entrances shall be clearly signed from public streets. (6) Interior garage lighting shall not produce glaring sources towards adjacent properties while providing safe and adequate lighting levels. The use of sensor dimmable LEDs and white-stained ceilings are a good strategy to control light levels on site while improving energy efficiency. (7) Where a driveway crosses a public sidewalk, the driveway shall be a different color, texture, or paving material than the sidewalk to warn drivers of the possibility of pedestrians in the area. (8) The street level facing facades of all parking structures shall be wrapped along all street frontages with habitable space that is occupied by a use that is allowed in the zone as a permitted or conditional use. (9) Parking structures shall be designed to minimize vehicle noise and odors on the public realm. Venting and fan locations	primary exterior material is brick and breaks in the façade are provided with a metal mesh screening alternated with wall murals. See the material board for specifications. The metal mesh screening is carried across to other elements on the façade. Access to the residential lobby is provided and the doorway creates a visual break in the façade. Additional elements can be addresses during the building permit process.	environmental remediation requirements do not allow for habitable space on the first floor, additional commercial space would not be successful, and that space is required for parking.

		shall not be located next to public spaces and shall be located as far as possible from adjacent residential land uses.		
Building configuration:				
	Building entry	Minimum of 1 building entry per street frontage. An additional entry feature is required for every 75' of building wall adjacent to street. Side entries for multiple dwelling unit buildings are permitted provided there is at least 1 primary entrance facing a public street	900 South elevation complies, Washington Street elevation has one section with an approximately 95' span without entries.	No, part of Planned Development request. This section extends along the parking garage façade and an additional door to the garage would require the removal of a parking space. The intent of the standard is met with the alternating wall mural and metal mesh screening.
	Pedestrian connections	Pedestrian access to public walkway is required	Building setback is nearly at the property line and pedestrian access to public walkway is provided.	Yes
	Ground floor transparency	Minimum of 60% of street facing facade, located between 2' and 8' above the grade of the sidewalk, shall be transparent glass…There must be visual clearance behind the glass for a minimum of six feet (6'). Three-dimensional display windows at least six feet (6') deep are permitted and may be counted toward the sixty percent (60%) glass requirement…Ground floor windows of commercial uses shall be kept clear at night, free from any window covering, with internal illumination. When ground floor glass conflicts with the internal function of the building, other means shall be used to activate the sidewalk, such as display windows, public art, architectural ornamentation or detailing or other similar treatment.	900 South façade: 64% Washington Street façade: 53% glazing and public art/wall mural	No, the Washington Street façade does not meet the requirement. Windows could be added to this façade; however, they would look into a parking garage. Staff and the applicant worked together to place alternating panels of wall murals and metal mesh screening to address the intent of this standard.
	Building fenestration	No building wall that faces onto a street shall exceed more than thirty feet (30') in length without being interrupted by windows, doors, or change of building wall	Walls are interrupted with windows, doors, wall murals, and	Yes

		plane that results in an offset of at least twelve inches (12")	metal mesh screening.	
	Open space	A minimum of 10% of lot area shall be provided for open space. Open space may include landscaped yards, patios, dining areas, balconies, rooftop gardens, and other similar outdoor living spaces. Required parking lot landscaping or perimeter parking lot landscaping shall not count toward the minimum open space requirement	The courtyard open space is identified as 3,356 square feet and 10.6% of the total site area.	Yes
	Upper level outdoor space	All street facing residential units above the ground floor shall contain a usable balcony that is a minimum of 4' in depth. Balconies may overhang any required yard	All street facing residential units have balconies with a minimum 4' depth.	Yes
	Building facade materials	A minimum of 70% of any street facing building facade shall be clad in glass, brick, masonry, textured or patterned concrete, wood, or stone. Other materials may count up to 30% of the street facing building facade	100% of the 900 South and 90% of the Washington Street elevations are clad in a material listed to the left.	Yes

Sydney (east building)

Building Regulation		**Building Form**		
		Multi-Family Residential	**Proposal**	**Complies?**
Building height and placement:				
H	Height	4 stories with a maximum of 50'. 5 stories with a maximum of 65' on parcels located on the corners of West Temple at 800 or 900 South, 200 West at 700, 800 or 900 South, 200 West at Fayette Avenue, 300 West at 800 or 900 South, and in the area identified on Figure 21A.27.050.C.1. All heights measured from established grade.	Identified as 65'. Additional height for mechanical equipment parapet wall and the elevator/stairway tower or bulkhead as permitted by Table 21A.36.020.C.	Yes.
F	Front and corner side yard setback	No minimum Maximum 10'	0'-4'.	Yes
B	Required build-to	Minimum of 50% of street facing facade shall be built to the minimum setback line	North façade built to property line. Approximately 40% of east	Yes

			façade built to 4' and 60% built to 1'6".	
S	Interior side yard	Minimum of 15' along a side property line adjacent to FB-UN1 or any residential zoning district that has a maximum building height of 35' or less, otherwise no setback required	Adjacent property is FB-UN2. Approximately 70% has 1'6" setback. Remainder set back 4".	Yes
R	Rear yard	Minimum of 20' along a rear property line adjacent to FB-UN1 or any residential zoning district that has a maximum building height of 35' or less	Rear yard (south) is adjacent to FB-UN2. Approximately 80% is built to property line. Remainder set back between 2' and 12', generally to accommodate transformers.	Yes
U	Upper level step back	When adjacent to lot in the FB-UN1, buildings shall be stepped back 1 additional foot for every foot of building height above 35'. When a parcel in the FB-UN2 district is separated from a parcel in the FB-UN1 district by an alley, the width of the alley may be counted toward the upper level step back	Building is not adjacent to FB-UN1 zoned parcels.	Yes
L	Minimum lot size	4,000 sq. ft.; not to be used to calculate density	Exceeds 4,000 sq ft.	Yes
W	Minimum lot width	30'	Exceeds 30'.	Yes
DU	Dwelling units per building form	No minimum or maximum	125 units	Yes
BF	Number of building forms per lot	1 building form permitted for every 4,000 sq. ft. of lot area	1 building form	Yes
Parking:				
	Surface parking in front and corner side yards	Not permitted	None proposed.	NA
	Vehicle access	If property is less than 30' wide, vehicle access from an alley is required when property is served by a public or private alley with access rights. If no alley access exists, only 1 vehicle access point	Corner lot with a width exceeding 120'. Vehicle access is provided from a single	Yes

		from a street may be permitted If property is 30' wide or more, only 1 vehicle access point from a street may be permitted. If property is served by a public or private alley, ingress shall be from street and egress onto alley unless otherwise permitted by this section Corner lots with a minimum width of 120', may have 1 vehicle access point per street frontage. Vehicle access may be one-way or multi-directional	multidirectional access point on 200 West.	
	Vehicle access width at street	When a one-way vehicle drive is included in a development, no vehicle drive or curb cut may exceed 12' in width. When a multi-directional vehicle drive is included, a curb cut may not exceed 24' in width	No one-way drive proposed	NA
	Vehicle access from street design standards	If vehicle access is from a street, the following additional design standards shall apply: garage entry shall have a minimum 20' setback from property line; garage entry may not exceed 50% of first floor building width; one-way garage entry may not exceed 14' in width; multiway garage entry may not exceed 26' in width; garage door or gate shall be constructed of durable building materials and compatible with building design	Garage entry is setback approximately 20'. Entry door is 20' in width. Material is not identified, but can be approved with conditions.	Yes, with conditions.
	Driveway location	The minimum distance between curb cuts shall be 12'. Driveways shall be at least 6' from abutting property lines for a depth of 10' unless shared. Driveways shall be at least 12' from property lines adjacent to a street corner or 5' from the point of tangency of the curb return, whichever is greater. Abandoned curb cuts shall be removed and replaced with city standard curb	One driveway proposed. Driveway is approximately 20' from abutting property line.	Yes
	Vehicle access and parking compliance	All new drive approaches, driveways, and parking lots shall comply with form based urban neighborhood regulations, and all other applicable sections of this code. Existing drive approaches, driveways, and parking lots shall	Existing approach to be removed.	Yes

		be made compliant with form based urban neighborhood regulations upon change of use, increase in parking, or building additions greater than 25% of the footprint of the structure or 1,000 sq. ft., whichever is less		
	Parking on separate lots	Parking may be provided on an adjacent lot, or in a common area associated with the development, or within 500' of the property. If located on an adjacent parcel or on a parcel within 500', the proposed location of the parking shall contain a principal building and the parking shall be located behind a principal building	Parking on the same lot, not applicable.	NA
Additional Design Standards:				
	Façade length	The maximum length of any building facade facing a street is two hundred feet (200')	900 South façade is approximately 150' and 200 West façade is 235' in length	No, 200 West façade does not comply and is part of Planned Development request.
	Stepback Requirement	Floors rising above thirty feet (30') in height shall be stepped back fifteen (15) horizontal feet from the building foundation at grade for building elevations that are adjacent to a public street, public trail, or public open space. This stepback does not apply to buildings that have balconies on floors rising above thirty feet (30') in height.	All elevations are greater than 30' in overall height and all elevations facing a public street have balconies on floors that rise about 30'.	Yes
	Glass	For all floors or levels above the ground floor, a minimum of fifteen percent (15%) of all street facing facades must be glass.	The upper floors on the 900 South elevation have 52% glass and the upper floor elevations on 200 West have 43% glass.	Yes
	Ground Floor Uses	On the ground floor, a permitted use other than parking shall occupy at least seventy five percent (75%) of the width of any street-facing building facade. All portions of such ground floor spaces shall extend a minimum of twenty-five feet (25') into the structure of all building forms with the exception of row houses, two-family dwellings, and cottage developments, which shall extend a minimum of ten feet (10').	Commercial uses extend approximately 30' into the structure for the entire width of the 900 South façade. Commercial uses extend approximately 28' into the structure for	No, 900 South elevation complies, 200 West elevation does not comply and is part of Planned Development request.

		Parking may be located behind these spaces.	approximately 35% of the 200 West façade. Parking occupies the remaining approximately 150'.	
	Parking Structure	(1) Parking structures shall have an external skin designed to improve visual character when adjacent to a public street or other public space. (2) The architectural design of the facades should express the internal function of the structure. Facade elements shall align to parking levels and there shall be no sloped surfaces visible from a public street, public trail, or public open space. (3) Internal circulation must be designed such that parking surfaces are level (or without any slopes) along all primary facades. All ramping between levels need to be placed along the secondary facade or to the center of the structure. Parking structures shall be designed to conceal the view of all parked cars and drive ramps from public spaces. (4) Elevator and stairs shall be highlighted architecturally so visitors, internally and externally, can easily access these entry points. (5) Signage and way-finding shall be integrated with the architecture of the parking structure and be architecturally compatible with the design. Public parking structure entrances shall be clearly signed from public streets. (6) Interior garage lighting shall not produce glaring sources towards adjacent properties while providing safe and adequate lighting levels. The use of sensor dimmable LEDs and white-stained ceilings are a good strategy to control light levels on site while improving energy efficiency. (7) Where a driveway crosses a public sidewalk, the driveway	Approximately 150' of the length of the 200 West façade is parking. The primary exterior material is brick and breaks in the façade are provided by windows that are similar to those on residential floors and are alternated with decorative murals of a similar size and shape. The ramp is located to the center of the structure. Access to a set of stairs is provided and the doorway creates a visual break in the façade. Additional elements can be addresses during the building permit process.	No, and is part of planned development request. The 200 West façade is not fully wrapped with habitable space or a use allowed in the zone. The applicant states that the environmental remediation requirements do not allow for habitable space on the first floor, additional commercial space would not be successful, and that space is required for parking.

		shall be a different color, texture, or paving material than the sidewalk to warn drivers of the possibility of pedestrians in the area. (8) The street level facing facades of all parking structures shall be wrapped along all street frontages with habitable space that is occupied by a use that is allowed in the zone as a permitted or conditional use. (9) Parking structures shall be designed to minimize vehicle noise and odors on the public realm. Venting and fan locations shall not be located next to public spaces and shall be located as far as possible from adjacent residential land uses.		
Building configuration:				
	Building entry	Minimum of 1 building entry per street frontage. An additional entry feature is required for every 75' of building wall adjacent to street. Side entries for multiple dwelling unit buildings are permitted provided there is at least 1 primary entrance facing a public street	900 South elevation complies, 200 West elevation has two sections with a greater 75' span without entries.	No, part of Planned Development request. Northern span is part of storefront area, which has other elements that would provide visual interest and has the potential for a door. The southern span extends along the parking garage façade and an additional door to the garage would require the removal of a parking space. The intent of the standard is met with the alternating wall mural and glazing.
	Pedestrian connections	Pedestrian access to public walkway is required	Building setback is nearly at the property line and pedestrian access to public walkway is provided.	Yes
	Ground floor transparency	Minimum of 60% of street facing facade, located between 2' and 8' above the grade of the sidewalk, shall be transparent glass…There must be visual clearance behind	900 South façade: 79%; 200 West façade: 43% glazing, 64% glazing and	No, part of Planned Development request. The applicant meets the intent of this standard with the

		the glass for a minimum of six feet (6'). Three-dimensional display windows at least six feet (6') deep are permitted and may be counted toward the sixty percent (60%) glass requirement…Ground floor windows of commercial uses shall be kept clear at night, free from any window covering, with internal illumination. When ground floor glass conflicts with the internal function of the building, other means shall be used to activate the sidewalk, such as display windows, public art, architectural ornamentation or detailing or other similar treatment.	public art/wall mural	combination of glazing and wall murals.
	Building fenestration	No building wall that faces onto a street shall exceed more than thirty feet (30') in length without being interrupted by windows, doors, or change of building wall plane that results in an offset of at least twelve inches (12")	900 South and 200 West elevations comply.	Yes
	Open space	A minimum of 10% of lot area shall be provided for open space. Open space may include landscaped yards, patios, dining areas, balconies, rooftop gardens, and other similar outdoor living spaces. Required parking lot landscaping or perimeter parking lot landscaping shall not count toward the minimum open space requirement	The courtyard on the second level is 4,346 square feet and provides 11.8% of the site area as open space.	Yes
	Upper level outdoor space	All street facing residential units above the ground floor shall contain a usable balcony that is a minimum of 4' in depth. Balconies may overhang any required yard	All street facing residential units have balconies that have a minimum 4' depth.	Yes
	Building facade materials	A minimum of 70% of any street facing building facade shall be clad in glass, brick, masonry, textured or patterned concrete, wood, or stone. Other materials may count up to 30% of the street facing building facade	90% of the 900 South and 200 West elevations are clad in a material listed to the left.	Yes

ATTACHMENT F: ANALYSIS OF PLANNED DEVELOPMENT STANDARDS

21A.55.050: Standards for Planned Developments: The Planning Commission may approve, approve with conditions, or deny a planned development based upon written findings of fact according to each of the following standards. It is the responsibility of the applicant to provide written and graphic evidence demonstrating compliance with the following standards:

Standard	Findings	Rationale
A. Planned Development Objectives: The planned development shall meet the purpose statement for a planned development and will achieve at least one of the objectives stated in said section. To determine if a planned development objective has been achieved, the applicant shall demonstrate that at least one of the strategies associated with the objective are included in the proposed planned development. The applicant shall also demonstrate why modifications to the zoning regulations are necessary to meet the purpose statement for a planned development. The Planning Commission should consider the relationship between the proposed modifications to the zoning regulations and the purpose of a planned development, and determine if the project will result in a more enhanced product than would be achievable through strict applicable of the land use regulations. ... C. Housing: Providing affordable housing or types of housing that helps achieve the City's housing goals and policies: ... 2. The proposal includes housing types that are not commonly found in the existing neighborhood but are of a scale that is typical to the neighborhood. D. Mobility: Enhances accessibility and mobility: ... 2. Improvements that encourage transportation options other than just the automobile. E. Sustainability: Creation of a project that achieves exceptional performance with regards to resource consumption and impact on natural systems:	Complies	The purpose statement for a Planned Development states: "A planned development is intended to encourage the efficient use of land and resources, promoting greater efficiency in public and utility services and encouraging innovation in the planning and building of all types of development. Further, a planned development implements the purpose statement of the zoning district in which the project is located, utilizing an alternative approach to the design of the property and related physical facilities. A planned development incorporates special development characteristics that help to achieve City goals identified in adopted Master Plans and that provide an overall benefit to the community as determined by the planned development objectives. A planned development will result in a more enhance product than would be achievable through strict application of land use regulations, while enabling the development to be compatible with adjacent and nearby land developments. The City seeks to achieve at least one or any combination of the following objectives through the planned development process." The proposed planned development would result in 275 units in two structures, 8,900 square feet of commercial space, and 156 parking spaces. The applicant suggests that the development complies with Objectives C.2, D.2, E.2 and F.1. Staff finds that it meets D.2, E.2, and F.1. Each of these objectives. Supporting details are below.

... 2. Reuse Of Priority Site: Locate on a brownfield where soil or groundwater contamination has been identified, and where the local, State, or national authority (whichever has jurisdiction) requires its remediation. Perform remediation to the satisfaction of that authority. F. Master Plan Implementation: A project that helps implement portions of an adopted Master Plan in instances where the Master Plan provides specific guidance on the character of the immediate vicinity of the proposal: ... 1. A project that is consistent with the guidance of the Master Plan related to building scale, building orientation, site layout, or other similar character defining features.		The applicant states that the proposed project meets Objective C.2 and includes housing types that are not commonly found in the neighborhood, and are of a scale that is typical to the neighborhood. It has a number of studio and one-bedroom units. This may not have historically been the case for this neighborhood, but, consistent with city plans, and particularly since the applicant purchased the property and has been working on this project, it has continued to transition into an area with more intensive development than it had previously, much of which has units that are generally similar to what is proposed. The applicant also states that it meets D.2 and provides improvements that encourages the use of transportation options other than the automobile. This includes first-floor commercial space that may have services for residents, bike storage, a transportation planning screen, and its location steps from a Trax station. In regards to E.2, the reuse of a priority site, the applicant will complete and environmental remediation of the site. See details in Attachment I: Remedial Action Plan. It states that the eastern portion of the site was the location of various dry cleaning businesses for over 90 years, which caused the contamination. The site can be considered a priority site since it is located at a key intersection in Central Ninth – across from the Trax station, along a frequent bus route, and the 9-Line trail. As detailed in Issue 1, the proposal is consistent with the Downtown Plan in terms of housing choice, transit-oriented development, and additional commercial space to further develop the small neighborhood business node in this area.
B. Master Plan Compatibility: The proposed planned development is generally consistent with adopted policies set forth in the Citywide, community, and/or small area Master	Complies	As discussed in Issue 1, staff finds that the proposal is consistent with adopted policies in *Plan Salt Lake* and the *Downtown Plan*.

Plan that is applicable to the site where the planned development will be located.		
C. Design and Compatibility: The proposed planned development is compatible with the area the planned development will be located and is designed to achieve a more enhanced product than would be achievable through strict application of land use regulations. In determining design and compatibility, the Planning Commission should consider: 1. Whether the scale, mass, and intensity of the proposed planned development is compatible with the area the planned development will be located and/or policies stated in an applicable Master Plan related to building and site design; 2. Whether the building orientation and building materials in the proposed planned development are compatible with the neighborhood where the planned development will be located and/or the policies stated in an applicable Master Plan related to building and site design; 3. Whether building setbacks along the perimeter of the development: a. Maintain the visual character of the neighborhood or the character described in the applicable Master Plan. b. Provide sufficient space for private amenities. c. Provide sufficient open space buffering between the proposed development and neighboring properties to minimize impacts related to privacy and noise. d. Provide adequate sight lines to street, driveways and sidewalks. e. Provide sufficient space for maintenance. 4. Whether building facades offer ground floor transparency, access, and architectural	Complies	1. The scale, mass and intensity of the planned development is compatible with the area and its increasingly intense development pattern and, as detailed in Issue 1, compatible with Master Plan policies. 2. The orientation of the development is compatible with the neighborhood. Both buildings are located on corners and have their main facades facing 900 South. The building materials meet the requirements of the underlying zone and are at least 90% durable materials on all street facing facades. 3. a. The proposed development maintains the changing character of the neighborhood with its mix of uses, increased density and transit-friendly amenities. b. The development provides amenity space for residents in each building. Each has a courtyard amenity area and there are also bike storage and resident storage areas. c. The adjacent properties are also zoned FB-UN2 and the proposal is not required to provide an open space buffer. d. The proposal provides adequate sight lines from the parking entrances to the street. The buildings themselves have adequate setbacks from the street. e. The site plan provides adequate space for maintenance requirements. 4. The primary elevations of the buildings face 900 South and are designed with a significant amount of ground floor transparency. The buildings are both on corners and the secondary street facing elevations have a significant amount of transparency towards the 900 South portions of the building and have murals and detailing that provide visual interest for pedestrians and others.

detailing to facilitate pedestrian interest and interaction; 5. Whether lighting is designed for safety and visual interest while minimizing impacts on surrounding property; 6. Whether dumpsters, loading docks and/or service areas are appropriately screened; and 7. Whether parking areas are appropriately buffered from adjacent uses.		The secondary street facing elevations do not meet the standards for ground floor transparency, but have a mix of glazing, wall murals, and metal mesh (Slate) screening to add visual interest, pedestrian interest, and provide a feeling of safety and security. All facades have architectural detailing that facilitate pedestrian interest and interaction. The ground floors have a mix of materials including metal panels, brick, and fiber cement siding. 5. The buildings are substantially constructed to the property lines and accent lighting is not shown at this stage. Review of lighting is a condition that is to be delegated to staff as a condition of approval. 6. Internal trash rooms are proposed that will be accessed from the alley for removal. 7. The proposal includes a total of 156 structured parking spaces. The parking areas are adequately screened with a combination of windows, metal mesh, and wall murals that provide visual interest.
D. Landscaping: The proposed planned development preserves, maintains or provides native landscaping where appropriate. In determining the landscaping for the proposed planned development, the Planning Commission should consider: 1. Whether mature native trees located long the periphery of the property and along the street are preserved and maintained; 2. Whether existing landscaping that provides additional buffering to the abutting properties is maintained and preserved; 3. Whether proposed landscaping is designed to lessen potential impacts created by the proposed planned development; and 4. Whether proposed landscaping is appropriate for the scale of the development.	Complies	1. There are currently no mature trees within the periphery of the property that will be maintained as part of this development. The existing trees in the park strip of the Sydney site will be replaced with City Sprite Serrata/Zelkova. 2. The existing landscaping will not be preserved. 3. The applicant has incorporated trees along the perimeter of the development and the front yards. These elements will help to buffer and lessen the potential impacts from the development. 4. The proposed landscaping is appropriate for the scale of the development.

E. Mobility: The proposed planned development supports City wide transportation goals and promotes safe and efficient circulation within the site and surrounding neighborhood. In determining mobility, the Planning Commission should consider: 1. Whether drive access to local streets will negatively impact the safety, purpose and character of the street; 2. Whether the site design considers safe circulation for a range of transportation options including: a. Safe and accommodating pedestrian environment and pedestrian oriented design; b. Bicycle facilities and connections where appropriate, and orientation to transit where available; and c. Minimizing conflicts between different transportation modes; 3. Whether the site design of the proposed development promotes or enables access to adjacent uses and amenities; 4. Whether the proposed design provides adequate emergency vehicle access; and 5. Whether loading access and service areas are adequate for the site and minimize impacts to the surrounding area and public rights-of-way.	Complies	1. The parking access is from the secondary street facing facades and is also to the rear of the building. This will impact the safety, purpose, and character as minimally as possible. 2. a. The proposed development is built nearly to the property lines and provides for pedestrian circulation on the adjacent sidewalks. b. The proposal provides bike storage for residents and the site is located adjacent to the 9-Line route. c. There are no anticipated or foreseen conflicts between different transportation modes. The modes will generally operate in the public right-of-way and not on-site. 3. The resident amenities are self-contained within the residential areas of the building. The commercial spaces, as appropriate, will be open to the public. 4. The proposal is required to provide fire suppression to meet all fire code requirements. 5. The loading access and service areas meet the requirements of the zoning ordinance.
F. Existing Site Features: The proposed planned development preserves natural and built features that significantly contribute to the character of the neighborhood and/or environment.	Complies	The existing natural and built features will not be preserved. The site is not located within a National or Local historic district. There are no natural or built features that significantly contribute to the character of the neighborhood and environment.
G. Utilities: Existing and/or planned utilities will adequately serve the development and not have a detrimental effect on the surrounding area.	Complies	The proposal will need to comply with all requirements from other divisions and departments.

ATTACHMENT G: PUBLIC PROCESS AND COMMENTS

Ballpark and Central 9th Community Councils: Staff sent a notice to the community councils on October 31, 2019. The Central 9th Community Council provided a response (attached). The 45-day comment period ended on December 16, 2019. Additional public comment is also attached.

An Open House for Sydney and Slate was held on Thursday, November 21, 2019.

- One member of the public specifically attended for the project and also provided written comments (attached).
- Other members of the public attended the meeting and asked general questions regarding the proposal.

From:	Jesse Hulse
To:	Javoronok, Sara
Cc:	Paul Johnson
Subject:	(EXTERNAL) Re: Planned Development - 906 S 200 W Sydney and Slate - PLNPCM2018-00869
Date:	Friday, November 22, 2019 10:14:22 AM

Sara.
The Central 9th Community Council met on November 4th and discussed this proposal. We had approximately 12 people in attendance and have aggregated the comments from our discussion into the following statement.

"The neighborhood supports the project and appreciates the off street parking provided. We feel that overall it meets the intent of the masterplan and zoning code with the exception of ground floor transparency and use. However, the benefit of having more off-street parking and having a good development happen in the near term in place of the current blighted property, outweighs the detriment of this project's parking facing 200 West and Washington Street. With that said, it would be preferable if the developer could incorporate CPTED design strategies and active storefront use along more of the Washington Street and 200 West Elevations. If the developer can demonstrate that this is not possible or would keep the project from going forward in a timely manner then we recommend approval as the design currently stands."

Jesse J Hulse

Principal, Atlas Architects Inc
Vice Chair, Central 9th Community Council

801.322.2724
www.atlasarchitects.com

----- Forwarded Message -----
From: Javoronok, Sara <sara.javoronok@slcgov.com>
To: amy.j.hawkins@gmail.com <amy.j.hawkins@gmail.com>; pjslc@yahoo.com <pjslc@yahoo.com>
Sent: Thursday, October 31, 2019, 02:25:39 PM MDT
Subject: Planned Development - 906 S 200 W Sydney and Slate - PLNPCM2018-00869

Ms. Hawkins and Mr. Johnson,

The Planning Division has received an application for a Planned Development located at 906 South 200 West. The proposal includes two buildings, both located on the south side of the street, one located at the southwest intersection of 900 South and 200 West and the other at the southeast intersection of 900 South and Washington Street.

I have attached:

1. The applicant's submittal
2. A vicinity map
3. A formal letter requesting your community council's input

As a recognized community organization you have 45 days from the date of this e-mail to provide comments on the proposed petition. The 45 day period ends on Monday, December 16, 2019. Please let me know if you intend to have the petitioner present at one of your community council meetings, including the date and time of the meeting, and I will coordinate with them.

Since the project is located in two community council areas, planning staff has scheduled an Open House for the project on Thursday, November 21, 2019, from 5:00-7:00 p.m. in Conference Room B at the Main City Library at 210 East 400 South in Salt Lake City.

If you have any questions about the petition please feel free to contact me.

Please acknowledge that you received this email.

Thanks,

Sara

SARA JAVORONOK, AICP

Senior Planner

PLANNING DIVISION

COMMUNITY *and* NEIGHBORHOODS

SALT LAKE CITY CORPORATION

sara.javoronok@slcgov.com

TEL 801-535-7625

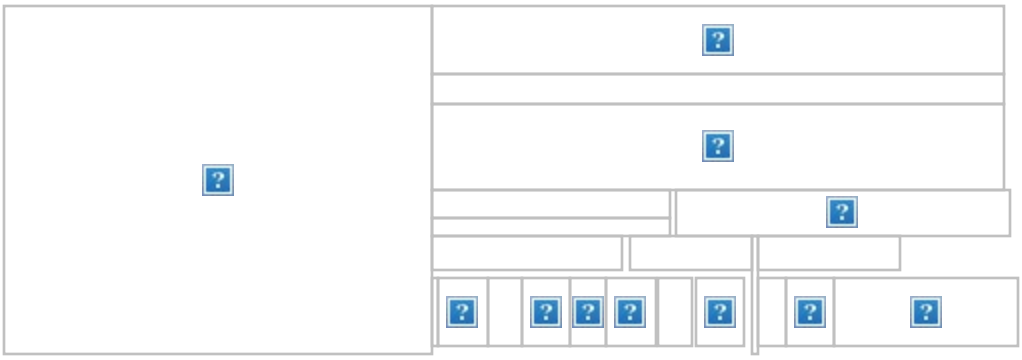
https://www.slc.gov

https://www.slc.gov/planning/

<Submittal_Reduced.pdf><Vicinity Map.pdf><Recognized Organization Notice.pdf>

From: Justin Udy
To: Javoronok, Sara
Cc: Ball Park CC Chair; pjslc@yahoo.com
Subject: (EXTERNAL) CASE PLNSUB2018-00869 906 S 200 W
Date: Tuesday, February 25, 2020 5:09:05 PM

Sara,
I wanted to follow up on the conditional use and requested higher density on this project.
Please confirm status of this project and when the city meeting will be.
I was concerned about the parking in this area and density request on this project with the conditional use.
You had mentioned redevelopment for additional parking along 900 S that would assist with issues.
Also, I wanted to know if the city has more information about past conversations on building a parking structure on the city owned ground near freeway at this location.
Please update me.
Thanks.



From:	Jesse Hulse
To:	Planning Public Comments; Javoronok, Sara
Subject:	(EXTERNAL) comment regarding Sydney & Slate at 906 South 200 West - PLNSUB2018-00869
Date:	Tuesday, April 14, 2020 5:06:16 PM

Dear members of the Planning Commission
I am a neighbor to this parcel and have been looking forward to it's redevelopment for a long time.

Overall I like this project, it includes some active street level use as well as bringing new residents to the neighborhood.The renderings look great, it appears to be well designed with durable, long lasting materials, that are appropriate to an urban building of this scale. It is tastefully composed in a way that will stand the test of time, avoiding some of the trendy clichés too many developers and architects are foisting upon us. In addition, unlike many projects in our neighborhood, it has on-site parking.

However, I have reservations.
I believe in the intent of the FB-UN2 code that this project seeks relief from. Ground floor transparency, shorter facades, ground floor active uses and entrances are all important to creating an active, engaging and safe streetscape.
On a small street like Washington Street, this is even more important than most. Washington and Jefferson Streets along with 900 South are the heart of this community and these two smaller streets are defining to it's character. It is most important that we get it right on these two streets and do our best to improve them by implementing our best urban design practices - not line them with parking podiums.

I have been told that the developer can not activate the ground level space with residential units due to soil contamination and does not want to have more active commercial space.

I understand the developers argument that they don't think they need more active ground floor commercial use, and that they are trying to maintain a higher parking count, but I don't agree. There is still a need and desire in this neighborhood for a number of commercial or non-profit uses. We do not yet have any number of uses in this neighborhood such as art galleries, fitness studios, offices, boutiques, health clinics, aestheticians, more barbers and salons, etc. If the developer wants to maintain parking count, they can do so on upper levels, put it on the alley sides, or interior of their footprint.

I understand that the developer is prohibited from putting residential units at grade on these street faces due to soil contamination. But I don't think they have explored elevating townhome style units built a few feet above sidewalk grade above a ventilated crawl space to mitigate the prohibition from slab on grade residential.

If there was no other way to have a project built in the foreseeable future than to grant these concessions, I would be in support.
However, I don't think this project necessarily needs these concessions.. We have zoning for a reason and we work hard to stay in those constraints for the public good, I don't see how allowing these variances will result in a better project for the public.

This project is still in the Design Phase, it is awaiting full design and engineering based on this outcome. It's not too late to go back to the drawing board and get it right. I would encourage

you to ask hard questions and require the developer to prove that they have no way to accomplish this project any other way before allowing this project to move forward as requested.

Best regards,

Jesse J Hulse

Principal, Atlas Architects Inc
Vice Chair, Central 9th Community Council

801.322.2724
www.atlasarchitects.com

ATTACHMENT H: DEPARTMENT REVIEW COMMENTS

Engineering
Scott Weiler
No objections

Transportation
Michael Barry
No comments

Fire
Ted Itchon, edward.itchon@slcgov.com, 801-535-6636
Both structure are over 30 ft. in height and will be required to meet all of the sections of the IFC Appendix D105, unless the construction type were of non-combustible construction. This would require and Alternative Means and Methods (AM&M) application. The structures shall meet the IFC Section 503.1.1 by the use of automatic smoke detection in the corridors and public spaces with an increase of automatic fire sprinkler density with an AM&M application.

Building Comments
Steven Collett, steven.collett@slcgov.com, 801-535-7289
• The type of construction per IBC Chapter 6 will dictate the allowable heights, areas, and occupancies limitations per IBC Chapter 5.
• Fire protection and life safety systems per IBC & IFC Chapter 9
• Means of egress design per IBC Chapter 10
• Provisions of IBC Section 420 as applicable

Zoning Comments
Alan Michelsen, alan.michelsen@slcgov.com, 801-535-7142
FB-UN2 Zoning District / 100 Year Floodplain Overlay. Proposal to demolish an existing abandoned dry cleaner and other buildings and redevelop apartment units above the ground floor commercial uses.
• Any public way encroachments, such as balconies or other building elements crossing property lines, will need to be discussed with the SLC Real Property Div. in Room #425 at 451 S. State St. 801-535-7133.
• Demolition permits will be required for the removal of the existing buildings. As part of the demolition application, the construction waste management provisions of 21A.36.250 apply.
• Certified Addresses are to be obtained from the Engineering Division and all plan sheets and submittal documents shall be updated with the correct certified address for use in the plan review and building permit process.
• See 21A.27 for general and specific regulations of the FB-UN2 zoning district.
• The street level facing facades of all parking structures shall be wrapped along all street frontages with habitable space that is occupied by a use that is allowed in the zone as a permitted or conditional use per 21A.27.030.C4.f.8. or exempted by the planned development approval. Also please note that that rooftop amenities appear to exceed the maximum 65 feet building height requirement
• See 21A.36.250 for a permanent recycling collection station. See 21A.36.250 for construction waste management plan requirements.
• See 21A.40 for Accessory Uses, Buildings and Structures, and including ground mounted utility boxes.
• Provide the minimum and maximum parking calculations per Table 21A.44.030.

• Provide a completed Impact Fee Assessment Worksheet. Credit may be given for building square footage being demolished.
• See 21A.48 for landscaping requirements and park strip trees as approved by the Urban Forestry Division.

Public Utilities Comments
Jason Draper, jason.draper@slcgov.com, 801-483-6751
• Planned Development approval does not provide utility development or building permits. Review of plans is for preliminary acceptance and to provide comments for development requirements.
• Utilities cannot cross property lines without appropriate easements and agreements.
• Parcels must be consolidated prior to permitting.
• Public Utility permit, connection, survey and inspection fees will apply.
• Please submit site utility and grading plans for review. Other plans such as erosion control plans and plumbing plans may also be required depending on the scope of work. Submit supporting documents and calculations along with the plans.
• Covered parking area drains and work shop area drains are required to be treated to remove solids and oils prior to discharge to the sanitary sewer. These drains cannot be discharged to the storm drain. Use a sand/oil separator or similar device. A 4ft diameter sampling manhole must be located downstream of the device and upstream of any other connections.
• All utility design and construction must comply with APWA Standards and SLCPU Standard Practices.
• Storm water treatment is required prior to discharge to the public storm drain. Utilize storm water Best Management Practices (BMPs) to remove solids and oils. Green infrastructure should be used whenever possible. Sand/oil separators are commonly used to treat storm water runoff from uncovered parking areas.
• Storm water detention is required for this project. The allowable release rate is 0.2 cfs per acre. Detention must be sized using the 100 year 3 hour design storm using the farmer Fletcher rainfall distribution. Provide a complete Technical Drainage Study including all calculations, figures, model output, certification, summary and discussion.
• Contact SLCPU Street Light Program Manager, Dave Pearson (801-483-6738), for information regarding street lights.
• Projects larger than one acre require that a Storm Water Pollution Prevention Plan (SWPPP) and Technical Drainage Study are submitted for review.
• All utilities must be separated by a minimum of 3ft horizontally and 18" vertically. Water and sewer lines require 10ft minimum horizontal separation.
• Applicant must provide fire flow and culinary water demands to SLCPU for review. The public water system will be modeled with these demands. If the demand is not adequately delivered, a water main upsizing will be required at the property owner's expense. Required improvements on the public water system will be determined by the Development Review Engineer. New water mains must cross the entire frontage of the property. A plan and profile and Engineer's cost estimate must be submitted for review. The property owner is required to bond for the amount of the approved cost estimate.

Planning Comments
Sara Javoronok, sara.javoronok@slcgov.com, 801-535-7625
Sydney & Slate:

1) Submit environmental report or other documentation for both Sydney and Slate stating remediation required, including that first floor residences are not permitted,

and provide documentation that first floor residences are not permitted on any of the parcels, particularly those that have existing single family residences.

2) Please provide additional information on the public art shown.
3) Remove duplicate labeling from site plan (Slate) and enlarge font on both plan sets so that it is legible when printed at 11x17 and viewed at 100% in Acrobat. There may be additional comments based on clarification of these areas.
4) The narrative states that the proposal meets the Planned Development Objective for Master Plans in 21A.55.010, and that the proposal will leverage the alley to create a unique, urban community gathering space. There needs to be additional activation for the proposal to meet the objective. There is a span of the alley façades on both Sydney and Slate that are over 100 feet where there is no break in the façade with windows, doors, or other visual elements. Modify to provide additional visual interest and "eyes on the street" to create a safe and welcoming space.
5) Please coordinate with the RDA on improvements in the right-of-way. A project extending from West Temple to 300 W is expected to be underway in the next two years. I recommend discussing this project and timing with Kort Utley in the RDA. He can be reached at Kort.Utley@slcgov.com or 801-535-7219.
6) Per 21A.55.110, Planned Developments require that the developer calculate an initial estimate of the costs for maintenance and capital improvements of all infrastructure for the planned development including roads, sidewalks, curbs, gutters, water and sewer pipes and related facilities, drainage systems, landscaped or paved common areas and other similar facilities ("infrastructure"), for a period of sixty (60) years. The document will need to be recorded against the property with the subdivision/condo plat or before the first unit occupancy of the Planned Development. This is a condition of approval for all Planned Developments. The document can either be provided now or after PC approval of the proposal. If not provided prior to the Planning Commission hearing, it will be a condition of approval.
7) Per 21A.27.030.C.7, identify the materials on each building façade and the percent of each material. Please provide material samples or links for each of the materials identified.
8) As referenced in the zoning comments, per 21A.27.030.C.12, awnings, balconies, and doors that project into the right-of-way require an encroachment permit. Speak with Olga Crump in Real Estate Services (olga.crump@slcgov.com, or 801-535-7184) regarding this proposal and process.
9) Table 21A.27.050.C permits a maximum height of 65' measured from established grade. Table 21A.36.020.C provides exceptions for elevator/stairway tower or bulkhead of up to 16 feet. Please provide floor plans to determine location of elevator and other mechanical equipment and balcony placement and verify building height. Table 21A.36.020.C also provides an exception in height of up to 5 feet for a mechanical equipment parapet wall. This wall must be used to screen mechanical equipment. If additional height beyond these two categories is needed, per 21A.55.020.C an additional 5' in building height can be requested as with the Planned Development.
10) Per Table 21A.27.050.C, submit lot consolidation or other subdivision application and related drawing that places each building on a single parcel with a minimum of 4,000 sq. ft.
11) Per 21A.44.070.D, you may be required to provide a short off street loading berth at least 10' in width by at least 35' in length. See 21A.44.070 and 21A.44.080 for additional details.

12) Project shall be required to meet other zoning ordinance requirements that will be reviewed at time of building permit application.

Slate:

1) Clarify submitted ALTA that includes proposed building rather than existing conditions.
2) Submit elevations surrounding 227/229 E 900 S.
3) Per 21A.55.050.C, the Planned Development Standards and related to design and compatibility, consider the following:
    a. Particularly on the west façade, consider recessed balconies, awnings, or other elements to provide shade and prevent solar heat gain.
    b. Consider adding modulation, relief, or a change in materials or color on south elevations to provide additional visual interest.
    c. Please include the existing Central Water Inc. building that is not part of the proposed development in the elevation drawing for Slate. Demonstrate that the proposal maintains the visual character of the neighborhood and the character described in the Master Plan, and that there is sufficient buffering for potential privacy and noise impacts. Have you approached Central Water regarding the development proposal?
4) Per 21A.27.030.C.1.d, every building shall have at least one entry every 75'. The Washington Street elevation does not meet this requirement.
5) 21A.44.020.D requires three accessible parking spaces when 51-75 parking spaces are provided. Please provide an additional parking space.
6) 21A.44.050.B.2 requires one electrical vehicle parking space for every 25 parking spaces provided. Please provide two electrical vehicle parking spaces.

Sydney:

1) Per 21A.55.050.C, the Planned Development Standards and related to design and compatibility, consider the following:
    a. The 200 W elevation of Sydney appears flat and more depth and texture and/or color is needed. Consider using wood as a material.
    b. Consider extending the fiber cement panels and art wall on the 200 W façade to the ground level similar to the same elements on the Washington Street elevation. This could provide additional visual interest and modulation. Alternatively, or in addition to, consider stepping the building back on the southernmost portion of the 200 W façade (near the garage door and where the material changes to fiber cement siding) to provide visual interest and a transition to the smaller scale building to the south. On the second floor, the step back could allow for a patio area.
    c. Consider adding modulation, relief, or a change in materials or color on south elevations to provide additional visual interest.
    d. Consider a corner feature on the southeast corner of the building. Alinea and Spy Hop, which is under construction, have corner features that are more significant than what is currently proposed on this building. The corner feature could provide a design feature for the building itself and add to the existing elements that are already present at this highly visible intersection.
2) Per 21A.27.030.C.1.d, every building shall have at least one entry every 75'. The 200 W elevation does not meet this requirement.
3) 21A.44.020.D requires four accessible parking spaces when 76-100 parking spaces are provided. Please provide two additional parking spaces.

4) 21A.44.050.B.2 requires one electrical vehicle parking space for every 25 parking spaces provided. Please provide 3 electrical vehicle parking spaces.

Rocky Mountain Power
Jeff Barrett, Jeffrey.Barrrett@pacificorp.com, (c) 385-239-1388
Please provide the meter locations.
General points of concern:

- Transformer placement, required clearances, and accessibility.
- Acceptable metering equipment placement, required clearances, and accessibility.
- Overhead to underground conversions which will affect other customers.
- Additional infrastructure will be required to serve this development and affected neighboring customers.

Generally, there doesn't appear to be sufficient room planned for RMP facilities. Currently, the estimate (preliminary/subject to change) is that the project would need the following, with the following clearances:

- At least one sectionalizing cabinet (approximate 7-ft. by 4-ft. footprint).
- At least one pad-mounted switchgear which requires a vault – 8-ft. (W) by 13-ft. (L) by 6-ft. (H).
- An additional transformer for maintaining service to the building which Slate will surround. Transformers needs to be within 50' of the meters they serve.
- At least one, potentially three, self-supporting deadened steel poles.

The preference is that the equipment is placed on site. Initial findings along 900 South indicate that there is no available space in the franchise for these facilities. The typical requirement in such cases is that the customer provide private easement(s) for the equipment.

ATTACHMENT I: REMEDIAL ACTION PLAN

REMEDIAL ACTION PLAN
FORMER HENRIES DRY CLEANER
906 SOUTH 200 WEST
SALT LAKE CITY, UTAH
VOLUNTARY CLEANUP PROGRAM SITE C096

Project No. 2221-003C

Prepared for:

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December 7, 2018

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REMEDIAL ACTION PLAN
FORMER HENRIES DRY CLEANER
906 SOUTH 200 WEST
SALT LAKE CITY, UTAH
VOLUNTARY CLEANUP PROGRAM SITE C096

1. INTRODUCTION

On behalf of Urban 9th LLC (Urban 9th), the prospective purchaser of the former Henries Dry Cleaner (Site) and the Applicant, Wasatch Environmental, Inc. (Wasatch), has prepared this Remedial Action Plan (RAP) for addressing chlorinated solvent impacts to soil and groundwater that have been identified at the Site and off-Site properties. This RAP is intended to be used in conjunction with the Quality Assurance Project Plan (QAPP), the Sampling and Analysis Plan (SAP), and individual work plans prepared for the Site.

The Applicant plans to redevelop the Site (location is shown on Figure 1) as part of a larger redevelopment project that includes the Site as well as many of the properties located west of the Site as shown on Figure 2. For the purposes of this RAP, the term "Site" is used to refer to the former Henries Dry Cleaner property; the term "Applicant-controlled off-Site properties" is used to refer to off-Site properties that are owned and controlled by the Applicant and are part of the Applicant's redevelopment project; and the term "non-Applicant-controlled off-Site properties" refers to off-Site properties that are neither owned nor controlled by the Applicant. The term "on-Site" is used to refer to features or issues located on, or pertaining to, the former Henries Dry Cleaner Site. The term "off-Site" (in the absence of a prefix denoting "Applicant-controlled" or "non-Applicant-controlled" is used to refer to features or issues neither located on, nor pertaining to, the former Henries Dry Cleaner Site, regardless of whether the feature or issue pertains to a property controlled or owned by the Applicant. Defining and understanding these terms is critical for discussions related to the remedial strategy. The Site and Applicant-Controlled off-Site properties are clearly illustrated on Figure 2.

As the Utah Department of Environmental Quality (UDEQ), Division of Environmental Response and Remediation (DERR), has expressed an interest in resolving several specific Site characterization issues (as expressed in their comments on the Environmental Assessment); prior to commencement of active remediation at the Site, Wasatch would submit a work plan(s) to the DERR for their review and approval for conducting the additional Site characterization tasks. All Site characterization tasks would be conducted in accordance with the approved SAP and QAPP. Any modifications to the approved RAP that may become necessary due to the outcome of the additional Site characterization, would be submitted in writing to the DERR and subject to their review and approval. Specific site characterization issues that the DERR has requested that the Applicant address include:

- Delineation of the groundwater plume southwest of the Site.
- Improving the delineation of vertical and lateral extent of soil impacts in the south source area.
- Evaluation of the potential for vapor intrusion into on-Site and off-Site structures (non-Applicant-controlled off-Site structures will be screened to residential standards).
- Evaluation of the actual impacts to indoor air for any structures for which a vapor intrusion risk is identified.

1.1 Site Description

The Site is located at 906 South 200 West in Salt Lake City, Utah (see Figure 1). The Site is identified by the Salt Lake County Assessor's Office as Parcel Numbers 15-12-258-015 and 15-12-258-016 and totals 0.85 acres.

The Site is bordered to the north by 900 South, to the east by 200 West, to the south by multifamily-residential development, to the southwest by single-family residential development, and to the west by an alley and a mix of single-family residential and commercial development beyond the alley (see Figure 3).

The Site is occupied by one single-story, vacant, former dry cleaning building which occupies 17,150 square feet on the northern portion of the Site, and asphalt parking on the southern portion of the Site. The floor of the building consists of concrete in most areas. Offices and a restroom are located in the eastern portion of the building with one additional restroom located in the western portion of the building. A boiler room is located in the northwest portion of the building. Two underground storage tanks (USTs) containing Stoddard solvent were formerly located outside the northwestern portion of the building. The main entrances are located in the northeast portion of the building. Several other entrances are located on the west and east sides of the building. The dry cleaning activities were conducted in three main areas (northern, central, and southern production areas). An oil/water separator (OWS) is located just north of the northern side of the building. Several floor drains are located throughout the building. Site features are shown on Figure 4 and detailed Site features are shown on Figure 5.

1.2 Site Background

The dry cleaning building was constructed in several phases beginning in 1919 in the northeast portion of the Site, and was expanded in 1962 and again in 1971, to its current size and configuration. The building has been occupied by several different dry cleaners for a period of over 90 years. The most recent occupant was Henries Dry Cleaner, which vacated the building in 2015. The Site was identified as a leaking underground storage tank (LUST) site and a chlorinated solvent hazardous waste generator site. The USTs contained Stoddard solvent.

The USTs were removed in 1990 and the release reportedly impacted only soil. The impacted soil was excavated and disposed off-Site. The 1992 Preliminary Site Cleanup Report by Sitex Environmental, Inc., documented that some minor residual ethylbenzene and xylene contamination remained following the excavation and off-Site disposal of soil contaminated with Stoddard solvent from the UST basin located near the northwest corner of the property. The LUST release was granted regulatory closure in 1996.

Granite Environmental, Inc., collected one soil sample during a subsurface investigation conducted in 1999. The soil sample contained tetrachloroethene (PCE) at a concentration of 5.6 micrograms per kilogram (µg/kg). Although the concentration of PCE detected was well below the current United States Environmental Protection Agency (U.S. EPA) Regional Screening Levels (RSLs) for both Composite Worker and Residential Soil, this was the first sample collected from the Site that confirmed a chlorinated solvent release and impacts to environmental media.

In 2015, ERM conducted indoor air sampling at the Site. Two of the four indoor air samples collected from the dry cleaner building exceed the U.S. EPA RSL for Industrial Indoor Air for PCE.

Weston Solutions, Inc. (Weston), conducted subsurface investigation work at the Site in two phases; the first phase was conducted in 2016, and the second phase was conducted in 2017. The results of the 2016 subsurface investigation work demonstrated that halogenated volatile organic compound (VOC) concentrations [including: 1,1-dichloroethene (1,1-DCE), *cis*-1,2-dichloroethene (*cis*-1,2-DCE), PCE, trichloroethene (TCE), and vinyl chloride (VC)] in groundwater exceeded the U.S. EPA Maximum Contaminant Levels (MCLs) in the west-central portion of the Site. Six soil borings were advanced around the building exterior. Two soil samples were collected from each boring. One “soil” sample was also collected of the sludge found in each of the two interior sumps. Benzo(a)pyrene was detected at a concentration exceeding the U.S. EPA RSL for Residential Soil in one sample located near the former Stoddard solvent UST basin. Total Petroleum Hydrocarbons as Diesel-Range Organics (TPH-DRO) and Total Petroleum Hydrocarbons as Gasoline-Range Organics (TPH-GRO) exceeded the Utah Initial Screening Levels (ISLs) in the sample collected from the North Sump. Arsenic exceeded the Industrial RSL in the samples collected from the North Sump and the South Sump. The arsenic concentrations are within the range of typical background arsenic concentrations for Utah. The investigation also demonstrated that chlorinated solvent concentrations in soil gas exceeded the U.S. EPA Residential Vapor Intrusion Screening Levels (VISLs) in two sample locations; one soil gas sample was collected from a location adjacent to the north-central portion of the building, and one soil gas sample was collected

from a location adjacent to the south-central portion of the building. No source areas for the chlorinated solvent contamination at the Site were identified.

The second phase of subsurface investigation by Weston demonstrated that chlorinated solvent (primarily PCE, TCE, *cis*-1,2-DCE, and VC) concentrations in groundwater exceeding the U.S. EPA MCLs were evident throughout most of the Site and extended off-Site to the northwest, west, and southwest. This investigation effort failed to delineate the off-Site extent of the groundwater plume. Although low concentrations (below U.S. EPA RSLs for Residential Soil) of chlorinated solvents were detected in soil throughout much of the property, the investigation failed to identify the source areas for the chlorinated solvent contamination at the Site.

AECOM Technical Services, Inc., conducted additional subsurface investigation in 2017 intended to define the lateral extent of the groundwater plume. The investigation involved the advancement of seven soil borings, all of which were converted to groundwater monitoring wells (MW-100 through MW-106). The soil borings and monitoring wells were installed in locations intended to delineate the lateral extent of the groundwater plume. The investigation successfully delineated the groundwater plume in every direction except to the southwest. The investigation determined that the groundwater gradient is primarily to the northwest, and that the groundwater plume extends off-Site to the southwest, west and northwest. The investigation determined that the groundwater plume primarily extends in a northwesterly direction and does not reach the north side of 900 South. No analytes were detected in soil at concentrations exceeding either the U.S. EPA RSLs for either Residential or Composite Worker Soil.

Wasatch conducted a survey of the building interior and sewer lines in 2018 to identify potential source areas (i.e., staining, cracks and joints in the floor slab, breaks in the sewer lines, locations of dry cleaning equipment, drum storage areas, floor drains, etc.) that may have served as sources or pathways for PCE to be released to the subsurface. These features were carefully mapped, along with the location of prior sampling locations. This information was then used to formulate a strategy for a subsequent subsurface investigation intended to locate the source areas for the chlorinated solvent contamination in groundwater.

Later in 2018, Wasatch conducted a subsurface investigation targeted at identifying locations that may have served as sources or pathways for PCE to be released to the subsurface. Fifteen soil borings were advanced in the potential source areas. Soil samples were collected from each of the borings and groundwater samples were collected from eight of the borings. The investigation successfully identified two source areas for the chlorinated solvent contamination in groundwater. A smaller source area was identified associated with the Stoddard solvent UST basin located near the northwest corner of the building, and a larger source area was identified in association with a drum storage area and dry cleaning equipment located near the west-central portion of the building. The source areas are shown on Figures 4, 5, and 6.

The groundwater plume and sample locations are shown on Figures 4 and 6.

On August 9, 2018, Urban 9th LLC applied for acceptance into the Voluntary Cleanup Program (VCP). The Site was accepted into the VCP on September 26, 2018.

1.3 Conceptual Site Model

The Site is located within the discharge area for the basin-fill aquifer system, near the eastern boundary with the secondary recharge area. The discharge area of the basin-fill aquifer system is characterized by a shallow unconfined aquifer overlying a deep confined aquifer, with a confining layer (aquitard) separating the shallow unconfined aquifer from the deep confined aquifer. The discharge area exhibits an upward vertical hydraulic gradient.

The shallow unconfined aquifer, where it is present, extends to a maximum depth of approximately 50 feet and is composed primarily of clays, silts, and fine-grained sands. Throughout the central portion of Salt Lake Valley, the shallow unconfined aquifer has an upward vertical hydraulic gradient. Recharge to

the shallow unconfined aquifer generally occurs through infiltration of precipitation falling on the valley floor, infiltration of unconsumed irrigation water, and upward migration of groundwater through the confining layer from the deep confined aquifer. Discharge from the shallow unconfined aquifer is generally to the Jordan River, streams, canals, springs, the Great Salt Lake, and loss through evapotranspiration. The shallow unconfined aquifer is only slightly more permeable than the confining layer which underlies the shallow unconfined aquifer, yields little water, the water is of poor quality, and; therefore, is rarely used as a source of potable water.

The confining layer, where it is present, ranges from 40 to 100 feet thick and is composed of Quaternary deposits of clay, silt, and fine-grained sands. The confining layer exhibits an estimated average upward vertical hydraulic conductivity of 0.025 feet per day.

The deep confined aquifer ranges from 0 feet (at the edges of the valley where it becomes unconfined and in the recharge area) to over 2,000 feet in thickness and is composed of layered Quaternary deposits of clay, silt, sand, and gravel which are hydraulically interconnected. The deep confined aquifer has an upward vertical hydraulic gradient. Recharge to the deep confined aquifer generally occurs through inflow from consolidated rock and coarse-grained unconsolidated sediments in the primary and secondary recharge zones (along the margins of the valley); and infiltration from streams, rivers, canals, ponds, and lakes where the water level elevation is higher than the water table (i.e., losing streams, etc.). Groundwater flow originates in the recharge areas to the northern and central portions of Salt Lake Valley. Discharge from the deep confined aquifer is through groundwater withdrawal from wells, and upward movement through the confining layer to the shallow aquifer. In the central portion of the Salt Lake Valley (including the area in which the Site is located), the deep confined aquifer is classified as a Class II aquifer, suitable for use as drinking water. The deep confined aquifer is the principal aquifer from which most of the groundwater from the Salt Lake Valley is discharged (i.e., for irrigation, stock watering, potable water, etc.).

Soils at the Site consist of sand fill (SW), sandy silt (ML), and silty clay (CL); overlying silty sand/sandy silt (SM/ML ML/SM), sand (SP) and gravelly sand (SW). Depth to groundwater is approximately 6 to 8 feet bgs. The hydraulic gradient is generally to the northwest at approximately 0.002 feet per foot, steepening to approximately 0.03 feet per foot under 900 South Street. Groundwater and contaminant transport are likely to occur primarily within the sandy soils which typically occur below a depth of approximately 10 feet. Soils consisting primarily silts and clays are likely to serve as contaminant storage zones.

Dissolved phase chlorinated solvent contamination underlies nearly the entire building and much of the remainder of the Site. The chlorinated solvent plume extends off-Site approximately 145 feet to the northwest but does not extend as far as the north side of 900 South Street. The widespread dissolved phase chlorinated solvent contamination is likely due to a number of factors including: wide-spread chlorinated solvent impacts to soil at concentrations below the U.S. EPA RSLs for Residential Soils, but above the U.S. EPA MCL-based Soil Screening Levels (SSLs), partitioning into groundwater; a relatively flat but variable hydraulic gradient; and diffusion.

Two source areas have been identified which Wasatch believes are the primary source of dissolved phase groundwater contamination: a smaller source area associated with the Stoddard solvent tank area, and a larger source area associated with a drum storage area and dry cleaning equipment located in the central production area.

A complete range of PCE daughter products (including TCE, 1,1-DCE, *cis*-1,2-DCE, *trans*-1,2-dichloroethene, and VC) have been detected in groundwater at the Site. The presence of these compounds indicates that the PCE is naturally degrading in the environment due to reductive dechlorination.

1.4 Objectives

The Applicant plans to redevelop the Site as part of a larger redevelopment project that also includes the Applicant-controlled off-Site properties located west of the Site as shown on Figure 2. This provides the

Applicant with the opportunity to manage off-Site impacts to the west of the Site and eliminate potential routes of exposure through the implementation of engineering and institutional controls. Redevelopment of the Site and Applicant-controlled off-Site properties would include ground-level parking structures and limited commercial space (primarily along 900 South) and residential space on levels 2 through 4 above the on-grade parking and commercial spaces. The Applicant would identify non-Applicant-controlled off-Site properties having structures in areas where there may be a risk of vapor intrusion attributable to releases from the Site, screen these properties and structures against residential standards, and implement appropriate vapor mitigation measures as required (with the permission of the property owners).

The Applicant intends to demolish and remove the existing structures located on-Site and on Applicant-controlled off-Site properties and redevelop the Site and Applicant-controlled off-Site properties with parking and commercial use on the ground floor and residential above the ground floor. Therefore, the objective of this remedial action is to remediate soil and groundwater at the Site to meet the U.S. EPA RSLs for Industrial Soil (and to U.S. EPA RSLs for Residential Soil to the extent practicable), U.S. EPA MCLs for groundwater to be protective relative to the groundwater ingestion exposure pathway, and the U.S. EPA VISL Commercial Target Groundwater Concentrations to be protective relative to the vapor intrusion exposure pathway.

The Applicant also intends to mitigate any residual vapor intrusion risk that may remain at the Site, and at Applicant-controlled off-Site properties, following active remediation to meet U.S. EPA RSLs for Industrial Indoor Air on the ground floor and U.S. EPA RSLs for Residential Indoor Air above the ground floor. The Applicant anticipates that land use and engineering controls (which would require an Environmental Covenant [EC] and Site Management Plan [SMP]) would be a required component for achieving regulatory closure of the Site. The land use and engineering controls would likely be necessary, both for the Site and Applicant-controlled off-Site properties, due to the probability that the U.S. EPA MCLs and/or VISL Commercial Target Groundwater Concentrations may not be achieved in the short-term which would result in a requirement for long-term groundwater monitoring, restrictions on the use of groundwater, restrictions on land use and development, and that engineering controls (i.e., vapor barrier and/or sub-slab depressurization system, etc.) would be required to ensure that chlorinated solvent concentrations in indoor air are maintained at acceptable levels for the continued use of the Site and Applicant-controlled off-Site properties following active remediation and redevelopment. Engineering controls, such as vapor mitigation systems, may also be necessary to manage exposure risks at some non-Applicant-controlled off-Site properties.

2. REMEDIAL ACTION SELECTION

Site characteristics, historical and proposed future (following redevelopment) land use of the Site and Applicant-controlled off-Site properties, current land use of properties surrounding the Site and Applicant-controlled off-Site properties, and the nature and distribution of contamination, are discussed in Sections 1.1 Site Description, 1.2 Site Background, and 1.3 Conceptual Site Model of this RAP. The information presented in these sections of the RAP serve as the basis for the selection of appropriate remedial action measures, engineering controls, and institutional controls as discussed in the following sections. The applicable references are listed in Section 11 of this RAP.

2.1 Contaminants of Concern

Contaminants of concern include the chlorinated solvent PCE; and PCE daughter products including: TCE, 1,1-DCE, 1,2-*cis*-DCE, 1,2-*trans*-DCE, and VC. Additionally, benzo(a)pyrene is a contaminant of concern with respect to the north source area and possibly the north sump and OWS; and TPH-GRO and TPH-DRO are contaminants of concern with respect to the contents, and possibly the surrounding soils, with respect to the north sump.

2.2 Proposed Cleanup Levels

Soil at the Site would be remediated to meet the U.S. EPA RSLs for Industrial Soil (and to U.S. EPA RSLs for Residential Soil to the extent practicable). Remediation of soil to the U.S. EPA Industrial RSLs is protective of composite workers, and construction workers with respect to the soil ingestion and inhalation exposure pathways. This standard for soil is not, however, protective with respect to contaminants partitioning out of soil into groundwater and soil gas. This standard, in the absence of engineering and/or institutional controls, would also not be protective of residents. All of the contaminants of concern at the Site have MCL-based Soil Screening Levels (SSLs) which are much lower than the RSLs for Industrial Soil and Residential Soil. Therefore, continued partitioning of contaminants out of soil and into groundwater at the Site is expected. Continued partitioning of contaminants out of soil and into soil gas is also expected.

Groundwater occurring both on-Site and off-Site would be remediated to meet the U.S. EPA MCLs for groundwater to be protective relative to the groundwater ingestion exposure pathway. Because *cis*-1,2-DCE and *trans*-1,2-DCE do not have U.S. EPA VISL Target Groundwater Concentrations, and the U.S. EPA VISL Commercial Target Groundwater Concentrations for PCE, TCE, 1,1-DCE, and VC are higher than their respective MCLs; the MCLs are also protective with respect to contaminants partitioning out of groundwater into soil gas (protective with respect to the vapor intrusion exposure pathway).

Indoor air in both on-Site and Applicant-controlled off-Site human-occupied structures in which vapor intrusion attributable to the Site is occurring would be mitigated to meet the U.S. EPA RSLs for Residential Indoor Air or Industrial Indoor Air (as appropriate for the land use and building occupancy). Any residual vapor intrusion risk that may remain at the Site following active remediation would be mitigated to meet U.S. EPA RSLs for Industrial Indoor Air on the ground floor (where building occupancy is for commercial use) and U.S. EPA RSLs for Residential Indoor Air above the ground floor (where building occupancy is for residential use).

The Applicant cannot impose land use controls on non-Applicant-controlled off-Site properties. Where a vapor intrusion risk to structures located on non-Applicant-controlled properties is identified, and that vapor intrusion risk is attributable to releases from the Site; these properties, and the structures located on these properties, would be screened against residential standards for the evaluation of vapor intrusion risk (U.S. EPA VISL Residential Target Groundwater Concentrations, U.S. EPA VISL Target Sub-slab and Near-source Soil Gas Concentrations, U.S. EPA RSLs for Residential Indoor Air). With the permission of the property owner(s), the Applicant would implement appropriate vapor mitigation measures (refer to Sections 3.4 and 3.5) to achieve residential indoor air quality standards with respect to contaminants attributable to releases from the Site as required.

Following active remediation, any residual risk to receptors on both the Site and Applicant-controlled off-Site properties would be managed through the use of engineering and institutional controls (discussed in Section 2.4 below).

2.3 Proposed Remedial Action Measures

Given the Site characteristics, nature and distribution of contaminants, and proposed future land use; Wasatch proposes *in situ* chemical reduction (ISCR) of the contaminants in the saturated zone within the two source areas by injection of a zero valent iron (ZVI) slurry into the two source areas. Vadose zone soils within the two source areas would be remediated by *in situ* mixing of ZVI slurry with the vadose zone soils. Permeable reactive barriers (PRBs) would be installed along the north and west sides of the Site, and a portion of the south side of the Site (at the southwest corner of the Site). The PRBs would reduce the concentrations of dissolved phase contaminants in groundwater as the groundwater migrates off-Site. This approach would significantly reduce the contaminant mass remaining in the two source areas (in both the vadose zone and saturated zone), thereby significantly reducing the contaminant mass that is available to partition into groundwater and soil gas. This approach also treats contaminated groundwater as it migrates off-Site, significantly reducing the risks associated with off-Site groundwater contamination

and associated vapor intrusion concerns. Details regarding these remedial action measures are provided in Section 3 of this RAP.

2.4 Proposed Engineering and Institutional Controls

The following engineering and institutional controls are proposed in the event that the remedial action fails to fully achieve the proposed cleanup levels and to manage residual exposure risks following remedial action.

2.4.1 Vapor Barrier and Vapor Mitigation System

Wasatch proposes that a vapor barrier and passive vapor mitigation system (VMS) be installed in the new on-Site structure, and a vapor barrier be installed in the new Applicant-controlled off-Site structures. These engineering controls would greatly reduce the potential for vapor intrusion into the new structure. Details regarding these engineering controls are provided in Section 3 of this RAP.

2.4.2 Environmental Covenant (EC) and Site Management Plan (SMP)

Wasatch anticipates that groundwater on-Site and off-Site may not meet the MCLs for an indeterminate period of time following active remediation at the Site, and that residual chlorinated solvent concentrations in groundwater and soil may be sufficient to result in elevated chlorinated solvent concentrations in soil gas and an increased risk of vapor intrusion. An EC and SMP would be implemented to reduce the probability of exposure to the contaminants by specifying how the Site and Applicant-controlled off-Site properties may and may not be used (e.g., forbidding the extraction and use of shallow groundwater and requiring vapor barriers for new structures and possible VMSs). These controls would be protective of occupants of the Site and Applicant-controlled off-Site properties and could facilitate regulatory closure of the Site with residual soil and/or groundwater contamination left in place. The EC and SMP would be subject to review and approval by the DERR.

3. REMEDIAL ACTION DESIGN AND CONSTRUCTION

Prior to commencement of active remediation at the Site, all drummed dry cleaning and investigation derived waste would be properly disposed and the contents of the two sumps and OWS would be removed and properly disposed. The two sumps and OWS, and associated pipes, would be removed and properly disposed during later phases of Site demolition. The locations of these features are shown on Figures 4, 5, and 6.

Details of the remedial design (i.e., excavation boundaries and depths, boring locations, injection depth, ZVI dosing, etc.) may be subject to revision based on unforeseen Site conditions and the results of any additional Site characterization work that may be performed. Any substantive revisions to the approved RAP would be submitted in writing to the DERR prior to implementation of the revision, and would be subject to DERR review and approval. Critical aspects of the remedial design are illustrated on Figure 6.

Prior to commencement of the remediation work at the Site, the above ground portions of the former dry cleaner building would be demolished and removed from the Site, leaving behind the concrete floor slabs and asphalt pavement. Leaving the floor slabs and pavement in place during the injections and soil mixing would help maintain a cleaner work area and help to form a surface seal during the ZVI injections. Where injections are performed within the footprint of the existing structure and asphalt-paved areas, holes would be cored through the concrete and asphalt to facilitate drilling and injection. The holes would not need to be patched with cement following completion of the injections at each boring location. Because the drill rig and excavator would be tracking over paved surfaces, there should be no need for track-out pads or decontamination of heavy equipment except for the drill-rods, excavator arm, and excavator bucket.

The ZVI product specified for this project is Micro Blend ZVI which will be supplied by CERES Corporation (CERES). The ZVI specifications and material safety data sheet are presented in Appendix A. The ZVI product would be emplaced for the PRBs and treatments of the saturated zone within the two source areas using specialized hydraulic fracturing and injection tooling by Frac Rite Remediation, Inc., (Frac Rite), using direct-push drilling equipment operated by Direct Push Services (DPS), and with oversight by Wasatch. The procedures and equipment used for the ZVI injections for the PRBs and treatment of the saturated zone within the two source areas are identical. Critical procedures and other detailed information pertaining to the injection equipment and processes are presented in Appendix D. The ZVI powder would be mixed with water (as specified by the ZVI supplier), and extremely low concentrations fracture fluid chemicals (see Appendix D), to form a slurry and then injected into the subsurface at specified injection intervals. Down-hole injection tooling is a proprietary, ported, fixed-tip injection tool which isolates a 3 to 5-inch portion of the borehole during the injections. Fluids are pumped through the drill-rods to the injection tool. A disposal-tip injection tool would be used if there are problems with the fixed-tip tool plugging. Injection pressures at each injection interval are expected to momentarily (less than one second) be has high as 650 pounds per square inch (psi) and then drop to the range of 50 to 200 psi. Damage to existing utilities would be prevented by maintaining a minimum horizontal offset from utilities of 3 feet, and increasing the offset to a minimum of 6 feet when injecting in locations adjacent to sensitive utilities such as fiber optic lines. If surfacing of the injection fluid occurs, pumping would immediately be stopped, and additional boreholes would be advanced to complete the injection dosage at the specified injection interval. While there is no cost-effective or practical means of verifying the radius of distribution (ROD) of the injection fluids in the field, the assumed RODs are conservative and should be more than adequate to achieve the specified remedial objectives.

3.1 Source Area *In Situ* Chemical Reduction (ISCR) - Injection of ZVI (Saturated Zone)

Two source areas have been identified which Wasatch believes are the primary source of dissolved phase groundwater contamination: the north source area, a smaller source area associated with the Stoddard solvent tank area; and the south source area, a larger source area associated with a drum storage area and dry cleaning equipment located in the central production area. The north source area measures approximately 35 feet by 15 feet, and the south source area measures approximately 40 feet square (see Figures 4, 5, and 6).

Wasatch proposes ISCR of the contaminants located in the two source areas, and occurring within the saturated zone, by injection of a ZVI slurry into the saturated zone in each of the two source areas.

Injections to treat the saturated zone in the two source areas would be performed at depths of 5 to 20 feet bgs. The injection borings would be completed as shallow borings treating depths of 5 to 10 feet bgs, injecting at 2-foot injection intervals (depth intervals); and deep borings treating depths of 10 to 20 feet bgs, injecting at 2-foot injection intervals. In the shallow injection zone (5 to 10 feet bgs) the spacing of borehole locations is based on a ZVI slurry load of 26 gallons per injection interval which is expected to result in a ROD of 4.5 to 5.5 feet (calculated by Frac Rite based on assumed fracture thickness and the volume of ZVI slurry injected). In the deep injection zone (10 to 20 feet bgs) the spacing of borehole locations is based on a ZVI slurry load of 106 gallons per injection interval which is expected to result in a ROD of 8.5 to 10.5 feet. CERES based the ZVI dosing on the contaminant concentrations present and a target *in situ* soil mass dose of 1% ZVI. According to CERES, the 1% *in situ* soil mass dose is an aggressive dosing suitable for sites where dense non-aqueous phase liquids (DNAPL) may be present. In the north source area, eight shallow injection borings would be completed using 5.1 pounds of ZVI per gallon of water ZVI slurry loading, 79 gallons of ZVI slurry would be emplaced in each shallow injection boring (totaling 632 gallons of ZVI slurry and 3,200 pounds of ZVI). In the north source area, two deep injection borings would be completed using 5.0 pounds per gallon of water ZVI slurry loading, 634 gallons of ZVI slurry would be emplaced in each deep injection boring (totaling 1,268 gallons of ZVI slurry and 6,300 pounds of ZVI). In the south source area, 20 shallow injection borings would be completed using 6 pounds of ZVI per gallon of water ZVI slurry loading, 79 gallons of ZVI slurry would be emplaced in each shallow injection boring (totaling 1,580 gallons of ZVI slurry and 9,500 pounds of ZVI). In the south source area, five deep injection borings would be completed using 6 pounds of ZVI per gallon of water

ZVI slurry loading, 634 gallons of ZVI slurry would be emplaced in each deep injection boring (totaling 3,170 gallons of ZVI slurry and 19,125 pounds of ZVI). Actual boring locations would be determined in the field based on the location of utilities and structures.

Information about the ZVI product is presented in Appendix A. Areas where ZVI injections would be performed are shown on Figures 4, 5, and 6.

3.2 Source Area ISCR – *In Situ* Mixing of ZVI (Vadose Zone)

After injections into the saturated zone have been completed (as described in Section 3.1 above), *in situ* soil mixing of ZVI would be performed in each of the two source areas to treat the vadose zone soils (depths of 0 to 7 feet bgs). Soil mixing would be performed by DPS with oversight by a geologist from Wasatch. Areas of Contamination (AOCs) would be established around each of the source areas (the north AOC around the north source area, and the south AOC around the south source area (as shown on Figure 6). The AOCs would each extend outward approximately 15 feet from their respective excavation boundary but would not extend beyond the property boundary or overlap each other. The ZVI and soil mixing would be performed within the footprint of the excavation within each of the AOCs. Soil would not be removed from the AOCs, nor would soil be moved between the AOCs. Soil would not be removed from the AOCs until such time as the soil has been sampled to verify that it meets the cleanup standard and a "not-contained-in" determination for the soil has been issued by the UDEQ.

The concrete floor slabs would be saw-cut and removed from the each of the two source areas where the concrete floor slabs overly the footprint of the source areas (not from the full footprint of the AOCs). Soil mixing would be performed using a long-reach excavator. The soil mixing would be performed working in sections in each of the two source areas. The north source area would likely be worked in two sections (an east section and a west section), and the south source area would likely be worked in four sections (quadrants). A total of approximately 4,339 pounds of ZVI would be added to the soil in the north source area, and a total of approximately 13,404 pounds of ZVI would be added to the soil in the south source area. CERES based the ZVI dosing on the contaminant concentrations present and a target *in situ* soil mass dose of 1% ZVI, an aggressive dosing suitable for sites where DNAPL may be present. When working each section, the soil would be mixed to a depth of 7 feet while gradually adding the prescribed mass of ZVI and gradually bringing the moisture content up to 30 to 40%. The soil mixing contractor would monitor soil moisture using a moisture probe. As the soil in each section is mixed, and after the specified mass of ZVI has been added and moisture content is in the specified range, the soil mixing would continue until, based on visual observations by the Wasatch geologist, the soil and ZVI mixture has been sufficiently homogenized. Soil mixing would then commence on the next section. This process would be repeated in each section until the vadose zone soils in both source areas have been completely treated with the ZVI. Wasatch anticipates that the soil mixing process should require approximately 6 to 10 days to complete.

After the soil mixing has been completed, the soil would be left in place to react with the ZVI and for the moisture content to stabilize for a period of three weeks. After three weeks, the soil would be sampled (as described in Section 6.2) to verify that the soil meets the cleanup standard for the Site. Once the soil meets the cleanup standard of the Site, Wasatch would request a "not-contained-in" determination for the soil from the UDEQ. Upon issuance of the "not-contained-in" determination, the soil would be removed from each of the excavations and temporarily placed on the concrete floor slabs and/or asphalt pavement. If the moisture content is still too high to achieve compaction, the soil may be left on the concrete and/or asphalt for a period of one to two weeks to dry out. Straw swaddles would be placed around the stockpiles of soil to prevent runoff if the moisture content of the soil is high enough that the soil is free draining. The Applicant's geotechnical contractor will then be permitted to collect soil samples for Proctor tests to determine the optimum moisture content and maximum dry density of the soil. The data resulting from the Proctor tests will serve as a basis of comparison for the compaction testing. Once the moisture content of the stockpiled soil is in the correct range to achieve compaction, the soil will be placed back in excavations lifts, compacted, and tested for adequate compaction (according to specifications from the geotechnical engineering consultant retained by the Applicant).

Because the concrete floor slabs and asphalt pavement would be left in place surrounding the excavations where the soil mixing is performed, the excavator would be tracking over paved surfaces, and only the excavator arm and bucket should require decontamination. The soil mixing contractor would be permitted to decontaminate the excavator arm and bucket over the source area excavations using a pressure washer, potable water, and scrub brushes. Decontamination of the excavator arm and bucket would be required when moving the excavator between AOCs and following the completion of the soil mixing.

3.3 PRBs – Injection of ZVI

PRBs would be installed along the north, west, and a portion of the south side of the Site (as shown on Figure 6). The PRBs would involve injection of ZVI to reduce the dissolved phase contaminant mass migrating off-Site. The ZVI product would be emplaced using specialized hydraulic fracturing and injection tooling by Frac Rite, using direct-push drilling equipment operated by DPS, and with oversight by Wasatch. The ZVI product proposed for this project is Micro Blend (see Appendix A for additional information). The ZVI powder would be mixed with water as specified by the manufacturer to form a slurry and then injected into the subsurface. ZVI slurry would be injected from depths of 5 to 20 feet bgs at two-foot injection intervals (eight injection intervals per boring). The spacing of borehole locations is based on a ZVI slurry load of 53 gallons per injection interval which is expected to result in a ROD of 6 to 7.5 feet (calculated by Frac Rite based on assumed fracture thickness and the volume of ZVI slurry injected). According to CERES, the PRBs would have an expected lifespan of 5 to 10 years.

The north PRB, which would be approximately 165 feet in length, would involve approximately 14 borings spaced approximately 11.5 feet apart. The injections for the north PRB would be completed using 4.96 pounds of ZVI per gallon of water ZVI slurry loading. A total of 423 gallons of ZVI slurry would be emplaced in each PRB injection boring, totaling 5,922 gallons of ZVI slurry and 29,373 pounds of ZVI.

The west PRB, which would be approximately 250 feet in length, would involve approximately 21 borings spaced approximately 11.5 feet apart. The injections for the west PRB would be completed using 5.08 pounds of ZVI per gallon of water ZVI slurry loading. A total of 423 gallons of ZVI slurry would be emplaced in each PRB injection boring, totaling 8,883 gallons of ZVI slurry and 45,126 pounds of ZVI.

The south PRB, which would be approximately 70 feet in length, would involve approximately 6 borings spaced approximately 11.5 feet apart. The injections for the south PRB would be completed using 4.96 pounds of ZVI per gallon of water ZVI slurry loading. A total of 423 gallons of ZVI slurry would be emplaced in each PRB injection boring, totaling 2,538 gallons of ZVI slurry and 12,588 pounds of ZVI.

Actual boring locations would be determined in the field based on the location of utilities and structures.

3.4 Installation of Passive VMS

Wasatch proposes the installation of a passive VMS, in conjunction with a vapor barrier (as discussed below), to mitigate the accumulation of chlorinated solvent vapors beneath the floor slab of the new on-Site structure. The passive VMS would be constructed so as to be easily converted to an active VMS should the need arise. The VMS would consist of one vent stack per approximately 2,500 square feet of ground-level floor space intended for human occupancy. As the preliminary building design consists of approximately 5,170 square feet of ground-level floor space intended for human occupancy, Wasatch is recommending that a minimum of two vent stacks be installed at the Site. The approximate locations of the VMS vent stacks (based on the preliminary building design) and the general design of the passive VMS are presented in Appendix B. The final VMS design will be based on the final building design and the placement of the vent stacks will be determined in cooperation with the architectural firm completing the building design. The final VMS design will be submitted to the DERR for review and approval prior to construction of the new building.

The VMS system described is this section is specifically intended for the new structure to be constructed on-Site; however, a system of similar design could be implemented for a structure(s) constructed on

Applicant-controlled off-Site properties and/or non-Applicant-controlled off-Site properties, if necessary, using the same design guidelines. The VMS system(s) could also be constructed as, or converted to, and active VMS system if required as illustrated in Appendix B.

3.5 Installation of Vapor Barrier

Wasatch proposes the installation of a vapor barrier underlying the entire area of the floor slab of the new on-Site and Applicant-controlled off-Site structures. Wasatch is specifying Drago® Wrap vapor intrusion barrier, manufactured by Stego Industries, LLC, for this project. Drago® Wrap is a 20-mil thick, multi-layer material engineered for use as a vapor barrier to prevent vapor intrusion into structures located on VOC-contaminated properties. Drago® Wrap has been performance tested against a wide range of VOCs including PCE and TCE. Installation of the vapor barrier would be performed by a qualified contractor and the installation would be inspected by Wasatch. Specifications and installation instructions for the vapor barrier are provided in Appendix C.

The vapor barrier described in this section is specifically intended for new construction for the on-Site and Applicant-controlled off-Site structures and is only applicable to new construction. If a vapor barrier is deemed necessary for an existing structure(s) located on non-Applicant-controlled off-Site properties, Wasatch would recommend an epoxy-based vapor barrier that can be applied to the top surface of an existing floor slab (i.e., Retro-Coat™ by Land Science Technologies or Vaportight® Coat by Aquafin).

3.6 General Demolition, Construction, and Decontamination Issues

The following best management practices would be employed during implementation of the remedies specified in this RAP:

- The Applicant would have a pre-demolition inspection performed, have universal wastes and asbestos-containing building materials removed and properly disposed, and obtain a demolition permit prior to demolition of the existing structure.
- The DERR would be notified and provided with an opportunity to be present on-Site to observe the removal of the floor slabs and subsurface features such as the OWS and north sump.
- Storm drain openings would be covered and runoff would be controlled during building demolition, drilling, and excavation activities to prevent mud and contaminants from entering the storm sewer system.
- Site access would be limited by erecting temporary chain-link fencing around the entire Site prior to commencement of the remediation field work. The fencing would remain in place for the duration of the field work.
- The drilling/soil mixing and injection subcontractors would be required to decontaminate their equipment prior to arrival at the Site, and prior to demobilization from the Site.
- Decontamination of the excavator arm and bucket would be performed over the source area excavations using a pressure washer, potable water, and scrub brushes (as described in Section 3.2).
- Decontamination of drill-rods would be performed over a small decontamination pad constructed with an impermeable liner (such as a heavy-duty tarp) draped over sidewalls that would contain the fluids (such as timers or railroad ties) using a pressure washer, potable water, Alconox® (or similar non-phosphate detergent), and scrub brushes. Sediment and fluids generated during decontamination would be collected and drummed for off-Site disposal.
- Decontamination of field sampling equipment is described in SOP 22 of the SAP.
- Decontamination of field personnel boots would be performed in a small plastic kiddie pool using potable water, Alconox® (or similar non-phosphate detergent), and scrub brushes. Sediment and fluids generated during decontamination would be collected and drummed for off-Site disposal.

4. PERMITTING REQUIREMENTS

4.1 Blue Stakes Utility Clearance Request

A utility clearance request would be submitted to Blue Stakes at least two full business days prior to the commencement of the remediation work. The Blue Stakes utility clearance would be renewed every 12 calendar days for the duration of the project. Wasatch would also have DPS perform a private utility locate prior to the commencement of work.

4.2 Underground Injection Control Permit

Wasatch would submit an application for an Underground Injection Control (UIC) permit to the Division of Water Quality (DWQ) for Class 5B6 beneficial use injection well(s) [subsurface environmental remediation injection well(s)] prior to the commencement of field work. Injections would not be performed until the UIC permit has been approved. Wasatch would notify the DWQ when the work has been completed and the permit can be discontinued.

4.3 Storm Water Pollution Prevention Plan (SWPPP)

As the Site occupies less than one acre, a SWPPP is not required for the work described in this RAP. Subcontractors will be required to use best management practices (i.e., cover exposed storm drains and manage runoff, etc.) to prevent adverse impacts to the storm sewer system.

4.4 Utah Division of Air Quality (DAQ) Requirements

Wasatch contacted Mr. Alan Humphries at the DAQ regarding the DAQ requirements for the remediation project. Mr. Humphries stated that the DAQ would not require emissions monitoring or modeling of emissions emanating from the soils removed from the source areas (after treatment and issuance of a "not-contained-in" determination) and temporarily stockpiled on-Site prior to backfill and compaction. Mr. Humphries stated that the project would need to follow the fugitive dust rules specified in R307-309, which requires a Fugitive Dust Control Plan be submitted to the DAQ. The Fugitive Dust Control Plan would be applicable to demolition, remediation (soil mixing, excavation, backfill, and compaction), and construction (excavation and grading). The Fugitive Dust Control Plan would be submitted to the DAQ prior to commencement of demolition, remediation, and construction activities. The DERR would be provided with a copy of the Fugitive Dust Control Plan.

The DAQ currently requires emissions monitoring of passive VMSs in accordance with the requirements of Utah Administrative Code R307-401-15. Wasatch is working with the DAQ to implement a rule change to provide an exemption to the emissions monitoring requirement for VMSs. However, until such time as an exemption is placed into rule, emissions will be monitored and reported to the DAQ as required by the current regulations. Current regulations require monitoring and reporting of VOCs and hazardous air pollutants (HAPs) emitted from each discharge point (each vent stack) monthly for the first quarter, quarterly for the remainder of the first year, and semiannually thereafter. The DERR would be provided copies of the emissions monitoring reports.

4.5 Salt Lake County Health Department

The Salt Lake County Health Department would be notified at least 72 hours prior to commencement of field work related to the remediation activities at the Site.

5. PUBLIC NOTIFICATION AND PARTICIPATION

The Applicant, and Wasatch acting as an agent of the Applicant, would clearly convey to stakeholders a commitment to open an honest communication, a commitment to partnering with the UDEQ in matters of

public involvement, and a commitment to being sensitive and responsive to the concerns of stakeholders. Stakeholders include not only the Applicant, Applicant's environmental attorney, Applicant's consultant, UDEQ, and affected property owners/lessees/occupants; but may also include public utilities, the Salt Lake County Health Department, and Salt Lake City government. This list of stakeholders is not intended to be exclusive. Public comments having technical merit will be considered, regardless of the source of the comment.

In stakeholder communications, Wasatch would explain the iterative nature of environmental investigations and complexities related to actual exposure risk. Wasatch would explain that contamination present in soil or groundwater does not necessarily result in exposure risk, and that often the most common route of exposure is through vapor intrusion into occupied structures. Wasatch would further explain that the data we are gathering would allow us to identify and then reduce or eliminate exposure pathways and associated risks during Site remediation and mitigation efforts.

Communication with stakeholders may be necessary in order to obtain access agreements. All access agreements would be obtained in writing, prior to the commencement of field work. When requesting access to perform investigation, remediation, or mitigation activities on off-Site properties Wasatch would:

- Explain why the work needs to be performed;
- Explain what is known about the release(s) at the time of the request for access that is driving the need for access (without engaging in speculation);
- Clearly describe the nature of the work to be performed;
- Meetings with the Wasatch project manager and VCP project manager would be offered if stakeholders have questions or concerns that cannot be otherwise immediately addressed.
- Allow stakeholders to provide input on sampling locations, dates, and times (when work would be conducted on property they own, lease, or otherwise legally occupy); and
- Provide the stakeholders with contact information for the Wasatch project manager and VCP project manager.

Communication with stakeholders would also be necessary as the results from various phases of investigation and confirmation sampling, particularly phases of investigation and confirmation sampling involving off-Site sampling, become available. Wasatch, with assistance from the UDEQ, would communicate with stakeholders to inform stakeholders of the results of the investigation and confirmation sampling as it proceeds, and provide stakeholders with updated information as it is warranted and in a timely manner. If requested by stakeholders, Wasatch would provide stakeholders with data related to their specific business or residence (i.e., indoor air data and sub-slab soil gas data, etc.) and Site-wide groundwater plume maps; but would not provide data related specifically to neighboring residents or businesses. Stakeholders would be provided information on how they may obtain copies of complete project-related documents through the UDEQ website or by submitting a Government Records Access and Management Act (GRAMA) request. Wasatch would also offer to facilitate meetings between concerned stakeholders, the UDEQ, Applicant, and Applicant's environmental attorney, as necessary.

Wasatch would submit drafts of any written public outreach materials to the VCP project manager for review and provide final copies for the VCP project file. Depending on the number of stakeholders that ultimately become affected by the investigation and remediation activities, Wasatch (in cooperation with the Applicant, Applicant's environmental attorney, and UDEQ) may need to conduct public meetings in order to facilitate effective communication with multiple stakeholders.

The Applicant, and Wasatch acting as an agent of the Applicant, would adhere to the VCP requirements regarding the public comment period required prior to implementing any remediation strategy. Prior to implementation of any remediation strategy, written notification would be provided to adjacent landowners and a notice would be placed in a local newspaper. Notification would be followed by a public comment period on the RAP of no less than 30 days. Any substantive public comments that are received would be responded to per VCP procedures prior to implementation of the Remedial Action Plan.

6. SAMPLING AND ANALYSIS

The sampling methods and laboratory analytical methods vary by environmental media. All soil and groundwater samples would be analyzed for full list VOCs by method SW-846 8260C, and selected locations would also be sampled for TPH-GRO by method SW-846 8260C, TPH-DRO by method SW-846 8270D, and polycyclic aromatic hydrocarbons by method SW-846 8260C (full scan and single selected ion mode). Soil samples collected for analysis of VOCs would be collected using method SW-846 5035A. Indoor air and soil gas samples would be analyzed for full list VOCs by U.S. EPA method TO-15. Additional details regarding the sampling methods and the anticipated laboratory analytical methods are provided in the SAP.

6.1 Waste Characterization Sampling

Wasatch does not anticipate generating any waste soil or groundwater in conjunction with the injections or soil mixing; however, a small quantity of soil and groundwater waste would be generated during sampling conducted in conjunction with additional site characterization activities, soil confirmation sampling, and groundwater monitoring activities. Waste soil may also be generated in conjunction with the removal of subsurface features (i.e., OWS, north sump, or previously unidentified subsurface features, etc.). If contamination is discovered during the removal of these subsurface features, Wasatch would perform waste characterization sampling in accordance with the SAP and complete the appropriate waste profiles to be approved by the facility receiving the waste based on the waste characterization sampling results. All waste will be properly contained in labeled 55-gallon drums or roll-off containers pending laboratory analysis and proper transport and disposal.

Wasatch would arrange for proper transport and disposal of the waste soil and groundwater through Clean Harbors or other appropriate transport, storage, and disposal facilities.

6.2 Soil Confirmation Sampling

Soil confirmation samples will be collected to verify that contaminant mass reductions in soil are occurring, and that the cleanup levels have been, or will be, met. Soil samples would be collected no sooner than 30 days following the completion of the ISCR injections and soil mixing.
Wasatch proposes advancing two soil borings using direct-push drilling methods in the north source area for the purposes of soil confirmation sampling. The boring locations would be evenly distributed throughout the source area. Borings would be advanced to a depth of 20 feet bgs. So as to be representative of the full depth of the treatment zone, samples would be collected from depth intervals of 0 to 1 foot bgs, 5 to 6 feet bgs, 10 to 11 feet bgs, 15 to 16 feet bgs, and 19 to 20 feet bgs.

Wasatch proposes advancing five soil borings using direct-push drilling methods in the south source area for the purposes of soil confirmation sampling. The boring locations would be evenly distributed throughout the source area. Borings would be advanced to a depth of 20 feet bgs (or possibly deeper depending on the results of additional site characterization activities). So as to be representative of the full depth of the treatment zone, samples would be collected from depth intervals of 0 to 1 foot bgs, 5 to 6 feet bgs, 10 to 11 feet bgs, 15 to 16 feet bgs, and 19 to 20 feet bgs. Deeper sampling may be required based on the results of additional site characterization activities.

The sample intervals described above may be revised based on field observations during RAP implementation and the information obtained during additional site characterization work.

The soil borings would be advanced in 5-foot increments using a direct-push drill rig (in accordance with SOP 4 of the SAP). Soil cores would be collected from 5-foot long by 1.5-inch diameter discrete interval push samplers equipped with disposable polybutyrate liners. Soil cores would be field screened with a MiniRae 3000 photoionization detector (PID) equipped with an 11.7 electronvolt lamp. The soil cores would be field logged by an experienced geologist (in accordance with SOP 10 of the SAP). The field logging would include a description of color, moisture content, consistency, odor, staining, and soil type based on the Unified Soil Classification System. Soil samples would be collected from the locations and

depth intervals specified above and submitted for laboratory analysis. Soil samples for VOC analysis would be collected using a laboratory-supplied sampling device, sample preservation methods, and sample containers consistent with U.S. EPA method 5035A. Soil samples would be collected from each sample interval for both low-range (0.5 to 250 micrograms per kilogram [µg/kg]) and high-range (>250 µg/kg) laboratory analysis for VOCs. Low-range soil samples would be collected as 5-gram (g) aliquots and placed in laboratory-supplied, unpreserved volatile organic analysis (VOA) bottles, and immediately placed in a cooler with dry ice. High-range samples would be collected as 10-g aliquots and placed in laboratory-supplied VOA bottles preserved with methanol and immediately placed in a cooler with ice. All soil samples would be delivered under chain-of-custody protocol to American West Analytical Laboratories (AWAL), a Utah-Certified analytical laboratory, for analysis. Soil samples would be analyzed on standard laboratory turnaround time unless Wasatch is directed by the Applicant to expedite the analyses.

Soil confirmation samples would also be collected from the floor and sidewalls of any excavations conducted at the Site where contamination has been identified through site characterization activities or where contamination has been identified through sampling under subsurface features such as the OWS, north sump, and previously unidentified subsurface features discovered when the floor slabs are removed.

6.3 Groundwater Sampling

Wasatch anticipates that many of the existing monitoring wells located both on and off-Site will be abandoned during remediation and redevelopment of the Site, and that new monitoring wells will be installed to complete the groundwater monitoring network. Wasatch further anticipates that at least some of the new monitoring wells will be nested monitoring well sets installed with screened intervals targeted to monitor different depths within the aquifer. The nested monitoring wells would also be used to evaluate the vertical hydraulic gradient and to evaluate variations in the direction and magnitude of the horizontal hydraulic gradient. The monitoring well network will likely evolve over time. Changes to the monitoring well network, including the location and screened intervals for new monitoring wells, will be subject to DERR review and approval.

Wasatch proposes sampling groundwater quarterly for the first year using low flow sampling techniques (in accordance with SOP 14 of the SAP) that would allow for the collection of some geochemical parameters. After the first year of groundwater monitoring, the monitoring well network, frequency of monitoring, and field methods for monitoring would be reevaluated.

Groundwater samples would be analyzed on standard laboratory turnaround time unless Wasatch is directed by the Applicant to expedite the analyses. Purge water would be contained in a properly labeled 55-gallon drum for proper disposal.

Groundwater monitoring reports would be submitted to the Applicant and DERR within 60 days of the completion of each groundwater monitoring event. Groundwater monitoring reports would include:

- narrative text explaining objectives, methods, results, and presenting conclusions and recommendations;
- comprehensive groundwater data tables;
- a map depicting the sample locations;
- maps depicting analyte concentrations;
- a map depicting the groundwater elevations and hydraulic gradient;
- laboratory analytical reports; and
- data validation reports.

6.4 Indoor Air Sampling

Wasatch proposes collecting one round of indoor air samples prior to occupancy of the new structures constructed on-Site and on the Applicant-controlled off-Site properties. Wasatch further proposes

collecting a minimum of one round of indoor air samples from any non-Applicant-controlled off-Site structures where a vapor intrusion risk has been confirmed through soil gas sampling or where vapor intrusion mitigation measures have been implemented. Indoor air sampling would be conducted in accordance with SOP 19 of the SAP. In conjunction with any indoor air samples collected, an outdoor air sample will be collected to establish ambient background concentrations. Prior to collecting indoor air samples, the occupants (if any) would be interviewed to ascertain whether or not dry cleaned clothing has been brought into the structure, or carpets have been professionally cleaned, within the preceding two weeks. Additionally, the occupants would be interviewed to ascertain what recent activities have been conducted within the structure, and if any products known to contain chlorinated solvents are present. Next a chemical inventory would be performed to identify and remove any products containing chemicals of concern (any chlorinated solvents). This procedure would be followed to reduce the potential for false positive results in the indoor air samples (i.e., the detection of chlorinated solvents in the indoor air samples resulting from sources inside the structure rather than from beneath the floor slabs). Products discovered during the chemical inventory that contain chlorinated solvents would be removed from the structure for a minimum of two weeks prior to sampling activities. All products would be documented in a field notebook.

Chain-of-custody documentation would be completed, and the samples would be delivered to ALS Environmental for the analysis of VOCs in accordance with the SAP. All samples would be analyzed on a standard laboratory turn-around time unless expedited analysis is requested by the Applicant.

7. CONTINGENCY PLANNING

Samples would be collected from beneath the OWS, north sump, and any other previously unidentified subsurface features where there may be indications of a release. Sampling would be conducted in accordance with the SAP. If contamination above residential screening levels is confirmed through this sampling; the soil would be excavated, Wasatch would perform waste characterization sampling in accordance with the SAP, and Wasatch would complete the appropriate waste profiles to be approved by the facility receiving the waste. All waste would be properly contained in labeled 55-gallon drums or roll-off containers pending laboratory analysis and proper transport and disposal.

If contamination is discovered in unexpected locations, at unexpected concentrations, or if new contaminants discovered that were not expected based on Site history and previous data; Wasatch would immediately communicate relevant findings to the Applicant and the DERR and work to develop an appropriate remedial alternative.

If the data resulting from confirmation sampling, groundwater monitoring, or indoor air sampling indicate that the remedial strategy, after implementation, has not been effective at remediating the contamination (either in localized areas or throughout the areas impacted by releases from the Site) Wasatch would immediately communicate relevant findings to the Applicant and the DERR and work to develop an appropriate remedial alternative.

It is impossible for Wasatch to develop specific contingencies and speculate as to what specific responses would be appropriate, without knowing the specific conditions and circumstances to which the contingencies are responding. Contingency responses would always be developed in a manner consistent with the intended land use, applicable laws and regulations, and with the objectives expressed by the Applicant.

8. REMEDIAL ACTION IMPLEMENTATION REPORT

Following completion of the remedial action, Wasatch would produce a remedial action implementation report documenting the results of the remedial action. The report would include:

- narrative text explaining objectives, methods, results, and presenting conclusions and recommendations, and documenting any deviations from the approved RAP;

- comprehensive data tables;
- figure(s) depicting the location of injections, source areas, confirmation samples, and monitoring wells, and other relevant Site features;
- photographs;
- laboratory analytical reports;
- data validation reports; and
- copies of permits and approvals.

9. HEALTH AND SAFETY

All remedial action activities at the Site would be performed by Wasatch and our subcontractors in accordance with Wasatch's general health and safety policy. A site-specific health and safety plan would also be prepared to address specific health and safety concerns and establish protocols for conducting work related activities in a safe manner.

10. PROJECT SCHEDULE

Wasatch anticipates completing any additional site characterization tasks by February 2019. The timing of the remediation work described in this RAP will be largely dependent on the timing of the building permit approvals which the Applicant anticipates receiving by June 2019. Demolition of the on-Site building and Site remediation would likely commence shortly thereafter. Wasatch anticipates completing the Site remediation work during the summer of 2019. Wasatch would communicate scheduling details with the DERR as the schedule develops.

11. REFERENCES

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Wasatch Environmental, Inc.; 2018d. Former Henries Dry Cleaner, Sampling and Analysis Plan, Former Henrie's Dry Cleaner, 906 South 200 West, Salt Lake City, Utah; Voluntary Cleanup Program Site C096.

Wasatch Environmental, Inc.; 2018e. Former Henries Dry Cleaner, Quality Assurance Project Plan, Former Henrie's Dry Cleaner, 906 South 200 West, Salt Lake City, Utah; Voluntary Cleanup Program Site C096.

Weston Solutions, Inc.; 2016a. Phase I Environmental Site Assessment for Henrie's Dry Cleaners, 906 South 200 West, Salt Lake City, Utah, 84101.

Weston Solutions, Inc.; 2016b. Phase II Environmental Site Assessment for Henrie's Dry Cleaners, 906 South 200 West, Salt Lake City, Utah.

Weston Solutions, Inc.; 2017a. Phase II Environmental Site Assessment Addendum for Henrie's Dry Cleaners, 906 South 200 West, Salt Lake City, Utah.

Weston Solutions, Inc.; 2017b. Updated Phase I Environmental Site Assessment for Henrie's Dry Cleaners, 906 South 200 West, Salt Lake City, Utah, 84101.

Figures

WASATCH ENVIRONMENTAL

Environmental Science and Engineering

Site Location Map

Former Henries Dry Cleaner
906 South 200 West, Salt Lake City, Utah

PROJECT NO.: 2221-003C	DATE: October 18, 2018	FIGURE 1

Site Property Boundary

Applicant-Controlled Off-Site Properties

Scale: 1" equals approximately 62'

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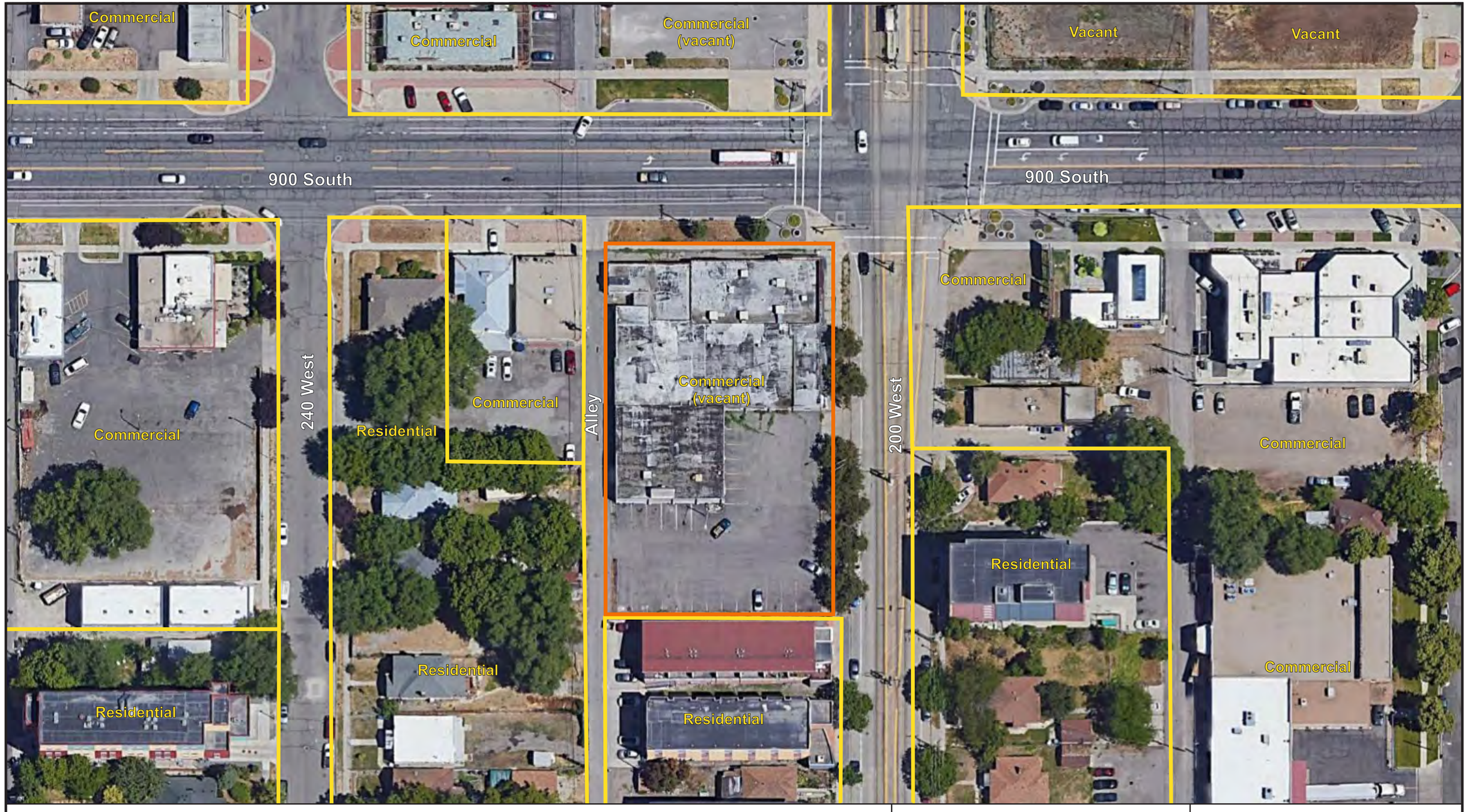
WASATCH ENVIRONMENTAL

Environmental Science and Engineering

Redevelopment Area Map

Former Henries Dry Cleaner
906 South 200 West, Salt Lake City, Utah

PROJECT NO.	DRAWING DATE	FIGURE
2221-003C	December 5, 2018	2



Site Property Boundary

Current Surrounding Land Use

Scale: 1" equals approximately 62'

N W E S

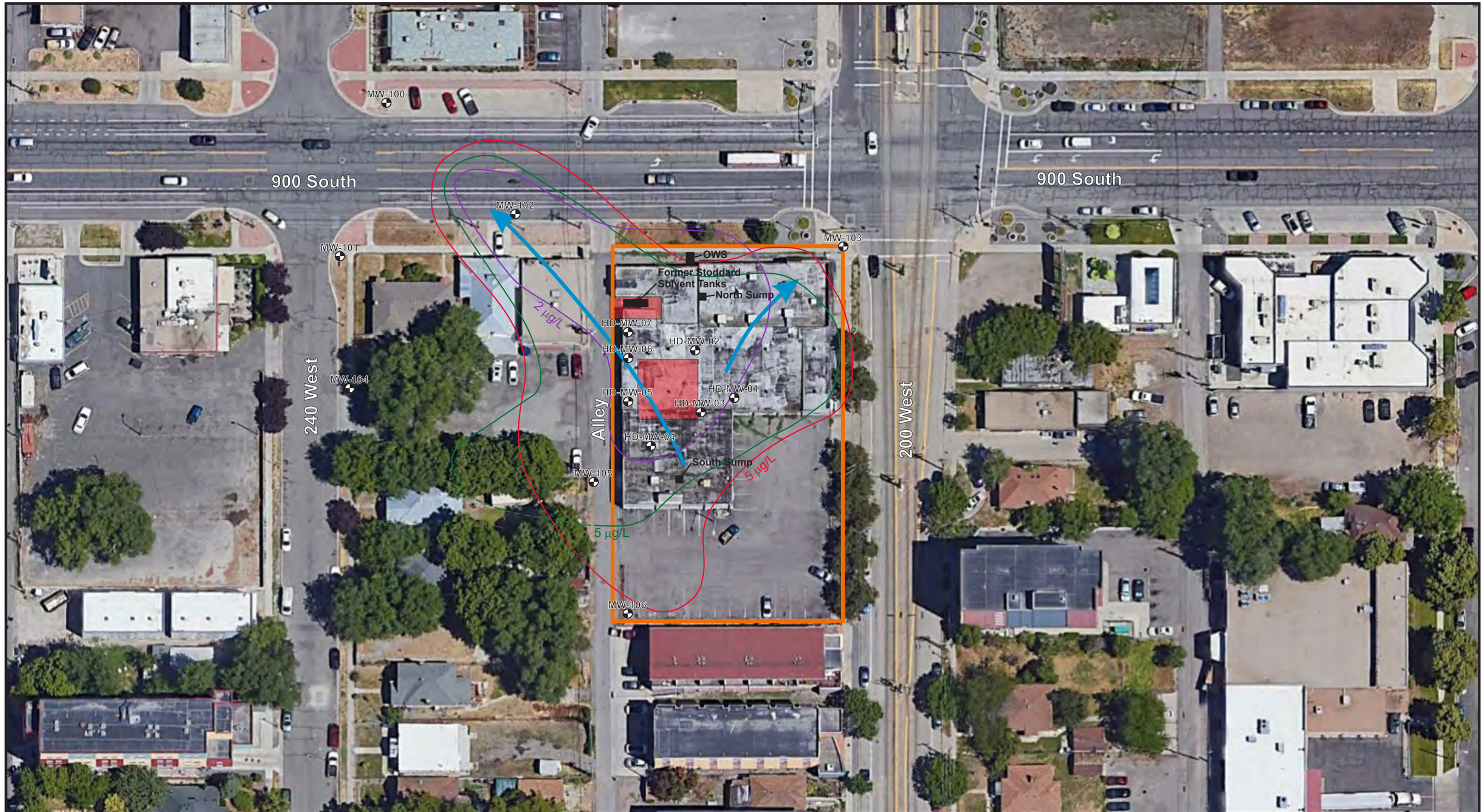
WASATCH ENVIRONMENTAL

Environmental Science and Engineering

Current Property Use Map

Former Henries Dry Cleaner
906 South 200 West, Salt Lake City, Utah

PROJECT NO.	DRAWING DATE	FIGURE
2221-003C	December 5, 2018	3



Monitoring Well

Site Property Boundary

Source Areas

Tetrachloroethene (PCE) Concentrations in Groundwater

Trichloroethene (TCE) Concentrations in Groundwater

Vinyl Chloride (VC) Concentrations in Groundwater

Hydraulic Gradient

Scale: 1" equals approximately 62'

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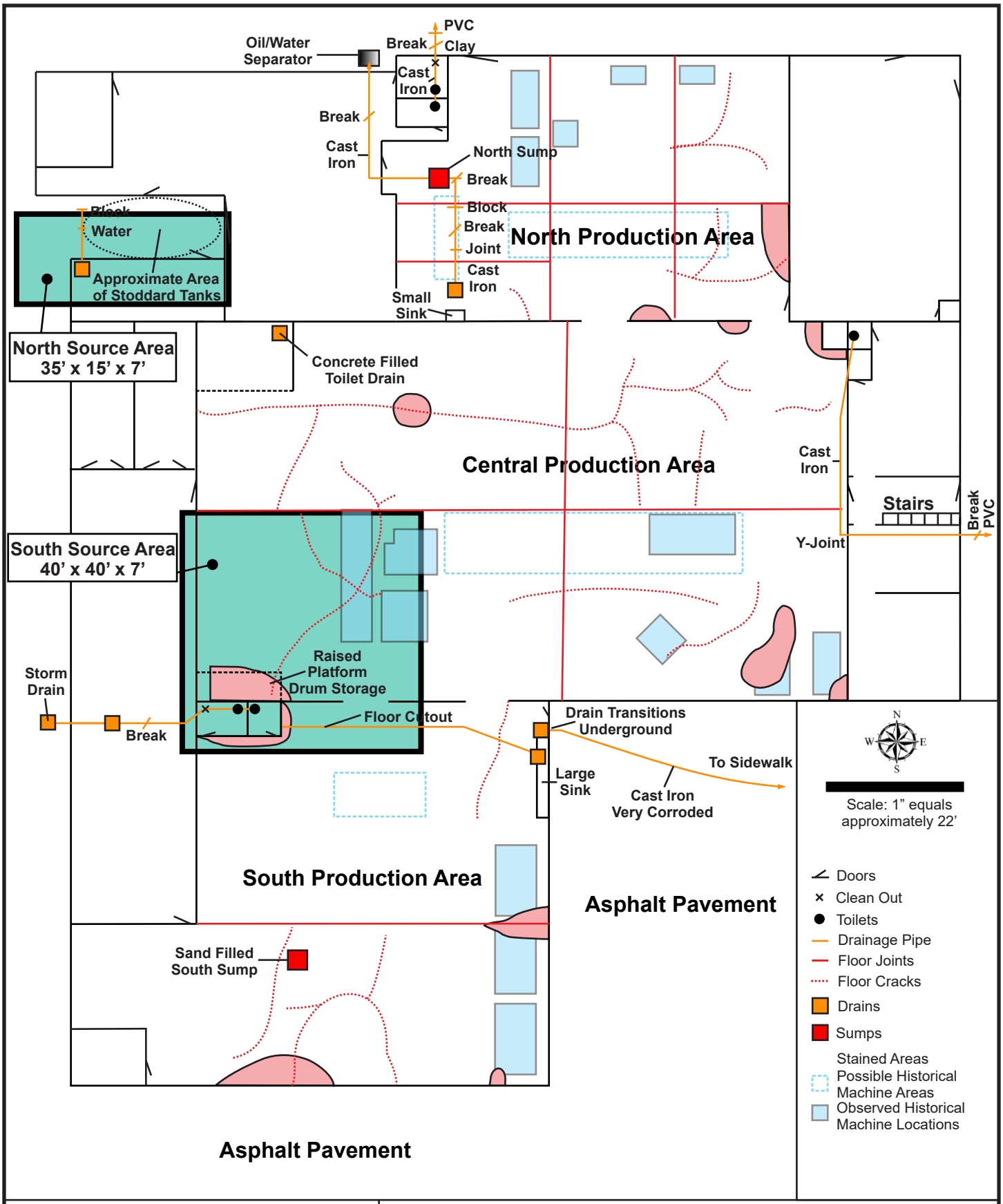
WASATCH ENVIRONMENTAL

Environmental Science and Engineering

Site Feature Map

Former Henries Dry Cleaner
906 South 200 West, Salt Lake City, Utah

PROJECT NO.	DRAWING DATE	FIGURE
2221-003C	December 5, 2018	4



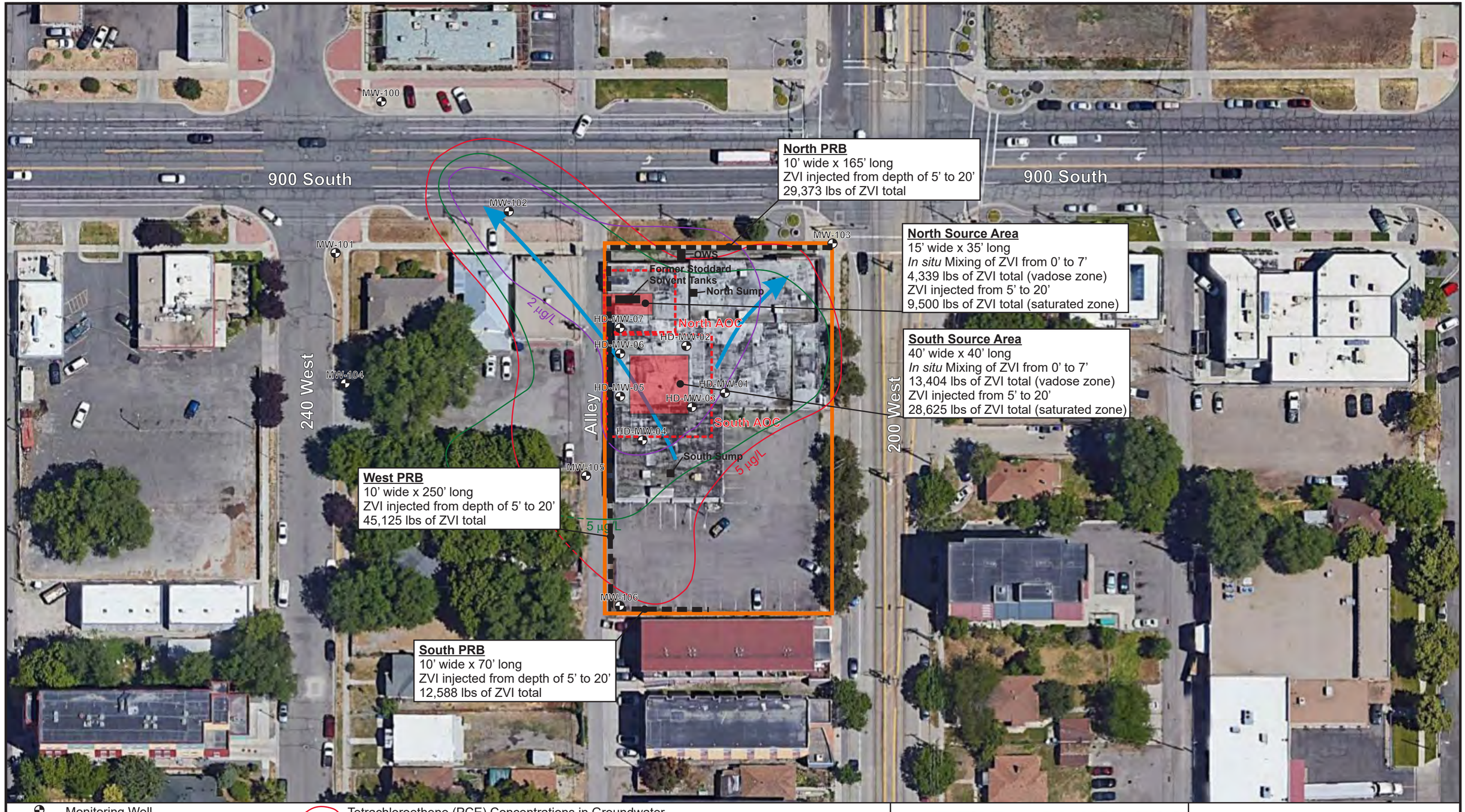
WASATCH ENVIRONMENTAL

Environmental Science and Engineering

Detailed Site Feature Map

Former Henries Dry Cleaner
906 South 200 West, Salt Lake City, Utah

PROJECT NO.: 2221-003C	DATE: December 5, 2018	FIGURE 5



Monitoring Well
Site Property Boundary
Source Areas
Permeable Reactive Barrier (PRB)
Tetrachloroethene (PCE) Concentrations in Groundwater
Trichloroethene (TCE) Concentrations in Groundwater
Vinyl Chloride (VC) Concentrations in Groundwater
Hydraulic Gradient
AOC Boundaries (North and South)

Scale: 1" equals approximately 62'

N W E S

WASATCH ENVIRONMENTAL
Environmental Science and Engineering

Proposed Remediation Plan Map

Former Henries Dry Cleaner
906 South 200 West, Salt Lake City, Utah

PROJECT NO.	DRAWING DATE	FIGURE
2221-003C	December 5, 2018	6

Appendix A

Zero Valent Iron Information

ZVI
ZERO VALENT IRON

Zero Valent Iron – High quality and purity iron powder and granules for water treatment or conditioning, permeable reactive barriers, and other soil remediation applications.

Benefits Include

Proven remediation technology since 1970's

Applicable in soil piles and insitu applications for groundwater treatment

Economical solution compared to other available products

Can combine with MTS for mixed contaminant plumes with metals and organics

Proven Field Applications

Permeable reactive barriers (PRBs) and Funnel and Gate

Direct Push Injection of micron scale particles into groundwater zone

Trenching and aggregate scale particles PRB design

Deep Soil Mixing

Hydraulic Fracturing

Applicable to Treatment of many contaminants including:

Chlorinated Solvents
PCE, TCE, DCE
And degradation products
Other chlorinated compounds

Heavy Metals
Arsenic
Selenium
Hexavalent Chromium (CrVI)
Other heavy metals

Other COCs
Cyanide
Nitrate
Uranium
Technetium
Pesticides (DDT, DDD, and DDE)

Our Zero valent iron powder is manufactured from 100% recycled virgin iron residual material from trusted OEM manufacturers with iron content up to 99% depending on specification requirements. We use high quality raw materials and proprietary grinding and pulverizing technology to produce ZVI powder with no appreciable surface oxides.

Material	% Composition
Iron	up to 99%
Carbon	minimal %
Silicon	minimal %
Water	less than 1%

Physical Properties

Form: Fine Powder to aggregate

Density: 2.2-3.6 g/cm3

Odor: Odorless

Color: Gray

ZVI Size and Associated Application

ULTRA-FINE ZVI POWDER

MICRO 20 (625 Mesh)

>25 micron	<7%
20-25 micron	**>90%**
<20 micron	<7%

MICRO 40 (400 Mesh)

>44 micron	<5%
37-44 micron	**>90%**
<37 micron	<7%

STANDARD ZVI BLEND

MICRO BLEND (+/- 10%)

88-177 micron	30-35%
88 micron	30-35%
44-74 micron	30-35%
<44micron	<5%

Other options available to meet specific design criteria.

We love made to order opportunities. Let us help you!

Technical support and reliable customer service available to all customers.

MATERIAL SAFETY DATA SHEET

POWDER AND GRANULAR IRON

SECTION 1 – MATERIAL IDENTIFICATION AND INFORMATION

Product Name: Cast Iron Aggregate
Formula: Fe
Date: 1 September, 2015
Chemical Family: Metals
CAS No. 7439-89-6
Appearance: Gray color

SECTION 2 – INGREDIENTS AND RECOMMENDED OCCUPATIONAL EXPOSURE LIMITS

Material	CAS No.	Weight %	ACGIH TLV Mg/cu m
Iron	7439-89-6	94-98%	5
Carbon	7440-44-0	<3%	3.5
Silicon	7440-21-3	<2.5%	10
Manganese	7439-96-5	<0.80%	5

SECTION 3 – HAZARDS IDENTIFICATION

Irritant to the skin, eyes and respiratory system.

Inhalation will cause irritation to lungs and mucus membrane. Irritation to eyes will cause watering and redness. Skin irritation may result in redness, itching or inflammation.

SECTION 4 – FIRST AID MEASURES

If inhaled: Keep patient calm, remove to fresh air. Assist in breathing if necessary.
Consult a physician.
If on skin: Wash thoroughly with soap and water. If irritation develops, seek medical attention.
If in eyes: Wash affected eyes for at least 15 minutes under running water with eyelids held open. If irritation develops, seek medical attention.
If swallowed: Rinse mouth and then drink plenty of water. Seek medical attention.

SECTION 5 – FIRE FIGHTING MEASURES

Flash point: Not applicable
Flammability: Non-flammable

Suitable extinguishing media: waterspray
Unsuitable extinguishing media for safety reasons: carbon dioxide
Additional information:
Avoid whirling up the material/product because of the danger of dust explosion.
Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.
Additional information:
The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid dust formation. Use personal protective clothing.
Environmental precautions: This product is not regulated by RCRA. This product is not regulated by CERCLA ('Superfund').
Cleanup: Do not vacuum up powder. For large amounts: Dampen, pick up mechanically and dispose of. For residues: Dampen, pick up mechanically and dispose.

SECTION 7 - HANDLING AND STORAGE

Handling: Handle in accordance with good industrial hygiene and safety practice. Wear suitable personal protective clothing and equipment.
Storage temperature: Ambient temperature
Protection against fire and explosion: Fine dust of the product is capable of dust explosion. Avoid all sources of ignition: heat, sparks, open flame. Electrostatic discharge may cause ignition. Ground all transfer equipment properly to prevent electrostatic discharge.
Storage incompatibility: Segregate from acids and from oxidants.
Storage stability: Protect against moisture.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Personal protective equipment respiratory protection: Wear a NIOSH-certified (or equivalent) particulate respirator. Do not exceed the maximum use concentration for the respirator face piece/cartridge combination.
Hand protection: Chemical resistant protective gloves
Eye protection: Tightly fitting safety goggles (chemical goggles).
General safety and hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wearing of closed work clothing is recommended.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Form: Fine Powder to Aggregate
Odor: Odorless
Color: Gray
Vapor Pressure: N/A
Density: 2.4-3.8 g/cm3
Solubility in water: Insoluble
Molar Mass: 55.85 g/mol

SECTION 10 – TOXICOLOGICAL INFORMATION

Acute toxicity	Information on: Carbonyl iron powder Assessment of acute toxicity: Virtually nontoxic after a single ingestion.
Oral	Information on: Carbonyl iron powder Type of value: LD50 Species: rat (male) Value: 9,860 mg/kg (OECD Guideline 401)
Repeated dose toxicity	Information on: Iron Information on: Iron Oxide
Carcinogenicity	Information on: Carbonyl iron powder. No data available concerning carcinogenic effects.

SECTION 11 - ECOLOGICAL INFORMATION

Aquatic toxicity: Iron powder Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

SECTION 12 - DISPOSAL CONSIDERATIONS

Waste disposal of substance: Dispose of in a licensed facility. Dispose of in accordance with national, state and local regulations.
Container disposal: Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

SECTION 13 - TRANSPORTATION INFORMATION

Land transport
USDOT- Not classified as a dangerous good under transport regulations
Sea transport
IMDG- Not classified as a dangerous good under transport regulations
Air transport
IATA/ICAO- Not classified as a dangerous good under transport regulations

SECTION 14 – OTHER INFORMATION

We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to safety is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products.

Disclaimer/ Additional information:

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE

INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

END OF DATA SHEET

Appendix B

Passive Vapor Mitigation System Design

Proposed Vent Stack Location (Approximate)

Scale: 1" equals approximately 23'

WASATCH ENVIRONMENTAL

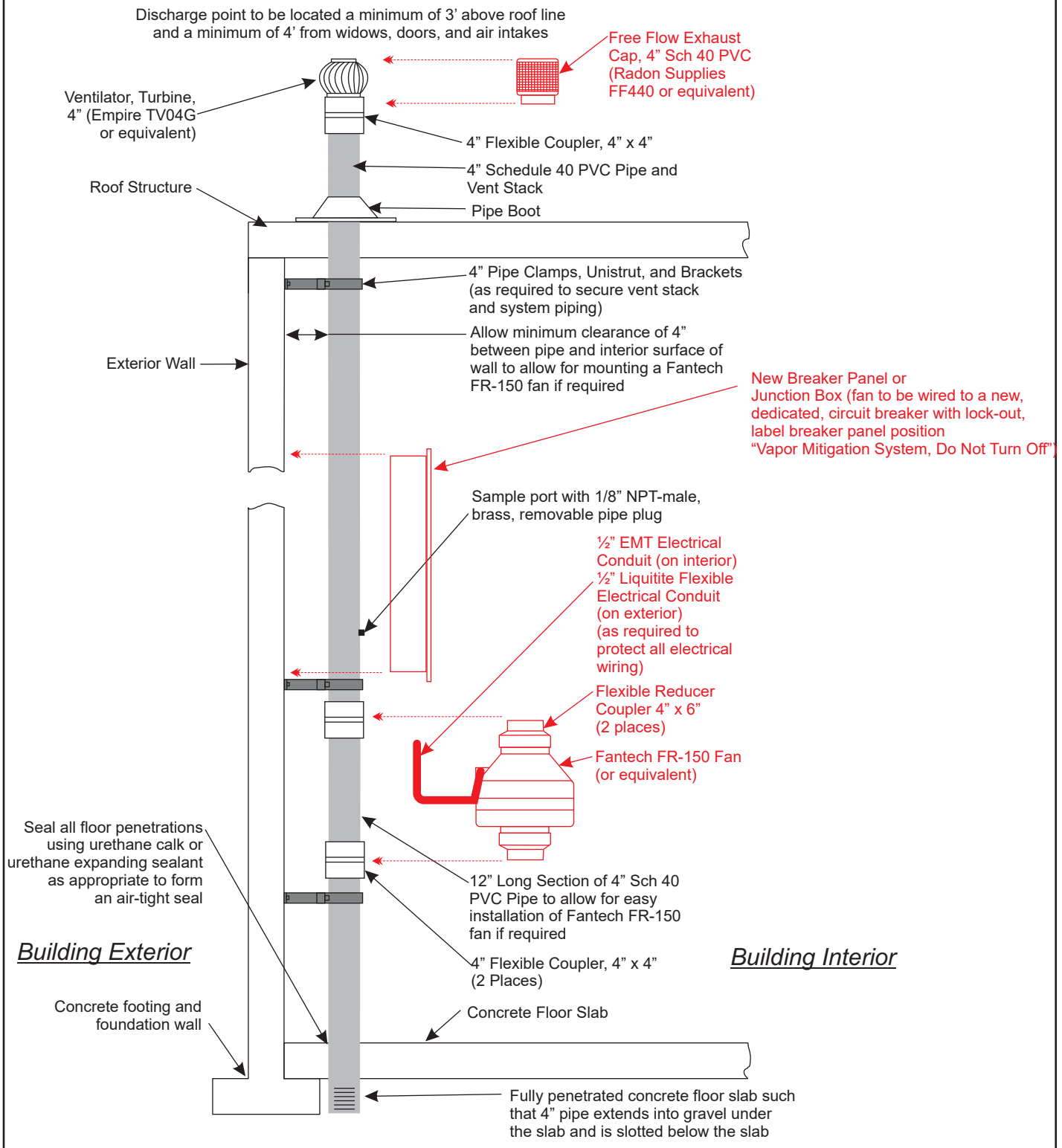
Environmental Science and Engineering

Proposed Vent Stack Location Map

Former Henries Dry Cleaner
906 South 200 West, Salt Lake City, Utah

PROJECT NO.	DRAWING DATE	FIGURE
2221-003C	November 7, 2018	B-1

Former Henries Dry Cleaner - Passive Vapor Mitigation System Design WEI 2221-003C



Note: System components and notations shown in red are for converting the passive vapor mitigation system to an active vapor mitigation system. The components shown in red do not need to be supplied or installed during construction of the passive vapor mitigation system.

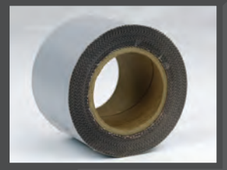
Drawing is not to scale

Passive Vapor Mitigation System Design | Figure B-2

Appendix C

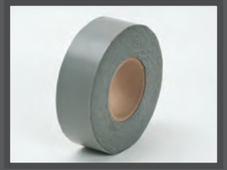
Vapor Barrier Specifications and Installation Instructions

COMPLETE PROTECTION
With **Drago's** Full Line of Accessory Products



Drago® Tape

This pressure-sensitive adhesive, coupled with the same uniquely designed materials as Drago Wrap, make it ideal for sealing Drago Wrap seams and penetrations.



DragoTack™ Tape

A solvent-resistant, double-sided adhesive strip used to bond and seal Drago Wrap to concrete, masonry, wood, metal, and other surfaces.

Drago® Sealant

A two-part, water-based, urethane, designed to be used with Drago Wrap, for sealing utility and pipe penetrations.

Drago® Sealant Form

A low-density, cross-linked, closed-cell polyethylene foam designed to be used as a detailing piece with Drago Sealant.

Drago
INSTALLATION

Installation methodology derived from extensive lab and field work based on the principles found in ASTM E1643 and validated through pressure stress testing of simulated installations demonstrates **Drago Wrap's** ability to produce a fully intact, dependable installation.

As with any protection system, the installation of **Drago Wrap** is critical to the system's effectiveness. **Drago Wrap** and **Drago Accessories** make it easy to complete a successful installation. Refer to the complete **Drago Wrap Installation Instructions** and **Warranty Information** on the website: **www.stegoindustries.com**.*

Drago
SUPPORT

Our North American network of Stego employees, representatives, and distributors ensure that the products we bring to market are both readily available and accompanied with excellent technical knowledge and field support ***when you need it***.*

To learn more about this new game-changing technology, contact us to get in touch with the nearest Stego representative.* We look forward to working with you on your next project.
www.stegoindustries.com | 877-464-7834

Tel: 949-257-4100 | Toll Free: 877-464-7834 | www.stegoindustries.com

DRAGO® WRAP
VAPOR INTRUSION BARRIER

Engineered protection to create a *healthy* built environment.

A VAPOR INTRUSION BARRIER SOLUTION
with Unsurpassed Permeation Coefficients

Drago Wrap Vapor Intrusion Barrier is a multi-layered plastic extrusion that combines uniquely designed materials with only high grade, prime, virgin resins. This game-changing barrier technology provides high performance and longevity, allowing for the redevelopment of contaminated sites, creating a *healthy* built environment.

3-in-1 product solution

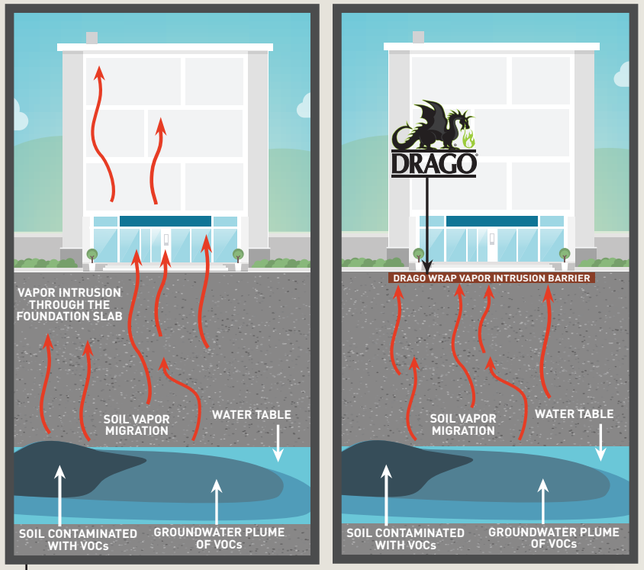
A *cost effective* 3-in-1 product solution providing unsurpassed protection from chlorinated solvents, hydrocarbons, and moisture vapor.

Drago Wrap Vapor Intrusion Barrier is the next game-changing barrier technology from the creators of Stego® Wrap Vapor Barrier, the most widely-specified below-slab moisture vapor barrier in North America.*

"It is estimated that there are more than 450,000 brownfields in the U.S."
– www.epa.gov/brownfields

EXPOSURE PATHWAY – VAPOR INTRUSION

For brownfields and contaminated sites, the focus has historically been to protect human health by preventing exposure to direct contact of contaminated soil or drinking contaminated water. We now know that inhaling chemical vapors poses a potential risk to the health of residents, workers, and other occupants who are inside of the buildings. (Source: EPA)



Vapor-forming chemicals may include:

- Volatile organic compounds (VOCs), such as trichloroethylene and benzene.
- Select semivolatile organic compounds, such as naphthalene.

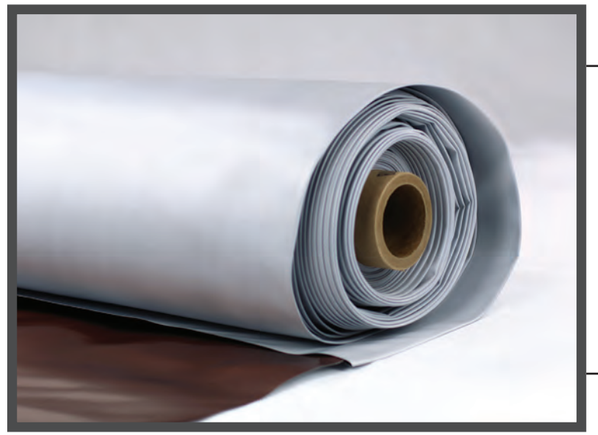
This exposure pathway, known as vapor intrusion, is the movement of chemical vapors from the soil and groundwater into the building envelope.

- In extreme examples, there is a risk of fire or explosion.
- Other times, at levels with a detectable odor, there may be acute short-term health issues such as nausea, headache, and respiratory irritation.
- More commonly though, long-term exposure to even low-levels of certain chemical vapors may increase the risk of chronic health effects, such as cancer.

(Source: EPA)

Migration of Soil Vapors to Indoor Air

Both diffusion and advection can draw unwanted chemicals into the building envelope. Regardless of the path that soil vapors can take, ***experts agree that a monolithic layer of protection like the Drago Wrap Vapor Intrusion Barrier System is critical to controlling the transmission of these chemicals into the building.***



DRAGO WRAP IS *ENGINEERED* TO SERVE AS A **BARRIER** TO VOLATILE ORGANIC COMPOUNDS

Drago Wrap is specifically engineered to serve as a barrier to volatile organic compounds (VOCs). Through patented and trade secret processes, **Drago Wrap** combines engineered barrier materials with the *flexibility* and *strength* of a *high-performance* polyolefin film into an easy-to-install barrier against hydrocarbons and chlorinated solvents.

BENEFITS OF THE DRAGO WRAP VAPOR INTRUSION BARRIER SYSTEM

FEATURES	BENEFITS
Independent, university testing	Efficacy testing for hydrocarbons, chlorinated solvents, and other soil gases (radon, methane)
Made from game-changing resin technology and provides high performance and longevity	Allows Developers, Owners, and Engineers to redevelop brownfield sites and create a healthy built environment
Installation methodology derived from extensive lab and field work based on the principles found in ASTM E1643 and finally validated through pressure stress testing of simulated installations	Fully intact, dependable installation
20-mil, multi-layer material	Exceptional durability as a result of robust physical properties
14 ft wide rolls	Minimize seams
ASTM E1745 compliant	Designed to be installed below concrete slabs in commercial, residential, and industrial applications

Extensive testing

TESTED – **PROVEN** EFFECTIVENESS

Extensive, independent testing proved **Drago Wrap's** effectiveness in attenuating hydrocarbons and chlorinated solvents. For more information on our independent testing, please contact Stego Industries' Technical Department or visit our website at **www.stegoindustries.com**.*

DRAGO® WRAP VAPOR INTRUSION BARRIER
RESISTANCE TO DEGRADATION – ADDITIONAL CONSIDERATIONS

Drago Wrap Vapor Intrusion Barrier, and the technologies that underlie this game-changing vapor intrusion protection product, has undergone extensive testing to determine its ability to attenuate VOCs and other relevant material properties. These tests exposed Drago Wrap to a host of deleterious chemicals that may exist at or below a project site, including various petroleum distillates, chlorinated solvents, etc. The results of these tests are positive and telling; they show that Drago Wrap is extremely impermeable to a wide range of chemical vapors and, more importantly for our current considerations, maintains such impermeability over the course of years of exposure to these deleterious compounds.

While the results of such testing speak extensively to Drago Wrap's ability to resist degradation in extreme exposure conditions, we wished to pursue multiple exposure scenarios to further increase the confidence project team members should have in Drago Wrap as a critical component of the vapor intrusion systems they utilize on their projects. The following pages detail these measures. The conclusions indicate that there were no significant changes in mass or volume of Drago Wrap when exposed to direct contact with soils contaminated with benzene, toluene, ethylbenzene, xylene (collectively known as BTEX), trichloroethylene (TCE), perchloroethylene (PCE, or tetrachloroethylene), cis-1,2-dichloroehtylne (C-DCE), trans-1,2-dichloroehtylene (T-DCE), and sulfates. Additionally, we tested the post-exposure samples to determine their tensile strength (ASTM E882) and permeance to water vapor (F1249), and we observed that Drago Wrap maintains its ability to meet each corresponding performance threshold for high-performance water vapor barriers: for D882, Drago Wrap remains a Class A Vapor Barrier per ASTM E1745; for F1249, Drago Wrap maintains a permeance well below 0.01 perms.

If additional questions remain regarding any aspect of Drago Wrap, please be sure to contact the Stego Technical Department. We are happy to help and look forward to the opportunity to provide an effective and economical solution to your barrier needs.

Regards,

Dan Marks CSI CDT LEED Green Associate
Technical Director | Stego Industries, LLC
O: (949) 325-2035| F: (949) 325-2062
danmarks@stegoindustries.com

DRAGO® WRAP VAPOR INTRUSION BARRIER TESTING SIMULATED HYDROCARBON (BTEX) CONDITION

SETUP

To simulate a hydrocarbon contaminated brownfield site, a senior chemist at a research and testing lab prepared contaminated water to contain 1,000 ppb of each benzene, toluene, ethylbenzene, and xylene (BTEX). Two liters of this mixture were placed in a chamber, 49 cm x 23.5 cm wide by 27 cm tall. ASTM C778 standard 20-30 sand was added to the vessel until it was 5 cm above the original water line. At this level, the sand was damp with no free-standing water. Drago Wrap samples were placed on top of the damp sand, and the entire surface of the membrane were weighted down with sand-filled plastic bags to ensure full contact of the Drago Wrap with the damp sand. The test vessel was covered and sealed. After 30 days of exposure under ambient laboratory conditions (21-25°C), the samples were removed for evaluation.

Simply stated:
We took relatively large amounts of often-seen hydrocarbons resulting from fuel spills and old service station sites and put them into a water table just 2 inches below a sample of Drago Wrap. This can be considered an extreme situation in that water tables are not typically that close to the slab and vapor barrier membrane. After a 30-day exposure, the mass and volume changes were analyzed, and we subsequently tested the material for its water vapor permeance rating and tensile strength.

RESULTS

Mass and Volume

The chemist conducted mass and volume measurements before and after exposure. The following comes directly from her report: *"All of the test coupons exhibited slight changes in mass and volume, no matter what their exposure conditions were. Statistical analysis by the two-tailed t-test showed that the changes for the BTEX-exposed coupons were not significantly different from the changes for the control-exposed coupons."*

Conclusion: In other words, Drago Wrap mass and volume were not significantly affected by the BTEX exposure.

Tensile Strength

Samples were sent by the lab to our in-house lab and tested per ASTM E882 in both the machine and transverse directions. After the 30-day extreme BTEX solvent exposure, the results were 50.2 lbf/in and 49.6 lbf/in for machine and transverse directions respectively. These results were not significantly different than the water-exposed control samples (48.7 lbf/in, 48.5 lbf/in) or the unexposed samples (48.5 lbf/in, 46.8 lbf/in). For another point of comparison, consider that to be labeled as Class A per ASTM E1745, new-material tensile need only test at 45 lbf/in.

Conclusion: BTEX exposure has little to no effect on Drago Wrap's physical integrity in below-slab applications.

Water Vapor Permeance

The testing lab then sent exposed and control samples to our in-house lab where they were subsequently tested per ASTM F1249. The results were very positive. The permeance of the sample exposed to the BTEX solution (0.00733 perms) increased minimally compared to the control (0.00614 perms), both staying well below the threshold of 0.01 perms.

Conclusion: BTEX exposure had minimal effect on Drago Wrap's ability to retard water vapor.

DRAGO® WRAP VAPOR INTRUSION BARRIER TESTING
SIMULATED CHLORINATED SOLVENT CONDITION

SETUP

To simulate a dry-cleaning brownfield site, a senior chemist at a research and testing lab prepared contaminated water to contain 3,600 ppb perchloroethylene (PCE), 12,500 PPB trichloroethylene (TCE), 16,200 PPB CIS-1,2-dichloroethylene (C-DCE), AND 1,700 PPB trans-1,2-dichlorothylene (T-DCE). Two liters of this mixture were placed in a chamber, 49 cm x 23.5 cm wide and 27 cm tall. ASTM C778 standard 20-30 sand was added to the vessel until it was 5 cm above the original water line. At this level, the sand was damp with no free-standing water. Drago Wrap samples were placed on top of the damp sand, and the entire surface of the vapor barrier was weighted down with sand-filled plastic bags to ensure full contact of the Drago Wrap with the damp sand. The test vessel was covered and sealed. After 30 days of exposure under ambient laboratory conditions (21-25°C), the samples were removed for evaluation.

Simply stated:
We took an actual soils report from an old dry cleaning site and recreated the conditions, roughly. In the actual scenario the water table was 20 feet below the vapor barrier. In our setup, we created a contaminated water table just 2 *inches* below Drago Wrap. After a 30-day exposure, the mass and volume changes were analyzed, and we subsequently tested the material for its water vapor permeance rating and tensile strength.

RESULTS

Mass and Volume

The chemist conducted mass and volume measurements before and after exposure. The following comes directly from her report: *"All of the test coupons exhibited slight changes in mass and volume, no matter what their exposure conditions were. Statistical analysis by the two-tailed t-test showed that the changes for the chlorinated solvent-exposed coupons were not significantly different from the changes for the control-exposed coupons."*

Conclusion: Drago Wrap's mass and volume were not significantly affected by the chlorinated solvent exposure.

Tensile Strength

Samples were sent by the lab to our in-house lab and tested per ASTM E882 in both the machine and transverse directions. After the 30-day extreme chlorinated solvent exposure, the results were 51.2 lbf/in and 49.7 lbf/in for machine and transverse directions respectively. These results were not significantly different than the water-exposed control samples (48.7 lbf/in, 48.5 lbf/in) or the unexposed samples (48.5 lbf/in, 46.8 lbf/in). For another point of comparison, consider that to be labeled as Class A per ASTM E1745, new-material tensile need only test at 45 lbf/in.

Conclusion: Chlorinated solvent exposure has little to no effect on Drago Wrap's physical integrity in below-slab applications.

Water Vapor Permeance

The testing lab then sent exposed and control samples to our in-house lab where they were subsequently tested per ASTM F1249. The results were very positive. The permeance of the sample exposed to the BTEX solution (0.00713 perms) increased minimally compared to the control (0.00614 perms), both staying well below the threshold of 0.01 perms.

Conclusion: Chlorinated solvent exposure had minimal effect on Drago Wrap's ability to retard water vapor.

DRAGO® WRAP VAPOR INTRUSION BARRIER TESTING
SIMULATED SULFATE EXPOSURE CONDITION

SETUP

To simulate the worst possible sulfate exposure, a senior chemist at a research and testing lab prepared water contaminated with 10,000 PPM of SO4 (sulfate.) This sulfate concentration was chosen because it was rated as "very severe" (the highest or worst classification) by UC Berkeley professors conducting research for the Caltrans Long Life Pavement Rehabilitation Strategy (LLPRS) Program. The Chemist took this worst-case scenario concentration and soaked samples of Drago Wrap in it for 28 days. Upon removal, the samples were analyzed for changes in mass and volume, and subsequently the exposed product was tested to determine its tensile strength and water vapor permeance rate.

RESULTS

Mass & Volume

The chemist conducted mass and volume measurements before and after exposure. The following comes directly from her report: *"All of the test coupons exhibited slight changes in mass and volume, no matter what their exposure conditions were. Statistical analysis by the two-tailed t-test showed that the changes for the sulfate-exposed coupons were not significantly different from the changes for the control-exposed coupons."*

Conclusion: In other words, Drago Wrap's mass and volume were not significantly affected by the sulfate exposure.

Tensile

Samples were sent by the lab to our in-house lab and tested per ASTM E882 in both the machine and transverse directions. After the 28-day extreme sulfate exposure, the results were 49.6 lbf/in and 52.3 lbf/in for machine and transverse directions respectively. These results were not significantly different than the water-exposed control samples (48.7 lbf/in, 50.8 lbf/in) or the unexposed samples (48.5 lbf/in, 46.8 lbf/in). For another point of comparison, consider that to be labeled as Class A per ASTM E1745, new-material tensile need only test at 45 lbf/in.

Conclusion: Sulfate exposure has little to no effect on Drago Wrap's physical integrity in below-slab applications.

Water Vapor Permeance

The testing lab then sent exposed and control samples to our in-house lab where they were subsequently tested per ASTM F1249. The results were very positive. The permeance of the sample exposed to the sulfate solution (0.00734 perms) increased minimally compared to the control (0.00698 perms), both staying well below the threshold of 0.01 perms.

Conclusion: Sulfate exposure had no significant effect on Drago Wrap's ability to retard water vapor.

DRAGO® WRAP VAPOR INTRUSION BARRIER
SUMMARY OF PERMEATION AND ATTENUATION TESTING

BACKGROUND

Commencing in 2015 and continuing indefinitely, Drago Wrap Vapor Intrusion Barrier has been subjected to a series of permeation tests. This testing was designed—and has been subsequently overseen—by an expert in the permeation of volatile organic compounds (VOCs) at a prominent university. The results of this testing have been used to empirically determine the attenuation efficacy (i.e. the permeation coefficients) of Drago Wrap against various hydrocarbons and chlorinated solvents. The purpose of this document is to summarize and explain the robust and ongoing testing protocol utilized and to relay the current results.

CHEMICALS TESTED

Drago Wrap has been/is being tested with regard to permeation of the following chemicals: TCE; PCE; the BTEX family: Benzene, Toluene, Ethylbenzene, Xylene; Dichloromethane; 1,4 Dichlorobenzene; Methyl tert-butyl ether (MTBE) and Naphthalene.

TESTING METHODOLOGY

The tests utilize stainless steel diffusion cells as depicted in Figures 1 and 2. The diffusion cells create two chambers—a source chamber and receptor chamber—that are separated by the membrane under investigation. The source chamber is populated by the permeant (chemical) under consideration and diffuses across the membrane toward the receptor chamber. In this setup, the membrane—Drago Wrap—is the only barrier preventing chemicals from reaching the receptor chamber. Periodic sampling of both the source and receptor chambers of the diffusion cell allows for Gas Chromatography, Mass Spec (GC/MS) analysis of the airspace on either side of the membrane. Complex physics, mathematics and numerical modeling of the GC/MS data yield the permeation coefficients seen in Table **1**. Testing, as alluded, is ongoing; the concentrations in the diffusion cells will be monitored indefinitely, numerical models utilized and results updated accordingly.

Figure 1

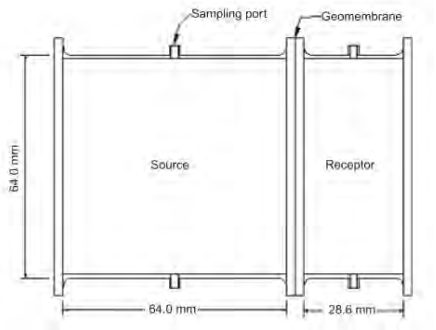


Figure 2

The discrete layers that make up Drago Wrap were tested to determine their respective permeation coefficients. The results obtained from the mathematical modeling of these tests do not necessarily equate to the values obtained from whole-film permeation testing. In other words, the membrane appears to benefit from a synergistic effect; the whole is greater than the sum of its parts. The results in Table 1 come from the most conservative approach to analyzing the results and do not take into account these synergies.

RESULTS

The values displayed in Table 1 result from a combination of data generated from several phases of testing and numerical modeling.

Table 1

Chemical	Abbreviation	Family	Use	Upper-Bound Permeation, P_g [x 10^{-13} m^2/s]
Benzene	Btex	Aromatic Hydrocarbon	Gasoline byproduct	4.5
Toluene	bTex	Aromatic Hydrocarbon	Gasoline byproduct	5.1
Ethylbenzene	btEx	Aromatic Hydrocarbon	Gasoline byproduct	3.1
M&P-Xylenes	bteX	Aromatic Hydrocarbon	Gasoline byproduct	2.9
O-Xylene	bteX	Aromatic Hydrocarbon	Gasoline byproduct	2.7
Methyl tert-butyl ether	MTBE	Oxygenate	Octane-increasing additive to fuel	0.012
Trichloroethylene	TCE	Chlorinated Hydrocarbon	Dry Cleaning and Solvent	1.5
Tetrachloroethylene	PCE	Chlorinated Hydrocarbon	Dry Cleaning and Solvent	3.0
Dichloromethane	DCM	Chlorinated Hydrocarbon	Paint Stripper, Decaffeinater, Aerosol propellant	4.5
1,4-Dichlorobenzne	1,4-DCB	Chlorinated Hydrocarbon	Pesticide, Disinfectant, Deodorant	7.1
Naphthalene	Naphthalene	Polycyclic Aromatic Hydrocarbon	Fumigant, Pyrotechnics, Wetting Agent	0.25

UNDER-SLAB VAPOR INTRUSION BARRIER

PART 1 – GENERAL

1.1 SUMMARY

A. Products supplied under this section:
   1. Vapor intrusion barrier and accessories for installation under concrete slabs.

B. Related sections:
   1. Section 03 30 00 Cast-in-Place Concrete
   2. Section 07 26 00 Vapor Retarders

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM):
   1. ASTM E1745-17 Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs.
   2. ASTM E1643-11 Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.

B. Technical Reference - American Concrete Institute (ACI):
   1. ACI 302.2R-06 Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.
   2. ACI 302.1R-15 Guide to Concrete Floor and Slab Construction.

1.3 SUBMITTALS

A. Quality control/assurance:
   1. Summary of test results per paragraph 9.3 of ASTM E1745.
   2. Summary of independent testing documenting permeation testing for hydrocarbons and chlorinated solvents.
   3. Manufacturer’s warranty.
   4. Manufacturer’s samples and literature.
   5. Manufacturer’s installation instructions for placement, seaming, penetration prevention and repair, perimeter seal, and any additional procedures to account for vapor intrusion.
   6. All mandatory ASTM E1745 testing must be performed on a single production roll per ASTM E1745 Section 8.1.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Vapor intrusion barrier products:
   1. Drago Wrap Vapor Intrusion Barrier by Stego Technology LLC, (877) 464-7834 www.stegoindustries.com.
   2. No substitutions.

2.2 ACCESSORIES

A. Seams:
   1. Drago Tape by Stego Technology LLC, (877) 464-7834 www.stegoindustries.com.

B. Sealing Penetrations of Vapor Intrusion Barrier:
   1. Drago Sealant by Stego Technology LLC, (877) 464-7834 www.stegoindustries.com.
   2. Drago Sealant Form by Stego Technology LLC, (877) 464-7834 www.stegoindustries.com.
   3. Drago Tape by Stego Technology LLC, (877) 464-7834 www.stegoindustries.com.

C. Perimeter/edge seal:
   1. DragoTack Tape by Stego Technology LLC, (877) 464-7834 www.stegoindustries.com.

D. Penetration Prevention:
   1. Beast Foot by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.

E. Vapor Barrier-Safe Screed System
   1. Beast Screed by Stego Industries, LLC, (877) 464-7834 www.stegoindustries.com.
   2. Beast Hook by Stego Industries, LLC, (877) 464-7834 www.stegoindustries.com.

PART 3 – EXECUTION

3.1 PREPARATION

A. Ensure that subsoil is approved by Architect or Geotechnical Engineer.
   1. Level and compact base material.

3.2 INSTALLATION

A. Install vapor barrier in accordance ASTM E1643 and manufacturer's instructions.
   1. Unroll Drago Wrap with the longest dimension parallel with the direction of the concrete placement and face laps away from the expected direction of the placement whenever possible. Drago Wrap must be installed with the gray side facing the subgrade.
   2. Extend Drago Wrap to the perimeter of the slab. If practicable, terminate it at the top of the slab, or terminate at impediments such as dowels, waterstops, or any other site condition requiring early termination of the vapor barrier. Consult the structural engineer and environmental engineer of record before proceeding. At the point of termination, seal Drago Wrap to the foundation wall or grade beam.
   3. Seal Drago Wrap along its terminating edge to the entire perimeter wall or footing/grade beam with double sided DragoTack Tape per manufacturer's instructions. Ensure the concrete is clean and dry prior to adhering tape.
   3. Overlap joints a minimum of 12 inches and seal with Drago Tape.
   4. Apply Drago Tape to a clean and dry Drago Wrap.
   5. Seal all penetrations per manufacturer's instructions.
   6. For interior forming applications, avoid the use of non-permanent stakes driven through vapor barrier. Use blunt-end and/or threaded nail stakes (screed pad posts) and insert them into Beast Foot. Ensure Beast Foot's peel-and-stick adhesive base is fully adhered to Drago Wrap.
   7. If non-permanent stakes must be driven through Drago Wrap, repair per manufacturer's instructions.
   8. Use reinforcing bar supports with base sections that eliminate or minimize the potential for puncture of Drago Wrap.
   9. Repair damaged areas by cutting patches of Drago Wrap, overlapping damaged area a minimum of 6 inches, and taping all sides with Drago Tape.
   10. For vapor barrier-safe concrete screeding applications, install Beast Screed (vapor barrier-safe screed system) per manufacturer's instructions prior to placing concrete.

END OF SECTION

Appendix D

Critical Procedures for Zero Valent Iron Injections

JANUARY, 2017
V1.R2

CRITICAL PROCEDURES – LOADING MIXING TANKS WITH A FORKLIFT

A forklift (or lift truck) may be required to load the EF9300 when frac sand or amendments come in containers that are too heavy to be lifted by hand. Anyone operating the forklift or lift truck must have a valid forklift operator certificate from an accredited organization and must be competent with the machine they are operating. A seatbelt must be worn at all times when operating any forklift or lift truck. Due to the increased likelihood of exposure to the treatment amendment particulate matter being loaded, the operator must wear the appropriate personal protective equipment (i.e. eye and respiratory protection) as per the MSDS and manufacturer's specifications.

The EF9300 has been outfitted with a railing and catch-bar system that was designed to prevent crushing hazard during EF9300 tank loading. The railing system increases the lift height required by approximately 50 cm (20 inches). The minimum lift height required for forklifts on fracturing projects is 4.1 m (160 inches). The minimum load rating for forklifts on fracturing projects is 2,270 kg (5,000 lbs). The drive system, tire type and load rating should be considered for sites that may require extra heavy lifting, rough terrain or sites that are sensitive to surface disturbance.

TOOLS
Retractable knife
Wheel chocks

Additional PPE required beyond standard oilfield PPE[1]
None, although the nature of the reagents being blended may warrant additional PPE

INSTRUCTIONS

1. Perform a forklift inspection prior to operation at the start of the work day.
2. Clear obstructions pathway between amendment staging area and frac unit.
3. Erect and secure the tank loading guards.
4. Load the amendment onto the forklift via the lifting points or on the pallet. Secure super sacs with a bar and straps if there is an internal plastic membrane.

[1] Standard Oilfield PPE comprises the following:
Fire Retardant Coveralls with high visibility striping
Hardhat
Safety Glasses
Work gloves
Steel-toed boots

5. Bring the amendment to the mixing tank, raise the load as close to the frac unit as possible. Have the frac unit operator guide the container to the desired location. Use wheel chocks to prevent the forklift from contacting the frac unit.
6. Lift and open sand/amendment according to container and manufacturer's instructions.
7. Once the amendment has been loaded, return to the staging area, discard of used container and repeat steps 3 to 5.

TASK DETAILS

Generally two people can load the frac unit under most circumstances however in multiple tank fracturing events and continuous pumping; three or more people are required to expedite loading and staging of amendments. Only the frac unit operator should give directions to the forklift operator when near the frac unit.

SEE NEXT PAGE FOR RISK ASSESSMENT MATRIX

JANUARY, 2017
V1.R2

CRITICAL PROCEDURE – LOADING AND BLENDING SLURRIES

The EF9300 is outfitted with hopper style mixing tanks which are used to batch mix treatment and sand slurries. Treatment amendment and frac sand can come in a variety of containers (i.e. buckets, bags, super sacs etc.) and an appropriate loading process must be used to minimized heavy lifting, fatigue and crush or pinch point hazards. It is important to note that crystalline silica and other solid phase amendments have respirable dust particles that are known to have carcinogenic effects so properly fitted respiratory protective equipment are required when handling and loading any amendment that poses a risk for respiratory exposure. Before loading or handling any treatment amendment, the MSDS must be read and personal protective equipment must meet the manufacturer's specifications. When blending fracturing slurries with particulate or granular treatment reagents refer to Manufacturer's blending instructions, in addition to ***Geo Tactical's RPE Code of Practice and Fit Testing Standards (2016)***. When blending silica sand fracturing slurries refer to ***Geo Tactical's Silica Dust Code of Practice (2016)***, in addition to ***Geo Tactical's RPE Code of Practice and Fit Testing Standards (2016)***.

SUPPLIES
pH strips
Plastic beakers

TOOLS
Retractable knife

Additional PPE required beyond standard oilfield PPE[1]
Nitrile gloves
Splash goggles
Fit-Tested Respiratory Protective Equipment (RPE)[2] with P100 particulate filter cartridges

[1] Standard Oilfield PPE comprises the following:
Fire Retardant Coveralls with high visibility striping
Hardhat
Safety Glasses
Work gloves
Steel-toed boots

[2] Fit Testing Standards can be found in Geo Tactical's Code of Practice Library – *GEO TACTICAL RPE CODE OF PRACTICE & FIT TESTING STANDARDS 2016 V1R2*

INSTRUCTIONS

1. Prior to loading any sand[3]/amendment ensure nitrile gloves, fit-tested RPE and splash goggles (at a minimum) are on.
2. Erect and secure the tank loading guards.
3. Ensure proper base fluid volume and consistency are in tanks, augers are engaged and that the grate is securely fastened down. (No objects should be on top of the grate!)
4. Make certain other workers in the dust area[4] are wearing appropriate PPE (i.e. respiratory protection).
5. Lift and open sand/amendment according to container and manufacturer's instructions.
6. If loading from super sacs be aware of overhead hazards, do not keep arms and hands underneath loads except to open the container (use a retractable blade knife if required).
7. Dispose of empty containers appropriately (wear the same PPE as loading).

TASK DETAILS

Generally done with two people operating the EF9300. At least one certified person is required to operate the lifting equipment, in some instances two people are necessary (i.e. super sacs requiring preparation). Watch wind direction for dusting hazard, workers not in the immediate working zone may be exposed to particulate matter. Industrial hygiene monitoring has shown that operators and on site personnel of the EF9300 may be exposed to dust particulate within 12 m of the fracturing unit. Extended unprotected occupancy of the 12 m perimeter, particularly downwind of the tanks should be avoided.

SEE NEXT PAGE FOR RISK ASSESSMENT MATRIX

[3] If fracturing with silica sand standards outlined in Geo Tactical's Silica Dust Code of Practice must be adhered to - *SILICA DUST CODE OF PRACTICE 2016 V1R2*

[4] The dusting area will be subject to site specific conditions – use Certified Industrial Hygiene Consulting Ltd. report as reference - *FracRiteExposureJune2011ReportFINAL*

MAY, 2018
V1.R3

CRITICAL PROCEDURE – ENVIRONMENTAL FRACTURING WITH THE EF9300

Hydraulic fracturing involves downhole emplacement of slurry phase treatment amendments and proppants for in situ remediation. Geo Tactical's EF9300 hydraulic fracturing unit is a skid mounted piece of equipment containing two hydraulically driven triplex pumps. The main triplex pump used for initiating and propagating fractures can create hydraulic pressure up to a maximum of 1,350 psi. All plumbing fittings and frac hoses are rated for greater pressure than the triplex pump can generate. The EF9300 has protective shrouding and shields around all moving and rotating components used for mixing and pumping. An operator will be supervised and trained on the unit by an experienced Geo Tactical employee for multiple hours before being deemed competent enough to operate on their own.

Additional PPE required beyond standard oilfield PPE[1]
Nitrile gloves
Splash goggles
Some injection reagents may require additional PPE; for handling, consult Manufacturer's requirements

INSTRUCTIONS

1. Review critical operating procedure 011 "Starting the EF9300" and start accordingly.
2. Inspect the triplex pump, and hydraulic fittings for leaks.
3. Inspect all gauges on the control panel and ensure the "Data Acquisition" (DA), "Horn", "Lights", and "Deck & Triplex Lights" switches work.
4. Turn on the DA unit.
5. Visually inspect all fittings prior to connecting the frac hose.
6. Connect the discharge assembly to the discharge fitting on the front side of the unit.
7. Connect the remote pressure transducer to the discharge assembly.
8. Connect the 1" hose via railroad union to the discharge assembly.
9. Attach frac hose to the wellhead assembly at the borehole.
10. Review the horn signaling procedure: one horn blast means that pumping will start; two horn blasts mean pumping has ceased but all equipment is still pressurized; three horn blasts mean pressure has subsided and the lines and EF9300 are safe to approach.

[1] Standard Oilfield PPE comprises the following:
Fire Retardant Coveralls with high visibility striping
Hardhat
Safety Glasses
Work gloves
Steel-toed boots

11. Refer to the critical operating procedures regarding the amendment being used and mix accordingly.
12. Review critical operating procedure(s) based upon the type of drilling used (034 and 035 - Direct Push Fracturing (Disposable Head)" and "Direct Push Fracturing (Fixed Head)").
13. Open the downhole valve.
14. Ensure that the recirculation valves are closed.
15. Move auger lever(s) pertaining to tank(s) containing the slurry to "Feed".
16. Before starting to pump, blast the horn once.
17. Slowly start pushing the triplex pump lever forward while carefully monitoring the pressure on the gauge as well as the flow rate on the DA unit.
18. Continue increasing pump rate to a maximum of 420 L/min. Shut down immediately if reaching 1,350 psi (9,300 kPa)
19. When finished with the fracture, switch to gel or water to flush remaining amendment or proppant out of the pump and lines.
20. After the pumping is completed, blast the horn twice.
21. Monitor the pressure on the gauge and the DA unit.
22. When pressure subsides, open one of the recirculation valves to release any residual pressure.
23. Blast the horn three times after the pressure has subsided.
24. At the end of the day, download the data recorded on the DA unit onto a floppy disk.
25. Ensure that the data has been recorded by downloading it onto a field laptop.

TASK DETAILS

The pre-work inspection and start up should be completed by the EF9300 unit operator. In cold weather conditions, run heaters on plumbing fitting and engine compartment prior to engaging the engine (if and when possible). Boosting of the battery from a vehicle or forklift may be required in cold weather conditions. When fracturing, always use hoses rated for a minimum of 1,500 psi.

SEE NEXT PAGE FOR RISK ASSESSMENT MATRIX

DECEMBER, 2018
V1.R3

CRITICAL PROCEDURE – DIRECT PUSH DRILLING/FRACTURING (DISPOSABLE HEAD)

Direct push drilling is used to collect soil samples, create well borings and advance fracturing tools into the subsurface. Anyone working in the vicinity of the drill rig should know the rigs basic features and emergency shutoff locations. Only a trained certified operator shall operate the drill. When drilling or fracturing there must be an exclusion zone in place, only approved personnel are to be allowed in the exclusion zone.

TOOLS
Pipe wrenches
Wire brush
Hammer

Additional PPE required beyond standard oilfield PPE[1]
Nitrile gloves
Splash goggles
Some injection reagents or contaminants may require additional PPE for handling, consult Manufacturer or NIOSH[2] for PPE recommendations

INSTRUCTIONS

1. Ensure that the site has been cleared for both private and public underground utilities.
2. Prior to drilling, set up an exclusion zone around the immediate work area.
3. Tighten rods by hand, then snug with backed up pipe wrenches.
4. Tighten rods constantly to prevent thread fatigue.
5. Once at depth pull back the rods approximately three inches to disengage the head.
6. Once tool is disengaged, put on the direct push fracturing wellhead and secure whip check to drill rods and frac hose. Remember to connect the wellhead assembly with backed up pipe wrenches.
7. Connect frac hose and SHUT the wellhead pressure relief valve.
8. Lower the mast of the drill rig so that it sits atop the wellhead assembly or slightly above, this is to prevent the rods from sliding up in the event of a high pressure frac or injection.

[1] Standard Oilfield PPE comprises the following:
Fire Retardant Coveralls with high visibility striping
Hardhat
Safety Glasses
Work gloves
Steel-toed boots

[2] NIOSH – National Institute for Occupational Safety and Health. *NIOSH POCKET GUIDE TO CHEMICAL HAZARDS*

9. Once pumping event has stopped and operator has given the all clear signal (three blasts or verbal notice), have the driller push the wellhead assembly back down to engage the tip (approximately three inches).
10. Relieve pressure from the line using the wellhead pressure relief valve.
11. Disconnect the frac hose from wellhead assembly with the valve OPEN.
12. Use a bail head to pull out rods, secure pipe in an open borehole with a pipe vise or shoe.
13. NEVER hold, pull or push pipe by hand in an open borehole.

TASK DETAILS

Generally two to three people for drilling or fracturing. Set up an exclusion zone where only trained and competent personnel are permitted.

SEE NEXT PAGE FOR RISK ASSESSMENT MATRIX

DECEMBER, 2018
V1.R3

CRITICAL PROCEDURE – DIRECT PUSH DRILLING/FRACTURING (FIXED HEAD)

Direct push drilling is used to collect soil samples, create well borings and advance fracturing tools into the subsurface. Anyone working in the vicinity of the drill rig should know the rigs basic features and emergency shutoff locations. Only a trained certified operator shall operate the drill. When drilling or fracturing there must be an exclusion zone in place, only approved personnel are to be allowed in the exclusion zone.

TOOLS
Pipe wrenches
Wire brush
Hammer

Additional PPE required beyond standard oilfield PPE[1]
Nitrile gloves
Splash goggles
Some injection reagents or contaminants may require additional PPE for handling, consult Manufacturer or NIOSH[2] for PPE recommendations

INSTRUCTIONS
1. Ensure that the site has been cleared for both private and public underground utilities.
2. Prior to drilling, set up an exclusion zone around the immediate work area.
3. Tighten rods by hand, then snug with backed up pipe wrenches.
4. Tighten rods constantly to prevent thread fatigue.
5. Push rods and tool to the first fracture depth.
6. Once at depth flush tool with water (see Critical Procedures – Flushing Down-hole Tool) if necessary.
7. Once tool is cleaned, secure whip check to drill rods and frac hose and connect the wellhead assembly with backed up pipe wrenches.
8. Connect frac hose and SHUT the wellhead pressure relief valve.
9. Lower the mast of the drill rig so that it sits atop the wellhead assembly or slightly above, this is to prevent the rods from sliding up in the event of a high pressure frac or injection.
10. Pump the fracture.

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[1] Standard Oilfield PPE comprises the following:
Fire Retardant Coveralls with high visibility striping
Hardhat
Safety Glasses
Work gloves
Steel-toed boots

[2] NIOSH – National Institute for Occupational Safety and Health. *NIOSH POCKET GUIDE TO CHEMICAL HAZARDS*

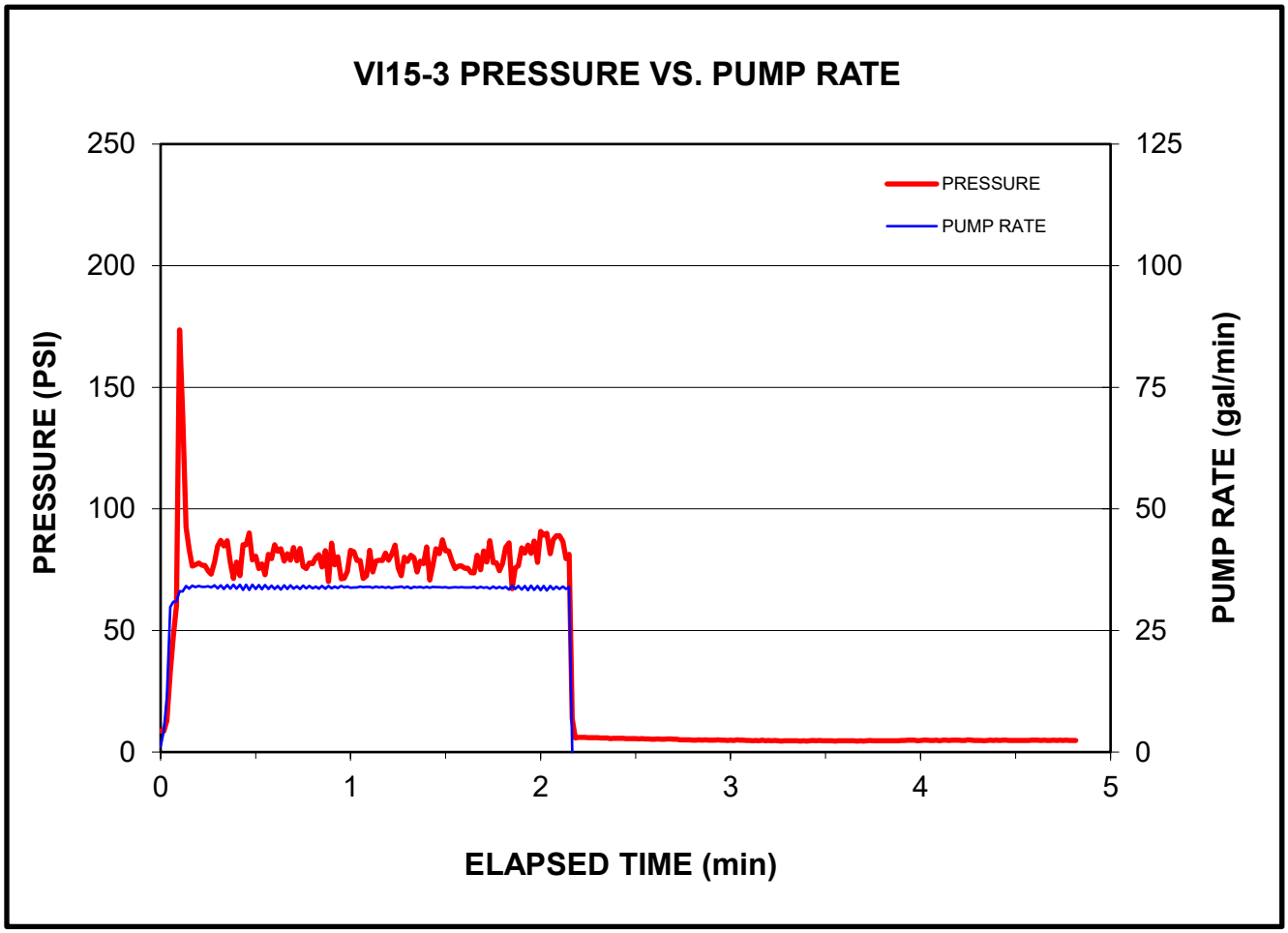
11. Once pumping event has stopped and operator has given the all clear signal (three blasts or verbal notice) relieve pressure from the line using the pressure relief valve.
12. Disconnect the frac hose from wellhead assembly with the valve OPEN.
13. Push rods and tooling to the next depth.
14. Repeat steps 5 to 10 until all fracture depths have been completed.
15. Use a bail head to pull out rods, secure pipe in an open borehole with a pipe vice or shoe.
16. NEVER hold, pull or push pipe by hand in an open borehole.

TASK DETAILS

Generally, two to three people for drilling or fracturing. Set up an exclusion zone where only trained and competent personnel are permitted.

SEE NEXT PAGE FOR RISK ASSESSMENT MATRIX

FRACTURE DATA



PROJECT NUMBER:	J1804		DATE:	13 September 2018	
FRACTURE NO.:	VI15-3		FRACTURE BOREHOLE:	VI15	
FRACTURE DEPTH:	6.0	(ft.)	SOIL TYPE:	Unknown	
SLURRY VOL PUMPED:	42	(gal)	PLACEMENT EFFICIENCY:	100	(%)
AMENDMENT TYPE:	ZVI		AMENDMENT MASS PUMPED:	227	(lbs)
BREAK PRESSURE:	174	(PSI)	AVERAGE PUMP RATE:	34	(gal/min)