# SOUTH WEBER CITY PLANNING COMMISSION AMENDED AGENDA

**PUBLIC NOTICE** is hereby given that the **Planning Commission of SOUTH WEBER CITY**, Utah, will meet in a **REGULAR** public meeting on **Tuesday, January 29, 2019** at the **South Weber City Council Chambers, 1600 East South Weber Drive,** commencing at **6:30 p.m.**

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A WORK MEETING WILL BE HELD PRIOR TO THE REGULAR PLANNING COMMISSION MEETING AT 6:00 P.M. TO DISCUSS AGENDA ITEMS, CORRESPONDENCE, AND/OR FUTURE AGENDA ITEMS

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**THE AGENDA FOR THE REGULAR MEETING IS AS FOLLOWS*:**

1. Welcome, Pledge of Allegiance—Commissioner Walton
2. Approval of Consent Agenda
   a. Minutes 2018-12-13
   b. Appointment of chair and vice chair
3. **Public Hearing on Land Use Specifications**: Amendment to South Weber City Public Works Standards
4. **Public Hearing on Rezone**: Application at approximately 7636 Cornia Dr (3.74 acres) parcel 13-039-0041 from Commercial Highway (CH) to Commercial Overlay (CO) by Fred Gunderson
5. **Action on Final Plat and Improvement Plans**: Application for La Pintana (1 lot) at approximately 1860 E South Weber Drive (0.26 acres) by Kody Holker.
6. Public Comments – Please keep public comments to 3 minutes or less per person
7. Planning Commissioner Comments (Grubb, Walton, Pitts, Johnson, Osborne)
8. Adjourn

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THE UNDERSIGNED PLANNING COORDINATOR FOR THE MUNICIPALITY OF SOUTH WEBER CITY HEREBY CERTIFIES THAT A COPY OF THE FOREGOING NOTICE WAS MAILED, EMAILED OR POSTED TO THOSE LISTED ON THE AGENDA ALONG WITH THE FOLLOWING:

| | | |
|---|---|---|
| City Office Building | www.southwebercity.com | Family Activity Center |
| Utah Public Notice website (www.utah.gov/pmn) | South Weber Elementary | Each Member of The Planning Commission |

DATE: 1-16-19

Lisa Smith

LISA SMITH, PLANNING COORDINATOR

IN COMPLIANCE WITH THE AMERICANS WITH DISABILITIES ACT, INDIVIDUALS NEEDING SPECIAL ACCOMMODATIONS DURING THIS MEETING SHOULD NOTIFY LISA SMITH, 1600 EAST SOUTH WEBER DRIVE, SOUTH WEBER, UTAH 84405 (801-479-3177) AT LEAST TWO DAYS PRIOR TO THE MEETING.

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***Agenda are flexible and may be moved in order or sequence to meet the needs of the Commission.**

# SOUTH WEBER CITY
# PLANNING COMMISSION MEETING
# WORK MEETING

**DATE OF MEETING:** **13 December 2018** **TIME COMMENCED:** **6:05 p.m.**

**PRESENT:** **COMMISSIONERS:** **Tim Grubb**
**Debi Pitts**
**Rob Osborne**
**Wes Johnson**
**Taylor Walton**

**CITY ENGINEER:** **Brandon Jones**

**CITY PLANNER:** **Barry Burton (excused)**

**PLANNING COORDINATOR:** **Lisa Smith**

**Transcriber: Minutes transcribed by Michelle Clark**

**ATTENDEES:** Blair Halverson, Chris Cave.

**Public Hearing and Action on Street Vacation: Request by South Weber City to vacate Spaulding Drive at approximately 600 E Petersen Parkway as a public right of way to satisfy the conditions of the development agreement for Riverside Place Subdivision:** Commissioner Osborne asked how the citizens feel about this. Brandon Jones, City Engineer, stated the improvements have been removed and the curb and gutter have been installed. He said he did send out a request to the utilities and both power, gas, and Comcast all have something located in the right of way. He said the development agreement states the developer will pay to switch over the power, and when he talked to Rocky Mountain Power, they haven't heard from the developer. He will have to follow up. He said the gas comes into the home on the west on the side from a main line and he is waiting to hear back from them. He said we may preserve a Public Utility Easement (PUE) over the top of it. He said the ordinance will need to be changed to include the PUE. Commissioner Osborne said according to the development agreement, the developer is required to cap the utilities. Brandon said the intent of that is the city utilities. He said the developer did cap the water, sewer, and irrigation. They also agreed to eliminate the transformer. He said there is a work order in place, but that hasn't been completed yet. He said the worst case scenario is that the property owners will have the title and a PUE. Commissioner Grubb suggested identifying the location a little bit better so that the property owners have a better idea of where the utilities are located.

**Action on Final Plat approval: Application for Harvest Park Subdivision, at approximately 725 E 6640 S (63 lots) by applicant Bruce Nilson:** Commissioner Osborne asked how many lots are in phase 1. It was stated 29 lots. Brandon said the point of egress/ingress is the intersection of Pebble Creek Drive and Canyon Meadows Drive. Commissioner Walton asked

about the basement depth. Brandon said he is waiting for a geotech to provide a basement depth table. Commissioner Walton pointed out that the plat states I-80 and it should be I-84.

**Action on Road Dedication Plat: Portion of Canyon Meadows Drive (675 East) through Riverside Place:** Brandon said this is related to the Final Plat for Harvest Park Subdivision, but Barry Burton felt it should be a separate agenda item.

**Public Hearing and Action and amending code 11.04 along with City Development, Design, and Constructions Standards: Changes to procedures for purchase and maintenance of Streetlight:** Brandon Jones, City Engineer, stated with some recent developments, there are a few more clarifications that need to be included. He said it will probably come back to the Planning Commission again.

**Discussion on proposed commercial business by Colby Sherman: (No discussion on this item)**

**ADJOURNED: 6:30 p.m.**

**APPROVED:** _____ **Date** _____
**Chairperson: Rob Osborne**

_____
**Transcriber: Michelle Clark**

_____
**Attest: Planning Coordinator: Lisa Smith**

# SOUTH WEBER CITY
# PLANNING COMMISSION MEETING

**DATE OF MEETING:** **13 December 2018** **TIME COMMENCED:** **6:32 p.m.**

**PRESENT:** **COMMISSIONERS:** **Tim Grubb**
**Debi Pitts**
**Rob Osborne**
**Wes Johnson**
**Taylor Walton**

**CITY PLANNER:** **Barry Burton (excused)**

**CITY ENGINEER:** **Brandon Jones**

**PLANNING COORDINATOR:** **Lisa Smith**

**Transcriber: Minutes transcribed by Michelle Clark**

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***A PUBLIC WORK MEETING was held at 6:00 p.m. to* REVIEW AGENDA ITEMS**

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**PLEDGE OF ALLEGIANCE:** Commissioner Pitts

**ATTENDEES:** Chris Cave, Stanley R. Cook, Skyler Moss, Colby Sherman, Erick Meacock, Jason Korcher, and Julie Korcher.

**APPROVAL OF CONSENT AGENDA**

- **Minutes November 8, 2018**
- **2019 meeting calendar**

**Planning Commission 2nd Thursday 6:30 p.m. (work mtg. 6 pm)**

**January 10**
**February ~~14~~ 21**
**March 14**
**April 11**
**May 9**
**June 13**
**July 11**
**August 8**
**September 12**
**October 10**
**November 14**

**December 12**

Commissioner Osborne asked if there is any room to move the February 14th meeting to February 21st. The Planning Commission agreed to change the February 14th meeting to February 21st.

**Commissioner Grubb moved to approve the consent agenda as amended. Commissioner Walton seconded the motion. Commissioners Grubb, Johnson, Pitts, Osborne, and Walton voted yes. Commissioner Johnson abstained from approval of the minutes of 8 November 2018 as he was excused from the meeting. The motion carried.**

**DECLARATION OF CONFLICT OF INTEREST: (None)**

**Commissioner Johnson moved to open the public hearing for request by South Weber City to vacate Spaulding Drive at approximately 600 E Petersen Parkway as a public right of way to satisfy the conditions of the development agreement for Riverside Place Subdivision. Commissioner Pitts seconded the motion. Commissioners Grubb, Johnson, Pitts, Osborne, and Walton voted yes. The motion carried.**

**********  PUBLIC HEARING  **********

**Public Hearing and Action on Street Vacation: Request by South Weber City to vacate Spaulding Drive at approximately 600 E Petersen Parkway as a public right of way to satisfy the conditions of the development agreement for Riverside Place Subdivision:**

Commissioner Osborne asked if there were any public comments.

**Eric Meacock, 617 Petersen Parkway,** asked what is going on with this**.**

Brandon Jones, City Engineer, explained the procedure of vacating a street, which in this case, is Spaulding Drive.

Brandon stated the developer is not proposing to connect the subdivision to the abutting Spaulding Drive stubbed street. This will allow for an additional lot in the development. In the development agreement, the City agreed to allow the developer will not connect to Spaulding Drive. The City also agreed to initiate proceedings to formally vacate the right-of-way. The developer agreed to cap the existing underground utilities, remove the existing curb, gutter, sidewalk, and asphalt, and install curb, gutter, sidewalk, and asphalt across the southern boundary of the vacated right-of-way to completely remove the former intersection. This construction will be required along with the other improvements with the Riverside Place Phase 3 development.

**Commissioner Walton moved to close the public hearing for request by South Weber City to vacate Spaulding Drive at approximately 600 E Petersen Parkway as a public right of way to satisfy the conditions of the development agreement for Riverside Place Subdivision. Commissioner Johnson seconded the motion. Commissioners Grubb, Johnson, Pitts, Osborne, and Walton voted yes. The motion carried.**

**********  PUBLIC HEARING CLOSED  **********

Brandon discussed maintaining side yard easements. Commissioner Osborne said we need to find out exactly where the utilities are located. Brandon said before the vacation is recorded, a decision needs to be made on the utilities as to utility easement preservation.

**Commissioner Johnson moved to approve the request by South Weber City to vacate Spaulding Drive at approximately 600 E Petersen Parkway as a public right of way to satisfy the conditions of the development agreement for Riverside Place Subdivision subject to removal or capping the utilities or identify the easement before it is turned over to the landowners. Commissioner Grubb seconded the motion. Commissioners Grubb, Johnson, Pitts, Osborne, and Walton voted yes. The motion carried.**

**Action on Final Plat and Improvement plans: Application for Harvest Park Subdivision, phase 1 at approximately 725 E 6640 S (29 lots) by applicant Bruce Nilson:** Commissioner Osborne asked if there is any discussion from the Planning Commission. He noted Barry's letter of the 6 December 2018. He also noted the letter of 5 December 2018 from Jones & Associates. Commissioner Walton clarified that this is for phase 1 (29 lots).

**HARVEST PARK PHASE 1 DEVELOPMENT REVIEW by Barry Burton 12.6.18 is as follows:**

**Plat/Layout**: The layout of lots and roads is as approved with the revised preliminary plat. Lot widths and sizes also are as approved on the preliminary plat. The access road into the project through Riverside Place Subdivision is included on a separate road dedication plat. This plat will also need approval for this phase to have access from a dedicated public street. This section of roadway is included in the improvement drawings for Phase 1.

**Development Agreement**: There is an existing approved development agreement for Harvest Park that specifies, among other things, that the developer will dedicate the land for South Bench Drive and pay their proportionate share of the costs of construction of that road. The City will be constructing the road next year. It also specifies what the developer will do to improve the open space. Specifically, they will construct a detention basin that is also a public dog park with a 6' chain link fence and a 6' wide natural surface trail around the perimeter. (The Parks Committee met on Dec. 5th and recommended a design for the park that incorporates these items.)

The agreement also specifies that homes built on the lots on the west side of the property adjacent to Canyon Meadows will be restricted to a maximum height of 25'.

**Recommendation**: The Phase 1 Plat and the accompanying Road Dedication Plat along with the Development Agreement meet the requirements of Preliminary Approval and negotiations between the City and the developer. I recommend forwarding both plats to the City Council with a recommendation of approval.

**Brandon Jones, City Engineer's, memo of 5 December 2018 is as follows:**

Our office has completed a review of the Final Plat and Improvement Plans for the Harvest Park Subdivision Phase 1, dated November 14, 2018. We recommend approval subject to the following items being addressed prior to approval from the City Council. Some items are mentioned for information purposes only.

**GENERAL**

1. Final plans need to be submitted to the South Weber Irrigation Company and an approval letter provided indicating that the improvement plans meet their requirements.
2. The South Weber Fire Department needs to provide an approval letter.
3. The Detention Basin is only being constructed in part with Phase 1 and will not be completed with sod, sprinklers and fencing, as specified in the Development Agreement, until Phase 2.
4. A portion of the ROW for South Bench Drive is being dedicated with Phase 1. The remaining portion will be dedicated with Phase 2 or prior to that by deed as needed, in accordance with the Development Agreement.
5. Easements outside of the subdivision boundary (sewer and turnaround) will need to be conveyed to the City with a separate easement document and must be recorded prior to or with the plat.

**PLAT**

6. The streets need to be given names. If names are not desired, we can provide coordinate street numbers.
7. Addresses for the lots will be provided by our office.
8. A maximum basement depth table needs to be added according to the recommendations of the geotechnical engineer.
9. The following notes should be added:
   a. Lots 106 – 112 are restricted to a maximum structure height of 25’. The maximum structure height for all other lots must comply with the provisions of the Development Agreement, dated _____.
   b. The existing sewer easement located on Lots 101 and 103 – 112 is hereby vacated with the recordation of this plat.
10. There are some discrepancies between the written boundary description and the drawing. The surveyor needs to make sure both match.

**ROAD DEDICATION PLAT**

11. The plat needs to be given a unique name, perhaps Canyon Meadows Drive Road Dedication Plat.
12. The streets need to be labeled.
13. Centerline information and monuments need to be added.
14. The ROW radii at the east connection with Harvest Park appear to be reversed and potential don’t match correctly.

**IMPROVEMENT PLANS**

15. If the grades of the storm drain system will allow for the storm drain to drain out to South Bench Drive, the outlet control structure could be located adjacent to the sidewalk for better maintenance access and would not require all of the piping through the open space. We would request that the developer’s engineer look into this possibility.
16. The Utility Plan and/or each Plan and Profile sheet should add notes indicating:

a. The approximate depth of groundwater in order to notify the contractor. The sewer is very deep, and groundwater will be an issue in getting it installed.
b. That imported trench backfill will be required wherever unsuitable conditions are present within the street

**ROW.**
17. Existing asphalt and curb and gutter need to be removed at the connection of Canyon Meadows Drive in order to provide a smooth transition between the grades of the two roads.
18. A 6' vinyl fence needs to be shown and called out in the plans along the south and east sides of the open space as shown in the preliminary plans.
19. We have a few additional minor comments that we will supply to the developer's engineer to be addressed.

**Commissioner Walton moved to recommend approval to the City Council the Final Plat and Improvement Plans Application for Harvest Park Subdivision, phase 1, at approximately 725 E 6640 S phase 1 (29 lots) by applicant Bruce Nilson subject to the following:**

**1. Barry Burton's memo of 6 December 2018.**
**2. Brandon Jones' memo of 5 December 2018.**

**Commissioner Pitts seconded the motion. Commissioners Grubb, Johnson, Pitts, Osborne, and Walton voted yes. The motion carried.**

**Action on Road Dedication Plat: Portion of Canyon Meadow Drive (675 East) through Riverside Place:** It was stated that in the future, a road dedication should be put on the agenda prior to the final plat approval of a subdivision.

**Commissioner Grubb moved to recommend approval to the City Council for the road Dedication Plat: Portion of Canyon Meadow Drive (675 East) through Riverside Place subject to the following:**

**1. Barry Burton's memo of 6 December 2018.**
**2. Brandon Jones' memo of 5 December 2018.**

**Commissioner Johnson seconded the motion. Commissioners Grubb, Johnson, Pitts, Osborne, and Walton voted yes. The motion carried.**

**Commissioner Johnson moved to open the public hearing amending code 11.04 along with City Development, Design, and Constructions Standards: Changes to procedures for purchase and maintenance of Streetlight. Commissioner Pitts seconded the motion. Commissioners Grubb, Johnson, Pitts, Osborne, and Walton voted yes. The motion carried.**

**********  PUBLIC HEARING  **********

**Public Hearing and Action and amending code 11.04 along with City Development, Design, and Constructions Standards: Changes to procedures for purchase and maintenance of Streetlight:** Brandon Jones reviewed his letter of 6 December 2018.

**Brandon Jones, City Engineer's, letter of 6 December 2018 is as follows:**

**BACKGROUND**

When the current City Standards were approved in October 2017, there was discussion about which approach for streetlights was best; City owned vs. Rocky Mountain Power (RMP) owned. The City moved forward with the RMP owned approach in the Standards at the time but requested that the City Staff look into the matter. Over the past several months the City Staff has analyzed the advantages and disadvantages of both approaches. The results were presented to the Municipal Utilities Committee on November 1, 2018, and then to the City Council on November 13, 2018. The City Staff and MUC recommended moving forward with city-owned streetlights for the following reasons:

- The City could save $1,600 - $10,000 per light, depending on what light is selected (50-year analysis)
- The City has more control over costs
- The City can provide a higher level of service
- The streetlights selected are all LED, which provides long life and low maintenance
- The streetlights selected are more attractive and can provide style and character to the City

**NEW RECOMMENDED STREETLIGHTS**

There were three different styles of streetlights that were recommended to the City Council based on their proposed function (described and similar examples shown below). All styles would have a fluted pole with a script "South Weber City" inscribed on the base.

- Residential: Located in cul-de-sacs, mid-block, and minor intersections (where approved)
- Intersection: Located at all intersections
- Corridor: Located along major corridors (South Weber Drive and South Bench Drive), commercial centers and other locations (where approved)

The City Council agreed with the recommendation of moving forward with City-owned streetlights. The City Council also agreed with the general style and use of the recommended streetlights in the appropriate locations.

**IMPLEMENTATION**

The first step in moving forward with city-owned streetlights is to make all necessary changes in the City Code and City Standards.

1. City Standards. The changes in the City Standards consist of detailed drawings that include materials, part numbers, styles, fixtures, etc. necessary to ensure that the same lights are manufactured and installed consistently no matter what company supplies the lights. These drawings are not included with this memo but will be adopted by ordinance by the City Council.
2. City Code. The City Code needs to be revised. Below are the recommended revisions.

**11.04.020.J General Requirements**

6. Street Lights: The sub divider is required to pay for all street lights required by the City Standards. Once power is installed, the sub divider shall notify the City. The Street Lights will be ordered by the City and installed by the **City's authorized Contractor** ~~Power Company~~. Once

paid for, the sub divider is no longer responsible for the installation or the timing of the installation.

**11.04.140 Street Lighting**
A. The sub divider shall be required to pay for all outdoor street lighting fixtures.
B. The placement and installation of street lighting shall be in accordance with adopted city standards.
C. The sub divider shall be required to get power installed into the subdivision and notify the City when power is available.
D. The City is responsible to order the street lights. The street lights are then installed and maintained by the **City's authorized Contractor** ~~Power Company~~.

Commissioner Osborne asked if there is any public comment. There was none.

**Commissioner Grubb moved to close the public hearing amending code 11.04 along with City Development, Design, and Constructions Standards: Changes to procedures for purchase and maintenance of Streetlight. Commissioner Johnson seconded the motion. Commissioners Grubb, Johnson, Pitts, Osborne, and Walton voted yes. The motion carried.**

**********  PUBLIC HEARING CLOSED  **********

Commissioner Grubb asked how it is decided as to what type of street light style for intersections. Brandon explained that it is a case by case according to location and use. He said at this point, this is for new subdivision street lights moving forward. Discussion took place regarding dark sky lighting. It was stated that is something that may need to be checked as to whether or not it is required in the city code.

**Commissioner Grubb moved to recommend approval to City Council to amend code 11.04 along with City Development, Design, and Constructions Standards: Changes to procedures for purchase and maintenance of Streetlight subject to Brandon Jones letter of 6 December 2018. Commissioner Pitts seconded the motion. Commissioners Grubb, Johnson, Pitts, Osborne, and Walton voted yes. The motion carried.**

**Discussion on proposed commercial business by Colby Sherman:**
Colby Sherman stated he comes from a long line of car dealerships. He said the hours would be 10:00 a.m. to 5:00 p.m. and would mainly be on-line sales. He would like the Planning Commissions opinion as to where such a business could be located in the city. He said they need frontage of 100' to 200'. He asked how close they can be to the street. He said because of the hours they wouldn't need the lighting. He said ideal would be two acres. He understands there are lots available by Burly Burger. Commissioner Grubb said he would be in favor of this type of business and the master plan shows all the commercial zones. Mr. Sherman said most of our vehicles are ten years old or newer and wouldn't be an eyesore. Commissioner Osborne said we would love to have you in the city. He said we would love to see something.

**PUBLIC COMMENTS: (None)**

**Planning Commission Comments:**

**Commissioner Johnson:** He reported that he attended a site plan meeting for the RV Park on Cottonwood. He said KOA is doing the layout and they have hired an arborist to check out the trees. He said there will be access from Cottonwood to the trail. He said they discussed the need for public parking in that area. He said the Parks and Trails Committee will be applying for three grants for the parking on Cottonwood, underpass on I-89, and sidewalk along South Weber Drive.

**ADJOURNED: Commissioner Grubb moved to adjourn the Planning Commission meeting at 7:16 p.m. Commissioner Walton seconded the motion. Commissioners Grubb, Johnson, Pitts, Osborne, and Walton voted yes. The motion carried.**

**APPROVED:** _____ **Date** _____
**Chairperson: Rob Osborne**

_____
**Transcriber: Michelle Clark**

_____
**Attest: Planning Coordinator: Lisa Smith**

JONES & ASSOCIATES CONSULTING ENGINEERS

**M E M O R A N D U M**

TO: South Weber City Planning Commission

FROM: Brandon K. Jones, P.E.
South Weber City Engineer

CC: David J. Larson – South Weber City Manager
Mark Larsen – South Weber City Public Works Director

**RE: CITY CODE AND CITY STANDARDS CHANGES**
**Summary and Recommendation Memo**

Date: January 23, 2019

## BACKGROUND

When the current City Standards were approved in October 2017, there was discussion about which approach for streetlights was best; City owned vs. Rocky Mountain Power (RMP) owned. The City moved forward with the RMP owned approach in the Standards at the time, but requested that the City Staff look into the matter. Over the past several months the City Staff has analyzed the advantages and disadvantages of both approaches. The results were presented to the Municipal Utilities Committee on November 1, 2018, and then to the City Council on November 13, 2018. Based on the analysis, the City Staff, MUC, and City Council recommended moving forward with city-owned streetlights. The next step is to implement the streetlight changes to the City Code and the City Standards.

Since the last update to the City Standards, there have been a few other needed changes identified. As changes to the City Code and City Standards need to be taken to both the Planning Commission and City Council, and adopted by ordinance, the City Staff felt it would be best to bring all of the proposed changes together at one time. The following summarize the proposed changes.

## SUMMARY OF CHANGES – CITY CODE

Following are the proposed changes to the City Code:

### 11.04.020.J General Requirements

6. Street Lights: The subdivider is required to pay for all street lights required by the City Standards. Once power is installed, the subdivider shall notify the City. The Street Lights will be ordered by the City and installed by the **City's authorized Contractor** ~~Power Company~~. Once paid for, the subdivider is no longer responsible for the installation or the timing of the installation.

**11.04.040.B**

2. Collector Or Feeder Streets: Not less than seventy ~~six feet (76')~~ **eight feet (78')**.

**11.04.140 Street Lighting**

A. The subdivider shall be required to pay for all outdoor street lighting fixtures.
B. The placement and installation of street lighting shall be in accordance with adopted city standards.
C. The subdivider shall be required to get power installed into the subdivision and notify the City when power is available.
D. The City is responsible to order the street lights. The street lights are then installed and maintained by the **City's authorized Contractor** ~~Power Company~~.

**SUMMARY OF CHANGES – CITY STANDARDS**

Following are the proposed changes to the City Standards (**text portion**):

1. Cover – The date would be changed from "October 2017" to "October 2017 – *Rev. 1, February 2019*"
2. Title Page – Updated personnel
3. Section 4B. Licensing – Removed the table containing specific licenses for specific work and replaced it with generic language that contractors must comply with the Utah Administrative Code R156-55a (Utah Construction Trades Licensing Act Rule). This avoids inadvertently referencing the wrong required license, and does not need to be updated when licensing changes are made.
4. Section 4.03 Construction – B3 was added. This section designates that the City has the authority to require improvements to be replaced if their as-built condition is not in compliance with the approved improvement plans and these Standards.

Following are the proposed changes to the City Standards (**drawing portion**):

- All changes in the Drawings are highlighted with a cloud

5. Cover Sheet – Updated personnel and revision text to "October 2017 – *Rev. 1, February 2019*"
6. There are several sheets that have been updated based on comments received from the Division of Drinking Water. These revisions have been made in order to show greater compliance with the DDW rules, but should not be considered fundamental changes.
7. CS-02 – Added tolerance of 0.5% +/- on cross slope
8. CS-02 – Added requirement for the inspector to give written approval before pavement is installed
9. CS-03 – Old Fort Road was changed to South Bench Drive
10. CS-03 – The previous 70' Old Fort Road cross section was removed and replaced with the current 78' South Bench Drive cross section
11. CS-03 – The shoulder can be left as a shoulder, or designated as a dedicated bike lane

12. CS-04 – A general detail for a concrete utility collar was included, and all other collars reference this detail
13. CS-05 – If cutting the pavement on a road that has been paved or overlayed in the last 10 years, the patching requirements become much more in depth to help protect the life of the road.
14. CS-06 – Added notes for a better understanding of the requirements on curb and gutter and sidewalk
15. CS-07 – Added cul-de-sac streetlight and reference
16. CS-11 – Contractor is responsible to supply all meters 1 ½" or greater
17. CS-22 – This is the sheet that implements the new streetlight standards. As it will be the City's responsibility to select and install the lights, we felt it was best to give general direction in the Standards, and not show specific lights.
    The City will be requesting proposals from various streetlight suppliers and through that process will select the exact streetlight that will be installed. This sheet establishes that there are three different styles of lights. Each will be used in different locations and with different spacing requirements, based on their intended use. Also listed are general requirements that the streetlights must comply with (e.g. LED, dark-sky compliant, aluminum bases painted black with a sanded aluminum city logo/text, etc.).

South Weber City Corporation

# Development, Design, & Construction Standards



**October 2017**

***Rev. 1, February 2019***

SOUTH WEBER city

Prepared by
JONES & ASSOCIATES
*Consulting Engineers*

JONES & ASSOCIATES

# DEVELOPMENT, DESIGN, AND CONSTRUCTION STANDARDS for SOUTH WEBER CITY



**SUBMITTED & RECOMMENDED:**

| | |
|---|---|
| Brandon K. Jones, P.E.<br>City Engineer | Date |

**APPROVED:**

| | |
|---|---|
| Jolene C. Sjoblom<br>Mayor | Date |
| David J. Larson<br>City Manager | Date |
| Barry Burton<br>City Planner | Date |
| Mark B. Larsen<br>Public Works Director | Date |
| Mark McRae<br>Attest, City Recorder | Date |

## TABLE OF CONTENTS

# SECTION 1 GENERAL

## 1.01 South Weber City Municipal Code Governs

**Nothing in this document shall be construed to be contrary to South Weber City Municipal Code. Should a conflict exist between this document and the Ordinances, the Code shall govern.**

## 1.02 Conformance with Federal, State, and Local Laws

**Nothing in this document shall relieve the Developer, Engineer, or Contractor from abiding by any and all Federal, State, and local laws.**

## 1.03 Definitions

A. Contractor – The individual, firm, co-partnership, or corporation, and his, their, or its heirs, executors, administrators, successors, and assigns, or the lawful agent of any such individual firm, partnership, covenanter, or corporation, or his, their, or its surety under the contract bond, constituting one of the principals to the contract and undertaking to perform the Work.

B. Drawings – The City-approved construction drawings, the South Weber City Public Works Standard Drawings, and/or the Manual of Standard Drawings, as applicable.

C. Developer – The person sponsoring construction of the improvements.

D. Development – The subject subdivision, minor subdivision, or building.

E. Improvements – See "Work."

F. Improvement Plans – See "Drawings."

G. Inspector – The authorized representative of the City or City Engineer assigned to make all necessary inspections of the Work performed or being performed, or of materials furnished or being furnished by the Contractor.

H. Work – All types of work necessary to provide safe access and utility service to and within proposed subdivision or site, including, but not limited to, site grading, utility installation, and street construction. Work includes all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning.[1]

I. See also the South Weber City Municipal Code. Where definition conflicts arise between City Ordinance and this document, the definitions in this document shall take precedence when in reference to this document.



[1] From EJCDC© C-700, Standard General Conditions of the Construction Contract.

## 1.04 Acronyms

A. BMP – Best Management Practice

B. CFP – Capital Facilities Plan

C. DDW – Division of Drinking Water

D. DWQ – Division of Water Quality

E. DWRi – Division of Water Rights

F. FEMA – Federal Emergency Management Agency

G. HOA – Homeowners' Association

H. LID – Low Impact Development

I. RCP – Reinforced Concrete Pipe

J. SWC – South Weber City

K. UDEQ – Utah Department of Environmental Quality

L. UDOT – Utah Department of Transportation

M. UPDES – Utah Pollutant Discharge Elimination System

N. USACE – United States Army Corps of Engineers

## 1.05 Modification Process

A. Whenever, in the opinion of the City Public Works Department, the City Engineer, or the Superintendent having jurisdiction, a literal enforcement of these regulations may work an undue hardship or a literal enforcement of the provisions may be unnecessary to meet the goals and standards of the City, the City may modify those standards in the following manner:

B. Modifications may be granted when there are practical difficulties involving carrying out the provisions of the Public Works Standards and Technical Specifications, and a panel consisting of the City Manager, City Planner, City Engineer, and the Public Works Director or their Representative determine that granting of a modification for an individual case will meet the goals and requirements of the City without unduly jeopardizing the public and the individual's interest.

1. The City shall first receive a written request for a modification to the standards from any interested party.

2. Upon receipt of the request, the panel discussed above shall find that a special individual reason makes the strict letter of the standard impractical, and shall find the modification is in conformance with the intent and purpose of the standards and shall find that such modification does not in any way lessen the integrity of the standards.

3. When such findings of fact are made, the panel may grant such modification as it deems appropriate. The details of any action granted as modification by this panel shall be recorded and entered in the files of the City, with the specific reasons for the granting of said modification.

# SECTION 2 DEVELOPMENT STANDARDS

## 2.01 Approval Procedure

**See Title 11 – Subdivision Regulations of the South Weber City Municipal Code**

## 2.02 Developer Responsibilities

A. Required Improvements and Guarantees – see Title 11 of South Weber City Municipal Code.

B. Permits and Approvals

1. Developer is responsible for obtaining all necessary permits and approvals for the construction of the Improvements. Copies of all applications and approved permits shall be submitted to the City. Agencies/permits that may be required include, but are not limited to:

   a. DDW Plan Approval (pre-construction)

   b. DDW Operating Permit (post-construction)

   c. UPDES NOI and NOT

   d. DWRi Stream Alteration

   e. DWRi Dam Safety

   f. EPA 404 Wetlands

   g. FEMA CLOMA and/or CLOMR

   h. UDOT

   i. Others as applicable

C. Improvements

1. The required improvements shall include all street improvements in front of all lots along all dedicated streets to a connection with existing improvements of the same kind or to the boundary or the subdivision nearest existing improvements. Design must provide for future extension to adjacent development and to be compatible with the contour of the ground for proper drainage. All water lines, sewer lines, and any other buried conduit shall be installed to the boundary lines of the subdivision. See Chapter 11.04 for more information.

2. Upsizing based on CFPs – The Developer will be required to construct/install infrastructure sized in accordance with the City's currently adopted CFPs. The City will be responsible for paying difference in cost between the master planned infrastructure size and the minimum infrastructure size required for the development.

3. Seal Coat – See Municipal Code.

4. Street Lighting – See Municipal Code.

5. Street Signage – See Municipal Code.
6. Survey of Existing Improvements – Developer shall reimburse City for City Engineer's time spent surveying in locations of new improvements.

**2.03 Subdivision Standards**

A. The general standards for subdivision layout and development are found in Title 11 – Subdivision Regulations.

B. See also Section 3 – Design Standards and Section 4 – Construction Standards of this document.

# SECTION 3 DESIGN STANDARDS

## 3.01 Required Improvements

A. See Chapter 11.04 for information on the required improvements.

B. See also Section 5 – Technical Specifications and Section 6 – Standard Drawings, Plans, and Details of this document for additional information.

## 3.02 Improvement Plans

A. Complete and detailed, and signed and sealed (in accordance with Utah Code 58-22-602) construction plans and drawings of improvements shall be submitted to the City for the review by the City Engineer prior to receiving final plat approval and prior to commencing construction. Per Chapter 11.04, no construction shall begin until plans have been checked and approved by the City Engineer, and final approval is granted by the City Council.

B. The following instructions are for the purpose of standardizing the preparation of drawings to obtain uniformity in appearance, clarity, size, and style. The plans and designs shall meet the standards defined in the specifications and drawings hereinafter outlined. The minimum information required on the drawings for improvements is as follows:

1. All drawings and/or prints shall be clear and legible and conform to industry standard engineering and drafting practices.
2. Drawings shall be legible and to a common scale when printed on 11”x17” paper.
3. Both plan view and centerline profile must be shown. On subdivisions along steep cross slopes, profiles for each side of the street may be required to be shown.
4. Plan and profiles shall indicate design and/or existing grades a minimum of 200 feet beyond the limits of the proposed project.
5. All wet utilities (water, sewer, storm drain, irrigation) shall be shown in plan and profiles views.

C. Each set of plans shall be accompanied by a separate sheet of details for special structures which are to be constructed and are not covered by the City Standards. All structures shall be designed in accordance with the minimum South Weber City Standards and approved by the City Engineer.

D. Separate drawings of elements of the South Weber City Standards shall not be required to be redrawn and submitted with the construction drawings unless specific deviations from the standards are requested for approval; however, the construction drawings shall refer to the specific items of the Standards that are to be incorporated into the Work.

E. The plan and profile construction plans shall be submitted in portable document format (“pdf”). Upon approval, the developer’s engineer shall provide the City Engineer with electronic files of the final plat and improvement plans in AutoCAD or other City Engineer approved format. A hard copy of the approved construction plans bearing the signature of

the City Engineer shall be kept available at the construction site. Prior to final acceptance by the City, the developer, developer's representative, contractor, or project engineer shall submit to the City Engineer a set of "as built" drawings for permanent City file record.

### 3.03 Sanitary Sewer Design

A. All design shall be in accordance with Utah Administrative Code R317.

B. All terminating sewer mains shall end with a city standard manhole.

C. Service lateral connection shall not be allowed in sewer manholes.

D. All sewer shall be gravity unless otherwise approved by the City.

E. Collection lines shall be located in public rights-of-way or private road rights-of-way. Collection lines shall not be located on private property (easements) without the express written permission form the City. If such case is granted, easement shall be a minimum of 20' and shall be dedicated to the City of South Weber.

### 3.04 Water Design

A. All design shall be in accordance with Utah Administrative Code R309.

B. Valves are required on all branches of tees and crosses. On unbroken lengths of water line, the maximum valve spacing is 1000-ft.

C. At dead end lines, including temporary dead ends, provide fire hydrant at termination point.

D. All fire lines shall meet public works standards, but shall remain privately owned and maintained.

E. Fire hydrants are to be installed in locations as required by the fire code and approved by the Fire Marshal and City Engineer, with a minimum spacing of 500-ft.

### 3.05 Street/Road Design

A. Design

1. Streets shall be designed in accordance with these Standards, standard engineering practices, and AASHTO and MUTCD guidelines.
2. No changes of grade in excess of 1.5% shall be permitted without a vertical curve.
3. Sight triangles shall be shown at the request of the City Engineer.
4. Cul-de-Sacs
    a. Length - See Municipal Code and Standard Drawings.
5. Temporary Turnarounds
    a. When turnaround cannot be constructed outside of subdivision, it shall be located on a portion of the subdivision lots (as needed) with the developer placing in escrow

an amount of money sufficient to complete the street improvements to the subdivision boundary. These funds will be used at such time the street is extended.

b. Drainage onto adjacent property must be by written approval (easement) of adjacent property owner.

c. The lot on which the turnaround is constructed shall be restricted as follows:

(i) Platted as an "R" (restricted) lot.

(ii) This lot cannot be sold or building permits issued until the road is extended beyond the subdivision boundary, complete with curb, gutter, and sidewalk.

6. Landscaping

a. When landscaping is required to be designed/installed, refer to the Standard Drawings.

7. UDOT

a. Roadway intersections with UDOT controlled streets shall be in accordance with UDOT standards. A copy of the approved UDOT Access Permit shall be submitted to the City.

**3.06 Storm Drain Design**

A. See Appendix A for Storm Drain and Drainage Design Standards.

**3.07 Low Impact Development**

A. [SECTION RESERVED]

# SECTION 4 CONSTRUCTION STANDARDS

## 4.01 General Policies

A. General Conditions

1. Permit/License: When the work is in progress, Contractor shall have at the work site a copy of the permit and his contractor's license number.

2. Private access: Temporary all weather roadways, driveways, walks, and right-of-ways for vehicles and pedestrians shall be constructed and continuously maintained where required.

3. Street excavation in winter: Excavation of City streets during the winter months (herein defined as November 15 to April 1) will be allowed only if the work is a new service connection, required maintenance or emergency, or otherwise approved by the Public Works Department. Permanent patching of City streets excavated in the winter may be delayed until April 1 with the following provisions: Within five working days from the completion of the excavation, the permittee provides/maintains a 1-1/2" thick temporary winter asphalt surface until such time as the permanent asphalt surface is installed; the permittee shall provide/maintain a temporary untreated base course surface until such time as the temporary winter asphalt surface is installed. These provisions apply regardless of whether the permittee or City crews are performing the permanent resurfacing.

4. Existing utilities: The contractor shall use extreme caution to avoid a conflict, contact, or damage to existing utilities, such as power lines, sewer lines, storm drains, street lights, telephone lines, cable television lines, water lines, gas lines, poles, or other appurtenances during the course of construction of this project. Any such conflict, contact, or damage shall be immediately communicated to said utility company and the Public Works Department. All projects shall be “Blue Staked” prior to construction.

5. Preconstruction pictures of existing public way improvements: The permittee may secure pictures of the conditions of the existing public way improvements such as curbing, sidewalk, landscaping, asphalt surfaces, etc. In the event that public way improvements are damaged and no pictures are taken, the Public Works Department will assume the correction of the damage is the responsibility of the permittee.

B. Licensing

1. Contractor (including all sub-contractors) must be licensed with the State of Utah: It is the policy of South Weber City that contractors desiring to perform work in the City's public way shall be properly licensed in the State of Utah, as required by the Utah Administrative Code R156-55a (Utah Construction Trades Licensing Act Rule).

2. Exceptions: A license shall not be required by the City when the permittee is a public utility company. However, subcontractors for utility companies shall have a valid contractor's license.

C. Permits

1. Developer/Contractor is responsible for obtaining all necessary permits for the construction of the Improvements prior to commencement of said Improvements. Agencies/permits required may include, but are not limited to:

2. Encroachment (City)

a. South Weber City's Department of Public Works issues permits to control any excavation and construction operations in the public right-of-way. All contractors, sub-contractors, and utility companies proposing to construct, repair, or replace any facility within the public right-of-way shall contact the South Weber City Building Department and complete all permit requirements prior to commencing proposed work.

b. Work by utility companies and their contractors in constructing facilities in new subdivision streets shall be required to post a bond with the City and will be subject to City inspection and compliance with all requirements.

c. Emergency Work

(i) Maintenance of pipelines or facilities in the public way may proceed without a permit when emergency circumstances demand the work be done immediately provided a permit could not reasonably and practicably have been obtained beforehand.

(ii) In the event that emergency work is commenced on or within any public way of the City, the Public Works Department shall be notified within one-half hour when the work commences or as soon as possible from the time the work is commenced. Contact shall be made to the City's "on call" personnel. If emergency work is commenced during off business hours, the Public Works Department will be notified within one (1) hour of the start of work on the first regular business day of which City offices are open after such work commences, and, at the discretion of the Public Works Department, a permit may be issued which shall be retroactive to the date when the work was begun. Before commencing the emergency work, all necessary safety precautions for the protection of the public and the direction and control of traffic shall be taken. None of the provisions of these regulations are waived for emergency situations except for the prior permit requirement.

d. Enforcement: Violators of these regulations of working within the Public Way shall be subject to the provisions of the applicable South Weber City Municipal Code.

3. USACE/DWRi Stream Alteration – Stream Alteration

4. UPDES
5. Dam Safety (DWRi)
6. UDOT
7. Davis County Surveyor's Monument
8. Excavation Operations
    a. Blue Stakes: Before commencing excavation operations, the permittee shall call "Blue Stakes" at 1-800-662-4111 or 811.
9. Traffic control devices: Traffic control devices such as construction signs, barricades, and cones must be in place before excavation begins.
10. Protection of paved surfaces outside of excavation area: In order to avoid unnecessary damage to paved surfaces, backhoes, outriggers, tracked equipment, or any other construction equipment that may prove damaging to asphalt shall use rubber cleats or paving pads when operating on or crossing said surfaces.
11. Open trench limits: Open trenches will be limited to one block at a time or 660 feet, whichever is less.
12. In the event of a planned road closure, Contractor shall notify the City, Fire Department, emergency services dispatch, US Postal Service, and Davis School District a minimum of 24 hours prior to the closure. In the case of an emergency, the above listed agencies will soon be notified at the soonest possible time.
13. Environmental Controls
    a. Dust and debris: The permittee or contractor shall keep dust and debris controlled at the work site at all times. If necessary, a container shall be provided for debris and dusty areas shall be wet down. The permittee or contractor shall be responsible for the cleanup of mud or debris from public roads deposited by vehicles or construction equipment exiting the work site. The City Engineer reserves the right to shut down the work or issue a citation if dust is not controlled.
    b. Noise: The permittee or contractor shall keep neighborhood free of noise nuisance in accordance with the Noise Ordinance.
14. Cleanup: The permittee or contractor shall remove all equipment, material, barricades, and similar items from the right-of-way. Areas used for storage of excavated material will be smoothed and returned to their original contour. Vacuum sweeping or hand sweeping shall be required when the Building Department determines cleaning equipment is ineffective.
15. Storm Water: All Contractors working within the boundaries of South Weber City shall conform to all requirements and regulations as outlined by the South Weber City Storm

Water Management Plan. Copies of the plan are available in the South Weber City Offices.

**4.02 Pre-Construction Conference**

A. The pre-construction conference shall not be held until the City Engineer has approved and signed the construction plans.

B. A preconstruction conference shall be held before any excavation or other work is begun in the subdivision or Project. The meeting will include:

1. City Engineer
2. Developer or Project Manager
3. Subdivision or Project Engineer
4. All contractors and subcontractors involved with installing the subdivision or project improvements
5. Representatives of affected South Weber City Departments
6. Representatives of local utility companies as may be required by South Weber City.

C. Items pertaining to the construction and inspection of the subdivision or Project improvements will be discussed.

**4.03 Construction**

A. Specifications

1. Contractor shall be responsible for constructing all improvements in accordance with the Technical Specifications, per Section 5 of this document.
2. Deviations from such shall be reviewed and authorized by the City Engineer on a case-by-case basis.

B. Plans and Details

1. Contractor shall be responsible for constructing all improvements in accordance with the Drawings, Plans, and Details, per Section 6 of this document.
2. Deviations from such shall be reviewed and authorized by the City Engineer on a case-by-case basis.
3. In the event that as-built conditions of the improvements are found to be out of compliance with the approved improvement plans and tolerances contained in these Standards, it shall be the contractor's responsibility to remove those improvements and replace them with improvements that comply with the approved improvement plans, and are within the given tolerances. Adjacent improvements may also require replacement in order to bring all improvements into compliance.

C. Sequence/Timing

1. All underground utility work shall be completed prior to placement and compaction of the roadway base course. Utilities, including service lines, not installed prior to roadway construction shall be bored as approved by the Public Works Director.
2. All concrete collars shall be installed within fourteen (14) days of asphalt placement.

D. Inspection

1. All construction work involving the installation of improvements in the subdivision or project shall be subject to inspection by the City. It shall be the responsibility of the person responsible for construction to insure that inspections take place where and when required. Certain types of construction shall have continuous inspection, while others may have only periodic inspections.

E. Requests for Inspections

1. Requests for inspections shall be made to the Public Works Department by the person responsible for the construction.
2. Requests for inspection on work requiring continuous inspection shall be made three (3) working days prior to the commencing of the work.
3. Notice shall also be given one (1) day in advance of the starting of work requiring periodic inspection, unless specific approval is given otherwise by the City Engineer, or his duly authorized representatives.

F. Continuous Inspection

1. May be required on (but not limited to) the following types of work:
   a. Laying of street surfacing
   b. Placing of concrete for curb and gutter, sidewalks, and other structures
   c. Laying of sewer pipe, irrigation pipe, drainage pipe, water mains, water service laterals and testing.
2. On construction requiring continuous inspection, no work shall be done except in the presence or by permission of the City Engineer or authorized city representative.

G. Periodic inspections

1. Shall be required on (but not limited to) the following types of work:
   a. Street grading and gravel base
   b. Excavations for curb and gutter and sidewalks
   c. Excavations for structures
   d. Trenches for laying pipe
   e. Forms for curb and gutter, sidewalks and structures

H. Substantial and Final Completion Inspections

1. A substantial completion inspection shall be requested by the Contractor and made by the City Engineer or authorized representative after all construction work is completed. Any faulty or defective work shall be corrected by the persons responsible for the work within a period of thirty (30) days of the date of the City Engineer's or authorized representative's Punchlist defining the faulty or defective work.

2. A final completion inspection shall be requested by the Contractor and made by the City Engineer or authorized representative after all faulty and defective work has been corrected.

I. Testing

1. Contractor shall be responsible for all testing in accordance with the Technical Specifications per Section 5 of this document.

2. Testing shall be performed by a licensed and qualified testing firm. Contractor shall submit qualifications to City for approval of firm prior to beginning Work.

3. Testing reports shall be submitted to City weekly for review. Areas with failed tests shall be corrected and retested.

4. Failure to submit testing reports to the City shall be cause for work stoppage or rejection by City.

J. Safety

1. Contractor is solely responsible for jobsite safety.

2. Contractor shall comply with all local, state, and federal rules and regulations regarding jobsite safety.

3. City and/or its authorized representatives shall have the authority to shut down a job when unsafe working conditions are found.

# SECTION 5 TECHNICAL SPECIFICATIONS

## 5.01 Technical Specifications for South Weber City

A. Adoption of Divisions 01 through 34 of the Manual of Standard Specifications, as published by Utah LTAP Center, Utah State University, Logan, Utah, current edition, with all published amendments.

B. Modifications and Additions to Manual of Standard Specifications (see Appendix B)

## 5.02 Order of Precedence

A. Approved project-specific specifications (when applicable)

B. Modifications and Additions to Manual of Standard Specifications

C. Manual of Standard Specifications, current edition, with all published amendments

# SECTION 6 STANDARD DRAWINGS, PLANS, AND DETAILS

## 6.01 Standard Drawings, Plans, and Details for South Weber City

A. South Weber City Public Works Standard Drawings, current edition (See Appendix C)

B. Adoption of Manual of Standard Plans, published by Utah LTAP Center, Utah State University, Logan, Utah, current edition, with all published amendments.

## 6.02 Order of Precedence

A. Approved project-specific drawings and details (when applicable)

B. South Weber City Public Works Standard Drawings, current edition

C. Manual of Standard Plans, current edition, with all published amendments, when not covered by one of the aforementioned items

# APPENDIX A – STORM DRAIN AND DRAINAGE DESIGN STANDARDS

# APPENDIX A

# STORM DRAIN AND DRAINAGE DESIGN STANDARDS

## A1. General Provisions

A. Pleasant View faces unique storm water challenges because the City is surrounded on two sides by mountains and has the potential to receive a large amount of runoff in a short time. Pleasant View has tremendous opportunities for growth in residential, commercial, and industrial areas thus increasing the amount of impervious surfaces leading to increased runoff.

B. This document represents the design and construction standards for private and public design and construction as it relates to storm drainage within the City. All efforts have been made for this policy to conform to the requirements of the Clean Water Act, Phase II; and the Storm Water Management Plan of the City.

C. The following information is organized in such a way to follow the natural flow of storm water – from the initial rainfall hydrology (A2), to conveyance of the rain water (A3) to a basin (A4), then discharge to a natural outlet location (A5).

## A2. Rainfall Hydrology

A. All storm drain systems shall be designed to carry the 100-year storm, unless otherwise stated.

B. Storm Specifications

1. Local storm drain piping shall be designed for the 10-year storm, where the road or other above ground conveyance will carry the difference to the 100-year storm.
2. All basins regardless of local or regional, or retention or detention, shall be designed to accommodate a 100-year storm event, including all piping into the basin.
3. The storm duration used for the sizing of basins shall be based upon the worst case scenario and not the time of concentration.
4. Volume in pipes, ditches, or roadside swales shall not be considered in the volume calculation for detention and retention basins.

C. Rainfall Intensity – When using the Rational Method, use the rainfall intensity table included as Exhibit 1 to this document.

D. Calculation Basis – For developments less than 20 acres, the Rational Method may be used. For developments larger than 20 acres, a City Engineer-approved computer model shall be used.

E. Rainfall Pattern and Depth – For the use of computer models, the following rainfall pattern shall be used. This pattern is based on the Farmer-Fletcher Distribution. This pattern is for a

1-inch unit storm and must be multiplied by rainfall depth for storms of other magnitudes, as provided in Exhibit 2.

**Farmer-Fletcher Distribution**
**Unit Storm**

| Time (Min.) | Depth (inches) | Time (Min.) | Depth (inches) | Time (Min.) | Depth (inches) | Time (Min.) | Depth (inches) | Time (Min.) | Depth (inches) | Time (Min.) | Depth (inches) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 11 | 0.004 | 21 | 0.033 | 31 | 0.052 | 41 | 0.012 | 51 | 0.005 |
| 2 | 0 | 12 | 0.005 | 22 | 0.034 | 32 | 0.045 | 42 | 0.011 | 52 | 0.005 |
| 3 | 0.002 | 13 | 0.008 | 23 | 0.035 | 33 | 0.04 | 43 | 0.01 | 53 | 0.004 |
| 4 | 0.002 | 14 | 0.009 | 24 | 0.038 | 34 | 0.035 | 44 | 0.009 | 54 | 0.004 |
| 5 | 0.002 | 15 | 0.009 | 25 | 0.039 | 35 | 0.03 | 45 | 0.009 | 55 | 0.004 |
| 6 | 0.002 | 16 | 0.013 | 26 | 0.045 | 36 | 0.022 | 46 | 0.008 | 56 | 0.003 |
| 7 | 0.002 | 17 | 0.017 | 27 | 0.052 | 37 | 0.02 | 47 | 0.006 | 57 | 0.003 |
| 8 | 0.002 | 18 | 0.02 | 28 | 0.054 | 38 | 0.018 | 48 | 0.006 | 58 | 0.002 |
| 9 | 0.003 | 19 | 0.024 | 29 | 0.054 | 39 | 0.016 | 49 | 0.005 | 59 | 0.002 |
| 10 | 0.003 | 20 | 0.029 | 30 | 0.054 | 40 | 0.014 | 50 | 0.005 | 60 | 0.001 |

## A3. Storm Drain System

A. Independent System

1. Storm waters shall not be conveyed in irrigation ditches.

2. Irrigation waters shall not be conveyed in storm drain systems.

B. Piping – Storm drain lines shall be reinforced concrete pipe (RCP), of appropriate class. Minimum size for storm sewer mains shall be 15-inch diameter. Pipe specifications are included in the Section 5 of the Development, Design, and Construction Standards. Where determined by the City Engineer and/or the Storm Drain Capital Facilities Plan, larger drain lines shall be installed to accommodate future development. The cost to provide adequate storm drainage to a development shall be paid for by the Developer. Upsizing will be coordinated at the time of development. The cost of upsizing will be the responsibility of the City.

C. Access – Storm drain lines shall have cleanout boxes, inlets, or manholes installed at all changes in grade or alignment, with a maximum distance of 400 feet between accesses. Structures shall be installed in accordance with the standard specifications and standard drawings.

D. Sump Drains are not allowed except as approved by the City Engineer on a case-by-case basis. Proper permitting is required.

## A4. Detention and Retention Basins

A. Definitions

1. Detention Basin – An open water storage pond designed to store a volume of water that reduces the post-development peak runoff of a storm to the pre-development runoff rate or other rate as defined by the governing body. This is accomplished by the use of an outlet control which controls the rate of flow out of the pond into the receiving storm drain or water body. The basin is intended to drain the storm water within a period of time to make the volume available for the next storm event.

2. Retention Basin - An open water storage pond designed to store the runoff volume of a storm. The basin is intended to dispose of water through infiltration and evaporation within a period of time to make the volume available for the next storm event.

B. Storm drainage basins are required for all development; however, developments less than one (1) acre are not required to have detention except when determined by the City Engineer.

C. Location – Detention basins shall be located with convenient access for maintenance and repair by maintenance personnel. This generally means that the basin property has frontage along a public roadway.

D. Parking lots – Storage of water shall not be allowed in parking lots.

E. Underground Storage – Underground storage will be considered for private basins only.

F. All detention basin designs and calculations shall be reviewed by the City Engineer for approval.

G. Maintenance and Ownership

1. Private Basins – When approved, private detention basins shall be owned and maintained by the property owner.

2. Local Public Basins – Local detention basins shall be constructed by the developer. Following acceptance of the construction, the ownership, operation, and maintenance shall be conveyed to the City.

3. Regional Detention Basins – Regional basins shall be owned and maintained by the City, constructed according to the criteria herein, and approved of the City Engineer. Actual ownership and responsibility shall be specifically defined in the Owner's Dedication Certificates, Development Agreements, or by Deed.

H. Basin Easement and Access

1. Public Basins – The developer shall provide the City permanent access to any public basin.

2. Private Basin – The City shall be provided an easement for emergency access, operation, and/or repair for a private basin.

3. Access – Each basin shall be constructed with sufficient drivable access, outside of the basin, to any structure from a city street.

I. Detention and Retention Basin Elements

1. Side slopes – Side slopes shall not be steeper than 4:1 (horizontal to vertical).
2. Bottom Slope – The basin floor shall be designed so as to prevent the permanent ponding of water. The slope of the floor of the basin shall not be less than 1% to provide drainage of water to the outlet grate and prevent prolonged wet, soggy, or unstable soil conditions. The preferred minimum slope is 2%.
3. Freeboard – At least one (1) foot of freeboard is required (berm above the high water mark).
4. Spillways
    a. The spillway shall be designed to carry the 200-year storm flow minus the 100-year storm flow which is handled by the outlet control structure.
    b. Spillways shall introduce flows back into the pipe or stream downstream of the outlet control.
    c. Spillways shall include a maintained swale and drainage easement to a safe location.
    d. The spillway shall be designed to prevent erosion.
    e. All spillways shall be designed to protect adjacent embankments, nearby structures, and surrounding properties.
5. Ground Covers – The surface area of the basin shall be sodded. A minimum of 4-inches of top soil must be installed prior to sod placement. The basin shall be provided with an automated sprinkler system approved by the City Engineer.
6. Embankment (Fill) Construction – If a raised embankment is constructed for a basin (constructed with granular materials), it shall be provided with a minimum of 6-inches of clay cover on the inside of the berm to prevent water passage through the soil.
7. Excavation (Cut) Construction – If the basin is constructed primarily by excavation, then it may be necessary to provide an impermeable liner and land drain system when constructed in the proximity of basements or other below grade structures as determined by a geotechnical evaluation.
8. Multi-Use Basins – Basins may be designed as multi-use facilities when appropriate precautions are incorporated into the design. If amenities such as pavilions, playground equipment, volleyball courts, etc. are to be constructed within the water detention area of a basin, they shall be designed appropriately. Structures shall be designed for saturated soil conditions and bearing capacities are to be reduced accordingly. Restrooms shall not be located in areas of inundation. Inlet and outlet structures should

be located as far as possible from all facilities. No wood chips or floatable objects may be used in the area that will be inundated.

J. Detention Basins

1. Percolation – No reduction due to percolation for detention basins volumes shall be permitted.
2. Outlet Control – Private detention basins may have a calculated fixed orifice plate mounted on the outlet of the basin. Public detention basins shall have movable, screw-type head gates set at the calculated opening height with a stop block required to carry the maximum allowable discharge.
3. Low Flow Piping – The inlet and outlet structures may be located in different areas of the basin, requiring a buried pipe to convey any base flows that enter and exit the basin. (Cross gutters and surface flows are prohibited.)

K. Retention Basins

1. Retention basins must be specifically approved by the City Engineer.
2. Retention basins shall not be permitted within zones 1, 2, or 3 of any Drinking Water Source Protection Zone of any drinking water source.
3. An approved oil/sediment separator shall be installed upstream of retention basin.
4. Volume shall be based upon the 100-year, 3 hour storm. See Exhibits 1 and 2 for rainfall data.
5. Retention Basin Criteria – Retention basins may be permitted if the following conditions apply:
   a. The distance between the nearest City storm drain and the boundary of the development is greater than:
      i. 500 feet for subdivisions or 10 lots or less;
      ii. 1,000 feet for subdivisions greater than 10 lots.
   b. The basin is not located within a Hazardous Area (such as a steep slope ) or some other sensitive area (such as a Drinking Water Source Protection Zone).
   c. Recommendation by the City Engineer.
6. Percolation Rate for Retention Basins
   a. A percolation test shall be performed by a licensed tester. The percolation test shall be performed at the elevation of the proposed grade of the bottom of the retention basin.
   b. Due to degradation of soils ability to percolate over time, only 80% of the percolation rate shall be used in the calculations for the retention basins.

7. Retention basins shall be designed to completely drain within 48 hours of the primary storm event.

**A5. Discharge**

A. Allowable Discharge Design

1. Calculations shall be based on the 100-year storm event.
2. Calculations shall be based on the total acreage of the development draining to the basin.
3. Pass-through of offsite drainage through the development will be allowed.
4. Discharge shall not exceed pre-development runoff with pre-development meaning the condition of the land prior to settlement.
5. Alternatively, a standard discharge rater of 0.1 cubic feet per second per total acre may be used.
6. Controlled discharge will be established as described in A4.H.5 of this document.

B. Water Quality

1. Long-term Best Management Practices (BMPs) shall be used to maintain, to the maximum extent practical, the quality of the water to the pre-developed condition.
2. Construction BMPs shall be implemented per the City's Storm Water Management Plan.

C. Discharge to Irrigation Ditches – No discharge shall be permitted to irrigation ditches and canals unless express written permission is obtained from the responsible ditch company or ditch owners.

## EXHIBIT 1 – NOAA POINT PRECIPITATION FREQUENCY ESTIMATES - INTENSITY

**NOAA Atlas 14, Volume 1, Version 5**
**Location name: Ogden, Utah, USA***
**Latitude: 41.1331°, Longitude: -111.9381°**
**Elevation: 4511.67 ft****
* source: ESRI Maps
** source: USGS

**POINT PRECIPITATION FREQUENCY ESTIMATES**

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

## PF tabular

**PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour)[1]**

| Duration | Average recurrence interval (years) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 5 | 10 | 25 | 50 | 100 | 200 | 500 | 1000 |
| 5-min | **1.73** (1.50-2.02) | **2.17** (1.90-2.54) | **2.95** (2.56-3.46) | **3.67** (3.16-4.31) | **4.84** (4.06-5.71) | **5.93** (4.82-7.08) | **7.21** (5.68-8.70) | **8.74** (6.62-10.8) | **11.2** (8.04-14.2) | **13.6** (9.24-17.6) |
| 10-min | **1.31** (1.13-1.54) | **1.65** (1.45-1.94) | **2.25** (1.94-2.63) | **2.80** (2.40-3.28) | **3.68** (3.08-4.35) | **4.51** (3.67-5.38) | **5.48** (4.31-6.62) | **6.65** (5.04-8.19) | **8.54** (6.11-10.8) | **10.3** (7.03-13.4) |
| 15-min | **1.08** (0.936-1.27) | **1.36** (1.19-1.60) | **1.86** (1.61-2.18) | **2.31** (1.98-2.71) | **3.04** (2.55-3.60) | **3.72** (3.03-4.45) | **4.53** (3.56-5.47) | **5.50** (4.16-6.77) | **7.06** (5.05-8.96) | **8.52** (5.81-11.1) |
| 30-min | **0.730** (0.632-0.854) | **0.918** (0.802-1.08) | **1.25** (1.08-1.46) | **1.56** (1.33-1.82) | **2.05** (1.72-2.42) | **2.51** (2.04-3.00) | **3.05** (2.40-3.68) | **3.70** (2.80-4.56) | **4.75** (3.40-6.03) | **5.74** (3.91-7.46) |
| 60-min | **0.452** (0.391-0.529) | **0.568** (0.496-0.668) | **0.773** (0.670-0.906) | **0.962** (0.826-1.13) | **1.27** (1.06-1.50) | **1.55** (1.26-1.85) | **1.89** (1.49-2.28) | **2.29** (1.74-2.82) | **2.94** (2.11-3.73) | **3.55** (2.42-4.62) |
| 2-hr | **0.294** (0.259-0.338) | **0.367** (0.324-0.422) | **0.474** (0.416-0.544) | **0.575** (0.499-0.663) | **0.742** (0.630-0.863) | **0.896** (0.742-1.05) | **1.08** (0.865-1.28) | **1.30** (1.00-1.57) | **1.65** (1.20-2.06) | **1.97** (1.37-2.53) |
| 3-hr | **0.226** (0.203-0.256) | **0.279** (0.250-0.317) | **0.348** (0.310-0.395) | **0.414** (0.365-0.470) | **0.520** (0.450-0.595) | **0.619** (0.524-0.716) | **0.739** (0.610-0.867) | **0.881** (0.705-1.05) | **1.12** (0.848-1.39) | **1.33** (0.971-1.70) |
| 6-hr | **0.152** (0.139-0.168) | **0.186** (0.170-0.206) | **0.224** (0.204-0.248) | **0.259** (0.234-0.288) | **0.312** (0.278-0.348) | **0.356** (0.313-0.400) | **0.409** (0.353-0.466) | **0.469** (0.395-0.542) | **0.586** (0.477-0.702) | **0.692** (0.547-0.861) |
| 12-hr | **0.097** (0.089-0.107) | **0.119** (0.108-0.131) | **0.143** (0.130-0.158) | **0.164** (0.148-0.181) | **0.196** (0.175-0.218) | **0.223** (0.196-0.250) | **0.251** (0.218-0.285) | **0.282** (0.239-0.325) | **0.332** (0.273-0.391) | **0.373** (0.299-0.448) |
| 24-hr | **0.060** (0.056-0.064) | **0.073** (0.068-0.079) | **0.087** (0.081-0.094) | **0.099** (0.092-0.107) | **0.115** (0.106-0.124) | **0.127** (0.118-0.137) | **0.140** (0.129-0.151) | **0.153** (0.140-0.165) | **0.170** (0.155-0.198) | **0.189** (0.165-0.227) |
| 2-day | **0.036** (0.033-0.039) | **0.044** (0.041-0.047) | **0.052** (0.048-0.056) | **0.059** (0.055-0.064) | **0.068** (0.063-0.074) | **0.075** (0.070-0.081) | **0.083** (0.076-0.089) | **0.090** (0.082-0.097) | **0.099** (0.090-0.108) | **0.107** (0.096-0.116) |
| 3-day | **0.026** (0.024-0.028) | **0.032** (0.030-0.035) | **0.038** (0.036-0.041) | **0.044** (0.041-0.047) | **0.051** (0.047-0.054) | **0.056** (0.052-0.060) | **0.062** (0.057-0.067) | **0.067** (0.062-0.073) | **0.075** (0.068-0.081) | **0.081** (0.073-0.088) |
| 4-day | **0.022** (0.020-0.023) | **0.026** (0.025-0.028) | **0.032** (0.029-0.034) | **0.036** (0.033-0.039) | **0.042** (0.039-0.045) | **0.046** (0.043-0.050) | **0.051** (0.047-0.055) | **0.056** (0.051-0.061) | **0.063** (0.057-0.068) | **0.068** (0.061-0.074) |
| 7-day | **0.015** (0.014-0.016) | **0.018** (0.017-0.020) | **0.022** (0.020-0.023) | **0.025** (0.023-0.026) | **0.029** (0.027-0.031) | **0.032** (0.029-0.034) | **0.035** (0.032-0.038) | **0.038** (0.035-0.041) | **0.042** (0.038-0.046) | **0.045** (0.041-0.050) |
| 10-day | **0.012** (0.011-0.013) | **0.015** (0.014-0.016) | **0.017** (0.016-0.019) | **0.020** (0.018-0.021) | **0.022** (0.021-0.024) | **0.025** (0.023-0.026) | **0.027** (0.025-0.029) | **0.029** (0.026-0.031) | **0.031** (0.029-0.034) | **0.033** (0.030-0.036) |
| 20-day | **0.008** (0.007-0.008) | **0.010** (0.009-0.010) | **0.011** (0.011-0.012) | **0.013** (0.012-0.014) | **0.014** (0.014-0.015) | **0.016** (0.015-0.017) | **0.017** (0.016-0.018) | **0.018** (0.017-0.019) | **0.019** (0.018-0.021) | **0.020** (0.019-0.022) |
| 30-day | **0.006** (0.006-0.007) | **0.008** (0.007-0.008) | **0.009** (0.009-0.010) | **0.010** (0.010-0.011) | **0.012** (0.011-0.012) | **0.013** (0.012-0.013) | **0.014** (0.013-0.014) | **0.014** (0.013-0.015) | **0.015** (0.014-0.017) | **0.016** (0.015-0.017) |
| 45-day | **0.005** (0.005-0.006) | **0.007** (0.006-0.007) | **0.008** (0.007-0.008) | **0.009** (0.008-0.009) | **0.010** (0.009-0.010) | **0.011** (0.010-0.011) | **0.011** (0.011-0.012) | **0.012** (0.011-0.013) | **0.013** (0.012-0.014) | **0.014** (0.013-0.015) |
| 60-day | **0.005** (0.004-0.005) | **0.006** (0.005-0.006) | **0.007** (0.006-0.007) | **0.008** (0.007-0.008) | **0.009** (0.008-0.009) | **0.009** (0.009-0.010) | **0.010** (0.009-0.011) | **0.011** (0.010-0.011) | **0.011** (0.010-0.012) | **0.012** (0.011-0.013) |

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.



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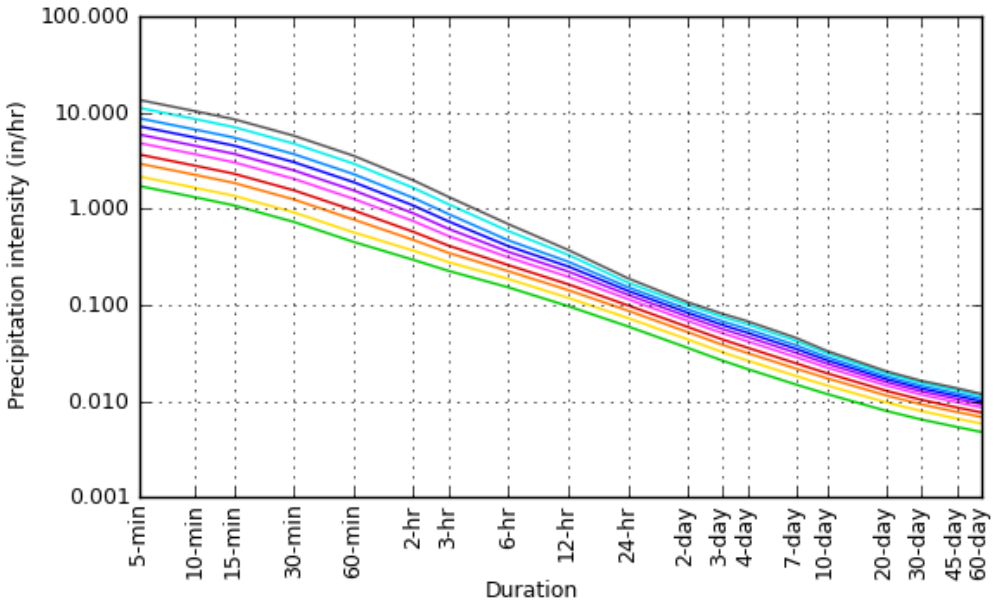
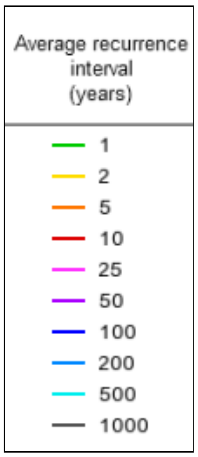
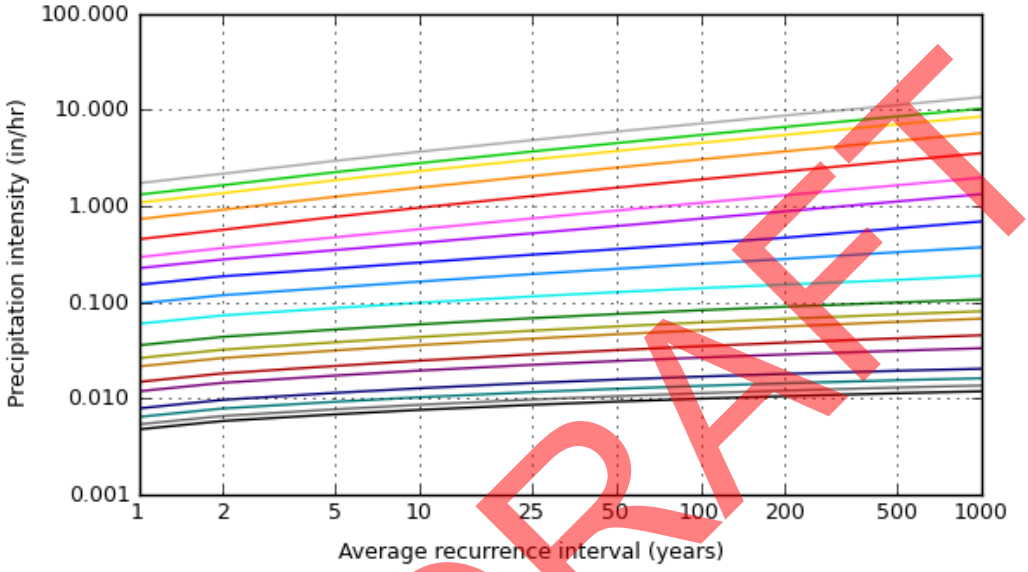
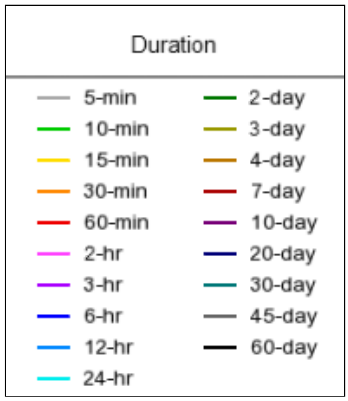
## PF graphical

PDS-based intensity-duration-frequency (IDF) curves
Latitude: 41.1331°, Longitude: -111.9381°






NOAA Atlas 14, Volume 1, Version 5 Created (GMT): Fri Oct 6 21:15:57 2017

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## Maps & aerials

**Small scale terrain**

## EXHIBIT 2 – NOAA POINT PRECIPITATION FREQUENCY ESTIMATES - DEPTH

**NOAA Atlas 14, Volume 1, Version 5**
**Location name: Ogden, Utah, USA***
**Latitude: 41.1331°, Longitude: -111.9381°**
**Elevation: 4511.67 ft****
* source: ESRI Maps
** source: USGS

**POINT PRECIPITATION FREQUENCY ESTIMATES**

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

## PF tabular

**PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]**

| Duration | Average recurrence interval (years) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 5 | 10 | 25 | 50 | 100 | 200 | 500 | 1000 |
| 5-min | 0.144 (0.125-0.168) | 0.181 (0.158-0.212) | 0.246 (0.213-0.288) | 0.306 (0.263-0.359) | 0.403 (0.338-0.476) | 0.494 (0.402-0.590) | 0.601 (0.473-0.725) | 0.728 (0.552-0.897) | 0.935 (0.670-1.19) | 1.13 (0.770-1.47) |
| 10-min | 0.219 (0.189-0.256) | 0.275 (0.241-0.323) | 0.375 (0.324-0.439) | 0.466 (0.400-0.546) | 0.614 (0.514-0.725) | 0.751 (0.611-0.897) | 0.914 (0.719-1.10) | 1.11 (0.840-1.37) | 1.42 (1.02-1.81) | 1.72 (1.17-2.24) |
| 15-min | 0.271 (0.234-0.317) | 0.341 (0.298-0.401) | 0.464 (0.402-0.544) | 0.578 (0.496-0.677) | 0.760 (0.638-0.899) | 0.931 (0.758-1.11) | 1.13 (0.891-1.37) | 1.37 (1.04-1.69) | 1.77 (1.26-2.24) | 2.13 (1.45-2.77) |
| 30-min | 0.365 (0.316-0.427) | 0.459 (0.401-0.540) | 0.625 (0.542-0.732) | 0.778 (0.667-0.912) | 1.02 (0.859-1.21) | 1.25 (1.02-1.50) | 1.53 (1.20-1.84) | 1.85 (1.40-2.28) | 2.38 (1.70-3.02) | 2.87 (1.96-3.73) |
| 60-min | 0.452 (0.391-0.529) | 0.568 (0.496-0.668) | 0.773 (0.670-0.906) | 0.962 (0.826-1.13) | 1.27 (1.06-1.50) | 1.55 (1.26-1.85) | 1.89 (1.49-2.28) | 2.29 (1.74-2.82) | 2.94 (2.11-3.73) | 3.55 (2.42-4.62) |
| 2-hr | 0.588 (0.518-0.675) | 0.734 (0.649-0.845) | 0.947 (0.832-1.09) | 1.15 (0.998-1.33) | 1.49 (1.26-1.73) | 1.79 (1.48-2.10) | 2.16 (1.73-2.57) | 2.59 (2.00-3.15) | 3.29 (2.40-4.12) | 3.94 (2.74-5.06) |
| 3-hr | 0.679 (0.609-0.768) | 0.838 (0.751-0.951) | 1.05 (0.930-1.19) | 1.24 (1.10-1.41) | 1.56 (1.35-1.79) | 1.86 (1.57-2.15) | 2.22 (1.83-2.61) | 2.65 (2.12-3.17) | 3.35 (2.55-4.16) | 3.99 (2.92-5.11) |
| 6-hr | 0.912 (0.835-1.00) | 1.12 (1.02-1.23) | 1.34 (1.22-1.49) | 1.55 (1.40-1.72) | 1.87 (1.66-2.09) | 2.13 (1.87-2.40) | 2.45 (2.11-2.79) | 2.81 (2.36-3.25) | 3.51 (2.86-4.20) | 4.14 (3.28-5.16) |
| 12-hr | 1.17 (1.07-1.29) | 1.43 (1.31-1.57) | 1.72 (1.56-1.90) | 1.98 (1.79-2.18) | 2.36 (2.11-2.63) | 2.68 (2.37-3.01) | 3.03 (2.62-3.44) | 3.40 (2.88-3.91) | 4.00 (3.29-4.71) | 4.49 (3.60-5.40) |
| 24-hr | 1.43 (1.33-1.54) | 1.75 (1.63-1.90) | 2.09 (1.95-2.26) | 2.37 (2.21-2.56) | 2.76 (2.55-2.97) | 3.06 (2.82-3.29) | 3.36 (3.09-3.62) | 3.67 (3.36-3.96) | 4.09 (3.71-4.76) | 4.54 (3.97-5.46) |
| 2-day | 1.72 (1.60-1.85) | 2.10 (1.95-2.27) | 2.50 (2.33-2.70) | 2.83 (2.63-3.05) | 3.28 (3.04-3.53) | 3.62 (3.34-3.91) | 3.97 (3.64-4.29) | 4.32 (3.94-4.67) | 4.78 (4.32-5.19) | 5.12 (4.61-5.59) |
| 3-day | 1.89 (1.76-2.04) | 2.32 (2.16-2.50) | 2.77 (2.58-2.98) | 3.14 (2.92-3.38) | 3.65 (3.38-3.92) | 4.04 (3.73-4.35) | 4.44 (4.08-4.79) | 4.85 (4.43-5.24) | 5.39 (4.88-5.85) | 5.80 (5.22-6.32) |
| 4-day | 2.07 (1.92-2.22) | 2.53 (2.36-2.72) | 3.03 (2.83-3.25) | 3.44 (3.21-3.70) | 4.02 (3.73-4.31) | 4.46 (4.13-4.79) | 4.92 (4.52-5.29) | 5.38 (4.92-5.81) | 6.01 (5.45-6.51) | 6.49 (5.83-7.06) |
| 7-day | 2.50 (2.33-2.68) | 3.06 (2.86-3.29) | 3.66 (3.41-3.92) | 4.15 (3.87-4.45) | 4.82 (4.48-5.17) | 5.34 (4.94-5.73) | 5.87 (5.40-6.30) | 6.39 (5.86-6.90) | 7.10 (6.45-7.71) | 7.64 (6.89-8.34) |
| 10-day | 2.85 (2.66-3.05) | 3.50 (3.26-3.75) | 4.15 (3.88-4.44) | 4.68 (4.37-5.00) | 5.37 (5.00-5.74) | 5.88 (5.46-6.29) | 6.39 (5.91-6.85) | 6.89 (6.35-7.40) | 7.52 (6.89-8.12) | 7.99 (7.28-8.66) |
| 20-day | 3.79 (3.53-4.05) | 4.65 (4.34-4.99) | 5.49 (5.13-5.88) | 6.13 (5.73-6.57) | 6.95 (6.49-7.43) | 7.54 (7.03-8.06) | 8.11 (7.54-8.68) | 8.65 (8.02-9.27) | 9.31 (8.60-10.0) | 9.78 (9.00-10.5) |
| 30-day | 4.63 (4.33-4.95) | 5.68 (5.31-6.07) | 6.66 (6.23-7.12) | 7.42 (6.93-7.92) | 8.39 (7.82-8.96) | 9.08 (8.45-9.70) | 9.75 (9.04-10.4) | 10.4 (9.60-11.1) | 11.1 (10.3-12.0) | 11.7 (10.7-12.6) |
| 45-day | 5.82 (5.43-6.24) | 7.11 (6.63-7.64) | 8.33 (7.78-8.94) | 9.29 (8.66-9.95) | 10.5 (9.79-11.2) | 11.4 (10.6-12.2) | 12.2 (11.4-13.1) | 13.0 (12.1-14.0) | 14.0 (12.9-15.1) | 14.7 (13.5-15.9) |
| 60-day | 6.88 (6.42-7.35) | 8.41 (7.85-9.02) | 9.85 (9.21-10.5) | 11.0 (10.2-11.7) | 12.4 (11.5-13.2) | 13.4 (12.5-14.3) | 14.3 (13.3-15.4) | 15.2 (14.1-16.3) | 16.3 (15.1-17.6) | 17.1 (15.7-18.4) |

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.



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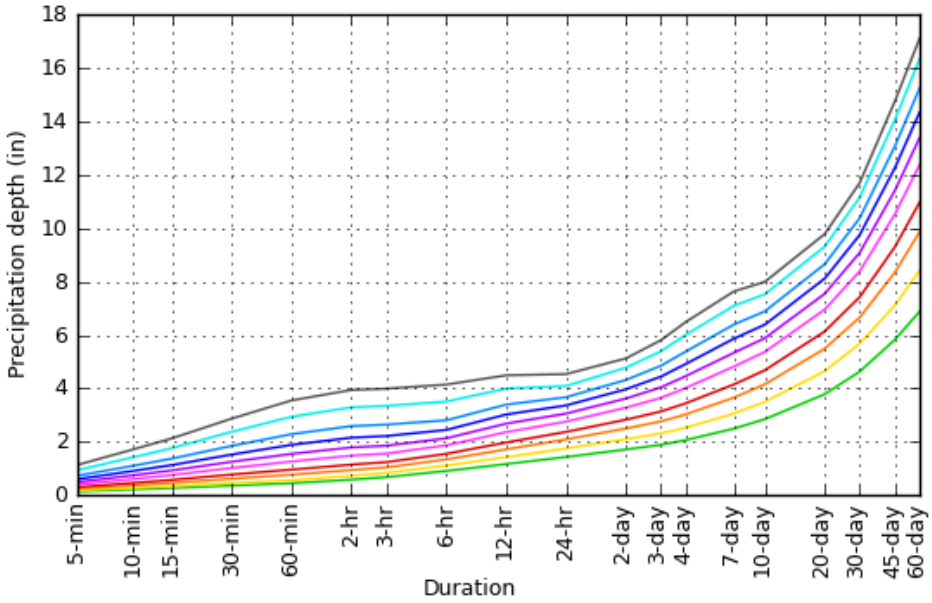
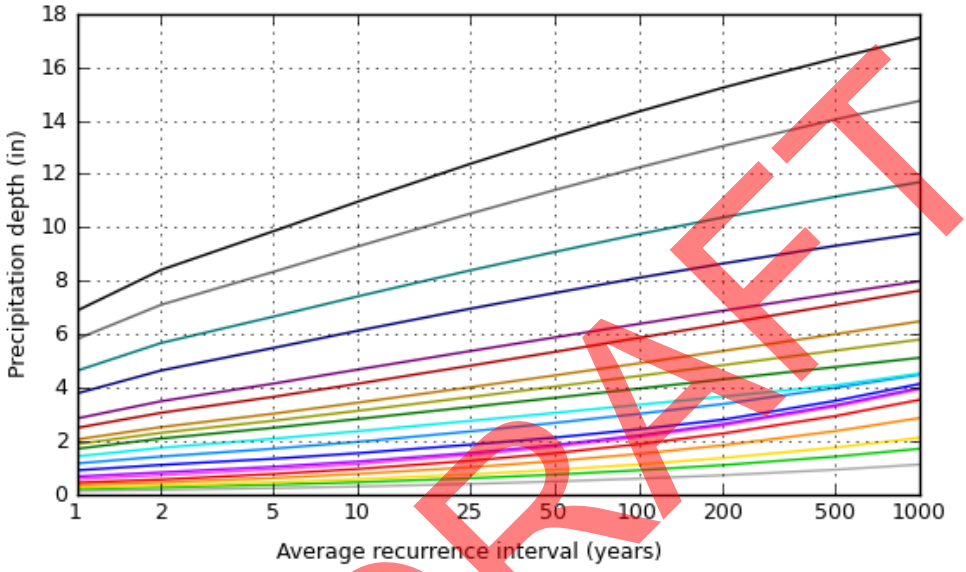
## PF graphical

PDS-based depth-duration-frequency (DDF) curves
Latitude: 41.1331°, Longitude: -111.9381°



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## Maps & aerials

**Small scale terrain**

# APPENDIX B – MODIFICATIONS AND ADDITIONS TO MANUAL OF STANDARD SPECIFICATIONS

Modifications and Additions to the
2017 Manual of Standard Specifications

as published by:
Utah LTAP Center
Utah State University
Logan Utah
2017

**TABLE OF CONTENTS**

**SECTION 03 20 00 M**
**CONCRETE REINFORCING (MODIFIED)**

## PART 3 EXECUTION

### 3.1 PLACING

*Add paragraphs F and G as follows:*

F. No steel shall extend from or be visible on any finished surface

G. All steel shall have a minimum of 1.5-inches of concrete cover.

**SECTION 03 30 04 M**
**CONCRETE (Modified)**

## PART 2 PRODUCTS

### 2.5 MIX DESIGN

*Replace Paragraph A with the following:*

A. **Class:** When not specified in the plans or project specifications, use the following table to select the class of concrete required for the application:

| Class | Application |
|---|---|
| 5,000 | Reinforced Structural Concrete |
| 4,000 | Sidewalks, curb, gutter, cross gutters, waterways, pavements, and unreinforced footings and foundations |
| 3,000 | Thrust blocks |
| 2,000 | Anchors, mass concrete |

**SECTION 03 30 10 M**
**CONCRETE PLACEMENT (Modified)**

## PART 3 EXECUTION

### 3.2 PREPARATION

*Add paragraph F as follows:*

F. No concrete shall be placed until the surfaces have been inspected and approved by the City Engineer or City Inspector.

**SECTION 31 23 16 M**
**EXCAVATION (Modified)**

## PART 3 EXECUTION

### 3.3 GENERAL EXCAVATION REQUIREMENT

*Add paragraph I as follows:*

I. Excavation for pipelines under existing curb and gutter, concrete slabs, or sidewalks shall be open cut. Neither tunneling nor water jetting is allowed. At the option of the City Engineer, jacking or boring under permanent facilities may be allowed based on his/her direction.

*Add Section 31 23 20 Fill*

**SECTION 31 23 20**
**FILL**

## PART 1 GENERAL

### 1.1 SECTION INCLUDES

A. Non-structural fill materials.

B. Non-structural placement and compaction.

### 1.2 REFERENCEs

A. **ASTM Standards**

| | |
|---|---|
| D 698 | Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft$^3$ (600 kN-m/m$^3$)). |
| D 1557 | Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft$^3$ (2,700 kN-m/m$^3$)). |
| D 2922 | Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth). |

### 1.3 SUBMITTALS

A. When requested by ENGINEER, submit laboratory dry density and optimum laboratory moisture content for each type of fill to be used.

### 1.4 QUALITY ASSURANCE

A. Do not change material sources without ENGINEER's knowledge.

B. Reject material that does not comply with the requirements specified in this Section.

### 1.5 STORAGE

A. Safely stockpile materials.

B. Separate differing fill materials, prevent mixing, and maintain optimum moisture content of materials.

### 1.6 SITE CONDITIONS

A. Do not place, spread, or roll any fill material over material that is damaged by water. Remove and replace damaged material at no additional cost to OWNER.

B. Control erosion. Keep area free of trash and debris. Repair settled, eroded, and rutted areas.

C. Reshape and compact damaged structural section to required density.

### 1.7 ACCEPTANCE

A. General: Native material may be wasted if there is no additional cost to substitute material acceptable to ENGINEER.

B. Lift thickness: One test per Lot.

C. Compaction: One test per Lot. Verify density using nuclear tests, ASTM D 2922. Compaction and Lot sizes as follows:

1. Compact to 92% Standard Proctor
2. One Lot = 1500 square feet per lift

1.8 **WARRANTY**

A. Repair settlement damage at no additional cost to OWNER.

## PART 2 PRODUCTS

2.1 **FILL MATERIALS**

A. Material shall be free from sod, grass, trash, rocks larger than four (4) inches in diameter, and all other material unsuitable for construction of compacted fills.

2.2 **WATER**

A. Make arrangements for sources of water during construction and make arrangements for delivery of water to site.

B. Comply with local Laws and Regulations at no additional cost to OWNER when securing water from water utility company.

## PART 3 EXECUTION

3.1 **PREPARATION**

A. Implement the traffic control plan requirements, Section 01 55 26.

B. Verify material meets maximum size requirements.

C. If ground water is in the intended fill zone, dewater.

3.2 **PROTECTION**

A. Protect existing trees, shrubs, lawns, structures, fences, roads, sidewalks, paving, curb and gutter and other features.

B. Protect above or below grade utilities. Contact utility companies to repair utility damage. Pay all cost of repairs.

C. Avoid displacement of and damage to existing installations while compacting or operating equipment.

D. Do not use compaction equipment adjacent to walls or retaining walls that may cause wall to become over-stressed or moved from alignment.

E. Restore any damaged structure to its original strength and condition.

3.3 **LAYOUT**

A. Identify required line, levels, contours, and datum.

B. Stake and flag locations of underground utilities.

C. Upon discovery of unknown utility or concealed conditions, notify ENGINEER.

D. Maintain all benchmarks, control monuments and stakes, whether newly established by surveyor or previously existing. Protect from damage and dislocation.

E. If discrepancy is found between Contract Documents and site, ENGINEER shall make such minor adjustments in the Work as necessary to accomplish the intent of Contract Documents without increasing the Cost of the Work to CONTRACTOR or OWNER.

## 3.4 SUBGRADE

A. Protect Subgrade from desiccation, flooding, and freezing.

B. Before placing fill over Subgrade, get ENGINEER's inspection of subgrade surface preparations.

C. If Subgrade is not readily compactable get ENGINEER’s permission to stabilize the subgrade.

## 3.5 TOLERANCES

A. Compaction: Ninety-two (92) percent minimum relative to a standard proctor density, Section 31 23 26.

B. Lift Thickness (before compaction):

1. Eight (8) inches when using riding compaction equipment.
2. Six (6) inches when using hand held compaction equipment.

## 3.6 CLEANING

A. Remove stockpiles from site. Grade site surface to prevent free standing surface water.

B. Leave borrow areas clean and neat.

END OF SECTION

**SECTION 31 41 00 M**
**SHORING (Modified)**

## PART 1 GENERAL

### 1.2 PRICE – MEASUREMENT AND PAYMENT

A. In Trenching, Shoring:

*Revise subparagraph 1 to read as follows:*

1. A two (2) part Protective System is required if each Side of the Trench is to be shored. The use of a Trench Box shall be classified as one Protective System.

### 1.4 DESIGN OF PROTECTIVE SYSTEMS

*Add paragraphs C and D as follows:*

C. Trenches five (5) feet deep or greater require a protective system unless the excavation is made entirely in stable rock. If less than five (5) feet deep, a competent person may determine that a protective system is not required.

D. Trenches 20 feet deep or greater require that the protective system be designed by a registered professional engineer or be based on tabulated data prepared and/or approved by a registered professional engineer in accordance with 1926.652(b) and (c).

### 1.5 SUBMITTALS

*Revise paragraph A to read as follows:*

A. Submit a Protective System plan:

1. When excavation is over twenty (20) feet deep, or
2. When requested by ENGINEER.

*Add Article 1.6 as follows:*

### 1.6 REFERENCES

A. 29 CFR Part 1910 – Occupational Safety and Health Standards

B. 29 CFR Part 1926 Subpart P – Excavations

## PART 3 EXECUTION

### 3.4 INSPECTIONS

*Add paragraph C as follows:*

C. OWNER and/or ENGINEER may order an immediate work stoppage if working conditions are thought to be unsafe. Work may resume only after proper safety precautions are implemented.

**SECTION 32 01 06 M**
**STREET NAME SIGNS (Modified)**

## PART 1 GENERAL

1.2 **REFERENCES**

*Add paragraph C as follows:*

C. **South Weber City Public Works Standard Drawings**

**SECTION 32 01 13.64 M**
**CHIP SEAL (Modified)**

## PART 1 GENERAL

1.2 **REFERENCES**

A. **ASTM Standards:**

*Add the following to paragraph A:*

C 29 Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate

C 330 Standard Specification for Lightweight Aggregates for Structural Concrete

*Rename Article 1.5 as follows:*

1.5 **WEATHER AND CONDITIONS**

D. Temperature

*Add subparagraph 4 as follows:*

4. Do not place if forecasted temperature is expected to drop below 40 deg F within 72 hours of placement.

B. Moisture and Wind:

*Add subparagraph 1 as follows:*

1. Do not place chip seal coat if surface moisture is present.

## PART 2 PRODUCTS

2.1 **ASPHALT BINDER**

*Revise paragraph B as follows:*

A. Emulsified Asphalt: CRS-2P or LMCRS, Section 32 12 03. Use any of the following additives to match aggregate particle charge, weather conditions, and mix design:

(Subparagraphs 1-5 remain unchanged.)

2.2 **COVER AGGREGATE**

A. Material:

*Revise subparagraph 2 to read as follows:*

2. 100% Crusher processed rotary kiln lightweight expanded shale chips (Utelite or approved equal).

*Replace Table 1 with the following:*

| Table 1 – Physical Properties of Lightweight Aggregate (ASTM C330) | | | |
|---|---|---|---|
| **Property** | **ASTM** | **Min.** | **Max.** |
| Clay Lumps and Friable Particles, percent | C142 | - | 2 |
| Bulk Density Dry Loose Condition, lb/ft$^3$ | C29 | - | 55 |

B. Gradation: Analyzed on a dry weight and percent passing basis.

*Replace Table 2 with the following:*

| Table 2 – Master Grading Band for Lightweight Aggregate | | |
|---|---|---|
| **Sieve** | **ASTM** | **C330 Requirement** |
| 1/2” | C136 | 100 |
| 3/8” | | 80-100 |
| No. 4 | | 5-40 |
| No. 8 | | 0-20 |
| No 16 | | 0-10 |
| No. 200 | | 0-10 |

*Replace Article 2.3 with the following:*

2.3 **FOG SEAL/FLUSH COAT**

A. Material: Use cationic emulsified asphalt grade CSS-1h, Section 32 12 03.

*Add Article 2.4 as follows:*

2.4 **MIX DESIGN**

A. Select Type and grade of emulsified asphalt, ASTM D 3628.

B. Use the following application rates, or submit mix design for approval by Engineer.

1. Emulsion: Use Table 3.

| Table 3 – Emulsion Application Rate | |
|---|---|
| Emulsion | Application Rate (gal/sy) |
| CRS-2P | 0.32 – 0.35 |
| LMCRS-2 | 0.32 – 0.35 |

2. Cover Material: Use Table 4.

| Table 4 – Cover Material Application Rate | |
|---|---|
| Emulsion | Application Rate (lbs/sy) |
| CRS-2P | 10.0 – 12.0 |
| LMCRS-2 | 10.0 – 12.0 |

3. Fog Seal/Flush Coat: Use 0.10 – 0.12 gal/sy at a 2:1 dilution rate.

## PART 3 EXECUTION

### 3.2 PREPARATION

*Add paragraph F as follows:*

F. Cover manholes, valves boxes, storm drain inlets, and other service utility features before placing any chip seal coat.

### 3.4 APPLICATION

*Revise paragraph A to read as follows:*

A. Asphalt Emulsion: Keep viscosity between 50 and 100 centistokes during application, ASTM D 2170. Keep temperature to a minimum of 145 deg F.

*Revise Article 3.6 to read as follows:*

### 3.6 FOG SEAL/FLUSH COAT

A. Apply asphalt seal over the chips within 24 hours of placing chips.

B. Keep viscosity between 50 and 100 centistokes, during application, ASTM D 2170.

**SECTION 32 12 05 M**
**BITUMINOUS CONCRETE (MODIFIED)**

*Revise Section 2.3 as follows:*

2.3 **ADDITIVES**

A. Mineral Filler: None

B. Recycle Agent: None

C. Anti-strip Agent: 1% Lime Slurry, minimum

D. RAP or ROSP (By weight or binder, whichever is lesser): Allowed up to 15%

1. Free of detrimental quantities of deleterious materials
2. No change in specified binder grade

2.4 **MIX DESIGN**

*Replace paragraph A with the following:*

A. Project Specific Requirements:

1. Road Category: Class II
2. Mix Designator (Compaction Effort): 50 $N_d$
3. Binder Grade: PG 58-28
4. Master Grading Band: SP-1/2

**SECTION 32 16 13 M**
**DRIVEWAY, SIDEWALK, CURB, GUTTER (Modified)**

## PART 3 EXECUTION

### 3.4 CONTRACTION JOINTS

D. Curb, Gutter, Waterway:

*Revise subparagraph 1 to read as follows:*

1. Place joints at intervals not exceeding 10 feet.

### 3.5 EXPANSION JOINTS

B. Sidewalks:

*Add subparagraph 5 as follows:*

5. Expansion joints are to be placed at 48-foot intervals (minimum) or wherever new sidewalk adjoins existing sidewalks, driveways, or aprons.

**SECTION 32 31 13 M**
**CHAIN LINK FENCES AND GATES (Modified)**

## PART 2 PRODUCTS

### 2.6 POSTS, CAPS, RAILS, COUPLINGS

A. Posts, Frames, Stiffeners, Rails: ASTM F 1043:

*Revise applicable rows of Table 1 to read as follows:*

| | |
|---|---|
| Top Rail | 1-5/8” pipe |

## PART 3 EXECUTION

### 3.6 INSTALLATION OF FENCE FABRIC

*Revise paragraph A to read as follows:*

A. Place fence fabric on roadway side of posts unless otherwise specified. Place fabric approximately 1 inch above the grounds. Maintain a straight grade between posts by excavating ground high points and filling depressions with soil.

**SECTION 32 31 16 M**
**WELDED WIRE FENCES AND GATES (Modified)**

## PART 1 GENERAL

1.2 **REFERNCES**

*Add paragraph D as follows:*

D. UDOT Standard Drawing

FG 2A Right of Way Fence and Gates (Metal Post)

FG 2B Right of Way Fence and Gates (Metal Post)

## PART 3 EXECUTION

3.2 **INSTALLATION**

*Add paragraph N as follows:*

N. Install per UDOT Standard Drawings FG 2A and FG 2B.

*Add Section 32 31 23 Poly(Vinyl Chloride)(PVC) Fences and Gates*

**SECTION 32 31 23**
**POLY(VINYL CHLORIDE)(PVC) FENCES AND GATES**

## PART 1 GENERAL

### 1.1 SECTION INCLUDES

A. PVC fencing, posts, gates, and appurtenances.

### 1.2 REFERNCES

A. **ASTM Standards:**

| | |
|---|---|
| D 1784 | Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds |
| F 626 | Fence Fittings |
| F 964 | Rigid Poly(Vinyl Chloride)(PVC) Exterior Profiles Used for Fencing and Railing |
| F 1999 | Installation of Rigid Poly(Vinyl Chloride)(PVC) Fence Systems |

### 1.3 SUBMITTALS

A. Drawings: Indicate plan layout, grid, size and spacing of components, accessories, fittings, anchorage, and post section.

B. Data: Submit manufacturer's installation instructions and procedures, including details of fence and gate installation.

C. Submit sample of fence fabric and typical accessories.

## PART 2 PRODUCTS

### 2.1 GENERAL

A. Products from other qualified manufacturers having a minimum of 5 years' experience manufacturing PVC fencing will be acceptable by the architect as equal, if approved in writing, ten days prior to bidding, and if they meet the following specifications for design, size, and fabrication. PVC Profiles, lineals, and extrusions used as components must "meet or exceed" the minimum performance guidelines laid out in ASTM 964.

### 2.2 PVC FENCE

A. Pickets, rails, and posts fabricated from PVC extrusion. The PVC extrusions shall comply with ASTM D 1784, Class 14344B and have the following characteristics:

| | |
|---|---|
| Specific Gravity (+/- 0.02) | 1.4 |
| Using 0.125 specimen Izod impact ft. lbs./in. notch | 23.0 |
| Tensile strength, PSI | 6,910 |
| Tensile modulus, PSI | 336,000 |
| Flexural yield strength, PSI | 10,104 |
| Flexural modulus, PSI | 385,000 |
| DTUL at 264 PSI | 67˚C |

B. All fence parts made from PVC shall have a minimum thickness of 0.17 in except where specified otherwise.

2.3 **POST CAPS**

A. Molded, one piece.

B. Cross Section: Match post or gate upright cross section.

C. Thickness: 0.095" minimum.

D. Configuration: Flat or four-sided as required for installation to top of posts and gate.

2.4 **ACCESSORIES**

A. Standard gate brace, screw caps, rail end reinforcers, and other accessories as required.

2.5 **MISCELLANEOUS MATERIALS**

A. Stiffener Chemicals: Galvanized steel structural channel. Configure channels for concealed installation within PVC rails with pre-drilled holes for drainage. Aluminum extruded channel available upon request.

1. Cross Section: 3.00" x 3.00" x 1.500" hourglass shape to grip picket.
2. Thickness: 0.040 Gauge (minimum)

B. Fasteners and Anchorage: Stainless Steel. All fasteners to be concealed or colored heads to match. Provide sizes as recommended by fence manufacturer.

C. PVC Cement: As recommended by fence manufacturer.

2.6 **GATE HARDWARE AND ACCESSORIES**

A. General: Provide hardware and accessories for each gate according to the following requirements.

B. Hinges: Size and material to suit gate size, non-lift-off type, self-closing, glass filled nylon with stainless steel adjuster plate, offset to permit 120 degree gate opening. Provide one pair of hinges for each gate.

1. Stainless Steel, painted with carbo zinc base.
2. Finish: Pre-painted, 2 coats "Polane."
3. Color: Black Gravity Latch or dual access gravity latch.

C. Latch: Manufacturers' standard self-latching, thumb latch, pre-finished steel, or stainless steel gravity latch. Provide one latch per gate.

1. Finish: Match gate hinge finish.

D. Hardware: Stainless Steel. Provide sizes as recommended by fence manufacturer.

1. Finish: Match gate hinge finish.

2.7 **CONCRETE**

A. Use Class 3000 concrete. Section 03 30 04.

2.8 **REINFORCING FOR FILLED POSTS**

A. Steel Reinforcing:

1. Steel Reinforcing Bars: ASTM A 615. Grade 60. Deformed (#4 or ½").
2. Install 2 bars for each corner or gate post as specified in the drawings.

## PART 3 EXECUTION

3.1 **PREPARATION**

A. Locate and preserve utilities, Section 31 23 16.

B. Excavation, Section 31 23 16.

C. Review to ASTM F 567 and CLFMI products manual for chain link fence installation.

D. Protect roots and branches of trees and plants to remain.

E. Limit amount of clearing and grading along fence line to permit proper installation.

3.2 **LAYOUT OF WORK**

A. Accurately locate and stake locations and points necessary for installation of fence and gates.

B. General arrangements and location of fence and gates are indicated. Install except for minor changes required by unforeseen conflicts with work of other trades.

3.3 **INSTALLATION – GENERAL**

A. Install fence in compliance with manufacturer's written instructions.

B. PVC components shall be carefully handled and stored to avoid contact with abrasive surfaces.

C. Install components in sequence as recommended by fence manufacturer.

D. Install fencing as indicated on the drawings provided.

E. Variations from the installation indicated must be approved.

F. Variations from the fence and gate installation indicated and all costs for removal and replacement will be the responsibility of the CONTRACTOR.

3.4 **INSTALLATION OF POSTS**

A. Excavation

1. Drill or hand-excavate (using post hole digger) holes for posts to diameters and spacings indicated, in firm, undisturbed or compacted soil.

2. If not indicated on drawings, excavate holes for each post to a minimum diameter of 12 inches.
3. Unless otherwise indicated, excavate hole depths not less than 30 inches or to frost line.

B. Posts

1. Install posts in one piece, plumb and in line. Space as noted in the drawings. Enlarge excavation as required to provide clearance indicated between post and side of excavation.
2. Protect portion of posts above ground from concrete splatter. Place concrete around posts and vibrate or tamp for consolidation. Check each post for vertical and top alignment and hold in position during placement and finishing operations.
   a. Unless otherwise indicated, terminate top of concrete footings 3 inches below adjacent grade and trowel to a crown to shed water.
   b. Secure posts in position for manufacturer's recommendations until concrete sets.
   c. After installation of rails and unless otherwise indicated, install reinforcing in posts in opposing corners of post as shown and fill end and gate posts with concrete to level as indicated. Concrete fill shall completely cover the reinforcing steel and gate hardware fasteners. Consolidate the concrete by striking the post face with a rubber mallet, carefully tamping around the exposed post bottom.
   d. Install post caps. Use #8 screws, nylon washers and snap caps.
   e. Remove concrete splatters from PVC fence materials with care to avoid scratching.

## 3.5 INSTALLATION OF RAILS

A. Top and Bottom Rails

1. Install rails in one piece into routed hole fabricated into posts to receive top and bottom rails, and middle where necessary. Except at sloping terrain, install rails level.
   a. Prior to installation of rails into posts, insert concealed steel channel stiffeners in top rail, where necessary. Bottom rails shall include minimum 2-¼" drainage holes.
   b. At posts to receive concrete fill, tape rail ends to prevent seepage when filling post with concrete.

B. Middle Rails:

1. Where necessary, install middle rails in one piece into routed hole in posts with larger holes facing down. Except at sloping terrain, install middle rails level. Secure mid rail to pickets with 2-#8 x 1-1/2" screws evenly spaced.
   a. At posts to receive concrete fill, tape rail ends to prevent seepage when filling post with concrete.

## 3.6 INSTALLATION OF FENCE FABRIC/PICKETS

A. Pickets: Install pickets in one piece as per manufacturer recommendations. Install pickets plumb.

## 3.7 INSTALLATION ON SLOPING TERRAIN

A. At sloping terrain rails may be racked (sloped) or stepped to comply with manufacturer's recommendations.

## 3.8 INSTALLATION OF GATES

A. Prior to installation of rails into posts, apply PVC cement into sockets per manufacturer's recommendations. Bottom rail shall include minimum 2-¼" drainage holes.

B. Assemble gate prior to fence installation to accurately locate hinge and latch post. Align gate horizontal rails with fence horizontal rails.

C. Install gates plumb, level, and secure for full opening without interference according to manufacturer's instructions.

D. Gate Latch Installation. Install gate latch according to manufacturer's instructions.

E. Allow minimum 72 hours to let concrete set-up before opening gates.

END OF SECTION

**SECTION 32 92 00 M**
**TURF AND GRASS (Modified)**

## PART 1 GENERAL

### 1.3 SUBMITTALS

*Add paragraph C as follows:*

C. Submit seed mix.

## PART 2 PRODUCTS

### 2.1 SEED

*Add paragraph D as follows:*

D. Seed Mix:

| SEED # | BOTANICAL NAME | COMMON NAME | % by Weight |
|---|---|---|---|
| 1 | Agropyron cristatum 'Fairway' | Fairway Crested Wheatgrass | 15% |
| 2 | Agropyron riparium 'Sodar' | Streambank Wheatgrass | 20% |
| 3 | Bromus inermis 'Manchar' | Smooth Brome | 32% |
| 4 | Fescue rubra 'Fortress' | Red Fescue | 25% |
| 5 | Poa compressa 'Reuben's' | Reuben's Canadian Bluegrass | 6% |
| 6 | Trifolium repens | White Dutch Cover | 2% |

## PART 3 EXECUTION

### 3.4 SEEDING

*Revise paragraph A to read as follows:*

A. Apply seed at a rate of eight (8) pounds per 1,000 square feet evenly in two (2) intersecting directions. Rake in lightly.

**SECTION 33 05 25 M**
**PAVEMENT RESTORATION (Modified)**

## PART 1 GENERAL

### 1.2 REFERENCES

*Replace paragraph A to read as follows:*

A. **South Weber City Public Works Standard Drawings**

## PART 2 PRODUCTS

### 2.2 ASPHALT PAVEMENT

*Revise paragraph A to read as follows:*

A. Permanent Warm Weather Asphalt Concrete: Section 32 12 05 M unless indicated otherwise.

*Revise paragraph C to read as follows:*

C. Pavement Sealing:

1. Crack Seal: Section 32 01 17
2. Chip Seal: Section 32 01 13.64 and 32 01 13.64 M.
3. Fog Seal: Section 32 01 13.50.

## PART 3 EXECUTION

### 3.5 ASPHALT PAVEMENT RESTORATION

*Revise paragraphs A and B to read as follows:*

A. Follow South Weber City Public Works Standard Drawings.

B. Match existing pavement thickness or 4-inches minimum, whichever is greater.

**SECTION 33 08 00 M**
**COMMISSIONING OF WATER UTILITIES (Modified)**

**PART 3 EXECUTION**

3.5 **INFILTRATION TEST**

*Revise paragraph A to read as follows:*

A. General: 150 gallons per inch diameter per mile per day. If the ground water table is less than two (2) feet above the crown of the pipe, the infiltration test is not required.

*Revise Article 3.6 in its entirety to read as follows:*

3.6 **EXFILTRATION TEST**

A. Non-Pressurized System:

1. General: Air test or hydrostatic test is CONTRACTOR's choice.
2. Air Test:
   a. Plastic Pipe: ASTM F 1417.
      (i) For pipe up to 30 inches diameter, pressure drop is 0.5 psi.
      (ii) For pipe larger than 30 inches diameter, isolated joint test is 3.5 psi maximum pressure drop is 1.0 psi in 5 seconds.
   b. Concrete Pipe:
      (i) ASTM C 1214 for concrete pipe 4" to 24" diameter.
      (ii) ASTM C 1103 for concrete pipe 27" and larger.
3. Hydrostatic Test: Provide air release taps at pipeline's highest elevations and expel all air before the test. Insert permanent plugs after test has been completed.
   a. Plastic Pipe: ASTM F 2497.
   b. Concrete Pipe: ASTM C 497. Abide by Section 3 and Section 16 in the ASTM standard and applicable recommendations of manufacturer.

B. Pressurized System:

1. Pressure Test: All newly laid pipe segments and their valves, unless otherwise specified, shall be subjected to a hydrostatic pressure test of 225 psi or 50 psi above working pressure, whichever is higher. The hydrostatic pressure test shall be conducted after the pipe segments have been partially backfilled.
2. Duration of Pressure Test: The duration of each hydrostatic pressure test shall be at least two (2) hours.
3. Test Procedure: Each pipe segment shall be slowly filled with water and the specified test pressure, measured at the point of lowest elevation, shall be applied by means of a pump connected to the pipe in a satisfactory manner. Testing against closed valves will be allowed. The pump, pipe connection, and all necessary apparatus including gauges

and meters shall be furnished by the CONTRACTOR. CONTRACTOR shall provide all labor and equipment necessary to perform the test.

4. Expelling Air Before Test: Before applying the specified test pressure, all air shall be expelled from the pipe. To accomplish this, air release mechanisms shall be installed, if necessary, at points of highest elevation, and afterwards tightly capped.

5. Examination Under Pressure: All pipes, fittings, valves, hydrants, joints, and other hardware will be subject to examination under pressure during the hydrostatic test. Any defective pipes, fittings, hydrants, valves, or other hardware discovered in consequence of this pressure test shall be removed and replaced by the CONTRACTOR with sound material, at no expense to the OWNER, and the test shall be repeated until the ENGINEER is satisfied.

6. No piping installation will be acceptable until the leakage is less than the amount allowed by industry standards for the type of pipe material being tested. Or, if no standard prevails, than the number of gallons per hour is determined by the formula:

$$Q = \frac{LD\sqrt{P}}{148{,}000}$$

Where: Q = allowable leakage, gallons per hour

L = length of pipe under test, feet

D = diameter of pipe, inches

P = average test pressure, psig

**SECTION 33 11 00 M**
**WATER DISTRIBUTION AND TRANSMISSION (Modified)**

## PART 1 GENERAL

### 1.2 REFERENCES

*Revise paragraph B to read as follows:*

B. **South Weber City Public Works Standard Drawings**

*Add to paragraph C. AWWA Standards:*

| | |
|---|---|
| C105 | Polyethylene Encasement for Ductile Iron Pipe Systems |
| C110 | Ductile-Iron and Gray-Iron Fittings |
| C111 | Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings |
| C223 | Fabricated Steel and Stainless Steel Tapping Sleeves |
| M14 | AWWA Recommended Practice for Backflow Prevention and Cross-Connection Control |

*Add paragraph F as follows:*

F. ANSI/NSF Standards:

| | |
|---|---|
| 61 | Drinking Water System Components |

### 1.3 PERFORMANCE REQUIREMENTS

*Replace paragraph A with the following:*

A. Depth of Cover:

1. Minimum as indicated on the drawings. If minimum cannot be achieved, contact ENGINEER.
2. Maximum of 72 inches unless indicated on the plans or approved by ENGINEER.

### 1.5 SITE CONDITIONS

*Revise paragraph D to read as follows:*

D. Do not operate any water valve until its owner and water company's permission is secured.

## PART 2 PRODUCTS

### 2.1 PIPES AND FITTINGS

*Revise paragraph A to read as follows:*

A. Provide piping materials and factory fabricated piping products of sizes, types, pressure ratings, and capacities indicated. Use only NSF 61 approved products in drinking water systems. All such products shall be appropriately stamped with the NSF logo.

*Add paragraphs E and F as follows:*

E. Mechanical Joint Fittings: Ductile iron, Class 250

F. Flanged Fittings: Ductile iron, Class 250

### 2.3 VALVE BOX

*Revise paragraph A to read as follows:*

A. Buried Valves in Traffic Areas: Cast iron two (2) piece slip sleeve type, 5-1/4 inch shaft, with a drop lid, rated for HL-93 loading.

*Revise paragraph C to read as follows:*

C. Markings: Potable water main line valves box covers shall contain the wording “SOUTH WEBER WATER.”

*Add Articles 2.9 and 2.10 as follows:*

### 2.9 TAPPING SLEEVE AND VALVE

A. AWWA C223.

B. Sleeve shall be full circumferential seat with all stainless steel tapping sleeve.

C. Flanged outlet with flanged by MJ valve.

### 2.10 FIRE SPRINKLER/SUPRESSION LINES

A. Lines:

1. Ductile iron, Class 51, or as approved in writing by OWNER or ENGINEER.
2. Meet all specifications for main lines.

B. Valve:

1. All fire lines shall be equipped with an isolation gate valve located at the main line.

## PART 3 EXECUTION

### 3.4 INSTALLATION – PIPE AND FITTING

A. General:

*Add subparagraphs 3 through 7 as follows:*

3. Encase all buried ductile iron valves, fitting, connections, and specialties in minimum 8 mil. polyethylene sheets in accordance with AWWA C105.
4. Waterline shall be laid and maintained to lines and grades established by the drawings, with fittings and valves at the required locations. Deviations as approved in writing by OWNER or ENGINEER.
5. Lay water lines on a continuous grade to avoid high points except as shown on the plans.
6. Cut edges and rough ends shall be ground smooth. Bevel end for push-on connections.
7. Do not drop pipe or fittings into trench.

*Add paragraph I as follows:*

I. Tie-Ins:

1. All tie-ins shall be made dry and not on a day proceeding a weekend or holiday.
2. OWNER requires 48-hours' notice for water turn-off.
3. At least 24-hours prior to a service disruption, CONTRACTOR shall notify all affected water users.
4. Where shutting down a line is not feasible as determine by OWNER or ENGINEER, CONTRACTOR shall make a wet tap using a tapping sleeve and valve.

### 3.5 INSTALLATION – CONCRETE THRUST BLOCK

*Revise paragraph A to read as follows:*

A. South Weber City Public Works Standard Drawings.

### 3.8 INSTALLATION – TAPS

*Revise paragraph A to read as follows:*

A. South Weber City Public Works Standard Drawings.

### 3.9 INSTALLATION – SERVICE LINE

*Revise paragraph C to read as follows:*

C. Meter Box: South Weber City Public Works Standard Drawings.

*Add paragraph D as follows:*

D. New Water Service Line

1. 1" Service

a. All laterals must be of one continuous copper tube between the corp stop and the meter box. No joints or copper to copper connectors are allowed.

2. 1.5" and 2" Services

a. All solder joints shall be 95-5 solder or better, or Mueller compression fittings.

## 3.10 INSTALLATION – WATERMAIN LOOP (SYPHON)

*Revise paragraph A to read as follows:*

A. South Weber City Public Works Standard Drawings.

## 3.12 BACKFILLING

B. Trenches: Section 33 05 20:

*Revise subparagraphs 1 and 2 to read as follows:*

1. Pipe zone backfill, South Weber City Public Works Standard Drawings.
2. Trench backfill, South Weber City Public Works Standard Drawings.

## 3.13 SURFACING RESTORATION

A. Roadway Trenches and Patches: Section 33 05 25:

*Revise subparagraphs 1 and 2 to read as follows:*

1. Asphalt concrete patch, South Weber City Public Works Standard Drawings.
2. Concrete pavement patch, contact OWNER for instructions.

*Add new Article 3.14 as follows:*

## 3.14 FIRE SPRINKLER/SUPPRESSION LINES

A. Notify OWNER 48 hours prior to installation.

B. Unless written authorization is given by OWNER, no services shall be connected to the fire sprinkler/suppression lines.

C. Location: As approved by OWNER.

**SECTION 33 12 16 M**
**WATER VALVES (Modified)**

## PART 1 GENERAL

### 1.2 REFERENCES

*Modify the fourth (4th) item in paragraph A to read as follows:*

C509 Resilient-Seated Gate Valves for Water Supply Service

*Add paragraph B as follows:*

B. **South Weber City Public Works Standard Drawings**

## PART 2 PRODUCTS

### 2.1 VALVES – GENERAL

A. Underground:

*Add subparagraph 3 as follows:*

3. Valves over five (5) feet in depth shall have a valve nut extension stem.

### 2.2 GATE VALVES

*Add paragraph D as follows:*

D. Model: Mueller A-2361

*Add Article 2.10 as follows:*

### 2.10 AIR/VACUUM RELIEF VALVES

A. Operation: Relieve air build-up and/or allow intrusion of air to prevent vacuum conditions within pipe.

B. Location: Valve and vent placement location as approved by OWNER or ENGINEER.

C. Connection: Service saddle.

## PART 3 EXECUTION

### 3.1 INSTALLATION

*Add paragraphs D, E, and F as follows:*

D. Prior to installation, inspect valves for direction of opening, freedom of operation, tightness of pressure-containing bolting, and cleanliness of valve ports and seating surfaces.

E. Examine all valves for damage or defects immediately prior to installation.

F. Mark and hold defective materials for inspection by OWNER or ENGINEER. Replace rejected materials.

**SECTION 33 12 19 M**
**HYDRANTS (Modified)**

## PART 1 GENERAL

### 1.2 REFERENCES

*Revise paragraph A to read as follows:*

A. **South Weber City Public Works Standard Drawings**

## PART 2 PRODUCTS

### 2.1 DRY-BARREL FIRE HYDRANT

*Add paragraph C as follows:*

C. Model: Mueller Super Centurion.

### 2.2 VALVES

*Revise paragraph A to read as follows:*

C. Gate Valve: Section 33 12 16.

### 2.3 ACCESSORIES

*Revise paragraph D to read as follows:*

D. Valve Box, Valve Chamber: Section 33 11 00.

## PART 3 EXECUTION

### 3.2 INSTALLATION

*Revise paragraph A to read as follows:*

C. Install hydrant according to South Weber City Public Works Standard Drawings and AWWA M17.

*Revise paragraph H to read as follows:*

H. Install thrust block according to South Weber City Public Works Standard Drawings.

**SECTION 33 12 33 M**
**WATER METER (Modified)**

## PART 1 GENERAL

### 1.2 REFERENCES

*Add paragraph B as follows:*

E. **South Weber City Public Works Standard Drawings.**

## PART 2 PRODUCTS

### 2.2 METERS FOR SERVICE PIPING

*Revise paragraph A to read as follows:*

F. OWNER shall supply and set all 1" meters. All other meters supplied and set by CONTRACTOR.

### 2.3 SERVICE LINE, VALVES, AND FITTINGS

*Revise paragraph A to read as follows:*

A. Service Pipe: Type K Copper, Section 33 05 03, with compression copper fittings made of brass.

*Revise paragraph B to read as follows:*

B. Service Valves and Fittings:

1. AWWA C800.
2. 1-Inch Service Laterals – Brass corporation stops with CC thread.
3. 1.5-Inch and 2-Inch Service Laterals – Copper or brass screw-type fittings (ball valves, strainers, nipples, tees, bends, etc.).
4. 3-Inch and 4-Inch Service Laterals
   a. Ductile iron pipe.
   b. Cast iron, flanged valves and fittings.
5. Greater than 4-Inch – Coordinate with and obtain approval from OWNER and ENGINEER.

*Replace Article 2.4 with the following:*

### 2.4 METER BOXES

A. See South Weber City Public Works Standard Drawings.

## PART 3 EXECUTION

### 3.1 INSTALLATION

*Revise paragraph D to read as follows:*

D. OWNER Supplied Meters: Installed by OWNER unless indicated otherwise.

*Add paragraphs E and F as follows:*

E. Install one solid piece of copper pipe from main to meter.

F. Install service laterals with 48-inches of cover, minimum.

**SECTION 33 13 00 M**
**DISINFECTION (Modified)**

## PART 1 GENERAL

### 1.2 REFERENCES

*Modify paragraph B to read as follows:*

B. Utah Administrative Code

R309 Drinking Water

*Add paragraph C as follows:*

C. NSF/ANSI Standards:

60 Drinking Water Treatment Chemicals – Health Effects

### 1.4 SUBMITTALS

*Delete paragraphs B, C, and D in their entirety.*

*Add Article 1.8 as follows:*

### 1.8 WORK PERFORMED BY OWNER

A. OWNER will perform bacteriological and high chlorine sampling and testing. CONTRACTOR shall provide all other work associated with this Section.

## PART 2 PRODUCTS

### 2.1 DISINFECTANT

*Add paragraph E as follows:*

E. All products shall comply with NSF/ANSI 60.

## PART 3 EXECUTION

### 3.1 PREPARATION

*Add paragraphs C and D as follows:*

C. Notify OWNER at least 72 hours prior to any flushing or disinfecting.

D. Install temporary connections for flushing water lines after disinfection. After the satisfactory completion of the flushing work, remove and plug the temporary connection.

3.2 **DISINFECTION OF WATER LINES**

*Revise paragraph D to read as follows:*

D. Coordinate with OWNER to collect a bacteriological water sample at end of line to be tested. If sample fails bacteriological test, flush system and retest. Continue flushing and retesting until sample passes test.

*Revise paragraph G to read as follows:*

G. After a passing bacteriological test sample is obtained, let the system relax for 24 hours. Flush and coordinate with OWNER to collect a subsequent bacteriological sample for testing. If the subsequent test passes, then water line is acceptable.

3.5 **FIELD QUALITY CONTROL**

A. Bacteriological Test:

*Revise subparagraphs 1 and 2 to read as follows:*

1. Coordinate with OWNER to collect samples for testing no sooner than 16 hours after system flushing.
2. OWNER will have water samples analyzed per State of Utah requirements.

*Add Article 3.6 as follows:*

3.6 **SPECIAL PROCEDURE FOR TAPPING SLEEVES**

A. Before a tapping sleeve is installed, the exterior of the main to be tapped shall be thoroughly cleaned, and the interior surface of the sleeve shall be lightly dusted with calcium hypochlorite powder.

# APPENDIX C - SOUTH WEBER CITY PUBLIC WORKS STANDARD DRAWINGS

# SOUTH WEBER CITY CORPORATION

# PUBLIC WORKS STANDARD DRAWINGS

SUBMITTED & RECOMMENDED

BRANDON K. JONES P.E.
SOUTH WEBER CITY ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER
BRANDON KENT JONES
No. 5148758
State of Utah

APPROVAL

JOLENE C. SJOBLOM
SOUTH WEBER CITY MAYOR — DATE

DAVID J. LARSON
SOUTH WEBER CITY MANAGER — DATE

MARK B. LARSEN
SOUTH WEBER CITY PUBLIC WORKS DIRECTOR — DATE

MARK McRAE
ATTEST, SOUTH WEBER CITY RECORDER — DATE

JONES & ASSOCIATES
CONSULTING ENGINEERS

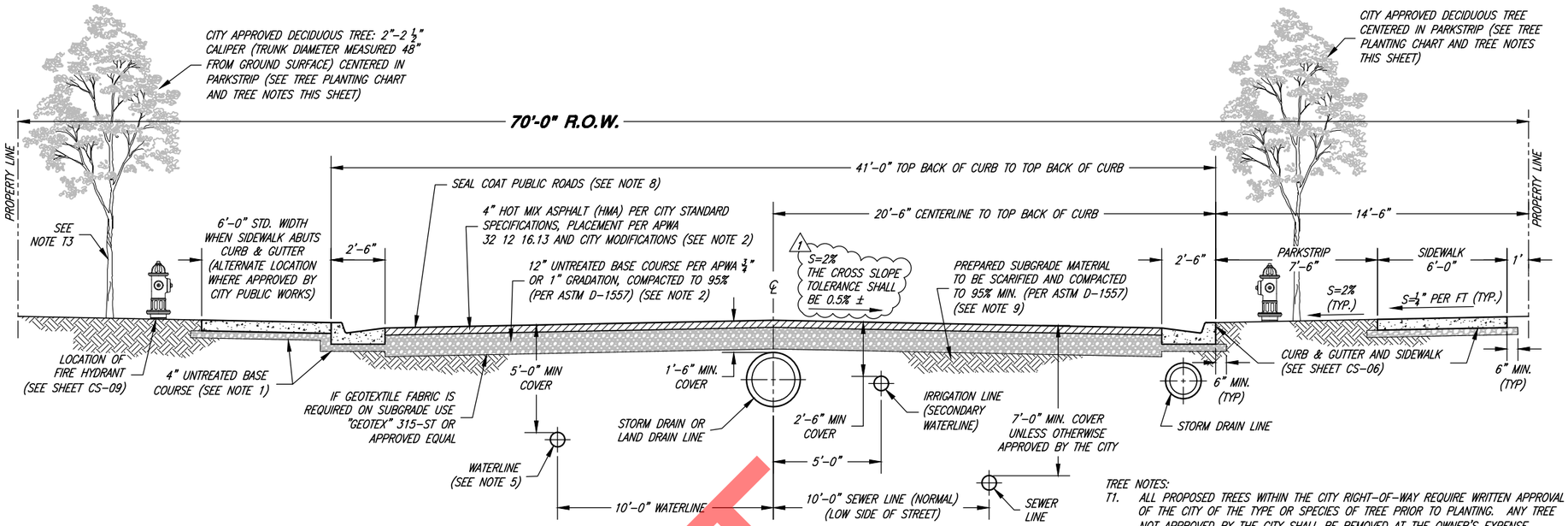


⚠ REVISION 1 - FEBRUARY 12, 2019
ORIGINAL - ADOPTED OCTOBER 24 2017

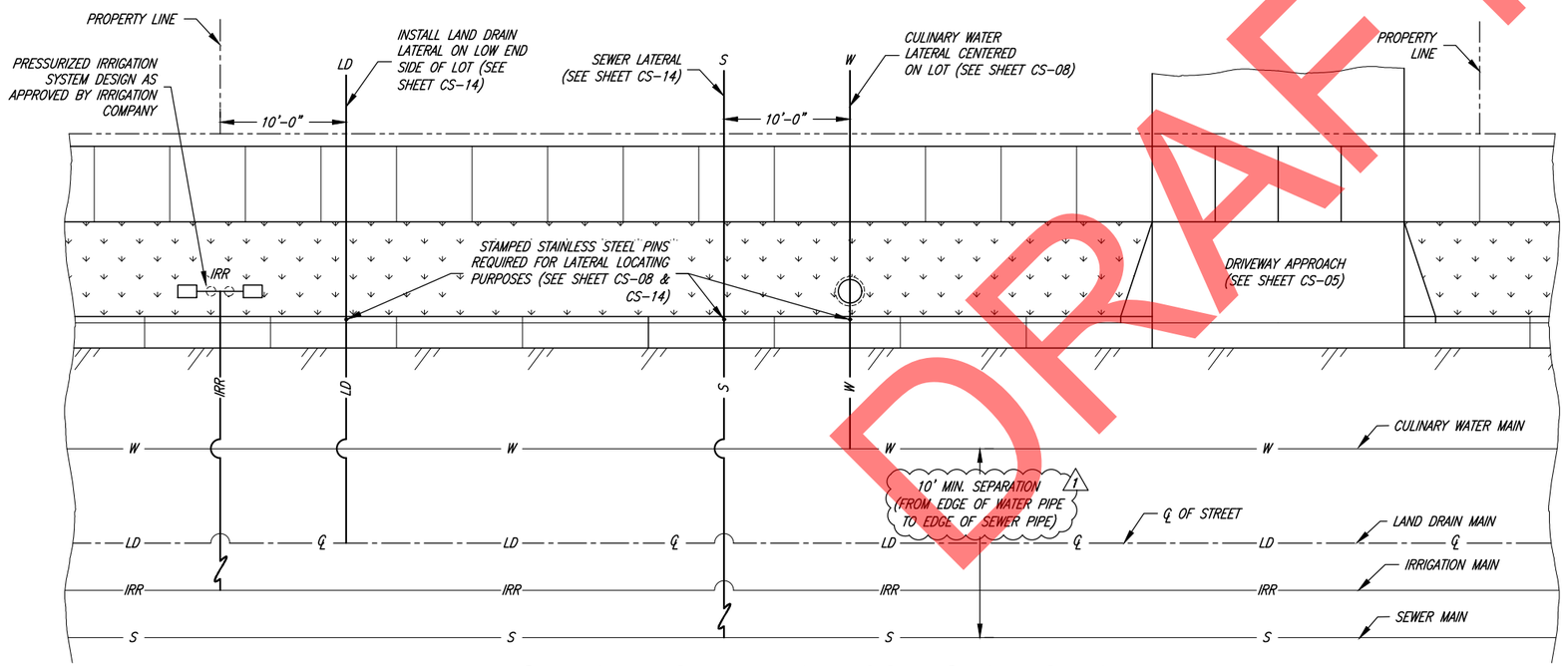
## Index of Drawings

GENERAL NOTES:

1. PROVIDE 4" THICKNESS OF 3/4" OR 1" UNTREATED BASE COURSE UNDER SIDEWALK, DRIVEWAY APPROACHES AND CURB & GUTTER, COMPACTED TO 95%, PER ASTM D-1557.
2. THESE PAVEMENT THICKNESS SHALL BE CONSIDERED AS CITY MINIMUMS AND MAY BE INCREASED BY THE CITY ENGINEER WHEN A GREATER DEPTH IS NECESSARY TO PROVIDE SUFFICIENT STABILITY. DESIGNER AND/OR DEVELOPER MAY SUBMIT AN ALTERNATIVE PAVEMENT DESIGN BASED ON A DETAILED SOILS ANALYSIS FOR APPROVAL BY THE CITY ENGINEER WHICH MAY MODIFY PAVEMENT THICKNESS, BUT IN NO CASE SHALL THE BITUMINOUS SURFACE COURSE BE LESS THAN 4" AND UNTREATED BASE COURSE LESS THAN 12" THICK.
3. ALL ROAD CUTS SHALL BE PATCHED PER CS-05 AND CS-13
4. CURB & GUTTER AND SIDEWALKS SHALL BE CONSTRUCTED USING FIBER REINFORCED CONCRETE AND IN COMPLIANCE WITH SOUTH WEBER CITY TECHNICAL SPECIFICATIONS AND THESE DRAWINGS.
5. ALL CULINARY WATER MAINS AND SERVICES MUST MAINTAIN A MINIMUM SEPARATION FROM ALL SEWER MAINS AND LATERALS OF 10'-0" HORIZONTAL AND 18" VERTICAL IN ACCORDANCE WITH THE STATE OF UTAH DIVISION OF DRINKING WATER RULES SECTION R309-550-7
6. THE 6'-0" SIDEWALK SHOWN ABOVE IS TO BE CONSIDERED THE "CITY STANDARD." OTHER LOCATIONS AND TYPES OF SIDEWALK AS REQUESTED BY THE DEVELOPER MUST BE APPROVED BY THE CITY. IF SIDEWALK IS LOCATED AGAINST THE TBC, IT MUST BE A MINIMUM OF 6 FEET IN WIDTH.
7. NATURAL GAS TYPICALLY LOCATED IN THE PARKSTRIP, POWER AND COMMUNICATION LINES TYPICALLY LOCATED BEHIND PROPERTY LINES OR IN LOT EASEMENTS.
8. "SEAL COAT" CONSISTS OF THE FOLLOWING:
   a. CHIP SEAL PER APWA 32 01 13.64 AND CITY MODIFICATIONS, AND
   b. FOG SEAL PER APWA 32 01 13.50 AND CITY MODIFICATIONS.
9. IMPORTED FILL UNDER ROADWAY SHALL BE GRANULAR BORROW 2" MAX.
10. PRIOR TO THE INSTALLATION OF PAVEMENT, THE CITY INSPECTOR MUST GIVE WRITTEN PERMISSION TO PROCEED. (1)




## STANDARD LOCAL STREET SECTION




## GENERAL LOT LATERAL CONFIGURATION DETAIL

TREE NOTES:

T1. ALL PROPOSED TREES WITHIN THE CITY RIGHT-OF-WAY REQUIRE WRITTEN APPROVAL OF THE CITY OF THE TYPE OR SPECIES OF TREE PRIOR TO PLANTING. ANY TREE NOT APPROVED BY THE CITY SHALL BE REMOVED AT THE OWNER'S EXPENSE.

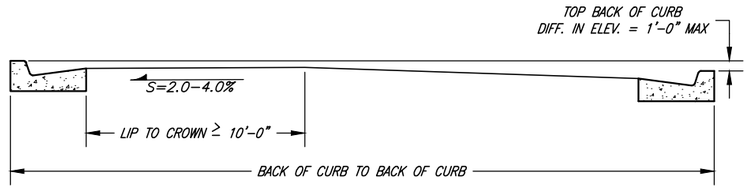
T2. ALL PLANTED TREES TO BE SPACED IN ACCORDANCE WITH THE SPECIES CHARACTERISTICS SUCH THAT THE TREES' CROWNS AT MATURITY WILL NOT OVERLAP WITH ANOTHER TREE NOR TOUCH OR OVERHANG A BUILDING.

T3. FOR ADDITIONAL HELP WITH TREE SELECTION VISIT WWW.TREEBROWSER.ORG FOR FURTHER INFORMATION ON NATIVE AND INTRODUCED TREES GROWING IN UTAH AND THE INTERMOUNTAIN WEST.

T4. THE PLANTING OF TREES IN THE PARKSTRIP MAY BE A REQUIREMENT OF THE DEVELOPMENT IF DEEMED NECESSARY BY THE CITY.

TREE PLANTING CHART

| SIZE | MATURE HEIGHT | CONCRETE OFFSET | STREET CORNER/FH | POWER/UTILITY DISTANCE |
|---|---|---|---|---|
| LARGE | OVER 40 FEET | 8 FEET MIN. DISTANCE | 30 FEET FROM STREET | 10 LATERAL FEET OF ANY OVERHEAD |
| MEDIUM | 25 FEET TO 40 FEET | 6 FEET MIN. DISTANCE | CORNER & 10 FEET | UTILITY WIRE & 5 LATERAL FEET OF |
| SMALL | LESS THAN 25 FEET | 3 FEET MIN. DISTANCE | FROM ANY FIRE HYDRANT | ANY UNDERGROUND UTILITY LINE |




## CROWN LOCATION FOR VARIOUS CROSS SLOPES

CROWN NOTES:

A. MAXIMUM DIFFERENCE IN ELEVATION BETWEEN CURBS ON OPPOSITE SIDES OF THE STREET SHALL NOT EXCEED 1'-0" AS SHOWN IN DETAIL.

B. ON CERTAIN STREETS APPROVED BY THE CITY COUNCIL, THE CITY ENGINEER WILL PROVIDE A PAVEMENT DESIGN. LOCATION OF SIDEWALK AND CURB & GUTTER MAY VARY PER DIRECTION OF THE CITY ENGINEER.

B. ALL STREET CROSS SECTIONS SHALL BE AS APPROVED BY THE CITY ENGINEER.



REGISTERED PROFESSIONAL ENGINEER — BRANDON KENT JONES — No. 5148758 — State of Utah

PROJECT ENGINEER — DATE: 2-12-2019

| REV. | DATE | APPR. | |
|---|---|---|---|
| 1 | JAN '19 | BKJ | ADDED AND/OR MODIFIED NOTES |

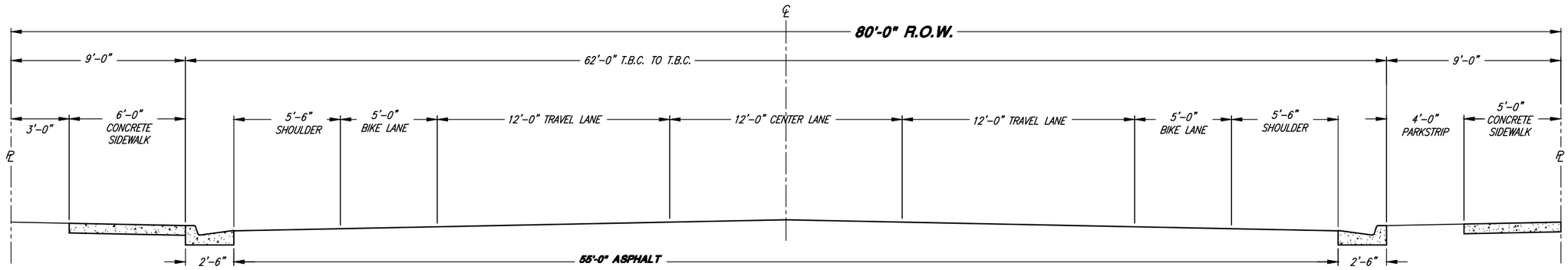
SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

JA JONES & ASSOCIATES
CONSULTING ENGINEERS
6080 Fashion Point Drive
South Ogden, Utah 84403 (801) 476-9767
www.jonescivil.com

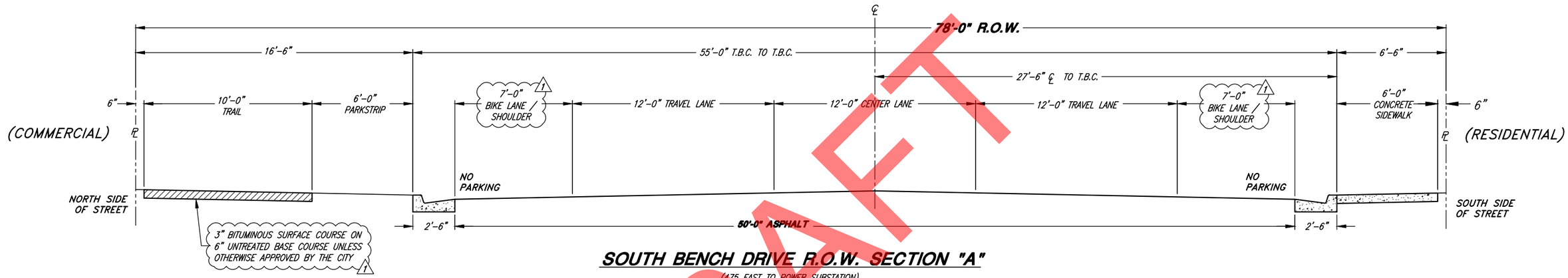
SOUTH WEBER CITY CORPORATION
PUBLIC WORKS STANDARDS
PUBLIC ROADS - TYPICAL LOCAL STREET CROSS SECTION & UTILITY LATERAL CONFIGURATION DETAILS

SHEET: CS-02 OF 23 SHEETS
0



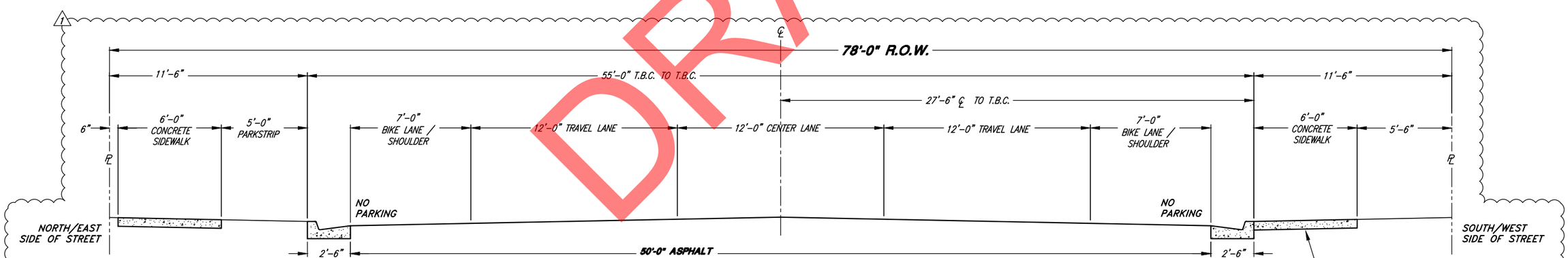

## SOUTH WEBER DRIVE R.O.W. SECTION

THE 80'-0" ROADWAY SECTION SHOWN ABOVE IS TO BE CONSIDERED THE "CITY STANDARD" FOR SOUTH WEBER DRIVE. WHERE DESIGNATED BY THE CITY ON A CASE BY CASE BASIS IN AREAS OF PRE-EXISTING ROADWAY IMPROVEMENTS, ALTERNATE STREET CROSS SECTION DESIGNS MAY BE USED WITH THE PRIOR APPROVAL OF THE CITY ENGINEER AND THE CITY PUBLIC WORKS DEPARTMENT. SUBMIT ENGINEERED CONSTRUCTION PLANS TO THE CITY ENGINEER FOR REVIEW AND WRITTEN ACCEPTANCE PRIOR TO CONSTRUCTION.




## SOUTH BENCH DRIVE R.O.W. SECTION "A"

(475 EAST TO POWER SUBSTATION)




## SOUTH BENCH DRIVE R.O.W. SECTION "B"

(POWER SUBSTATION TO LAYTON CITY CONNECTION)



REGISTERED PROFESSIONAL ENGINEER — BRANDON KENT JONES No. 5148758 — State of Utah

PROJECT ENGINEER

2-12-2019

DATE

| REV. | DATE | APPR. | |
|---|---|---|---|
| 1 | JAN '19 | BKJ | MODIFIED NOTES; UPDATED STREET SECTION DETAIL |

SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

JONES & ASSOCIATES CONSULTING ENGINEERS
6080 Fashion Point Drive
South Ogden, Utah 84403 (801) 476-9767
www.jonescivil.com

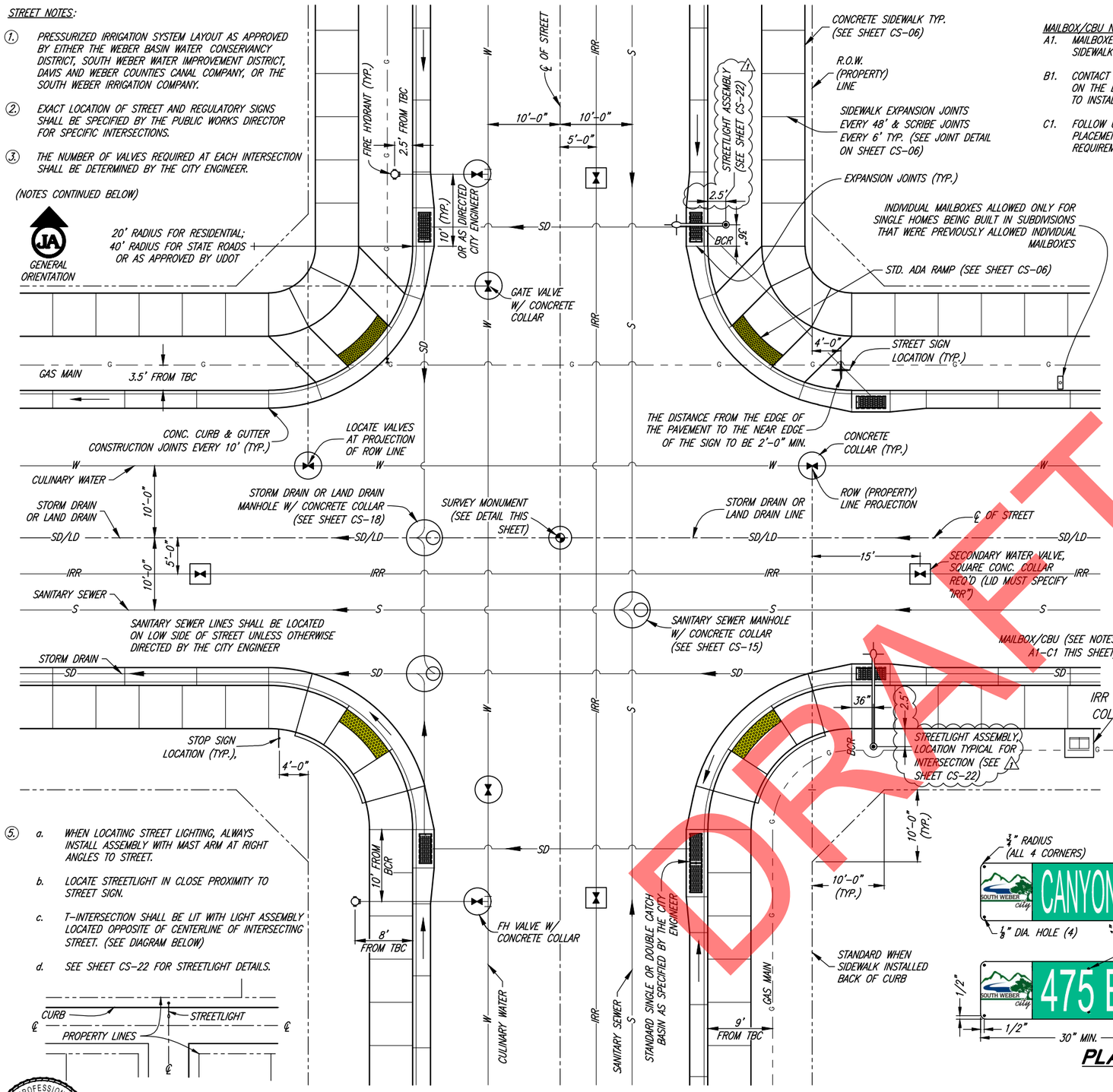
SOUTH WEBER CITY CORPORATION
PUBLIC WORKS STANDARDS
PUBLIC ROADS - SOUTH WEBER DRIVE & SOUTH BENCH DRIVE
TYPICAL ROADWAY CROSS SECTION DETAILS

SHEET: CS-03
OF 23 SHEETS
0

## STREET NOTES:

1. PRESSURIZED IRRIGATION SYSTEM LAYOUT AS APPROVED BY EITHER THE WEBER BASIN WATER CONSERVANCY DISTRICT, SOUTH WEBER WATER IMPROVEMENT DISTRICT, DAVIS AND WEBER COUNTIES CANAL COMPANY, OR THE SOUTH WEBER IRRIGATION COMPANY.
2. EXACT LOCATION OF STREET AND REGULATORY SIGNS SHALL BE SPECIFIED BY THE PUBLIC WORKS DIRECTOR FOR SPECIFIC INTERSECTIONS.
3. THE NUMBER OF VALVES REQUIRED AT EACH INTERSECTION SHALL BE DETERMINED BY THE CITY ENGINEER.

(NOTES CONTINUED BELOW)




5. a. WHEN LOCATING STREET LIGHTING, ALWAYS INSTALL ASSEMBLY WITH MAST ARM AT RIGHT ANGLES TO STREET.
   b. LOCATE STREETLIGHT IN CLOSE PROXIMITY TO STREET SIGN.
   c. T-INTERSECTION SHALL BE LIT WITH LIGHT ASSEMBLY LOCATED OPPOSITE OF CENTERLINE OF INTERSECTING STREET. (SEE DIAGRAM BELOW)
   d. SEE SHEET CS-22 FOR STREETLIGHT DETAILS.




## MAILBOX/CBU NOTES:

A1. MAILBOXES SHALL NOT BE PLACED IN THE SIDEWALK.

B1. CONTACT THE LOCAL POSTMASTER FOR APPROVAL ON THE LOCATION OF THE MAILBOX OR CBU PRIOR TO INSTALLATION.

C1. FOLLOW USPS GUIDELINES & POLICIES FOR THE PLACEMENT, INSTALLATION, AND ACCESS REQUIREMENTS FOR ALL MAILBOX AND CBU UNITS.

## STREET SIGN NOTES:

A. STREET SIGN BACKGROUND SHALL BE REGULATORY GREEN, BOTH STREET AND TRAFFIC SIGNS SHALL BE AT THE VERY LEAST HIGH INTENSITY REFLECTIVE SHEETING (9FP-85 TYPE IIIA)

B. LEGEND SHALL BE WHITE LETTERS, HIGH INTENSITY REFLECTIVE SHEETING (9FP-85 IIIA)

C. SIGN BLANK SHALL BE 6081-T6 HEAT TREATED HIGH TENSILE DEGREASED ALUMINUM W/ALODINE 1200 FINISH-THICKNESS SHALL BE 0.08"

D. EACH SIGN SHALL CONSIST OF TWO PLATES RIVETED TOGETHER & MOUNTED AS SHOWN

E. SIGNS ON PRIVATE ROADS SHALL MEET ALL SPECIFICATIONS FOR STANDARD SIGNS, EXCEPT BACKGROUND SHALL BE BLUE.

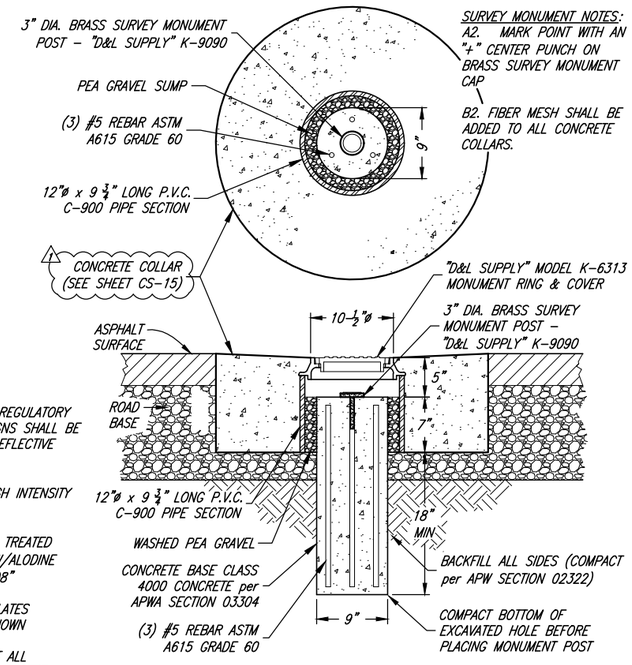
F. ALL STREETS WITH NAMES MUST ALSO SHOW LOCATIONS COORDINATE DESIGNATION

G. CONTACT CITY PRIOR TO MAKING SIGNS TO VERIFY PROPER NAMES AND COORDINATES

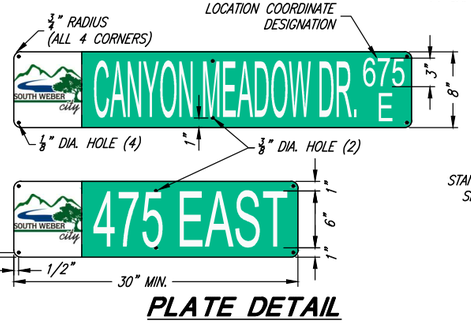
## SURVEY MONUMENT NOTES:

A2. MARK POINT WITH AN "+" CENTER PUNCH ON BRASS SURVEY MONUMENT CAP

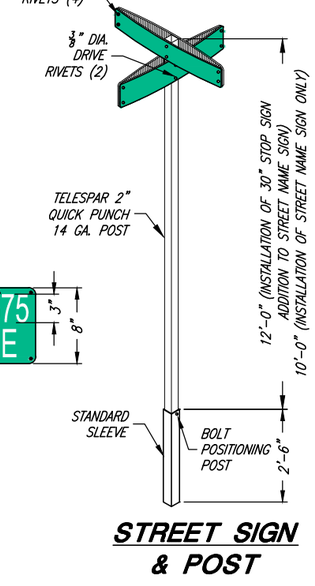
B2. FIBER MESH SHALL BE ADDED TO ALL CONCRETE COLLARS.



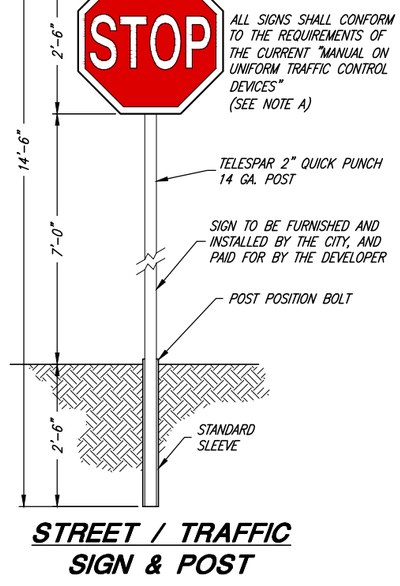

## SURVEY MONUMENT DETAIL




## PLATE DETAIL




## STREET SIGN & POST




## STREET / TRAFFIC SIGN & POST



REGISTERED PROFESSIONAL ENGINEER — BRANDON KENT JONES No. 5148758 — State of Utah

Brandon K. Jones
PROJECT ENGINEER
2-12-2019
DATE

| REV. | DATE | APPR. | |
|---|---|---|---|
| 1 | JAN '19 | BKJ | MODIFIED NOTES AND DIMENSIONS |

SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

JONES & ASSOCIATES
CONSULTING ENGINEERS
6080 Fashion Point Drive
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SOUTH WEBER CITY CORPORATION
PUBLIC WORKS STANDARDS

# PUBLIC ROADS - TYPICAL INTERSECTION & STREET DETAILS

SHEET: CS-04
OF 23 SHEETS
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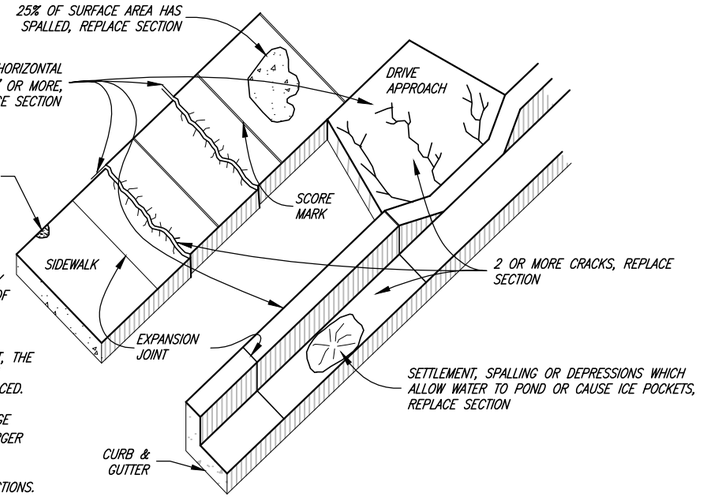



CONCRETE REPLACEMENT NOTES:

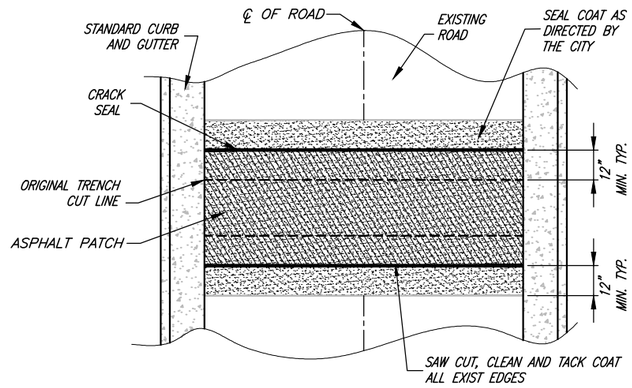
A. REPLACEMENT IS REQUIRED IF ANY COMPONENT HAS ONE OR MORE OF THE CONDITIONS SHOWN ABOVE.

B. ANY TIME CONCRETE IS CUT TO REPLACE A DEFECTIVE COMPONENT, THE CUT SHOULD EXTEND COMPLETELY THROUGH THE PIECE BEING REPLACED.

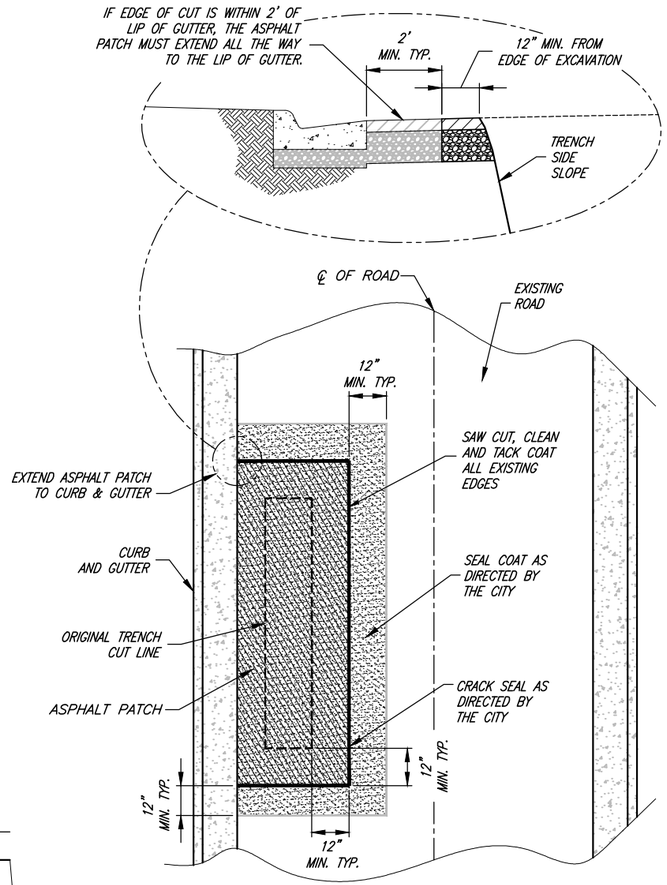
C. A CHIP IS CONCRETE EDGE DAMAGE THAT IS DEEPER THAN 1/4" AND LARGER THAN 2" DIA.

D. CURB & GUTTER MIN. 10'-0" SECTIONS.

## DEFECTIVE CONCRETE REPLACEMENT CRITERIA



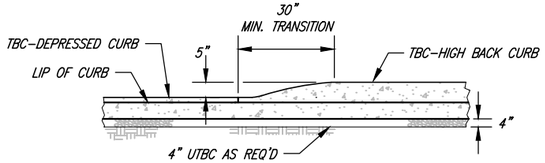

## TYPICAL HORIZONTAL ASPHALT PATCH PLAN



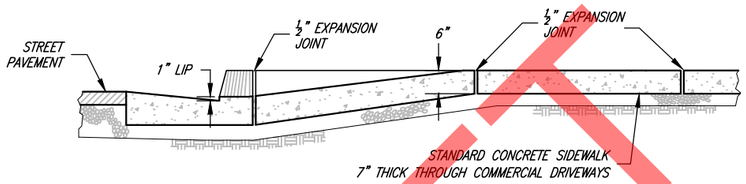

## TYPICAL PARALLEL ASPHALT PATCH PLAN

ASPHALT PATCH NOTE:

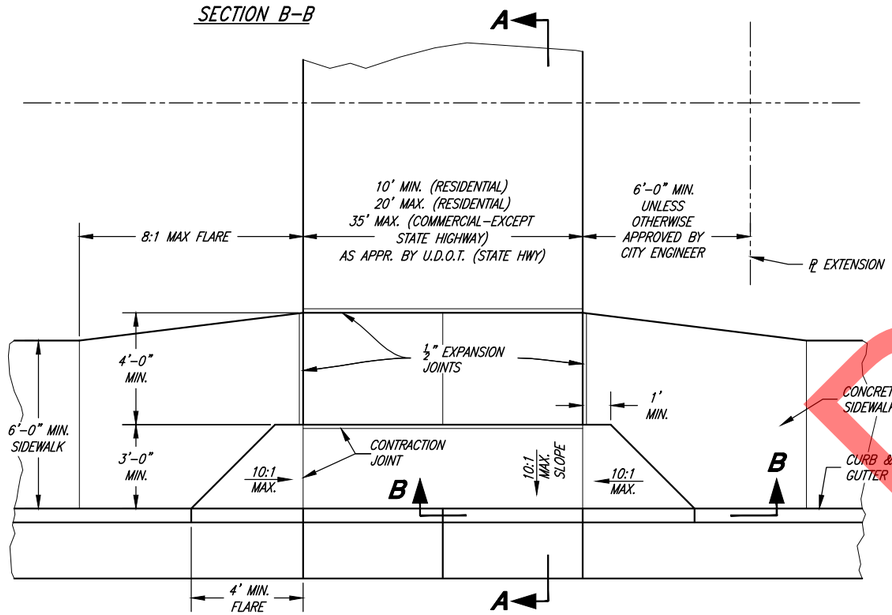
A1. ON ANY ROAD PAVED OR OVERLAYED WITHIN THE LAST 10 YEARS, THE PATCH MUST BE COMPLETED PER APWA PLAN 255 (BITUMINOUS PAVEMENT T-PATCH).



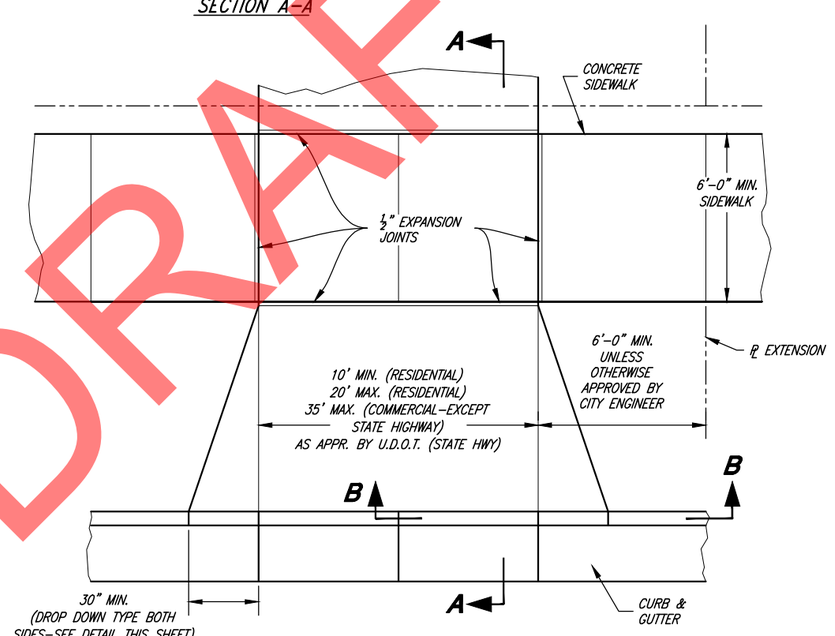

SECTION B-B




SECTION A-A




## DRIVEWAY APPROACH W/ ADJACENT SIDEWALK




## DRIVEWAY APPROACH W/ PARKSTRIP

DROP DOWN STYLE (CITY STANDARD)

DRIVEWAY APPROACH NOTES:

1. IN NEW SUBDIVISIONS WHERE FUTURE DRIVEWAY LOCATIONS ARE UNKNOWN, THE DRIVEWAY APPROACH SHALL BE MADE BY SAW CUTTING THE BACK OF THE EXISTING CURB TO THE REQUIRED DRIVEWAY WIDTH. ALL SAW CUTTING SHALL BE ACCOMPLISHED BY A CITY APPROVED LICENSED CONTRACTOR.

2. SCORE SIDEWALK 1/2" OF SIDEWALK THICKNESS AT EACH 6'-0" SECTION. EXPANSION JOINTS AT EACH 48'-0", PROVIDE ADDITIONAL CONTRACTION JOINTS ON OVERSIZED DRIVEWAYS AT 5'-0" MAX. SPACING



REGISTERED PROFESSIONAL ENGINEER
BRANDON KENT JONES
No. 5148758
State of Utah

PROJECT ENGINEER

2-12-2019
DATE

| REV. | DATE | APPR. | |
|---|---|---|---|
| 1 | JAN '19 | BKJ | ADDED NOTE |

SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

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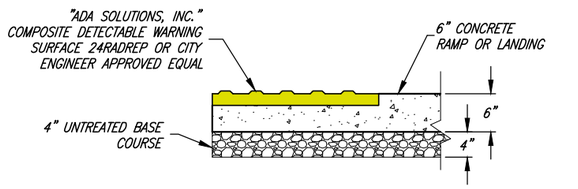
SOUTH WEBER CITY CORPORATION
PUBLIC WORKS STANDARDS

# PUBLIC ROADS - TYPICAL DRIVE APPROACH, ASPHALT PATCH & DEFECTIVE CONCRETE REPLACEMENT DETAILS

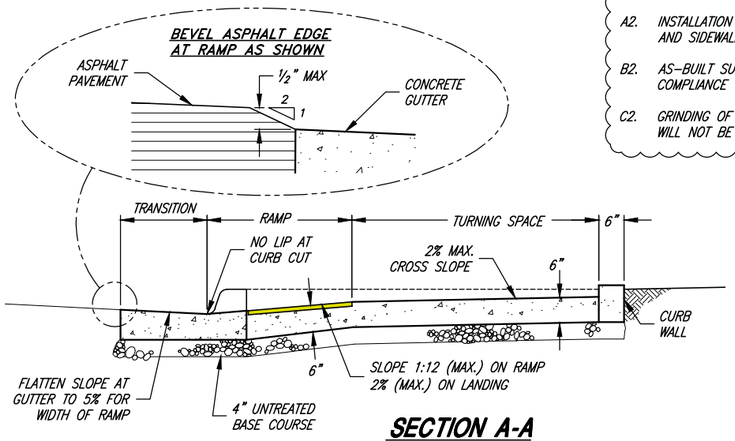
SHEET: CS-05
OF 23 SHEETS
0

DETECTABLE WARNING SURFACE NOTES:

1. LOCATE THE DETECTABLE WARNING SURFACE SO THE OUTSIDE CORNER NEAREST THE STREET IS WITHIN 1 INCH OF THE BACK OF CURB (TBC). PROVIDE 2–FOOT MINIMUM DEPTH.
2. PROVIDE DETECTABLE WARNING SURFACE FOR FULL WIDTH OF CURB CUT.
3. THE DETECTABLE WARNING SURFACE DOMES SHALL BE ORIENTED SUCH THAT THE ROWS ARE PARALLEL WITH THE DIRECTION OF PEDESTRIAN TRAVEL TO THE RAMP ON THE OPPOSITE SIDE OF THE STREET.
4. THE STANDARD COLOR FOR THE DETECTABLE WARNING SURFACE SHALL BE YELLOW OR PRE–APPROVED CONTRASTING COLOR. WHEN THE EXISTING SIDEWALK COLOR IS NOT STANDARD CONCRETE, THE COLOR OF THE DETECTABLE WARNING SURFACE SHALL BE DETERMINED BY THE CITY ENGINEER OR AUTHORIZED REPRESENTATIVE.
5. WHEN A DETECTABLE WARNING SURFACE DOME IS CUT, THE REMAINING PORTION OF THE DOME SHALL BE BEVELED TO A MAXIMUM SLOPE OF 1:2.




## DETECTABLE WARNING SURFACE DETAIL




## SECTION A-A

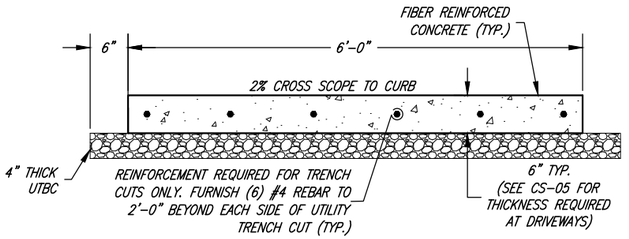
GENERAL NOTES:

A2. INSTALLATION TOLERANCES ON CURB & GUTTER AND SIDEWALK PER APWA 32 16 13, 3.7.

B2. AS–BUILT SURVEY MAY BE REQUIRED TO VERIFY COMPLIANCE WITH TOLERANCES.

C2. GRINDING OF CONCRETE, TO MEET TOLERANCES, WILL NOT BE ALLOWED.

1




## SIDEWALK SECTION

(CITY STANDARD)

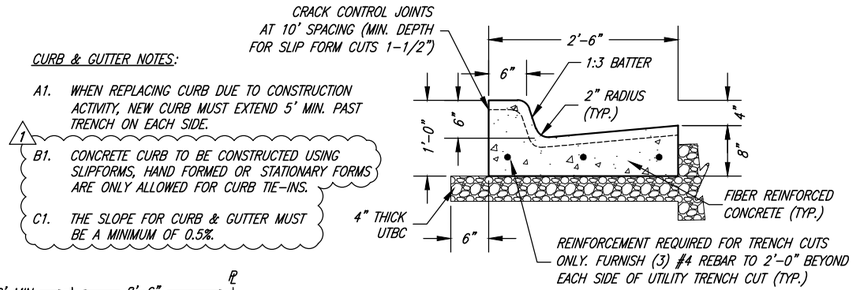
CURB & GUTTER NOTES:

A1. WHEN REPLACING CURB DUE TO CONSTRUCTION ACTIVITY, NEW CURB MUST EXTEND 5' MIN. PAST TRENCH ON EACH SIDE.

1

B1. CONCRETE CURB TO BE CONSTRUCTED USING SLIPFORMS, HAND FORMED OR STATIONARY FORMS ARE ONLY ALLOWED FOR CURB TIE–INS.

C1. THE SLOPE FOR CURB & GUTTER MUST BE A MINIMUM OF 0.5%.




## CURB & GUTTER SECTION

(CITY STANDARD)

ADA RAMP NOTES:

A. WHERE DESIGNATED BY THE CITY, ALTERNATE UDOT OR APWA RAMP DESIGNS MAY BE USED WITH THE PRIOR APPROVAL OF THE CITY ENGINEER AND THE CITY PUBLIC WORKS DEPARTMENT. SUBMIT ENGINEERED CONSTRUCTION PLANS TO CITY ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.

B. SITE CONDITIONS WILL VARY. CONFIGURATION OF RAMP, LANDING, AND TRANSITION MAY BE CHANGED, BUT THEY MUST MEET DIMENSIONS AND SLOPES AS SHOWN IN THE MOST RECENT EDITION OF THE U.D.O.T. STANDARDS & SPECIFICATIONS (SHEETS PA1 THROUGH PA5). THE USE OF FLARES, CURB WALLS, ETC. ARE AT THE DISCRETION OF THE ENGINEER.

C. LOCATE CURB CUT WITHIN CROSSWALK.

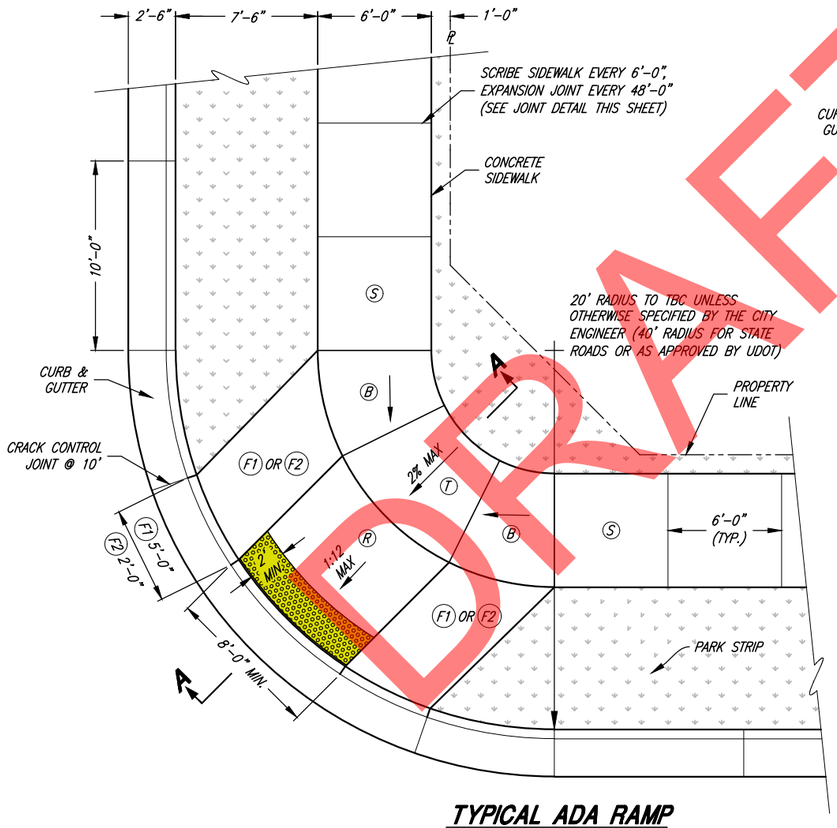
D. RAMP GRADE BREAK MUST BE PERPENDICULAR TO THE RUNNING SLOPE.

| SLOPE TABLE | | | |
|---|---|---|---|
| | ITEM | MAX RUNNING SLOPE* | MAX. CROSS SLOPE* |
| (T) | TURNING SPACE [2] | 2% (1V:48H) | 2% (1V:48H) |
| (R) | RAMP | 8.3% (1V:12H) | 2% (1V:48H) |
| (S) | SIDEWALK | 5% (1:20) [1] | 2% (1V:48H) |
| (F1) | TRAVERSABLE SURFACE | 10% (1V:10H) | -- |
| (F2) | NON–TRAVERSABLE SURFACE | 25% (1V:4H) | -- |
| (B) | BLENDED TRANSITION | 5% (1V:20H) 2% MIN. | 2% (1V:48H) |

* RUNNING SLOPE IS IN THE DIRECTION OF PEDESTRIAN TRAVEL. CROSS SLOPE IS PERPENDICULAR TO PEDESTRIAN TRAVEL.

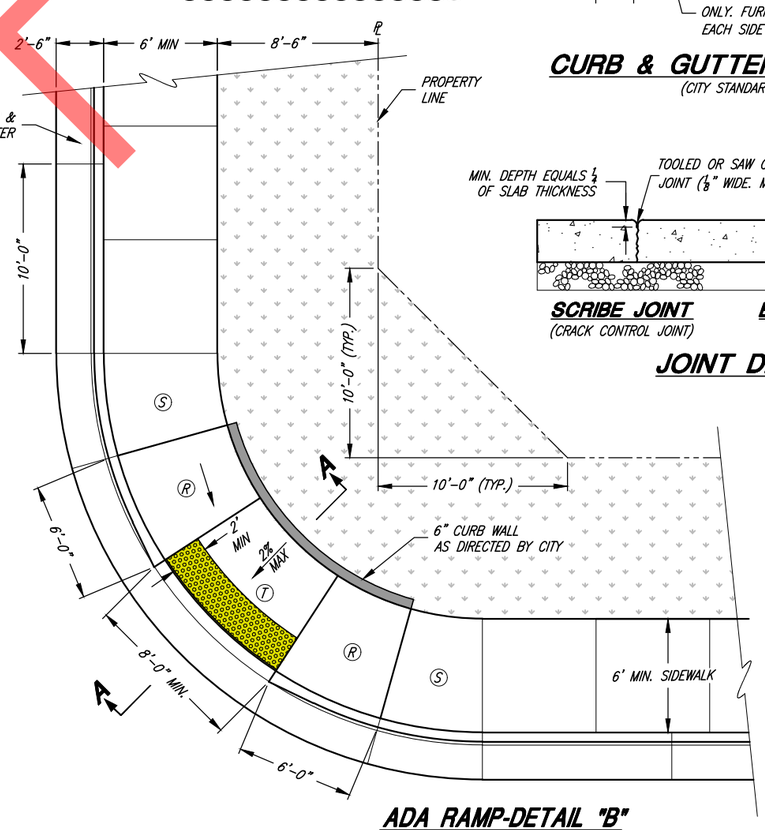
[1] 5% MAX OR NATURAL SLOPE OF LAND

[2] NOT TO EXCEED 2% IN ANY DIRECTION



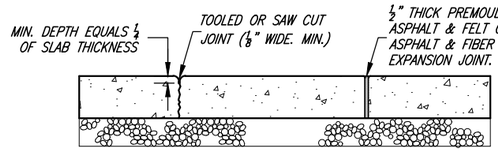

## TYPICAL ADA RAMP

(WITH PARK STRIP)




## ADA RAMP-DETAIL "B"

(WITHOUT PARK STRIP)




SCRIBE JOINT (CRACK CONTROL JOINT)

EXPANSION JOINT

## JOINT DETAIL



REGISTERED PROFESSIONAL ENGINEER — BRANDON KENT JONES — No. 5148758 — State of Utah

Brandon K. Jones

PROJECT ENGINEER

2-12-2019

DATE

| REV. | DATE | APPR. | |
|---|---|---|---|
| 1 | JAN '19 | BKJ | ADDED NOTES |

SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

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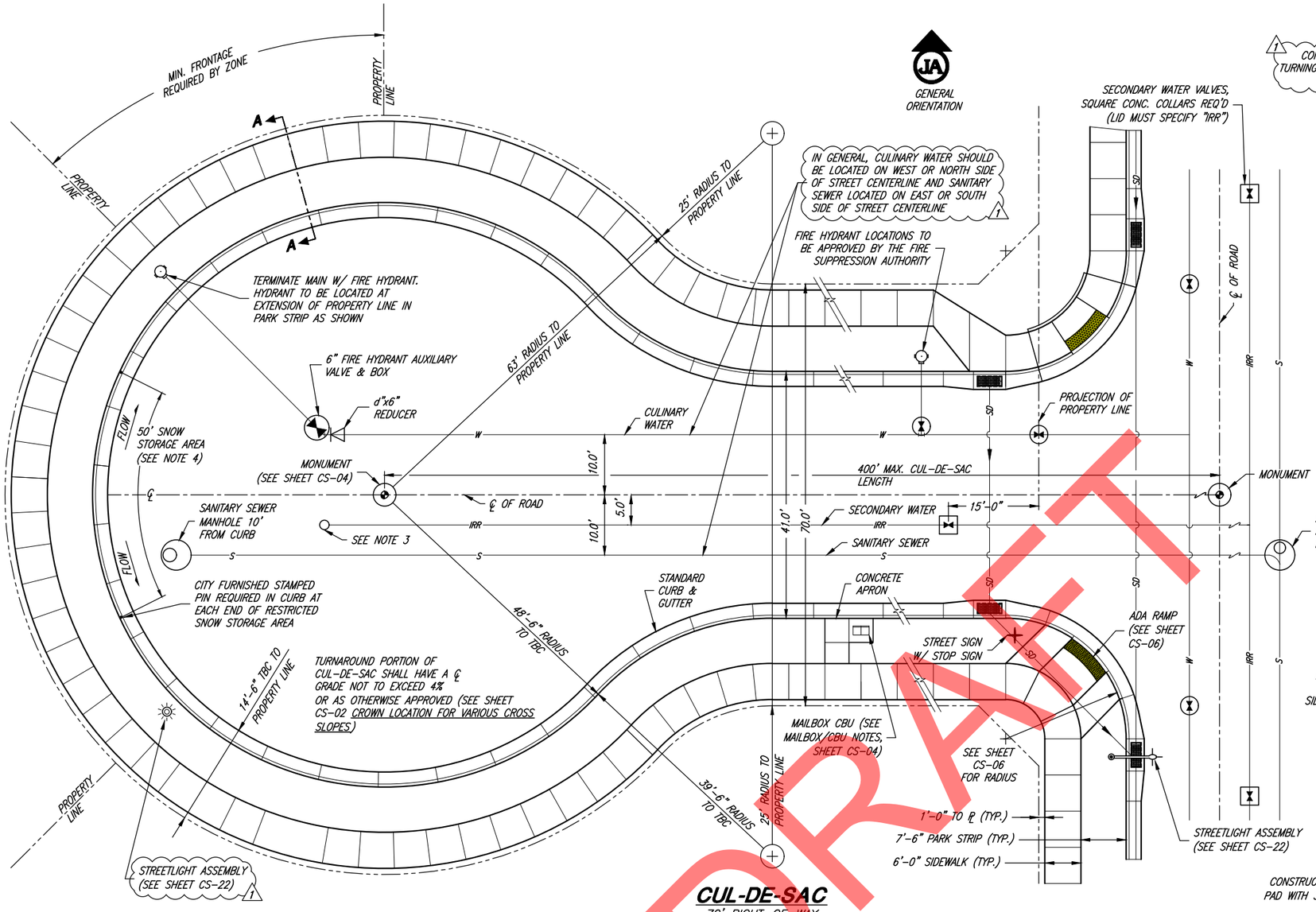
SOUTH WEBER CITY CORPORATION

PUBLIC WORKS STANDARDS

PUBLIC ROADS - TYPICAL ADA RAMP, SIDEWALK, CURB & GUTTER, AND CONCRETE JOINT DETAILS

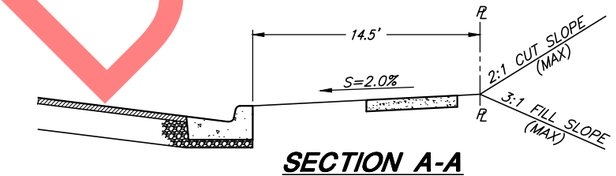
SHEET: CS-06 OF 23 SHEETS

0



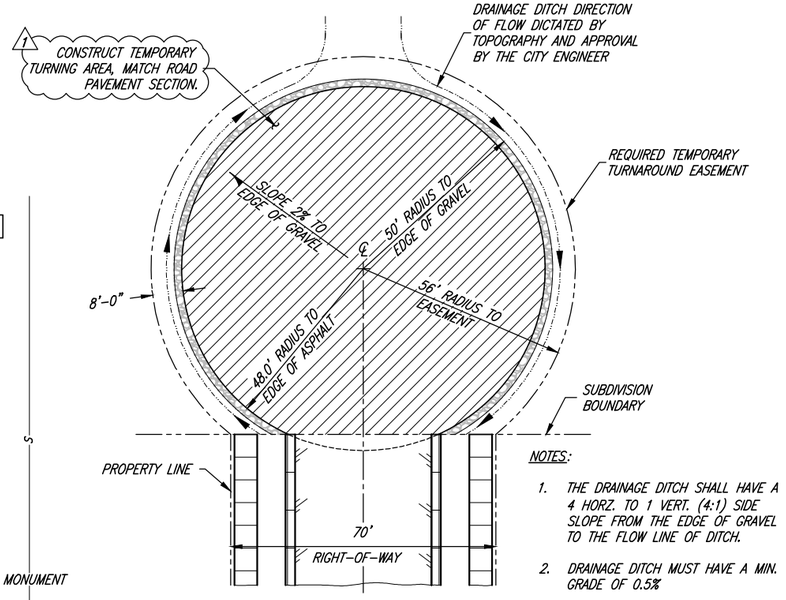

## CUL-DE-SAC

70' RIGHT-OF-WAY




## SECTION A-A

REQUIRED GRADING BETWEEN TBC AND PROPERTY LINE

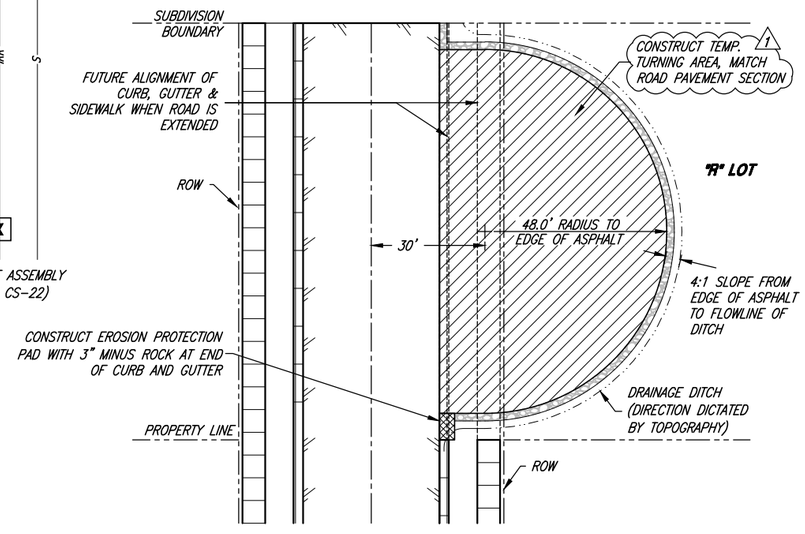



NOTES:

1. THE DRAINAGE DITCH SHALL HAVE A 4 HORZ. TO 1 VERT. (4:1) SIDE SLOPE FROM THE EDGE OF GRAVEL TO THE FLOW LINE OF DITCH.
2. DRAINAGE DITCH MUST HAVE A MIN. GRADE OF 0.5%

## CITY STANDARD TEMPORARY TURNAROUND

(FOR OUTSIDE OF SUBDIVISION BOUNDARY AND TO BE MAINTAINED BY PROPERTY OR EASEMENT OWNER)




## TEMPORARY TURNAROUND

(FOR INSIDE SUBDIVISION BOUNDARY TO BE MAINTAINED BY PROPERTY OWNER)

GENERAL NOTES:

1. THE CIRCULAR CUL-DE-SAC LAYOUT ON THIS SHEET IS TO BE CONSIDERED AS THE CITY STANDARD DESIGN. OTHER ALTERNATE DESIGNS MAY BE CONSIDERED AS APPROVED BY THE CITY ENGINEER.
2. MODIFIED CUL-DE-SACS (KNUCKLE, EYEBROW, BULB, OR HALF CUL-DE-SACS) ARE NOT PERMITTED.
3. DEVELOPER SHALL PROVIDE AN AIR RELIEF OR BLOW-OFF AS DETERMINED BY THE SECONDARY WATER PROVIDER AND IN ACCORDANCE WITH THEIR STANDARDS AND APPROVED BY THE CITY ENGINEER.
4. NO DRIVEWAYS, FIRE HYDRANTS, OR MAIL BOXES ARE PERMITTED WITHIN THE 50' SNOW STORAGE AREA.



REGISTERED PROFESSIONAL ENGINEER — BRANDON KENT JONES — No. 5148758 — State of Utah

PROJECT ENGINEER

2-12-2019

DATE

| REV. | DATE | APPR. | |
|---|---|---|---|
| 1 | JAN '19 | BKJ | ADDED AND/OR MODIFED NOTES, ADDED STREETLIGHT |

SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

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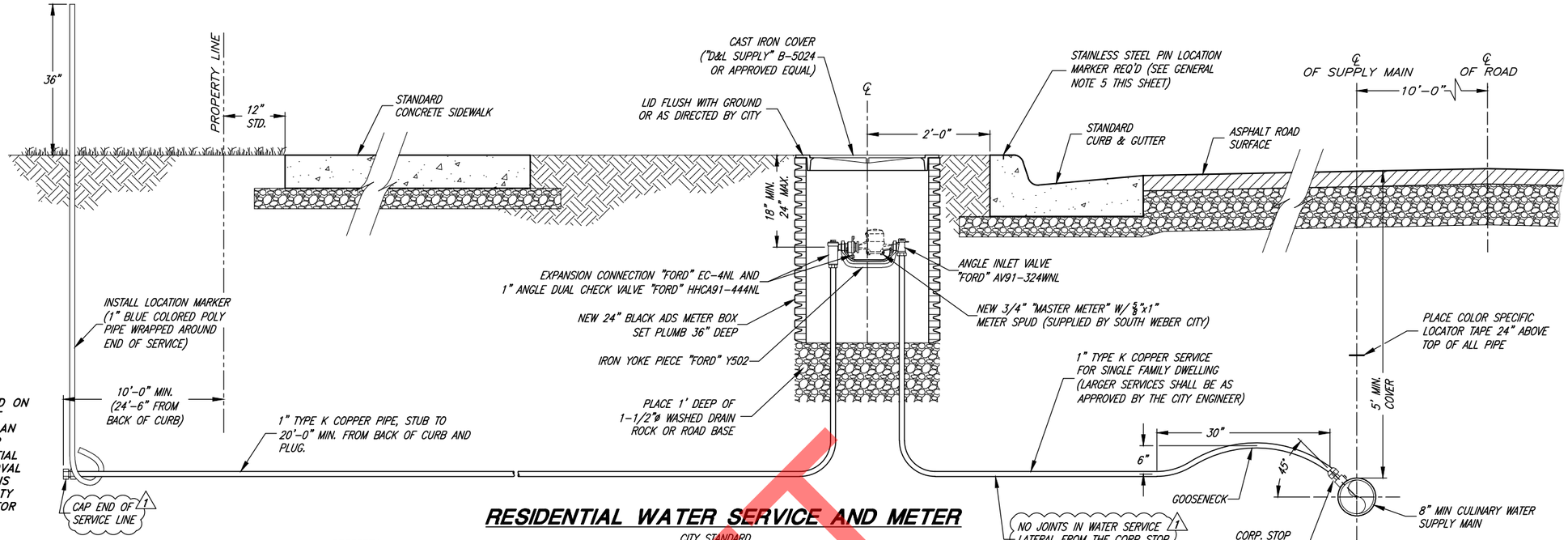
SOUTH WEBER CITY CORPORATION
PUBLIC WORKS STANDARDS
PUBLIC ROADS - CUL-DE-SAC & TEMP. TURNAROUND DETAILS

SHEET: CS-07
OF 23 SHEETS
0

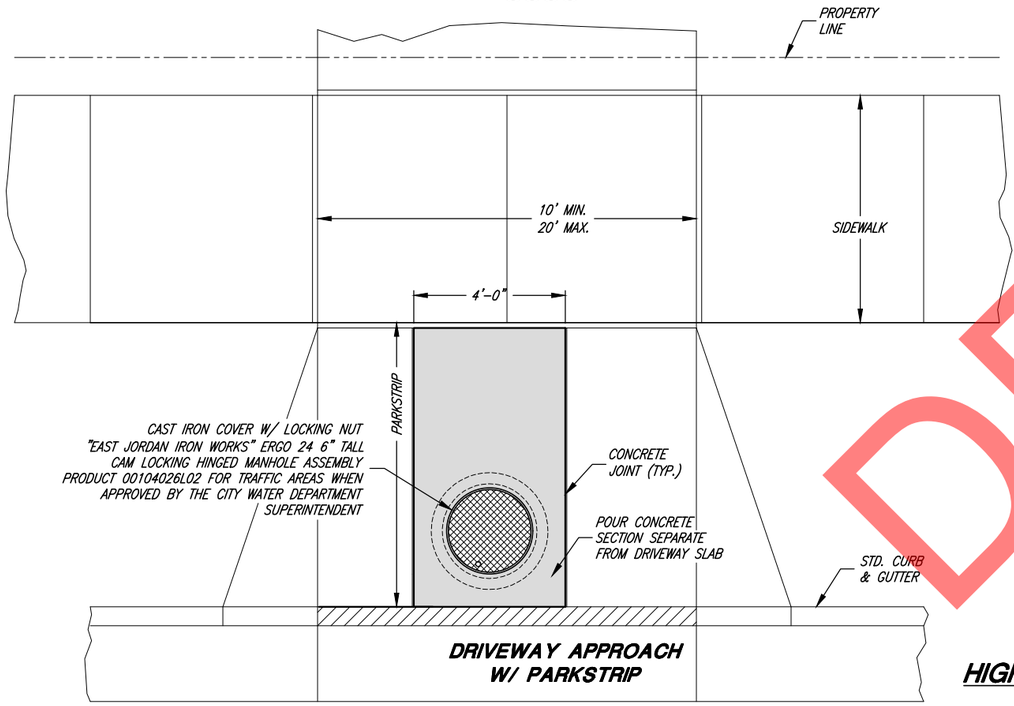



**METER LOCATION NOTE:**
**ALL CULINARY WATER METERS SHALL BE CENTERED ON THE LOT AND SHOULD NOT BE LOCATED WITHIN THE DRIVEWAY AREA. IF A DRIVEWAY IS PLACED OVER AN EXISTING METER, THE "ENTIRE" SERVICE AND METER SHALL BE RELOCATED OR A HIGH TRAFFIC RESIDENTIAL METER PIT MAY BE INSTALLED WITH WRITTEN APPROVAL FROM THE WATER SYSTEM SUPERINTENDENT. THIS IS DETERMINED ON A CASE BY CASE BASIS BY THE CITY WATER SYSTEM SUPERINTENDENT AND TO BE PAID FOR BY THE OWNER.

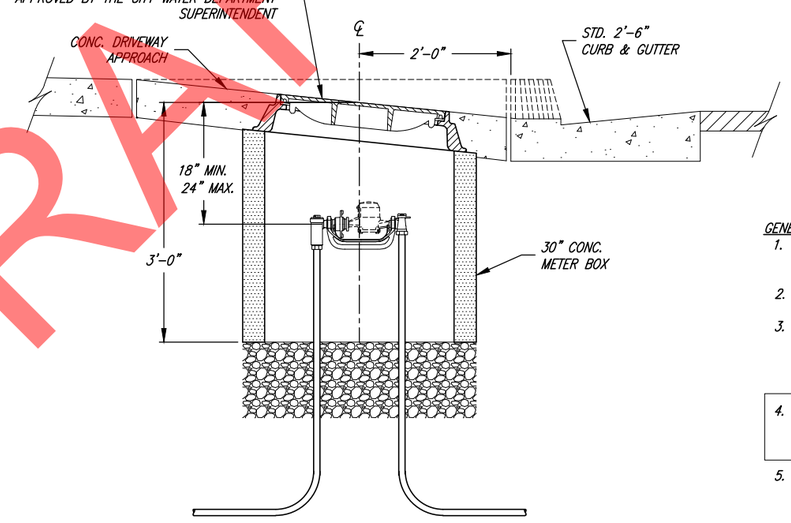
## RESIDENTIAL WATER SERVICE AND METER

CITY STANDARD

**DUCTILE IRON PIPE:**
POLYWRAP ALL D.I.P. WATERLINES
8"-12" MAINS SHALL BE CLASS 51.
14" OR LARGER MAINS SHALL BE CLASS 250 psi




**DRIVEWAY APPROACH W/ PARKSTRIP**




## HIGH TRAFFIC RESIDENTIAL METER PIT DETAIL

THE USE OF A HIGH TRAFFIC RESIDENTIAL SERVICE METER PIT IS SITE SPECIFIC AND REQUIRES WRITTEN APPROVAL FROM THE WATER SYSTEM SUPERINTENDENT PRIOR TO INSTALLATION



GENERAL NOTES:

1. ALL FITTINGS SHALL BE "MUELLER" COMPRESSION TYPE UNLESS OTHERWISE NOTED.
2. "BLUE" BOLTS AND NUTS ARE REQUIRED BY THE CITY.
3. ALL SUPPLIES, LABOR, MACHINERY, ETC. WILL BE SUPPLIED BY THE CONTRACTOR. SOUTH WEBER CITY WILL SUPPLY AND SET THE METER ONLY ON 1" CONNECTIONS. THE CONTRACTOR SHALL SUPPLY METERS FOR CONNECTIONS GREATER THAN 1" (SEE SHEET CS-11).
4. ALL SPECIFIED BRANDS OF MATERIALS SHOWN ON THESE DRAWINGS ARE "CITY STANDARDS." OTHER EQUIVALENT BRANDS MAY BE USED WITH THE PRIOR APPROVAL OF THE CITY ENGINEER AND THE CITY WATER SYSTEM SUPERINTENDENT.
5. STAMPED STAINLESS STEEL PINS USED FOR LATERAL LOCATING ARE REQUIRED BY THE CITY. BLANK S.S. PINS SHALL BE PROVIDED BY THE CITY AND INSTALLED AND STAMPED BY THE CONTRACTOR DURING ALL NEW CONSTRUCTION OR RESTORED WHEN REPLACING DAMAGED CURB & GUTTER DUE TO ANY CONSTRUCTION RELATED ACTIVITY. S.S. PINS SHALL BE STAMPED "S" FOR SANITARY SEWER, "W" FOR CULINARY WATER, AND "L" FOR LAND DRAIN.

REGISTERED PROFESSIONAL ENGINEER — BRANDON KENT JONES No. 5148758 — State of Utah

PROJECT ENGINEER

2-12-2019
DATE

| REV. | DATE | APPR. | |
|---|---|---|---|
| 1 | JAN '19 | BKJ | ADDED NOTES |

SCALE: N.T.S

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

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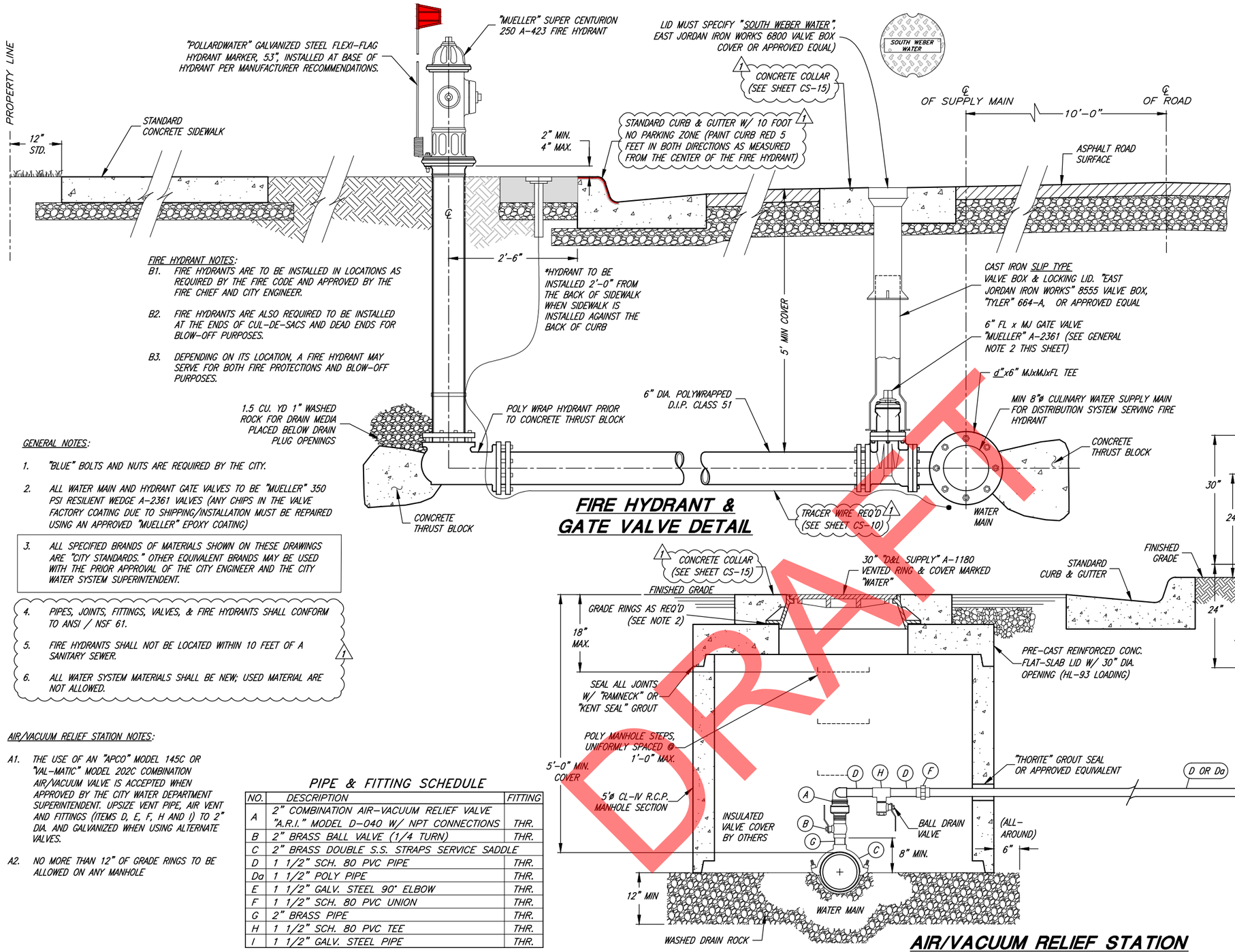
SOUTH WEBER CITY CORPORATION
PUBLIC WORKS STANDARDS
CULINARY WATER - RESIDENTIAL WATER SERVICE DETAILS

SHEET: CS-08
OF 23 SHEETS
0




## FIRE HYDRANT & GATE VALVE DETAIL

FIRE HYDRANT NOTES:

B1. FIRE HYDRANTS ARE TO BE INSTALLED IN LOCATIONS AS REQUIRED BY THE FIRE CODE AND APPROVED BY THE FIRE CHIEF AND CITY ENGINEER.

B2. FIRE HYDRANTS ARE ALSO REQUIRED TO BE INSTALLED AT THE ENDS OF CUL-DE-SACS AND DEAD ENDS FOR BLOW-OFF PURPOSES.

B3. DEPENDING ON ITS LOCATION, A FIRE HYDRANT MAY SERVE FOR BOTH FIRE PROTECTIONS AND BLOW-OFF PURPOSES.

GENERAL NOTES:

1. "BLUE" BOLTS AND NUTS ARE REQUIRED BY THE CITY.
2. ALL WATER MAIN AND HYDRANT GATE VALVES TO BE "MUELLER" 350 PSI RESILIENT WEDGE A-2361 VALVES (ANY CHIPS IN THE VALVE FACTORY COATING DUE TO SHIPPING/INSTALLATION MUST BE REPAIRED USING AN APPROVED "MUELLER" EPOXY COATING)
3. ALL SPECIFIED BRANDS OF MATERIALS SHOWN ON THESE DRAWINGS ARE "CITY STANDARDS." OTHER EQUIVALENT BRANDS MAY BE USED WITH THE PRIOR APPROVAL OF THE CITY ENGINEER AND THE CITY WATER SYSTEM SUPERINTENDENT.
4. PIPES, JOINTS, FITTINGS, VALVES, & FIRE HYDRANTS SHALL CONFORM TO ANSI / NSF 61.
5. FIRE HYDRANTS SHALL NOT BE LOCATED WITHIN 10 FEET OF A SANITARY SEWER. 1
6. ALL WATER SYSTEM MATERIALS SHALL BE NEW; USED MATERIAL ARE NOT ALLOWED.

AIR/VACUUM RELIEF STATION NOTES:

A1. THE USE OF AN "APCO" MODEL 145C OR "VAL-MATIC" MODEL 202C COMBINATION AIR/VACUUM VALVE IS ACCEPTED WHEN APPROVED BY THE CITY WATER DEPARTMENT SUPERINTENDENT. UPSIZE VENT PIPE, AIR VENT AND FITTINGS (ITEMS D, E, F, H AND I) TO 2" DIA. AND GALVANIZED WHEN USING ALTERNATE VALVES.

A2. NO MORE THAN 12" OF GRADE RINGS TO BE ALLOWED ON ANY MANHOLE

### PIPE & FITTING SCHEDULE

| NO. | DESCRIPTION | FITTING |
|---|---|---|
| A | 2" COMBINATION AIR-VACUUM RELIEF VALVE "A.R.I." MODEL D-040 W/ NPT CONNECTIONS | THR. |
| B | 2" BRASS BALL VALVE (1/4 TURN) | THR. |
| C | 2" BRASS DOUBLE S.S. STRAPS SERVICE SADDLE | |
| D | 1 1/2" SCH. 80 PVC PIPE | THR. |
| Da | 1 1/2" POLY PIPE | THR. |
| E | 1 1/2" GALV. STEEL 90° ELBOW | THR. |
| F | 1 1/2" SCH. 80 PVC UNION | THR. |
| G | 2" BRASS PIPE | THR. |
| H | 1 1/2" SCH. 80 PVC TEE | THR. |
| I | 1 1/2" GALV. STEEL PIPE | THR. |

## AIR/VACUUM RELIEF STATION

(BURIED WATERMAIN APPLICATION)



REGISTERED PROFESSIONAL ENGINEER — BRANDON KENT JONES — No. 5148758 — State of Utah

PROJECT ENGINEER

2-12-2019

DATE

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|---|---|---|---|
| 1 | 12/29/2017 | BKJ | UPDATED FIRE HYDRANT MARKER TO FLEXI-FLAG |
| 1 | JAN '19 | BKJ | ADDED AND/OR MODIFIED NOTES |

SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

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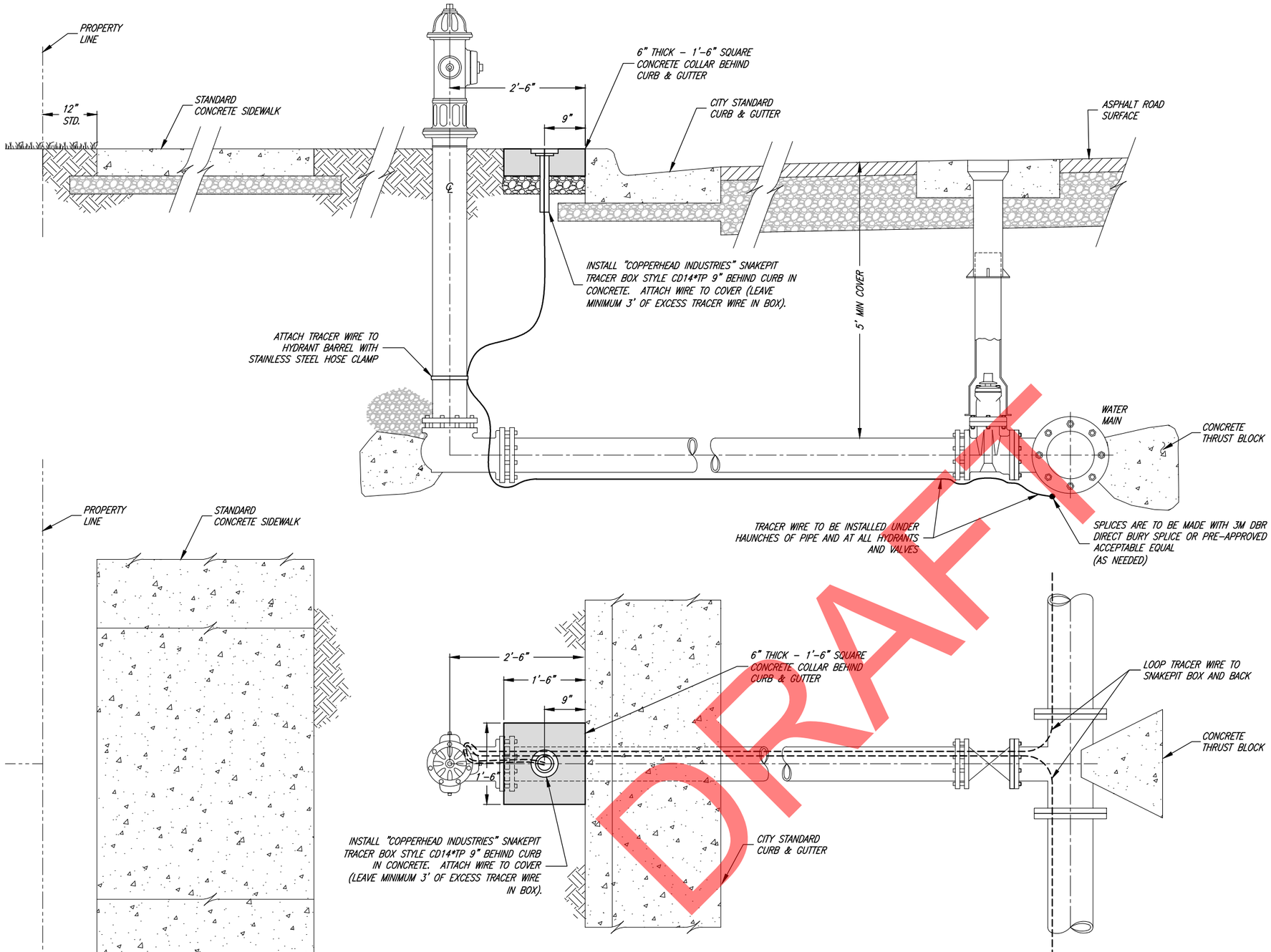
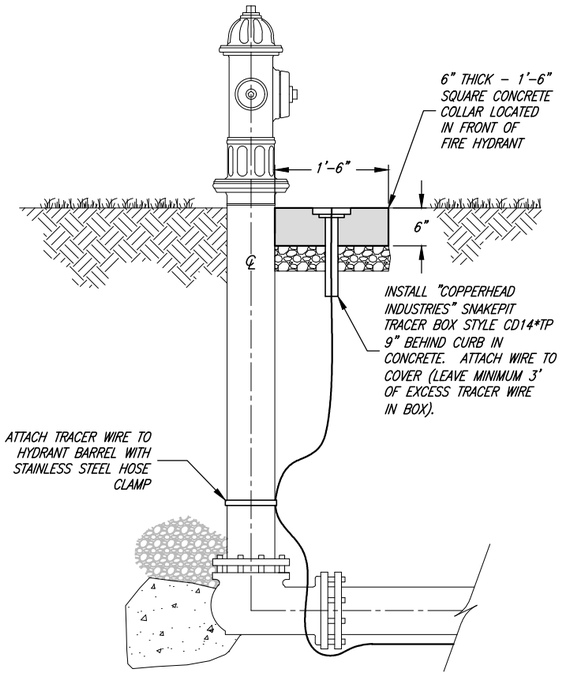
SOUTH WEBER CITY CORPORATION
PUBLIC WORKS STANDARDS
CULINARY WATER - AIR/VACUUM RELIEF STATION & FIRE HYDRANT DETAILS

SHEET: CS-09
OF 23 SHEETS
0




## TRACER WIRE INSTALLATION

CITY STANDARD STREET SECTION (CURB & GUTTER)




## ALTERNATE TRACER WIRE INSTALLATION

WHERE APPROVED BY THE WATER SYSTEM SUPERINTENDENT ON STREET SECTIONS WITH NO CURB & GUTTER

NOTES:

1. ALL WATERLINES SHALL HAVE A MINIMUM 12 GA. INSULATED TRACER WIRE INSTALLED UNDER THE HAUNCHES OF THE PIPE PRIOR TO BACKFILLING.
2. TRACER WIRES SHALL TERMINATE AT ALL FIRE HYDRANTS. AT SERVICE SADDLES AND TAPPING SLEEVES, THE TRACER WIRE SHALL NOT BE ALLOWED TO BE PLACED BETWEEN THE SADDLE AND THE PIPE. A GROUNDING ROD SHALL BE INSTALLED AT ALL TRACER SYSTEM TERMINAL POINTS.
3. TRACER WIRE SHALL BE COPPER WIRE WITH BLUE INSULATION RATED FOR DIRECT BURIAL. ALL WIRE CONNECTORS SHALL BE 3M DBR DIRECT BURY SPLICE OR PRE-APPROVED ACCEPTABLE EQUAL AND SHALL BE WATERTIGHT TO PROVIDE ELECTRICAL CONTINUITY.
4. ALL TRACER WIRE SHALL BE TESTED FOR CONTINUITY IN THE PRESENCE OF THE PUBLIC WORKS INSPECTOR PRIOR TO ASPHALT PLACEMENT. ANY TRACER WIRE FOUND NOT TO BE CONTINUOUS AFTER TESTING SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR PRIOR TO ASPHALT PLACEMENT.



REGISTERED PROFESSIONAL ENGINEER
BRANDON KENT JONES
No. 5148758
State of Utah

PROJECT ENGINEER
2-12-2019
DATE

| REV. | DATE | APPR. | |
|---|---|---|---|
| 1 | JAN '19 | BKJ | CHANGED TRACING TO TRACER (TYP.) |

SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

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SOUTH WEBER CITY CORPORATION
PUBLIC WORKS STANDARDS
CULINARY WATER - TRACER WIRE INSTALLATION DETAILS

SHEET: CS-10
OF 23 SHEETS
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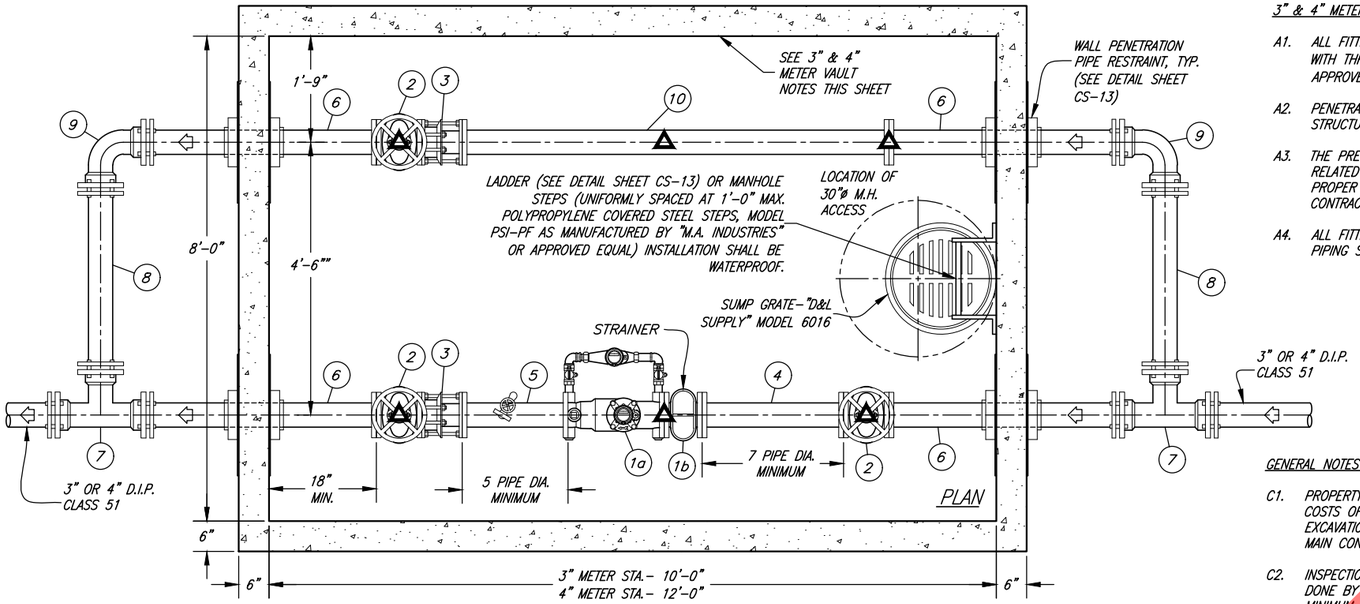
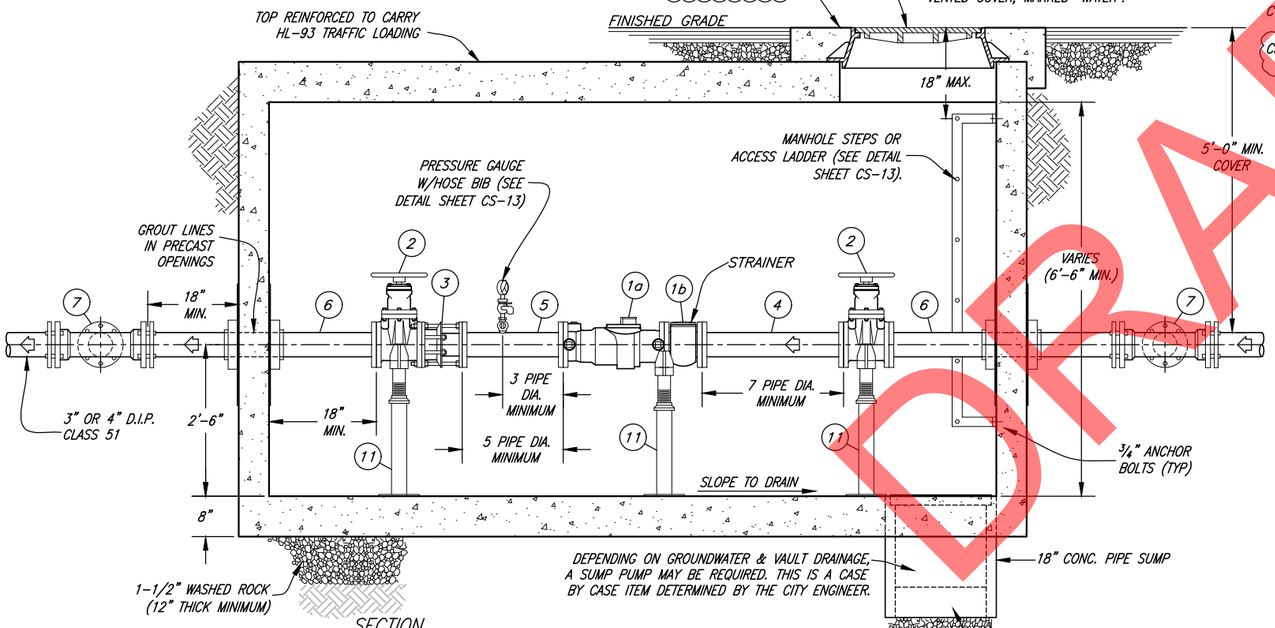



## 3" & 4" WATER METER STATION

3" & 4" METER VAULT NOTES:

A1. ALL FITTINGS OUTSIDE OF THE VAULT ARE TO BE DUCTILE IRON MJ WITH THRUST RESTRAINT RETAINER GLANDS ("ROMAC", MJRG, OR APPROVED EQUAL)

A2. PENETRATION WALLS NEED TO BE ADEQUATELY DESIGNED STRUCTURALLY FOR ANTICIPATED THRUST.

A3. THE PRECAST VAULT MANUFACTURER IS RESPONSIBLE FOR DESIGN RELATED TO TRAFFIC LOADING AND THRUST. VERIFICATION OF PROPER DESIGN MUST BE PROVIDED TO THE CITY BY THE DEVELOPER, CONTRACTOR, OR PROPERTY OWNER AS THE CASE MAY BE.

A4. ALL FITTINGS SHALL BE AWWA C-110 WITH 125 LB. FLANGES. ALL PIPING SHALL BE DUCTILE IRON PIPE CLASS 350 P.S.I. MIN.

NOTE:
ALL SPECIFIED BRANDS OF MATERIALS SHOWN ON THESE DRAWINGS ARE "CITY STANDARDS." OTHER EQUIVALENT BRANDS MAY BE USED WITH THE PRIOR APPROVAL OF THE CITY ENGINEER AND THE CITY WATER SYSTEM SUPERINTENDENT.

GENERAL NOTES:

C1. PROPERTY OWNER OR CONTRACTOR SHALL PAY FOR ALL COSTS OF INSTALLATION INCLUDING ALL MATERIALS, ALL EXCAVATION AND FILL, ASPHALT REPLACEMENT AND WATER MAIN CONNECTION.

C2. INSPECTION OF ALL WATER LINE INSTALLATIONS WILL BE DONE BY THE CITY WATER DEPARTMENT, WITH A 48 HOUR MINIMUM NOTICE REQUIRED PRIOR TO START OF WORK.

C3. IF APPLICABLE, A CITY EXCAVATION PERMIT MUST BE REQUESTED AND APPROVED PRIOR TO START OF WORK.

C4. "BLUE" BOLTS AND NUTS ARE REQUIRED BY THE CITY.

C5. CONTRACTOR TO SUPPLY ALL METERS 1 ½" OR LARGER. 1

1 1/2" & 2" METER NOTES: 1

B1. ½" SERVICE LINE-13" METER
2" SERVICE LINE-17" METER

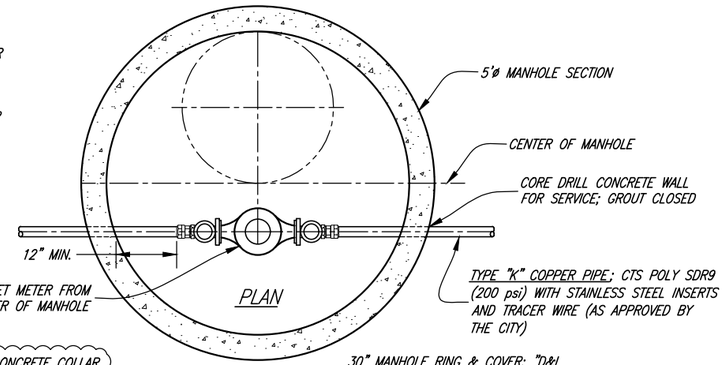
B2. NO MORE THAN 12" OF GRADE RINGS TO BE ALLOWED ON ANY MANHOLE

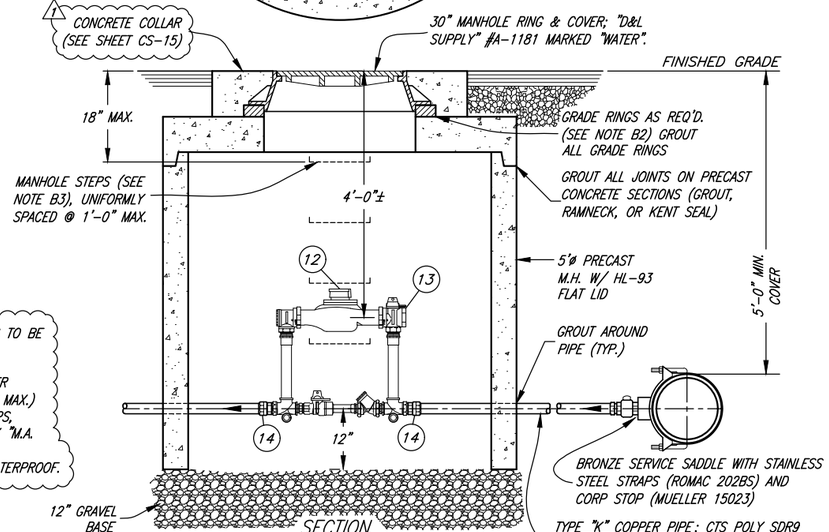
B3. MANHOLE STEPS (FOR MANHOLES OVER 6' DEEP,) UNIFORMLY SPACED (1'-0" MAX.) POLYPROPYLENE COVERED STEEL STEPS, MODEL PSI-PF AS MANUFACTURED BY "M.A. INDUSTRIES" OR APPROVED EQUAL - INSTALLATION OF STEPS SHALL BE WATERPROOF.

## PIPE & FITTING SCHEDULE

| NO. | DESCRIPTION (3" & 4" METER STA.) | JOINT TYPE | 3" LINE | 4" LINE |
|---|---|---|---|---|
| 1a 1b | "MASTER METER" DUAL BODY COMPOUND (DBC) METER W/ STRAINER & 3G INTEGRATED REGISTER | FL | 3" | 4" |
| 2 | "MUELLER" RESILIENT WEDGE GATE VALVE W/ HANDWHEEL | FL | 3" A-2362 | 4" A-2361 |
| 3 | "ROMAC" DJ400 DISMANTLING JOINT | FL | 3" | 4" |
| 4 | SPOOL PIECE (7 PIPE DIA. MINIMUM) | FL | 3" | 4" |
| 5 | SPOOL PIECE (5 PIPE DIA. MINIMUM) | FL | 3" | 4" |
| 6 | NIPPLE | FLxPE | 3" | 4" |
| 7 | TEE | MJ | 3" | 4" |
| 8 | PIPE SECTION | PE | 3" | 4" |
| 9 | 90° ELBOW | MJ | 3" | 4" |
| 10 | SPOOL PIECE | FL | 3" | 4" |
| 11 | "CLOW" F-1608 OR "ANVIL" #264 GALV. PIPE SUPPORT W/ COMPANION FLANGE & VARIABLE HEIGHT NIPPLE (6 EA REQ'D) | | △ SYMBOL | |

| NO. | DESCRIPTION (1 1/2" & 2" METER STA.) | JOINT TYPE | 1 1/2" LINE | 2" LINE |
|---|---|---|---|---|
| 12 | "MASTER METER" INTERMEDIATE MULTI-JET METER W/3G INTEGRATED REGISTER | FL | 1 1/2" | 2" |
| 13 | "MUELLER" B-2423-2 METER YOKE (18" RISER) | – | 1 1/2" | 2" |
| 14 | "MUELLER" 110 COMPRESSION CONN. COUPLING | – | 1 1/2" | 2" |




## 1 1/2" & 2" WATER METER STATION



REGISTERED PROFESSIONAL ENGINEER — BRANDON KENT JONES — No. 5148758 — State of Utah

PROJECT ENGINEER

2-12-2019
DATE

| REV. | DATE | APPR. | MODIFIED NOTES |
|---|---|---|---|
| 1 | JAN '19 | BKJ | |

SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

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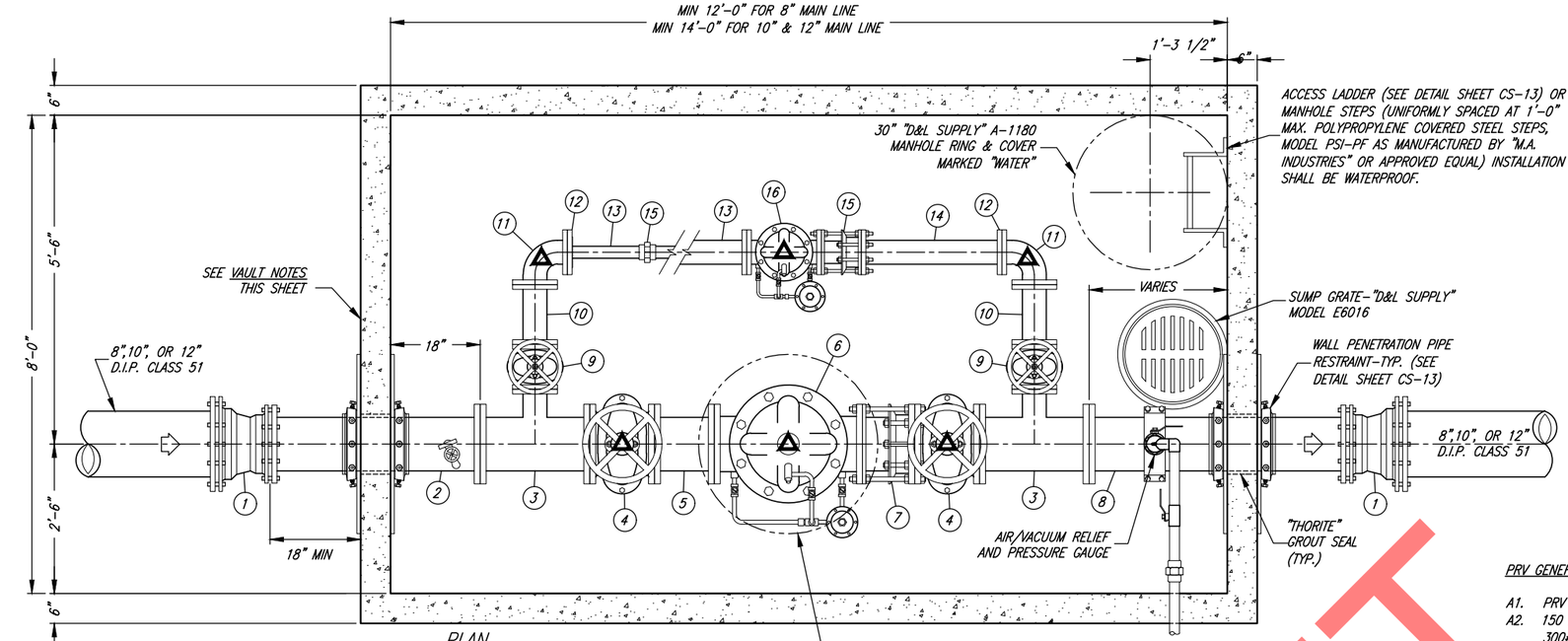
# CULINARY WATER - STANDARD WATER METER STATIONS

SHEET: CS-11
OF 23 SHEETS
0




## PRESSURE REDUCTION STATION

| PIPE & FITTING SCHEDULE | | | | | |
|---|---|---|---|---|---|
| NO. | DESCRIPTION | JOINT TYPE | 8" LINE | 10" LINE | 12" LINE |
| 1 | D.I. REDUCER (2) | MJxMJ | 8"x6" | 10"x8" | 12"x10" |
| 2 | D.I. NIPPLE PIECE | FLxPE | 6" | 8" | 10" |
| 3 | D.I. REDUCING TEE (2) | FL | 6"X6"X4" | 8"X8"X4" | 10"X10"X4" |
| 4 | "MUELLER" A-2361 GATE VALVE W/ HANDWHEEL (2) | FL | 6" | 8" | 10" |
| 5 | 12" D.I. SPOOL PIECE | FL | 6" | 8" | 10" |
| 6 | "CLA-VAL" 90-01 PRESSURE REDUCTION VALVE | FL | 6" | 8" | 10" |
| 7 | "ROMAC" DJ400 DISMANTLING JOINT | FL | 6" | 8" | 10" |
| 8 | D.I. NIPPLE PIECE | FLxPE | 6" | 8" | 10" |
| 9 | "MUELLER" A-2361 GATE VALVE W/ HANDWHEEL (2) | FL | 4" | 4" | 4" |
| 10 | 12" D.I. SPOOL PIECE | FL | 4" | 4" | 4" |
| 11 | D.I. 90° ELBOW (2) | FL | 4" | 4" | 4" |
| 12 | BLIND FLANGE W/ THR. CONNECTION (2) | FLxTHR. | 4"x2" | -- | -- |
| 13 | D.I. SPOOL PIECE | FL | -- | 4" | 4" |
| | BRASS PIPE | THR. | 2" | -- | -- |
| 14 | D.I. SPOOL PIECE | FL | -- | 4" | 4" |
| | BRASS PIPE | THR. | 2" | -- | -- |
| 15 | "ROMAC" DJ400 DISMANTLING JOINT | FL | -- | 4" | 4" |
| | BRASS UNION | THR. | 2" | -- | -- |
| 16 | "CLA-VAL" 90-01 PRESSURE REDUCTION VALVE | FL | -- | 4" | 4" |
| | | THR. | 2" | -- | -- |
| 17 | "CLOW" F-1608 OR "ANVIL" #264 GALV. PIPE SUPPORT W/ 3" COMPANION FLANGE & VARIABLE HEIGHT 3" NIPPLE (6 EA REQ'D.) | | | | △ SYMBOL |

PRV GENERAL SPECIFICATIONS:

A1. PRV TO BE CLA-VAL #90-01 YBCSKC
A2. 150 # FLANGED FOR 250 PSI WORKING PRESSURE, 300# FLANGED IF GREATER THAN 250 PSI
A3. DUCTILE IRON BODY GLOBE PATTERN
A4. EPOXY LINED AND COATED
A5. STAINLESS STEEL INTERNAL TRIM
A6. BRONZE PILOT CONTROLS
A7. STAINLESS STEEL TUBES & FITTINGS
A8. SPRING RANGES FOR PRESSURE REDUCING PILOT
A9. X101 VALVE POSITION INDICATOR
A10. CK2 ISOLATION BALL VALVES (STAINLESS)
A11. CV FLOW CONTROL (OPENING)

COATING NOTES:

B1. THE P.R.V. VALVE SHALL INCLUDE FACTORY INSTALLED INTERIOR EPOXY COATING.

B2. ALL NEW AND EXISTING PIPING, VALVES, FITTINGS, METERS, ETC, INSIDE THE VAULT SHALL BE EPOXY PAINTED.

B3. METAL SURFACES TO BE PAINTED SHALL BE PRIMED AND THEN PAINTED W/ TWO COATS OF EPOXY PAINT.

B4. COLORS AS DIRECTED BY THE CITY ENGINEER OR CITY WATER SYSTEM SUPERINTENDENT.

VAULT NOTES:

C1. PRE-PLUMBED PRV VAULTS ARE THE PREFERRED OPTION FOR INSTALLATION. THE USE AND LOCATION OF A PRE-PLUMBED PRV VAULT SHALL BE AS DIRECTED BY THE CITY ENGINEER FOLLOWING REVIEW OF CURRENT SITE CONDITIONS.

C2. WHERE APPLICABLE, PRESSURE RELIEF VALVE ASSEMBLY MAY BE REQUIRED. THIS IS A CASE BY CASE ITEM DETERMINED BY THE CITY WATER DEPARTMENT (PRV VAULT WILL NEED TO BE LENGTHENED TO ACCOMMODATE SUCH VALVE)

C3. PRECAST CONCRETE STRUCTURE CAN BE REPLACED WITH CAST-IN-PLACE CONCRETE VAULT. SUBMIT ENGINEERED CONSTRUCTION PLANS WITH REBAR DETAILS TO CITY ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.

C4. PENETRATION WALLS NEED TO BE ADEQUATELY DESIGNED STRUCTURALLY FOR ANTICIPATED THRUST.

C5. THE PRECAST VAULT MANUFACTURER IS RESPONSIBLE FOR DESIGN RELATED TO HL-93 TRAFFIC LOADING AND THRUST. VERIFICATION OF PROPER DESIGN MUST BE PROVIDED TO THE CITY BY THE DEVELOPER, CONTRACTOR, OR PROPERTY OWNER AS THE CASE MAY BE.

GENERAL NOTES:

A. "BLUE" BOLTS AND NUTS ARE REQUIRED BY THE CITY.

B. ALL FITTINGS OUTSIDE OF THE VAULT ARE TO BE DUCTILE IRON MJ WITH THRUST RESTRAINT RETAINER GLANDS ("ROMAC", MJRG, OR APPROVED EQUAL)

C. STRUCTURE, PIPING & VALVE SIZES FOR P.R.V. STATIONS ON LINE SIZES GREATER THAN 12" SHALL BE SPECIFIED BY THE CITY ENGINEER.

D. ALL SPECIFIED BRANDS OF MATERIALS SHOWN ON THESE DRAWINGS ARE "CITY STANDARDS." OTHER EQUIVALENT BRANDS MAY BE USED WITH THE PRIOR APPROVAL OF THE CITY ENGINEER AND THE CITY WATER SYSTEM SUPERINTENDENT.



REGISTERED PROFESSIONAL ENGINEER
BRANDON KENT JONES
No. 5148758
State of Utah

PROJECT ENGINEER
2-12-2019
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| 1 | JAN '19 | BKJ | |

SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

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SOUTH WEBER CITY CORPORATION
PUBLIC WORKS STANDARDS

# CULINARY WATER - PRESSURE REDUCTION STATION

SHEET: CS-12
OF 23 SHEETS
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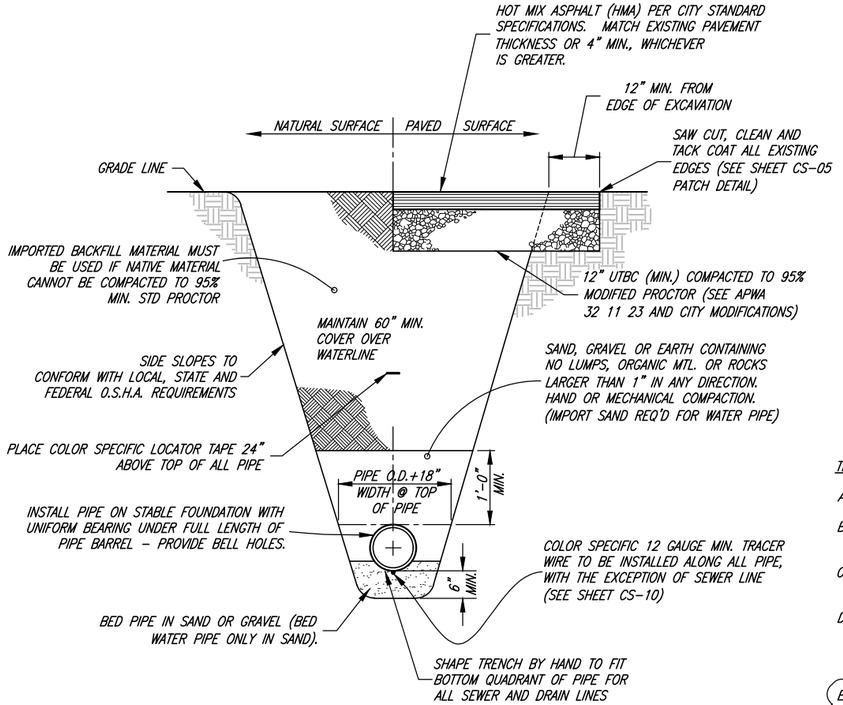
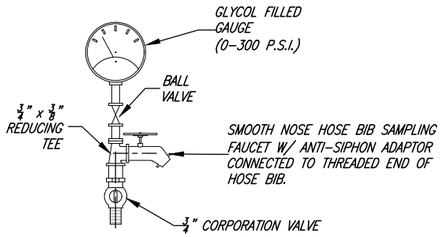


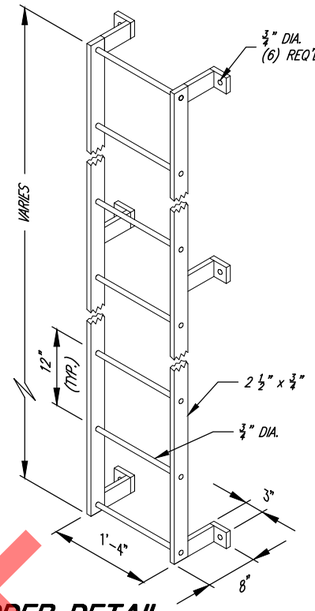

## TYPICAL TRENCH SECTION

(WATER, IRRIGATION, SEWER, STORM DRAIN, AND LAND DRAIN)



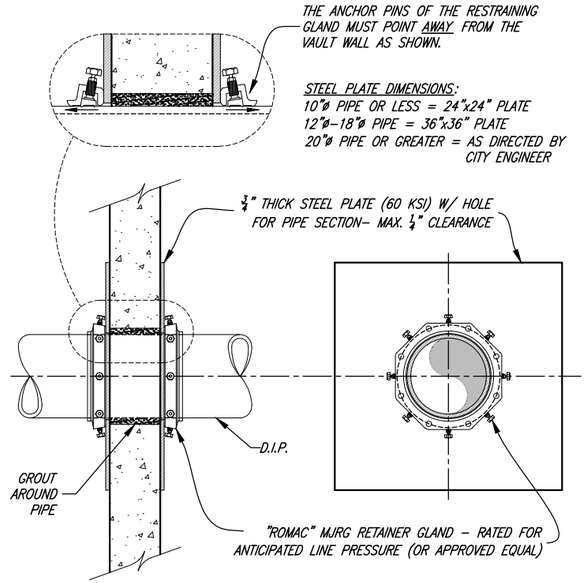

## PRESSURE GAUGE

W/SAMPLING FAUCET DETAIL




## LADDER DETAIL

HOT DIP GALVANIZE AFTER FABRICATION




## WALL PENETRATION DETAIL

FOR PRECAST VAULT (TYP)

TRENCH NOTES:

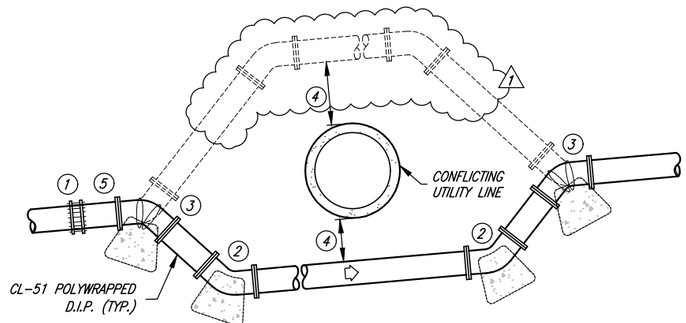
A. BACKFILL PER APWA 33 05 20 AND CITY MODIFICATIONS.

B. COMPACTION TEST REQUIRED AT SPRING–LINE FOR ALL P.V.C. OR H.D.P.E. PIPES.

C. PAVEMENT RESTORATION PER APWA 33 05 25 AND CITY MODIFICATIONS.

D. GRAVEL SURFACED AREAS, SUCH AS ROADS AND SHOULDERS, PARKING AREAS, AND UNPAVED DRIVEWAYS, SHALL BE REPAIRED WITH 8" THICK (MIN.) 1" UNTREATED BASE COURSE COMPACTED TO 95% MODIFIED PROCTOR.

E. WATER & SEWER LINES, INCLUDING SERVICE LINES, SHALL NOT BE INSTALLED IN THE SAME TRENCH. (1)




## TYPICAL WATERLINE LOOP

(1) TRANSITION COUPLING; "ROMAC" MODEL 501

(2) MJ 45° BEND W/RETAINER GLANDS

(3) CONSTRUCT THRUST BLOCKS AT EACH 45° BEND W/(3) #6 REBAR SECURING BLOCK TO FITTING (EPOXY COATING)

(4) MINIMUM OF 12" COVER BETWEEN THE WATERLINE AND CONFLICTING UTILITY LINE TO BE CROSSED, EXCEPT LOOPS INVOLVING SEWER MAINS WHERE A MINIMUM OF 18" VERTICAL COVER ABOVE THE SEWER MAIN IS REQUIRED. EXCEPTIONS MUST BE APPROVED BY THE UTAH DIVISION OF DRINKING WATER (DDW.) (1)

(5) AN AIR/VACUUM RELIEF VALVE MAY BE REQUIRED ON A CASE BY CASE BASIS AS DIRECTED BY THE CITY WATER SYSTEM SUPERINTENDENT.

## PIPE RESTRAINT

A1. FOR NOMINAL PIPE DIAMETERS 8" AND GREATER, ALL BENDS, CROSSES, TEES, REDUCERS, AND VALVES SHALL BE INSTALLED WITH RESTRAINING JOINTS ("MEGA–LUG" OR APPROVED EQUAL).

A2. DESIGN SHALL ALSO BE REQUIRED TO ENSURE ADEQUATE RESTRAINT FOR PIPING JOINTS NEAR FITTINGS BASED ON PIPE DIAMETER AND PIPE PRESSURE.

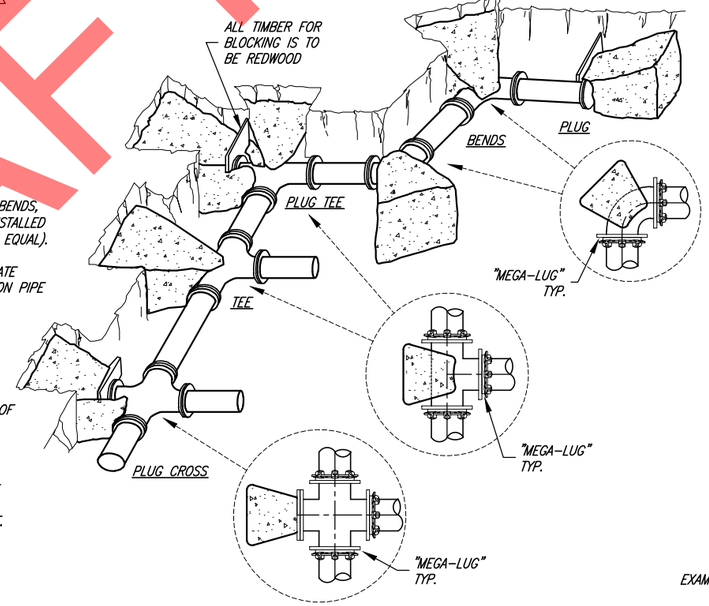
THRUST BLOCKING NOTES:

B1. CONCRETE SHALL NOT BE PLACED WITHIN 1–1/2" OF JOINTS AND BOLTS. COVER ALL METAL CONTACT AREAS WITH A POLY WRAP PRIOR TO CONCRETE PLACEMENT.

B2. IN THE ABSENCE OF A SOILS REPORT, ALL THRUST BLOCKS SHALL BE SIZED ON THE BASIS OF A MAXIMUM LATERAL BEARING VALUE FOR 2000 P.S.F. AND A THRUST RESULTING FROM 200% OF THE WATER LINE STATIC LINE TEST.

B3. THRUST BLOCKS ARE REQUIRED AT ALL BENDS OF 22–1/2° OR MORE. 11–1/4° BENDS SHALL HAVE RETAINER GLANDS.

B4. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS.




## TYPICAL RETAINER GLANDS & THRUST BLOCKING

THRUST PER PSI OF WATER PRESSURE AT VARIOUS FITTINGS

| PIPE SIZE (IN.) | DEAD END OR TEE (LB.) | 90° ELBOW (LB.) | 45° ELBOW (LB.) | 22–1/2° ELBOW (LB.) |
|---|---|---|---|---|
| 4 | 19 | 27 | 15 | 7 |
| 6 | 39 | 55 | 30 | 15 |
| 8 | 67 | 94 | 51 | 26 |
| 10 | 109 | 154 | 84 | 43 |
| 12 | 155 | 218 | 119 | 61 |
| 14 | 210 | 296 | 161 | 82 |
| 16 | 272 | 383 | 209 | 106 |
| 18 | 351 | 494 | 269 | 137 |
| 20 | 434 | 611 | 333 | 169 |
| 24 | 623 | 878 | 487 | 244 |
| 30 | 947 | 1,332 | 722 | 377 |
| 36 | 1,356 | 1,905 | 1,032 | 542 |

NOTES:

C1. IN USING THE ABOVE TABLE, USE THE MAXIMUM INTERNAL PRESSURE ANTICIPATED (I.E. HYDROSTATIC TEST PRESSURE, POSSIBLE SURGE PRESSURE DUE TO PUMP SHUT OFF, ETC.).

C2. SEE SOILS REPORT FOR BEARING STRENGTH OF SOIL. IN THE ABSENCE OF A SOILS REPORT, AN AVERAGE SOIL (SPADABLE MEDIUM CLAY) CAN BE ASSUMED TO HAVE A BEARING STRENGTH OF 2000 P.S.F.

EXAMPLE:

8–INCH 90° ELBOW, PRESSURE 200 LB./SQ. IN.
FROM TABLE: THRUST = 94 X 200 = 18,800 LB.
ASSUME BEARING STRENGTH = 2.000 LB./SQ. FT.

18,8000 / 2,000 = 9.4 SQ. FT. AREA OF BEARING REQUIRED FOR THRUST BLOCK



REGISTERED PROFESSIONAL ENGINEER — BRANDON KENT JONES — No. 5148758 — State of Utah

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| 1 | JAN '19 | BKJ | ADDED AND/OR MODIFIED NOTES & DETAIL |

SCALE: N.T.S.

DESIGNED BKJ
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CHECKED BKJ

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SOUTH WEBER CITY CORPORATION

PUBLIC WORKS STANDARDS

# CULINARY WATER - THRUST BLOCK, WATERLINE LOOP, PIPE TRENCH & MISC. VAULT DETAILS

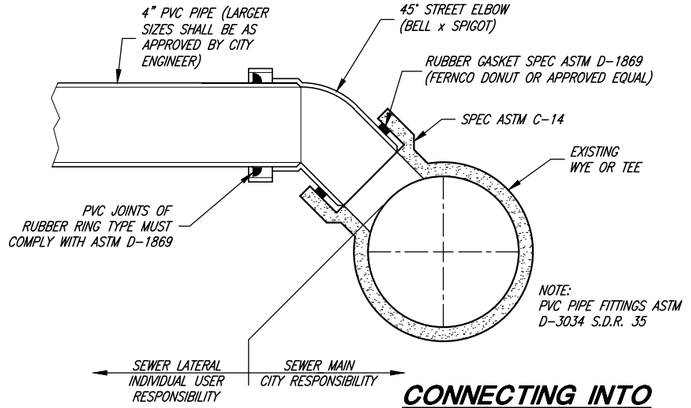
SHEET: CS-13

OF 23 SHEETS

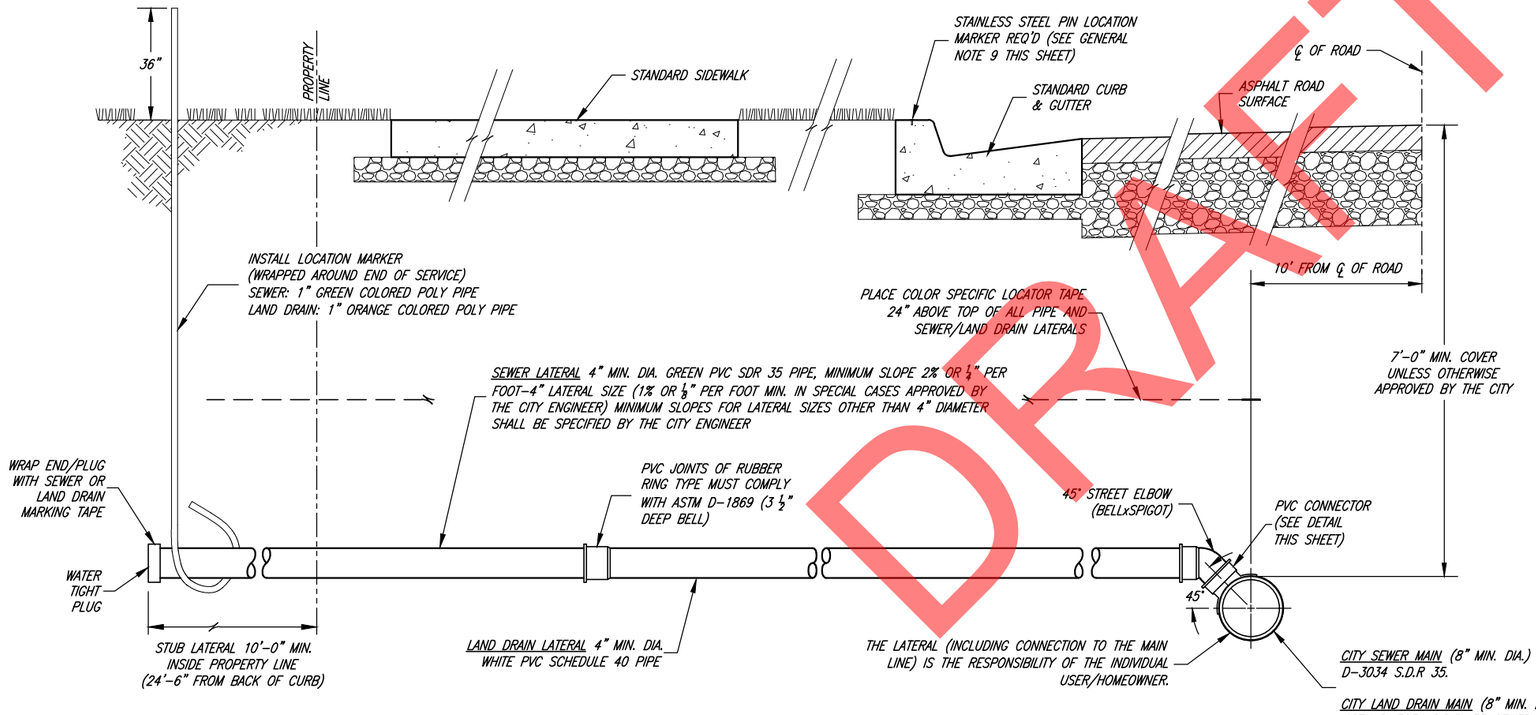
0

GENERAL NOTES:

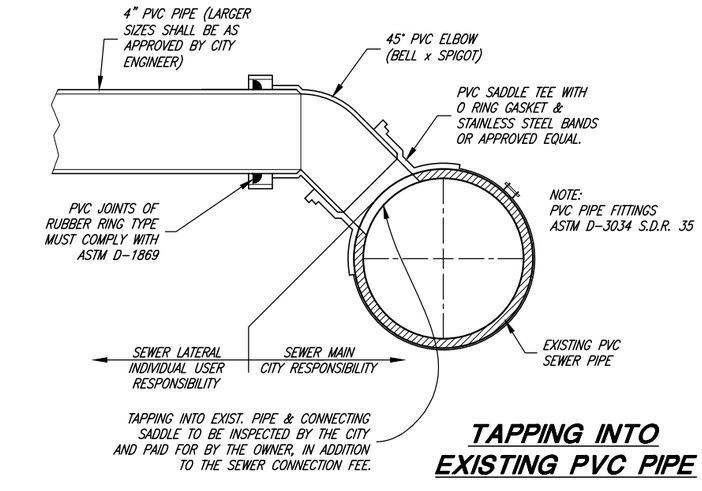
1. ALL SANITARY SEWER LATERAL CONNECTIONS ON SEWER MAINS IN NEW SUBDIVISIONS SHALL BE MADE WITH IN LINE PRE-FORMED WYES OR TEES UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
2. FLOWLINE ELEVATION OF LATERALS SHALL EQUAL THE INSIDE TOP OF PIPE ON MAINLINE AT THE CONNECTING POINT (THE LATERAL TAP SHALL BE IN THE TOP QUARTER OF THE SEWER MAIN LINE PREFERABLY IN THE 10:00 OR 2:00 POSITION).
3. SANITARY SEWER SERVICE LATERAL CONNECTIONS SHALL NOT BE ALLOWED IN SEWER MANHOLES.
4. SANITARY SEWER MAINS AND LATERALS SHALL BE "GREEN" IN COLOR. LAND DRAIN MAIN LINES SHALL BE "GREEN" IN COLOR AND LAND DRAIN LATERAL LINES SHALL BE "WHITE IN COLOR, IRRIGATION PIPES SHALL BE "PURPLE" IN COLOR. PREVIOUS YEARS PIPE COLORS VARY THROUGHOUT THE CITY. **CONTRACTOR TO VERIFY EXISTING PIPE PRIOR TO MAKING ANY CONNECTION,**
5. INSERTA TEE PRODUCT IS NOT APPROVED BY THE CITY
6. ALL CLEANOUTS SHALL BE MARKED AND FITTED WITH A METAL LID FOR LOCATION PURPOSES
7. ALL CULINARY WATER MAINS AND SERVICES MUST MAINTAIN A MINIMUM SEPARATION ABOVE ALL SEWER MAINS AND LATERALS OF 18" VERTICAL AND 10'-0" HORIZONTAL IN ACCORDANCE WITH THE STATE OF UTAH DIVISION OF DRINKING WATER (DDW) RULES SECTION R309-550-7. EXCEPTIONS MUST BE APPROVED BY DDW. (1)
8. ALL SANITARY SEWER LINES SHALL BE INSPECTED BY MEANS OF VIDEO CAMERA WHEN CONSTRUCTED.
9. STAMPED STAINLESS STEEL PINS USED FOR LATERAL LOCATING ARE REQUIRED BY THE CITY. BLANK S.S. PINS SHALL BE PROVIDED BY THE CITY AND INSTALLED AND STAMPED BY THE CONTRACTOR DURING ALL NEW CONSTRUCTION OR RESTORED WHEN REPLACING DAMAGED CURB & GUTTER DUE TO ANY CONSTRUCTION RELATED ACTIVITY. S.S. PINS SHALL BE STAMPED "S" FOR SANITARY SEWER, "W" FOR CULINARY WATER, AND "L" FOR LAND DRAIN.
10. DOWNSTREAM LAND DRAIN CONNECTION TO AN EXISTING STORM DRAIN SYSTEM IS REQUIRED.




## CONNECTING INTO EXISTING WYE OR TEE




## TYPICAL SEWER / LAND DRAIN LATERALS CONNECTION




## TAPPING INTO EXISTING PVC PIPE



REGISTERED PROFESSIONAL ENGINEER — BRANDON KENT JONES No. 5148758 — State of Utah

PROJECT ENGINEER

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| 1 | JAN '19 | BKJ | DELETED EX. DETAIL; MODIFIED NOTES |

SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
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# SANITARY SEWER - LATERAL & CONNECTION DETAILS

SHEET: CS-14
OF 23 SHEETS
0

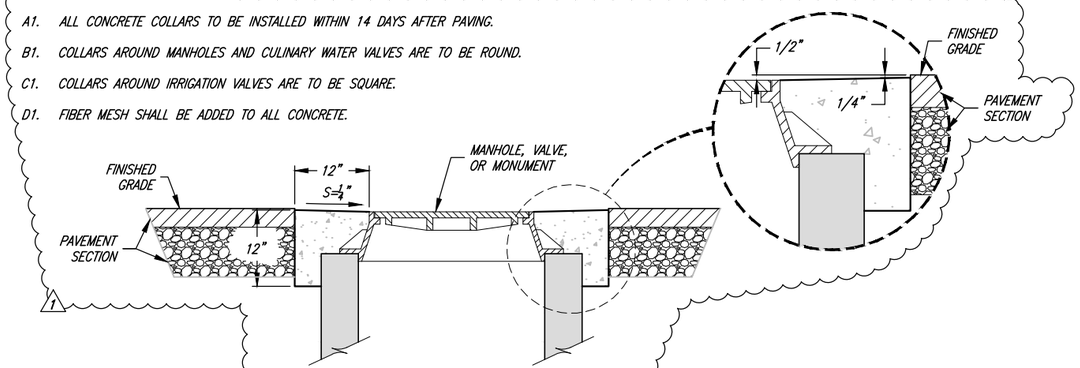
CONCRETE COLLAR NOTES:

A1. ALL CONCRETE COLLARS TO BE INSTALLED WITHIN 14 DAYS AFTER PAVING.

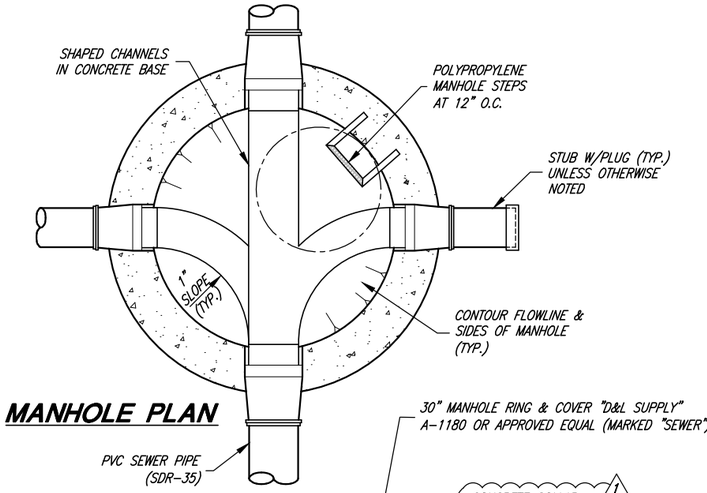
B1. COLLARS AROUND MANHOLES AND CULINARY WATER VALVES ARE TO BE ROUND.

C1. COLLARS AROUND IRRIGATION VALVES ARE TO BE SQUARE.

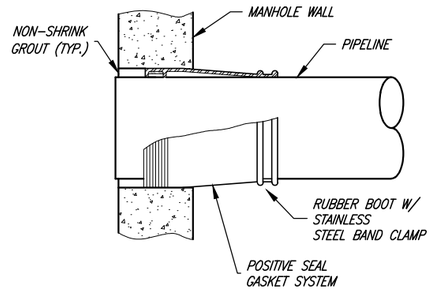
D1. FIBER MESH SHALL BE ADDED TO ALL CONCRETE.




## CONCRETE COLLAR DETAIL




## MANHOLE PLAN




## RUBBER BOOT DETAIL

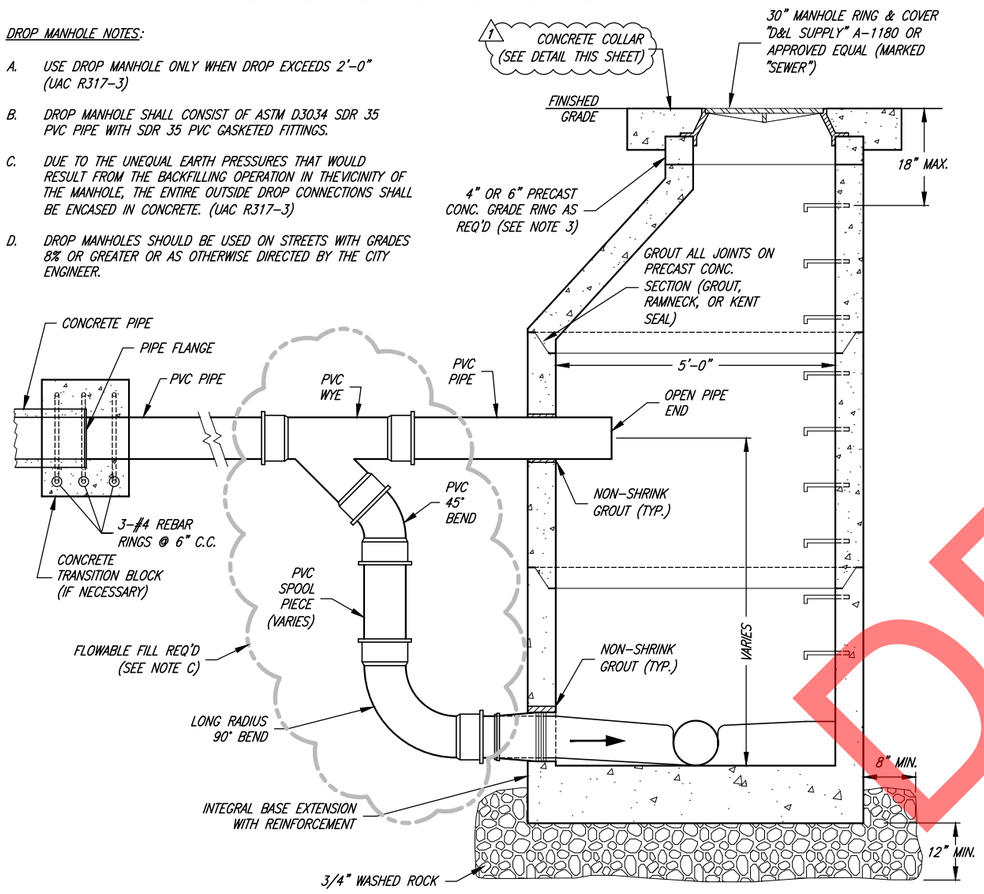
DROP MANHOLE NOTES:

A. USE DROP MANHOLE ONLY WHEN DROP EXCEEDS 2'-0" (UAC R317-3)

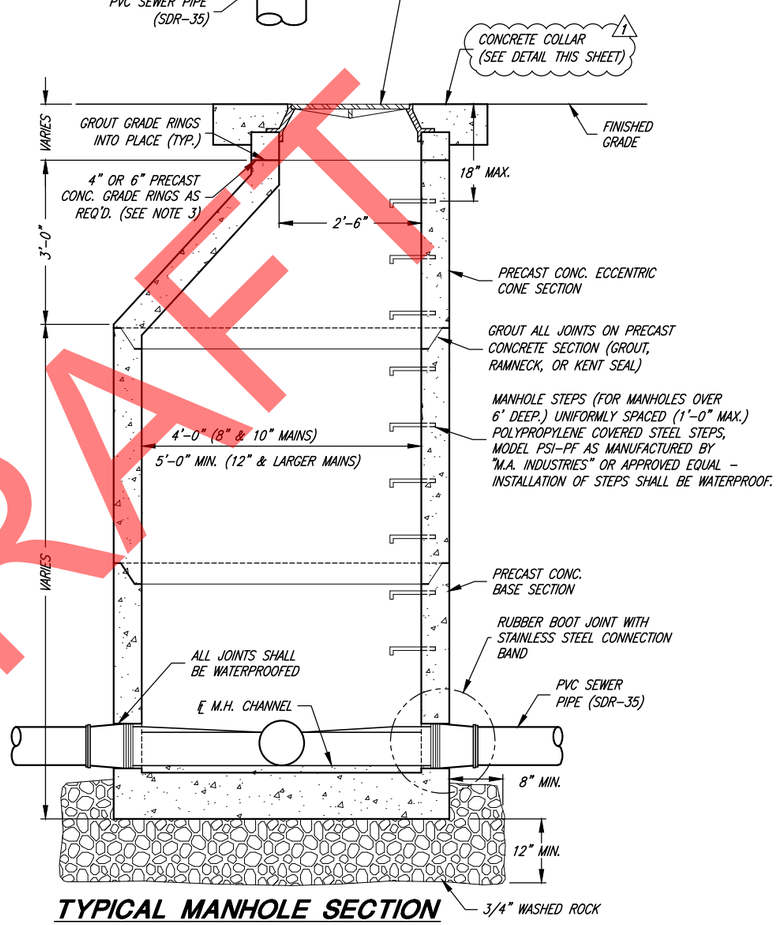
B. DROP MANHOLE SHALL CONSIST OF ASTM D3034 SDR 35 PVC PIPE WITH SDR 35 PVC GASKETED FITTINGS.

C. DUE TO THE UNEQUAL EARTH PRESSURES THAT WOULD RESULT FROM THE BACKFILLING OPERATION IN THEVICINITY OF THE MANHOLE, THE ENTIRE OUTSIDE DROP CONNECTIONS SHALL BE ENCASED IN CONCRETE. (UAC R317-3)

D. DROP MANHOLES SHOULD BE USED ON STREETS WITH GRADES 8% OR GREATER OR AS OTHERWISE DIRECTED BY THE CITY ENGINEER.




## TYPICAL DROP MANHOLE SECTION




## TYPICAL MANHOLE SECTION

GENERAL NOTES:

1. SECURE INVERTS IN ALL MANHOLES DURING CONSTRUCTION SO AS TO PREVENT GRAVEL AND OTHER DEBRIS FROM COLLECTING INSIDE.
2. A LARGER DIAMETER MANHOLE MAY BE REQUIRED BY THE DESIGN ENGINEER AFTER EVALUATION OF THE NUMBER, SIZE, AND ANGLE OF THE PIPES THAT CONNECT TO THE MANHOLE.
3. NO MORE THAN 12" OF GRADE RINGS TO BE ALLOWED ON ANY MANHOLE.
4. ALL TERMINATING SEWER MAINS SHALL END WITH A CITY STANDARD MANHOLE.
5. SERVICE LATERAL CONNECTIONS SHALL NOT BE ALLOWED IN SEWER MANHOLES.
6. ALL SANITARY SEWER LINES SHALL BE INSPECTED BY MEANS OF VIDEO CAMERA AND AIR TESTED WHEN CONSTRUCTED. SEE APWA 33 08 00 AND CITY MODIFICATIONS FOR MORE INFORMATION.
7. WHERE THE DIFFERENCE IN ELEVATION BETWEEN THE INCOMING SEWER AND MANHOLE INVERT IS LESS THAN 24 INCHES, THE INVERT SHOULD BE FILLETED.
8. FLAT MANHOLE RINGS & COVERS (SLAB CONSTRUCTION) ARE NOT ALLOWED ON ANY MANHOLE CONE SECTION. 1



REGISTERED PROFESSIONAL ENGINEER — BRANDON KENT JONES — No. 5148758 — State of Utah

Brandon K. Jones
PROJECT ENGINEER
2-12-2019
DATE

| REV. | DATE | APPR. | |
|---|---|---|---|
| 1 | JAN '19 | BKJ | ADDED DETAIL; ADDED AND/OR MODIFIED NOTES |

SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

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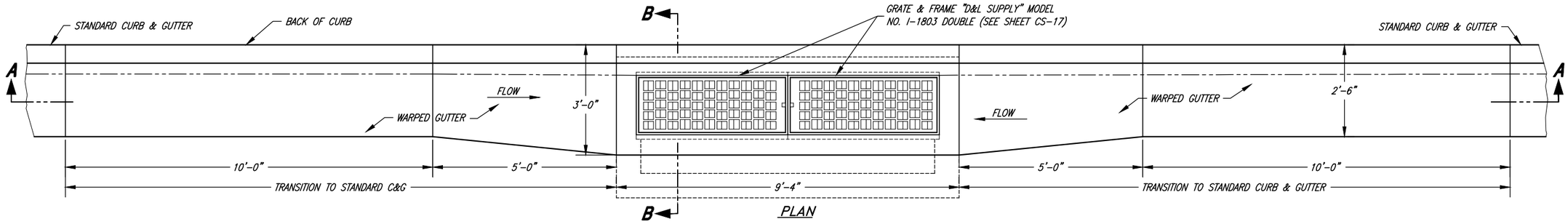
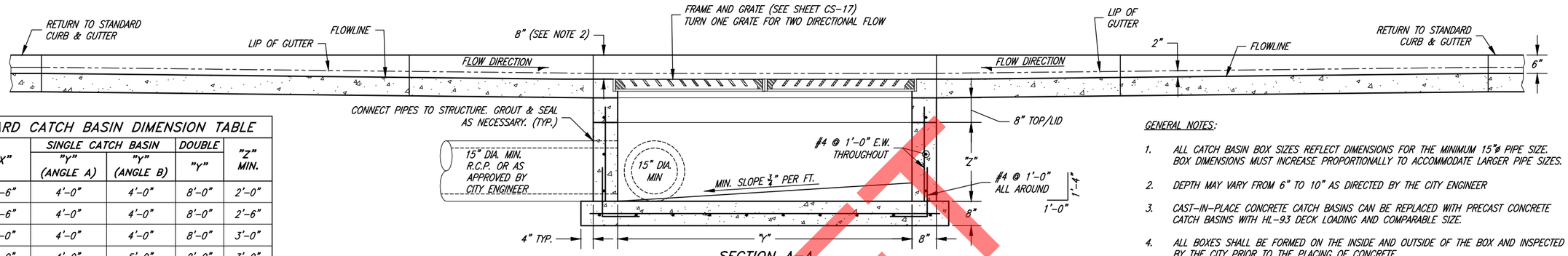
# SANITARY SEWER - TYPICAL MANHOLES & DETAILS

SHEET: CS-15 OF 23 SHEETS
0



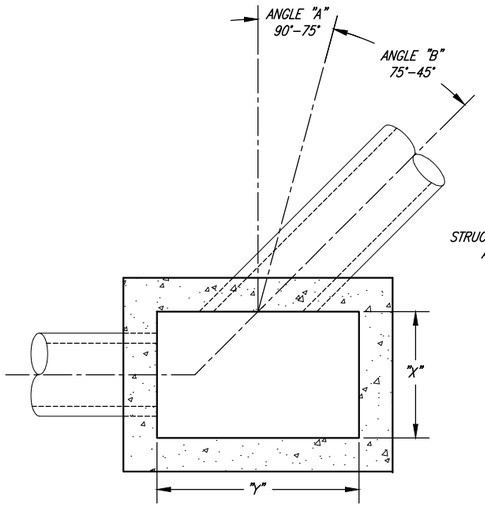

PLAN

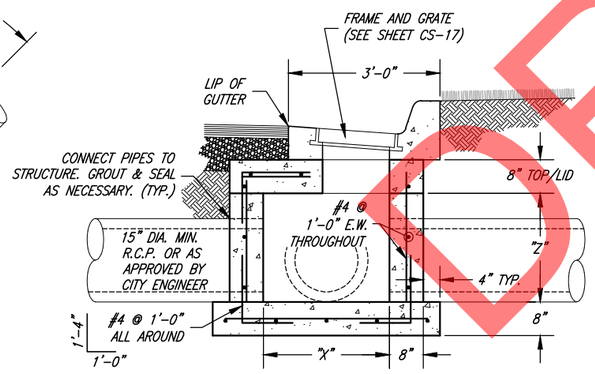



SECTION A-A

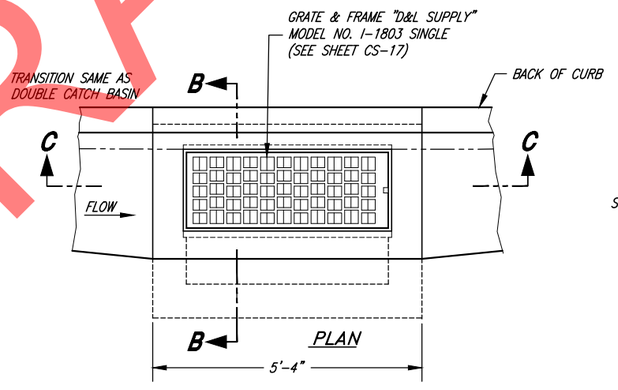
## DOUBLE CATCH BASIN

| STANDARD CATCH BASIN DIMENSION TABLE | | | | | |
|---|---|---|---|---|---|
| PIPE SIZE (IN.) | "X" | SINGLE CATCH BASIN "Y" (ANGLE A) | SINGLE CATCH BASIN "Y" (ANGLE B) | DOUBLE "Y" | "Z" MIN. |
| 15 | 2'-6" | 4'-0" | 4'-0" | 8'-0" | 2'-0" |
| 18 | 2'-6" | 4'-0" | 4'-0" | 8'-0" | 2'-6" |
| 21 | 4'-0" | 4'-0" | 4'-0" | 8'-0" | 3'-0" |
| 24 | 4'-0" | 4'-0" | 5'-0" | 8'-0" | 3'-0" |
| 30 | 4'-0" | 4'-0" | 6'-0" | 8'-0" | 3'-6" |
| 36 | 4'-0" | 5'-0" | 6'-0" | 8'-0" | 4'-0" |
| 42 | 6'-0" | 6'-0" | 7'-0" | 8'-0" | 5'-0" |
| 48 | 6'-0" | 6'-0" | 8'-0" | 8'-0" | 5'-6" |

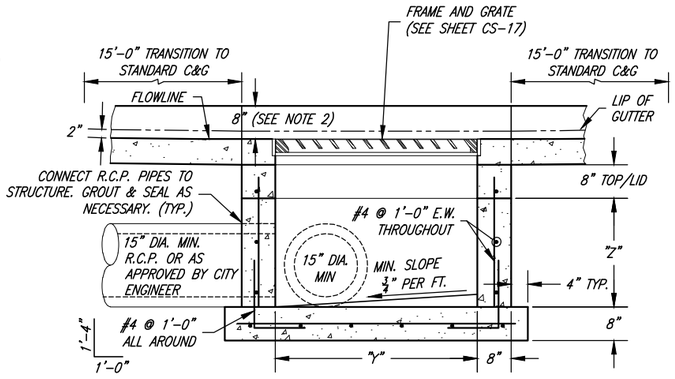



SECTION B-B




## SINGLE CATCH BASIN




SECTION C-C

GENERAL NOTES:

1. ALL CATCH BASIN BOX SIZES REFLECT DIMENSIONS FOR THE MINIMUM 15"Ø PIPE SIZE. BOX DIMENSIONS MUST INCREASE PROPORTIONALLY TO ACCOMMODATE LARGER PIPE SIZES.
2. DEPTH MAY VARY FROM 6" TO 10" AS DIRECTED BY THE CITY ENGINEER
3. CAST-IN-PLACE CONCRETE CATCH BASINS CAN BE REPLACED WITH PRECAST CONCRETE CATCH BASINS WITH HL-93 DECK LOADING AND COMPARABLE SIZE.
4. ALL BOXES SHALL BE FORMED ON THE INSIDE AND OUTSIDE OF THE BOX AND INSPECTED BY THE CITY PRIOR TO THE PLACING OF CONCRETE.
5. DOUBLE CATCH BASINS WILL BE REQUIRED IN LOCATIONS SPECIFIED BY THE CITY ENGINEER (TYPICALLY IN LOW SPOTS OR WHERE ADDITIONAL INLET CAPACITY IS NEEDED).
6. STORM DRAIN LINES SHALL BE 15 INCH MINIMUM DIAMETER REINFORCED CONCRETE PIPE (RCP), OF APPROPRIATE CLASS.
7. ALTERNATE STRUCTURE (E.G. COMBO BOXES) MAY BE USED WITH APPROVAL OF THE CITY ENGINEER. STRUCTURES SHALL FOLLOW APWA STANDARD PLANS AND BE A COMMON SIZE.



REGISTERED PROFESSIONAL ENGINEER — BRANDON KENT JONES No. 5148758 — State of Utah

PROJECT ENGINEER

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| 1 | JAN '19 | BKJ | ADDED NOTE |

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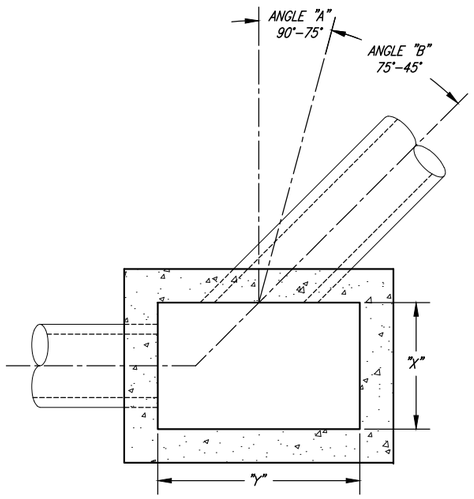
# STORM DRAIN - SINGLE AND DOUBLE CATCH BASIN DETAILS

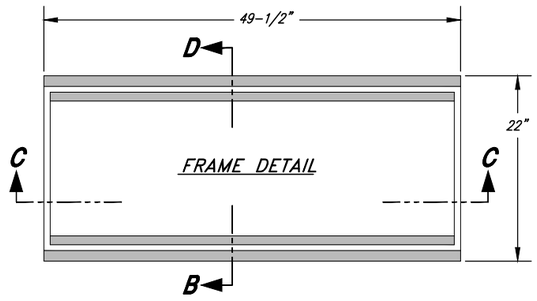
SHEET: CS-16
OF 23 SHEETS
0

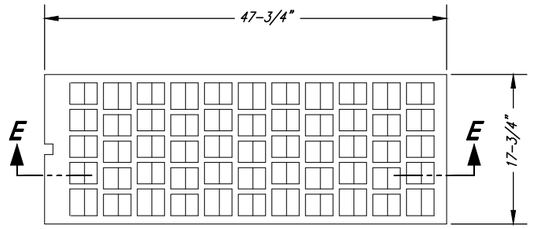



| DRAINAGE DITCH INLET BOX DIMENSION TABLE | | | | |
|---|---|---|---|---|
| PIPE SIZE (IN.) | "X" | INLET BOX "Y" (ANGLE A) | INLET BOX "Y" (ANGLE B) | "Z" MIN. |
| 15 | 2'-6" | 4'-0" | 4'-0" | 2'-0" |
| 18 | 2'-6" | 4'-0" | 4'-0" | 2'-6" |
| 21 | 4'-0" | 4'-0" | 4'-0" | 3'-0" |
| 24 | 4'-0" | 4'-0" | 5'-0" | 3'-0" |
| 30 | 4'-0" | 4'-0" | 6'-0" | 3'-6" |
| 36 | 4'-0" | 4'-0" | 6'-0" | 4'-0" |
| 42 | 6'-0" | 6'-0" | 7'-0" | 5'-0" |
| 48 | 6'-0" | 6'-0" | 8'-0" | 5'-6" |

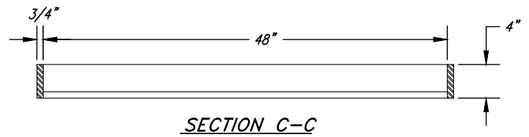
GENERAL NOTE:

STORM DRAIN LINES SHALL BE 15 INCH MINIMUM DIAMETER REINFORCED CONCRETE PIPE (RCP), OF APPROPRIATE CLASS.

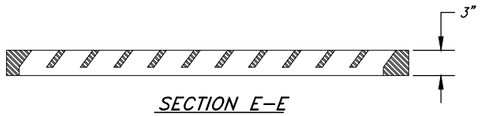



GRATE DETAIL




SECTION C-C




SECTION E-E

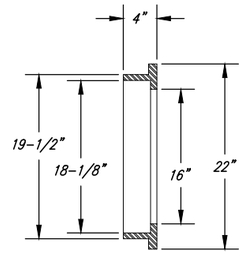
## FRAME & GRATE DETAILS

FRAME AND GRATE NOTES:

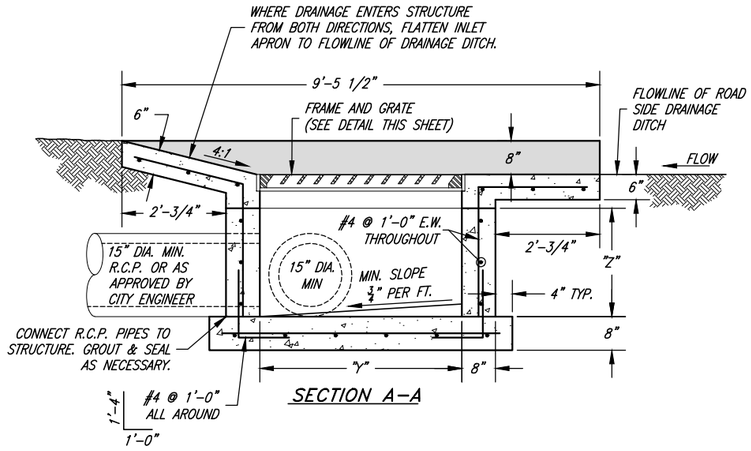
A1. GRATE AND FRAME SHALL BE AS MANUFACTURED BY "D&L SUPPLY" I-1803

B1. BICYCLE SAFE GRATE REQUIRED.

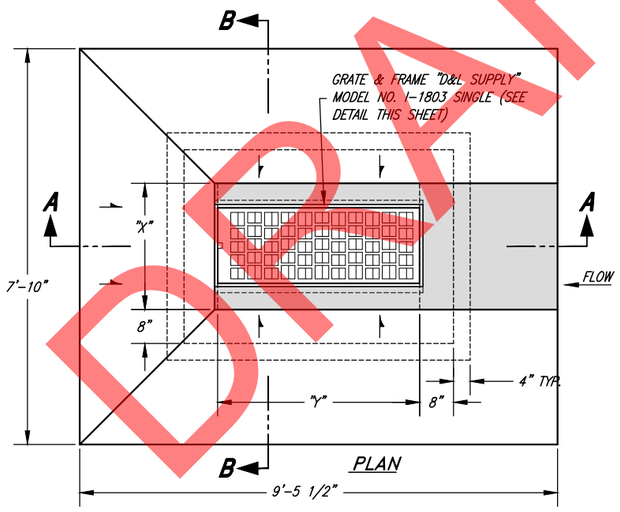
C1. "OR EQUAL" GRATES AND FRAMES WILL BE CONSIDERED AS APPROVED BY THE CITY ENGINEER.



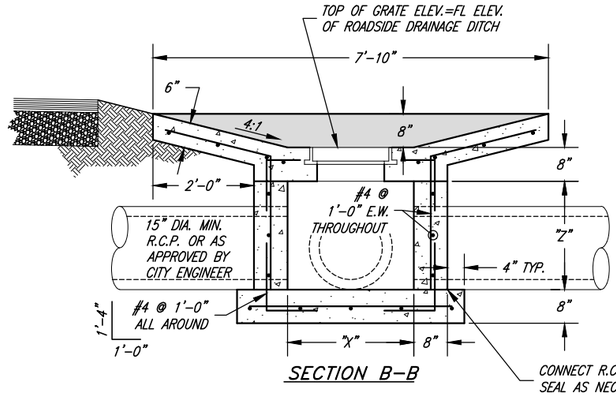

SECTION D-D




SECTION A-A




## DRAINAGE DITCH / PARKING LOT INLET BOX




SECTION B-B

DRAINAGE BOX NOTES:

1. ALL BOX SIZES REFLECT DIMENSIONS FOR THE MINIMUM 15"ø PIPE SIZE. BOX DIMENSIONS MUST INCREASE PROPORTIONALLY TO ACCOMMODATE LARGER PIPE SIZES. (SEE TABLE THIS SHEET)
2. CAST-IN-PLACE CONCRETE STRUCTURES CAN BE REPLACED WITH PRECAST CONCRETE STRUCTURES WITH HL-93 DECK LOADING AND COMPARABLE SIZE.
3. ALL BOXES SHALL BE FORMED ON THE INSIDE AND OUTSIDE OF THE BOX AND INSPECTED BY THE CITY PRIOR TO THE PLACING OF CONCRETE.



REGISTERED PROFESSIONAL ENGINEER
BRANDON KENT JONES
No. 5148758
State of Utah

PROJECT ENGINEER
2-12-2019
DATE

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DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

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6080 Fashion Point Drive
South Ogden, Utah 84403 (801) 476-9767
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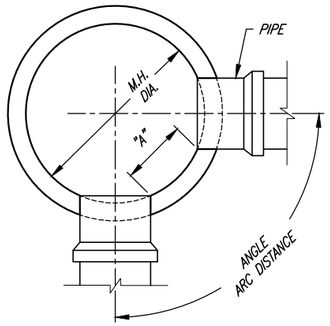
SOUTH WEBER CITY CORPORATION
PUBLIC WORKS STANDARDS
STORM DRAIN - DRAINAGE INLET BOX & GENERAL GRATE AND FRAME DETAILS

SHEET: CS-17
OF 23 SHEETS
0

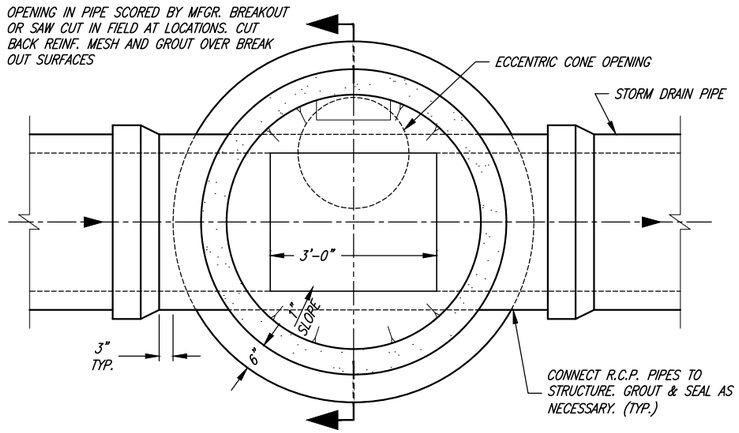
## PIPE SIZES

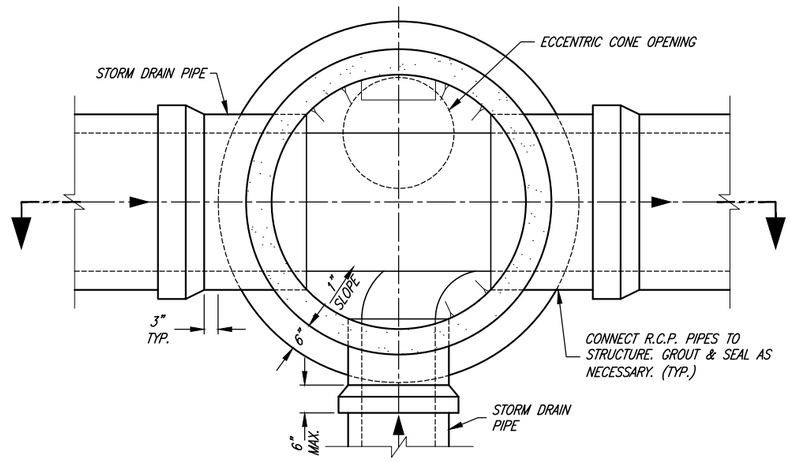
| M.H. SIZE | IN-LINE M.H. 180° | JUNCTION MANHOLE (ANGLE / ARC DISTANCE) 90° | 85° | 80° | 75° | 70° | 65° | 60° | 55° | 50° | 45° |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 4'ø M.H. | 15"-24" | 15"-18" | 15"-18" | 15" | 15" | -- | -- | -- | -- | -- | -- |
| 5'ø M.H. | 27"-30" | 21"-24" | 21"-24" | 18"-21" | 18"-21" | 15"-18" | 15"-18" | 15" | -- | -- | -- |
| 6'ø M.H. | 36"-48" | 27"-30" | 27"-30" | 24"-27" | 24" | 21"-24" | 21" | 18" | 15"-18" | 15" | -- |
| 7'ø M.H. | 54" | 36" | 36" | 30" | 27"-30" | 27" | 24" | 21"-24" | 21" | 18" | 15" |
| 8'ø M.H. | 60" | 42" | 42" | 36" | 36" | 30" | 27"-30" | 27" | 24" | 21" | 18" |




SIZING NOTES:

1. SUGGESTED "A" DISTANCE IS 6" OR GREATER FOR 48", 60" AND 72" DIAMETER MANHOLES
2. SUGGESTED "A" DISTANCE IS 8" OR GREATER FOR 84" AND 96" DIAMETER MANHOLES




GENERAL NOTES:

A. STORM DRAIN MANHOLE DIAMETER TO BE DETERMINED BY THE DESIGN ENGINEER AFTER EVALUATION OF THE NUMBER, SIZE, AND PIPE ENTRY ANGLE OF THE PIPES THAT CONNECT TO THE MANHOLE.

B. NO MORE THAN 12" OF GRADE RINGS TO BE ALLOWED ON ANY MANHOLE

C. PLYWOOD COVERS SHALL BE USED AT MANHOLE FLOOR TO COVER FLOWLINE DURING CONSTRUCTION AND MAINTENANCE ACTIVITIES.

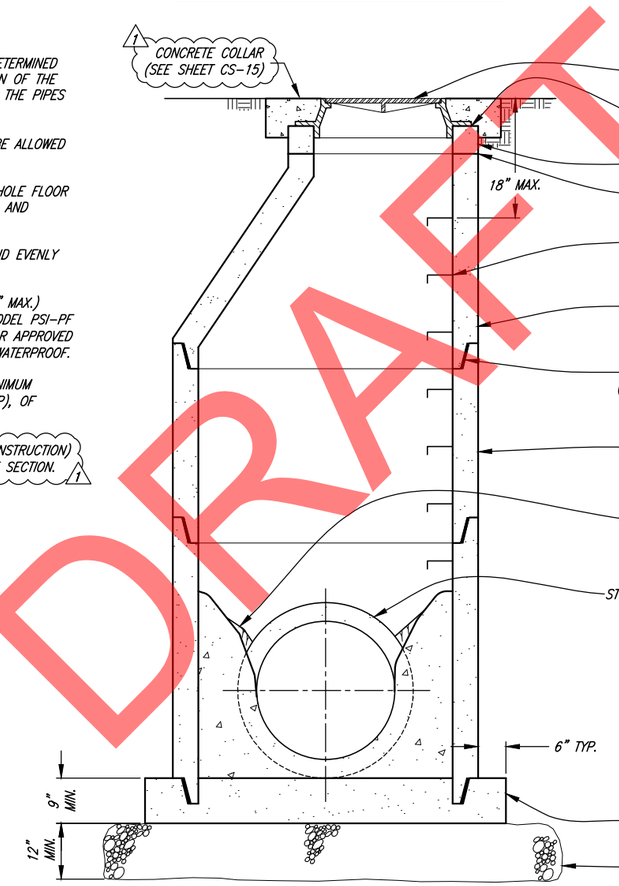
D. ALL INTERIOR JOINTS SHALL BE SMOOTH AND EVENLY GROUTED WITH NON-SHRINK GROUT MIX.

E. MANHOLE STEPS UNIFORMLY SPACED (1'-0" MAX.) POLYPROPYLENE COVERED STEEL STEPS, MODEL PSI-PF AS MANUFACTURED BY "M.A. INDUSTRIES" OR APPROVED EQUAL-INSTALLATION OF STEPS SHALL BE WATERPROOF.

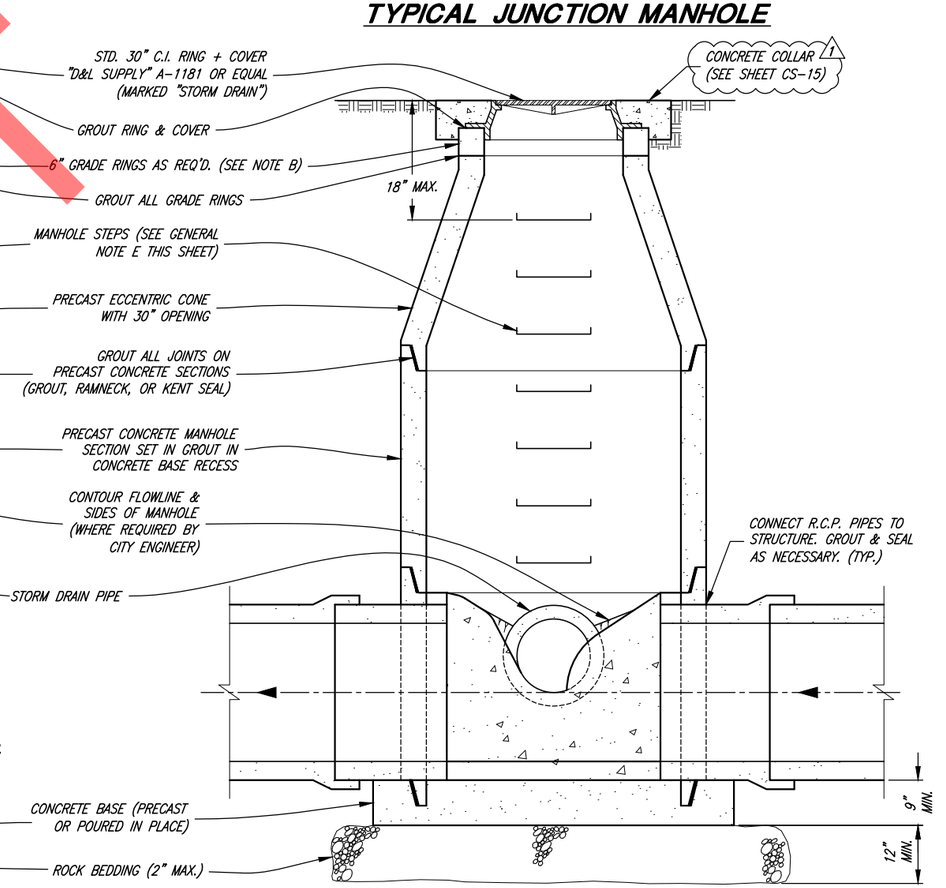
F. STORM DRAIN LINES SHALL BE 15 INCH MINIMUM DIAMETER REINFORCED CONCRETE PIPE (RCP), OF APPROPRIATE CLASS.

G. FLAT MANHOLE RINGS & COVERS (SLAB CONSTRUCTION) ARE NOT ALLOWED ON ANY MANHOLE CONE SECTION. 1

## TYPICAL LINE MANHOLE




## TYPICAL JUNCTION MANHOLE






REGISTERED PROFESSIONAL ENGINEER
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PROJECT ENGINEER

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|---|---|---|---|
| 1 | JAN '19 | BKJ | CONCRETE COLLAR-DELETED NOTE/DIMENSIONS; ADDED NOTES |

SCALE: N.T.S.

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CHECKED BKJ

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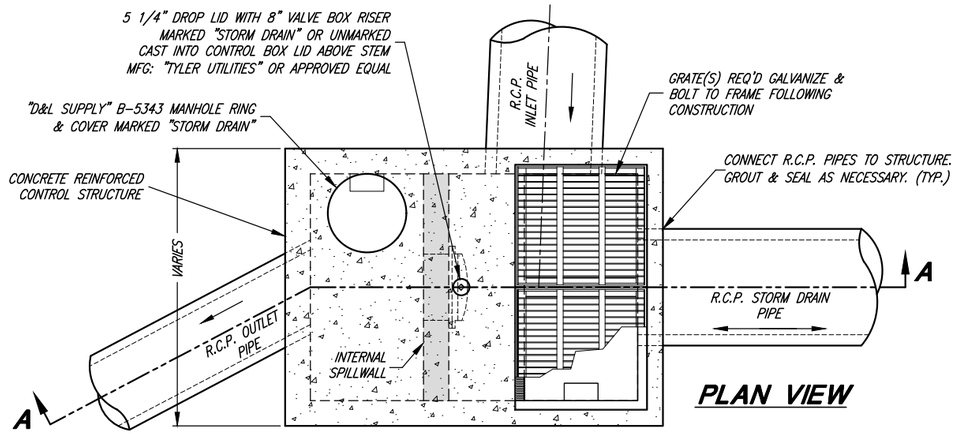
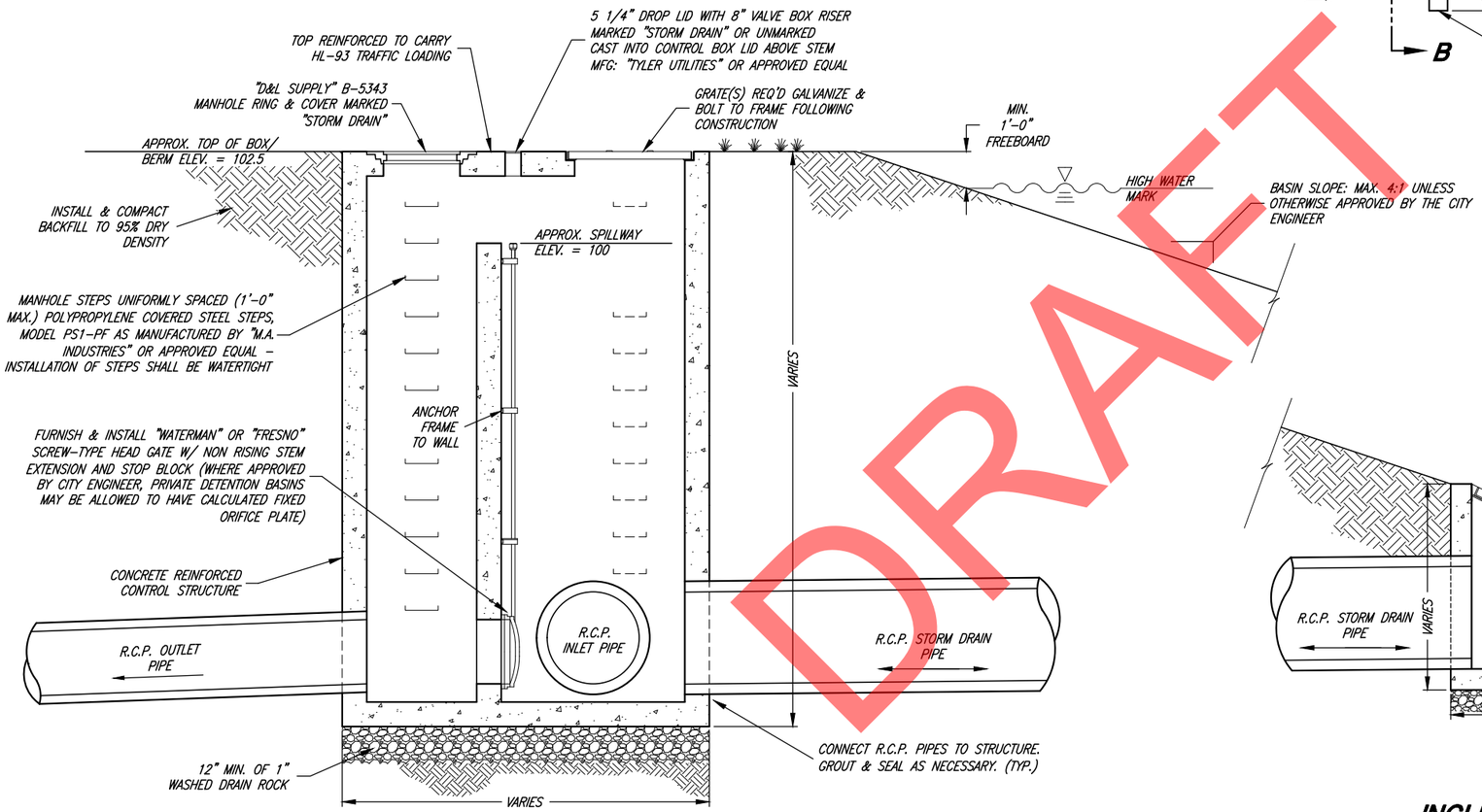
# STORM DRAIN - MANHOLE DETAILS

SHEET: CS-18
OF 23 SHEETS
0

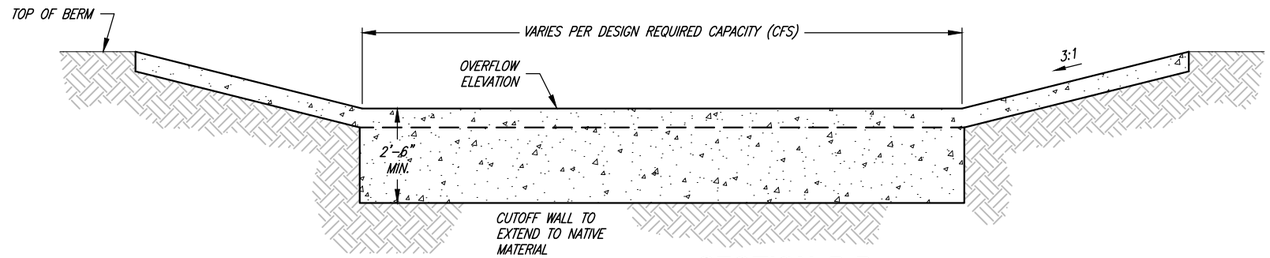



## DETENTION INLET/OUTLET CONTROL STRUCTURE

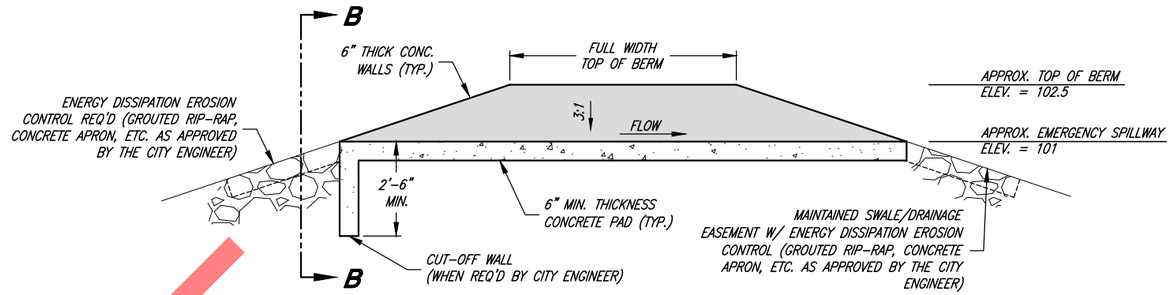
(PRECAST OR CAST-IN-PLACE)



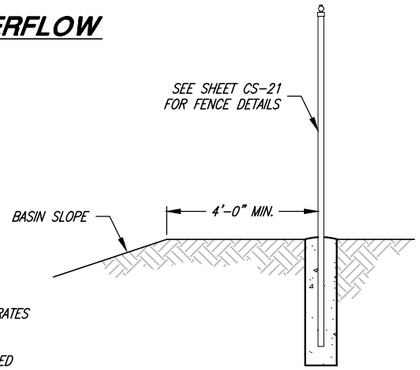

## SECTION A-A




## SECTION B-B

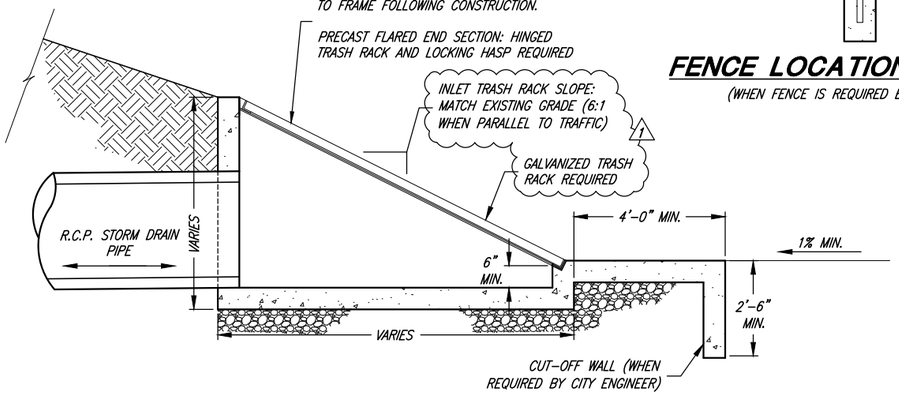



## EMERGENCY OVERFLOW




## FENCE LOCATION DETAIL

(WHEN FENCE IS REQUIRED BY CITY)




## INCLINED GRATE STORM DRAIN INLET

GENERAL AND STRUCTURAL NOTES: SEE SHEET CS-20



REGISTERED PROFESSIONAL ENGINEER — BRANDON KENT JONES No. 5148758 — State of Utah

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2-12-2019

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| 1 | JAN '19 | BKJ | MODIFIED NOTES |

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# STORM DRAIN - LARGE DETENTION BASIN DETAILS

SHEET: CS-19

OF 23 SHEETS

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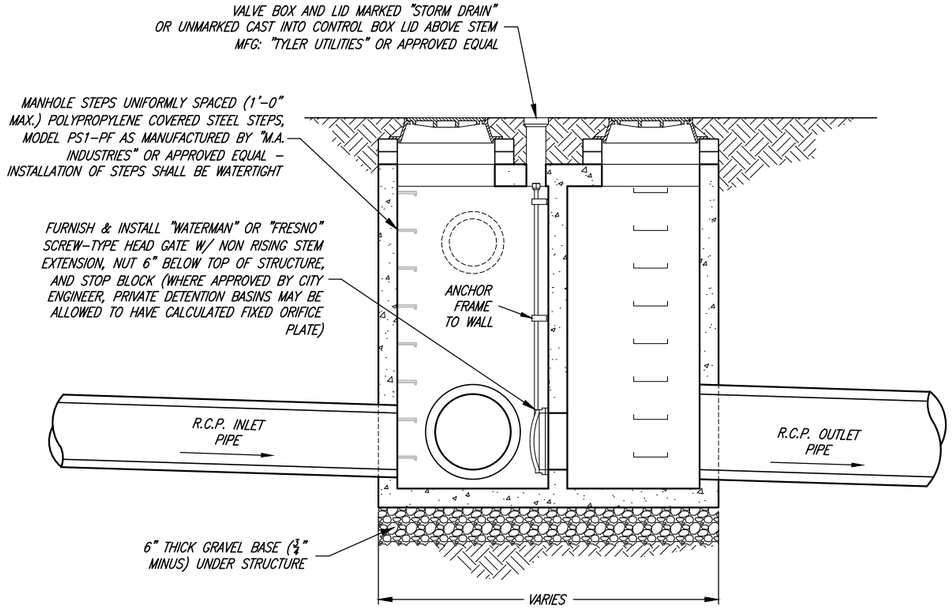



## SECTION B-B

GENERAL NOTES:

1. ALL BASINS REGARDLESS OF LOCAL OR REGIONAL SHALL BE DESIGNED TO ACCOMMODATE A 100 YEAR STORM EVENT.
2. A DAM SAFETY (UTAH DIVISION OF WATER RIGHTS) HAZARD PERMIT MAY BE REQUIRED.
3. STRUCTURE DESIGN AND FLOW CALCULATIONS MUST BE APPROVED BY CITY ENGINEER PRIOR TO CONSTRUCTION.
4. STORM DRAIN LINES SHALL BE 15 INCH MINIMUM DIAMETER REINFORCED CONCRETE PIPE (RCP), OF APPROPRIATE CLASS.
5. THE SURFACE AREA OF THE BASIN SHALL BE SODDED AND SHALL BE PROVIDED WITH AN AUTOMATED SPRINKLER SYSTEM APPROVED BY THE CITY ENGINEER.
6. GRATES SHALL BE REMOVABLE FOR MAINTENANCE PURPOSES
7. GRATES SHALL BE HOT DIPPED GALVANIZED WITH BARS AT MAXIMUM 3 INCH SPACING.
8. LOW FLOWS MUST BE PIPED CONTINUOUSLY TO THE CONTROL STRUCTURE. NO OPEN FLOW IS PERMITTED THROUGH THE BASIN.
9. INCLINED GRATES ARE REQUIRED ON ALL PIPES/INLETS WHERE OPEN CHANNELS, DITCHES, OR PONDS DISCHARGE DIRECTLY INTO THE STORM DRAIN SYSTEM.
10. AN INTERNAL SPILLWAY MAY BE CONSTRUCTED INSIDE THE STRUCTURE DEPENDING ON SITE CONDITIONS AND ELEVATIONS.
11. BASIN STRUCTURES ARE DETERMINED BY THE SIZE OF THE DETENTION BASIN OR AS REQUIRED BY THE CITY ENGINEER. (SEE SHEET CS-19 OR CS-20)
    a. SMALL DETENTION BASIN: LESS THAN OR EQUAL TO 1 ACRE FOOT
    b. LARGE DETENTION BASIN: GREATER THAN 1 ACRE FOOT

STRUCTURAL NOTES:

A. PRECAST CONCRETE STRUCTURE CAN BE REPLACED WITH CAST-IN-PLACE CONCRETE VAULT. SUBMIT ENGINEERED CONSTRUCTION PLANS WITH REBAR DETAILS TO CITY ENGINEER FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.

B. ADD REINFORCEMENT AROUND OPENINGS EQUAL TO REINFORCEMENT DISPLACED BY OPENING.

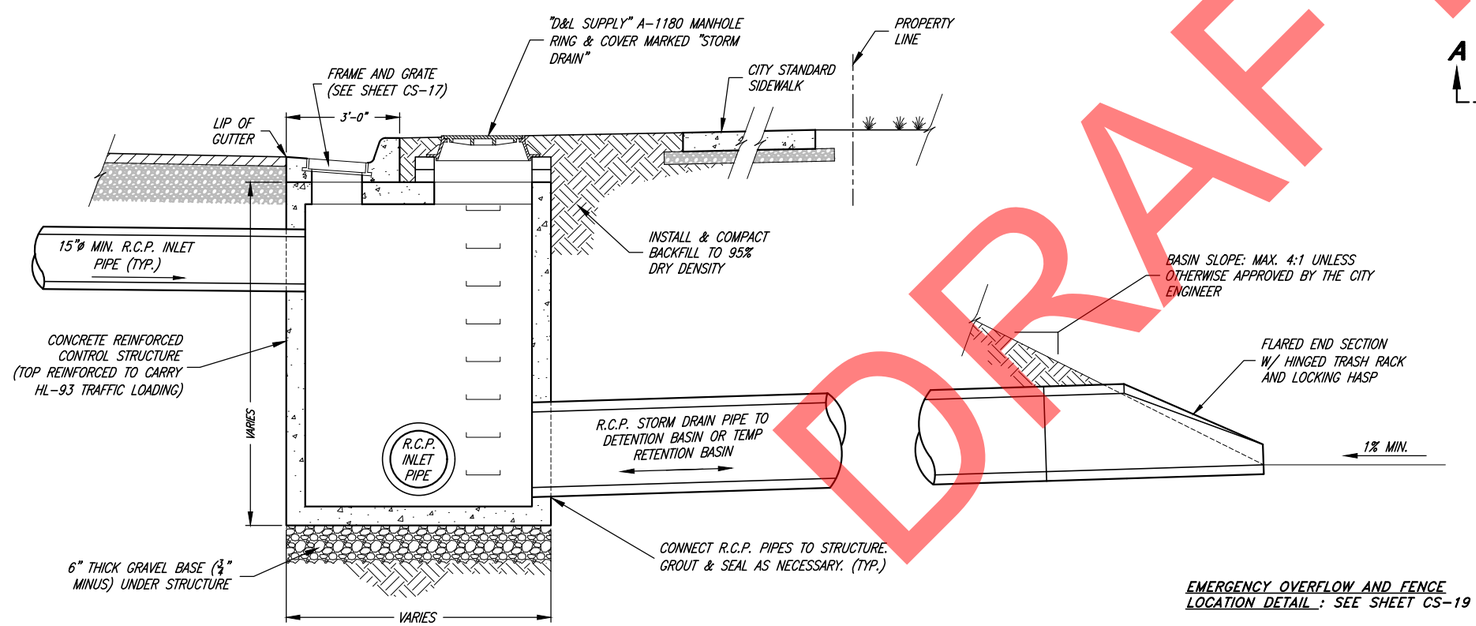
C. THE PRECAST VAULT MANUFACTURER IS RESPONSIBLE FOR DESIGN RELATED TO TRAFFIC LOADING AND THRUST. VERIFICATION OF PROPER DESIGN MUST BE PROVIDED TO THE CITY BY THE DEVELOPER, CONTRACTOR, OR PROPERTY OWNER AS THE CASE MAY BE.

D. REINFORCEMENT TO CONFORM WITH ASTM A 615 GRADE 60

E. CONCRETE SHALL HAVE A 28-DAY COMPRESSIVE STRENGTH OF 5,000 PSI

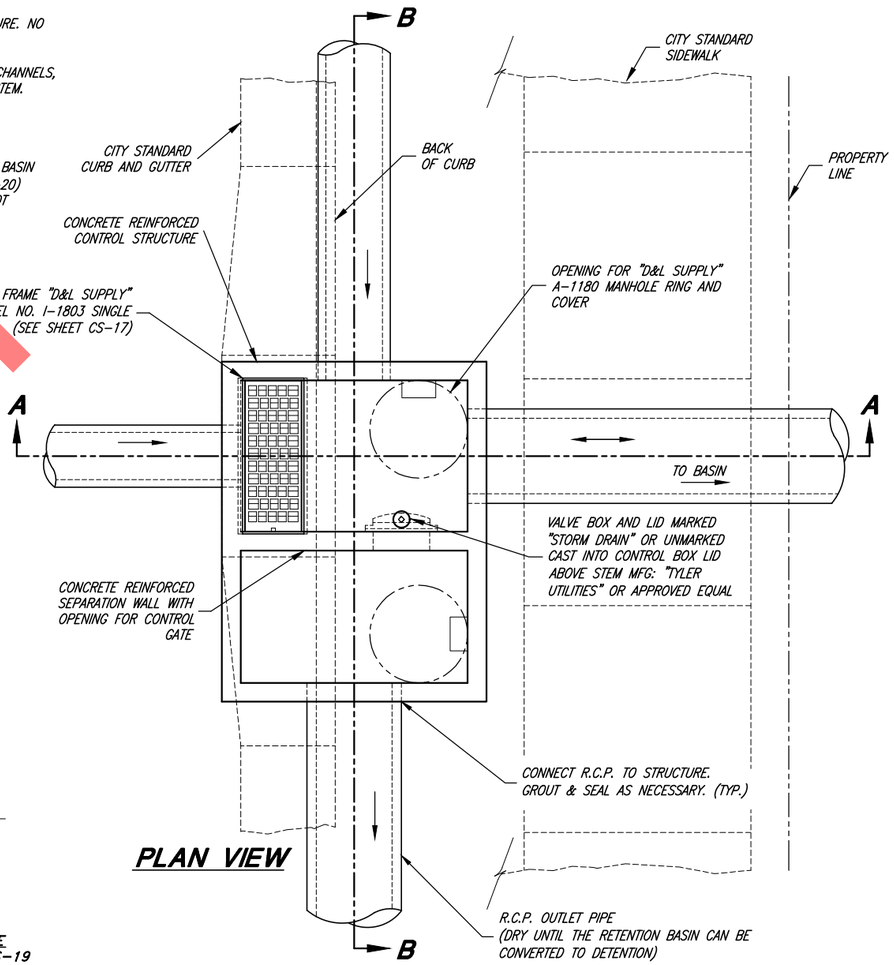
F. USE AN AIR-ENTRAINING AGENT ON ALL CONCRETE EXPOSED TO THE WEATHER.

G. HL-93 LOADING




## SECTION A-A

EMERGENCY OVERFLOW AND FENCE LOCATION DETAIL : SEE SHEET CS-19




## PLAN VIEW

## INLET/OUTLET CONTROL STRUCTURE

(PRECAST OR CAST-IN-PLACE)



REGISTERED PROFESSIONAL ENGINEER
BRANDON KENT JONES
No. 5148758
State of Utah

Brandon K. Jones
PROJECT ENGINEER
2-12-2019
DATE

| REV. | DATE | APPR. |
|---|---|---|
| | | |

SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

JA JONES & ASSOCIATES
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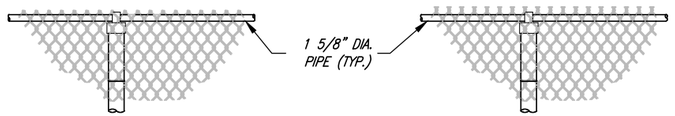
6080 Fashion Point Drive
South Ogden, Utah 84403 (801) 476-9767
www.jonescivil.com

SOUTH WEBER CITY CORPORATION
PUBLIC WORKS STANDARDS

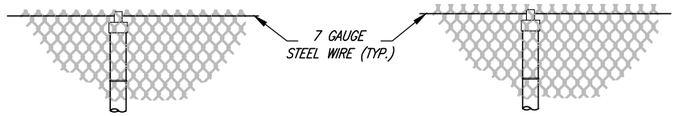
# STORM DRAIN - SMALL DETENTION BASIN DETAILS

SHEET: CS-20
OF 23 SHEETS
0



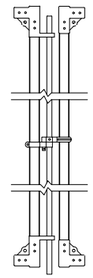

**KNUCKLED SELVAGE**
**TYPE I**

**TWISTED & BARBED SELVAGE**
**TYPE II**

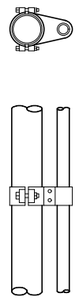



**KNUCKLED SELVAGE**
**W/ TENSION WIRE**
**TYPE III**

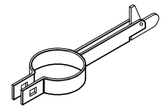
**TWISTED & BARBED**
**SELVAGE W/ TENSION WIRE**
**TYPE IV**



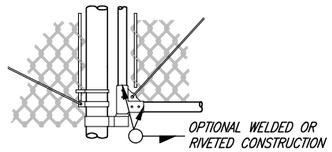
**DROP ROD**
**ASSEMBLY**



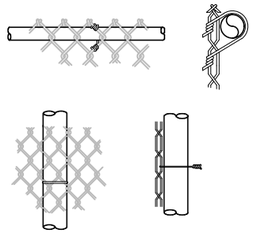
**TOP GATE HINGE**



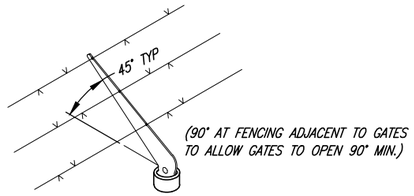
**GATE KEEPER**



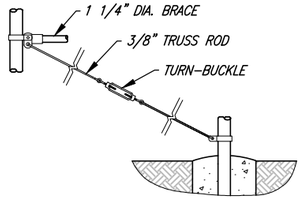

**BOTTOM GATE HINGE**
**AND GATE DETAIL**



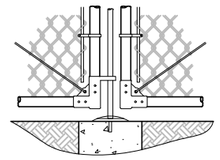
**PIPE POST TIE**



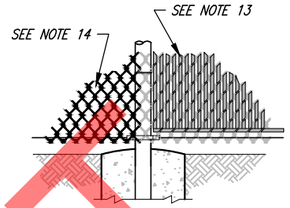

**COMBINATION CAP AND**
**BARBED WIRE SUPPORTING ARM**




**BRACE & TRUSS CONNECTIONS**



**CENTER GATE STOP**
**AND GATE DETAIL**




**SLATS & VINYL**
**COATING DETAIL**

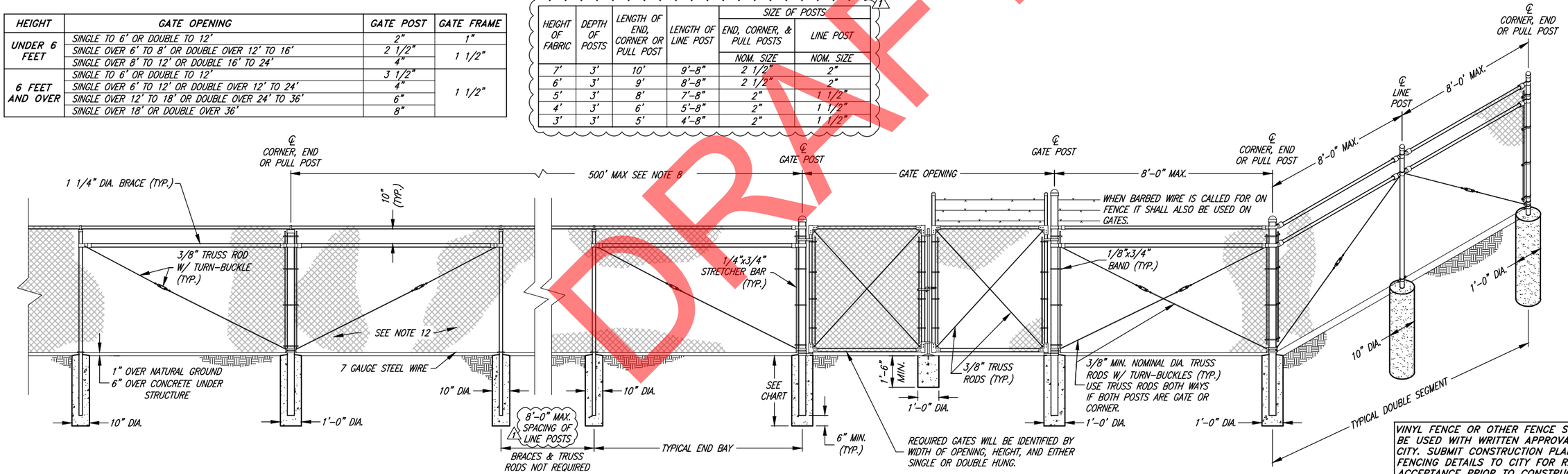
*GENERAL NOTES:*

1. MATERIALS, CONSTRUCTION, AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH PROJECT STANDARD SPECIFICATIONS.
2. THE TYPE OF TOP SUPPORT IS SPECIFIED IN THE BIDDING SCHEDULE, TYPES I AND II TUBULAR RAIL, TYPES III AND IV TENSION WIRE.
3. BARB WIRE SHALL BE USED ONLY WHEN DESIGNATED ON THE PLANS OR IN THE SPECIFICATIONS.
4. TWISTED AND BARBED SELVAGE TOP AND BOTTOM SHALL BE USED ON FENCES 5-FEET HIGH OR GREATER.
5. KNUCKLED SELVAGE ON TOP AND TWISTED AND BARBED ON BOTTOM SHALL BE USED ON FENCES LESS THAN 5-FEET.
6. ALL STEEL PIPE MEMBERS SHALL CONFORM TO ASTM A53 HOT DIPPED ZINC COATED HIGH TENSILE STEEL PIPE. (1)
7. POSTS SHALL BE SCHEDULE 40 PIPE. (1)
8. LINE POSTS SHALL BE LOCATED AT EQUAL SPACING FOR EACH SEGMENT WITH A MAXIMUM SPACING AS FOLLOWS:
   a. TANGENT SECTIONS TO 500-FOOT RADIUS NOT MORE THAN 8-FEET.
   b. UNDER 500-FOOT RADIUS TO 200-FOOT RADIUS NOT MORE THAN 8-FEET.
   c. UNDER 200-FOOT RADIUS TO 100-FOOT RADIUS NOT MORE THAN 6-FEET.
   d. UNDER 100-FOOT RADIUS NOT MORE THAN 5-FEET.
9. TRUSS RODS AND BRACES SHALL NOT BE REQUIRED FOR FABRIC HEIGHT LESS THAN 5-FEET.
10. TENSION WIRE SHALL BE 7 GAUGE ZINC- OR ALUMINUM-COATED COIL SPRING STEEL TENSION WIRE.
11. ALL POSTS SHALL BE SET IN 3000 PSI CONCRETE AND SHALL BE TOPPED WITH BALL TYPE OR OTHER APPROVED ORNAMENT.
12. ALL FABRIC SHALL BE 2" GALVANIZED 9 GAUGE MESH.
13. WHITE VERTICAL SEMI-PRIVACY VINYL SLATS WITH BOTTOM-LOCKING SLAT, WHEN REQUIRED BY THE CITY.
14. BLACK VINYL COATED CHAINLINK FENCING WHEN REQUIRED BY THE CITY.
15. ALL FENCING SHALL CONFORM TO LOCATION AND HEIGHT LIMITATIONS AS STATED IN SOUTH WEBER CITY FENCING ORDINANCE.

| HEIGHT | GATE OPENING | GATE POST | GATE FRAME |
|---|---|---|---|
| UNDER 6 FEET | SINGLE TO 6' OR DOUBLE TO 12' | 2" | 1" |
| | SINGLE OVER 6' TO 8' OR DOUBLE OVER 12' TO 16' | 2 1/2" | 1 1/2" |
| | SINGLE OVER 8' TO 12' OR DOUBLE 16' TO 24' | 4" | |
| 6 FEET AND OVER | SINGLE TO 6' OR DOUBLE TO 12' | 3 1/2" | 1 1/2" |
| | SINGLE OVER 6' TO 12' OR DOUBLE OVER 12' TO 24' | 4" | |
| | SINGLE OVER 12' TO 18' OR DOUBLE OVER 24' TO 36' | 6" | |
| | SINGLE OVER 18' OR DOUBLE OVER 36' | 8" | |

| HEIGHT OF FABRIC | DEPTH OF POSTS | LENGTH OF END, CORNER OR PULL POST | LENGTH OF LINE POST | SIZE OF POSTS | |
|---|---|---|---|---|---|
| | | | | END, CORNER, & PULL POSTS | LINE POST |
| | | | | NOM. SIZE | NOM. SIZE |
| 7' | 3' | 10' | 9'-8" | 2 1/2" | 2" |
| 6' | 3' | 9' | 8'-8" | 2 1/2" | 2" |
| 5' | 3' | 8' | 7'-8" | 2" | 1 1/2" |
| 4' | 3' | 6' | 5'-8" | 2" | 1 1/2" |
| 3' | 3' | 5' | 4'-8" | 2" | 1 1/2" |

(1)




VINYL FENCE OR OTHER FENCE STYLES MAY BE USED WITH WRITTEN APPROVAL BY THE CITY. SUBMIT CONSTRUCTION PLANS AND FENCING DETAILS TO CITY FOR REVIEW AND ACCEPTANCE PRIOR TO CONSTRUCTION.



REGISTERED PROFESSIONAL ENGINEER
BRANDON KENT JONES
No. 5148758
State of Utah

Brandon K. Jones
PROJECT ENGINEER
2-12-2019
DATE

| REV. | DATE | APPR. | |
|---|---|---|---|
| 1 | JAN '19 | BKJ | ADDED DIMENSION; MODIFIED TABLE & NOTES. |

SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

JA JONES & ASSOCIATES
CONSULTING ENGINEERS
6080 Fashion Point Drive
South Ogden, Utah 84403 (801) 476-9767
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SOUTH WEBER CITY CORPORATION
PUBLIC WORKS STANDARDS

# GENERAL - CHAIN LINK FENCE DETAILS

SHEET: CS-21
OF 23 SHEETS
0

## STREETLIGHT STYLES AND LOCATIONS

**RESIDENTIAL (SL-1):**

- FIXTURE STYLE: LAMP POST
- POLE HEIGHT: 14 FEET
- SPACING: MAXIMUM 400 FEET, ON ALTERNATING SIDES OF THE STREET
- LOCATION: CUL-DE-SACS, MID-BLOCK, AND MINOR INTERSECTIONS (WHEN APPROVED)

**INTERSECTION (SL-2):**

- FIXTURE STYLE: OVERHEAD WITH STRAIGHT DECORATIVE MAST ARM
- POLE HEIGHT: 18 FEET
- SPACING: INTERSECTIONS
- LOCATION: INTERSECTIONS AND PARKING LOTS (OR AS OTHERWISE DIRECTED)

**CORRIDOR (SL-3):**

- FIXTURE STYLE: OVERHEAD WITH CURVED DECORATIVE MAST ARM
- POLE HEIGHT: 18 FEET
- SPACING: MAXIMUM 300 FEET, ON ALTERNATING SIDES OF THE STREET
- LOCATION: ALONG THE SOUTH WEBER DRIVE AND SOUTH BENCH DRIVE CORRIDORS (OR AS OTHERWISE DIRECTED)
- ADDITION DECORATIVE FEATURES: BANNER POLES, FLOWER BASKETS, ETC. (AS APPROVED)

## STREETLIGHT REQUIREMENTS

**POLES:**

1. ALL POLES MUST BE SEMI-GLOSS BLACK
2. ALL POLES MUST BE THE SAME DIAMETER (NON-TAPERED), BUT HEIGHT VARIES AS STATED ABOVE
3. ALL POLES MUST BE MOUNTED TO A CONCRETE FOOTING PER MANUFACTURER RECOMMENDATIONS
4. ANCHOR BOLTS MUST NOT CONFLICT WITH THE BASE
5. INTERSECTION AND CORRIDOR POLES MUST HAVE A GFCI LOCATED 2 FEET BELOW THE TOP OF THE POLE

**BASES:**

6. ALL BASES MUST BE SEMI-GLOSS BLACK
7. ALL BASES MUST BE THE SAME STYLE AND SIZE
8. ALL BASES MUST BE TWO-PIECE CAST ALUMINUM
9. ALL BASES MUST CONTAIN THE CITY NAME IN SANDED ALUMINUM TEXT, AS APPROVED BY THE CITY
10. ALL BASES MUST HAVE A HANDHOLE WITH COVER

**LIGHT FIXTURE:**

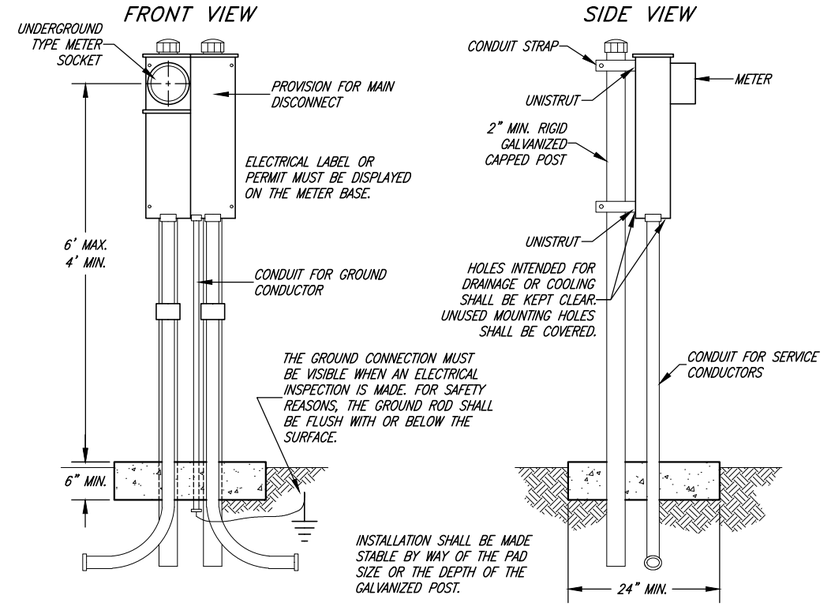
11. ALL STREETLIGHT FIXTURES MUST BE LED
12. ALL STREETLIGHT FIXTURES MUST BE FULLY DARK-SKY COMPLIANT

**GENERAL NOTES:**

13. THE COST OF ALL NEW DEVELOPMENT STREETLIGHTS IS THE RESPONSIBILITY OF THE DEVELOPER, AND IS PAID DIRECTLY TO THE CITY, PRIOR TO THE RECORDING OF THE PLAT
14. THE CITY IS RESPONSIBLE FOR INSTALLATION OF ALL STREETLIGHTS
15. THE DEVELOPER IS RESPONSIBLE TO PROVIDE ALL POWER INFRASTRUCTURE FOR THE DEVELOPMENT, INCLUDING COORDINATION WITH THE POWER COMPANY FOR CONNECTION AND SERVICE TO THE PROPOSED STREETLIGHTS
16. ALL PROPOSED STREETLIGHT TYPES AND LOCATIONS MUST BE SHOWN ON THE APPROVED IMPROVEMENT PLANS
17. THE JUNCTION BOX MUST BE FLUSH TO GRADE AND LOCATED WITHIN A MINIMUM OF 4' AND MAXIMUM OF 10' FROM THE BASE OF THE POLE
18. FOR SAFETY PURPOSES, STREETLIGHTS MUST CONTAIN BREAK-AWAY STYLE FEATURES
19. ALL STREETLIGHTS MUST BE DESIGNED TO MEET ALL BUILDING CODE STRUCTURAL REQUIREMENTS
20. ALL STREETLIGHTS SHOULD BE LOCATED ON LOT LINES WHEN NOT LOCATED AT AN INTERSECTION
21. ALL STREETLIGHTS SHOULD BE LOCATED 2.5 FEET BEHIND THE BACK OF CURB OR BACK OF SIDEWALK

1






## UNDERGROUND SERVICE TO A FREE-STANDING METER BASE

**(STEEL POLE)**

INSTALLATION PER ROCKY MOUNTAIN POWER ELECTRIC SERVICE REQUIREMENTS MANUAL

DEVELOPER/CONTRACTOR WILL FURNISH AND INSTALL:

- A. METER SOCKET ENCLOSURE (UNDERGROUND TYPE WITH MANUAL-LINK BYPASS)
- B. PEDESTAL HARDWARE
- C. CONDUIT
- D. RIGHT-OF-WAY OR EASEMENT
- E. TRENCH EXCAVATION AND BACKFILL
- F. GROUNDING PER NEC
- G. CONCRETE PAD 24" x 24" x 6" DEPTH
- H. LONG RADIUS SWEEP
- I. 36" SWEEP

FREE-STANDING METER BASE REQUIREMENTS:

A1. THE DEVELOPER/CONTRACTOR SHALL MEET WITH THE POWER COMPANY TO DETERMINE THE LOCATION OF THE FREE-STANDING METER BASE.

B1. THE FREE-STANDING METER BASE SHALL BE LOCATED ADJACENT TO, OR IN, THE POWER COMPANY EASEMENT.

C1. THE FREE-STANDING METER BASE SHALL MEET ALL LOCAL ORDINANCE REQUIREMENTS.

D1. THE METER SOCKET SHALL BE PROTECTED FROM DAMAGE BY USE OF BARRIER POSTS OR OTHER SUITABLE PROTECTION APPROVED BY THE POWER COMPANY.

E1. THE DEVELOPER/CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN AN APPROVED PEDESTAL OR POLE POST.

F1. THE ACCESS DOOR TO POWER COMPANY CONNECTIONS SHALL BE KEPT FREE OF OBSTRUCTIONS A MINIMUM OF 6" ABOVE THE FINAL GRADE, WITH A SEALABLE PROVISION FOR THE POWER COMPANY.

G1. THE UNMETERED SERVICE CONDUCTOR AND THE METERED SERVICE CONDUCTOR SHALL NO BE RUN IN THE SAME CONDUIT, RACEWAY, OR GUTTER.

H1. THE METER SOCKET AND SERVICE EQUIPMENT SHALL BE NEMA TYPE 3R (RAINPROOF), IN GOOD CONDITION WITH NO HOLES, DENTS OR DAMAGE, AND PLUMB IN ALL DIRECTIONS. THE INSTALLATION SHALL BE MADE WITH SUFFICIENT MATERIALS AND INSTALLED SUCH THAT IT REMAINS PLUMB FOR THE DURATION OF THE SERVICE.

I1. CONDUIT AND CONDUCTOR TRENCHERS SHALL BE LOCATED AWAY FROM (AND NEVER UNDERNEATH) THE PAD AND FOUNDATION. FOR MOBILE HOMES, TRENCHES SHALL BE LOCATED CLEAR OF THE AREA PROVIDED FOR THE DWELLING.

J1. WHERE TWO OR MORE METERS ARE LOCATED SIDE-BY-SIDE (SUCH AS WITH DUPLEXES OR IN MOBILE HOME PARKS), THE METER SOCKET ENCLOSURE SHALL BE PERMANENTLY LABELED WITH THE SPACE OR BERTH NUMBERS.

REGISTERED PROFESSIONAL ENGINEER — BRANDON KENT JONES — No. 5148758 — State of Utah

PROJECT ENGINEER

2-12-2019
DATE

| REV. | DATE | APPR. | |
|---|---|---|---|
| 1 | JAN '19 | BKJ | DELETED EX. LIGHT DETAILS; UPDATED STREETLIGHT NOTES. |

SCALE: N.T.S.

DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

JONES & ASSOCIATES
CONSULTING ENGINEERS
6080 Fashion Point Drive
South Ogden, Utah 84403 (801) 476-9767
www.jonescivil.com

SOUTH WEBER CITY CORPORATION
PUBLIC WORKS STANDARDS

# GENERAL - STREET LIGHTING STANDARDS

SHEET: CS-22 OF 23 SHEETS
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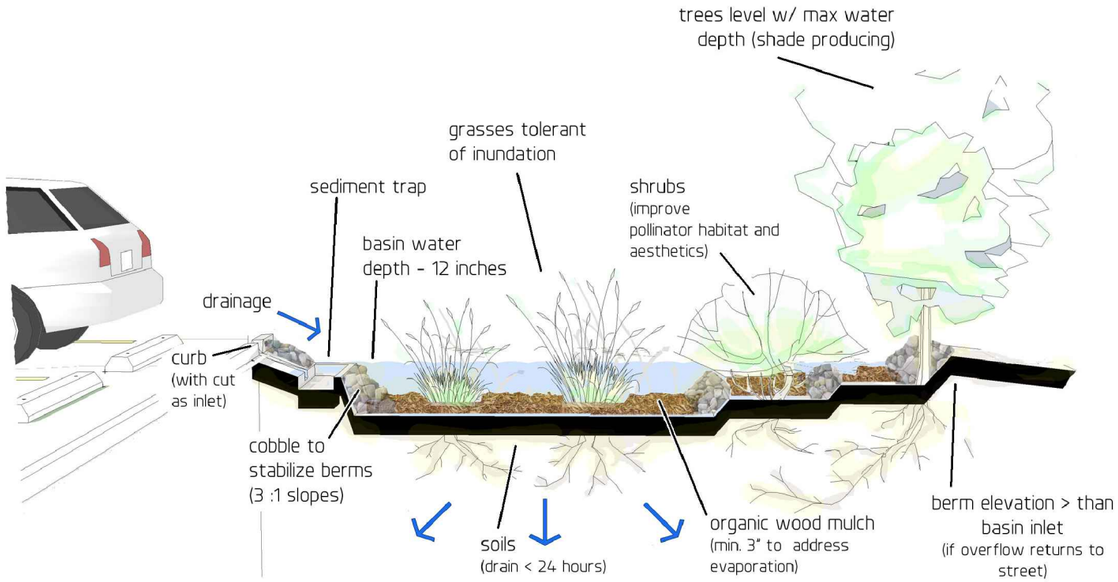



## Basic Basin Design Considerations

diagram by
Paul Navrot
for SUH

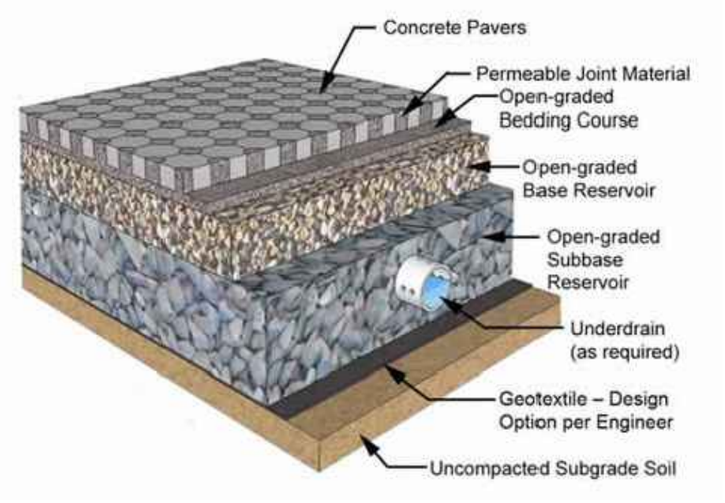
***RAIN GARDEN***

**** http://www.lid-stormwater.net/site_map.htm ****

***RAIN BARREL***

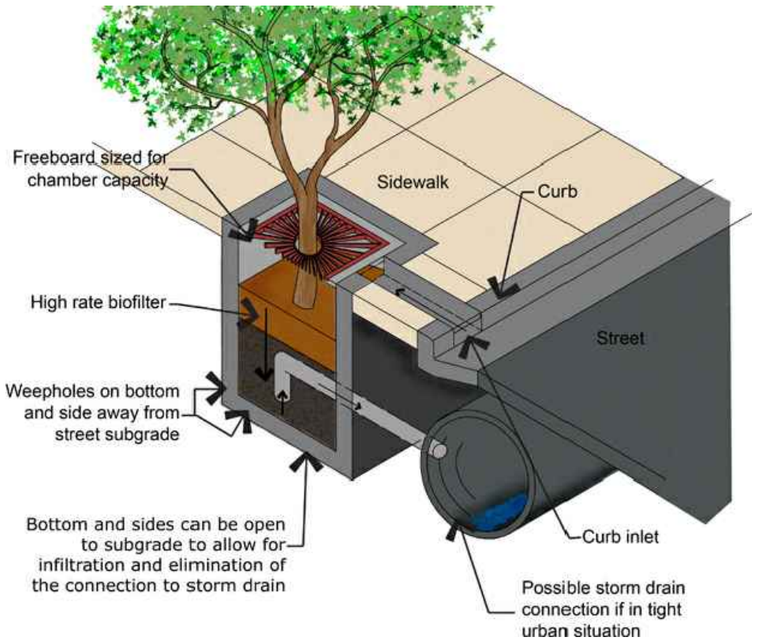
**** http://www.goodideasinc.com/products/rain-barrels/rain-wizard-50/ ****

*DISCLAIMER:*
*ALL LID EXAMPLES SHOWN ON THIS SHEET ARE FOR REFERENCE PURPOSES ONLY. ANY SPECIFIC WEBSITES, COMMERCIAL PRODUCTS, PROCESS OR SERVICE BY TRADE NAME, TRADEMARK, MANUFACTURER, OR OTHERWISE, DOES NOT CONSTITUTE OR IMPLY ITS ENDORSEMENT, RECOMMENDATION, OR FAVORING BY SOUTH WEBER CITY. THE PURPOSE OF PROVIDING SPECIFIC PRODUCT INFORMATION IS TO ENSURE THAT THE CONTRACTOR AND/OR DEVELOPER HAS ALL THE APPROPRIATE INFORMATION AND REFERENCES TO ASSESS THE USEFULNESS OF THE PRODUCT.*




***PERMEABLE PAVER***

From Smith, D. 2006. *Permeable Interlocking Concrete Pavement–selection design, construction and maintenance. Third Edition.* Interlocking Concrete Pavement Institute. Herndon, VA




***TREE BOX FILTER***

*From www.wbdg.org*



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|---|---|---|---|
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DESIGNED BKJ
DRAWN BEB
CHECKED BKJ

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SOUTH WEBER CITY CORPORATION
PUBLIC WORKS STANDARDS
GENERAL - LID (LOW IMPACT DEVELOPMENT) EXAMPLES

SHEET: CS-23
OF 23 SHEETS
0

**GUNDERSON REZONE CH to CO**
**REVIEW**
**By Barry Burton 1.22.19**

**Proposal/History:**

This proposal is to rezone 3.74 acres from the current CH zone to the CO zone. This property was originally designed and approved for a trucking company waystation where trucks could be left over night, washed and receive minor repairs. This was in 1988. I don't recall the year, but sometime after 2000, Burbidge Concrete Pumping made application to turn the property into a contractor yard/facility. That application was denied because the CH zone had been amended to eliminate contractor facilities. It has been little used in recent years.

Mr. Gunderson would like to establish gymnastics training facility along with some retail space. We don't know exactly what that would look like yet. The reason for the rezone is that the CH zone does not allow Recreational Activities, whereas the CO zone allows it as a conditional use. The retail part is allowed in either zone.

**General Plan:**

The General Plan Allows for the application of the Commercial Overlay (CO) zone to this property.

**Recommendation:** This property has long had little or no use. This is an opportunity to establish something beneficial to the City and that fits within our General Plan guidelines. I recommend forwarding the proposal to the City Council with a recommendation of approval.

RZ 19-01

SOUTH WEBER city
1600 E. South Weber Drive
South Weber, UT 84405
www.southwebercity.com
801-479-3177
FAX 801-479-0066

**FOR OFFICE USE ONLY**

Fee paid $ 300.00 Receipt 17.053486 Date 1/9/18

Recommended by Planning Commission on: _____

Approved by City Council on: _____

# ZONE CHANGE APPLICATION

Approx. Location: 7636 Corvina Dr

Parcel Number(s): 130390041 Total Acres: 3.74

Request: 3.74 Acres changed from CH Zone to CO Zone

_____ Acres changed from _____ Zone to _____ Zone

Legal Description: (attach if too large) _____

Proposed Use: Mixed Commercial

How does this use support the City's General Plan? Diverse Commercial Development started on this property.

**Applicant**

Name: Fred Gundersen
Company: S.L. Fred LLC
Address: 337 E 35th S.
City/State/Zip: Ogden Ut 84403
Phone: 801-698-2225
Email: Fredbjumpin@Yahoo.com

**Property Owner, if not Applicant**

Name: Richard Jessop
Company: X Marks the Spot
Address: 7636 Cornia Dr
City/State/Zip: S Weber Ut 84405
Phone: 801-675-5294
Email: Rich@Axiom.work

**Public Notice Authorization**: I do hereby give permission to South Weber City to place a public notice sign on the property contained herein for the purpose of citizen notification of this proposed change in zoning.
**Affidavit:** I also, being duly sworn, depose and state that I am the owner or agent of the owner of the property cited and that the statements and answers contained herein, along with any attachments are true and correct to the best of my knowledge and belief.

Applicant's Signature: _____ Date: 1/9/2019

State of Utah, County of Davis

Subscribed and sworn to before me on this 9 day of JAN, 2019

Printed Name Kimberli Guill

Notary Signature _____

KIMBERLI A GUILL
Notary Public, State of Utah
Commission # 700725
My Commission Expires On
June 05, 2022

Seal

**Agent Authorization** (To be filled out by owner, if allowing an agent to act on his/her behalf.)

As the owner of the real property referenced in this document, I do hereby appoint Fred Gundersen as my agent to represent me regarding this application and to appear on my behalf before any city boards considering this application.

Property Owner's Signature: _____ Date: 1/9/19

State of Utah, County of Davis

Subscribed and sworn to before me on this 9 day of JAN, 2019

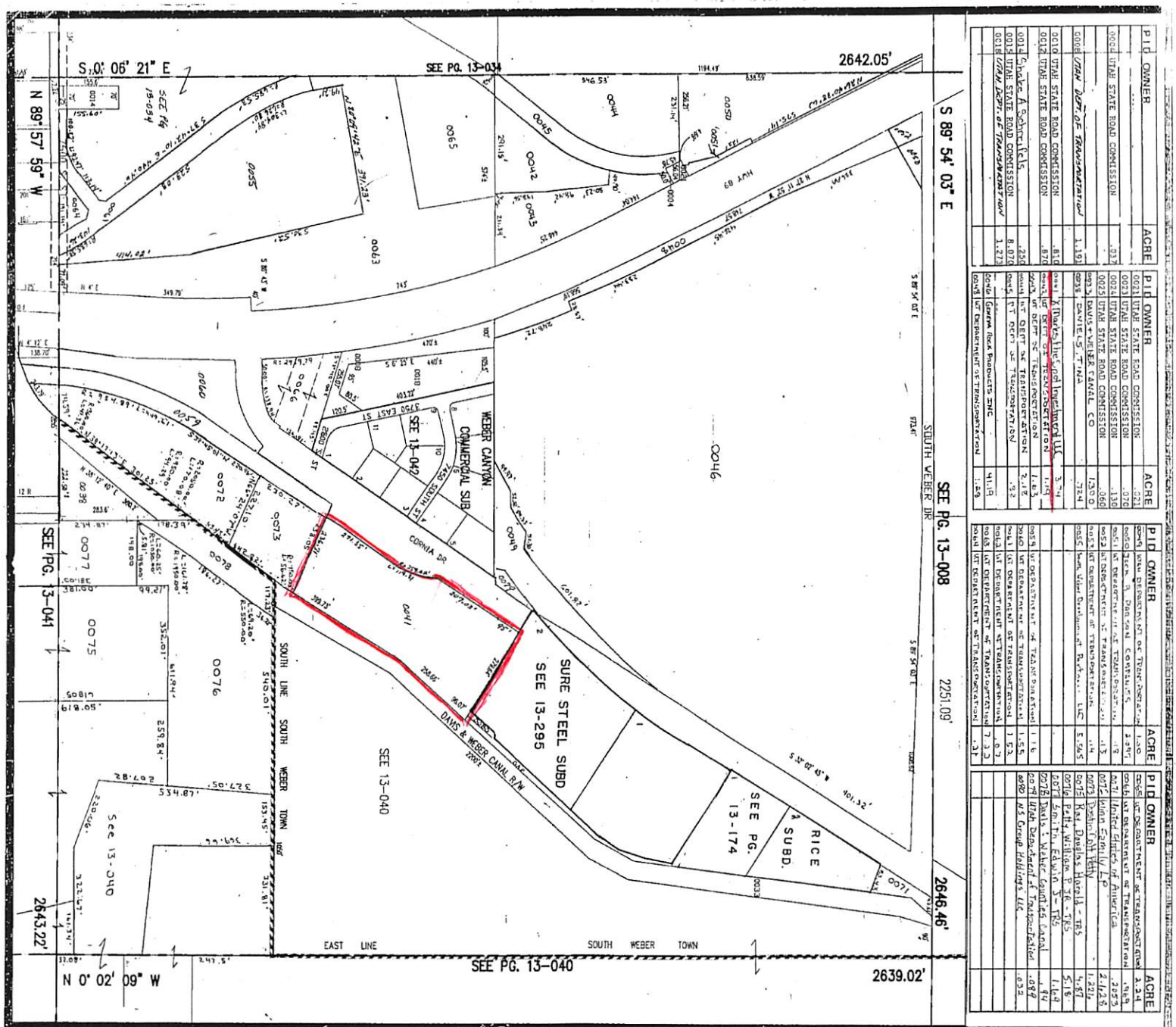
Printed Name Kimberli Guill

Notary Signature _____

KIMBERLI A GUILL
Notary Public, State of Utah
Commission # 700725
My Commission Expires On
June 05, 2022

Seal

13 039




| PID | OWNER | ACRE |
|---|---|---|
| 0004 | UTAH DEPARTMENT OF TRANSPORTATION | 1.30 |
| 0005 | UT DEPARTMENT OF TRANSPORTATION | 3.595 |
| 0006 | UT DEPARTMENT OF TRANSPORTATION | .19 |
| 0007 | United States of America | .2953 |
| 0008 | Union Family LP | 2.1435 |
| 0023 | Dashon Toth Utley | 1.221 |
| 0015 | Kay Douglas Harris - TRS | 4.87 |
| 0016 | Patty Wilson Trs - TRS | 5.18 |
| 0017 | Smith Edwin S - TRS | 1.169 |
| 0018 | Davis & Weber Counties Canal | .44 |
| 0019 | Utah Department of Transportation | .089 |
| 0020 | MS Group Holdings LLC | .032 |

| PID | OWNER | ACRE |
|---|---|---|
| 0001 | UTAH STATE ROAD COMMISSION | .021 |
| 0003 | UTAH STATE ROAD COMMISSION | .070 |
| 0024 | UTAH STATE ROAD COMMISSION | .130 |
| 0025 | UTAH STATE ROAD COMMISSION | .060 |
| 0023 | DAVIS & WEBER CANAL CO | 130.0 |
| 0038 | DANIELS, T. IND. | .7824 |
| 0009 | UT DEPT OF TRANSPORTATION | 3.74 |
| 0055 | UT DEPT OF TRANSPORTATION | 1.184 |
| 0055 | UT DEPT OF TRANSPORTATION | 1.83 |
| 0055 | UT DEPT OF TRANSPORTATION | 2.18 |
| 0055 | UT DEPT OF TRANSPORTATION | .92 |
| 0046 | Geneva Rock Products Inc | 41.19 |
| 0048 | UT Department of Transportation | 1.89 |

| PID | OWNER | ACRE |
|---|---|---|
| 0004 | UTAH DEPARTMENT OF TRANSPORTATION | 1.30 |
| 0005 | UT DEPARTMENT OF TRANSPORTATION | 3.595 |
| 0006 | UT DEPARTMENT OF TRANSPORTATION | .19 |
| 0007 | United States of America | .2953 |
| 0008 | Union Family LP | 2.1435 |
| 0023 | Dashon Toth Utley | 1.221 |
| 0015 | Kay Douglas Harris - TRS | 4.87 |
| 0016 | Patty Wilson Trs - TRS | 5.18 |
| 0017 | Smith Edwin S - TRS | 1.169 |
| 0018 | Davis & Weber Counties Canal | .44 |
| 0019 | Utah Department of Transportation | .089 |
| 0020 | MS Group Holdings LLC | .032 |

| PID | OWNER | ACRE |
|---|---|---|
| 0009 | UTAH STATE ROAD COMMISSION | .810 |
| 0012 | UTAH STATE ROAD COMMISSION | .870 |
| 0014 | Shane A Schmeichels | .250 |
| 0013 | UTAH STATE ROAD COMMISSION | 8.070 |
| 0018 | UTAH DEPT. OF TRANSPORTATION | 1.273 |

| PID | OWNER | ACRE |
|---|---|---|
| 0009 | UTAH DEPARTMENT OF TRANSPORTATION | 3.74 |
| 0055 | UT DEPARTMENT OF TRANSPORTATION | 1.184 |
| 0055 | UT DEPARTMENT OF TRANSPORTATION | 1.83 |
| 0055 | UT DEPARTMENT OF TRANSPORTATION | 2.18 |
| 0055 | UT DEPARTMENT OF TRANSPORTATION | .92 |
| 0046 | UT DEPARTMENT OF TRANSPORTATION | 1.89 |

| PID | OWNER | ACRE |
|---|---|---|
| 0055 | UT DEPARTMENT OF TRANSPORTATION | 1.184 |
| 0055 | UT DEPARTMENT OF TRANSPORTATION | 1.83 |
| 0055 | UT DEPARTMENT OF TRANSPORTATION | 1.55 |
| 0061 | UT DEPARTMENT OF TRANSPORTATION | 1.63 |
| 0062 | UT DEPARTMENT OF TRANSPORTATION | .07 |
| 0063 | UT DEPARTMENT OF TRANSPORTATION | 7.32 |
| 0041 | UT DEPARTMENT OF TRANSPORTATION | .31 |

NW SECTION 36 T 5N R 1W. SALT LAKE MERIDIAN
DAVIS COUNTY, UTAH – RECORDERS OFFICE

SCALE: 1" = 200'

N

PREFIX 13
13-039
LAST #

1-94

Legal Description1303900417636 S CORNIA DR
SOUTH WEBER 84405PART OF THE NW 1/4 OF SEC 36-T5N-R1W, SLM; & MORE PART'LY DESC AS FOLLOWS: BEG AT A PT WH IS N 89^54'03" W 963.88 FT ALG THE SEC LINE & S 1,251.31 FT FR THE N 1/4 COR OF SD SEC 36-T5N-R1W, SLM; & RUN TH S 57^44'52" E 279.64 FT TO A PT ON THE DAVIS WEBER CANAL R/W; TH S 41^54'46" W 258.66 FT ALG SD R/W; TH S 30^06'21" W 399.73 FT ALG SD R/W; TH N 66^06'43" W 236.71 FT TO A PT ON THE E'LY R/W LINE OF A ROADWAY; TH N 32^27'49" E 271.35 FT ALG SD R/W; TH N'LY ALG THE ARC OF A 259.02 FT RAD CURVE TO THE LEFT 119.81 FT (LC BEARS N 19^12'46^ E 118.74 FT); TH N 34^41' E 207.03 FT ALG SD R/W; TH N 32^15'08" E 95.00 FT ALG SD R/W TO THE POB. CONT. 3.74 ACRES

**LA PINTANA SUBDIVISION FINAL PLAT**
**REVIEW**
**By Barry Burton 1.22.19**

**Plat:**

This simple one-lot subdivision is the remainder parcel from the Sun Rays Subdivision that has access directly onto South Weber Drive. The plat appears to be in order as far as I can tell. (Brandon may have more to say concerning the surveying issues.) The one thing I do notice is that the Owner's Dedication dedicates the portion of the property in South Weber Drive to UDOT. We all know what is meant by UDOT but I am not certain it can be used in a legal document. The name may need to be spelled out.

**Access and Utilities:**

The applicants have received their will-serve letter from South Weber Irrigation. Other utility companies will need to sign the plat. Developers have indicated they have an access permit from UDOT, but as of today we haven't seen it. This is a must before we approve the subdivision.

**Recommendation:** If the applicants provide a copy of the UDOT access permit, I would recommend forwarding to the City Council with a recommendation of approval. We can determine if UDOT needs to be spelled out before the CC acts on it.

JONES & ASSOCIATES CONSULTING ENGINEERS

**M E M O R A N D U M**

TO: South Weber City Planning Commission

FROM: Brandon K. Jones, P.E.
South Weber City Engineer

CC: Barry Burton – South Weber City Planner
Mark Larsen – South Weber City Public Works Director
Lisa Smith – South Weber City Deputy Recorder

**RE: LA PINTANA SUBDIVISION**
**Preliminary and Final Review**

Date: January 23, 2019

---

Our office has completed a review of the Final Plat and Improvement Plans for the La Pintana Subdivision dated, January 15, 2019. We recommend approval, subject to the following comments and items being addressed prior to final approval from the City Council.

**GENERAL**

1. Approval Letters.
    a. We have received an approval letter from the South Weber Water Improvement District.
    b. An Access Permit from UDOT is required, but has not yet been received. Without this permit, the proposed lot does not have access onto South Weber Drive.

**PLAT**

2. South Weber Drive should include (SR-60) for reference.
3. The address for Lot 1 is 1878 E. South Weber Drive.
4. The Questar Gas note should be updated to reflect Dominion Energy, or eliminated if not required by Dominion Energy.
5. The signature blocks for SWWID, RMP, and Questar Gas are only needed if those companies are requiring a signature block for this plat.
6. The Owner's Dedication language should be updated to spell out the Utah Department of Transportation (UDOT).
7. The Owner's Dedication contains language that dedicates a 10' irrigation easement, but does not show it on the drawing. Either the language in the Owner's Dedication needs to be removed and the irrigation line will be in a PUE, or the drawing needs to be updated to show the limits of the PUE and the irrigation easement. We would recommend removing the Owner's Dedication language and leaving it as a PUE.

8. The Centerline and/or ROW line of South Weber Drive should be labeled in order to clearly delineate the location of the street dedication as it relates to Lot 1 and the adjacent properties.

**IMPROVEMENT PLANS**

9. An Encroachment Permit is required by UDOT in order to cut the asphalt in South Weber Drive, which is needed in order to install the water and sewer laterals. This permit should also cover the construction of a driveway approach and all other concrete improvements along the roadway.
10. The location and width of the driveway approach should be shown.
11. Even though curb, gutter and sidewalk currently existing, any defective concrete will be required to be replaced prior to occupancy. This should be indicated on the plans.

SOUTH WEBER city
1600 E. South Weber Drive
South Weber, UT 84405
www.southwebercity.com
801-479-3177
FAX 801-479-0066

# SUBDIVISION/PROJECT PROCESS APPLICATION

Project/Subdivision Name: ~~LA~~ PINTANA

Approx. Location: 1860 EAST SOUTH WEBER DR.

Parcel Number(s): _____ Total Acres: .26

Current Zone: RM If Rezoning, to what zone: _____ Bordering Zones: _____

Surrounding Land Uses: RM

Number of Lots: 1 # of Lots Per Acre: .26 PUD: Yes No

**Developer or Agent**

Name: _____

Company: _____

Address: _____

City/State/Zip: _____

Phone: _____

Email: _____

LISA DANIELS SMITH
NOTARY PUBLIC • STATE of UTAH
COMMISSION NO. 687227
COMM. EXP. 10-02-2021

**Developer's Engineer**

Name: _____

Company: _____

Address: _____

City/State/Zip: _____

Phone: _____

Email: _____

State License #

**Property Owner, if not Developer**

Name: KODY HOLKER

Company: RAY CREEK, LLC

Address: 11148 ZEALAND AVEN

City/State/Zip: CHAMPLIN MN 55316

Phone: 612-518-7629

Email: KODY@HOLKERLAWOFFICES.COM

**Surveyor, if not Engineer**

Name: _____

Company: _____

Address: _____

City/State/Zip: _____

Phone: _____

Email: _____

**FOR OFFICE USE ONLY**

| Process step | Amount Paid | Date | Receipt | Meeting Date |
|---|---|---|---|---|
| Concept | | | | |
| Sketch/Site | 400 | 5/25 | 13083961 | |
| Preliminary | n/a | | | |
| Final | 700 | 1-15-19 | 17053621 | 1-29-19 |
| | | | | |

**Recommended by Planning Commission on:** _____

**Approved by City Council on:** _____

## Applicant Certification

I swear the statements and answers contained herein, in the attached plans, and other exhibits, thoroughly, to the best of my/our ability, present the argument in behalf of the application requested herewith, and that the statements and information above referred to are in all respects true and correct to the best of my/our knowledge and belief. I also certify that I am the owner of the subject property and that the authorized agent noted in this application has my consent to represent me with respect to this application and to appear on my/our behalf before any city commission, board or council considering this application. Should any of the information or representations submitted be incorrect or untrue, I understand that The City of South Weber may rescind any approval or take any other legal or appropriate action. I also acknowledge that I have reviewed the applicable sections of the South Weber City Land Development Code (SWMC 11) and that items and checklists contained in this application are basic and minimum requirements only and that other requirements may be imposed that are unique to individual projects or uses. Additionally, I agree to pay all fees associated with this project, as set by the current adopted Consolidated Fee Schedule as well as **any fees associated with any City Consultant (i.e. engineer, attorney)**. The applicant shall also be responsible for all collection fees incurred including a collection fee of up to 40% (pursuant to the provisions of the Utah Code Ann. §12-1-11). I also agree to allow the Staff, Planning Commission, or City Council or appointed agent(s) of the City to enter the subject property to make any necessary inspections thereof.

Applicant's Signature: _____ Date: 5-25-2018

State of Utah, County of Davis
Subscribed and sworn to before me on this 25th day of May, 2018
By Kody Holker.

Notary _____

LISA DANIELS SMITH
NOTARY PUBLIC • STATE of UTAH
COMMISSION NO. 697237
COMM. EXP. 10-02-2021

Seal

Property Owner's Signature: _____ Date: _____

State of Utah, County of Davis
Subscribed and sworn to before me on this _____ day of _____, 201__
By _____.

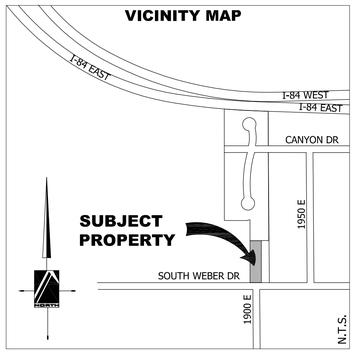
Notary _____

Seal

# LA PINTANA SUBDIVISION

## 1890 EAST SOUTH WEBER DRIVE
## SOUTH WEBER, UTAH

## VICINITY MAP




## GENERAL NOTES

1) ALL WORK WITHIN THE SOUTH WEBER CITY RIGHT OF WAY SHALL CONFORM TO THE SOUTH WEBER CITY STANDARDS & SPECIFICATIONS.

2) ALL WORK PERFORMED ON SOUTH WEBER CITY OWNED UTILITES & CONNECTIONS THERETO SHALL CONFORM TO THE SOUTH WEBER CITY STANDARDS & SPECIFICATIONS.

3) ALL WORK PERFORMED ON SOUTH WEBER WATER IMPROVEMENT DISTRICT OWNED UTILITIES AND CONNECTIONS THERETO SHALL CONFORM TO THE SOUTH WEBER WATER IMPROVEMENT DISTRICT STANDARDS AND SPECIFICATIONS.

4) CONTRACTOR SHALL OBTAIN AND REVIEW A COPY OF ALL OF THE ABOVE MENTIONED STANDARDS AND SPECIFICATIONS.

5) THESE PLANS CALL FOR BUT ARE NOT DESIGN DRAWINGS FOR THE RELOCATION, AND/OR REMOVAL OF EXISTING DRY UTILITIES INFRASTRUCTURE. DESIGN DRAWINGS FOR SAID RELOCATIONS AND REMOVALS SHALL BE BY OTHERS.

6) CALL BLUESTAKES 48 HOURS PRIOR TO DIGGING.

7) CONTRACTOR SHALL FIELD VERIFY LOCATIONS OF ALL EXISTING MANHOLES AND OTHER UTILITIES BEFORE BUILDING OR STAKING ANY UTILITY LINES.

8) BENCHMARK IS: THE SECTION CORNER MONUMENT LOCATED AT THE INTERSECTION OF SOUTHWEBER DRIVE AND 1900 EAST KNOWN AS THE SOUTHEAST CORNER OF SECTION 27, TOWNSHIP 5 NORTH, RANGE 1 WEST, SLB&M ELEVATION = 4508.10.

## DEVELOPER

ROB EDWARDS
227 Suite B 25th Str., UT 84403
TEL: 801-558-4740

## ENGINEER / SURVEYOR

PINNACLE
Engineering & Land Surveying, Inc.
327 WEST GORDON AVE. #3 — Phone: (801) 773-1910
LAYTON, UT 84041 — Fax: (801) 719-6738

## 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.

## 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 THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB-SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO 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.

## TRAFFIC CONTROL & SAFETY NOTES

TRAFFIC CONTROL PLAN FOR WORK WITHIN UDOT RIGHT OF WAY MUST MEET UDOT STANDARDS & SPECIFICATIONS

1. BARRICADING AND DETOURING SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE CURRENT STATE OF UTAH DEPARTMENT OF TRANSPORTATION MANUAL OF TRAFFIC CONTROLS FOR CONSTRUCTION AND MAINTENANCE WORK ZONES, AND THE CURRENT SOUTH WEBER CITY STANDARD DRAWING, AND SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY WORK.

2. NO STREET SHALL BE CLOSED TO TRAFFIC WITHOUT WRITTEN PERMISSION FROM THE CITY TRAFFIC ENGINEER, EXCEPT WHEN DIRECTED BY LAW ENFORCEMENT OR FIRE OFFICIALS.

3. THE CONTRACTOR SHALL MAKE EVERY EFFORT TO PROVIDE FOR SMOOTH TRAFFIC FLOW AND SAFETY. ACCESS SHALL BE MAINTAINED FOR ALL PROPERTIES ADJACENT TO THE WORK.

4. DETOURING OPERATIONS FOR A PERIOD OF SIX CONSECUTIVE CALENDAR DAYS, OR MORE, REQUIRE THE INSTALLATION OF TEMPORARY STREET STRIPING AND REMOVAL OF INTERFERING STRIPING BY SANDBLASTING. THE DETOURING STRIPING PLAN OR CONSTRUCTION TRAFFIC CONTROL PLAN MUST BE SUBMITTED TO THE CITY TRAFFIC ENGINEER FOR REVIEW AND APPROVAL.

5. ALL TRAFFIC CONTROL DEVICES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE END OF THE WORK TO THE SATISFACTION OF THE CITY TRAFFIC ENGINEER.

6. TRAFFIC CONTROL DEVICES (TCDs) SHALL REMAIN VISIBLE AND OPERATIONAL AT ALL TIMES.

## GOVERNING AGENCIES

**CITY**
SOUTH WEBER CITY
1600 EAST SOUTH WEBER DR.
SOUTH WEBER, UT 84050
PHONE: 801-479-3177
FAX: 801-479-0066

**TRANSPORTATION**
SOUTH WEBER CITY ENGINEER
BRANDON JONES
1716 EAST 5600 SOUTH
OGDEN, UT 84403
PHONE: 801-476-9767
PHONE: 801-476-9768

**FIRE INSPECTION**
SOUTH WEBER CITY FIRE MARSHALL
1600 EAST SOUTH WEBER DR.
SOUTH WEBER, UT 84050
PHONE: 801-479-3177
FAX: 801-479-0066

**SEWER**
SOUTH WEBER CITY PUBLIC WORKS
1600 EAST SOUTH WEBER DR.
SOUTH WEBER, UT 84050
PHONE: 801-479-3177
FAX: 801-479-0066

**STORM DRAIN**
SOUTH WEBER CITY PUBLIC WORKS
1600 EAST SOUTH WEBER DR.
SOUTH WEBER, UT 84050
PHONE: 801-479-3177
FAX: 801-479-0066

**CULINARY WATER**
SOUTH WEBER CITY PUBLIC WORKS
1600 EAST SOUTH WEBER DR.
SOUTH WEBER, UT 84050
PHONE: 801-479-3177
FAX: 801-479-0066

**SECONDARY WATER**
SOUTH WEBER WATER IMPROVEMENT DIST.
7924 SOUTH 1900 EAST
SOUTH WEBER, UT 84405
CONTACT PERSON
PHONE: 801-475-4749

**POWER**
ROCKY MOUNTAIN POWER
SALT LAKE CITY, UT
ED ZIEBER 801-543-3017

**NATURAL GAS**
DOMINION ENERGY UTAH
333 SOUTH STATE STREET
PO BOX 45360
SALT LAKE CITY, UT 84145
MIKE DAVIS 801-395-6806

**TELEPHONE**
QWEST CORPORATION
1425 WEST 3100 SOUTH
SALT LAKE CITY, UT 84119
GARY WEAVER: 801-626-5380

**IRRIGATION WATER**
SOUTH WEBER IRRIGATION COMPANY
6525 SOUTH 475 EAST
SOUTH WEBER, UT 84405
LOUISE COOPER
PHONE: 801-295-8854

**CABLE**
COMCAST CABLE CORPORATION
9602 SOUTH 300 WEST
SANDY, UT 84070
PHONE: 885-782-1061

## DRAWING INDEX



PINNACLE
Engineering & Land Surveying, Inc.
Layton • West Bountiful • Mount Pleasant • St. George
327 West Gordon Ave. #3 — Phone: (801) 773-1910
Layton, UT 84041 — Fax: (801) 773-1925

LA PINTANA
COVER SHEET
FOR: ROB EDWARDS
1890 EAST SOUTH WEBER DRIVE
SOUTH WEBER, UTAH
PROJECT #17-084A

LICENSED PROFESSIONAL ENGINEER
STATE OF UTAH
STEPHEN P. BOTT
#5519
SIGNATURE
DATE

| REVISION | BY | DATE |
|---|---|---|

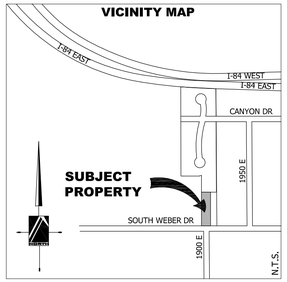
SURVEYED BY
DESIGNED BY
DRAWN BY SPB 01/15/19
APPROVED BY SJF

**CALL BLUESTAKES**
**1-800-662-4111**
AT LEAST 48 HOURS BEFORE DIGGING

SHEET
1

# LA PINTANA SUBDIVISION

A PART OF THE SOUTHEAST QUARTER OF SECTION 27,
TOWNSHIP 5 NORTH, RANGE 1 WEST,
SALT LAKE BASE AND MERIDIAN,
SOUTH WEBER CITY, DAVIS COUNTY, UTAH




## NOTES

1- PUBLIC UTILITY AND DRAINAGE EASEMENTS ARE 10 FEET WIDE AROUND SUBDIVISION BOUNDARY AND ALONG ROAD FRONTAGES.

2- BUILDABLE AREA ENVELOPES ARE AS FOLLOWS:

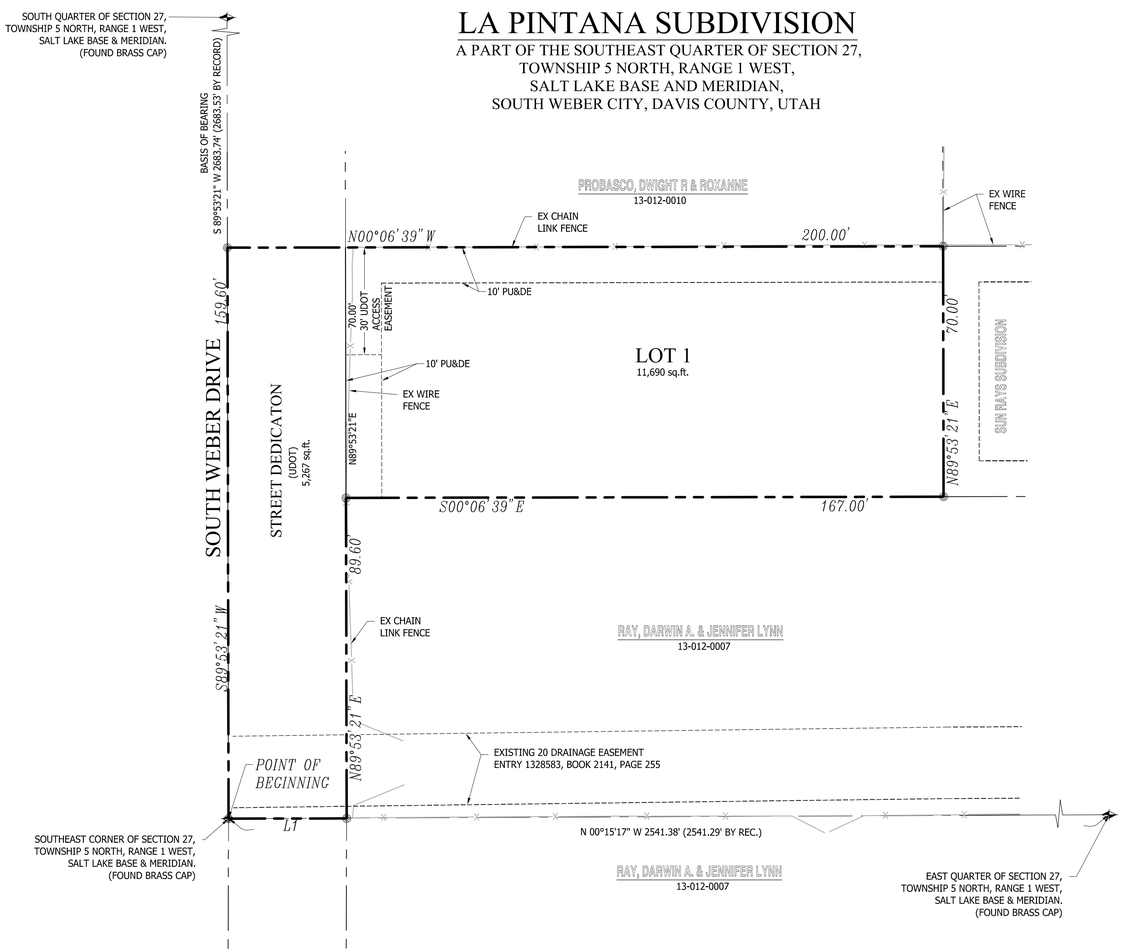
20 FOOT FRONT YARD SETBACK
25 FOOT REAR YARD SETBACK
10 FOOT SIDE YARD SETBACK
20 FOOT SIDE YARD SETBACK ON CORNER LOTS

3- ALL LOTS ARE SUBJECT TO THE REQUIREMENTS OF THE GEOTECHNICAL REPORT PREPARED BY CHRISTENSEN GEOTECHNICAL, DATED JUNE 27, 2017. THIS INCLUDES EXCAVATION OBSERVATIONS ON EACH LOT BY THE GEOTECHNICAL ENGINEER AFTER THE EXCAVATION IS COMPLETE BUT BEFORE THE FOUNDATIONS ARE POURED OR STRUCTURAL FILL IS PLACED

## QUESTAR GAS NOTE

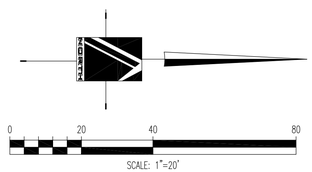
QUESTAR APPROVES THIS PLAT SOLELY FOR THE PURPOSE OF CONFIRMING THAT THE PLAT CONTAINS PUBLIC UTILITY EASEMENTS. QUESTAR MAY REQUIRE OTHER EASEMENTS IN ORDER TO SERVE THIS DEVELOPMENT. THIS APPROVAL DOES NOT CONSTITUTE ABROGATION OR WAIVER OF ANY OTHER EXISTING RIGHTS, OBLIGATIONS OR LIABILITIES PROVIDED BY LAW OR EQUITY. THIS APPROVAL DOES NOT CONSTITUTE ACCEPTANCE, APPROVAL OR ACKNOWLEDGMENT OF ANY TERMS CONTAINED IN THE PLAT, INCLUDING THOSE SET IN THE OWNERS DEDICATION AND THE NOTES AND DOES NOT CONSTITUTE A GUARANTEE OF PARTICULAR TERMS OF NATURAL GAS SERVICE. FOR FURTHER INFORMATION PLEASE CONTACT QUESTAR'S RIGHT-OF-WAY DEPARTMENT AT 1-800-366-8532.

| LINE TABLE | | |
|---|---|---|
| LINE | BEARING | LENGTH |
| L1 | S 00°06'39" E | 33.00' |




## LEGEND

PROPERTY LINE
LOT LINE
CENTER / SECTION LINE
EASEMENT LINE
BUILDING SETBACK LINE (NOT SHOWN)
ADJOINING LOT LINE
PROPOSED STREET MONUMENT
SECTION CORNERS
PROPOSED STREETLIGHT
PUE&DE PUBLIC UTILITY & DRAINAGE EASEMENT
SET 5/8" REBAR WITH A ORANGE PLASTIC CAP, OR NAIL & WASHER STAMPED PINNACLE ENG. & LAND SURV.




## SURVEYOR'S CERTIFICATE

I, STEPHEN J FACKRELL DO HEREBY CERTIFY THAT I AM A LICENSED PROFESSIONAL LAND SURVEYOR, AND THAT I HOLD CERTIFICATE NO. 191517 AS PRESCRIBED UNDER LAWS OF THE STATE OF UTAH. I FURTHER CERTIFY THAT BY AUTHORITY OF THE OWNERS, I HAVE MADE A SURVEY OF THE TRACT OF LAND SHOWN ON THIS PLAT AND DESCRIBED BELOW, AND HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS AND STREETS, HEREAFTER TO BE KNOWN AS LA PINTANA SUBDIVISION AND THAT THE SAME HAS BEEN CORRECTLY SURVEYED AND STAKED ON THE GROUND AS SHOWN ON THIS PLAT. I FURTHER CERTIFY THAT ALL LOTS MEET FRONTAGE WIDTH AND AREA REQUIREMENTS OF THE APPLICABLE ZONING ORDINANCES.

## BOUNDARY DESCRIPTION

BEGINNING AT THE SOUTHEAST CORNER OF SECTION 27, TOWNSHIP 5 NORTH, RANGE 1 WEST, SLB&M; AND RUNNING THENCE SOUTH 89°53'21" WEST ALONG QUARTER SECTION LINE 159.60; THENCE NORTH 00°06'39" WEST 200.00 FEET; THENCE NORTH 89°53'21" EAST 70.00 FEET TO THE WESTERLY LINE OF THE PROPERTY CONVEYED IN WARRANTY DEED RECORDED 11/16/2015 AS ENTRY # 2905137, BOOK 6394, PAGE 903 AT THE DAVIS COUNTY RECORDERS OFFICE ; THENCE SOUTH 00°06'39" EAST ALONG SAID WESTERLY LINE 167.00 FEET TO THE NORTHERLY LINE OF THE SOUTH WEBER DRIVE RIGHT OF WAY; THENCE NORTH 89°53'21" EAST ALONG THE NORTH LINE OF SAID RIGHT OF WAY 89.60 FEET; AND THENCE SOUTH 00°06'39" EAST 33.00 FEET TO THE POINT OF BEGINNING.

CONTAINING: 16,957 SQ.FT. (0.39 ACRES)

DATE

STEPHEN J. FACKRELL
LICENSE NO. 191517

## OWNER'S DEDICATION

WE THE UNDERSIGNED OWNERS OF THE HEREON DESCRIBED TRACT OF LAND, HEREBY SET APART AND SUBDIVIDE THE SAME INTO LOTS AND STREETS, AS SHOWN ON THIS PLAT AND NAME SAID TRACT OF LAND

LA PINTANA SUBDIVISION

AND HEREBY DEDICATE, GRANT AND CONVEY TO UDOT, DAVIS COUNTY, UTAH ALL THOSE PARTS OR PORTIONS OF SAID TRACT OF LAND DESIGNATED AS STREETS, THE SAME TO BE USED AS PUBLIC THOROUGHFARES FOREVER , AND ALSO DEDICATE TO SOUTH WEBER CITY THOSE CERTAIN STRIPS AS EASEMENTS FOR PUBLIC UTILITY AND DRAINAGE PURPOSES, AS SHOWN HEREON, THE SAME TO BE USED FOR THE INSTALLATION, MAINTENANCE AND OPERATION OF PUBLIC UTILITY SERVICE INSTALLATION, MAINTENANCE AND OPERATION OF PUBLIC UTILITY SERVICE LINES AND DRAINAGE, AS MAY BE AUTHORIZED BY SOUTH WEBER CITY, AND DO HEREBY, DEDICATED, GRANT AND CONVEY TO SOUTH WEBER IRRIGATION COMPANY A 10 FOOT WIDE IRRIGATION EASEMENT AS SHOWN HEREON DESCRIBED HERON.

THE UNDERSIGNED HEREBY CERTIFY THAT THIS SUBDIVISION HAS MET THE ALL THE REQUIREMENTS OF SOUTH WEBER CITY ORDINANCES.

SIGNED THIS _____ DAY OF _____, 20___.

## ACKNOWLEDGMENT

STATE OF UTAH )
County of Davis )

On the _____ day of _____ A.D., 20_____, personally appeared before me, the undersigned Notary public, in and for said County of Davis in said State of Utah, the signer ( ) of the above Owner's dedication,____ in number, who duly acknowledged to me that signed it freely and voluntarily and for the uses and purposes therein mentioned.

MY COMMISSION EXPIRES: _____

NOTARY PUBLIC
RESIDING IN DAVIS COUNTY

## SOUTH WEBER IRRIGATION COMPANY

APPROVED THIS_____DAY OF_____ , 20____, BY THE SOUTH WEBER IRRIGATION COMPANY.

SOUTH WEBER IRRIGATION COMPANY REPRESENTATIVE

## ROCKY MOUNTAIN POWER

APPROVED THIS_____DAY OF_____ , 20____, BY A REPRESENTATIVE OF ROCKY MOUNTAIN POWER.

ROCKY MOUNTAIN POWER REPRESENTATIVE

## QUESTAR GAS COMPANY

APPROVED THIS_____DAY OF_____ , 20____, BY A REPRESENTATIVE OF QUESTAR GAS COMPANY.

QUESTAR GAS COMPANY REPRESENTATIVE

## CITY ATTORNEY'S APPROVAL

APPROVED THIS_____DAY OF_____ , 20____, BY THE SOUTH WEBER CITY ATTORNEY.

## PLANNING COMMISSION APPROVAL

APPROVED THIS_____DAY OF_____ , 20____, BY THE SOUTH WEBER CITY PLANNING COMMISSION.

CHAIRMAN, SOUTH WEBER CITY PLANNING COMMISSION

## CITY ENGINEER'S APPROVAL

APPROVED THIS_____DAY OF_____ , 20____, BY THE SOUTH WEBER CITY ENGINEER.

SOUTH WEBER CITY ENGINEER

## CITY COUNCIL APPROVAL

APPROVED THIS_____DAY OF_____ , 20____, BY THE SOUTH WEBER CITY COUNCIL.

ATTEST:

SOUTH WEBER CITY RECORDER SOUTH WEBER CITY MAYOR

## DAVIS COUNTY RECORDER

ENTRY NO._____FEE PAID_____FILED FOR RECORD AND RECORDED THIS_____DAY OF _____, 20___ AT _____ IN BOOK _____ OF OFFICIAL RECORDS PAGE _____

DAVIS COUNTY RECORDER

BY:_____
DEPUTY RECORDER

LA PINTANA SUBDIVISION
A PART OF THE SOUTHEAST QUARTER OF SECTION 27,
TOWNSHIP 5 NORTH, RANGE 1 WEST,
SALT LAKE BASE AND MERIDIAN,
SOUTH WEBER CITY, DAVIS COUNTY, UTAH
SHEET 1 OF 1

PINNACLE
Engineering & Land Surveying Inc
LAYTON • ST. GEORGE • MT. PLEASANT • W. BOUNTIFUL
327 West Gordon Ave., Suite #3
LAYTON, UT 84041
Phone: (801) 773-1910
Fax: (801) 719-6738

17-084B

## GENERAL NOTES

1. CONTRACTOR SHALL OBTAIN A COPY OF, AND STRICTLY ADHERE TO THE CURRENT STANDARDS AND SPECIFICATIONS OF ALL APPLICABLE AGENCIES.
2. NO ALLOWANCE WILL BE MADE FOR DISCREPANCIES OR OMISSIONS THAT CAN BE EASILY OBSERVED. CONTRACTOR MUST VERIFY ALL EXISTING CONDITIONS BEFORE BIDDING, AND BRING UP ANY QUESTIONS BEFOREHAND.
3. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING SURE THAT ALL REQUIRED PERMITS AND APPROVALS HAVE BEEN OBTAINED. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PLANS AND OTHER DOCUMENTS APPROVED BY ALL OF THE PERMITTING AUTHORITIES.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, MAINTAINING, OR RESTORING ALL MONUMENTS AND MONUMENT REFERENCE MARKS WITHIN THE PROJECT SITE. CONTACT THE CITY OR COUNTY SURVEYOR FOR MONUMENT LOCATIONS AND CONSTRUCTION DETAILS.
5. CONTRACTOR SHALL PROVIDE A CONSTRUCTION SCHEDULE IN ACCORDANCE WITH THE CITY OR COUNTY REGULATIONS FOR WORKING IN THE PUBLIC WAY.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL ACCORDING TO GOVERNING AGENTS STANDARDS. WET DOWN DRY MATERIALS AND RUBBISH TO PREVENT BLOWING.
7. THE CONTRACTOR IS RESPONSIBLE TO COORDINATE THE FURNISHING OF ALL MATERIALS WITH THE GENERAL CONTRACTOR TO COMPLETE THE PROJECT.
8. TRAFFIC CONTROL TO CONFORM TO THE CURRENT CITY OR COUNTY TRANSPORTATION ENGINEER'S MANUAL.

## GEOTECHNICAL NOTES

1. SITE GRADING SHALL BE PERFORMED IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT PREPARED BY CHRISTENSEN GEOTECHNICAL DATED JUNE 27, 2017. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ALL SOFT, YIELDING OR UNSUITABLE MATERIALS AND REPLACING WITH SUITABLE MATERIALS AS SPECIFIED IN THE SOILS REPORT. ALL EXCAVATED OR FILLED AREAS SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR MAXIMUM DENSITY PER ASTM TEST D-1557 EXCEPT UNDER BUILDING FOUNDATION WHERE IT SHALL BE 100% MIN. OF MAXIMUM DENSITY. MOISTURE CONTENT AT TIME OF PLACEMENT SHALL NOT EXCEED 2% ABOVE NOR 3% BELOW OPTIMUM. CONTRACTOR SHALL SUBMIT A COMPACTION REPORT PREPARED BY A QUALIFIED REGISTERED SOILS ENGINEER, VERIFYING THAT ALL FILLED AREAS AND SUB GRADE AREAS WITHIN THE BUILDING PAD AREA AND AREAS TO BE PAVED, HAVE BEEN COMPACTED IN ACCORDANCE WITH THESE PLANS AND SPECS AND THE RECOMMENDATIONS SET FORTH IN THE SOILS REPORT.
2. THE SOILS REPORT AND RECOMMENDATIONS SET FORTH THEREIN ARE A PART OF THE REQUIRED CONSTRUCTION DOCUMENTS AND IN CASE OF CONFLICT, SHALL TAKE PRECEDENCE UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCY BETWEEN SOILS REPORT AND PLANS, ETC.
3. BASED ON THE GEOTECHNICAL REPORT, "WITHIN AREAS TO BE GRADED (BELOW PROPOSED STRUCTURES, FILL SECTIONS, CONCRETE FLATWORK, OR PAVEMENT SECTIONS), ANY EXISTING VEGETATION, DEBRIS, TOPSOIL, UNDOCUMENTED FILL, OR OTHERWISE UNSUITABLE SOILS SHOULD BE REMOVED, ANY SOFT , LOOSE, OR DISTURBED SOILS SHOULD ALSO BE REMOVED".... TOPSOIL AND UNDOCUMENTED FILL MATERIALS SHOULD BE REMOVED PRIOR TO PLACEMENT OF STRUCTURAL FILL, STRUCTURES, CONCRETE FLATWORK AND PAVEMENTS." WHERE OVER-EXCAVATION OR SOFT SOIL STABILIZATION IS REQUIRED, IT SHOULD PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.

## DEMOLITION NOTES

1. CONTRACTOR TO LEGALLY REMOVE & DISPOSE OF ALL EXTRANEOUS UTILITIES , STRUCTURES, IMPROVEMENTS & DEBRIS ON THE SITE PRIOR TO CONSTRUCTING THE IMPROVEMENTS SHOWN ON THIS PLAN.
2. SAID DEMOLITION MAY INCLUDE, BUT IS NOT LIMITED TO UTILITY SERVICES AS WELL AS ASPHALT, CONCRETE, FENCES, TREES, SHRUBS & OTHER DELETERIOUS MATERIALS ON THE SITE.
3. SAID DEMOLITION INCLUDES UTILITY MAINS AS SHOWN ON THESE PLANS.
4. SITE CLEARING SHALL INCLUDE THE LOCATION AND REMOVAL OF ALL UNDERGROUND TANKS, PIPES, VALVES, ETC.
5. CONTRACTOR IS TO COORDINATE ALL PERMITS, FEES & INSPECTIONS AS REQUIRED BY ANY AGENCY HAVING JURISDICTION.
6. NATURAL VEGETATION AND SOIL COVER SHALL NOT BE DISTURBED PRIOR TO ACTUAL CONSTRUCTION OF A REQUIRED FACILITY OR IMPROVEMENT. MASS CLEARING OF THE SITE IN ANTICIPATION OF CONSTRUCTION SHALL BE AVOIDED. CONSTRUCTION TRAFFIC SHALL BE LIMITED TO ONE APPROACH TO SITE. THE APPROACH SHALL BE DESIGNATED BY THE GENERAL MANAGER.

## UNDERGROUND INFORMATION

1. THE LOCATION OF UNDERGROUND UTILITES SHOWN ON THESE PLANS IS BASED ON INFORMATION GATHERED FROM UTILITIES AND/OR FROM ABOVE-GROUND STRUCTURES OR EVIDENCE FOUND AT THE TIME OF SURVEY. AS SUCH, THE UNDERGROUND INFORMATION IS A BEST ESTIMATE. PINNACLE DOES NOT REPRESENT OR GUARANTEE THAT THE UNDERGROUND INFORMATION PROVIDED IS CORRECT OR UP TO DATE.
2. IT SHALL BE THE CONTRACTORS FULL RESPONSIBILITY TO CONTACT THE VARIOUS UTILITY COMPANIES TO LOCATE THEIR FACILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. CALL BLUESTAKES A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY DIGGING OR UTILITY WORK.
3. NO ADDITIONAL COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR DAMAGE AND REPAIR TO THESE FACILITIES CAUSED BY HIS WORK FORCE.

## UTILITY NOTES

CONTRACTOR SHALL OBTAIN A COPY OF, AND STRICTLY ADHERE TO THE CURRENT STANDARDS AND SPECIFICATIONS OF SOUTH WEBER CITY PUBLIC WORKS. CONTRACTOR IS TO OBTAIN ANY REQUIRED PERMITS AND NOTIFY THE UTILITY OWNER AND PINNACLE ENGINEERING PRIOR TO BEGINNING ANY WORK ON WET UTILITIES. CONTRACTOR IS TO COORDINATE DRY UTILITY WORK WITH THE UTILITY OWNERS.

**STORM DRAIN**
SEE SOUTH WEBER CITY PUBLIC WORKS. STANDARDS & SPECIFICATIONS FOR ALL DETAILS & SPECIFICATIONS GOVERNING THE CONSTRUCTION & INSPECTION OF THE STORM DRAIN & APPURTENANCES WITHIN THE PUBLIC RIGHT-OF-WAY SHOWN ON THIS PLAN. SEE THE DETAILS PROVIDED ON THIS SET OF DRAWINGS FOR ALL OTHER STORM DRAIN CONSTRUCTION. ALL STORM DRAIN SHALL BE CLASS III RCP.

**LAND DRAIN**
(NOT APPLICABLE)

**SANITARY SEWER**
SEE SOUTH WEBER CITY PUBLIC WORKS. STANDARDS & SPECIFICATIONS FOR ALL DETAILS & SPECIFICATIONS GOVERNING THE CONSTRUCTION & INSPECTION OF THE SANITARY SEWER & APPURTENANCES SHOWN ON THIS PLAN. COORDINATE SEWER FINAL DESIGN WITH SOUTH WEBER CITY ENGINEERED PLANS.

**CULINARY WATER**
SEE SOUTH WEBER CITY PUBLIC WORKS. STANDARDS & SPECIFICATIONS FOR ALL DETAILS & SPECIFICATIONS GOVERNING THE CONSTRUCTION & INSPECTION OF THE CULINARY WATER & APPURTENANCES SHOWN ON THIS PLAN. CULINARY WATER LINES SHALL BE 8" CL51 POLY-WRAPPED DUCTILE IRON PIPE. ELBOW FITTINGS SHALL BE DUCTILE IRON CLASS 250.

**SECONDARY WATER**
SEE SOUTH WEBER WATER IMPROVEMENT DIST. STANDARDS & SPECIFICATIONS FOR ALL DETAILS & SPECIFICATIONS GOVERNING THE CONSTRUCTION & INSPECTION OF THE SECONDARY WATER & APPURTENANCES SHOWN ON THIS PLAN. SECONDARY WATER LINES SHALL BE 6" PVC DR-14 CLASS 200 PIPE. ELBOW FITTINGS SHALL BE DUCTILE IRON CLASS 250.

**DRY UTILITIES**
THESE PLANS SHOW THE LOCATION OF POWER, NATURAL GAS, AND COMMUNICATIONS UTILITIES, BUT ARE NOT DESIGN DRAWINGS FOR THE RELOCATION OR REMOVAL OF EXISTING DRY UTILITIES, NOR FOR ANY NEW DRY UTILITY STUBS. CONTRACTOR IS TO SUBMIT SITE PLAN TO DRY UTILITIES FOR DESIGN OF SERVICE CONNECTIONS TO BUILDING. ACTUAL CONSTRUCTION OF SAID SERVICES TO BE DONE BY RESPECTIVE UTILITY PROVIDERS.

**GENERAL UTILITY NOTE:**

1. CONTRACTOR MUST START AT THE LOW END OF ALL GRAVITY FED LINES AND WORK UP HILL. FAILURE TO COMPLY WITH THIS NOTE WILL RELEASE THE CIVIL ENGINEER OF ALL LIABILITY.
2. THE CONTRACTOR IS TO VERIFY DEPTHS OF UTILITIES IN THE FIELD BY POT HOLING A MINIMUM OF 300 FEET AHEAD OF PIPELINE CONSTRUCTION TO AVOID CONFLICTS WITH DESIGNED PIPELINE GRADE AND ALIGNMENT. IF A CONFLICT ARISES RESULTING FROM THE CONTRACTOR'S NEGLIGENCE TO POTHOLE UTILITIES THE CONTRACTOR WILL BE REQUIRED TO RESOLVE THE CONFLICT WITHOUT ADDITIONAL COST OR CLAIM TO THE OWNER OR ENGINEER.
3. ALL DIMENSIONS, GRADES, AND UTILITY DESIGN SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES EXIST, PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO THE DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS, IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
4. CONTRACTOR SHALL NOT ALLOW ANY GROUNDWATER OR DEBRIS TO ENTER THE NEW PIPE DURING CONSTRUCTION.
5. ALL THRUST BLOCKS SHALL BE POURED IN PLACE AGAINST UNDISTURBED SOIL AS PER SPECIFICATIONS, ALL VALVES, FITTINGS, AND APPURTENANCES TO BE BLOCKED.
6. CONTRACTOR TO LOOP NEW WATERLINE AROUND GRAVITY UTILITIES IF CONFLICT DOES OCCUR. (NOTIFY ENGINEER OF THE PROBLEM).
7. CONTRACTOR IS TO COORDINATE ALL UTILITIES WITH MECHANICAL DRAWINGS.
8. NO CHANGE IN DESIGN LOCATION OR GRADE WILL BE MADE BY THE CONTRACTOR WITHOUT THE WRITTEN APPROVAL OF THE PROJECT ENGINEER.

## ABOVE-GROUND IMPROVEMENTS

CONTRACTOR SHALL OBTAIN A COPY OF, AND STRICTLY ADHERE TO THE CURRENT UTAH DEPARTMENT OF TRANSPORTATION AND SOUTH WEBER CITY PUBLIC WORKS STANDARDS AND SPECIFICATIONS. CONTRACTOR IS TO OBTAIN ANY REQUIRED PERMITS AND NOTIFY THE UDOT AND SOUTH WEBER CITY PRIOR TO BEGINNING ANY WORK WITHIN THE STREET.

1. ALL DIMENSIONS, AND GRADES SHOWN ON THE PLANS SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOTIFY THE ENGINEER IF ANY DISCREPANCIES EXIST, PRIOR TO PROCEEDING WITH CONSTRUCTION FOR NECESSARY PLAN OR GRADE CHANGES. NO EXTRA COMPENSATION SHALL BE PAID TO THE CONTRACTOR FOR WORK HAVING TO BE REDONE DUE TO THE DIMENSIONS OR GRADES SHOWN INCORRECTLY ON THESE PLANS, IF SUCH NOTIFICATION HAS NOT BEEN GIVEN.
2. ALL EXISTING MANHOLES, WATER VALVES, CLEAN OUTS, ETC., ARE TO BE RAISED OR LOWERED TO GRADE.
3. ALL NEW VALVES, MANHOLES, ETC. SHALL BE INSTALLED A MINIMUM OF 6" BELOW FINISH GRADE & RAISED TO GRADE AS REQUIRED WITH A MINIMUM 6" CONCRETE RING.
4. FULL DEPTH EXPANSION JOINTS WILL BE PLACED AGAINST ANY OBJECT DEEMED TO BE FIXED, CHANGES IN DIRECTION, AND AT EQUAL INTERVALS NOT TO EXCEED 50 FEET. SLABS-ON-GRADE WILL BE TYPICALLY SCORED (1/2 THE DEPTH) AT INTERVALS NOT TO EXCEED THEIR WIDTH OR 12 TIMES THEIR DEPTH, WHICHEVER IS LESS. SCORING WILL BE PLACED TO PREVENT RANDOM CRACKING.
5. CONCRETE WATERWAYS, CURB WALLS, MOW STRIPS, CURB AND GUTTER, ETC., WILL TYPICALLY BE SCORED ( 1/2 THE DEPTH) AT INTERVALS NOT TO EXCEED 10 FEET, AND HAVE FULL DEPTH EXPANSION JOINTS THAT EQUAL SPACING NOT TO EXCEED 40 FEET.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ADJACENT SURFACE IMPROVEMENTS.
7. ALL EXISTING ASPHALT WILL BE SAW CUT IN NEAT STRAIGHT LINES BY THE CONTRACTOR PRIOR TO EXCAVATION.
8. HANDICAP ACCESSIBILITY: ALL CONSTRUCTION SHALL MEET THE ADA HANDICAP ACCESSIBILITY REQUIREMENTS. FOR ANY DISCREPANCIES BETWEEN THE PLANS AND ADA REQUIREMENTS, ADA REQUIREMENTS WILL GOVERN.
9. STRIPING WILL BE PER THE PLANS AND/OR AS DIRECTED BY THE OWNER'S REPRESENTATIVE. STRIPING TO INCLUDE HANDICAP INSIGNIAS, SIGNS, CROSS-HATCHING, DIRECTION ARROWS, ETC. AS SHOWN OR AS DIRECTED.
10. NO CHANGE IN DESIGN LOCATION OR GRADE WILL BE MADE BY THE CONTRACTOR WITHOUT THE WRITTEN APPROVAL OF THE PROJECT ENGINEER.

## ABBREVIATIONS

| | |
|---|---|
| ⌀ | DIAMETER |
| Δ | DELTA |
| ° | DEGREES |
| ' | MINUTES, FEET |
| " | SECONDS, INCHES |
| AD | ALGEBRAIC DIFFERENCE |
| ADA | AMERICAN DISABILITIES ACT |
| ADS | CORRUGATED BLACK PLASTIC PIPE |
| ARCH | ARCHITECTURAL |
| B&C | BAR & CAP |
| BL | BOUNDARY LINE |
| BLA | BOUNDARY LINE AGREEMENT |
| BM | BENCHMARK |
| BND | BOUNDARY |
| BOW | BACK OF WALK |
| BRG | BEARING |
| BV | BUTTERFLY VALVE |
| BVC | BEGIN VERTICAL CURVE |
| BVCE | BEGIN VERTICAL CURVE ELEVATION |
| BVCS | BEGIN VERTICAL CURVE STATION |
| C&G | CURB AND GUTTER |
| CB | CATCH BASIN |
| CH | CHORD |
| CHB | CHORD BEARING |
| CI | CAST IRON |
| CL | CENTERLINE |
| CMP | CORRUGATED METAL PIPE |
| CO | CLEANOUT |
| COMBO | COMBINATION |
| CONC | CONCRETE |
| CONST | CONSTRUCTION |
| CP | CONTROL POINT |
| CUL | CULINARY |
| CW | CULINARY WATER |
| CWL | CULINARY WATERLINE |
| DEMO | DEMOLITION |
| DI | DUCTILE IRON |
| DIAM | DIAMETER |
| DIST | DISTANCE |
| DIV | DIVERSION |
| E | EAST |
| EASE | EASEMENT |
| EG | EXISTING GRADE |
| EL | ELBOW |
| ELEC | ELECTRICAL |
| EVC | END VERTICAL CURVE |
| EVCE | END VERTICAL CURVE ELEVATION |
| EVCS | END VERTICAL CURVE STATION |
| EX | EXISTING |
| FG | FINISH GRADE |
| FH | FIRE HYDRANT |
| FL | FLOWLINE |
| FND | FOUND |
| FND | FOUNDATION |
| FTG | FOOTING |
| GB | GRADE BREAK |
| GR | GRATE |
| GV | GATE VALVE |
| HDPE | HIGH-DENSITY POLYETHYLENE PIPE |
| HP | HIGH POINT |
| HPE | HIGH POINT ELEVATION |
| HPS | HIGH POINT STATION |
| ID | INSIDE DIAMETER |
| INV | INVERT |
| IRR | IRRIGATION |
| IRRMH | IRRIGATION MANHOLE |
| K | RADIUS OF CURVATURE |
| L | LENGTH |
| LAT | LATERAL SERVICE |
| LD | LAND DRAIN |
| LDMH | LAND DRAIN MANHOLE |
| LG | LIP OF GUTTER |
| LP | LOW POINT |
| LPE | LOW POINT ELEVATION |
| LPS | LOW POINT STATION |
| MECH | MECHANICAL |
| MH | MANHOLE |
| MON | MONUMENT |
| N | NORTH |
| NE | NORTHEAST |
| NR | NON-RADIAL |
| NW | NORTHWEST |
| OC | ON CENTER |
| OD | OUTSIDE DIAMETER |
| PL | PROPERTY LINE |
| PROP | PROPERTY |
| PUE | PUBLIC UTILTIY EASEMENT |
| PU&DE | PUBLIC UTILITY & DRAINAGE EASEMENT |
| PUE&DE | PUBLIC UTILITY EASEMENT & DRAINAGE EASEMENT |
| PVC | POLYVINYLCHLORIDE |
| R | RADIUS |
| RCL | ROADWAY CENTERLINE |
| RCP | REINFORCED CONCRETE PIPE |
| S | SOUTH |
| SD | STORM DRAIN |
| SDCB | STORM DRAIN CATCH BASIN |
| SDCO | STORM DRAIN CLEANOUT |
| SDMH | STORM DRAIN MANHOLE |
| SE | SOUTHEAST |
| SEC | SECONDARY |
| SEC | SECTION |
| SLB&M | SALT LAKE BASE & MERIDIAN |
| SPEC | SPECIFICATION |
| SPECS | SPECIFICATIONS |
| SPP | STEEL PIPE |
| SS | SANITARY SEWER |
| SSCO | SANITARY SEWER CLEANOUT |
| SSMH | SANITARY SEWER MANHOLE |
| STD | STANDARD |
| STDS | STANDARDS |
| SW | SECONDARY WATER |
| SW | SOUTHWEST |
| SWL | SECONDARY WATERLINE |
| TAN | TANGENT |
| TB | THRUST BLOCK |
| TBC | TOP BACK OF CURB |
| TBW | TOP BACK OF WALK |
| TEL | TELEPHONE |
| TCW | TOP OF CURBWALL |
| TOA | TOP OF ASPHALT |
| TOC | TOP OF CONCRETE |
| TOG | TOP OF GRATE |
| TOW | TOP OF WALL |
| UTIL | UTILITY |
| V | VALVE |
| VC | VERTICAL CURVE |
| W | WATER |
| W | WEST |
| WL | WATERLINE |
| WM | WATER METER |
| X | CROSS |
| X-SECT | CROSS-SECTION |

PINNACLE
Engineering & Land Surveying, Inc.
Layton • West Bountiful • Mount Pleasant • St. George
327 West Gordon Ave. #3
Layton, UT 84041
Phone: (801) 773-1910
Fax: (801) 773-1925

LA PINTANA
DETAILS, NOTES, & ABBREVIATIONS
FOR: ROB EDWARDS
1890 EAST SOUTH WEBER DRIVE
SOUTH WEBER, UTAH
PROJECT #17-084A

LICENSED PROFESSIONAL ENGINEER
STEPHEN P. BOTT
#333593
UTAH
1-15-19

| REVISION | BY | DATE |
|---|---|---|
| | | |

SURVEYED BY
DESIGNED BY
DRAWN BY SPB 01/15/19
APPROVED BY SJF

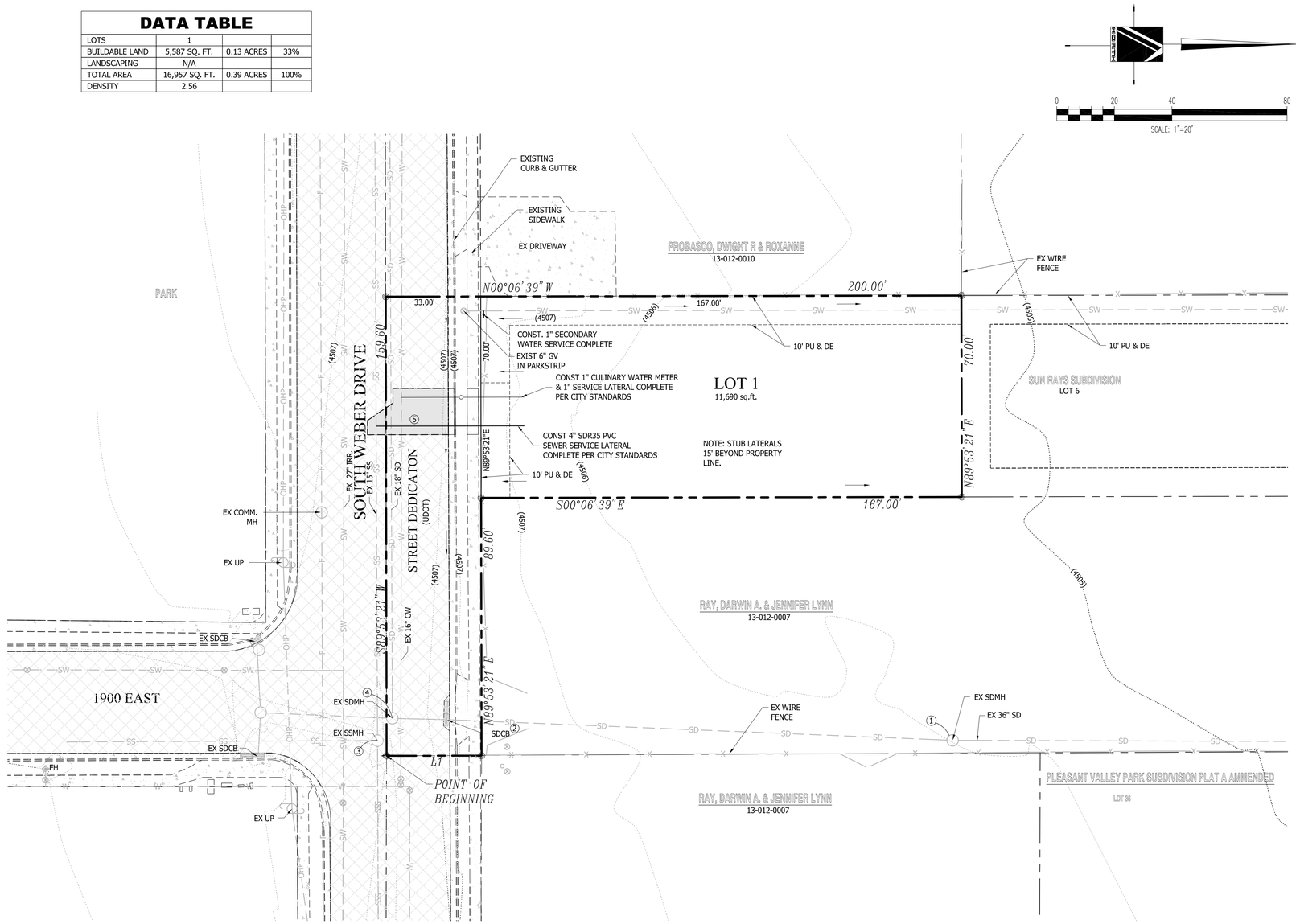
**CALL BLUESTAKES**
**1-800-662-4111**
AT LEAST 48 HOURS BEFORE DIGGING

SHEET
3



P:\2017 Projects\17-084\DWG\17-084A LaPINTANA IMP.DWG 1/15/2019 8:56:52 AM

| DATA TABLE | | | |
|---|---|---|---|
| LOTS | 1 | | |
| BUILDABLE LAND | 5,587 SQ. FT. | 0.13 ACRES | 33% |
| LANDSCAPING | N/A | | |
| TOTAL AREA | 16,957 SQ. FT. | 0.39 ACRES | 100% |
| DENSITY | 2.56 | | |




## KEYED NOTES

1. EXISTING STORM DRAIN MANHOLE RIM=4505.83 FL=4498.10
2. EXISTING STORM DRAIN CATCH BASIN GRATE=4506.50 FL=4496.55
3. EXISTING SEWER MANHOLE RIM=4508.06 FL=4495.46
4. EXISTING STORM DRAIN MANHOLE RIM=4507.93 FL(SOUTH)=4498.83 FL(WEST)=4498.53 FL(NORTH)=4497.98
5. SAWCUT, REMOVE, & REPLACE EXISTING ASPHALT AS DIRECTED BY THE UTAH DEPARTMENT OF TRANSPORTATION
6. SAWCUT, REMOVE, & REPLACE EXISTING CURB & GUTTER AND SIDEWALK AS REQUIRED

# SITE & UTILITY PLAN

PINNACLE
Engineering & Land Surveying, Inc.
Layton • West Bountiful • Mount Pleasant • St. George
327 West Gordon Ave. #3
Layton, UT 84041
Phone: (801) 773-1910
Fax: (801) 773-1925

LA PINTANA
CONSTRUCTION DRAWING
FOR: ROB EDWARDS
1890 EAST SOUTH WEBER DRIVE
SOUTH WEBER, UTAH
PROJECT #17-084A



LICENSED PROFESSIONAL ENGINEER
STEPHEN P. BOTT
5513593
UTAH

| REVISION | BY | DATE |
|---|---|---|
| | | |

SURVEYED BY
DESIGNED BY
DRAWN BY SPB 01/15/19
APPROVED BY SJF

**CALL BLUESTAKES**
**1-800-662-4111**
AT LEAST 48 HOURS BEFORE DIGGING

SHEET
4

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