CITY OF SARATOGA SPRINGS
CITY COUNCIL MEETING

Tuesday, August 18, 2015

Meeting held at the City of Saratoga Springs City Offices

1307 North Commerce Drive, Suite 200, Saratoga Springs, Utah 84045

CITY COUNCIL AGENDA

Councilmembers may participate in this meeting electronically via video or telephonic conferencing.

PLEASE NOTE: THE ORDER OF THE FOLLOWING ITEMS MAY CHANGE WITH THE ORDER OF THE MAYOR.

Commencing at 7:00 p.m.

- **Call to Order.**
- **Roll Call.**
- **Invocation / Reverence.**
- **Pledge of Allegiance.**
- **Public Input - Time has been set aside for the public to express ideas, concerns, and comments. Please limit repetitive comments.**
- **Awards and Recognitions. (Civic Events Awards)**

POLICY ITEMS: (All items are scheduled for consideration and possible approval unless otherwise noted)

1. **PUBLIC HEARING ITEMS:**
   a. Public Hearing: Amended Storm Drain Impact Fee, Storm Drain Capital Facilities Plan, Storm Drain Impact Fee Facilities Plan, and Storm Drain Impact Fee Analysis.
      i. Ordinance 15-25 (8-18-15): Amending the Storm Drain Impact Fee and Adopting a Storm Drain Capital Facilities Plan, Storm Drain Impact Fee Facilities Plan, and Storm Drain Impact Fee Analysis.

2. **ACTION ITEMS:**
   a. Final Plat for Talus Ridge Plat D located at 1100 West Talus Ridge Blvd, Edge Homes, applicant.
      i. Resolution R15-36 (8-18-15): Adding Lots to the City Street Lighting Special Improvement District for Talus Ridge Plat D.
   b. Final Plat for Talus Ridge Plat E located at 1100 West Talus Ridge Blvd, Edge Homes, applicant.
      i. Resolution R15-37 (8-18-15): Adding Lots to the City Street Lighting Special Improvement District for Talus Ridge Plat E.
   c. Site Plan, Conditional Use and Preliminary Plat for Harbor Bay Church located at 168 East Harbor Bay Drive, Evans and Associates Architecture, applicant.
   d. Site Plan and Conditional Use for Jacobs Ranch 1 and Israel Canyon Stake located at 163 West Ring Road, Evans and Associates Architecture, applicant.
   e. Improvement Agreement with Ken Evans and Intermountain Health Care.
   f. Cooperative Agreement with Utah Department of Transportation.
   g. City Council Minutes:
      i. July 21, 2015.
      ii. August 4, 2015

3. **REPORTS:**
   a. Mayor.
   b. City Council
   c. Administration communication with Council
   d. Staff updates: inquires, applications, and approvals
4. **REPORTS OF ACTION.**
5. **Motion to enter into closed session for the following: purchase, exchange, or lease of real property; pending or reasonably imminent litigation; the character, professional competence, or the physical or mental health of an individual.**
6. **Adjournment.**

Notice to those in attendance:

- Please be respectful to others and refrain from disruptions during the meeting.
- Please refrain from conversing with others in the audience as the microphones are sensitive and can pick up whispers in the back of the room.
- Keep comments constructive and not disruptive.
- Avoid verbal approval or dissatisfaction of the ongoing discussion (e.g., applauding or booing).
- Please silence all cell phones, tablets, beepers, pagers, or other noise making devices.
- Refrain from congregating near the doors to talk as it can be noisy and disruptive.

Individuals needing special accommodations under the Americans with Disabilities Act (including auxiliary communicative aids and services) during this meeting please notify the City Recorder at 766-9793 at least three day prior to the meeting.

City Council
Staff Report

Author: Jeremy D. Lapin, P.E., City Engineer
Subject: Storm Drain Impact Fee
Date: August 18, 2015
Type of Item: Public Hearing and Adoption of Ordinance 15-25

A. Topic:

This item is for an Ordinance and Impact Fee Enactment adopting a Storm Drain Capital Facilities Plan, Impact Fee Facilities Plan, Impact Fee Analysis and enacting Storm Drain impact fees in the City of Saratoga Springs, providing for the calculations and collection of such fees and providing for appeal, mediation, arbitration, accounting and severability of the same and other related matters

B. Background:

In 2012, the City of Saratoga Springs hired Bowen, Collins and Associates and Zion's Bank Public Finance to assess the level of Storm Drain system service that is currently provided to existing residents, the excess capacity in the existing drainage facilities infrastructure that is available to accommodate new growth without diminishing the current level of service, and the elements and cost of additional storm drain facilities that will be required to maintain the current level of service as projected growth occurs in the impact fee expenditure period and to recommend a valid Storm Drain impact fee based on the Impact Fee Facilities Plan and Impact Fee Analysis. This work has been completed and they are recommending the following:

	Existing Fee per Unit	Proposed Fee per Acre
Single City Service Area	$556	$1,649

C. Analysis:

Saratoga Springs continues to be one of the fastest growing cities in Utah and based on the recommendations from Bowen, Collins and Associates and Zion's Bank Public Finance, the proposed impact fees are necessary in order for the City to meet the growing demands on the system while maintaining a high level of service to existing residents.

This new impact fee equates is very close to equal to the current impact fee for developments with densities of 3 units per acre. For higher density developments it is a decrease while for lower density projects it is an increase.

D. Recommendation:

I recommend that the City Council approve Ordinances 15-25 amending the City's Impact Fees for Storm Drain

ORDINANCE 15-25

ADOPTING THE STORM DRAIN CAPITAL FACILITIES PLAN, STORM DRAIN IMPACT FEE FACILITIES PLAN, STORM DRAIN FACILITIES IMPACT FEE ANALYSIS, AND STORM DRAIN FACILITIES IMPACT FEE INCLUDING SERVICE AREAS, TIME AND METHOD OF CALCULATION, COLLECTION, ADJUSTMENTS, ACCOUNTING, EXPENDITURE, REFUNDS, CHALLENGES AND APPEALS, AND SEVERABILITY OF THE SAME; AND OTHER RELATED MATTERS

WHEREAS, on February 15, 2011 the City mailed notice to affected entities and to the development community of its intent to update its Capital Facilities Plan for Storm Drain System facilities and to amend its Storm Drainage impact fees;

WHERAS, on August 1, 2011 the City properly noticed its intent to update its Capital Facilities Plan and to create an Impact Fee Facilities Plan for Storm Drain facilities and to amend its Storm Drain impact fees;

WHEREAS, on July 28, 2011 Saratoga Springs, Utah mailed the same notice to all affected entities;

WHEREAS, the City properly noticed a January 2012 kickoff meeting to begin the process to analyze Storm Drain facilities impact fees as well as other impact fee qualified facilities;

WHEREAS, the City mailed individual notice of the kickoff meeting to 36 state and local governments, private development entities and private home owners' associations;

WHEREAS, City Consultants, City Officials, representatives of other Government entities, and two private citizens attended the kickoff meeting;

WHEREAS, on February 8, 2012 City staff met with interested members of the development community to address growth assumptions that would form the foundation for all advertised Impact Fee Facilities Plans and Analyses;

WHEREAS, on April 3, 2012, City staff convened a follow up meeting with the development community to address proposed growth assumptions;

WHEREAS, on January 14, 2015 the City posted a draft Storm Drain Capital Facilities Plan and Impact Fee Facilities Plan on its website and received input from the development community based on the draft plan;

WHEREAS, Bowen & Collins has assessed the level of Storm Drain facility service that is currently provided to existing residents, the excess capacity in the existing Storm Drain facilities infrastructure that is available to accommodate new growth without diminishing the current level of service provided to existing residents and the elements and the cost of additional Storm Drain facilities that will be required to maintain the current level of service as projected growth occurs in the impact fee expenditure period; a copy of the Storm Drain Impact Fee Facilities Plan prepared by Bowen & Collins is attached hereto as Exhibit "A"

WHEREAS, Bowen & Collins certified its work as compliant with Utah Code § 11-36a-306 in May 2015; and

WHEREAS, the City has caused a Storm Drain Facilities Impact Fee Analysis to be prepared by Zions' Public Finance;

WHEREAS, Zions' Public Finance has identified a maximum Storm Drain facilities impact fee based on the Storm Drain Impact Fee Facilities Plan; a copy of the Storm Drain Impact Fee Facilities Analysis prepared by Zions' Public Finance dated August 2015 is attached hereto as Exhibit "B";

WHEREAS, on June 11, 2015, the City noticed a meeting to invite further public input on the plan on July 9, 2015;

WHEREAS, City staff met with interested parties at the July 9, 2015 meeting and received positive input from them;

WHEREAS, on August 6, 2015 the City posted a copy of the executive summary of the Storm Drain Facilities Impact Fee and a copy of a draft Storm Drain Facilities Impact Fee Ordinance;

WHEREAS, on July 31, 2015, the City properly noticed its intent to adopt the certified Storm Drain Impact Fee Facilities Plan and Analysis as well as its intent to hold a public hearing and possibly adopt this Ordinance;

WHEREAS, Saratoga Springs is a fourth class city of the State of Utah, authorized and organized under the provisions of Utah law and is authorized pursuant to the Impact Fee Act, Utah Code § 11-36a-101 *et seq.* to adopt Storm Drain facilities impact fees; and

WHEREAS, on August 6, 2015, a full copy of the Storm Drain Impact Fee Facilities Plan, the Storm Drain Impact Fee Analysis, this Storm Drain Impact Fee Enactment or Ordinance, along with an executive summary of the Storm Drain Impact Fee Facilities Plan and Analysis that was prepared in a manner to be understood by a lay person, and a draft of this ordinance were made available to the public at the Saratoga Springs public library, posted on the City's website, and the Public Notice Website; and

WHEREAS, on July 31, 2015, the Provo Daily Herald published notice of the date, time, and place of the first public hearing to consider the Storm Drain Facilities Impact Fee Facilities Plan, Analysis, and Enactment; and

WHEREAS, on August 18, 2015, the City Council held a public hearing regarding the proposed and certified Storm Drain Impact Fee Facilities Plan, Storm Drain Impact Fee Analysis, and a draft of this Storm Drain Facilities Impact Fee Ordinance; and

WHEREAS, after careful consideration and review of the comments at the public hearing and the comments of the participants, the Council has determined that it is in the best interest of the health, safety, and welfare of the inhabitants of Saratoga Springs to:

1. adopt the 2015 Storm Drain Capital Facilities Plan as proposed;
2. adopt the 2015 Storm Drain Impact Fee Facilities Plan for Storm Drain Facilities as proposed;
3. adopt the 2015 Storm Drain Impact Fee Analysis as proposed; and
4. in a manner that is consistent with the Impact Fees Act, enact this Ordinance to:
    a. amend its current Storm Drain impact fees;
    b. provide for the calculation and collection of such fees;
    c. authorize a means to consider and accept an independent fee calculation for atypical development requests;
    d. provide for an appeal process consistent with the Impact Fees Act; and
    e. update its accounting and reporting method.

NOW, THEREFORE, BE IT ORDAINED by the Saratoga Springs Council as follows:

SECTION I STORM DRAIN IMPACT FEE FACILITIES PLAN AND IMPACCT FEE ANALISYS: STORM DRAIN FACILITIES

The Storm Drain Impact Fee Facilities Plan and Storm Drain Impact Fee Analysis attached hereto as Exhibits A and B are hereby adopted and incorporated herein. The Storm Drain Capital Facilities Plan attached as Exhibit C is also hereby adopted and incorporated herein.

SECTION II ENACTMENT

The following amendments to Chapter 7.04 of the City Code are hereby made effective 90 days from the date of this enactment:

7.04 Storm Drainage Impact Fee Sections:

7.04.01. Definitions.
7.04.02. Findings and Purpose.
7.04.03. Adoption of Capital Facilities Plan.
7.04.04. Adoption and Imposition of Impact Fees.
7.04.05. Service Area Established.
7.04.06. Time of Collection.
7.04.07. Use of Impact Fees.
7.04.08. Adjustments.
7.04.09. Accounting, Expenditure, and Refunds.
7.04.10. Impact Fee Challenges and Appeals.
7.04.11. Severability

7.04.01. Definitions.

As used in this Chapter the following terms shall have the meanings herein set out:

1 **"City"** means the City of Saratoga Springs and its incorporated boundaries.
2 **"Development Activity"** or **"new development"** means any subdivision of land, or any construction or expansion of a building, structure, or surface use of land that creates additional demand and need for Storm Drain Facilities on any land for which a storm drain impact fee has not been paid.
3 **"Gross Lot Acreage"** means the sum of the area of a subdivided lot plus its proportionate share of area within the subdivision that is not within a subdivided lot:

GLA = lot area + (common* area/# subdivision lots)

4 **"Storm Drain Impact Fees"** means the Impact Fees adopted and imposed by this Chapter on Development Activity within the City and as allowed by Utah Code Chapter 11-36a.

5 **"Storm Drain Facilities"** means the capital facilities identified in the 2015 Storm Drain Impact Fee Facilities Plan dated May 2015:

6 "**Utah Impact Fees Act"** means Utah Code Chapter 11-36a.

7.04.02. Findings and Purpose.

The City Council hereby finds and determines:

1. There is a need to update the City's storm drain facilities impact fee to meet the requirements of the Utah Impact Fees Act and to maintain the level of service for

storm water drainage proposed in the Storm Drain Impact Fee Facilities Plan dated May 2015 and the Storm Drain Impact Fee Analysis dated August 2015.

2. The 2015 Storm Drain Impact Fee Facilities Plan and the 2015 Storm Drain Impact Fee Analysis identify the:
    a. projected development activity in the City through 2025,
    b. level of service for storm drain facilities that the City currently provides to existing residents;
    c. excess storm drain facilities capacity that is available to serve new growth in the existing infrastructure;
    d. proposed level of service for the City, which is identical to the existing level of service for current residents;
    e. additional capital facilities that are required to maintain the level of service without burdening existing residents with costs of new development activity; and the
    f. maximum fee justified by the study.

7.04.03. Adoption of Storm Drain Impact Fee Facilities Plan and Storm Drain Impact Fee Analysis.

The City Council hereby approves and adopts the 2015 Storm Drain Impact Fee Facilities Plan and the 2015 Storm Drain Impact Fee Analysis reflected therein and the methodology used for calculation of the Impact Fees imposed by this Chapter for the Public Facilities covered by this Chapter.

7.04.04. Adoption and Imposition of Storm Drain Impact Fee.

The City Council hereby approves and imposes and levies on all Development Activity the Impact Fee for storm drain system facilities in the amount of $1,649 per acre.

7.04.05. Service Area Established.

There is a single, citywide service area for storm drain facilities.

7.04.06. Time of Collection.

1. For all new subdivision development applications filed on or after November 18, 2015 the Storm Drain Facilities Impact Fees imposed by this Chapter shall be paid prior to plat recordation, at a rate of $1,649 per subdivided acre.

Example:

The Storm drain Facilities Impact Fee for the subdivision of 22.43 acres is calculated as follows:

$1649/acre x 22.43 acres = $36,987.07

2. For development activity on undeveloped land for which a storm drain facilities impact fee was not charged as a condition of subdivision development, the Storm Drain Facilities Impact Fees imposed by this Chapter is due prior to the issuance of a building permit, at a rate of $1,649 per Gross Lot Acreage.

Example:

The Storm Drain Facilities Impact Fee for the development of quarter acre lot in a vested 60-lot subdivision within a plat with 5.2 acres of land that is outside of the individually platted lots is calculated as follows:

GLA = 0.25 acres. + (5.2 sq. ft. ÷ 60 lots) = 0.3367 acres
0.3367 acres x $1,649/acre = $555.16

3. For new development activity on land for which a Storm Drain Facilities Impact Fee has been paid, the storm drain facilities impact fee is zero.

4. For a plat amendment or boundary adjustment that does not increase the area of a subdivision the storm drain facilities impact is zero.

7.04.07. Use of Impact Fees.

Storm Drain Facilities Impact Fees collected by the City shall be used solely to:

1 pay for the Storm Drain Facilities provided for in the 2015 Storm Drain Impact Fee Facilities Plan;
2 reimburse the City for a existing storm drain facilities with excess capacity for growth identified in the 2015 Storm Drain Impact Fee Facilities Plan; and
3 reimburse developers who construct or dedicate facilities identified in the 2015 Storm Drain Impact Fee Facilities Plan in lieu of city construction of the same facilities.

7.04.08. Adjustments.

The City may adjust the Storm Drain Impact Fees imposed by this Chapter as necessary in order to:

1. respond to unusual circumstances in specific cases;
2. ensure that the Storm Drain Facilities Impact Fees are imposed fairly;
3. adjust the amount of the Storm Drain Facilities Impact Fees to be imposed on a particular development based upon studies and data submitted by the developer that are approved by the City Council; and
4. allow credits, as approved by the City Council, for dedication of land an for improvements to, or construction of, Storm Drain Facilities identified in the 2015

Storm Drain Facilities Impact Fee Facilities Plan that the City has required as a condition of approving the Development Activity.

7.04.09. Accounting, Expenditure, and Refunds.

The City shall account for, expend, and refund Storm Drain Impact Fees collected pursuant to this Chapter in accordance with the Utah Impact Fees Act.

7.04.10. Challenges and Appeals.

1. Any person or entity residing in or owning property within a service area and any organization, association, or corporation representing the interests of persons or entities owning property within a service area, may file a declaratory judgment action challenging the validity of the Storm Drain Facilities Impact Fees after filing an appeal with the City Council as provided in Subsection (4) of this Section.
2. Any person or entity required to pay a Storm Drain Facilities Impact Fee who believes the fee does not meet the requirements of law may file a written request for information with the City.
3. Within two weeks of the receipt of the request for information, the City shall provide the person or entity with the written analysis required by the Utah Impact Fee Act and with any other relevant information relating to the Impact Fees. The City may charge for all copies provided for in response to such a request in an amount set out in the City's Consolidated Fee Schedule
4. Within thirty days after paying a Storm Drain Facilities Impact Fee, any person or entity who has paid the fee and wishes to challenge the fee shall: file a written appeal with the City Council by delivering a copy of such appeal with the City Manager setting forth in detail all grounds for the appeal and all facts relied upon by the appealing party with respect to the fee being appealed.
    a. Upon receipt of an appeal, the City Council shall thereafter schedule a hearing on the appeal at which time all interested persons will be given an opportunity to be heard. The City Council shall schedule the appeal hearing and thereafter render its decision on the appeal no later than thirty days after the challenge to the impact fee is filed.
    b. Any person or entity who has failed to comply with the administrative appeal remedies established by this Section may not file or join an action challenging the validity of the Storm Drain Facilities Impact Fee imposed.
    c. Within ninety days of a decision upholding an Impact Fee by the City Council or within 120 days after the date the challenge to the impact fee was filed, whichever is earlier, any party to the appeal who is adversely affected by the City Council's decision may petition the Fourth Judicial District Court for Utah County for review of the decision. In the event of a petition to the Fourth Judicial District Court, the City shall transmit to the reviewing court the record of its proceedings including its minutes,

findings, orders and, if available, a true and correct transcript of its proceedings.

i. If the proceeding was tape recorded, a transcript of that tape recording is a true and correct transcript for purposes of this Subsection.

ii. If there is a record:

A. the court's review is limited to the record provided by the City; and

B. the court may not accept or consider any evidence outside the City's record unless that evidence was offered to the City Council and the court determines that it was improperly excluded by the City Council.

iii. If there is an inadequate record, the court may call witnesses and take evidence.

iv. The court shall affirm the decision of the City Council if the decision is supported by substantial evidence in the record.

v. The court may award reasonable attorneys' fees and costs to the prevailing party in any action brought under this Section.

7.04.11. Severability.

If any section, subsection, sentence, clause, or portion of this Chapter is for any reason, held invalid or unconstitutional by a court of competent jurisdiction, the remainder of this Chapter shall not be affected thereby and shall remain in effect and be enforced to the extent permitted by law.

SECTION III – AMENDMENT OF CONFLICTING ORDINANCES

If any ordinance, resolution, policy or map of the City heretofore adopted is inconsistent herewith it is hereby amended to comply with the provisions hereof. If it cannot be amended to comply with the provisions hereof, the inconsistent provision is hereby repealed.

SECTION IV – EFFECTIVE DATE

This ordinance shall take effect upon publication and 90 days after its passage by a majority vote of the Saratoga Springs City Council.

SECTION V – SEVERABILITY

If any section, subsection, sentence, clause, phrase, or portion of this ordinance is, for any reason, held invalid or unconstitutional by any court of competent jurisdiction, such provision shall be deemed a separate, distinct, and independent provision, and such holding shall not affect the validity of the remaining portions of this ordinance.

SECTION VI – PUBLIC NOTICE

The Saratoga Springs City Recorder is hereby ordered, in accordance with the requirements of Utah Code §§ 10-3-710—711, to:

a. deposit a copy of this ordinance in the office of the City Recorder; and

b. publish a short summary of this ordinance for at least one publication in a newspaper of general circulation in the City

Signed: _____
Jim Miller, Mayor

Attest: _____ _____
Lori Yates, City Recorder Date

VOTE	AYE	NAY
Shellie Baertsch	_____	_____
Rebecca Call	_____	_____
Michael McOmber	_____	_____
Bud Poduska	_____	_____
Stephen Willden	_____	_____

EXHIBIT A

City of Saratoga Springs

Storm Drain Impact Fee Facilities Plan

Project No. 305-11-02

Prepared by:

Bowen Collins
& Associates, Inc.
CONSULTING ENGINEERS

May 2015

Saratoga Springs Storm Drain Impact Fee Facilities Plan

Prepared for:

CITY OF

SARATOGA SPRINGS

Prepared by:

Bowen Collins
& Associates, Inc.
CONSULTING ENGINEERS

Bowen, Collins & Associates
154 East 14000 South
Draper, UT 84020

LICENSED PROFESSIONAL ENGINEER
343787
KEITH J.
LARSON
14 MAY 2015
STATE OF UTAH

May 2015

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EXECUTIVE SUMMARY

INTRODUCTION

Saratoga Springs has retained Bowen Collins & Associates (BC&A) to prepare an impact fee facility plan (IFFP) for its storm drainage system. The purpose of an IFFP is to identify demands placed upon City facilities by future development and evaluate how these demands will be met by the City. The IFFP is also intended to outline the improvements which may be funded through impact fees.

WHY IS AN IFFP NEEDED?

The IFFP provides a technical basis for assessing updated impact fees throughout the City. This document will address the future infrastructure needed to serve the City with regard to current land use planning. The existing and future capital projects documented in this IFFP will ensure that level of service standards are maintained for all existing and future residents who reside within the service area. Local governments must pay strict attention to the required elements of the Impact Fee Facilities Plan which are enumerated in the Impact Fees Act.

PROJECTED FUTURE GROWTH

To evaluate the use of existing capacity and the need for future capacity, it is first necessary to calculate the demand associated with existing development and projected growth. Using available information for existing development and expected growth, projected growth in developed acreage for the City is summarized in Table ES-1.

Table ES-1
Projected Saratoga Springs Developed Area

	Yearly Developed Acres	Annual Percent Increase	Total Developed Acres
2015			3,225
2016	103	3.2	3,328
2017	215	6.5	3,543
2018	271	7.7	3,814
2019	293	7.7	4,107
2020	316	7.7	4,423
2021	271	6.1	4,694
2022	288	6.1	4,982
2023	306	6.1	5,288
2024	325	6.1	5,613
2025	346	6.2	5,959
Total	**2,734**		

EXISTING CAPACITY AVAILABLE TO SERVE FUTURE GROWTH

Projected future growth will be met through a combination of utilizing available excess capacity in existing facilities and the construction of additional capacity in new facilities. The calculated percentage of existing capacity available for use by future growth in facilities constructed by the city is summarized in Table ES-2.

Table ES-2
Existing Facility Capacity Used by Growth

Project ID	Project Description	Percent Currently Utilized	Percent to 10-year Growth	Percent to Growth Beyond 10-year*
SAR.219	48" SSD Storm Drain Outfall through SSD and upgrade Box Culvert under Redwood Road	29.6%	22.2%	48.3%
EP.1	Sierra Estates Outfall (400 North)	17.5%	64.8%	17.8%
SAR.187	Piping of storm drain ditch through Saratoga Hills Park	92.6%	1.7%	5.6%
SAR.177	36" Storm Drain Town Center Outfall	83.9%	10.6%	5.6%
SAR.148	Tickville Wash Culverts at Redwood Road	100.0%	0.0%	0.0%
EP.2	Israel Canyon Debris Basin and Flood Mitigation	39.7%	16.4%	43.9%
EP.3	400 North (600 West to 800 West) and 800 West (400 North to Talus Ridge)	13.8%	60.5%	25.7%
EP.4	400 North (Redwood Road to Thunder Blvd)	21.1%	68.4%	10.5%
EP.5	Talus Ridge Plat B & D	0.0%	66.4%	33.6%
EP.6	Sunrise Outfall (800 West)	100%	0%	0%

[1] For components with multiple facilities, a weighted average was developed of available capacity used by future growth.

REQUIRED SYSTEM IMPROVEMENTS

Beyond available existing capacity, additional improvements required to serve new growth are summarized in Table ES-3. To satisfy the requirements of state law, Table ES-3 provides a breakdown of the percentage of the project costs attributed to existing and future users. For future use, capacity has been divided between capacity to be used by growth within the 10-year planning window of this IFFP and capacity that will be available for growth beyond the 10-year window.

Table ES-3
Impact Fee Facilities Plan - Costs Required for Future Growth

Project Identifier	Project Name	Construction Year	Total Estimated Cost	Percent Attributable to Existing	Percent Attributable to 10-year	Percent Attributable to Growth Beyond 10-year
CN11	400 North and Riverside Drive	2015	$227,540	14.5%	75.0%	10.5%
OCN2	Tickville Gulch	2015	$88,600	10.5%	54.9%	34.6%
OCN3	400 North East of Redwood	2015	$75,840	14.5%	71.0%	14.5%
PN4	Talus Ridge Phase 2	2015	$306,022	0.0%	64.1%	35.9%
PN7	Tickville Gulch	2015	$2,248,000	10.5%	54.9%	34.6%
CN10	Tickville Gulch Redwood Rd	2016	$270,400	10.5%	54.9%	34.6%
DS1	Harbor Park Way	2016	$1,109,500	40.7%	0.0%	59.3%
OCS1	Village Parkway & Redwood Road	2016	$33,620	18.8%	73.4%	7.9%
PN6a	Pioneer Crossing to Market St.	2016	$562,200	0.0%	24.9%	75.1%
PN6b	Market St. Outfall	2016	$487,240	0.0%	86.5%	13.5%
PS1	Harbor Parkway	2016	$212,000	24.5%	0.0%	75.5%
OCS2	Clark Canyon	2017	$21,340	11.9%	16.4%	65.1%
PN12	Harvest Hills to Jordan River 1	2017	$851,300	8.9%	88.1%	3.0%
PN18	SR-73	2017	$163,000	13.5%	1.7%	84.8%
OCS3	Limekiln Canyon	2018	$32,160	0.0%	0.0%	100.0%
CS3	Redwood Road & Limekiln Canyon	2019	$110,000	0.0%	0.0%	100.0%
PN16	1900 North/Redwood Rd	2019	$11,600	22.9%	21.3%	55.7%
CS12	Village Court Rd.	2020	$110,000	11.1%	52.3%	36.6%
PN1	Redwood Rd. Near Grandview Blvd	2020	$505,100	52.0%	47.7%	0.3%
Total			**$7,425,462**			

SECTION 1
INTRODUCTION

Saratoga Springs has retained Bowen Collins & Associates (BC&A) to prepare an impact fee facility plan for its storm drain system. The purpose of an IFFP is to identify demands placed upon City facilities by future development and evaluate how these demands will be met by the City. The IFFP is also intended to outline the improvements which may be funded through impact fees.

Requirements for the preparation of an IFFP are outlined in Title 11, Chapter 36 of the Utah code (the Impact Fees Act). Under these requirements, an IFFP shall accomplish the following for each facility:

1. Identify the existing level of service
2. Establish a proposed level of service
3. Identify excess capacity to accommodate future growth
4. Identify demands of new development
5. Identify the means by which demands from new development will be met
6. Consider the following additional issues
    a. revenue sources to finance required system improvements
    b. necessity of improvements to maintain the proposed level of service
    c. need for facilities relative to planned locations of schools

The following sections of this report have been organized to address each of these requirements.

SECTION 2
EXISTING LEVEL OF SERVICE (11-36A-302.1.A.I)

Level of service is defined in the Impact Fees Act as "the defined performance standard or unit of demand for each capital component of a public facility within a service area". This section discusses the level of service being provided to existing users.

PERFORMANCE STANDARD

The performance standard defines the level of service the City has established to satisfy City and/or State performance requirements. There is no minimum State standard for storm drain as there are with some other utilities. Every city desires to protect their residents and infrastructure from flooding and attempts to balance the cost of storm drainage improvements with public safety and the protection of property. The evaluation criteria for this study was provided by Saratoga Springs personnel as documented in the Storm Water Capital Facilities Plan (CFP) prepared by BC&A. The level of service adopted by Saratoga Springs is similar to the level of service provided by neighboring cities.

Storm Drain Conveyance

Storm drain pipelines are not allowed to flood during the 25-year storm event. In the event that storm water discharge is greater than the 25-year event, the pipes will pressurize and eventually flood in the streets. It is important to note that roadways become the major storm water conveyance facility during storms that are larger than the 25-year design event, and should be designed to convey flows up to the 100-year event. Storm drain pipe materials and minimum sizes are defined in the Saratoga Springs "2014 City Standards and Specifications".

Open Channels

Open channels should be designed to convey the 100-year event with at least 2 feet of freeboard. Open channels should also have adequate erosion protection. If velocities are less than 4 ft per second (ft/s), the channel may be lined with grass or other appropriate vegetation. However, if the peak velocity in a channel is over 4 ft/s, then grass will not be sufficient to protect the channel from erosion damage and armoring will be required. Open channel design should consider maintenance and safety issues.

Culverts

All culverts on reaches of open channel should be designed to convey the 100-year event with at least 18-inches of freeboard at the culvert opening.

Detention Basins

Detention facilities need to have capacity for the 100-year storm with at least one foot of freeboard. All detention basins should have an emergency overflow, designed to convey the 500 year storm and meet dam safety requirements if applicable, that directs water toward secondary conveyance facilities, such as a right-of-way or open channel, and away from private property and areas of potential property damage.

Allowable Release Rate

Current City policy requires that runoff from developed properties not exceed 0.2 cfs/acre or the historical runoff for pre-development conditions. This report considers flows at 0.2 cfs/acre for most areas of the City, but limits runoff to the lower historical flows for drainage basins associated with Tickville Gulch and the two unnamed drainages west of the City and north of Crossroads Blvd (formerly SR-75).

Design Storm Parameters

The design storm defines how much precipitation falls and at what rate for a projected precipitation event. Rainfall data for system evaluation is based on the National Oceanic and Atmospheric Administration (NOAA) Atlas 14. This data is commonly used by professionals in the industry, and has been shown to produce accurate results in studies conducted in neighboring communities. The Farmer Fletcher Storm distribution was used simulate a cloudburst event which is typical to the Wasatch front area in Northern Utah.

UNIT OF DEMAND

As noted in the discussion of performance standards above, Saratoga Springs policy requires all development to detain runoff to a maximum rate of discharge per acre. As a result, all development within a given drainage basin, regardless of type, produces the same demand on the storm drainage system on a per acre basis. This means that demand for the calculation of impact fees can be on the basis of total acres developed.

SECTION 3
PROPOSED LEVEL OF SERVICE (11-36A-302.1.A.II)

The proposed level of service is the performance standard used to evaluate system needs in the future. The Impact Fee Act indicates that the proposed level of service may:

1. diminish or equal the existing level of service; or
2. exceed the existing level of service if, independent of the use of impact fees, the City implements and maintains the means to increase the level of service for existing demand within six years of the date on which new growth is charged for the proposed level of service.

No changes in the level of service are proposed for Saratoga Springs. Future facilities will be constructed to meet the same performance standards identified for the existing level of service.

SECTION 4
EXCESS CAPACITY TO ACCOMMODATE FUTURE GROWTH (11-36A-302.1.A.III)

Projected future growth will be met through a combination of available excess capacity in existing facilities and construction of additional capacity in new facilities.

EXISTING STORM DRAIN INFRASTRUCTURE

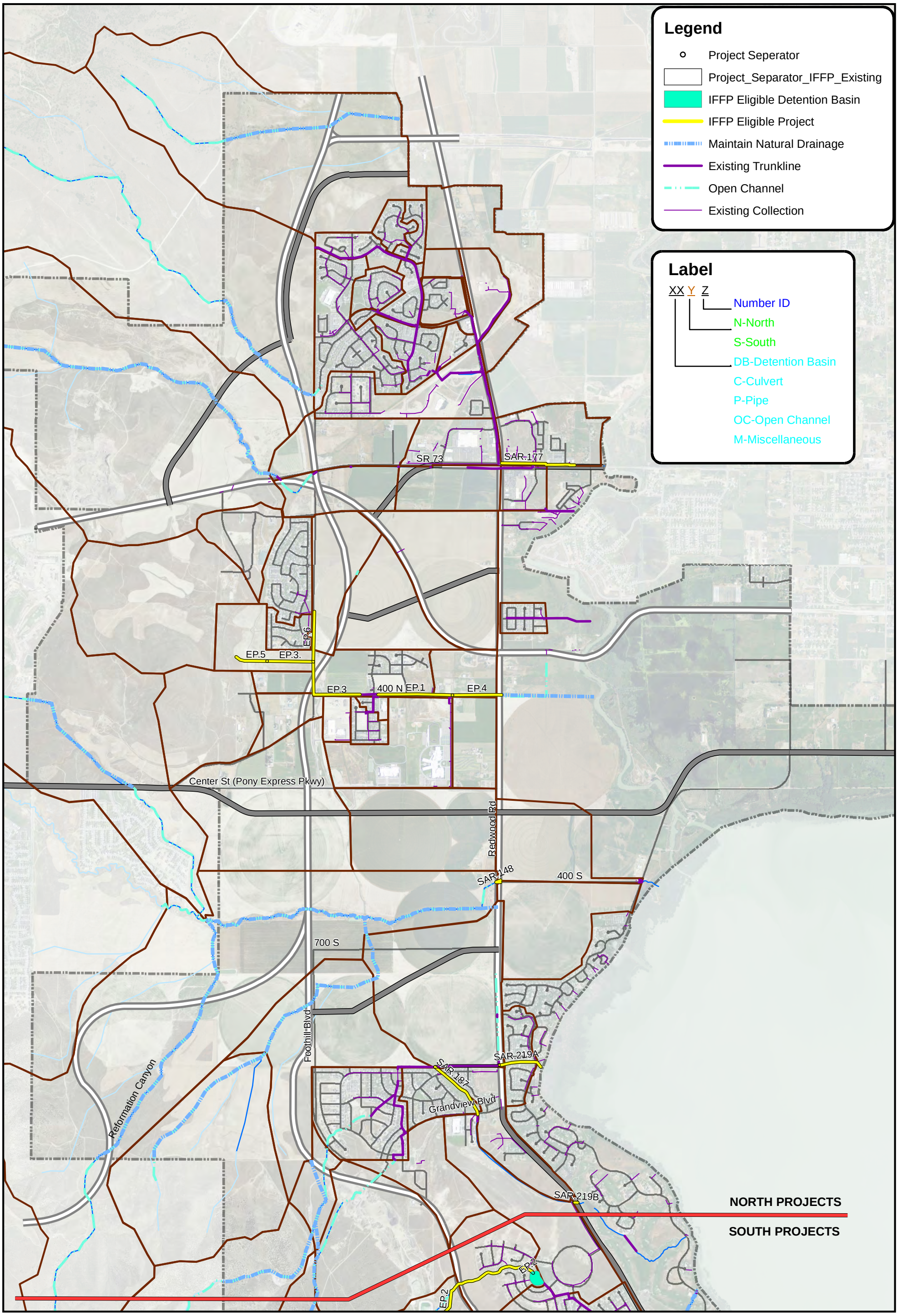
Existing storm drain infrastructure in Saratoga Springs includes conveyance pipelines, inlet structures, manholes, stormwater cleaning devices, open channels, and detention basins. In areas where existing facilities exist, future growth will utilize a portion of excess capacity in existing facilities.

EXISTING DEMAND AND DETERMINATION OF EXCESS CAPACITY

To calculate the percentage of existing capacity to be used by future growth in existing facilities, existing and future development patterns were examined. The method used to calculate excess capacity available for use by future development is as follows:

- **Calculate Potential Drainage Area of the Facilities –** The drainage area contributing to each storm drain facility or group of facilities was calculated for both existing and future development scenarios (see Section 5).
- **Identify Existing Development –** Based on city records and available aerial photography, the flow rate associated with existing developed areas within each drainage area has been identified.
- **Identify Growth** – Consistent with system growth projections, the flow rate associated with areas of projected growth in each drainage area has been calculated.
- **Calculate Percent of Excess Capacity Used by Growth** – The percent of excess capacity available for use in each facility was calculated by dividing the growth in use in the facility (flow rate for projected developed area) by the maximum use of capacity at buildout (total flow rate for the facilities). This was then divided between growth within the 10-year planning window and growth beyond following the same approach.
- **Calculate Cost Weighted Average for System** – Each facility in the system has a different quantity of excess capacity to be used by future growth. To develop an estimate of excess capacity for each project as a whole, the capacities of each of these facilities and their contribution to the project as a whole must be considered. To do this, each component has been weighted based on its estimated actual cost. The capacity of each project as a whole is then calculated as the sum of the weighted capacity used by future growth divided by the sum of total weighted capacity in the system.

Based on the method described above, Table 4-1 summarizes the excess capacity used by future growth in those storm drain facilities in which the City has available excess capacity and has also expended funds that are eligible for impact fee reimbursement. The location of these projects can be seen in Figure 4.1. The City has significantly more existing storm drain facilities with excess



Bowen Collins & Associates, Inc.
CONSULTING ENGINEERS

SARATOGA SPRINGS
STORM DRAIN CAPITAL FACILITIES PLAN

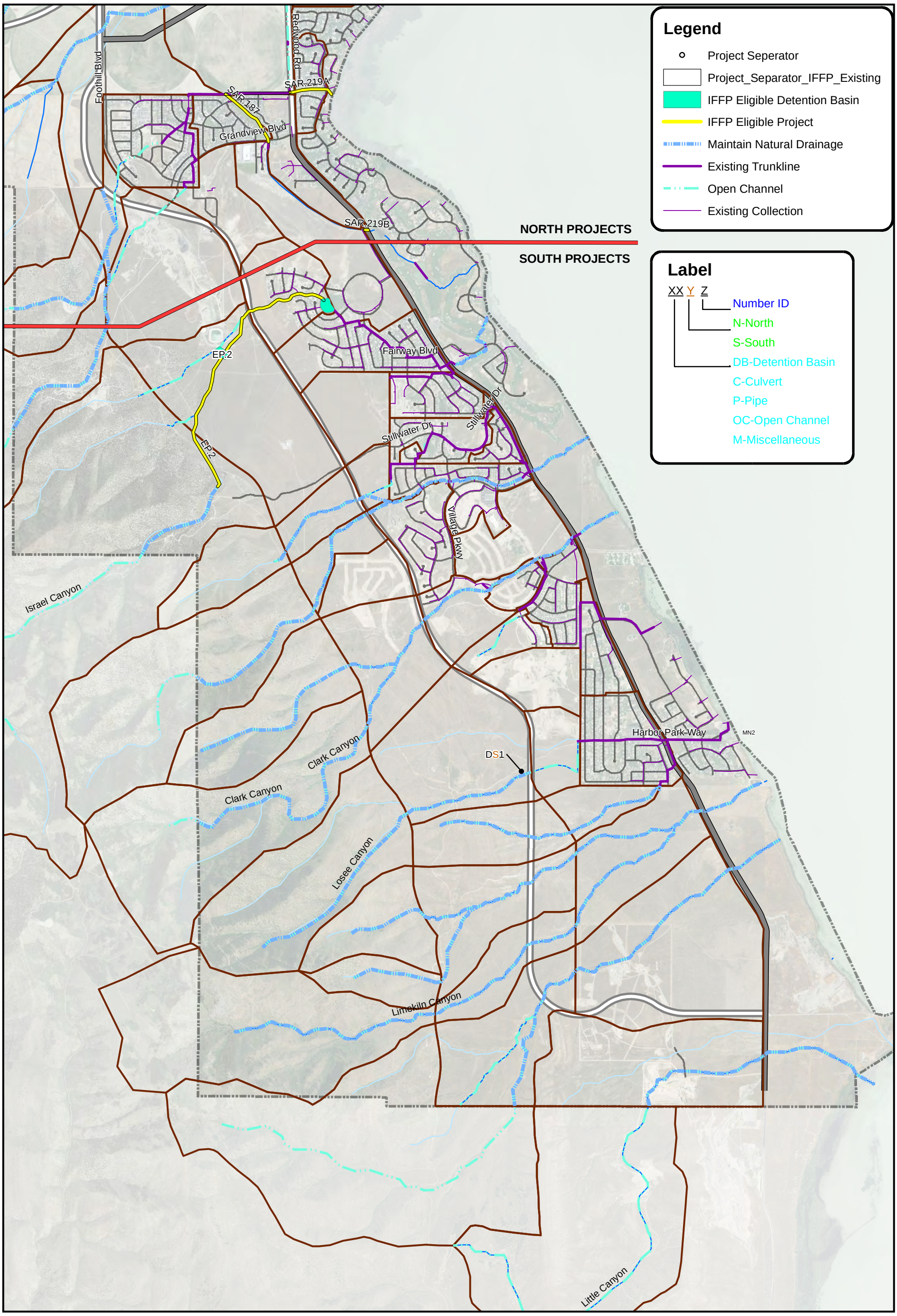
CONSTRUCTED STORM DRAIN PROJECTS

NORTH:

SCALE: 0 625 1,250 2,500 Feet

FIGURE NO. 4-1A

P:\Saratoga Springs\2011 Capital and Impact Fee Facilities Plans\4.0 GIS\4.1 Projects\StormMaps\Figure 4-1 - IFFP Existing Projects.mxd nwright 4/22/2015



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SARATOGA SPRINGS
STORM DRAIN CAPITAL FACILITIES PLAN

CONSTRUCTED STORM DRAIN PROJECTS

NORTH:

SCALE: 0 625 1,250 2,500 Feet

FIGURE NO. 4-1B

P:\Saratoga Springs\2011 Capital and Impact Fee Facilities Plans\4.0 GIS\4.1 Projects\StormMaps\Figure 4-1 - IFFP Existing Projects.mxd nwright 4/22/2015

capacity than those shown in the table. However, in most cases, these existing facilities were built through developer contributions that are not eligible for reimbursement through impact fees. While these developer constructed facilities are not eligible for impact fee reimbursement and are not included in the table, excess capacity in these facilities can be used for growth and has been accounted for in this evaluation.

Table 4-1
Existing Facility Capacity Used by Growth

Project ID	Project Description	Percent Currently Utilized	Percent to 10-year Growth	Percent to Growth Beyond 10-year*
SAR.219	48" SSD Storm Drain Outfall through SSD and upgrade Box Culvert under Redwood Road	29.6%	22.2%	48.3%
EP.1	Sierra Estates Outfall (400 North)	17.5%	64.8%	17.8%
SAR.187	Piping of storm drain ditch through Saratoga Hills Park	92.6%	1.7%	5.6%
SAR.177	36" Storm Drain Town Center Outfall	83.9%	10.6%	5.6%
SAR.148	Tickville Wash Culverts at Redwood Road	100.0%	0.0%	0.0%
EP.2	Israel Canyon Debris Basin and Flood Mitigation	39.7%	16.4%	43.9%
EP.3	400 North (600 West to 800 West) and 800 West (400 North to Talus Ridge)	13.8%	60.5%	25.7%
EP.4	400 North (Redwood Road to Thunder Blvd)	21.1%	68.4%	10.5%
EP.5	Talus Ridge Plat B & D	0.0%	66.4%	33.6%
EP.6	Sunrise Outfall (800 West)	100%	0%	0%

[1] For components with multiple facilities, a weighted average was developed of available capacity used by future growth.

SECTION 5
DEMANDS PLACED ON FACILITIES BY NEW DEVELOPMENT (11-36A-302.1.A.IV)

Saratoga experienced rapid growth at the beginning of the 2000's followed by a cooling period from 2007 to 2010. Since then, growth has rebounded during the past few years and is expected to continue for the foreseeable future. The City has projected modest growth for the near future with stronger growth occuring in 5 to 6 years due to the projected development of property held by Property Reserve, Inc. in the City. Projected growth and new development of property in Saratoga Springs is summarized in Table 5-1.

Table 5-1
Projected Saratoga Springs Developed Area

	Yearly Developed Acres	Annual Percent Increase	Total Developed Acres
2015			3,225
2016	103	3.2	3,328
2017	215	6.5	3,543
2018	271	7.7	3,814
2019	293	7.7	4,107
2020	316	7.7	4,423
2021	271	6.1	4,694
2022	288	6.1	4,982
2023	306	6.1	5,288
2024	325	6.1	5,613
2025	346	6.2	5,959
Total	**2,734**		

As summarized in the table, total projected growth for the planning window includes 2,734 acres of new development. It should be emphasized that this is gross developed acres and includes all components of development including lots, open space and roads, both public and private.

SECTION 6
INFRASTRUCTURE REQUIRED TO MEET DEMANDS OF NEW DEVELOPMENT (11-36A-302.1.A.V)

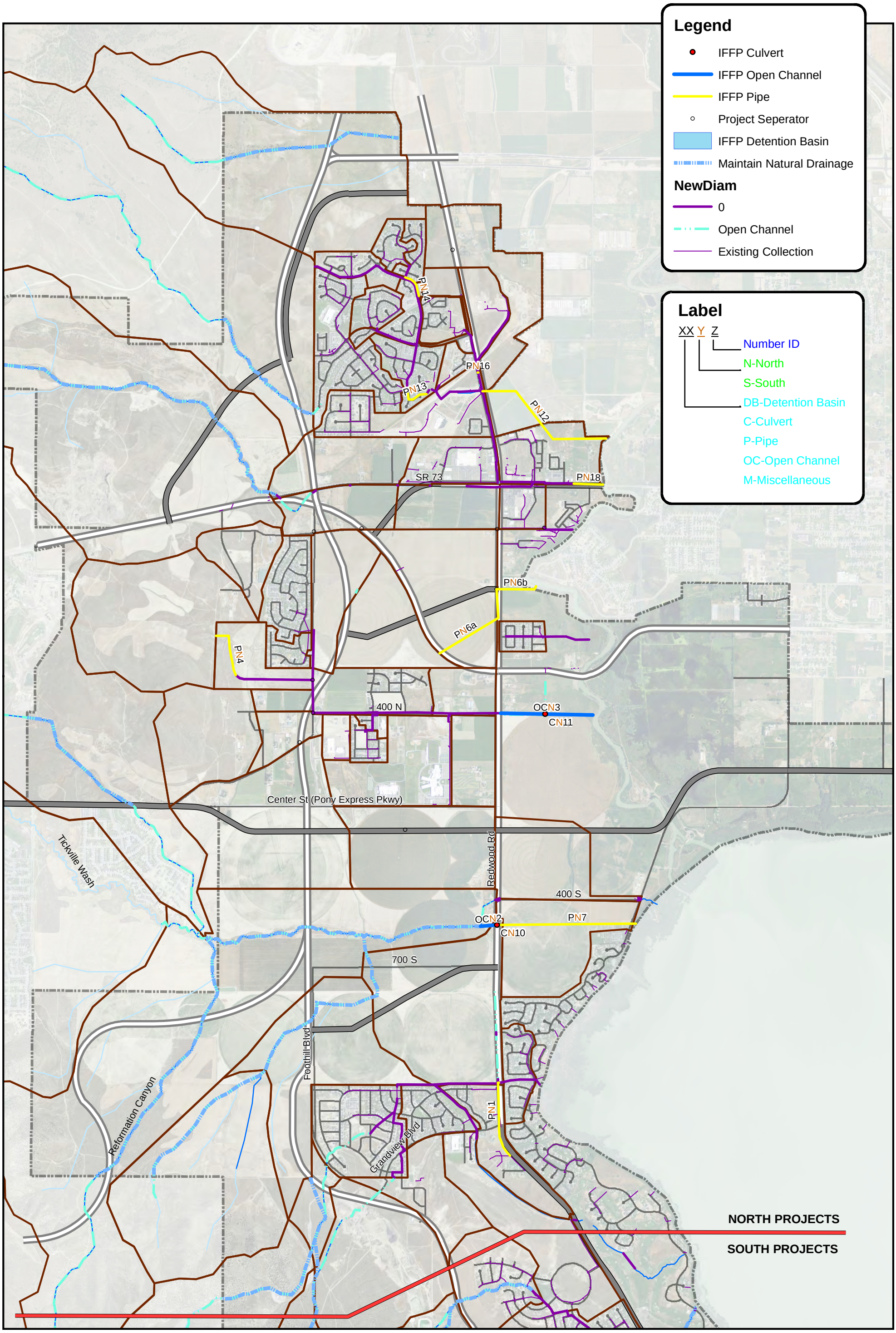
To satisfy the requirements of state law, demand placed upon system facilities by future development was projected using the process outlined below.

1. **Existing Capacity** – The capacities of the existing facilities were evaluated using a hydraulic storm water model as part of the master plan.
2. **Existing Deficiencies** – Existing deficiencies in the system were looked for by comparing defined levels of service against calculated capacities.
3. **Future Demand** - The demand that future development will place on the system was estimated based on development projections as discussed in Section 5.
4. **Future Deficiencies** - Future deficiencies in the storm drain infrastructure were identified based on the defined level of service.
5. **Recommended Improvements** – Needed storm drain improvements were identified to resolve the projected deficiencies.

The steps listed above describe the "demands placed upon existing public facilities by new development activity at the proposed level of service; and… the means by which the political subdivision or private entity will meet those growth demands" (Section 11-36a-302-1.a of the Utah Code).

10-YEAR IMPROVEMENT PLAN

In the City's storm drain capital facility plan, a comprehensive list of storm drain improvements was assembled to satisfy level of service requirements for projected demands. These improvements will be constructed in phases as development occurs. Only infrastructure to be constructed within a ten year horizon will be considered in the calculation of these impact fees to avoid uncertainty surrounding improvements further into the future. Table 6-1 summarizes the projects that are projected to be needed within the next ten years. The location of these projects is shown in Figure 6-1. It should be noted that Table 6-1 only includes those projects with components of cost that are eligible to be included in the impact fee calculation. Other storm drain projects that may be completed over the next ten years but have not been shown in the table include: projects for maintenance and repair (to be paid for by existing users), and project level improvements (to be paid for by individual developers).



Bowen Collins & Associates, Inc.
CONSULTING ENGINEERS

SARATOGA SPRINGS
STORM DRAIN CAPITAL FACILITIES PLAN

PROPOSED STORM DRAIN PROJECTS

NORTH:

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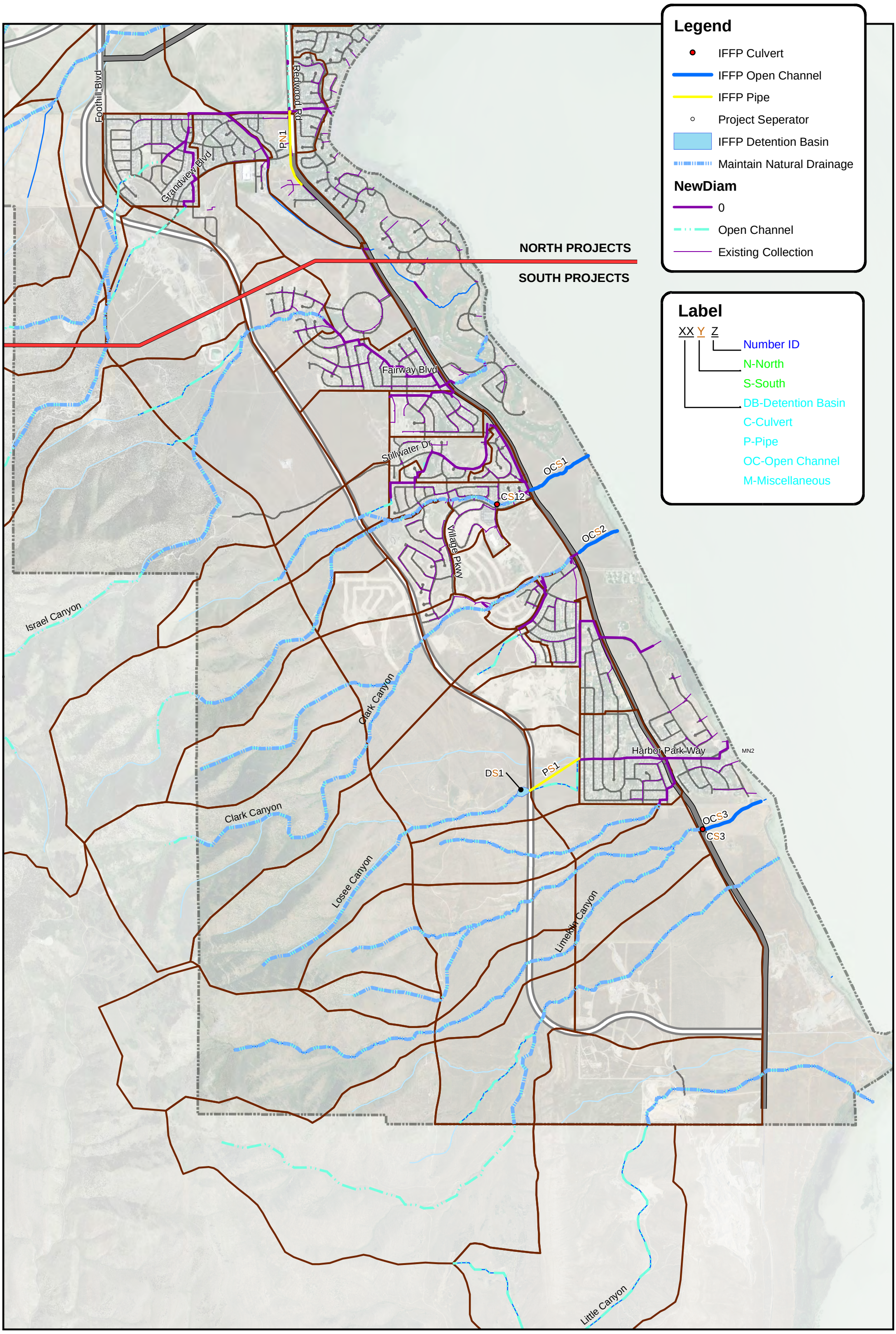
FIGURE NO. 6-1A

P:\Saratoga Springs\2011 Capital and Impact Fee Facilities Plans\4.0 GIS\4.1 Projects\StormMaps\Figure 6-1 - IFFP Proposed Projects.mxd nwright 4/22/2015



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SARATOGA SPRINGS
STORM DRAIN CAPITAL FACILITIES PLAN

PROPOSED STORM DRAIN PROJECTS

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FIGURE NO. 6-1B

P:\Saratoga Springs\2011 Capital and Impact Fee Facilities Plans\4.0 GIS\4.1 Projects\StormMaps\Figure 6-1 - IFFP Proposed Projects.mxd nwright 4/22/2015

Table 6-1
Impact Fee Facilities Plan - Costs Required for Future Growth

Project Identifier	Project Name	Construction Year	Total Estimated Cost	Percent Attributable to Existing	Percent Attributable to 10-year	Percent Attributable to Growth Beyond 10-year
CN11	400 North and Riverside Drive	2015	$227,540	14.5%	75.0%	10.5%
OCN2	Tickville Gulch	2015	$88,600	10.5%	54.9%	34.6%
OCN3	400 North East of Redwood	2015	$75,840	14.5%	71.0%	14.5%
PN4	Talus Ridge Phase 2	2015	$306,022	0.0%	64.1%	35.9%
PN7	Tickville Gulch	2015	$2,248,000	10.5%	54.9%	34.6%
CN10	Tickville Gulch Redwood Rd	2016	$270,400	10.5%	54.9%	34.6%
DS1	Harbor Park Way	2016	$1,109,500	40.7%	0.0%	59.3%
OCS1	Village Parkway & Redwood Road	2016	$33,620	18.8%	73.4%	7.9%
PN6a	Pioneer Crossing to Market St.	2016	$562,200	0.0%	24.9%	75.1%
PN6b	Market St. Outfall	2016	$487,240	0.0%	86.5%	13.5%
PS1	Harbor Parkway	2016	$212,000	24.5%	0.0%	75.5%
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PN18	SR-73	2017	$163,000	13.5%	1.7%	84.8%
OCS3	Limekiln Canyon	2018	$32,160	0.0%	0.0%	100.0%
CS3	Redwood Road & Limekiln Canyon	2019	$110,000	0.0%	0.0%	100.0%
PN16	1900 North/Redwood Rd	2019	$11,600	22.9%	21.3%	55.7%
CS12	Village Court Rd.	2020	$110,000	11.1%	52.3%	36.6%
PN1	Redwood Rd. Near Grandview Blvd	2020	$505,100	52.0%	47.7%	0.3%
Total			**$7,425,462**			

PROJECT COSTS ATTRIBUTABLE TO FUTURE GROWTH

To satisfy the requirements of state law, Table 6-1 provides a breakdown of the capital facility plan projects and the percentage of the project costs attributed to existing and future users. As defined in Section 11-36-304, the impact fee facilities plan should only include "the proportionate share of the costs of public facilities [that] are reasonably related to the new development activity." While most projects from the capital facilities plan are required to meet future growth, some projects also provide benefit to existing users. Projects that benefit existing users include those projects addressing existing capacity deficiencies, maintenance related projects, or projects increasing the level of service for existing users.

For many projects, the division of costs between existing and future users is easy because 100 percent of the project costs can be attributed to one category or the other (e.g. infrastructure needed solely to serve new development can be 100 percent attributed to new growth, while elimination of existing deficiencies can be 100 percent attributed to existing user needs). For projects needed to address both existing deficiencies and new growth, the costs were divided using one of two methods:

1. Where an existing facility requires replacement, existing users have been assigned the cost of replacement based on their needs and future users have been assigned the cost of upsizing the pipeline to accommodate additional future growth. For example, an existing pipeline that is undersized and needs to be replaced may require a new pipeline to accommodate existing flows that costs $150/ft. However, to accommodate future flows, the replacement may be increased in size to a pipeline costing $200/ft. In this case, 25 percent of the costs of the project would be assigned to future growth with 75 percent assigned to existing users.

2. Where a new facility is being added (no existing facility exists), costs have been divided between the several user categories based on the ratio of flow (pipelines) or volume (detention basins) needed for each type of user. For example, if peak flow through a proposed facility associated with existing development will be 7 cfs but the ultimate capacity of the pipeline needs to be 10 cfs to meet total flows with all future development, 70 percent of the costs of the project have been assigned to existing users with 30 percent assigned to future growth.

It should be noted that Table 6-1 does not include inflation or bond costs related to paying for impact fee eligible improvements. These costs should be considered as part of the impact fee analysis.

PROJECT COST ATTRIBUTABLE TO 10 YEAR GROWTH

Also included in Table 6-2 is a breakdown of capacity associated with growth through the next 10 years and for growth beyond 10 years. A challenge with storm drain infrastructure is that it is not cost effective to add capacity in small increments. Once a pipeline is being built, it needs to be built to satisfy long-term capacity needs. As a result, the improvements proposed in the impact fee facility plan will include capacity for growth beyond the 10-year planning window. To most accurately evaluate the cost of providing service for growth during the next ten years, added consideration has been given to evaluating how much of each improvement will be used in the next 10 years. This has been done following the same methodology as described above.

BASIS OF CONSTRUCTION COST ESTIMATES

The costs of construction for projects to be completed within ten years have been estimated based on past BC&A experience with projects of a similar nature. Pipeline project costs are based on average per foot costs for pipes of a similar nature. Costs include consideration of other components of the storm drain system including manholes, catch basins, and surface restoration as appropriate for each project.

SECTION 7
ADDITIONAL CONSIDERATIONS

MANNER OF FINANCING (11-36A-302.2)

The City may fund the infrastructure identified in this IFFP through a combination of different revenue sources.

Federal and State Grants and Donations

Impact fees cannot reimburse costs funded or expected to be funded through federal grants and other funds that the City has received for capital improvements without an obligation to repay. Grants and donations are not currently contemplated in this analysis. If grants become available for constructing facilities, impact fees will need to be recalculated and an appropriate credit given. Any existing infrastructure funded through past grants will be removed from the system value during the impact fee analysis.

Bonds

None of the costs contained in this IFFP include the cost of bonding. The cost of bonding required to finance impact fee eligible improvements identified in the IFPP may be added to the calculation of the impact fee. This will be considered in the impact fee analysis.

Interfund Loans

Because infrastructure must generally be built ahead of growth, there often arises situations in which projects must be funded ahead of expected impact fee revenues. In some cases, the solution to this issue will be bonding. In others, funds from existing user rate revenue will be loaned to the impact fee fund to complete initial construction of the project and will be reimbursed later as impact fees are received. Consideration of potential interfund loans will be included in the impact fee analysis and should also be considered in subsequent accounting of impact fee expenditures.

Impact Fees

It is recommended that impact fees be used to fund growth-related capital projects as they help to maintain the proposed level of service and prevent existing users from subsidizing the capital needs of new growth. Based on this IFFP, an impact fee analysis will be able to calculate a fair and legal fee that new growth should pay to fund the portion of the existing and new facilities that will benefit new development.

Developer Dedications and Exactions

Developer exactions are not the same as grants. Developer exactions may be considered in the inventory of current and future Storm Drain infrastructure. If a developer constructs a facility or dedicates land within the development, the value of the dedication is credited against that particular developer's impact fee liability.

If the value of the dedication/exaction is less than the development's impact fee liability, the developer will owe the balance of the liability to the City. If the value of the improvements dedicated is worth more than the development's impact fee liability, the City must reimburse the difference to the developer from impact fee revenues collected from other developments.

It should be emphasized that the concept of impact fee credits pertains to system level improvements only. For project level improvement (i.e. projects not identified in the impact fee facility plan), developers will be responsible for the construction of the improvements without credit against the impact fee.

NECESSITY OF IMPROVEMENTS TO MAINTAIN LEVEL OF SERVICE (11-36A-302.3)

According to State statute, impact fees cannot be used to correct deficiencies in the system and must be necessary to maintain the proposed level of service established for all users. Only those projects or portions of projects that are required to maintain the proposed level of service for future growth have been included in this IFFP. This will result in an equitable fee as future users will not be expected to fund any portion of the projects that will benefit existing residents.

SCHOOL RELATED INFRASTRUCTURE (11-36A-302.2)

As part of the noticing and data collection process for this plan, information was gathered regarding future school district and charter school development. Where the City is aware of the planned location of a school, required public facilities to serve the school have been included in the impact fee analysis.

NOTICING AND ADOPTION REQUIREMENTS (11-36A-502)

The Impact Fees Act requires that entities must publish a notice of intent to prepare or modify any IFFP. If an entity prepares an independent IFFP rather than include a capital facilities element in the general plan, the actual IFFP must be adopted by enactment. Before the IFFP can be adopted, a reasonable notice of the public hearing must be published in a local newspaper at least 10 days before the actual hearing. A copy of the proposed IFFP must be made available in each public library within the City during the 10 day noticing period for public review and inspection. Utah Code requires that the City must post a copy of the ordinance in at least three places. These places may include the City offices and the public libraries within the City's jurisdiction. Following the 10-day noticing period, a public hearing will be held, after which the City may adopt, amend and adopt, or reject the proposed IFFP.

SECTION 8
IMPACT FEE CERTIFICATION (11-36A-306.1)

This report has been prepared in accordance with Utah Code Title 11 Chapter 36a (the "Impact Fees Act"), which prescribes the laws pertaining to Utah municipal capital facilities plans and impact fee analyses. The accuracy of this report relies upon the planning, engineering, and other source data, which was provided by the City and their designees.

In accordance with Utah Code Annotated, 11-36a-306(1), Bowen Collins & Associates, makes the following certification:

I certify that this impact fee facility plan:

1. Includes only the cost of public facilities that are:
    a. allowed under the Impact Fees Act; and
    b. actually incurred; or
    c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid;
2. Does not include:
    a. costs of operation and maintenance of public facilities;
    b. cost of qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
    c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement; and
3. Complies in each and every relevant respect with the Impact Fees Act.

Dated: May 14, 2015

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Bowen Collins
& Associates, Inc.
CONSULTING ENGINEERS

EXHIBIT B

Saratoga Springs

Storm Drain Impact Fee Analysis

ZIONS BANK ZBPF PUBLIC FINANCE

August 2015

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Summary of Impact Fee Analysis

Background Information

Saratoga Springs (the City") retained Bowen Collins & Associates to prepare an Impact Fee Facilities Plan (IFFP) for storm drain, and retained Zions Bank Public Finance to prepare this Impact Fee Analysis (IFA) for the calculation of appropriate storm drain impact fees. This IFA relies on the information provided in the IFFP regarding current system capacity and future storm drain capital facility needs, cost and timing.

Service Area. There is one service area in Saratoga Springs for the purpose of calculating storm drain impact fees.

Level of Service. The City requires that all development detain water to a standard limited to 0.2 cfs per acre or the historical runoff for pre-development conditions. Therefore, because the *rate* of flow is controlled, the demand unit for storm drain capital facilities is the same for all development types and is calculated based on the development of "acres." Storm drain impact fees are charged, at platting, on an acreage basis.

Growth Projections. Over the next ten years, Saratoga Springs is expected to grow by 2,734 acres.

TABLE 1: GROWTH PROJECTIONS

	Yearly Developed Acres	Annual Percent Increase	Total Developed Acres
2015			3,225
2016	103	3.2	3,328
2017	215	6.5	3,543
2018	271	7.7	3,814
2019	293	7.7	4,107
2020	316	7.7	4,423
2021	271	6.1	4,694
2022	288	6.1	4,982
2023	306	6.1	5,288
2024	325	6.1	5,613
2025	346	6.2	5,959
Total	2,734		

Impact on Consumption of Existing Capacity

Utah Code 11-36a-304(1)(a)

According to the IFFP, the existing storm drain system improvements are at the following levels of capacity. The value of the excess capacity has been apportioned among all future users, based on the consumption of excess capacity by new development over the next ten years.

TABLE 2: EXCESS CAPACITY PERCENTAGE ATTRIBUTABLE TO NEW DEVELOPMENT OVER NEXT 10 YEARS

Project ID	Project Description	Percent Currently Utilized	Percent to 10-Year Growth	Percent to Growth Beyond 10 Years
SAR.219	48" SSD Storm Drain Outfall through SSD and upgrade Box Culvert under Redwood Road	29.6%	22.2%	48.3%
EP.1	Sierra Estates Outfall (400 North)	17.5%	64.8%	17.8%
SAR.187	Piping of storm drain ditch through Saratoga Hills Park	92.6%	1.7%	5.6%
SAR.177	36" Storm Drain Town Center Outfall	83.9%	10.6%	5.6%
SAR.148	Tickville Wash Culverts at Redwood Road	100.0%	0.0%	0.0%
EP.2	Israel Canyon Debris Basin and Flood Mitigation	39.7%	16.4%	43.9%
EP.3	400 North (600 West to 800 West) and 800 West (400 North to Talus Ridge)	13.8%	60.5%	25.7%
EP.4	400 North (Redwood Road to Thunder Blvd)	21.1%	68.4%	10.5%
EP.5	Talus Ridge Plat B & D	0.0%	66.4%	33.6%
EP.6	Sunrise Outfall (800 West)	100.0%	0.0%	0.0%

The excess capacity that will therefore be consumed by new development over the next ten years is $1,033,561.66.

TABLE 3: EXCESS CAPACITY COST ATTRIBUTABLE TO NEW DEVELOPMENT OVER NEXT 10 YEARS

Project ID	Actual Cost	Amount Attributable to Next 10 Years
SAR.219	$946,434.81	$210,108.53
EP.1	$222,280.50	$144,037.76
SAR.187	$578,243.25	$9,830.14
SAR.177	$147,082.80	$15,590.78
SAR.148	$250,500.00	$0.00
EP.2	$678,970.35	$111,351.14
EP.3	$326,351.00	$197,442.36
EP.4	$442,920.00	$302,957.28
EP.5	$63,620.00	$42,243.68
EP.6	$172,539.00	$0.00
TOTAL	$3,828,941.71	$1,033,561.66

Impact on System Improvements by Anticipated New Development

Utah Code 11-36a-304(1)(b)

The City has determined to maintain its current level of storm drain service which is that storm water runoff must be limited to 0.2 cfs per acre or the historical runoff for pre-development conditions. Therefore, additional storm drain improvements will be required in order to maintain the established storm drain level of service as new development occurs. The new facilities needed to serve the needs of new development over the next ten years have been identified by the City's engineers at a total $3,495,231.54.

TABLE 4: NEW CONSTRUCTION COSTS ATTRIBUTABLE TO NEW DEVELOPMENT OVER THE NEXT 10 YEARS

Project Identifier	Project Name	Construction Year	Total Estimated Cost	Percent Attributable to 10- year	Cost to be Shared over Next 10 Years
CN11	400 North and Riverside Drive	2015	$227,540	75.00%	$170,655.00
OCN2	Tickville Gulch	2015	$88,600	54.90%	$48,641.40
OCN3	400 North East of Redwood	2015	$75,840	71.00%	$53,846.40
PN4	Talus Ridge Phase 2	2015	$306,022	64.10%	$196,160.10
PN7	Tickville Gulch	2015	$2,248,000	54.90%	$1,234,152.00
CN10	Tickville Gulch Redwood Rd	2016	$270,400	54.90%	$148,449.60
DS1	Harbor Park Way	2016	$1,109,500	0.00%	$0.00

Project Identifier	Project Name	Construction Year	Total Estimated Cost	Percent Attributable to 10- year	Cost to be Shared over Next 10 Years
OCS1	Village Parkway & Redwood Road	2016	$33,620	73.40%	$24,677.08
PN6a	Pioneer Crossing to Market St.	2016	$562,200	24.90%	$139,987.80
PN6b	Market St. Outfall	2016	$487,240	86.50%	$421,462.60
PS1	Harbor Parkway	2016	$212,000	0.00%	$0.00
OCS2	Clark Canyon	2017	$21,340	16.40%	$3,499.76
PN12	Harvest Hills to Jordan River 1	2017	$851,300	88.10%	$749,995.30
PN18	SR-73	2017	$163,000	1.70%	$2,771.00
OCS3	Limekiln Canyon	2018	$32,160	0.00%	$0.00
CS3	Redwood Road & Limekiln Canyon	2019	$110,000	0.00%	$0.00
PN16	1900 North/Redwood Rd	2019	$11,600	21.30%	$2,470.80
CS12	Village Court Rd.	2020	$110,000	52.30%	$57,530.00
PN1	Redwood Rd. Near Grandview Blvd	2020	$505,100	47.70%	$240,932.70
Total			**$7,425,462**		**$3,495,231.54**

Proportionate Share Analysis and Impact Fee Calculation

Utah Code 11-36a-304(1)(d) and (e) and (2)(a) and (b)

Because the storm drain system has excess capacity, the City proposes to require future residents to buy-in to the existing storm drain system, as well as to contribute their fair share to the new storm drain facilities needed for new development. These costs, along with allowable consultant costs, are summarized below, resulting in a total maximum impact fee of $1,649.26 per acre.

TABLE 5: PER ACRE IMPACT FEE CALCULATION

	Amount
Excess Capacity Buy-In Cost:	
Storm Drain System Actual Cost	$3,828,941.71
Actual Cost of Excess Capacity Consumed Over Next 10 Years	$1,033,561.66
Total Acres Served by Excess Capacity Over Next 10 Years	2,734
Actual Cost of Excess Capacity per Acre	$378.04
New Construction Costs:	
Impact-Fee Eligible System Improvements to Serve New Development Over the Next 10 Years	$3,495,231.54
Acres Served by Construction of New System Improvements (undeveloped acres to buildout)	2,734
Cost per Acre	$1,278.43

	Amount
Consultant Costs:	
Consultant Costs	$67,000
Acres Served by Consultant Costs (acres developed over next 10 years)	2,734
Consultant Costs per Acre	$25.24
Fee Summary	
Buy-In Cost per Acre	$477.04
New System Improvements Cost per Acre	$1,278.43
Consultant Fees	$25.24
Fund Balance Credit	($32.45)
IMPACT FEE COST PER ACRE	$1,649.26

Manner of Financing for Public Facilities

There is no outstanding debt on the City's storm drain system and the City does not anticipate issuing debt in the near term to finance new facilities.

Utah Code Legal Requirements

Utah law requires that communities prepare an Impact Fee Analysis (IFA) based on the information presented in the Impact Fee Facilities Plan (IFFP) before enacting an impact fee. Utah law also requires that communities give notice of their intent to prepare and adopt an IFA. This IFA follows all legal requirements as outlined below. Saratoga Springs has retained Zions Bank Public Finance (ZBPF) to prepare this Impact Fee Analysis in accordance with legal requirements.

Notice of Intent to Prepare Impact Fee Analysis

A local political subdivision must provide written notice of its intent to prepare an IFA before preparing the Analysis (Utah Code 11-36a-503(1)). This notice must be posted on the Utah Public Notice website. The City has complied with this noticing requirement for the IFA by posting notice.

Preparation of Impact Fee Analysis

Utah Code requires that "each local political subdivision… intending to impose an impact fee shall prepare a written analysis of each impact fee" (Utah Code 11-36a-303).

Section 11-36a-304 of the Utah Code outlines the requirements of an impact fee analysis which is required to identify the following:

- (a) identify the anticipated impact on or consumption of any existing capacity of a public facility by the anticipated development activity;
- (b) identify the anticipated impact on system improvements required by the anticipated development activity to maintain the established level of service for each public facility;
- (c) demonstrate how anticipated impacts are reasonably related to the anticipated development activity;
- (d) estimate the proportionate share of:
  - (i) The costs for existing capacity that will be recouped; and
  - (ii) The costs of impacts on system improvement that are reasonably related to the new development activity; and
- (e) based on the requirements of this chapter, identify how the impact fee was calculated.

Further, in analyzing whether or not the proportionate share of the costs of public facilities are reasonably related to the new development activity, the local political subdivision or private entity, as the case may be, shall identify, if applicable:

- (a) the cost of each existing public facility that has excess capacity to serve the anticipated development resulting from the new development activity;
- (b) the cost of system improvements for each public facility;
- (c) other than impact fees, the manner of financing for each public facility such as user charges, special assessments, bonded indebtedness, general taxes, or federal grants;
- (d) the relative extent to which development activity will contribute to financing the excess capacity of and system improvements for each existing public facility, by means such as user charges, special assessments, or payment from the proceeds of general taxes;

(e) the relative extent to which development activity will contribute to the cost of existing public facilities and system improvements in the future;
(f) the extent to which the development activity is entitled to a credit against impact fees because the development activity will dedicate system improvements or public facilities that will offset the demand for system improvements, inside or outside the proposed development;
(g) extraordinary costs, if any in servicing the newly developed properties; and
(h) the time-price differential inherent in fair comparisons of amounts paid at different times.

Calculating Impact Fees

Utah Code states that for purposes of calculating an impact fee, a local political subdivision or private entity may include:

(a) the construction contract price;
(b) the cost of acquiring land, improvements, materials, and fixtures;
(c) the cost for planning, surveying, and engineering fees for services provided for and directly related to the construction of the system improvements; and
(d) for political subdivision, debt service charges, if the political subdivision might use impact fees as a revenue stream to pay the principal and interest on bonds, notes or other obligations issued to finance the costs of the system improvements.

Additionally, the Code states that each political subdivision or private entity shall base impact fee amounts on realistic estimates and the assumptions underlying those estimates shall be disclosed in the impact fee analysis.

Certification of Impact Fee Analysis

Utah Code states that an impact fee facilities plan shall include a written certification from the person or entity that prepares the impact fee facilities plan. This certification is included as part of this Impact Fees Analysis.

Impact Fee Enactment

Utah Code states that a local political subdivision or private entity wishing to impose impact fees shall pass an impact fee enactment in accordance with Section 11-36a-402. Additionally, an impact fee imposed by an impact fee enactment may not exceed the highest fee justified by the impact fee analysts. An impact fee enactment may not take effect until 90 days after the day on which the impact fee enactment is approved.

Consumption of Existing Capacity, Impact on System Improvements and How Impacts are Related to Anticipated Development Activity

Utah Code 11-36a-304(1)(a),(b) and (c)

Growth in Demand

Saratoga Springs requires that all development detain water to a standard that is limited to 0.2 cfs per acre or the historical runoff for pre-development conditions.

Growth in developed acres will generate demand for storm drain facilities. Table 6 shows the projected growth in the City through 2025 – the next ten years.

TABLE 6: PROJECTED GROWTH THROUGH 2025

Year	New Acres Developed	Cumulative New Acres of Development
2015		3,225
2016	103	3,328
2017	215	3,543
2018	271	3,814
2019	293	4,107
2020	316	4,423
2021	271	4,694
2022	288	4,982
2023	306	5,288
2024	325	5,613
2025	346	5,959
Total	2,734	

Consumption of Existing Capacity by Anticipated New Development

According to Bowen, Collins & Associates, the City's storm drain engineers, the existing storm drain system improvements have some excess capacity to serve the needs of new development. A portion, but not all, of the excess capacity will be consumed within the next ten years.

TABLE 7: CONSUMPTION OF EXCESS CAPACITY

Project ID	Project Description	Percent Currently Utilized	Percent to 10-Year Growth	Percent to Growth Beyond 10 Years
SAR.219	48" SSD Storm Drain Outfall through SSD and upgrade Box Culvert under Redwood Road	29.6%	22.2%	48.3%
EP.1	Sierra Estates Outfall (400 North)	17.5%	64.8%	17.8%
SAR.187	Piping of storm drain ditch through Saratoga Hills Park	92.6%	1.7%	5.6%

Project ID	Project Description	Percent Currently Utilized	Percent to 10-Year Growth	Percent to Growth Beyond 10 Years
SAR.177	36" Storm Drain Town Center Outfall	83.9%	10.6%	5.6%
SAR.148	Tickville Wash Culverts at Redwood Road	100.0%	0.0%	0.0%
EP.2	Israel Canyon Debris Basin and Flood Mitigation	39.7%	16.4%	43.9%
EP.3	400 North (600 West to 800 West) and 800 West (400 North to Talus Ridge)	13.8%	60.5%	25.7%
EP.4	400 North (Redwood Road to Thunder Blvd)	21.1%	68.4%	10.5%
EP.5	Talus Ridge Plat B & D	0.0%	66.4%	33.6%
EP.6	Sunrise Outfall (800 West)	100.0%	0.0%	0.0%

The excess capacity that will therefore be consumed by new development over the next ten years is $1,033,561.66.

TABLE 8: EXCESS CAPACITY COST ATTRIBUTABLE TO NEW DEVELOPMENT OVER NEXT 10 YEARS

Project ID	Actual Cost	Amount Attributable to Next 10 Years
SAR.219	$946,434.81	$210,108.53
EP.1	$222,280.50	$144,037.76
SAR.187	$578,243.25	$9,830.14
SAR.177	$147,082.80	$15,590.78
SAR.148	$250,500.00	$0.00
EP.2	$678,970.35	$111,351.14
EP.3	$326,351.00	$197,442.36
EP.4	$442,920.00	$302,957.28
EP.5	$63,620.00	$42,243.68
EP.6	$172,539.00	$0.00
TOTAL	$3,828,941.71	$1,033,561.66

Impact on System Improvements by Anticipated New Development

The City has determined to maintain its current level of storm drain service. Therefore, additional storm drain improvements will be required in order to maintain the established storm drain level of service.

TABLE 9: NEW SYSTEM IMPROVEMENTS NECESSITATED BY NEW DEVELOPMENT

Project Identifier	Project Name	Construction Year	Total Estimated Cost	Percent Attributable to 10- year	Cost to be Shared over Next 10 Years
CN11	400 North and Riverside Drive	2015	$227,540	75.00%	$170,655.00
OCN2	Tickville Gulch	2015	$88,600	54.90%	$48,641.40
OCN3	400 North East of Redwood	2015	$75,840	71.00%	$53,846.40
PN4	Talus Ridge Phase 2	2015	$306,022	64.10%	$196,160.10
PN7	Tickville Gulch	2015	$2,248,000	54.90%	$1,234,152.00
CN10	Tickville Gulch Redwood Rd	2016	$270,400	54.90%	$148,449.60
DS1	Harbor Park Way	2016	$1,109,500	0.00%	$0.00
OCS1	Village Parkway & Redwood Road	2016	$33,620	73.40%	$24,677.08
PN6a	Pioneer Crossing to Market St.	2016	$562,200	24.90%	$139,987.80
PN6b	Market St. Outfall	2016	$487,240	86.50%	$421,462.60
PS1	Harbor Parkway	2016	$212,000	0.00%	$0.00
OCS2	Clark Canyon	2017	$21,340	16.40%	$3,499.76
PN12	Harvest Hills to Jordan River 1	2017	$851,300	88.10%	$749,995.30
PN18	SR-73	2017	$163,000	1.70%	$2,771.00
OCS3	Limekiln Canyon	2018	$32,160	0.00%	$0.00
CS3	Redwood Road & Limekiln Canyon	2019	$110,000	0.00%	$0.00
PN16	1900 North/Redwood Rd	2019	$11,600	21.30%	$2,470.80
CS12	Village Court Rd.	2020	$110,000	52.30%	$57,530.00
PN1	Redwood Rd. Near Grandview Blvd	2020	$505,100	47.70%	$240,932.70
Total			$7,425,462		$3,495,231.54

Relation of Anticipated Development Activity to Impacts on Existing Capacity and System Improvements

The demand placed on existing storm drain improvements by new development activity is attributed to the increased developed acres related to both residential and nonresidential growth. Platted acreage, the first step in the development process, is expected to increase by 2,734 acres over the next ten years.

Proportionate Share Analysis

Utah Code 11-36a-304(1)(d)(i) and (ii)

Costs for Existing Capacity

Because the existing storm drain system has excess capacity, the City proposes to require future residents to buy-in to the existing storm drain system in order to achieve an equitable allocation to the costs borne in the past and to be borne in the future, in comparison to the benefits already received and yet to be received. The total historical cost for storm drain improvements paid for by the City is $3,828,941.71. The value of the excess capacity is based on varying percentages of actual cost for each storm drain capital facility. The value of the excess capacity that will be consumed by new development over the next ten years is $1,033,561.66.

TABLE 10: PER ACRE BUY-IN COST FOR EXISTING CAPACITY

	Amount
Storm Drain System Actual Cost	$3,828,941.71
Storm Drain Excess Capacity Consumed Over Next 10 Years	$1,033,561.66
Total Acres Served by Excess Capacity Over Next 10 Years	2,734
Cost of Excess Capacity per Acre	**$378.04**

Costs of System Improvements Related to New Development Activity

The City intends to maintain its existing level of service for storm drain services through adding the new improvements described in the Impact Fee Facilities Plan and previously in this Impact Fee Analysis. In addition, engineering and consultant fees are considered a legitimate cost in calculating impact fees. These costs are also summarized below.

Total impact-fee eligible costs for new construction, attributable to new development over the next ten years, are $3,495,231.54. Consultant costs are estimated at $69,000 in order to prepare the engineering plans, impact fee facility plans and impact fee analysis that were necessary in order to calculate defensible impact fees. The engineering and consultant studies are considered to serve development over the next ten years.

TABLE 11: PER ACRE COST FOR NEW SYSTEM IMPROVEMENTS

	Amount
New Construction Costs:	
Impact Fee Eligible System Improvements Due to Development for Next 10 Years	$3,495,231.54
Acres Served by Construction of New System Improvements Over Next 10 Years	2,734
Cost per Acre	$1,278.43
Consultant Costs:	
Consultant Costs	$69,000
Acres Served by Consultant Costs (acres developed over next 6 years)	2,734
Consultant Costs per Acre	$25.24

Impact Fee Calculation

The maximum impact fee allowable under law includes buy-in costs of $378.04, plus new system costs of $1,278.43 per acre, plus consultant costs of $25.24 per acre, less an outstanding fund balance of $88,715.96 that will benefit all of new development by defraying costs for the new facilities,[1] result in total maximum impact fees per acre of $1,649.26.

TABLE 12: PROPORTIONATE SHARE IMPACT FEE CALCULATION

	Fee
Buy-In Cost per Acre	$378.04
New System Improvements Cost per Acre	$1,278.43
Consultant Fees	$25.24
Fund Balance Credit	($32.45)
Cost per Acre	**$1,649.26**

Impact fees would be charged to new development by multiplying the cost per acres ($1,649.26) by the number of new acres platted.

Manner of Financing, Credits, Etc.

Utah Code 11-36a-304(2)(c),(d),(e),(f),(g), and (h)

Part of the proportionate share analysis is a consideration of the manner of funding existing public facilities. A City typically funds existing infrastructure through several different funding sources including:

- General Fund Revenues
- User Fees
- Grants
- Bond Proceeds
- Developer Exactions
- Impact Fees

At the present time the City is not considering using general fund revenues, user fees, grants or bond proceeds to fund storm drain construction to offset the needs created by new development. The City intends for the costs imposed by new development to be paid for through impact fees. Using impact fees places a burden on future users that is equal to the burden that was borne in the past by existing users. (Utah Impact Fees Act, 11-36a-304(2) (c) (d))

There is no outstanding debt on the storm drain facilities and therefore no credits have been applied.

[1] The reduced amount per acre, due to the fund balance, is calculated by dividing the $88,715.96 fund balance by the 2,734 future acres to be developed.

Certification

Zions Bank Public Finance certifies that the attached impact fee analysis:

1. Includes only the costs of public facilities that are:
    a. allowed under the Impact Fees Act; and
    b. actually incurred; or
    c. projected to be incurred or encumbered within six years after the day on which each impact fee is paid.

2. Does not include:
    a. costs of operation and maintenance of public facilities;
    b. costs for qualifying public facilities that will raise the level of service for the facilities, through impact fees, above the level of service that is supported by existing residents;
    c. an expense for overhead, unless the expense is calculated pursuant to a methodology that is consistent with generally accepted cost accounting practices and the methodological standards set forth by the federal Office of Management and Budget for federal grant reimbursement.

3. Offsets costs with grants or other alternate sources of payment; and

4. Complies in each and every relevant respect with the Impact Fees Act.

EXHIBIT C

City of Saratoga Springs

Storm Drain Capital Facilities Plan

Project No. 305-11-02

Prepared by:

Bowen Collins
& Associates, Inc.
CONSULTING ENGINEERS

March 2015

Saratoga Springs Storm Drain Capital Facilities Plan

Prepared for:

CITY OF

SARATOGA SPRINGS

Prepared by:

Bowen Collins
& Associates, Inc.
CONSULTING ENGINEERS

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Draper, UT 84020

LICENSED PROFESSIONAL ENGINEER
23 MAR 2015
343787
KEITH J.
LARSON
STATE OF UTAH

March 2015

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CHAPTER 1
INTRODUCTION AND BACKGROUND

INTRODUCTION

The City of Saratoga Springs has retained Bowen Collins & Associates (BC&A) to prepare a master plan for the City's storm drain collection system. The primary purpose of this Storm Drain Facilities Plan is to provide recommended improvements to resolve existing and projected future deficiencies in the City of Saratoga Springs storm drain collection system based on the City's adopted General Plan. This report will also serve as a starting point for an Impact Fee Facilities Plan in accordance with the new requirements of State law.

SCOPE OF SERVICES

The general scope of this project involved a thorough analysis of City of Saratoga Spring's storm drain system and its ability to meet the present and future storm drain needs of its residents. As part of this project, BC&A completed the following tasks:

Task 1: Collected and reviewed existing information pertinent to the City's storm drain system.

Task 2: Delineated subbasins and estimated subbasin hydrologic parameters.

Task 3: Inventoried existing storm drain facilities using the City's existing GIS database.

Task 4: Developed a new hydrologic computer model utilizing the Autodesk Storm and Sanitary Analysis computer program to evaluate existing and future conditions.

Task 5: Performed system analysis. The hydrologic models developed in Task 4 were used to estimate potential runoff and identify needed improvements to the City's storm drain system.

Task 6: Developed a Capital Facilities Plan that lists the recommended storm drain trunkline and detention facility improvements that are needed to provide the desired level of service.

Task 7: Developed an impact fee facilities improvement plan for City budgeting and planning purposes (included in a separate document)

Task 8: Conducted progress and coordination meetings as required to keep City staff involved and informed of progress and activities.

This document is a working document. Some of the recommended improvements identified in this report are based on the assumption that development and/or potential annexation will occur

in a certain manner. If future growth or development patterns change significantly from those assumed and documented in this report, the recommendations may need to be revised.

AUTHORIZATION

Saratoga Springs contracted the services of BC&A to prepare this Storm Drain Capital Facilities Plan in November of 2011. The initial draft facility plan study and associated report were completed July 2012. The final plan was completed in March 2015.

PROJECT STAFF

The project work was performed by the BC&A team members listed below. Team member's roles on the project are also listed. The project was completed in BC&A's Draper, Utah office. Questions may be addressed to Matt Stayner, Project Engineer at (801) 495-2224.

Jason Luettinger	Principal-In-Charge	Devin Stoker	Staff Engineer
Keith Larson	Project Manager	Angela Hansen	Word Processing
Matt Stayner	Project Engineer		

CHAPTER 2
EXISTING SYSTEM DESCRIPTION

SERVICE AREA

The City of Saratoga Springs, which first incorporated in 1997, is bounded to the west by the Lake Mountain and Eagle Mountain City and to the east and northeast by Utah Lake and Lehi City. Figure 2-1 shows the approximate planning extent of Saratoga Springs along with the City's major collection system components. The topography of the majority of the City slopes west to east toward either Utah Lake or the Jordan River. For the purposes of this report, it has been assumed that the future service area of the City's storm drain system will be limited to the annexation boundaries of the City.

STORM DRAINAGE PIPES

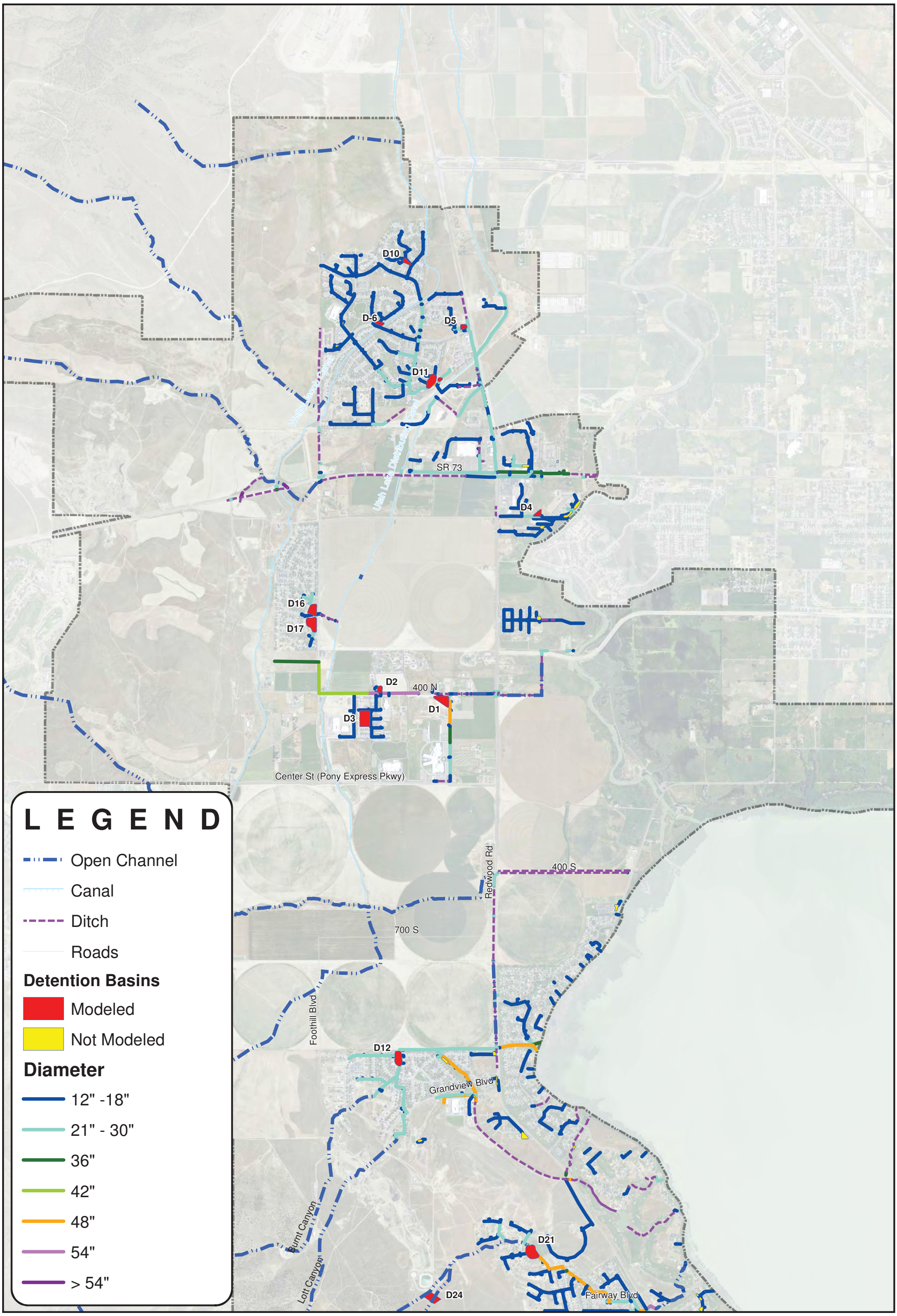
Table 2-1 lists the recorded length of pipe in the City's collection system as documented in the City's geographic database as of February 2012.

Table 2-1
Saratoga Springs Storm Drain Pipe Lengths

Diameter (in)	Length (ft)	Length (mi)
12	2,500	0.47
15	3,669	0.69
18	14,022	2.66
24	19,163	3.63
30	9,779	1.85
36	6,501	1.23
42	29	0.01
48	6,580	1.25
54	1,690	0.32
84	161	0.03
118	441	0.08
Total	**64,535**	**12.22**

DETENTION BASINS

There are approximately 46 detention facilities in the existing storm drain system according the City's GIS database. The primary purpose of the detention facilities is to capture and store peak storm water flows during large precipitation events. The storm water is then slowly released downstream at more manageable flow rates. Current City policy requires detention down to 0.2 cfs/acre or the historical runoff for pre-development conditions. The value of 0.2 cfs/acre is a standard that has been used by local communities for many years. It is an approximation of the expected runoff for pre-development conditions in the 100-year storm. Actual runoff for pre-



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SARATOGA SPRINGS
STORM DRAIN CAPITAL FACILITIES PLAN

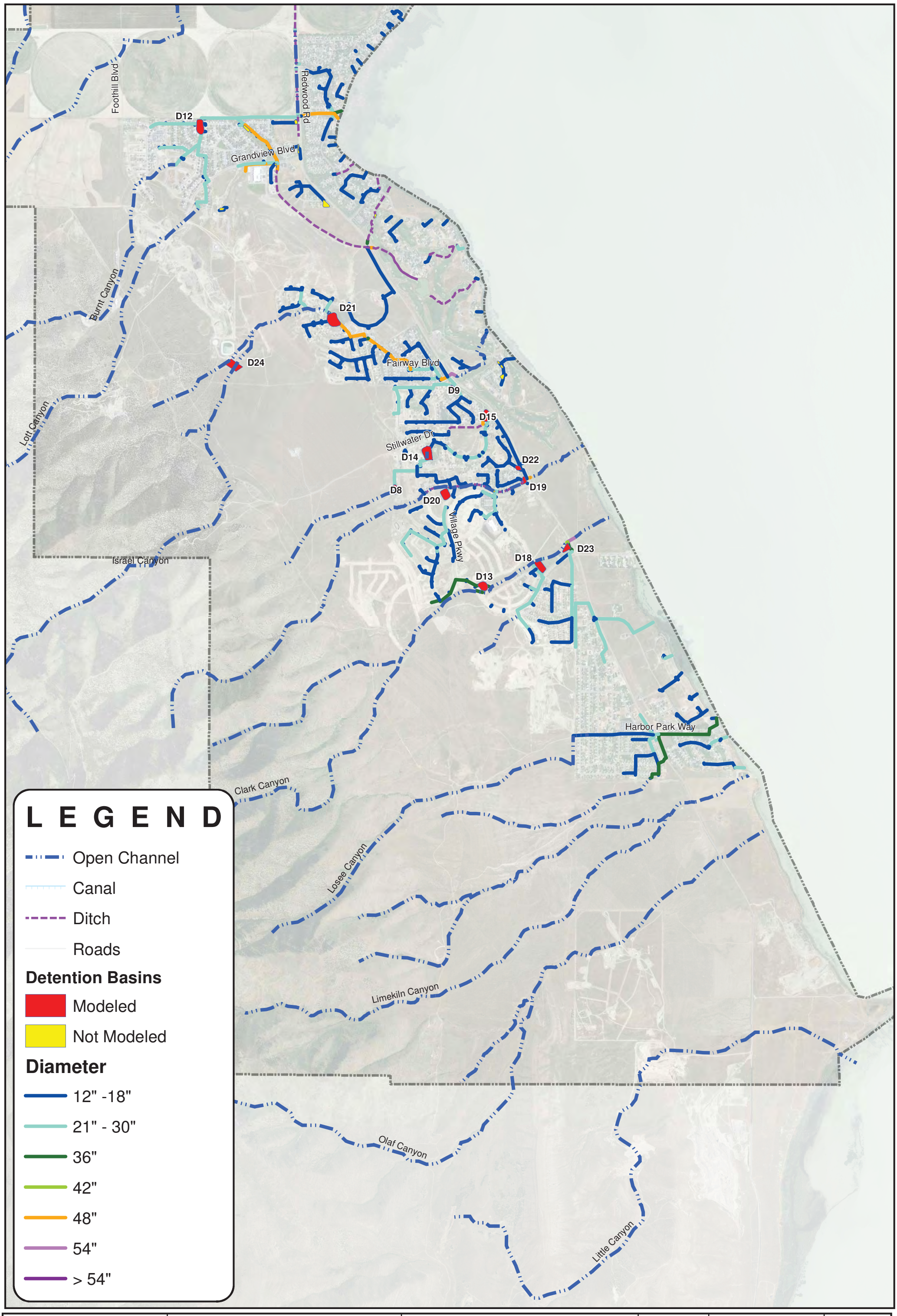
EXISTING STORM DRAIN COLLECTION AND DETENTION SYSTEM

NORTH:

SCALE: 0 1,250 2,500 Feet

FIGURE NO. 2-1A

P:\Saratoga Springs\2011 Capital and Impact Fee Facilities Plans\4.0 GIS\4.1 Projects\StormMaps\Figure 2-1 - Existing Facilities.mxd nwright 1/5/2015



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STORM DRAIN CAPITAL FACILITIES PLAN

EXISTING STORM DRAIN COLLECTION AND DETENTION SYSTEM

NORTH:

SCALE: 0 1,250 2,500 Feet

FIGURE NO. 2-1B

P:\Saratoga Springs\2011 Capital and Impact Fee Facilities Plans\4.0 GIS\4.1 Projects\StormMaps\Figure 2-1 - Existing Facilities.mxd nwright 1/5/2015

development conditions will vary depending on the size, slope, and soil conditions of each drainage area. Table 2-2 lists the existing detention basins in Saratoga Springs.

Table 2-2
Existing Detention Basin Characteristics

Detention Basin	Type	Address[1]
D1	Regional	200 W & 400 N
D2	Regional	540 W & 400 N
D3	Regional	610 W & 335 N
D4	Regional	Commerce Dr& 1200 N
D5	Regional	Harvest Hills Blvd & Redwood Rd
D6	Regional	Harvest Hills Blvd & Granary Way
D7	Regional	Hillcrest Condominiums
D8	Regional	Kit Fox Dr
D9	Regional	Maverick Rd & 2390 S
D10	Regional	Orchard Way & Apple Ave
D11	Regional	Peppermint Ct & Tuscany Dr
D12	Regional	Pondside Dr & Meadow Crest Way
D13	Regional	Rock Creek Way & Village Pkwy
D14	Regional	Honeysuckle Ct & Stillwater Dr
D15	Regional	Summerhill Dr& Stillwater Dr
D16	Regional	Buffalo Dr & Red Fox Lane
D17	Regional	Buffalo Dr & Red Fox Lane
D18	Regional	Swainson Ave & Wildlife Blvd
D19	Regional	Village Pkwy & Redwood Rd
D20	Regional	Waymond Park & Village Pkwy
D21	Regional	Weatherby Dr & Ring Rd
D22	Regional	Wildflower Dr & Redwood Rd
D23	Regional	Wildlife Blvd & Redwood Rd
D24	Regional	Israel Canyon Debris Basin
D25	Local	Commerce Dr & 8570 N
D26	Local	Village Pkwy & Village Court Rd
D27	Local	Grandview Blvd & Redwood Road
D28	Local	Parkside Dr & Grandview Blvd
D29	Local	Hillside Dr & Parkside Dr
D30	Local	Devonshire Dr and Brookshire Dr
D31	Local	1140 N & Riverside Drive
D32	Local	Saratoga Dr. & 400 S
D33	Local	Lakeview Dr & Montrose Ln
D34	Local	Hawthorne St & 2090 E
D35	Local	Lakeview Dr & 2090 E
D36	Local	Summer Village Rd & Sunshine Dr
D37	Local	Lake View Terrace Rd & Redwood Rd

Detention Basin	Type	Address[1]
D38	Local	Redwood Road & Hillside Dr
D39	Local	Range Rd & Redwood Road
D40	Local	Shorewood Dr & Cottage Cove
D41	Local	Shorewood Dr & Cottage Cove
D42	Local	Lakewood & Shorewood Dr
D43	Local	Saratoga Chase Dr & Harvest Hills Blvd
D44	Local	Valley View Dr & Grandview Ct
D45	Local	Providence Dr & Harvest Hills Blvd
D46	Local	Cascade Ct & Riverside Dr
D47	Local	Jordan Cove Loop & Riverside Dr

Included in the table is a designation of each detention basin as either a regional or a local facility. BC&A staff analyzed the existing system and consulted with City personnel to identify 24 detention basins that function as regional facilities. These are improvements that benefit large areas of the City, usually including multiple developments. The remaining detention basins have been identified as local facilities. These are project-specific improvements that serve much smaller areas, usually consisting of a single development or portion of development.

Those facilities that have been identified as regional facilities are an important part of the City's overall storm water conveyance strategy and have been included in the computer model that is being used to analyze the system. For these detention facilities, Saratoga Springs personnel provided outlet size, orifice size (where applicable) and a Digital Elevation Model (DEM) of the detention basin. BC&A staff developed stage-storage curves from the DEM's to estimate the maximum storage capacity. Those detention basins that function as local facilities are project specific improvements and correspondingly were not necessary to be included in the computer model.

NATURAL CHANNELS

Many natural tributary channels convey runoff from Lake Mountain and other upland areas to Utah Lake and the Jordan River (see Figure 2-1). Where these natural channels exist, it is expected they will be preserved and will continue to be used for conveyance purposes in the Saratoga Springs storm drain system. Those natural channels that are required to be preserved as part of the drainage system have been identified in Chapter 6 (see Figure 6-1).

OPEN CHANNELS

In addition to the natural tributary channels identified above, the City uses manmade open channels in some locations to convey storm water. This includes canals and ditches as shown in Figure 2-1. While some of these ditches will eventually be replaced with pipelines, others will be maintained as part of the drainage system as will be identified in Chapter 6. In the case of ditches to be replaced, it will be important to maintain the ditches until all corresponding new facilities have been constructed and commissioned.

CHAPTER 3
HYDROLOGIC ANALYSIS

To evaluate the capacity of the Saratoga Springs storm drain system, it is necessary to perform both a hydrologic and hydraulic analysis. The hydrologic analysis estimates the storm water runoff volume and peak discharges generated by a design cloudburst event. The hydraulic analysis evaluates the capacity of storm drain facilities to convey the predicted storm water discharges through the City. The purpose of this chapter is to document the hydrologic analysis performed for Saratoga Springs.

A hydrologic computer model of the study area was developed in Autodesk Storm and Sanitary Analysis (ASSA), version 6.4. The hydrologic model development process includes delineating drainage basins, estimating hydrologic parameters, developing a design storm, and calibrating the model. Each of these steps is described below.

DRAINAGE BASIN DELINEATION

The first step in developing a computer hydrologic model is to delineate drainage basins and subbasins. This involves dividing the overall service area into smaller areas based on topography. This is done for two reasons. First, it allows each area to be analyzed on a smaller scale to evaluate land use and development patterns more accurately. Second, it yields runoff projections that are distributed aerially across the service area, an important requirement when evaluating the capacity of individual facilities.

Topographic mapping, 2011 aerial photography, and an existing storm drainage system inventory (provided by the City) were used to delineate drainage basins and subbasin boundaries in the study area. Subbasin boundaries associated with the hydrologic model are shown on Figure A-1 in Appendix A.

HYDROLOGIC MODEL PARAMETERS

The next step in developing the ASSA computer model is to define a set of hydrologic model parameters to be used for each subbasin. Hydrologic parameters represent the physical characteristics of each subbasin to be used in the calculation of potential runoff. Required hydrologic parameters will vary depending on the method of calculation selected for the model. For this study, the hydrologic calculation method is as follows:

- ***Hydrology Method.*** In the ASSA software, there are multiple options for the hydrology method, including the EPA SWMM method and HEC-1 method, among others. Many of these methodologies could be used to produce accurate results. Based on BC&A's familiarity and experience with the several methods, the HEC-1 method was used for this study.
- ***Unit Hydrograph Method.*** The SCS Unit Hydrograph was used in the hydrologic model to convert rainfall to runoff.
- ***Loss Method.*** The SCS Curve Number method was used in the ASSA model to calculate infiltration losses (see NRCS TR-55 publication for additional information). This method requires the input of a composite Curve Number and the percent impervious for each subbasin.

These methods were selected because they are commonly used by professionals in the industry and have been shown to produce accurate results in neighboring communities.

Required hydrologic parameters for this approach are as follows (see Appendix B for a documentation of computer model input parameters by subbasin):

- ***Time of Concentration/Basin Lag Time.*** Time of concentration is the time of travel from the hydraulically most remote point in the watershed to the watershed outlet. Previous studies have shown that the lag time in urban areas can be approximated as the time of concentration. For the purposes of this report, these terms can be used synonymously. Worksheet 3 in the NRCS TR-55 publication was used to estimate the time of concentration. This parameter was adjusted for existing conditions during the calibration process for some subbasins. See "Model Calibration" below for a more detailed description.
- ***Composite Curve Number.*** A Curve Number is single parameter that can be used to represent land use and soil type in an area. A composite Curve Number was estimated for each subbasin based on soil type. The hydrologic soil type was obtained from the NRCS SSURGO dataset. Table 3-1 shows the Curve Numbers used in this study based on soil type. The Curve Numbers selected are based on the SCS TR-55 publication based on natural conditions. Figure A-2 in Appendix A shows a soils map for Saratoga Springs and the surrounding area. The Curve Number was adjusted for some sights based on model calibration. See "Model Calibration" below for a more detailed description.

Table 3-1
SCS Curve Number

Soil Type	Curve Number*
A	54
B	58
C	71
D	77

*Modified values from TR-55, Brush, Fair Hydrologic Condition

- ***Directly-Connected Impervious Area.*** The amount of directly connected impervious area for existing conditions was estimated using the 2011 NAIP aerial imagery. Each subbasin was analyzed and the estimated directly connected impervious area was recorded. This includes the directly connected impervious area within each developed lot (e.g. rooftops, driveways, etc.), along with impervious area associated with roadways. The amount of directly connected impervious area was also estimated for full build-out conditions. For areas that are currently undeveloped, the Land Use Plan was used in conjunction with the values shown in Table 3-2 to estimate the imperviousness for future conditions. The values in Table 3-2 were developed based on values obtained from

analysis of existing Saratoga Springs development and past analysis completed in other similar cities.

Table 3-2
Average Imperviousness Based on Land Use

General Plan Land Use Type	Directly Connected Imperviousness (Percent)
Low Density Residential	27%
Medium Density Residential	33%
High Density Residential	60%
Commercial and Business	85%
Industrial	72%
Agriculture	15%
Road	95%
Rural Residential	15%
Planned Community	60%

DESIGN STORM PARAMETERS

With the hydrologic parameters of each subbasin defined, the next step in the modeling process is to select a design storm. The design storm defines how much precipitation falls and at what rate for a projected precipitation event. In the model, the design storm is applied to each subbasin to see how much runoff is generated from the basin during the precipitation event. The following data were used to define the design storm for this study, are commonly used by professionals in the industry, and have been shown to produce accurate results in neighboring communities:

- ***Storm Duration:*** 3 Hours
- ***Storm Distribution****:* Modified Farmer and Fletcher
- **Recurrence Interval:**
  - Storm Drain Collection System: 25-Year
  - Major Natural Channels: 100-Year
    (See Chapter 2 of definition)
- ***Storm Depth (From NOAA Atlas 14):***
  - 25-Year: 1.18 inches
  - 100-Year: 1.72 inches

MODEL CALIBRATION

The final step in the hydrologic modeling process is model calibration. In general, calibration of a hydrologic model of an urban area refers to the process of adjusting parameters to achieve results consistent with available reference information in nearby areas rather than adjusting for actual measured discharge observations in the study area.

Calibration Target Range

The rainfall-runoff model generally produces peak runoff rates that range from 0.25 cfs/ac to 0.32 cfs/ac runoff for quarter-acre subdivision lots. The calibration target range for runoff on a quarter acre subdivision lot is typically between 0.25 and 0.35 cfs/ac during a 25-year design storm. The areas of the City that produce runoff below 0.25 cfs/ac tend to have less slope than other areas of the City. These flatter areas tend to drain more slowly, have a longer time of concentration, and produce less runoff.

CN Values

In some instances, the simulated peak runoff initially exceeded the calibration range. In these instances, the CN Value for the subbasin was examined and adjusted as required by model results. These adjustments typically occurred in areas where the soil map indicated the underlying soil was Type C or D soil (CN value 79 or 84), indicating low infiltration and high runoff potential. However, once an area develops, the pervious portion of the development area is usually landscaped with sod, mulch or other materials that have higher infiltration rates and lower runoff potential. Runoff is typically only generated from the impervious area of the developed area during a 10-year storm event. Therefore, in some of these areas the CN Value was adjusted to reflect little or no runoff from the pervious area of the development.

Lag Time

As indicated above, Worksheet 3 in TR-55 was initially used to estimate the time of concentration, which is approximately equal to Lag Time in urban areas. The Lag Time was further adjusted for some subbasins during the calibration process to adjust the peak runoff to be within, or closer to, the calibration target range described above. See Appendix B for computer model input used, including lag time.

Existing Inlet Capacity Issues

The collective assumption was made that there are enough existing storm water inlets in each subbasin to collect runoff from a 25-year design storm event. Such an assumption is standard for a study at this level of detail. In areas where ponding or local flooding occurs, the inlet capacity should be evaluated and additional inlets should be added if necessary.

CHAPTER 4
HYDRAULIC ANALYSIS

As discussed in the previous chapter, evaluation of the Saratoga Springs storm drain system requires both a hydrologic and hydraulic analysis. The hydrologic analysis estimates to the storm water runoff volume and peak discharges generated by a design cloudburst event. The hydraulic analysis evaluates the capacity of storm drain facilities to convey the predicted storm water discharges through the City. The purpose of this chapter is to document the hydraulic analysis performed for Saratoga Springs.

A hydraulic computer model of the study area was developed in Autodesk Storm and Sanitary Analysis (ASSA), version 6.4. There are two major types of data required to create a hydraulic model of a storm drain system, geometric data, and flow data.

GEOMETRIC MODEL DEVELOPMENT

Geometric data consists of all information in the model needed to represent the physical characteristics of the system, including pipelines, open channels, and detention basins.

Pipes

Information on the physical characteristics of the pipes included in the model was collected and assembled by Saratoga Springs personnel, including the diameter, length, and location of each pipe to be included in the computer model. A basic framework for the model was developed using Saratoga Springs geographic information system (GIS) records.

The scope of this storm drain facilities plan included a hydraulic analysis of only the system level storm drain improvements in the City. The storm drain trunk lines included in the hydraulic model are shown in Figure 5-1. The storm drain trunk lines that were evaluated in this model were coordinated with Saratoga Springs City and generally exclude project level pipes with diameters under 18 inches and pipes that serve only a small area.

Open Channels

The open channels identified on Figure 5-1 are based on data shown on USGS Quadrangle maps and input from Saratoga Springs City personnel. Estimates of channel slope were made based on the 5-meter autocorrelated DEM provided by the State of Utah's Automated Geographic Reference Center (AGRC). There was no detailed survey of the open channels for this study, so the exact capacity of the channels at all locations was not calculated. The actual channel capacity and improvements to each channel will need to be evaluated during the development planning process in those areas.

Detention Basins

Saratoga Springs personnel provided outlet size, orifice size (if one exists), and a Digital Elevation Model (DEM) for each the detention basin modeled. See Chapter 2 for list of the

existing detention basins modeled. Future detention basins were modeled in ASSA using a design stage-storage curve and an outlet that released the design flow rate.

FLOW MODEL DEVELOPMENT

The second type of data required by the hydraulic model is storm drain runoff. Hydrologic parameters were estimated and a design storm was developed as described in Chapter 3. Subbasin runoff was applied to the hydraulic system near the upstream side of the drainage area.

CHAPTER 5
SYSTEM EVALUATION

With the development and calibration of hydrologic and hydraulic storm drain models, it is possible to simulate storm drain system operating conditions for both present and future conditions. The purpose of this chapter is to document the hydraulic performance of the collection system and identify potential hydraulic deficiencies.

EVALUATION CRITERIA AND LEVEL OF SERVICE

To evaluate the performance of the system, it is necessary to first define the required level of service for the various components of the system. There is no minimum State standard for storm drain as there are with other utilities. Every city desires to protect their residents and infrastructure from flooding and attempts to balance the cost of storm drainage improvements with the amount of flow in the streets. The evaluation criteria for this study were provided by Saratoga City personnel at the beginning of this study and were documented below. The level of service provided by Saratoga City is consistent with the level of service provided by neighboring cities.

Allowable Runoff

Current City policy requires that runoff from developed properties not exceed 0.2 cfs/acre or the historical runoff for pre-development conditions. For planning purposes, this report considers flows at 0.2 cfs/acre for most areas of the City, but limits runoff to the lower historical flows for drainage basins associated with Tickville Gulch and the two unnamed drainages above the City north of Cedar Fort Road. These drainage basins are limited to historical flows because conveying anything above historical would be impractical given the size of these larger drainage basins.

Storm Drain Pipelines

Storm drain pipelines are generally designed to convey the 25-year storm event with a depth to diameter ratio of no greater than 0.80. Storm drain pipes are also not to be smaller than 15 inches in diameter. In the event that storm water discharge is greater than the 25-year event, the pipes will pressurize and eventually flood in the streets. It is important to note that roadways become the major storm water conveyance facility during storms that are larger than the 25-year design event, and should be designed to convey flows up to the 100-year event.

The exception to this is for pipelines that convey drainage from Lake Mountain or any other upland areas. In these cases, the pipelines will be designed to convey the 100-year storm event.

Open Channels

All open channels should be designed to convey the 100-year event with at least 2 feet of freeboard. This includes all manmade channel and enhancements to natural channel if required. Open channels should have adequate erosion protection. If velocities are less than 4 feet per

second (ft/s), the channel may be grass lined. However, if the peak velocity in a channel is over 4 ft/s, then grass will not be sufficient to protect the channel from erosion damage and armoring will be required. Open channel design should consider maintenance and safety issues.

Culverts

All culverts on reaches of open channel should be designed to convey the 100-year event with at least 18-inches of freeboard at the culvert opening.

Detention Basins

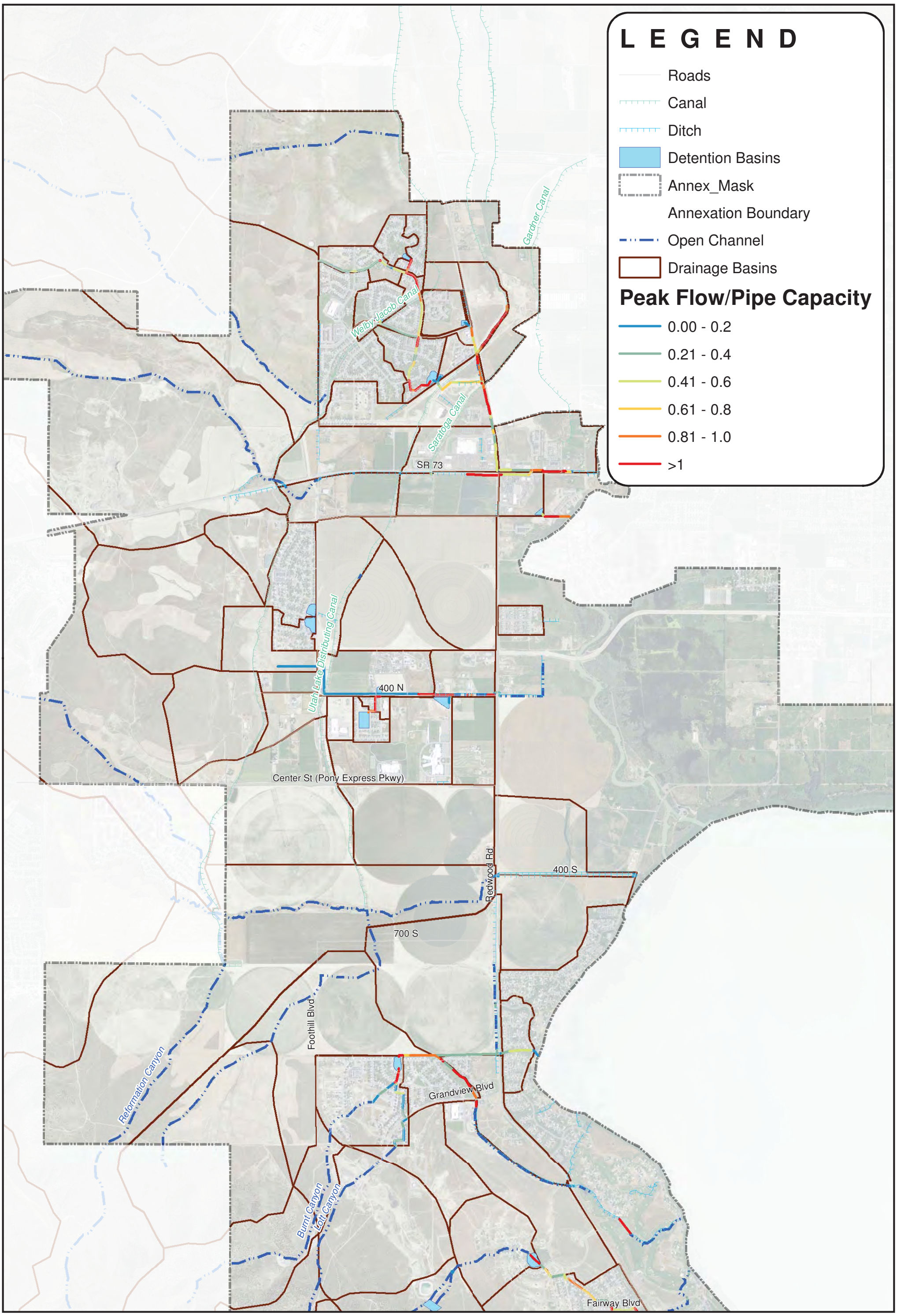
Detention facilities need to have capacity for the design storm (see Chapter 3 "Design Storm Parameters") with at least one foot of freeboard, and have an emergency overflow that directs water toward secondary conveyance facilities, such as a right-of-way or open channel, and away from private property and areas of potential property damage. Release rates for local detention basins need to be limited to 0.2 cfs/acre or the historic runoff for pre-development conditions as discussed above. Release rates for regional detention basins will be optimized to minimize cost between improvements at the detention basins and downstream conveyance facilities.

EXISTING CONVEYANCE SYSTEM ANALYSIS

Figure 5-1 shows the model results for the Saratoga Springs storm drain system under existing development conditions. Model results are shown in terms of the ratio of flow in each pipeline during the design storm event to the capacity of the existing storm drain system. As can be seen in the figure, most of the existing storm drain facilities in the City are adequate to meet projected flows. There are only a small number of facilities that do not meet the recommended level of service based on model results.

FUTURE CONVEYANCE SYSTEM ANALYSIS

With the additional growth projected for Saratoga Springs, it is expected that a number of projects will need to be constructed to meet build-out conditions in the City. Where existing facilities exist, much of the new growth can be accommodated through excess available capacity. In a few areas, some existing pipelines and detention basins will need to be replaced or modified. Where facilities do not currently exist, additional new pipelines and detention basins will need to be constructed to service new growth. Because of the extent of the improvements required to meet future growth, discussion of these improvements has been divided into a separate section. Chapter 6 discusses conceptual improvements that will be needed to continue to serve growth in Saratoga Springs.



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SARATOGA SPRINGS
STORM DRAIN CAPITAL FACILITIES PLAN

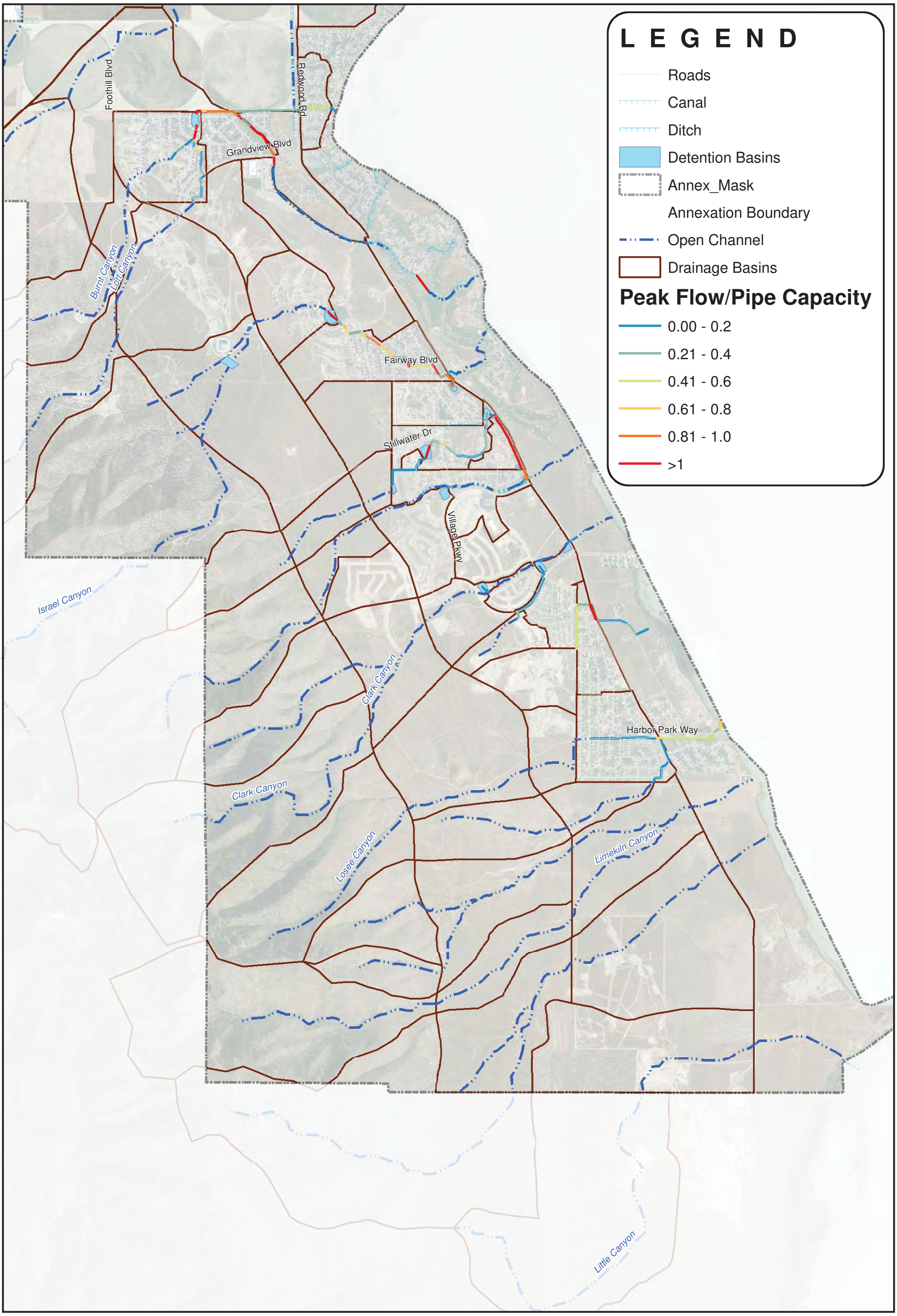
EXISTING STORM DRAIN SYSTEM CAPACITY

NORTH:

SCALE: 0 1,250 2,500 Feet

FIGURE NO. 5-1A

P:\Saratoga Springs\2011 Capital and Impact Fee Facilities Plans\4.0 GIS\4.1 Projects\StormMaps\Figure 5-1 - Existing Deficiencies.mxd nwright 1/5/2015



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SARATOGA SPRINGS
STORM DRAIN CAPITAL FACILITIES PLAN

EXISTING STORM DRAIN SYSTEM CAPACITY

NORTH:

SCALE: 0 1,250 2,500 Feet

FIGURE NO. 5-1B

P:\Saratoga Springs\2011 Capital and Impact Fee Facilities Plans\4.0 GIS\4.1 Projects\StormMaps\Figure 5-1 - Existing Deficiencies.mxd nwright 1/5/2015

CHAPTER 6
BUILDOUT SYSTEM IMPROVEMENTS

The hydraulic model was used to evaluate various alternatives for correcting the identified deficiencies under projected future conditions. Saratoga Springs personnel considered previous master plan alternatives and new alternatives proposed as part of this facilities plan and selected a preferred conveyance option. This chapter documents the preferred conveyance option based on the most cost effective approach to meet the required level of service. Proposed sizes for pipes have been included based on estimated runoff and pipe slopes. Final sizing will need to be verified as part of final design for each individual project. Proposed size and discharge rate of detention basins have been based on minimizing the total cost of improvements.

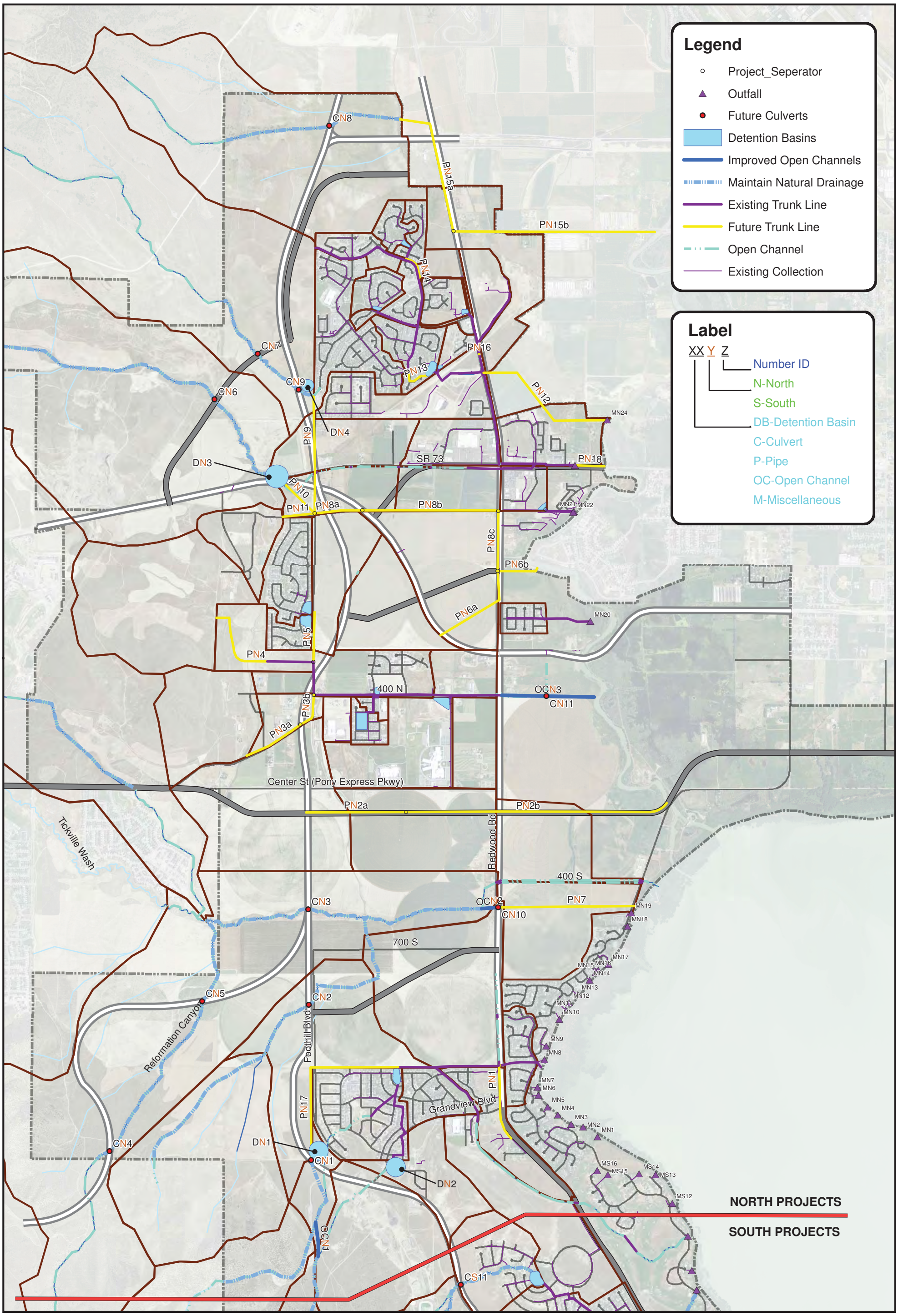
RECOMMENDED IMPROVEMENTS

Figure 6-1 shows the location of improvements required to meet future growth in Saratoga Springs. For organization purposes, each project has been given a unique project identifier. The project identifier is broken up into three parts: XXYZ. The first part, XX, indicates the type of project where:

- "D" is for detention basins
- "C" is for culvert
- "P" is for pipe
- "OC" is for open channel
- "M" is for miscellaneous projects

The middle part, Y, indicates if the project is located in the north (i.e. "N") or in the south (i.e. "S"). This has been done for the reader's convenience in locating the projects. There are no separate "north" and "south' service areas for the purpose of impact fees or otherwise. The last part, Z, is a number identifier. Thus "PN2" is a pipe, in the north with a number identifier of 2.

Table 6-1 summarizes all of the projects in alphabetical order by project number. This table also includes a brief description of each project. The same projects are presented in order of priority in Tables 6-2 through 6-4. These tables include project cost in 2014 dollars and the estimated timing of construction. Table 6-2 includes short-term projects (next 10 years), Table 6-3 includes intermediate projects (11 to 20 years), and Table 6-4 includes long-term projects (beyond 20 years). Detailed information on the cost estimates is located in Appendix C.



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SARATOGA SPRINGS
STORM DRAIN CAPITAL FACILITIES PLAN

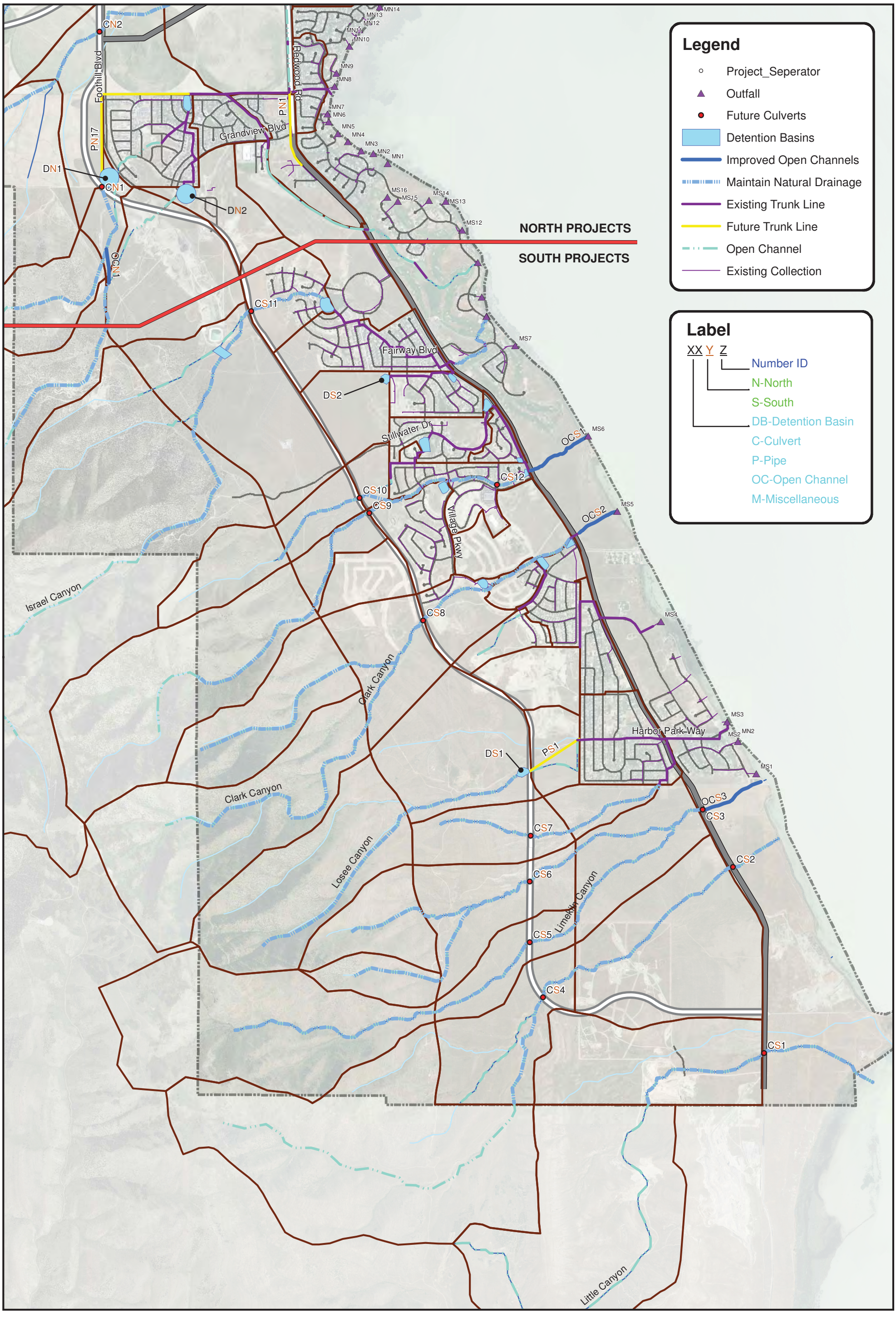
PROPOSED STORM DRAIN PROJECTS

NORTH:

SCALE: 0 625 1,250 2,500 Feet

FIGURE NO. 6-1A

P:\Saratoga Springs\2011 Capital and Impact Fee Facilities Plans\4.0 GIS\4.1 Projects\StormMaps\Figure 6-1 - Proposed Projects.mxd nwright 1/5/2015



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SARATOGA SPRINGS
STORM DRAIN CAPITAL FACILITIES PLAN

PROPOSED STORM DRAIN PROJECTS

NORTH:

SCALE: 0 625 1,250 2,500 Feet

FIGURE NO. 6-1B

P:\Saratoga Springs\2011 Capital and Impact Fee Facilities Plans\4.0 GIS\4.1 Projects\StormMaps\Figure 6-1 - Proposed Projects.mxd nwright 1/5/2015

Table 6-1
Capital Facility Plan – Projects with Short Description

Project Identifier	Project Name	Description	Design Flow/ Discharge Rate (cfs)	Design Volume (Acre-ft)
CN1	Foothill Blvd 5	Install culvert under future Foothill Blvd.	138	-
CN2	Foothill Blvd 6	Install culvert under future Foothill Blvd.	115	-
CN3	Foothill Blvd & Tickville Wash	Install culvert under future Foothill Blvd.	888	-
CN4	Mountain View Corridor 1	Install culvert under future Mountain View Corridor	394	-
CN5	Mountain View Corridor 2	Install culvert under future Mountain View Corridor	394	-
CN6	Saratoga Parkway 1	Install culvert under future Saratoga Parkway	599	-
CN7	Saratoga Parkway 2	Install culvert under future Saratoga Parkway	203	-
CN8	Mountain View Corridor 3	Install culvert under future Mountain View Corridor	343	-
CN9	Mountain View Corridor 4	Install culvert under future Mountain View Corridor	203	-
CN10	Tickville Gulch Redwood Rd	Upsize existing culvert at Redwood Road	967	-
CN11	400 North and Riverside Drive	Install new culvert under future Riverside Drive	197	-
CS1	Redwood Road & Little Canyon	Upsize existing culvert at Redwood Road	395	-
CS2	Redwood Road & Olaf Canyon	Upsize existing culvert at Redwood Road	241	-
CS3	Redwood Road & Limekiln Canyon	Upsize existing culvert at Redwood Road	197	-
CS4	Bonneville Dr. & Olaf Canyon	Install culvert under future Bonneville Dr.	154	-
CS5	Bonneville Dr. & Limekiln Canyon	Install culvert under future Bonneville Dr.	64	-
CS6	Foothill Blvd. 1	Install culvert under future Foothill Blvd.	122	-
CS7	Foothill Blvd. 2	Install culvert under future Foothill Blvd.	31	-
CS8	Foothill Blvd & Clark Canyon	Install culvert under future Foothill Blvd.	90	-
CS9	Foothill Blvd 3	Install culvert under future Foothill Blvd.	49	-
CS10	Foothill Blvd 4	Install culvert under future Foothill Blvd.	36	-
CS11	Foothill Blvd & Israel Canyon	Install culvert under future Foothill Blvd.	131	-
CS12	Village Court Rd.	Install Culvert at Road crossings	125	-

Project Identifier	Project Name	Description	Design Flow/ Discharge Rate (cfs)	Design Volume (Acre-ft)
DN1	Clay Pit 1	New Pond (will replace detention function currently accomplished by clay pit).	16	12.1
DN2	Clay Pit 2	New Pond (will replace detention function currently accomplished by clay pit).	20	15.0
DN3	Mountain View Corridor 1	New Pond to detain flow to rates that can be conveyed in downstream system with limited capacity.	84	34.3
DN4	Mountain View Corridor 2	New Pond to detain flow to rates that can be conveyed in downstream system with limited capacity.	13	29.7
DS1	Harbor Park Way	New Pond to detain to limit flow to capacity of existing pipe	11	8.5
DS2	Colt Drive	New Pond to detain to limit flow to capacity of existing pipe	15	2.8
M1	Pollution Control Outfall Treatment	New treatment devices to be added at all City outfalls		-
OCN1	Clay Pit Reroute	New channel to redirect flows to DN1	80	-
OCN2	Tickville Gulch	New channel to redirect flows to new pipe outfall	967	-
OCN3	400 North East of Redwood	Improve existing channel to convey 400 North drainage to Jordan River	197	-
OCS1	Village Parkway & Redwood Road	Improve existing channel to Utah Lake	121	-
OCS2	Clark Canyon	Improve existing channel to Utah Lake	157	-
OCS3	Limekiln Canyon	Improve existing channel to Utah Lake	196	-
PN1	Redwood Rd. Near Grandview Blvd	New 30" pipe along Redwood Road to convey flows to existing outfall to the north.	30	-
PN2a	Pony Express 1	New 42" pipe along Pony Express Prkwy	70	-
PN2b	Pony Express 2	New 48" pipe along Pony Express Prkwy	116	-
PN3a	Fairfield Road	New 24" pipe for future development	28	-
PN3b	800 West (Fairfield to 400 N)	New 30" pipe for future development	36	-
PN4	Talus Ridge Phase 2	New 36" pipe for future development	76	-

Project Identifier	Project Name	Description	Design Flow/ Discharge Rate (cfs)	Design Volume (Acre-ft)
PN5	800 W (Sunrise Mdws to 400 N)	New 24" pipe to redirect flow from Sunrise Meadows to 400 North outfall	12	-
PN6a	Pioneer Crossing to Market St.	New 24" pipe for future development	25	-
PN6b	Market St. Outfall	New 54" pipe to provide added outfall to Jordan River	172	-
PN7	Tickville Gulch	New 96" Pipe to reestablish Tickville Outfall to Utah Lake	967	-
PN8a	1200 North 1	New 42" pipe to reestablish outfall from northwest	110	-
PN8b	1200 North 2	New 42" pipe to reestablish outfall from northwest	117	-
PN8c	Redwood Rd. (1200 N to Market)	New 48" pipe to reestablish outfall from northwest	123	-
PN9	800 West (DN4 to 1200 N)	New 24" pipe to reestablish outfall from northwest	13	-
PN10	Pioneer Crossing (DN3 to 1200 N)	New 36" pipe to reestablish outfall from northwest	84	-
PN11	1200 North 3	New 18" pipe for future development	8	-
PN12	Harvest Hills to Jordan River 1	New 30" pipe to provide additional outfall to Jordan River	35	-
PN13	Harvest Moon Dr. 1	Upsize 30" to 48" pipe or parallel pipe for to eliminate bottleneck in existing system	148	-
PN14	Harvest Moon Dr. 2	Parallel 24" pipe in sag area	11 (18)	-
PN15a	Redwood Road (to 1500 N)	New 30" pipe to provide additional outfall to Jordan River	25	-
PN15b	1500 North (Redwood to Jordan River)	New 30" pipe to provide additional outfall to Jordan River	59	-
PN16	1900 North/Redwood Rd	Connect end of existing 24" pipe into existing parallel pipe	21 (32)	-
PN17	Meadow Crest Bypass	New 18" pipe to convey flows from basin to existing outfall	11	-
PN18	SR-73	New 36" pipe to complete outfall to Jordan River	52	-
PS1	Harbor Parkway	New 18" pipe to connect new basin to existing pipe	17	-

Table 6-2
Capital Facility Plan and Estimated Costs – Short-Term Projects

Project Identifier	Project Name	Design Flow/ Discharge Rate (cfs)	Design Volume (Acre-ft)	Construction Year	Total Estimated Cost
CN11	400 North and Riverside Drive	197	-	2015	$110,000
OCN2	Tickville Gulch	967	-	2015	$49,270
OCN3	400 North East of Redwood	197	-	2015	$182,930
PN13	Harvest Moon Dr. 1	148	-	2015	$306,900
PN4	Talus Ridge Phase 2	76	-	2015	$649,800
PN5	800 West (Sunrise Mdws to 400 N)	12	-	2015	$287,800
PN7	Tickville Gulch	967	-	2015	$2,200,000
CN10	Tickville Gulch Redwood Rd	967	-	2016	$150,000
DS1	Harbor Park Way	11	8.5	2016	$1,109,500
OCS1	Village Parkway & Redwood Road	121	-	2016	$33,620
PN6a	Pioneer Crossing to Market St.	25	-	2016	$562,200
PN6b	Market St. Outfall	172	-	2016	$453,300
PS1	Harbor Parkway	17	-	2016	$212,000
OCS2	Clark Canyon	157	-	2017	$21,340
PN12	Harvest Hills to Jordan River 1	35	-	2017	$851,300
PN14	Harvest Moon Dr. 2	11 (18)	-	2017	$148,900
PN18	SR-73	52	-	2017	$163,000
OCS3	Limekiln Canyon	196	-	2018	$32,160
CS3	Redwood Road & Limekiln Canyon	197	-	2019	$110,000
PN16	1900 North/Redwood Rd	21 (32)	-	2019	$11,600
CS12	Village Court Rd.	125	-	2020	$110,000
PN1	Redwood Rd. Near Grandview Blvd	30	-	2020	$505,100
M1	Pollution Control Outfall Treatment	-	-	2015+	$120,000
Total					**$8,134,620**

Table 6-3
Capital Facility Plan and Estimated Costs – Intermediate Projects

Project Identifier	Project Name	Design Flow/ Discharge Rate (cfs)	Design Volume (Acre-ft)	Construction Year	Total Estimated Cost
CN1	Foothill Blvd 5	138	-	10-20	$110,000
CN6	Saratoga Parkway 1	599	-	10-20	$150,000
CN7	Saratoga Parkway 2	203	-	10-20	$110,000
CN8	Mountain View Corridor 3	343	-	10-20	$110,000
CN9	Mountain View Corridor 4	203	-	10-20	$110,000
CS9	Foothill Blvd 3	49	-	10-20	$72,000
CS10	Foothill Blvd 4	36	-	10-20	$72,000
CS11	Foothill Blvd & Israel Canyon	131	-	10-20	$110,000
CS8	Foothill Blvd & Clark Canyon	90	-	10-20	$72,000
DN1	Clay Pit 1	16	12.1	10-20	$1,177,200
DN2	Clay Pit 2	20	15.0	10-20	$1,449,800
DN3	Mountain View Corridor 1	84	34.3	10-20	$2,912,300
DN4	Mountain View Corridor 2	13	29.7	10-20	$2,527,000
DS2	Colt Drive	15	2.8	10-20	$379,300
OCN1	Clay Pit Reroute	80	-	10-20	$11,380
PN10	Pioneer Crossing (DN3 to 1200 N)	84	-	10-20	$265,600
PN11	1200 North 3	8	-	10-20	$139,100
PN15a	Redwood Road (to 1500 N)	25	-	10-20	$931,600
PN15b	1500 North (Redwood to Jordan River)	59	-	10-20	$1,291,100
PN17	Meadow Crest Bypass	11	-	10-20	$667,100
PN2a	Pony Express 1	70	-	10-20	$659,800
PN2b	Pony Express 2	116	-	10-20	$2,178,400
PN3a	Fairfield Road	28	-	10-20	$356,100
PN3b	800 West (Fairfield to 400 N)	36	-	10-20	$291,700
PN8a	1200 North 1	110	-	10-20	$325,400
PN8b	1200 North 2	117	-	10-20	$926,800
PN8c	Redwood Rd. (1200 N to Market)	123	-	10-20	$493,600
PN9	800 West (DN4 to 1200 N)	13	-	10-20	$680,800
M1	Pollution Control Outfall Treatment	-	-	2015+	$750,000
Total					**$19,330,080**

Table 6-4
Capital Facility Plan and Estimated Costs – Long-Term Projects

Project Identifier	Project Name	Design Flow/ Discharge Rate (cfs)	Design Volume (Acre-ft)	Construction Year	Total Estimated Cost
CN2	Foothill Blvd 6	115	-	20+	$110,000
CN3	Foothill Blvd & Tickville Wash	888	-	20+	$150,000
CN4	Mountain View Corridor 1	394	-	20+	$110,000
CN5	Mountain View Corridor 2	394	-	20+	$110,000
CS1	Redwood Road & Little Canyon	395	-	20+	$110,000
CS2	Redwood Road & Olaf Canyon	241	-	20+	$110,000
CS4	Bonneville Dr. & Olaf Canyon	154	-	20+	$110,000
CS5	Bonneville Dr. & Limekiln Canyon	64	-	20+	$72,000
CS6	Foothill Blvd. 1	122	-	20+	$110,000
CS7	Foothill Blvd. 2	31	-	20+	$72,000
M1	Pollution Control Outfall Treatment	-	-	2015+	$750,000
Total					**$1,814,000**

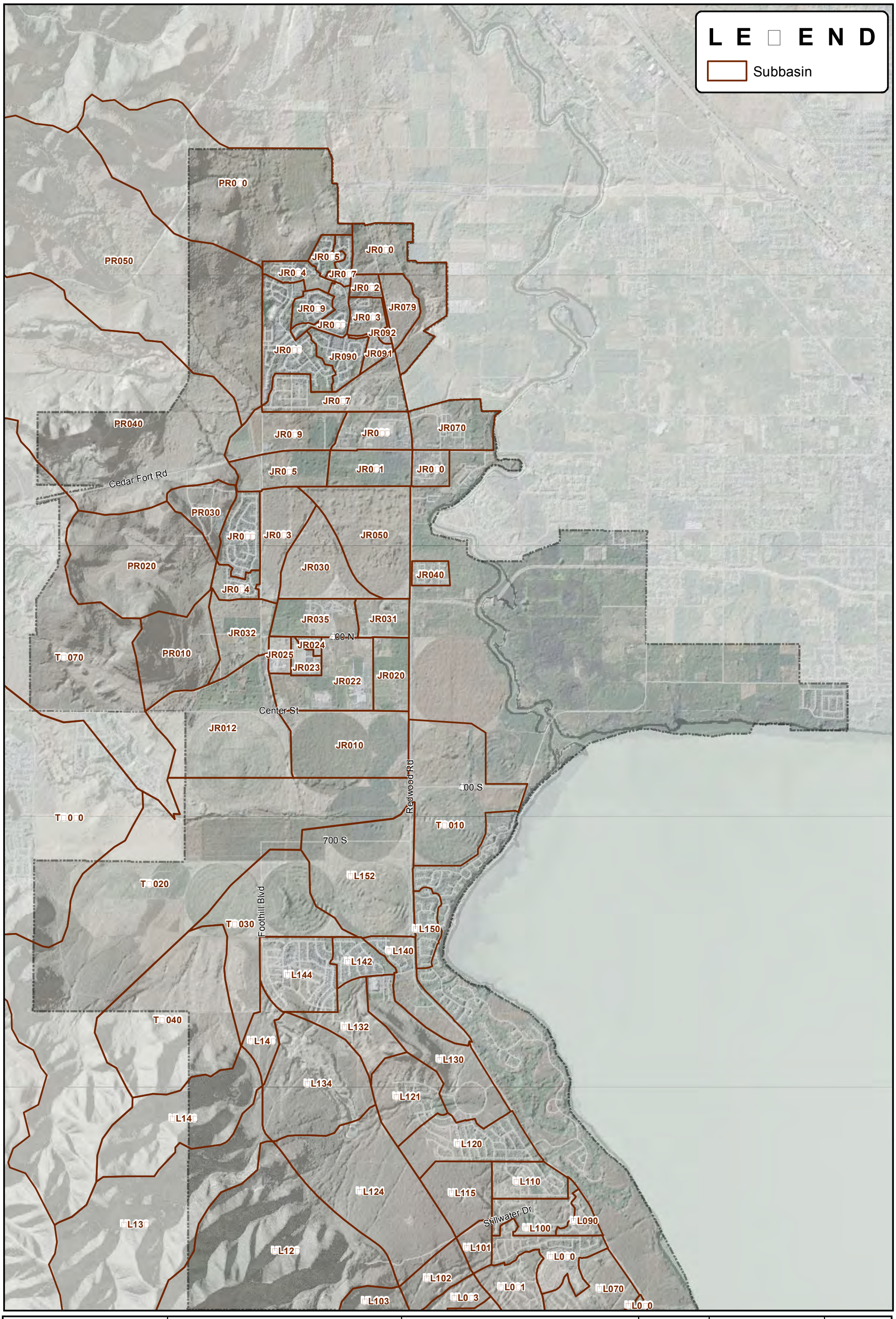
It should be noted that, outside of a few projects associated with existing deficiencies in the short-term window, development will be the primary motivation for these projects. As a result, the timing of projects beyond the short-term window may be expedited or deferred depending on the timing and location of future development.

OPERATIONAL MODIFICATIONS

During the modeling process there were a few locations where recommended changes in operational activities were identified. While these changes will not likely require any significant capital investment, they are an important part of the system's overall performance and should be implemented in the field in the near future. Operational changes are primarily associated with allowable outflow on existing detention basins. The following list shows the location and operational change that should be made. These updates may require physically changing the orifice plate at a basin or may simply require adjustment of control gates depending on how each basin was constructed.

- D3 (610 W & 335 N) – Upsize Orifice from 5" to 12"
- D12 (Pondside Dr. & Meadowcrest Way) – Upsize Orifice from 8" to 18"
- D1 (200 W & 400 N) – Downsize Orifice from 24" to 21"
- D15 (Summerhill Dr. & Stillwater Dr.) – Downsize Orifice from 15" to 8"
- D21 (Weatherby Dr. & Ring Rd.) – Downsize Orifice from 48" to 30"

APPENDIX A
HYDROLOGIC DATA



Bowen Collins & Associates, Inc.
CONSULTING ENGINEERS

SARATOGA SPRINGS
STORM DRAIN CAPITAL FACILITIES PLAN

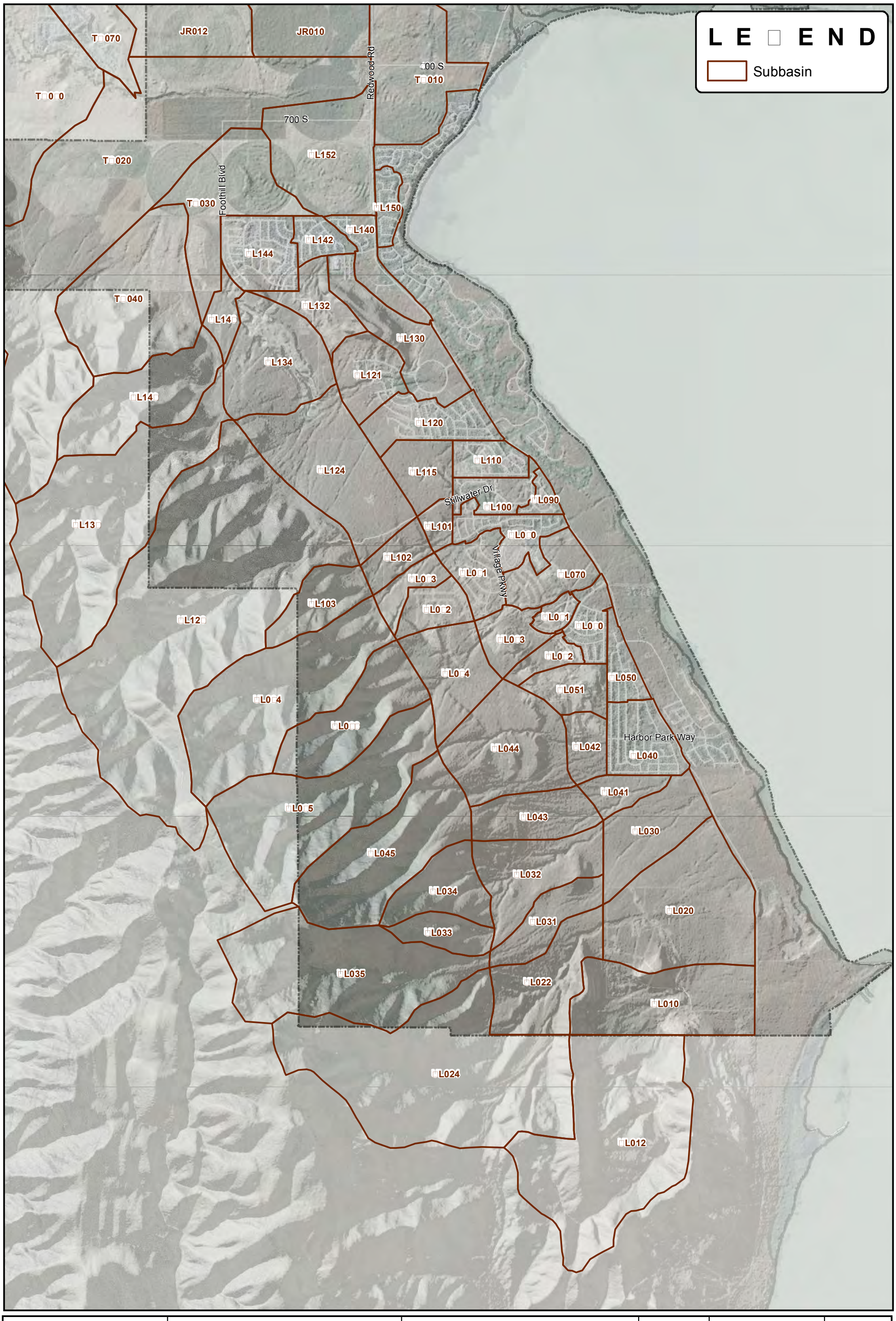
SUBBASIN BOUNDARIES

NORTH:

SCALE: 0 1,500 3,000

FIGURE NO.
A-1A

P:\Saratoga Springs\2011 Capital and Impact Fee Facilities Plans\0 GIS\1 Projects\StormMaps\Figure 3-1 - Drainage Basins.mxd mstayner 10/16/2012



Bowen Collins & Associates, Inc.
CONSULTING ENGINEERS

SARATOGA SPRINGS
STORM DRAIN CAPITAL FACILITIES PLAN

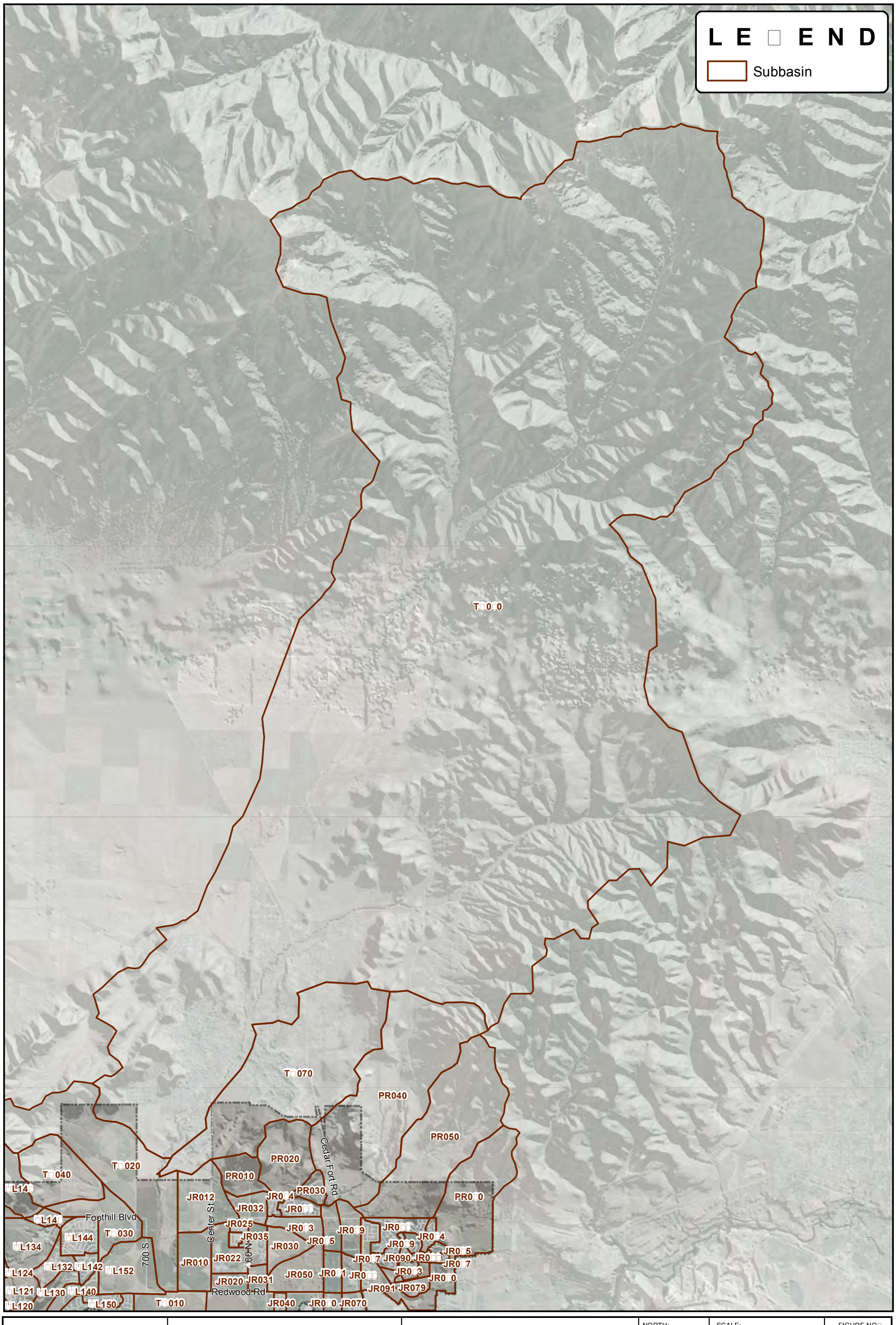
SUBBASIN BOUNDARIES

NORTH:

SCALE: 0 1:500 3:000

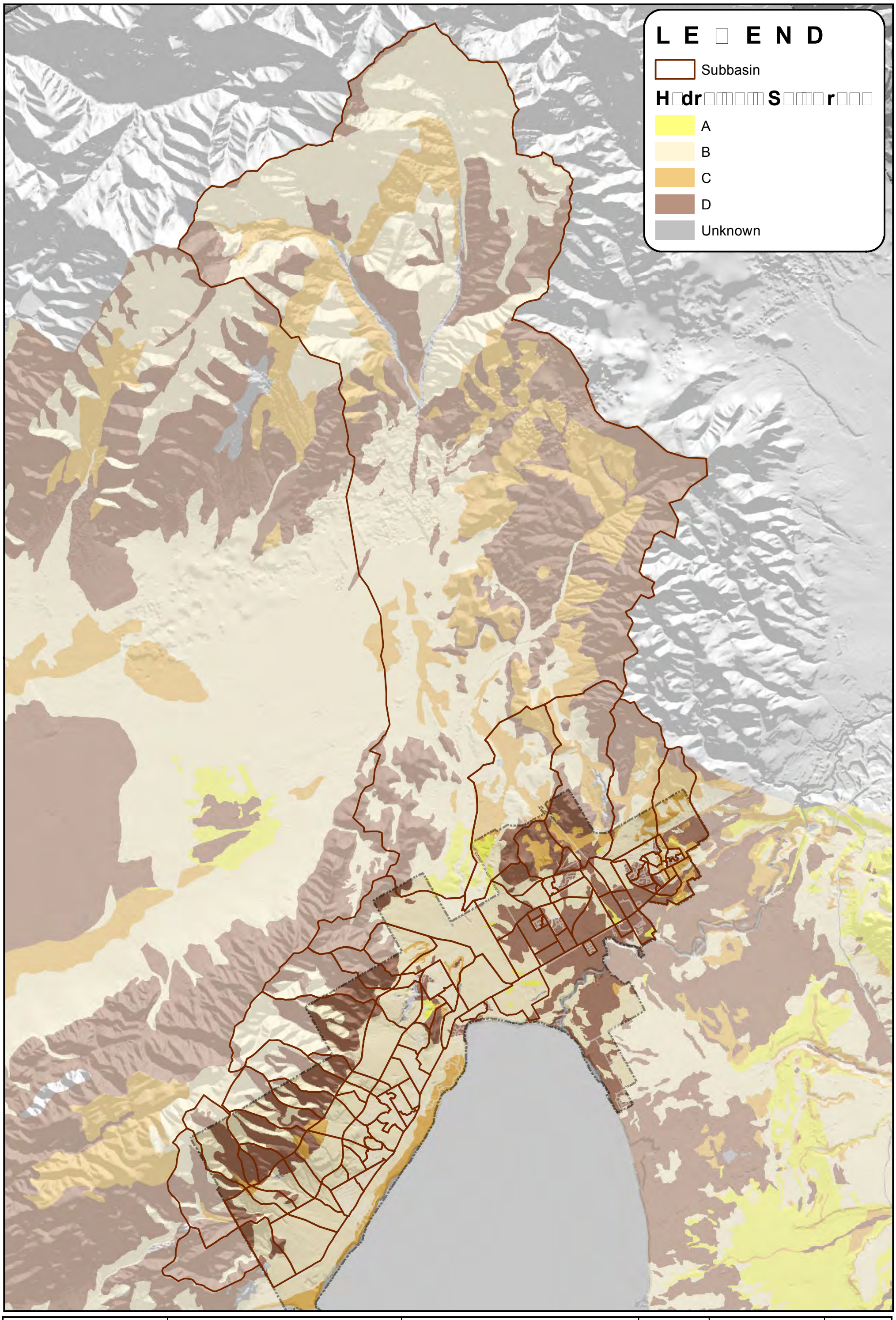
FIGURE NO.
A-1B

P:\Saratoga Springs\2011 Capital and Impact Fee Facilities Plans\0 GIS\1 Projects\StormMaps\Figure 3-1 - Drainage Basins.mxd mstayner 10/16/2012



Bowen Collins & Associates, Inc. CONSULTING ENGINEERS	SARATOGA SPRINGS STORM DRAIN CAPITAL FACILITIES PLAN	SUBBASIN BOUNDARIES	NORTH: NORTH	SCALE: 0 3□000 □000	FIGURE NO□ A-1C

P:□Saratoga Springs□2011 Capital and Impact Fee Facilities Plans□□0 GIS□□1 Projects□StormMaps□Figure 3-1 - Drainage Basins□m□d mstayner 10□16□2012



Bowen Collins & Associates, Inc.
CONSULTING ENGINEERS

SARATOGA SPRINGS
STORM DRAIN CAPITAL FACILITIES PLAN

HYDROLOGIC SOIL GROUP

NORTH:

SCALE:
0 4,000 8,000

FIGURE NO.
A-2

P:\Saratoga Springs\2011 Capital and Impact Fee Facilities Plans\10 GIS\1 Projects\StormMaps\Figure 3-2 - Soil.mxd mstayner 10/16/2012

APPENDIX B
ASSA INPUT AND OUTPUT

EXISTING CONDITION
25-YEAR STORM

Project Description

File Name ..... SaratogaStormExisting.SPF

Project Options

Flow Units ..... CFS
Elevation Type ..... Elevation
Hydrology Method HEC-1
HEC-1 unit hydrograph method ..... SCS Dimensionless
HEC-1 loss method ..... SCS Curve Number
Link Routing Method ..... Hydrodynamic
Enable Overflow Ponding at Nodes ..... YES
Skip Steady State Analysis Time Periods ... NO

Analysis Options

Start Analysis On ..... Jan 01, 2012 00:00:00
End Analysis On ..... Jan 01, 2012 07:00:00
Start Reporting On ..... Jan 01, 2012 00:00:00
Antecedent Dry Days ..... 0 days
Runoff (Dry Weather) Time Step ..... 0 01:00:00 days hh:mm:ss
Runoff (Wet Weather) Time Step ..... 0 00:05:00 days hh:mm:ss
Reporting Time Step ..... 0 00:05:00 days hh:mm:ss
Routing Time Step ..... 30 seconds

Number of Elements

	Qty
Rain Gages	6
Subbasins	95
Nodes	520
Junctions	476
Outfalls	20
Flow Diversions	0
Inlets	0
Storage Nodes	24
Links	512
Channels	129
Pipes	360
Pumps	0
Orifices	23
Weirs	0
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	100-Year	Time Series	TS-100yr	Cumulative	inches				0.00	
2	10-Year	Time Series	TS-10yr	Cumulative	inches				0.00	
3	25Year	Time Series	TS-25yr	Cumulative	inches				0.00	
4	2yr	Time Series	2 Yr	Cumulative	inches				0.00	
5	50YR	Time Series	50 YR	Cumulative	inches				0.00	
6	5yr	Time Series	5 Yr	Cumulative	inches				0.00	

Subbasin Summary

SN	Subbasin ID	Area (ac)	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)
1	JR010	263.79	1.03	0.00	0.00	0.00
2	JR012	409.49	1.03	0.02	8.60	8.03
3	JR020	75.12	1.03	0.05	3.38	2.26
4	JR022	159.04	1.03	0.21	33.72	26.45
5	JR023	24.06	1.03	0.25	5.99	7.41
6	JR024	9.50	1.03	0.56	5.32	8.04
7	JR025	23.83	1.03	0.85	20.33	35.89
8	JR030	252.83	1.03	0.08	19.22	13.52
9	JR032	111.91	1.03	0.07	8.06	9.61
10	JR040	26.23	1.03	0.44	11.65	16.26
11	JR050	262.24	1.03	0.01	2.62	1.40
12	JR060	127.06	1.03	0.20	25.79	19.47
13	JR062	437.08	1.03	0.13	55.51	58.47
14	JR063	120.38	1.03	0.05	6.14	9.22
15	JR064	37.13	1.03	0.20	7.28	11.18
16	JR066	82.30	1.03	0.29	23.78	29.71
17	JR070	109.91	1.03	0.21	23.41	25.48
18	JR080	20.40	1.03	0.02	0.43	0.33
19	JR082	135.24	1.03	0.14	18.53	15.12
20	JR083	36.82	1.03	0.28	10.13	13.96
21	JR084	37.71	1.03	0.14	5.09	7.15
22	JR085	25.52	1.03	0.34	8.68	13.71
23	JR086	138.78	1.03	0.37	51.49	72.90
24	JR087	23.81	1.03	0.38	8.98	15.26
25	JR088	37.93	1.03	0.37	14.07	21.85
26	JR089	33.28	1.03	0.21	6.86	10.83
27	JR090	58.55	1.03	0.31	18.21	25.44
28	JR091	18.12	1.03	0.29	5.22	5.26
29	JR092	8.80	1.03	0.74	6.51	9.93
30	PR010	237.16	1.03	0.00	0.00	0.00
31	PR020	390.78	1.03	0.03	10.94	6.78
32	PR030	78.69	1.03	0.03	2.20	1.72
33	PR040	2000.99	1.03	0.01	20.01	8.09
34	PR050	1368.43	1.03	0.01	8.21	4.02
35	PR060	735.89	1.03	0.01	4.42	2.39
36	SS-MN-2	16.92	1.03	0.40	6.78	9.92
37	TG010	327.98	1.03	0.01	3.28	2.92
38	TG020	1440.19	1.03	0.00	0.00	0.00
39	TG030	306.05	1.03	0.00	0.00	0.00
40	TG040	466.81	1.03	0.00	0.00	0.16
41	TG060	40567.11	1.03	0.01	365.10	91.40
42	TG070	2141.56	1.03	0.07	154.19	69.18
43	UL010	358.46	1.03	0.00	0.00	0.00
44	UL012	765.62	1.03	0.05	34.45	17.67
45	UL020	470.76	1.03	0.04	19.30	19.11
46	UL022	242.19	1.03	0.00	0.00	0.00
47	UL024	933.42	1.03	0.01	9.33	4.28
48	UL030	205.10	1.03	0.00	0.00	0.00
49	UL031	123.80	1.03	0.00	0.00	0.00
50	UL032	233.02	1.03	0.00	0.00	0.00
51	UL033	88.85	1.03	0.05	4.00	3.31

Subbasin Summary

SN	Subbasin ID	Area (ac)	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)
52	UL034	156.46	1.03	0.05	7.04	5.94
53	UL035	586.06	1.03	0.00	0.00	0.19
54	UL040	143.49	1.03	0.30	42.90	64.99
55	UL041	67.25	1.03	0.00	0.00	0.00
56	UL042	76.37	1.03	0.00	0.00	0.00
57	UL043	157.01	1.03	0.00	0.00	0.00
58	UL044	321.32	1.03	0.00	0.00	0.00
59	UL045	422.26	1.03	0.00	1.69	1.00
60	UL050	65.15	1.03	0.24	15.44	23.40
61	UL051	97.15	1.03	0.00	0.00	0.00
62	UL060	78.53	1.03	0.29	22.62	34.34
63	UL061	33.56	1.03	0.13	4.50	7.90
64	UL062	51.61	1.03	0.10	5.32	7.52
65	UL063	92.95	1.03	0.04	3.81	5.15
66	UL064	191.89	1.03	0.00	0.00	0.00
67	UL065	557.40	1.03	0.00	0.00	0.00
68	UL066	262.96	1.03	0.01	1.58	0.91
69	UL070	127.05	1.03	0.04	5.21	6.16
70	UL080	115.43	1.03	0.14	16.62	22.65
71	UL081	107.65	1.03	0.18	18.84	31.75
72	UL082	84.13	1.03	0.06	5.22	8.01
73	UL083	63.50	1.03	0.00	0.00	0.00
74	UL084	562.59	1.03	0.00	0.00	0.18
75	UL090	29.46	1.03	0.18	5.16	8.14
76	UL100	79.57	1.03	0.20	15.60	23.61
77	UL101	37.57	1.03	0.00	0.00	0.00
78	UL102	74.54	1.03	0.00	0.00	0.00
79	UL103	130.47	1.03	0.01	1.30	0.83
80	UL110	186.08	1.03	0.10	19.17	27.15
81	UL120	153.99	1.03	0.24	36.50	55.31
82	UL121	131.78	1.03	0.09	12.26	16.62
83	UL124	406.97	1.03	0.00	0.00	0.00
84	UL126	1502.76	1.03	0.00	0.00	0.00
85	UL130	199.88	1.03	0.09	18.59	21.80
86	UL132	110.79	1.03	0.04	4.54	6.05
87	UL134	292.08	1.03	0.04	11.98	13.27
88	UL136	740.74	1.03	0.01	7.41	3.19
89	UL140	102.56	1.03	0.20	20.10	23.91
90	UL142	57.99	1.03	0.22	12.53	15.39
91	UL144	155.20	1.03	0.25	38.33	58.17
92	UL146	55.82	1.03	0.04	2.29	3.09
93	UL148	301.52	1.03	0.06	16.58	10.45
94	UL150	50.72	1.03	0.31	15.67	21.66
95	UL152	329.01	1.03	0.03	10.20	7.22

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	J0004-0	Junction	4525.19	4530.79	0.00	4536.39	0.00	64.66	4527.20	0.00	3.59	0 00:00	0.00	0.00
2	J0006-0	Junction	4578.80	4586.35	0.00	4593.90	0.00	64.84	4580.35	0.00	6.00	0 00:00	0.00	0.00
3	J0011-0	Junction	4586.34	4592.94	0.00	4599.54	0.00	0.52	4588.44	0.00	4.50	0 00:00	0.00	0.00
4	J0012-1	Junction	4587.41	4592.91	0.00	4598.41	0.00	0.52	4588.44	0.00	4.47	0 00:00	0.00	0.00
5	J0014-1	Junction	4721.70	4725.70	0.00	4732.37	0.00	8.60	4722.25	0.00	3.45	0 00:00	0.00	0.00
6	J0015-0	Junction	4541.32	4550.27	0.00	4556.94	0.00	37.39	4542.18	0.00	9.14	0 00:00	0.00	0.00
7	J0015-1	Junction	4502.62	4509.79	0.00	4516.46	0.00	37.35	4504.07	0.00	8.55	0 00:00	0.00	0.00
8	J0016-0	Junction	4541.17	4546.98	0.00	4553.65	0.00	36.02	4542.02	0.00	9.15	0 00:00	0.00	0.00
9	J0016-1	Junction	4503.66	4512.14	0.00	4518.81	0.00	35.99	4504.81	0.00	8.85	0 00:00	0.00	0.00
10	J0018-0	Junction	4545.56	4548.66	0.00	4551.76	0.00	14.20	4546.57	0.00	2.09	0 00:00	0.00	0.00
11	J0018-1	Junction	4540.09	4544.49	0.00	4548.89	0.00	14.22	4541.13	0.00	3.36	0 00:00	0.00	0.00
12	J0019-0	Junction	4545.76	4549.66	0.00	4553.56	0.00	14.20	4548.26	0.00	1.40	0 00:00	0.00	0.00
13	J0020-1	Junction	4535.12	4539.32	0.00	4543.52	0.00	14.23	4543.52	4.20	0.00	0 01:08	0.00	0.00
14	J0021-1	Junction	4530.51	4534.61	0.00	4538.71	0.00	15.06	4538.11	3.50	0.00	0 00:00	0.00	0.00
15	J0023-0	Junction	4530.35	4533.90	0.00	4537.45	0.00	15.07	4537.45	3.55	0.00	0 01:05	0.01	0.00
16	J0023-1	Junction	4529.68	4534.18	0.00	4538.68	0.00	15.07	4538.68	4.50	0.00	0 01:05	0.00	0.00
17	J0025-1	Junction	4529.18	4532.63	0.00	4536.08	0.00	15.07	4536.08	3.45	0.00	0 01:04	0.13	9.00
18	J0026-1	Junction	4546.71	4549.51	0.00	4552.31	0.00	16.21	4552.31	2.80	0.00	0 01:02	3.25	157.00
19	J0038-0	Junction	4544.91	4550.35	0.00	4550.35	0.00	10.79	4545.48	0.00	9.43	0 00:00	0.00	0.00
20	J0040-0	Junction	4554.09	4558.54	0.00	4562.99	0.00	10.71	4555.19	0.00	3.35	0 00:00	0.00	0.00
21	J0040-1	Junction	4553.18	4557.73	0.00	4562.28	0.00	10.71	4554.21	0.00	3.52	0 00:00	0.00	0.00
22	J0041-0	Junction	4551.21	4555.41	0.00	4559.61	0.00	10.71	4552.30	0.00	3.11	0 00:00	0.00	0.00
23	J0041-1	Junction	4550.28	4555.41	0.00	4567.89	0.00	10.71	4551.30	0.00	4.11	0 00:00	0.00	0.00
24	J0043-0	Junction	4558.86	4564.71	0.00	4570.56	0.00	10.71	4560.33	0.00	4.38	0 00:00	0.00	0.00
25	J0043-1	Junction	4558.42	4563.42	0.00	4568.42	0.00	10.70	4559.40	0.00	4.02	0 00:00	0.00	0.00
26	J0044-1	Junction	4556.59	4561.79	0.00	4566.99	0.00	10.70	4557.53	0.00	4.26	0 00:00	0.00	0.00
27	J0048-0	Junction	4560.70	4566.85	0.00	4579.38	0.00	10.70	4561.66	0.00	5.19	0 00:00	0.00	0.00
28	J0050-0	Junction	4579.17	4587.57	0.00	4595.97	0.00	6.37	4589.00	1.43	0.00	0 00:00	0.00	0.00
29	J0050-1	Junction	4579.09	4587.64	0.00	4596.19	0.00	26.76	4589.64	2.00	0.00	0 00:00	0.00	0.00
30	J0051-1	Junction	4576.60	4581.55	0.00	4586.50	0.00	26.75	4586.50	4.95	0.00	0 00:53	0.00	0.00
31	J0052-1	Junction	4571.48	4575.05	0.00	4578.62	0.00	26.75	4578.62	3.57	0.00	0 01:40	20.36	93.00
32	J0054-1	Junction	4561.20	4566.85	0.00	4572.50	0.00	10.71	4562.37	0.00	4.48	0 00:00	0.00	0.00
33	J0071-0	Junction	4585.38	4589.48	0.00	4593.58	0.00	6.37	4589.36	0.00	0.12	0 00:00	0.00	0.00
34	J0071-1	Junction	4585.32	4588.92	0.00	4592.52	0.00	6.37	4589.19	0.27	0.00	0 00:00	0.00	0.00
35	J0073-0	Junction	4605.89	4616.51	0.00	4627.14	0.00	16.38	4611.96	0.00	4.55	0 00:00	0.00	0.00
36	J0073-1	Junction	4605.36	4612.03	0.00	4618.70	0.00	16.41	4605.70	0.00	9.66	0 00:00	0.00	0.00
37	J0074-0	Junction	4609.03	4618.78	0.00	4628.53	0.00	15.12	4616.39	0.00	2.39	0 00:00	0.00	0.00
38	J0074-1	Junction	4608.13	4617.03	0.00	4625.93	0.00	15.40	4614.53	0.00	2.50	0 00:00	0.00	0.00
39	J0075-1	Junction	4605.98	4617.53	0.00	4629.08	0.00	16.53	4612.23	0.00	5.30	0 00:00	0.00	0.00
40	J0076-0	Junction	4609.87	4618.92	0.00	4627.97	0.00	15.12	4617.97	0.00	0.95	0 00:00	0.00	0.00
41	J0077-0	Junction	4610.90	4619.15	0.00	4627.40	0.00	15.12	4619.82	0.67	0.00	0 00:00	0.00	0.00
42	J0078-0	Junction	4612.12	4620.37	0.00	4628.62	0.00	15.12	4621.64	1.27	0.00	0 00:00	0.00	0.00
43	J0079-0	Junction	4613.74	4621.69	0.00	4629.64	0.00	15.12	4623.66	1.97	0.00	0 00:00	0.00	0.00
44	J0080-0	Junction	4614.73	4619.33	0.00	4623.93	0.00	15.12	4623.93	4.60	0.00	0 01:15	0.00	0.00
45	J0080-1	Junction	4614.29	4620.14	0.00	4625.99	0.00	15.12	4624.12	3.98	0.00	0 00:00	0.00	0.00
46	J0084-0	Junction	4532.69	4542.04	0.00	4551.39	0.00	7.12	4540.40	0.00	1.64	0 00:00	0.00	0.00
47	J0085-1	Junction	4534.04	4543.24	0.00	4549.91	0.00	10.41	4537.06	0.00	6.98	0 00:00	0.00	0.00
48	J0086-0	Junction	4534.15	4542.55	0.00	4542.55	0.00	7.12	4540.47	0.00	2.08	0 00:00	0.00	0.00
49	J0086-1	Junction	4533.20	4541.65	0.00	4550.10	0.00	7.12	4540.40	0.00	1.25	0 00:00	0.00	0.00
50	J0088-0	Junction	4533.74	4542.39	0.00	4551.04	0.00	2.26	4540.56	0.00	1.83	0 00:00	0.00	0.00
51	J0089-0	Junction	4534.04	4540.23	0.00	4546.90	0.00	9.63	4537.06	0.00	6.98	0 00:00	0.00	0.00
52	J0089-1	Junction	4533.24	4540.22	0.00	4546.89	0.00	9.33	4535.31	0.00	7.93	0 00:00	0.00	0.00
53	J0090-0	Junction	4532.64	4537.02	0.00	4543.69	0.00	9.32	4535.31	0.00	7.33	0 00:00	0.00	0.00
54	J0090-1	Junction	4531.38	4536.45	0.00	4543.12	0.00	9.32	4531.74	0.00	9.64	0 00:00	0.00	0.00
55	J0091-0	Junction	4526.22	4531.40	0.00	4538.07	0.00	9.32	4529.60	0.00	6.62	0 00:00	0.00	0.00
56	J0091-1	Junction	4525.26	4530.25	0.00	4536.92	0.00	9.19	4525.57	0.00	9.69	0 00:00	0.00	0.00
57	J0094-0	Junction	4522.00	4527.55	0.00	4534.22	0.00	9.19	4523.14	0.00	8.86	0 00:00	0.00	0.00
58	J0094-1	Junction	4520.37	4527.04	0.00	4533.71	0.00	9.19	4520.57	0.00	9.80	0 00:00	0.00	0.00
59	J0095-0	Junction	4523.70	4530.37	0.00	4537.04	0.00	9.19	4524.67	0.00	9.03	0 00:00	0.00	0.00
60	J0095-1	Junction	4522.22	4530.91	0.00	4537.58	0.00	9.19	4523.17	0.00	9.05	0 00:00	0.00	0.00
61	J0101-1	Junction	4518.67	4525.34	0.00	4532.01	0.00	9.19	4519.23	0.00	9.44	0 00:00	0.00	0.00
62	J0103-1	Junction	4506.29	4512.96	0.00	4519.63	0.00	9.19	4506.94	0.00	9.35	0 00:00	0.00	0.00
63	J0108-1	Junction	4586.74	4593.41	0.00	4600.08	0.00	16.04	4591.42	0.00	5.32	0 00:00	0.00	0.00
64	J0109-1	Junction	4586.99	4593.23	0.00	4599.90	0.00	7.35	4589.52	0.00	7.47	0 00:00	0.00	0.00
65	J0110-1	Junction	4585.43	4590.68	0.00	4597.35	0.00	6.89	4589.52	0.00	5.91	0 00:00	0.00	0.00
66	J0111-0	Junction	4766.53	4774.18	0.00	4781.83	0.00	7.11	4767.31	0.00	6.87	0 00:00	0.00	0.00
67	J0111-1	Junction	4762.20	4767.10	0.00	4772.00	0.00	7.11	4762.87	0.00	4.23	0 00:00	0.00	0.00
68	J0112-0	Junction	4756.80	4762.40	0.00	4768.00	0.00	7.10	4757.36	0.00	5.04	0 00:00	0.00	0.00
69	J0114-0	Junction	4873.88	4881.88	0.00	4889.88	0.00	7.15	4874.52	0.00	7.36	0 00:00	0.00	0.00
70	J0114-1	Junction	4869.56	4878.16	0.00	4886.76	0.00	7.14	4870.03	0.00	8.13	0 00:00	0.00	0.00
71	J0115-1	Junction	4836.95	4845.80	0.00	4854.65	0.00	7.14	4837.59	0.00	8.21	0 00:00	0.00	0.00
72	J0116-1	Junction	4833.51	4841.46	0.00	4849.41	0.00	7.13	4834.12	0.00	7.34	0 00:00	0.00	0.00
73	J0117-1	Junction	4819.05	4825.35	0.00	4831.65	0.00	7.12	4819.62	0.00	5.73	0 00:00	0.00	0.00
74	J0118-1	Junction	4806.49	4814.09	0.00	4821.69	0.00	7.12	4807.31	0.00	6.78	0 00:00	0.00	0.00
75	J0119-1	Junction	4803.84	4808.39	0.00	4812.94	0.00	7.11	4804.46	0.00	3.93	0 00:00	0.00	0.00
76	J0120-1	Junction	4794.30	4798.95	0.00	4803.60	0.00	7.11	4794.93	0.00	4.02	0 00:00	0.00	0.00
77	J0121-1	Junction	4784.91	4790.11	0.00	4795.31	0.00	7.11	4785.47	0.00	4.64	0 00:00	0.00	0.00
78	J0122-0	Junction	4768.70	4777.05	0.00	4785.40	0.00	7.11	4769.38	0.00	7.67	0 00:00	0.00	0.00
79	J0122-1	Junction	4766.60	4775.25	0.00	4783.90	0.00	7.11	4767.91	0.00	7.34	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
80	J0125-0	Junction	4626.22	4632.02	0.00	4637.82	0.00	22.86	4627.23	0.00	4.79	0 00:00	0.00	0.00
81	J0125-1	Junction	4617.41	4622.06	0.00	4626.71	0.00	22.86	4619.15	0.00	2.91	0 00:00	0.00	0.00
82	J0126-0	Junction	4632.19	4638.49	0.00	4644.79	0.00	13.70	4633.11	0.00	5.38	0 00:00	0.00	0.00
83	J0126-1	Junction	4629.13	4634.00	0.00	4657.46	0.00	22.89	4630.91	0.00	3.09	0 00:00	0.00	0.00
84	J0127-0	Junction	4606.32	4617.37	0.00	4628.42	0.00	22.95	4612.17	0.00	5.20	0 00:00	0.00	0.00
85	J0129-0	Junction	4615.74	4620.29	0.00	4624.84	0.00	22.89	4616.84	0.00	3.45	0 00:00	0.00	0.00
86	J0131.0	Junction	4591.24	4594.79	0.00	4598.34	0.00	23.28	4598.34	3.55	0.00	0 01:01	2.78	28.00
87	J0133.0	Junction	4589.62	4590.92	0.00	4594.92	0.00	11.87	4594.92	4.00	0.00	0 00:48	0.00	0.00
88	J421012	Junction	4582.55	4590.95	0.00	4599.35	0.00	21.37	4594.57	3.62	0.00	0 00:00	0.00	0.00
89	J421015	Junction	4596.75	4601.15	0.00	4605.55	0.00	7.31	4597.71	0.00	3.44	0 00:00	0.00	0.00
90	J421016	Junction	4601.71	4610.26	0.00	4618.81	0.00	7.31	4602.55	0.00	7.71	0 00:00	0.00	0.00
91	J421017	Junction	4605.36	4614.06	0.00	4622.76	0.00	7.31	4606.31	0.00	7.75	0 00:00	0.00	0.00
92	J421018	Junction	4608.21	4614.81	0.00	4621.41	0.00	7.31	4608.85	0.00	5.96	0 00:00	0.00	0.00
93	J421019	Junction	4610.44	4615.14	0.00	4619.84	0.00	7.31	4611.28	0.00	3.86	0 00:00	0.00	0.00
94	J42108	Junction	4544.09	4549.89	0.00	4555.69	0.00	36.15	4545.45	0.00	8.64	0 00:00	0.00	0.00
95	J42112	Junction	4599.43	4605.33	0.00	4611.23	0.00	31.64	4607.40	2.07	0.00	0 00:00	0.00	0.00
96	J42117	Junction	4597.20	4602.90	0.00	4608.60	0.00	48.70	4598.35	0.00	4.55	0 00:00	0.00	0.00
97	J421172	Junction	4741.86	4758.76	0.00	4775.66	0.00	7.14	4775.66	16.90	0.00	0 00:48	0.00	0.00
98	J42118	Junction	4610.41	4615.21	0.00	4620.01	0.00	26.01	4614.96	0.00	0.25	0 00:00	0.00	0.00
99	J421180	Junction	4732.37	4749.62	0.00	4766.87	0.00	7.15	4754.83	5.21	0.00	0 00:00	0.00	0.00
100	J421185	Junction	4731.42	4749.37	0.00	4767.32	0.00	10.13	4754.50	5.13	0.00	0 00:00	0.00	0.00
101	J421186	Junction	4730.77	4747.62	0.00	4764.47	0.00	10.13	4752.72	5.10	0.00	0 00:00	0.00	0.00
102	J421187	Junction	4730.20	4746.45	0.00	4762.70	0.00	10.12	4752.65	6.20	0.00	0 00:00	0.00	0.00
103	J421188	Junction	4729.81	4745.66	0.00	4761.51	0.00	25.73	4752.76	7.10	0.00	0 00:00	0.00	0.00
104	J421189	Junction	4728.22	4739.47	0.00	4750.72	0.00	25.73	4733.39	0.00	6.08	0 00:00	0.00	0.00
105	J421190	Junction	4716.50	4729.05	0.00	4741.60	0.00	25.66	4718.31	0.00	10.74	0 00:00	0.00	0.00
106	J421191	Junction	4713.49	4725.79	0.00	4738.09	0.00	25.65	4714.53	0.00	11.26	0 00:00	0.00	0.00
107	J421192	Junction	4703.92	4713.42	0.00	4722.92	0.00	25.65	4704.98	0.00	8.44	0 00:00	0.00	0.00
108	J421193	Junction	4694.15	4701.55	0.00	4708.95	0.00	25.65	4695.26	0.00	6.29	0 00:00	0.00	0.00
109	J421194	Junction	4687.36	4694.76	0.00	4702.16	0.00	25.66	4688.69	0.00	6.07	0 00:00	0.00	0.00
110	J421195	Junction	4670.77	4676.77	0.00	4682.77	0.00	25.65	4682.77	6.00	0.00	0 00:50	0.00	0.00
111	J421196	Junction	4663.74	4670.24	0.00	4676.74	0.00	25.65	4676.74	6.50	0.00	0 00:57	0.64	18.00
112	J421197	Junction	4733.85	4743.45	0.00	4753.05	0.00	16.57	4752.16	8.71	0.00	0 00:00	0.00	0.00
113	J421200	Junction	4733.33	4743.58	0.00	4753.83	0.00	8.62	4752.22	8.64	0.00	0 00:00	0.00	0.00
114	J421201	Junction	4732.57	4746.07	0.00	4759.57	0.00	8.62	4752.55	6.48	0.00	0 00:00	0.00	0.00
115	J42154	Junction	4521.79	4530.29	0.00	4536.96	0.00	62.57	4523.02	0.00	7.27	0 00:00	0.00	0.00
116	J42155	Junction	4525.14	4536.04	0.00	4542.71	0.00	62.57	4527.44	0.00	8.60	0 00:00	0.00	0.00
117	J42156	Junction	4527.51	4540.26	0.00	4546.93	0.00	62.57	4529.79	0.00	10.47	0 00:00	0.00	0.00
118	J42157	Junction	4512.22	4529.67	0.00	4536.34	0.00	62.57	4513.49	0.00	16.18	0 00:00	0.00	0.00
119	J42175	Junction	4688.48	4696.88	0.00	4703.55	0.00	8.60	4689.61	0.00	7.27	0 00:00	0.00	0.00
120	J42176	Junction	4691.51	4699.51	0.00	4706.18	0.00	8.60	4692.40	0.00	7.11	0 00:00	0.00	0.00
121	J42177	Junction	4694.19	4701.99	0.00	4708.66	0.00	8.60	4694.98	0.00	7.01	0 00:00	0.00	0.00
122	J42178	Junction	4703.44	4711.94	0.00	4718.61	0.00	8.60	4704.05	0.00	7.89	0 00:00	0.00	0.00
123	J42180	Junction	4743.73	4755.03	0.00	4761.70	0.00	0.58	4743.86	0.00	11.17	0 00:00	0.00	0.00
124	J42181	Junction	4730.23	4738.33	0.00	4745.00	0.00	0.58	4730.35	0.00	7.98	0 00:00	0.00	0.00
125	J42223	Junction	4530.32	4547.72	0.00	4554.39	0.00	42.33	4532.00	0.00	15.72	0 00:00	0.00	0.00
126	J42224	Junction	4532.48	4548.08	0.00	4554.75	0.00	42.36	4534.01	0.00	14.07	0 00:00	0.00	0.00
127	J4224	Junction	4534.11	4539.51	0.00	4544.91	0.00	12.06	4534.81	0.00	4.70	0 00:00	0.00	0.00
128	J4225	Junction	4537.26	4542.31	0.00	4547.36	0.00	11.99	4538.28	0.00	4.03	0 00:00	0.00	0.00
129	J4226	Junction	4539.66	4544.36	0.00	4549.06	0.00	11.92	4540.60	0.00	3.76	0 00:00	0.00	0.00
130	J42264	Junction	4608.40	4617.30	0.00	4623.97	0.00	8.60	4609.04	0.00	8.26	0 00:00	0.00	0.00
131	J42265	Junction	4616.61	4625.16	0.00	4631.83	0.00	8.60	4617.15	0.00	8.01	0 00:00	0.00	0.00
132	J42266	Junction	4620.24	4630.84	0.00	4637.51	0.00	8.60	4620.95	0.00	9.89	0 00:00	0.00	0.00
133	J42267	Junction	4622.52	4631.27	0.00	4637.94	0.00	8.60	4623.27	0.00	8.00	0 00:00	0.00	0.00
134	J42268	Junction	4630.23	4638.98	0.00	4645.65	0.00	8.60	4630.90	0.00	8.08	0 00:00	0.00	0.00
135	J42269	Junction	4633.51	4641.96	0.00	4648.63	0.00	8.60	4634.23	0.00	7.73	0 00:00	0.00	0.00
136	J42270	Junction	4638.41	4646.21	0.00	4652.88	0.00	8.60	4639.09	0.00	7.12	0 00:00	0.00	0.00
137	J42271	Junction	4646.69	4654.24	0.00	4661.79	0.00	8.60	4647.25	0.00	6.99	0 00:00	0.00	0.00
138	J42273	Junction	4657.67	4666.52	0.00	4673.19	0.00	8.60	4658.24	0.00	8.28	0 00:00	0.00	0.00
139	J42274	Junction	4666.87	4675.87	0.00	4682.54	0.00	8.60	4667.45	0.00	8.42	0 00:00	0.00	0.00
140	J42275	Junction	4670.16	4678.16	0.00	4684.83	0.00	8.60	4670.79	0.00	7.37	0 00:00	0.00	0.00
141	J42277	Junction	4672.54	4680.24	0.00	4686.91	0.00	8.60	4673.24	0.00	7.00	0 00:00	0.00	0.00
142	J42278	Junction	4677.64	4685.14	0.00	4691.81	0.00	8.60	4678.26	0.00	6.88	0 00:00	0.00	0.00
143	J42279	Junction	4682.15	4689.30	0.00	4695.97	0.00	8.60	4682.83	0.00	6.47	0 00:00	0.00	0.00
144	J42280	Junction	4683.00	4690.90	0.00	4697.57	0.00	8.60	4684.01	0.00	6.89	0 00:00	0.00	0.00
145	J42282	Junction	4687.53	4695.98	0.00	4702.65	0.00	8.60	4688.32	0.00	7.66	0 00:00	0.00	0.00
146	J42284	Junction	4589.18	4593.08	0.00	4599.75	0.00	5.71	4598.99	5.91	0.00	0 00:00	0.00	0.00
147	J42285	Junction	4588.82	4592.92	0.00	4599.59	0.00	5.70	4598.59	5.67	0.00	0 00:00	0.00	0.00
148	J42286	Junction	4586.66	4598.71	0.00	4605.38	0.00	5.69	4597.07	0.00	1.64	0 00:00	0.00	0.00
149	J42287	Junction	4587.63	4596.28	0.00	4602.95	0.00	5.69	4595.91	0.00	0.37	0 00:00	0.00	0.00
150	J42302	Junction	4500.54	4509.44	0.00	4518.34	0.00	64.59	4502.89	0.00	6.55	0 00:00	0.00	0.00
151	J42303	Junction	4705.22	4712.12	0.00	4719.02	0.00	0.53	4705.37	0.00	9.85	0 00:00	0.00	0.00
152	J42304	Junction	4686.38	4691.98	0.00	4697.58	0.00	0.52	4686.54	0.00	5.44	0 00:00	0.00	0.00
153	J42305	Junction	4681.18	4687.53	0.00	4693.88	0.00	0.52	4681.32	0.00	6.21	0 00:00	0.00	0.00
154	J42306	Junction	4518.99	4525.39	0.00	4531.79	0.00	64.57	4520.24	0.00	5.15	0 00:00	0.00	0.00
155	J42307	Junction	4545.94	4551.54	0.00	4557.14	0.00	64.76	4547.56	0.00	3.98	0 00:00	0.00	0.00
156	J42308	Junction	4600.22	4608.82	0.00	4617.42	0.00	0.52	4600.39	0.00	8.43	0 00:00	0.00	0.00
157	J42309	Junction	4616.43	4624.03	0.00	4631.63	0.00	0.52	4616.58	0.00	7.45	0 00:00	0.00	0.00
158	J42310	Junction	4636.19	4643.89	0.00	4651.59	0.00	0.52	4636.34	0.00	7.55	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
159	J42311	Junction	4652.14	4657.74	0.00	4663.34	0.00	0.52	4652.28	0.00	5.46	0 00:00	0.00	0.00
160	J42312	Junction	4663.13	4669.03	0.00	4674.93	0.00	0.52	4663.28	0.00	5.75	0 00:00	0.00	0.00
161	J42333	Junction	4610.34	4619.04	0.00	4627.74	0.00	0.00	4610.34	0.00	8.70	0 00:00	0.00	0.00
162	J42334	Junction	4602.31	4610.41	0.00	4618.51	0.00	0.00	4602.31	0.00	8.10	0 00:00	0.00	0.00
163	J42335	Junction	4601.32	4609.92	0.00	4618.52	0.00	0.00	4601.32	0.00	8.60	0 00:00	0.00	0.00
164	J42336	Junction	4595.34	4600.34	0.00	4605.34	0.00	0.00	4595.34	0.00	5.00	0 00:00	0.00	0.00
165	J42337	Junction	4619.90	4626.60	0.00	4633.30	0.00	0.00	4619.90	0.00	6.70	0 00:00	0.00	0.00
166	J42340	Junction	4584.36	4588.76	0.00	4593.16	0.00	0.00	4584.36	0.00	4.40	0 00:00	0.00	0.00
167	J42341	Junction	4590.49	4594.89	0.00	4599.29	0.00	0.00	4590.49	0.00	4.40	0 00:00	0.00	0.00
168	J42346	Junction	4747.50	4757.40	0.00	4767.30	0.00	4.04	4747.83	0.00	9.57	0 00:00	0.00	0.00
169	J42347	Junction	4706.85	4722.55	0.00	4738.25	0.00	4.04	4707.24	0.00	15.31	0 00:00	0.00	0.00
170	J42348	Junction	4677.52	4683.92	0.00	4690.32	0.00	4.04	4677.88	0.00	6.04	0 00:00	0.00	0.00
171	J42349	Junction	4670.58	4676.48	0.00	4682.38	0.00	4.04	4671.05	0.00	5.43	0 00:00	0.00	0.00
172	J42350	Junction	4666.48	4674.28	0.00	4682.08	0.00	4.04	4666.74	0.00	7.54	0 00:00	0.00	0.00
173	J42357	Junction	4670.80	4675.10	0.00	4679.40	0.00	23.40	4671.81	0.00	3.29	0 00:00	0.00	0.00
174	J42358	Junction	4617.19	4622.39	0.00	4627.59	0.00	23.29	4618.07	0.00	4.32	0 00:00	0.00	0.00
175	J42359	Junction	4589.72	4593.12	0.00	4596.52	0.00	13.19	4596.52	3.40	0.00	0 00:48	0.65	30.00
176	J4236	Junction	4546.45	4551.85	0.00	4557.25	0.00	11.97	4547.11	0.00	4.74	0 00:00	0.00	0.00
177	J42363	Junction	4588.99	4592.79	0.00	4596.59	0.00	11.87	4589.59	0.00	3.20	0 00:00	0.00	0.00
178	J42364	Junction	4621.30	4627.60	0.00	4633.90	0.00	23.30	4622.72	0.00	4.88	0 00:00	0.00	0.00
179	J42365	Junction	4812.97	4819.17	0.00	4825.37	0.00	0.58	4813.18	0.00	5.99	0 00:00	0.00	0.00
180	J42366	Junction	4809.24	4818.24	0.00	4827.24	0.00	0.58	4809.38	0.00	8.86	0 00:00	0.00	0.00
181	J42367	Junction	4786.31	4790.81	0.00	4795.31	0.00	0.58	4786.45	0.00	4.36	0 00:00	0.00	0.00
182	J42368	Junction	4758.99	4764.89	0.00	4770.79	0.00	0.58	4759.13	0.00	5.76	0 00:00	0.00	0.00
183	J4237	Junction	4580.68	4585.88	0.00	4591.08	0.00	12.03	4581.27	0.00	4.61	0 00:00	0.00	0.00
184	J42370	Junction	4749.05	4760.55	0.00	4772.05	0.00	0.58	4749.19	0.00	11.36	0 00:00	0.00	0.00
185	J42371	Junction	4745.20	4754.40	0.00	4763.60	0.00	0.58	4745.39	0.00	9.01	0 00:00	0.00	0.00
186	J42393	Junction	4585.90	4597.47	0.00	4609.04	0.00	21.99	4587.00	0.00	10.47	0 00:00	0.00	0.00
187	J42394	Junction	4586.59	4597.69	0.00	4608.79	0.00	21.99	4587.82	0.00	9.87	0 00:00	0.00	0.00
188	J42402	Junction	4585.83	4595.68	0.00	4605.53	0.00	12.50	4588.37	0.00	7.31	0 00:00	0.00	0.00
189	J42420	Junction	4713.66	4725.36	0.00	4737.06	0.00	4.04	4713.94	0.00	11.42	0 00:00	0.00	0.00
190	J42421	Junction	4747.96	4758.26	0.00	4768.56	0.00	7.36	4748.81	0.00	9.45	0 00:00	0.00	0.00
191	J42436	Junction	4689.65	4696.32	0.00	4702.99	0.00	4.04	4692.77	0.00	3.55	0 00:00	0.00	0.00
192	J42438	Junction	4586.41	4592.21	0.00	4598.01	0.00	64.99	4588.44	0.00	3.77	0 00:00	0.00	0.00
193	J4244	Junction	4522.27	4528.57	0.00	4534.87	0.00	48.36	4525.05	0.00	3.52	0 00:00	0.00	0.00
194	J42440	Junction	4744.06	4754.86	0.00	4765.66	0.00	0.58	4744.33	0.00	10.53	0 00:00	0.00	0.00
195	J42442	Junction	4775.41	4781.21	0.00	4787.01	0.00	2.76	4775.76	0.00	5.45	0 00:00	0.00	0.00
196	J42443	Junction	4713.69	4721.59	0.00	4729.49	0.00	14.59	4714.80	0.00	6.79	0 00:00	0.00	0.00
197	J4245	Junction	4616.24	4622.54	0.00	4628.84	0.00	7.32	4616.82	0.00	5.72	0 00:00	0.00	0.00
198	J42450	Junction	4546.90	4554.75	0.00	4562.60	0.00	13.85	4562.60	7.85	0.00	0 01:47	0.00	0.00
199	J42451	Junction	4552.23	4560.13	0.00	4568.03	0.00	13.86	4553.96	0.00	6.17	0 00:00	0.00	0.00
200	J42452	Junction	4557.88	4566.58	0.00	4575.28	0.00	13.86	4558.70	0.00	7.88	0 00:00	0.00	0.00
201	J42453	Junction	4559.93	4570.43	0.00	4580.93	0.00	13.88	4560.85	0.00	9.58	0 00:00	0.00	0.00
202	J42454	Junction	4568.24	4570.99	0.00	4573.74	0.00	8.53	4568.76	0.00	2.23	0 00:00	0.00	0.00
203	J42458	Junction	4585.91	4597.91	0.00	4609.91	0.00	5.69	4597.99	0.08	0.00	0 00:00	0.00	0.00
204	J42459	Junction	4584.43	4595.48	0.00	4606.53	0.00	5.69	4590.93	0.00	4.55	0 00:00	0.00	0.00
205	J42460	Junction	4582.66	4594.71	0.00	4606.76	0.00	5.69	4588.31	0.00	6.40	0 00:00	0.00	0.00
206	J42461	Junction	4579.30	4590.20	0.00	4601.10	0.00	8.72	4580.50	0.00	9.70	0 00:00	0.00	0.00
207	J42462	Junction	4581.42	4595.62	0.00	4609.82	0.00	8.73	4582.25	0.00	13.37	0 00:00	0.00	0.00
208	J4249	Junction	4522.92	4529.59	0.00	4529.59	0.00	48.38	4528.73	0.00	0.86	0 00:00	0.00	0.00
209	J42494	Junction	4599.72	4608.72	0.00	4617.72	0.00	65.40	4612.38	3.66	0.00	0 00:00	0.00	0.00
210	J42495	Junction	4603.33	4612.28	0.00	4621.23	0.00	65.40	4616.53	4.25	0.00	0 00:00	0.00	0.00
211	J42496	Junction	4612.58	4622.18	0.00	4631.78	0.00	65.40	4621.53	0.00	0.65	0 00:00	0.00	0.00
212	J42497	Junction	4632.36	4641.66	0.00	4650.96	0.00	65.42	4634.06	0.00	7.60	0 00:00	0.00	0.00
213	J42498	Junction	4640.79	4649.84	0.00	4658.89	0.00	65.41	4642.60	0.00	7.24	0 00:00	0.00	0.00
214	J42499	Junction	4650.81	4659.71	0.00	4668.61	0.00	65.41	4652.49	0.00	7.22	0 00:00	0.00	0.00
215	J42500	Junction	4652.77	4662.12	0.00	4671.47	0.00	65.41	4656.75	0.00	5.37	0 00:00	0.00	0.00
216	J42516	Junction	4653.02	4664.07	0.00	4675.12	0.00	65.41	4657.51	0.00	6.56	0 00:00	0.00	0.00
217	J42517	Junction	4655.67	4665.42	0.00	4675.17	0.00	65.47	4657.97	0.00	7.45	0 00:00	0.00	0.00
218	J42518	Junction	4656.94	4666.44	0.00	4675.94	0.00	65.52	4659.38	0.00	7.06	0 00:00	0.00	0.00
219	J42519	Junction	4658.11	4667.16	0.00	4676.21	0.00	65.64	4660.58	0.00	6.58	0 00:00	0.00	0.00
220	J42520	Junction	4669.61	4682.46	0.00	4695.31	0.00	65.61	4670.94	0.00	11.52	0 00:00	0.00	0.00
221	J42521	Junction	4670.25	4680.20	0.00	4690.15	0.00	65.61	4673.07	0.00	7.13	0 00:00	0.00	0.00
222	J42522	Junction	4670.60	4680.05	0.00	4689.50	0.00	65.63	4674.00	0.00	6.05	0 00:00	0.00	0.00
223	J42523	Junction	4671.79	4678.79	0.00	4685.79	0.00	65.74	4675.06	0.00	3.73	0 00:00	0.00	0.00
224	J42525	Junction	4672.21	4681.46	0.00	4690.71	0.00	65.86	4676.00	0.00	5.46	0 00:00	0.00	0.00
225	J42526	Junction	4673.18	4681.88	0.00	4690.58	0.00	66.01	4676.98	0.00	4.90	0 00:00	0.00	0.00
226	J42527	Junction	4674.07	4682.32	0.00	4690.57	0.00	65.98	4678.44	0.00	3.88	0 00:00	0.00	0.00
227	J42528	Junction	4678.70	4688.75	0.00	4698.80	0.00	66.11	4681.00	0.00	7.75	0 00:00	0.00	0.00
228	J42529	Junction	4680.22	4686.92	0.00	4693.62	0.00	66.34	4682.72	0.00	4.20	0 00:00	0.00	0.00
229	J42530	Junction	4692.15	4706.20	0.00	4720.25	0.00	66.42	4693.58	0.00	12.62	0 00:00	0.00	0.00
230	J42531	Junction	4693.08	4703.98	0.00	4714.88	0.00	66.68	4695.69	0.00	8.29	0 00:00	0.00	0.00
231	J42532	Junction	4693.66	4702.01	0.00	4710.36	0.00	67.30	4696.99	0.00	5.02	0 00:00	0.00	0.00
232	J42533	Junction	4695.91	4701.91	0.00	4707.91	0.00	14.59	4697.18	0.00	4.73	0 00:00	0.00	0.00
233	J42538	Junction	4595.69	4610.69	0.00	4625.69	0.00	65.40	4597.10	0.00	13.59	0 00:00	0.00	0.00
234	J42540	Junction	4597.65	4612.65	0.00	4627.65	0.00	65.39	4599.85	0.00	12.80	0 00:00	0.00	0.00
235	J42554	Junction	4534.04	4542.18	0.00	4548.85	0.00	10.82	4540.40	0.00	1.78	0 00:00	0.00	0.00
236	J4260	Junction	4523.15	4529.55	0.00	4535.95	0.00	48.37	4525.89	0.00	3.66	0 00:00	0.00	0.00
237	J4262	Junction	4523.56	4529.96	0.00	4536.36	0.00	48.37	4529.38	0.00	0.58	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
238	J4263	Junction	4524.03	4530.03	0.00	4536.03	0.00	48.37	4530.85	0.82	0.00	0 00:00	0.00	0.00
239	J4264	Junction	4524.56	4531.56	0.00	4538.56	0.00	48.37	4533.46	1.90	0.00	0 00:00	0.00	0.00
240	J4265	Junction	4524.66	4532.76	0.00	4540.86	0.00	48.37	4534.14	1.38	0.00	0 00:00	0.00	0.00
241	J4267	Junction	4526.93	4533.08	0.00	4539.23	0.00	48.38	4538.01	4.93	0.00	0 00:00	0.00	0.00
242	J4272	Junction	4547.81	4553.01	0.00	4558.21	0.00	10.75	4549.16	0.00	3.85	0 00:00	0.00	0.00
243	J42722	Junction	4586.25	4594.25	0.00	4602.25	0.00	77.15	4587.92	0.00	6.33	0 00:00	0.00	0.00
244	J42745	Junction	4755.35	4761.10	0.00	4766.85	0.00	10.03	4756.17	0.00	4.93	0 00:00	0.00	0.00
245	J42746	Junction	4758.90	4764.40	0.00	4769.90	0.00	10.03	4759.56	0.00	4.84	0 00:00	0.00	0.00
246	J42747	Junction	4704.88	4709.53	0.00	4714.18	0.00	10.02	4705.84	0.00	3.69	0 00:00	0.00	0.00
247	J42748	Junction	4703.71	4709.86	0.00	4716.01	0.00	10.02	4704.54	0.00	5.32	0 00:00	0.00	0.00
248	J4278	Junction	4547.22	4551.82	0.00	4556.42	0.00	10.71	4548.49	0.00	3.33	0 00:00	0.00	0.00
249	J42788	Junction	4596.35	4603.40	0.00	4610.45	0.00	59.16	4610.45	7.05	0.00	0 00:03	0.01	0.00
250	J42808	Junction	4594.64	4601.49	0.00	4608.34	0.00	15.34	4597.37	0.00	4.12	0 00:00	0.00	0.00
251	J42809	Junction	4594.91	4601.61	0.00	4608.31	0.00	22.80	4597.36	0.00	4.25	0 00:00	0.00	0.00
252	J42810	Junction	4595.00	4600.90	0.00	4606.80	0.00	42.76	4597.36	0.00	3.54	0 00:00	0.00	0.00
253	J42811	Junction	4595.04	4600.54	0.00	4606.04	0.00	87.95	4598.16	0.00	2.38	0 00:00	0.00	0.00
254	J42812	Junction	4595.09	4601.24	0.00	4607.39	0.00	117.85	4604.66	3.42	0.00	0 00:00	0.00	0.00
255	J42813	Junction	4595.72	4601.42	0.00	4607.12	0.00	6.46	4599.72	0.00	1.70	0 00:00	0.00	0.00
256	J42814	Junction	4595.42	4600.92	0.00	4606.42	0.00	9.13	4601.05	0.13	0.00	0 00:00	0.00	0.00
257	J42815	Junction	4595.33	4601.43	0.00	4607.53	0.00	94.66	4601.90	0.47	0.00	0 00:00	0.00	0.00
258	J42816	Junction	4595.25	4601.25	0.00	4607.25	0.00	215.19	4607.25	6.00	0.00	0 00:03	0.89	1.00
259	J42821	Junction	4619.88	4624.58	0.00	4629.28	0.00	35.82	4626.11	1.53	0.00	0 00:00	0.00	0.00
260	J42822	Junction	4638.15	4644.25	0.00	4650.35	0.00	189.81	4650.35	6.10	0.00	0 00:03	0.04	0.00
261	J42824	Junction	4645.94	4654.69	0.00	4663.44	0.00	647.24	4659.78	5.09	0.00	0 00:00	0.00	0.00
262	J42825	Junction	4650.38	4655.43	0.00	4660.48	0.00	17.72	4654.90	0.00	0.53	0 00:00	0.00	0.00
263	J42826	Junction	4666.54	4673.44	0.00	4680.34	0.00	11.20	4667.99	0.00	5.45	0 00:00	0.00	0.00
264	J42827	Junction	4667.96	4673.71	0.00	4679.46	0.00	11.20	4668.81	0.00	4.90	0 00:00	0.00	0.00
265	J42828	Junction	4674.06	4677.66	0.00	4681.26	0.00	11.20	4674.78	0.00	2.88	0 00:00	0.00	0.00
266	J42829	Junction	4678.74	4685.19	0.00	4691.64	0.00	11.20	4679.54	0.00	5.65	0 00:00	0.00	0.00
267	J42831	Junction	4695.54	4700.84	0.00	4706.14	0.00	11.20	4696.14	0.00	9.40	0 00:00	0.00	0.00
268	J42832	Junction	4695.82	4700.77	0.00	4705.72	0.00	11.28	4696.26	0.00	9.56	0 00:00	0.00	0.00
269	J42833	Junction	4716.01	4720.71	0.00	4725.41	0.00	10.02	4716.57	0.00	4.14	0 00:00	0.00	0.00
270	J42834	Junction	4723.25	4729.80	0.00	4736.35	0.00	10.02	4723.93	0.00	5.87	0 00:00	0.00	0.00
271	J42835	Junction	4742.72	4749.37	0.00	4756.02	0.00	10.03	4743.32	0.00	6.05	0 00:00	0.00	0.00
272	J42836	Junction	4753.59	4759.29	0.00	4764.99	0.00	10.03	4754.28	0.00	5.01	0 00:00	0.00	0.00
273	J42853	Junction	4666.81	4672.06	0.00	4677.31	0.00	10.02	4667.37	0.00	4.69	0 00:00	0.00	0.00
274	J42854	Junction	4651.03	4657.83	0.00	4664.63	0.00	10.02	4664.63	6.80	0.00	0 00:00	0.00	0.00
275	J42855	Junction	4668.88	4674.28	0.00	4679.68	0.00	10.02	4669.96	0.00	4.32	0 00:00	0.00	0.00
276	J42856	Junction	4669.95	4674.45	0.00	4678.95	0.00	10.02	4670.89	0.00	3.56	0 00:00	0.00	0.00
277	J42857	Junction	4678.77	4683.37	0.00	4687.97	0.00	10.02	4679.36	0.00	4.01	0 00:00	0.00	0.00
278	J42858	Junction	4696.01	4701.26	0.00	4706.51	0.00	10.02	4696.62	0.00	4.64	0 00:00	0.00	0.00
279	J42859	Junction	4700.55	4707.90	0.00	4715.25	0.00	10.02	4701.29	0.00	6.61	0 00:00	0.00	0.00
280	J4287	Junction	4566.95	4570.85	0.00	4574.75	0.00	10.70	4568.00	0.00	2.85	0 00:00	0.00	0.00
281	J42877	Junction	4500.54	4509.34	0.00	4518.14	0.00	16.26	4500.54	0.00	8.80	0 00:00	0.00	0.00
282	J4288	Junction	4565.39	4569.39	0.00	4573.39	0.00	10.70	4566.28	0.00	3.11	0 00:00	0.00	0.00
283	J42885	Junction	4616.20	4626.17	0.00	4632.84	0.00	91.71	4626.52	0.35	0.00	0 00:00	0.00	0.00
284	J42886	Junction	4502.98	4506.60	0.00	4513.27	0.00	8.06	4505.46	0.00	1.14	0 00:00	0.00	0.00
285	J42887	Junction	4628.69	4635.94	0.00	4643.19	0.00	57.80	4643.19	7.25	0.00	0 00:46	0.00	0.00
286	J42888	Junction	4631.26	4638.76	0.00	4646.26	0.00	57.80	4646.26	7.50	0.00	0 00:46	0.05	9.00
287	J4289	Junction	4539.19	4545.39	0.00	4551.59	0.00	36.14	4540.50	0.00	4.89	0 00:00	0.00	0.00
288	J42890	Junction	4637.18	4645.63	0.00	4654.08	0.00	98.33	4654.08	8.45	0.00	0 01:00	2.14	15.00
289	J42891	Junction	4638.52	4645.92	0.00	4653.32	0.00	50.38	4653.32	7.40	0.00	0 00:56	23.20	42.00
290	J42893	Junction	4496.93	4500.63	0.00	4504.33	0.00	8.06	4498.07	0.00	2.56	0 00:00	0.00	0.00
291	J42901	Junction	4655.25	4661.05	0.00	4666.85	0.00	23.30	4666.85	5.80	0.00	0 00:51	0.00	0.00
292	J42903	Junction	4651.21	4656.91	0.00	4662.61	0.00	23.45	4662.61	5.70	0.00	0 00:49	0.01	0.00
293	J42904	Junction	4646.81	4652.41	0.00	4658.01	0.00	23.57	4658.01	5.60	0.00	0 00:49	0.01	0.00
294	J42905	Junction	4645.67	4651.87	0.00	4658.07	0.00	23.57	4658.07	6.20	0.00	0 00:48	0.01	0.00
295	J42906	Junction	4644.64	4651.14	0.00	4657.64	0.00	23.57	4657.64	6.50	0.00	0 00:48	0.00	0.00
296	J42907	Junction	4643.68	4650.23	0.00	4656.78	0.00	23.57	4656.78	6.55	0.00	0 00:48	0.00	0.00
297	J42908	Junction	4642.03	4649.63	0.00	4657.23	0.00	23.57	4657.23	7.60	0.00	0 00:48	0.00	0.00
298	J42958	Junction	4715.39	4728.89	0.00	4742.39	0.00	5.73	4716.42	0.00	12.47	0 00:00	0.00	0.00
299	J42959	Junction	4715.17	4726.62	0.00	4738.07	0.00	5.73	4715.68	0.00	10.94	0 00:00	0.00	0.00
300	J42960	Junction	4699.92	4706.62	0.00	4713.32	0.00	5.73	4700.46	0.00	6.16	0 00:00	0.00	0.00
301	J42961	Junction	4683.98	4689.48	0.00	4694.98	0.00	5.73	4684.49	0.00	4.99	0 00:00	0.00	0.00
302	J42962	Junction	4673.12	4679.32	0.00	4685.52	0.00	5.73	4685.52	6.20	0.00	0 00:53	0.00	0.00
303	J42963	Junction	4662.65	4668.65	0.00	4674.65	0.00	6.21	4674.65	6.00	0.00	0 01:10	1.65	30.00
304	J42964	Junction	4660.16	4667.46	0.00	4674.76	0.00	23.52	4674.76	7.30	0.00	0 00:47	0.00	0.00
305	J42992	Junction	4570.69	4575.49	0.00	4580.29	0.00	5.85	4580.29	4.80	0.00	0 01:35	0.00	0.00
306	J42993	Junction	4569.84	4574.59	0.00	4579.34	0.00	8.53	4579.34	4.75	0.00	0 01:34	0.00	0.00
307	J42997	Junction	4568.40	4572.55	0.00	4576.70	0.00	8.53	4574.24	1.69	0.00	0 00:00	0.00	0.00
308	J42998	Junction	4568.05	4573.15	0.00	4578.25	0.00	8.53	4573.50	0.35	0.00	0 00:00	0.00	0.00
309	J431143	Junction	4739.37	4742.94	0.00	4746.51	0.00	16.57	4746.51	3.57	0.00	0 00:59	2.96	25.00
310	J441024-0	Junction	4578.99	4590.09	0.00	4601.19	0.00	18.20	4579.77	0.00	10.32	0 00:00	0.00	0.00
311	J441024-1	Junction	4576.75	4588.25	0.00	4599.75	0.00	24.59	4578.56	0.00	9.69	0 00:00	0.00	0.00
312	J441032-1	Junction	4592.84	4599.09	0.00	4605.34	0.00	7.02	4599.55	0.46	0.00	0 00:00	0.00	0.00
313	J441117-0	Junction	4617.87	4629.52	0.00	4636.19	0.00	2.65	4618.26	0.00	11.26	0 00:00	0.00	0.00
314	J441211-0	Junction	4626.54	4631.04	0.00	4635.54	0.00	57.80	4635.54	4.50	0.00	0 00:45	0.55	28.00
315	J441211-1	Junction	4623.61	4630.28	0.00	4636.95	0.00	57.80	4635.81	5.53	0.00	0 00:00	0.00	0.00
316	J441317-0	Junction	4717.08	4727.19	0.00	4737.29	0.00	5.73	4717.91	0.00	9.28	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
317	J441557-0	Junction	4693.78	4701.38	0.00	4708.98	0.00	18.84	4697.01	0.00	4.37	0 00:00	0.00	0.00
318	J441560-0	Junction	4696.87	4705.22	0.00	4713.57	0.00	15.42	4699.22	0.00	7.65	0 00:00	0.00	0.00
319	J441565-1	Junction	4693.98	4708.08	0.00	4722.18	0.00	27.81	4697.30	0.00	10.78	0 00:00	0.00	0.00
320	J441657-0	Junction	4638.41	4643.98	0.00	4650.65	0.00	217.98	4650.65	6.67	0.00	0 00:03	0.44	1.00
321	J441657-1	Junction	4638.41	4644.16	0.00	4649.91	0.00	5107.27	4649.91	5.75	0.00	0 00:58	27.67	167.00
322	J441660-0	Junction	4645.74	4654.22	0.00	4660.89	0.00	1059.62	4660.89	6.67	0.00	0 00:03	8.58	1.00
323	J441664-0	Junction	4637.98	4643.86	0.00	4650.53	0.00	2306.82	4650.53	6.67	0.00	0 00:02	9.21	1.00
324	J441666-1	Junction	4628.74	4643.45	0.00	4650.12	0.00	1687.99	4650.12	6.67	0.00	0 00:02	16.62	31.00
325	J441667-1	Junction	4666.59	4673.26	0.00	4679.93	0.00	11.20	4667.16	0.00	6.10	0 00:00	0.00	0.00
326	J441673-1	Junction	4723.25	4729.80	0.00	4736.35	0.00	10.03	4724.59	0.00	5.21	0 00:00	0.00	0.00
327	J441759-0	Junction	4508.14	4517.96	0.00	4524.63	0.00	8.06	4508.87	0.00	9.09	0 00:00	0.00	0.00
328	J441814-0	Junction	4543.78	4549.57	0.00	4555.37	0.00	36.13	4545.41	0.00	8.37	0 00:00	0.00	0.00
329	J441823.0	Junction	4636.38	4643.08	0.00	4649.78	0.00	23.35	4637.42	0.00	5.66	0 00:00	0.00	0.00
330	J44269-1	Junction	4720.40	4727.07	0.00	4733.74	0.00	22.32	4726.70	0.00	3.70	0 00:00	0.00	0.00
331	J44279-1	Junction	4589.18	4592.62	0.00	4599.29	0.00	7.02	4599.29	6.67	0.00	0 02:02	1.22	82.00
332	J4429-0	Junction	4621.41	4632.89	0.00	4632.89	0.00	13.47	4623.41	0.00	9.48	0 00:00	0.00	0.00
333	J44373-0	Junction	4554.50	4559.43	0.00	4566.10	0.00	7.22	4554.93	0.00	9.57	0 00:00	0.00	0.00
334	J44377-1	Junction	4546.06	4554.75	0.00	4561.42	0.00	5.26	4546.37	0.00	8.38	0 00:00	0.00	0.00
335	J44488-1	Junction	4592.40	4597.30	0.00	4602.20	0.00	0.00	4592.40	0.00	4.90	0 00:00	0.00	0.00
336	J44563-1	Junction	4588.62	4592.48	0.00	4599.15	0.00	5.70	4598.27	5.79	0.00	0 00:00	0.00	0.00
337	J44598-1	Junction	4648.85	4654.25	0.00	4659.65	0.00	4.04	4659.65	5.40	0.00	0 00:51	0.00	0.00
338	J44599-0	Junction	4647.46	4658.96	0.00	4670.46	0.00	4.06	4648.25	0.00	10.71	0 00:00	0.00	0.00
339	J44612-0	Junction	4634.84	4641.34	0.00	4647.84	0.00	18.60	4639.27	0.00	2.07	0 00:00	0.00	0.00
340	J44614-0	Junction	4581.74	4587.59	0.00	4593.44	0.00	18.20	4584.99	0.00	2.60	0 00:00	0.00	0.00
341	J4466-1	Junction	4520.95	4529.97	0.00	4536.64	0.00	48.36	4521.73	0.00	9.22	0 00:00	0.00	0.00
342	J44681.0	Junction	4591.92	4596.82	0.00	4601.72	0.00	12.50	4592.52	0.00	4.30	0 00:00	0.00	0.00
343	JJR060.01-0	Junction	4586.22	4592.89	0.00	4599.56	0.00	39.45	4586.91	0.00	9.31	0 00:00	0.00	0.00
344	JJR060.01-1	Junction	4562.00	4568.67	0.00	4575.34	0.00	39.42	4569.80	0.00	2.20	0 00:00	0.00	0.00
345	JJR060.02-0	Junction	4611.44	4618.11	0.00	4624.78	0.00	58.47	4612.27	0.00	9.17	0 00:00	0.00	0.00
346	JJR060.02-1	Junction	4586.88	4593.55	0.00	4600.22	0.00	58.45	4592.66	0.00	4.22	0 00:00	0.00	0.00
347	JJR062.01-0	Junction	4648.54	4655.21	0.00	4661.88	0.00	5.08	4648.74	0.00	9.80	0 00:00	0.00	0.00
348	JJR062.01-1	Junction	4611.92	4618.59	0.00	4625.26	0.00	5.07	4614.45	0.00	7.47	0 00:00	0.00	0.00
349	JJR062.02-0	Junction	4674.27	4680.94	0.00	4680.94	0.00	5.17	4674.47	0.00	9.80	0 00:00	0.00	0.00
350	JJR062.02-1	Junction	4648.89	4655.56	0.00	4662.23	0.00	5.17	4650.73	0.00	8.16	0 00:00	0.00	0.00
351	JJR062.03-0	Junction	4689.20	4695.87	0.00	4702.54	0.00	5.28	4689.48	0.00	14.18	0 00:00	0.00	0.00
352	JJR062.03-1	Junction	4676.73	4683.40	0.00	4683.40	0.00	5.27	4677.43	0.00	9.30	0 00:00	0.00	0.00
353	JJR062.04-0	Junction	4902.18	4908.85	0.00	4915.52	0.00	7.87	4902.43	0.00	9.75	0 00:00	0.00	0.00
354	JJR062.04-1	Junction	4697.75	4704.42	0.00	4711.09	0.00	7.71	4698.46	0.00	9.29	0 00:00	0.00	0.00
355	JJR062.06-1	Junction	4937.75	4944.42	0.00	4951.09	0.00	7.87	4937.94	0.00	9.81	0 00:00	0.00	0.00
356	JJR062.07-1	Junction	4947.36	4954.03	0.00	4960.70	0.00	7.88	4947.67	0.00	9.69	0 00:00	0.00	0.00
357	JJR062.08-1	Junction	5009.12	5015.79	0.00	5022.46	0.00	7.89	5009.32	0.00	9.80	0 00:00	0.00	0.00
358	JJR062.09-1	Junction	5034.61	5041.28	0.00	5047.95	0.00	7.90	5034.84	0.00	9.77	0 00:00	0.00	0.00
359	JJR062.10-1	Junction	5120.19	5126.86	0.00	5133.53	0.00	7.95	5120.42	0.00	9.77	0 00:00	0.00	0.00
360	JJR062.11-0	Junction	6211.15	6217.82	0.00	6224.49	0.00	8.09	6211.31	0.00	9.84	0 00:00	0.00	0.00
361	JJR062.11-1	Junction	5271.65	5278.32	0.00	5284.99	0.00	8.06	5271.86	0.00	9.79	0 00:00	0.00	0.00
362	JPR050.01-1	Junction	4719.05	4725.72	0.00	4732.39	0.00	2.74	4719.10	0.00	9.95	0 00:00	0.00	0.00
363	JPR050.02-0	Junction	6210.37	6217.04	0.00	6223.71	0.00	4.02	6210.47	0.00	9.90	0 00:00	0.00	0.00
364	JPR050.02-1	Junction	4835.97	4842.64	0.00	4849.31	0.00	3.37	4836.09	0.00	9.88	0 00:00	0.00	0.00
365	JPR060.02-0	Junction	4898.95	4905.62	0.00	4912.29	0.00	2.31	4899.05	0.00	9.90	0 00:00	0.00	0.00
366	JPR060.06-0	Junction	5389.84	5396.51	0.00	5403.18	0.00	2.39	5389.93	0.00	9.91	0 00:00	0.00	0.00
367	JPR060.06-1	Junction	5052.04	5058.71	0.00	5065.38	0.00	2.36	5052.13	0.00	9.91	0 00:00	0.00	0.00
368	JTG010.02-0	Junction	4502.15	4506.51	0.00	4513.18	0.00	35.87	4503.44	0.00	8.71	0 00:00	0.00	0.00
369	JTG010.03-0	Junction	4501.85	4508.45	0.00	4515.12	0.00	37.15	4503.42	0.00	8.43	0 00:00	0.00	0.00
370	JTG010.03-1	Junction	4501.58	4509.72	0.00	4516.39	0.00	73.01	4503.35	0.00	8.23	0 00:00	0.00	0.00
371	JTG010.04-0	Junction	4542.60	4550.98	0.00	4557.65	0.00	73.41	4543.87	0.00	10.44	0 00:00	0.00	0.00
372	JTG010.05-0	Junction	4591.30	4597.97	0.00	4604.64	0.00	74.23	4592.59	0.00	8.71	0 00:00	0.00	0.00
373	JTG010.08-1	Junction	4669.46	4676.13	0.00	4682.80	0.00	73.65	4670.58	0.00	8.88	0 00:00	0.00	0.00
374	JTG020.01-1	Junction	4652.00	4658.67	0.00	4665.34	0.00	74.48	4653.19	0.00	8.81	0 00:00	0.00	0.00
375	JTG020.02-0	Junction	5929.34	5936.01	0.00	5942.68	0.00	1.00	5929.39	0.00	9.95	0 00:00	0.00	0.00
376	JTG020.02-1	Junction	4708.14	4714.81	0.00	4721.48	0.00	1.00	4708.22	0.00	9.92	0 00:00	0.00	0.00
377	JTG030.05-0	Junction	4693.33	4700.00	0.00	4706.67	0.00	0.06	4693.34	0.00	9.99	0 00:00	0.00	0.00
378	JTG030.05-1	Junction	4619.53	4626.20	0.00	4632.87	0.00	0.02	4619.53	0.00	10.00	0 00:00	0.00	0.00
379	JTG040.0-0	Junction	4960.00	4966.00	0.00	6.00	0.00	0.16	4960.01	0.00	9.99	0 00:00	0.00	0.00
380	JTG060.01-0	Junction	6952.33	6959.00	0.00	6965.67	0.00	91.40	6956.93	0.00	9.07	0 00:00	0.00	0.00
381	JTG070.01-1	Junction	4652.71	4659.38	0.00	4666.05	0.00	74.60	4654.82	0.00	7.89	0 00:00	0.00	0.00
382	JTG070.02-1	Junction	4735.62	4742.29	0.00	4748.96	0.00	72.63	4736.63	0.00	8.99	0 00:00	0.00	0.00
383	JTG070.03-0	Junction	5370.36	5377.03	0.00	5383.70	0.00	0.00	5370.36	0.00	10.00	0 00:00	0.00	0.00
384	JTG070.03-1	Junction	5142.62	5149.29	0.00	5155.96	0.00	69.17	5143.52	0.00	9.10	0 00:00	0.00	0.00
385	JUL010.04-0	Junction	4614.13	4620.80	0.00	4627.47	0.00	13.90	4614.45	0.00	9.68	0 00:00	0.00	0.00
386	JUL010.04-1	Junction	4495.70	4502.37	0.00	4509.04	0.00	13.78	4496.21	0.00	9.49	0 00:00	0.00	0.00
387	JUL010.08-0	Junction	4675.67	4682.34	0.00	4689.01	0.00	13.99	4675.97	0.00	9.70	0 00:00	0.00	0.00
388	JUL010.10-0	Junction	5849.45	5856.12	0.00	5862.79	0.00	17.67	5849.72	0.00	9.73	0 00:00	0.00	0.00
389	JUL010.10-1	Junction	4812.10	4818.77	0.00	4825.44	0.00	15.01	4812.39	0.00	9.71	0 00:00	0.00	0.00
390	JUL020.02-0	Junction	4865.89	4872.56	0.00	4879.23	0.00	19.11	4866.20	0.00	9.69	0 00:00	0.00	0.00
391	JUL020.06-0	Junction	5072.86	5079.53	0.00	5086.20	0.00	4.19	5072.98	0.00	9.88	0 00:00	0.00	0.00
392	JUL020.10-0	Junction	5162.24	5168.91	0.00	5175.58	0.00	0.00	5162.24	0.00	10.00	0 00:00	0.00	0.00
393	JUL020.12-0	Junction	5346.59	5353.26	0.00	5359.93	0.00	0.00	5346.59	0.00	10.00	0 00:00	0.00	0.00
394	JUL030.02-0	Junction	4580.07	4586.74	0.00	4593.41	0.00	5.34	4580.24	0.00	9.83	0 00:00	0.00	0.00
395	JUL030.04-0	Junction	4587.21	4593.88	0.00	4600.55	0.00	5.34	4587.38	0.00	9.83	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
396	JUL030.08-1	Junction	4618.14	4624.81	0.00	4631.48	0.00	5.37	4618.32	0.00	9.82	0 00:00	0.00	0.00
397	JUL030.12-1	Junction	4623.65	4630.32	0.00	4636.99	0.00	6.74	4623.84	0.00	9.81	0 00:00	0.00	0.00
398	JUL030.14-0	Junction	5067.12	5073.79	0.00	5080.46	0.00	8.78	5067.31	0.00	9.81	0 00:00	0.00	0.00
399	JUL030.14-1	Junction	4769.44	4776.11	0.00	4782.78	0.00	7.42	4769.63	0.00	9.81	0 00:00	0.00	0.00
400	JUL030.16-0	Junction	5222.41	5229.08	0.00	5235.75	0.00	5.89	5222.56	0.00	9.85	0 00:00	0.00	0.00
401	JUL031.06-1	Junction	4887.75	4894.42	0.00	4901.09	0.00	0.03	4887.76	0.00	9.99	0 00:00	0.00	0.00
402	JUL031.10-0	Junction	6622.71	6629.38	0.00	6636.05	0.00	0.19	6622.72	0.00	9.99	0 00:00	0.00	0.00
403	JUL031.10-1	Junction	5457.22	5463.89	0.00	5470.56	0.00	0.06	5457.23	0.00	9.99	0 00:00	0.00	0.00
404	JUL033.02-0	Junction	5974.93	5981.60	0.00	5988.27	0.00	3.31	5975.01	0.00	9.92	0 00:00	0.00	0.00
405	JUL033.02-1	Junction	5352.23	5358.90	0.00	5365.57	0.00	3.35	5352.32	0.00	9.91	0 00:00	0.00	0.00
406	JUL034.02-0	Junction	5708.23	5714.90	0.00	5721.57	0.00	5.94	5708.35	0.00	9.88	0 00:00	0.00	0.00
407	JUL040.04-1	Junction	4745.79	4752.46	0.00	4759.13	0.00	0.53	4745.83	0.00	9.96	0 00:00	0.00	0.00
408	JUL040.06-0	Junction	5281.46	5288.13	0.00	5294.80	0.00	0.84	5281.50	0.00	9.96	0 00:00	0.00	0.00
409	JUL040.06-1	Junction	4763.85	4770.52	0.00	4777.19	0.00	0.68	4763.91	0.00	9.94	0 00:00	0.00	0.00
410	JUL041.02-1	Junction	4627.15	4637.63	0.00	4644.30	0.00	0.00	4627.15	0.00	10.48	0 00:00	0.00	0.00
411	JUL041.04-0	Junction	5183.21	5189.88	0.00	5196.55	0.00	0.00	5183.21	0.00	10.00	0 00:00	0.00	0.00
412	JUL041.04-1	Junction	4741.62	4748.29	0.00	4754.96	0.00	0.00	4741.62	0.00	10.00	0 00:00	0.00	0.00
413	JUL045.02-0	Junction	6540.33	6547.00	0.00	6553.67	0.00	1.00	6540.37	0.00	9.96	0 00:00	0.00	0.00
414	JUL062.02-0	Junction	4933.69	4940.36	0.00	4947.03	0.00	7.52	4933.85	0.00	9.84	0 00:00	0.00	0.00
415	JUL065.02-0	Junction	6574.33	6581.00	0.00	6587.67	0.00	0.00	6574.33	0.00	10.00	0 00:00	0.00	0.00
416	JUL066.02-0	Junction	6216.13	6222.80	0.00	6229.47	0.00	0.91	6216.17	0.00	9.96	0 00:00	0.00	0.00
417	JUL070.02-0	Junction	4581.13	4587.80	0.00	4594.47	0.00	21.99	4581.49	0.00	9.64	0 00:00	0.00	0.00
418	JUL070.04-0	Junction	4647.09	4655.74	0.00	4662.41	0.00	10.02	4647.32	0.00	9.77	0 00:00	0.00	0.00
419	JUL070.04-1	Junction	4590.98	4604.49	0.00	4611.16	0.00	22.02	4591.69	0.00	12.80	0 00:00	0.00	0.00
420	JUL070.06-0	Junction	4659.93	4666.60	0.00	4673.27	0.00	6.61	4660.12	0.00	9.81	0 00:00	0.00	0.00
421	JUL070.10-0	Junction	5083.29	5089.96	0.00	5096.63	0.00	0.85	5083.33	0.00	9.96	0 00:00	0.00	0.00
422	JUL070.10-1	Junction	4779.12	4812.06	0.00	4818.73	0.00	2.71	4779.21	0.00	32.85	0 00:00	0.00	0.00
423	JUL070.12-0	Junction	5214.49	5221.16	0.00	5227.83	0.00	0.88	5214.54	0.00	9.95	0 00:00	0.00	0.00
424	JUL070.14-0	Junction	5261.14	5267.81	0.00	5274.48	0.00	0.00	5261.14	0.00	10.00	0 00:00	0.00	0.00
425	JUL080.02-0	Junction	4576.48	4585.13	0.00	4591.80	0.00	24.59	4576.92	0.00	9.56	0 00:00	0.00	0.00
426	JUL080.04-0	Junction	4595.90	4602.57	0.00	4609.24	0.00	18.59	4596.15	0.00	9.75	0 00:00	0.00	0.00
427	JUL080.04-1	Junction	4636.02	4642.69	0.00	4649.36	0.00	18.60	4636.38	0.00	9.64	0 00:00	0.00	0.00
428	JUL080.06-0	Junction	4635.30	4638.81	0.00	4642.31	0.00	31.18	4639.96	0.00	5.34	0 00:00	0.00	0.00
429	JUL080.06-1	Junction	4695.88	4702.55	0.00	4709.22	0.00	14.58	4696.17	0.00	9.71	0 00:00	0.00	0.00
430	JUL080.08-0	Junction	4696.80	4703.47	0.00	4710.14	0.00	14.59	4697.15	0.00	9.65	0 00:00	0.00	0.00
431	JUL080.08-1	Junction	4711.67	4718.34	0.00	4725.01	0.00	14.59	4711.95	0.00	9.72	0 00:00	0.00	0.00
432	JUL080.10-0	Junction	4770.94	4777.61	0.00	4784.28	0.00	2.76	4771.04	0.00	9.90	0 00:00	0.00	0.00
433	JUL080.10-1	Junction	4717.35	4724.02	0.00	4730.69	0.00	14.70	4718.78	0.00	8.57	0 00:00	0.00	0.00
434	JUL080.12-0	Junction	4776.51	4783.18	0.00	4789.85	0.00	7.43	4777.94	0.00	8.57	0 00:00	0.00	0.00
435	JUL080.12-1	Junction	4878.08	4884.75	0.00	4891.42	0.00	8.00	4878.26	0.00	9.82	0 00:00	0.00	0.00
436	JUL080.14-0	Junction	5014.70	5021.37	0.00	5028.04	0.00	0.03	5014.71	0.00	9.99	0 00:00	0.00	0.00
437	JUL080.16-0	Junction	5227.63	5234.30	0.00	5240.97	0.00	0.04	5227.64	0.00	9.99	0 00:00	0.00	0.00
438	JUL084.02-0	Junction	6213.33	6220.00	0.00	6226.67	0.00	0.18	6213.34	0.00	9.99	0 00:00	0.00	0.00
439	JUL100.02-1	Junction	4820.37	4825.52	0.00	4832.19	0.00	0.59	4820.53	0.00	4.99	0 00:00	0.00	0.00
440	JUL100.04-0	Junction	5012.74	5019.41	0.00	5026.08	0.00	0.80	5012.78	0.00	9.96	0 00:00	0.00	0.00
441	JUL100.04-1	Junction	4826.25	4832.92	0.00	4839.59	0.00	0.65	4826.30	0.00	9.95	0 00:00	0.00	0.00
442	JUL100.06-0	Junction	5193.10	5199.77	0.00	5206.44	0.00	0.83	5193.15	0.00	9.95	0 00:00	0.00	0.00
443	JUL120.02-0	Junction	4505.93	4512.60	0.00	4519.27	0.00	75.45	4507.05	0.00	8.88	0 00:00	0.00	0.00
444	JUL120.04-0	Junction	4541.49	4548.16	0.00	4554.83	0.00	75.92	4542.41	0.00	9.08	0 00:00	0.00	0.00
445	JUL120.04-1	Junction	4506.91	4513.58	0.00	4520.25	0.00	75.45	4509.72	0.00	12.01	0 00:00	0.00	0.00
446	JUL120.06-0	Junction	4574.18	4580.85	0.00	4587.52	0.00	77.17	4575.13	0.00	9.05	0 00:00	0.00	0.00
447	JUL120.06-1	Junction	4541.09	4547.76	0.00	4554.43	0.00	76.97	4542.87	0.00	8.22	0 00:00	0.00	0.00
448	JUL121.02-0	Junction	4698.77	4705.44	0.00	4712.11	0.00	16.62	4699.22	0.00	9.55	0 00:00	0.00	0.00
449	JUL121.04-0	Junction	5110.19	5116.86	0.00	5123.53	0.00	0.00	5110.19	0.00	10.00	0 00:00	0.00	0.00
450	JUL121.07-0	Junction	5108.32	5114.99	0.00	5121.66	0.00	0.00	5108.32	0.00	10.00	0 00:00	0.00	0.00
451	JUL121.07-1	Junction	5027.00	5033.67	0.00	5040.34	0.00	0.00	5027.00	0.00	10.00	0 00:00	0.00	0.00
452	JUL126.02-0	Junction	6714.13	6720.80	0.00	6727.47	0.00	0.00	6714.13	0.00	15.87	0 00:00	0.00	0.00
453	JUL130.02-0	Junction	4566.45	4573.12	0.00	4579.79	0.00	6.25	4566.66	0.00	9.79	0 00:00	0.00	0.00
454	JUL130.02-1	Junction	4505.04	4511.71	0.00	4518.38	0.00	6.25	4505.25	0.00	9.79	0 00:00	0.00	0.00
455	JUL130.04-0	Junction	4581.26	4587.93	0.00	4594.60	0.00	18.99	4581.82	0.00	9.44	0 00:00	0.00	0.00
456	JUL130.04-1	Junction	4567.91	4574.58	0.00	4581.25	0.00	18.81	4572.31	0.00	5.60	0 00:00	0.00	0.00
457	JUL130.06-0	Junction	4590.00	4603.44	0.00	4610.11	0.00	18.93	4590.37	0.00	13.07	0 00:00	0.00	0.00
458	JUL130.06-1	Junction	4582.55	4589.22	0.00	4595.89	0.00	18.93	4583.47	0.00	9.08	0 00:00	0.00	0.00
459	JUL130.08-0	Junction	4592.42	4604.78	0.00	4611.45	0.00	24.96	4593.51	0.00	11.27	0 00:00	0.00	0.00
460	JUL130.08-1	Junction	4594.64	4602.65	0.00	4609.32	0.00	14.39	4595.20	0.00	9.44	0 00:00	0.00	0.00
461	JUL132.02-1	Junction	4760.63	4767.30	0.00	4773.97	0.00	11.01	4761.55	0.00	9.08	0 00:00	0.00	0.00
462	JUL132.04-0	Junction	5089.33	5096.00	0.00	5102.67	0.00	13.26	5089.53	0.00	9.80	0 00:00	0.00	0.00
463	JUL132.04-1	Junction	4840.89	4847.56	0.00	4854.23	0.00	9.34	4841.13	0.00	9.76	0 00:00	0.00	0.00
464	JUL132.05-0	Junction	6033.00	6039.70	0.00	6046.37	0.00	3.19	6033.10	0.00	9.90	0 00:00	0.00	0.00
465	JUL144.04-0	Junction	4958.80	4965.47	0.00	4972.14	0.00	11.82	4959.05	0.00	9.75	0 00:00	0.00	0.00
466	JUL144.04-1	Junction	4766.71	4773.38	0.00	4780.05	0.00	11.45	4766.96	0.00	9.75	0 00:00	0.00	0.00
467	JUL148.01-0	Junction	5462.33	5469.00	0.00	5475.67	0.00	11.45	5462.55	0.00	9.78	0 00:00	0.00	0.00
468	JUL152.02-0	Junction	4550.30	4558.56	0.00	4565.23	0.00	8.62	4551.11	0.00	9.19	0 00:00	0.00	0.00
469	JUL152.02-1	Junction	4547.04	4555.99	0.00	4562.66	0.00	5.26	4547.82	0.00	11.50	0 00:00	0.00	0.00
470	JUL152.04-0	Junction	4554.21	4559.84	0.00	4566.51	0.00	7.22	4554.68	0.00	9.53	0 00:00	0.00	0.00
471	JUL152.04-1	Junction	4551.14	4558.14	0.00	4564.81	0.00	7.12	4552.26	0.00	8.88	0 00:00	0.00	0.00
472	Jun-38	Junction	4605.00	4615.00	0.00	0.00	0.00	0.00	4605.00	0.00	10.00	0 00:00	0.00	0.00
473	Jun-39	Junction	4618.00	4624.00	0.00	0.00	0.00	0.00	4618.00	0.00	6.00	0 00:00	0.00	0.00
474	Jun-40	Junction	4653.50	4659.50	0.00	0.00	0.00	0.00	4653.50	0.00	6.00	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
475	Jun-41	Junction	4880.00	4887.00	0.00	0.00	0.00	0.00	4880.00	0.00	15.60	0 00:00	0.00	0.00
476	UL024.02-0	Junction	7100.00	7106.67	0.00	7113.34	0.00	4.28	7100.11	0.00	9.89	0 00:00	0.00	0.00
477	J0008-1	Outfall	4494.53					64.52	4494.53					
478	J0104-1	Outfall	4501.97					9.19	4501.97					
479	J0105-1	Outfall	4519.09					48.36	4519.80					
480	J42797	Outfall	4520.54					11.93	4521.21					
481	J441761-1	Outfall	4491.44					8.06	4492.45					
482	J44298-1	Outfall	4498.50					62.57	4499.57					
483	J44325-1	Outfall	4502.46					6.25	4502.67					
484	JPR060.02-1	Outfall	4727.73					2.26	4727.83					
485	JTG010.01-1	Outfall	4500.00					72.97	4501.71					
486	JUL010.02-1	Outfall	4491.00					13.47	4491.51					
487	JUL020.02-1	Outfall	4490.00					16.92	4490.31					
488	JUL030.02-1	Outfall	4501.37					5.29	4501.54					
489	JUL070.02-1	Outfall	4500.32					21.98	4500.68					
490	JUL080.02-1	Outfall	4493.46					24.58	4493.90					
491	JUL120.02-1	Outfall	4504.59					75.45	4505.59					
492	Out-18	Outfall	4489.00					2.74	4489.00					
493	Out-21	Outfall	4489.00					1.43	4489.00					
494	Out-22	Outfall	0.00					24.14	0.00					
495	Out-23	Outfall	0.00					0.33	0.00					
496	Out-24	Outfall	0.00					9.92	0.00					
497	JUL121.06-1	Storage Node	4893.00	4903.50	0.00		0.00	0.00	4893.00				0.00	0.00
498	SN-200W	Storage Node	4536.80	5.20	0.00		20.00	28.37	4540.41				0.00	415.00
499	SN-540W	Storage Node	4568.20	3.20	0.00		20.00	13.52	4570.31				0.00	415.00
500	SN-610W	Storage Node	4573.00	3.40	0.00		20.00	42.42	4650.06				0.41	415.00
501	SN-Comm	Storage Node	4509.40	3.20	0.00		20.00	19.47	4511.80				0.00	415.00
502	SN-HHBl	Storage Node	4641.60	4.20	0.00		20.00	13.96	4642.27				0.00	415.00
503	SN-HHPa	Storage Node	4727.60	2.40	0.00		20.00	10.83	4729.12				0.00	415.00
504	SN-HillC	Storage Node	4621.20	5.20	0.00		20.00	5.26	4621.68				0.00	415.00
505	SN-KitF	Storage Node	4820.40	4.00	0.00		20.00	0.59	4820.65				0.00	359.00
506	SN-Mav	Storage Node	4597.00	5.60	0.00		20.00	27.15	4599.28				0.00	415.00
507	SN-Orch	Storage Node	4743.00	2.80	0.00		20.00	19.22	4745.22				0.00	415.00
508	SN-Pepp	Storage Node	4618.80	10.80	0.00		20.00	57.21	4626.57				0.00	412.00
509	SN-Pond	Storage Node	4625.00	4634.40	0.00		20.00	58.17	4655.44				0.20	221.00
510	SN-Rock	Storage Node	4788.10	10.90	0.00		20.00	5.15	4788.39				0.00	415.00
511	SN-SMPN	Storage Node	4628.60	3.00	0.00		20.00	29.71	4631.04				0.00	415.00
512	SN-SMPS	Storage Node	4628.60	3.20	0.00		20.00	16.68	4630.91				0.00	415.00
513	SN-Still	Storage Node	4726.40	1.00	0.00		20.00	23.61	4729.56				0.25	415.00
514	SN-SUMM	Storage Node	4599.80	7.40	0.00		20.00	8.60	4601.77				0.00	388.00
515	SN-Swain	Storage Node	4654.40	5.80	0.00		20.00	7.90	4655.33				0.00	415.00
516	SN-Vill	Storage Node	4587.40	4.60	0.00		20.00	16.80	4588.71				0.00	368.00
517	SN-Waym	Storage Node	4723.60	6.80	0.00		20.00	31.75	4725.14				0.00	415.00
518	SN-Weath	Storage Node	4702.20	5.80	0.00		20.00	0.00	4702.20				0.00	0.00
519	SN-WildF	Storage Node	4592.80	4.40	0.00		20.00	8.14	4593.29				0.00	415.00
520	SN-WildL	Storage Node	4592.80	4.40	0.00		20.00	34.34	4595.46				0.00	415.00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
1	0001	Pipe	J42306	J42302	251.32	4518.99	4500.54	7.3400	3.000	0.0130	64.59	180.72	0.36	14.60	1.77	0.60	0.00	Calculated
2	0002	Pipe	J44488-1	J42341	61.98	4592.40	4590.49	3.0800	3.000	0.0130	0.00	117.09	0.00	0.00	0.00	0.00	0.00	Calculated
3	0004	Pipe	J0004-0	J42306	174.71	4525.19	4518.99	3.5500	3.000	0.0130	64.57	125.65	0.51	16.46	1.61	0.54	0.00	Calculated
4	0005	Pipe	J42307	J0004-0	648.84	4545.94	4525.19	3.2000	3.000	0.0130	64.66	119.28	0.54	14.49	1.80	0.60	0.00	Calculated
5	0006	Pipe	J0006-0	J42307	859.23	4578.80	4545.94	3.8200	3.000	0.0130	64.76	130.44	0.50	17.10	1.58	0.53	0.00	Calculated
6	0007	Pipe	J42340	J0006-0	140.95	4584.36	4578.80	3.9400	3.000	0.0130	0.00	132.47	0.00	0.00	0.78	0.26	0.00	Calculated
7	0008	Pipe	J42302	J0008-1	199.41	4500.54	4496.64	1.9600	3.000	0.0130	64.52	93.28	0.69	12.26	2.06	0.70	0.00	Calculated
8	0009	Pipe	J42341	J42340	613.10	4590.49	4584.36	1.0000	3.000	0.0130	0.00	66.69	0.00	0.00	0.00	0.00	0.00	Calculated
9	0010	Pipe	J42438	J0006-0	134.44	4586.41	4578.80	5.6600	2.500	0.0130	64.84	97.59	0.66	17.26	1.79	0.72	0.00	Calculated
10	0011	Pipe	J0011-0	J42438	25.73	4586.34	4586.41	-0.2700	2.500	0.0130	0.52	21.39	0.02	1.72	2.06	0.82	0.00	Calculated
11	0013	Pipe	J42308	J0012-1	307.90	4600.22	4587.41	4.1600	1.500	0.0130	0.52	21.43	0.02	5.80	0.51	0.34	0.00	Calculated
12	0017	Pipe	JJR062.04-1	JJR062.03-0	160.92	4697.95	4696.66	0.8000	7.000	0.0130	5.28	571.97	0.01	4.42	0.49	0.07	0.00	Calculated
13	0028	Pipe	J0018-0	J0018-1	263.14	4545.56	4540.09	2.0800	2.000	0.0130	14.22	32.62	0.44	9.32	1.01	0.51	0.00	Calculated
14	0029	Pipe	J0019-0	J0018-0	186.78	4545.76	4545.56	0.1100	2.000	0.0130	14.20	7.40	1.92	5.04	1.68	0.84	0.00	> CAPACITY
15	0030	Pipe	J0018-1	J0020-1	262.46	4540.09	4535.12	1.8900	2.000	0.0130	14.23	31.13	0.46	8.97	1.48	0.75	0.00	Calculated
16	0031	Pipe	J0020-1	J0021-1	269.53	4535.12	4530.51	1.7100	2.000	0.0130	15.06	29.59	0.51	6.05	2.00	1.00	18.00	SURCHARGED
17	0033	Pipe	J0023-0	J0023-1	66.43	4530.35	4529.68	1.0100	2.000	0.0130	15.07	22.72	0.66	5.12	2.00	1.00	39.00	SURCHARGED
18	0034	Pipe	J0021-1	J0023-0	4.79	4530.51	4530.35	3.3400	2.000	0.0130	15.07	41.35	0.36	4.80	2.00	1.00	39.00	SURCHARGED
19	0035	Pipe	J0023-1	J0025-1	69.77	4529.68	4529.18	0.7200	2.000	0.0130	15.07	19.15	0.79	5.76	2.00	1.00	39.00	SURCHARGED
20	0036	Pipe	JJR060.01-1	J0026-1	679.32	4562.10	4546.71	2.2700	1.500	0.0130	16.21	15.81	1.03	9.17	1.50	1.00	200.00	SURCHARGED
21	0037	Pipe	J0026-1	J0019-0	168.43	4546.71	4545.76	0.5600	1.500	0.0130	14.20	7.89	1.80	8.04	1.50	1.00	217.00	SURCHARGED
22	0055	Pipe	J0040-0	J0040-1	58.27	4554.09	4553.18	1.5600	2.000	0.0130	10.71	28.27	0.38	6.30	1.06	0.53	0.00	Calculated
23	0056	Pipe	J0041-0	J0041-1	54.09	4551.21	4550.28	1.7200	2.000	0.0130	10.71	29.66	0.36	6.41	1.05	0.53	0.00	Calculated
24	0057	Pipe	J0040-1	J0041-0	158.86	4553.18	4551.21	1.2400	2.000	0.0130	10.71	25.19	0.43	6.37	1.05	0.53	0.00	Calculated
25	0058	Pipe	J0043-0	J0043-1	92.05	4558.86	4558.42	0.4800	2.000	0.0130	10.70	15.64	0.68	4.87	1.32	0.66	0.00	Calculated
26	0059	Pipe	J0043-1	J0044-1	112.20	4558.42	4556.59	1.6300	2.000	0.0130	10.70	28.89	0.37	7.16	0.96	0.48	0.00	Calculated
27	0062	Pipe	J0044-1	J0040-0	157.83	4556.59	4554.09	1.5800	2.000	0.0130	10.71	28.47	0.38	6.63	1.02	0.51	0.00	Calculated
28	0063	Pipe	J0048-0	J0043-0	109.87	4560.70	4558.86	1.6700	2.000	0.0130	10.71	29.28	0.37	5.41	1.21	0.61	0.00	Calculated
29	0065	Pipe	J0050-0	J0050-1	31.55	4579.17	4579.09	0.2500	2.000	0.0130	6.38	11.39	0.56	3.06	2.00	1.00	89.00	SURCHARGED
30	0066	Pipe	J0050-1	J0051-1	172.79	4579.09	4576.60	1.4400	2.000	0.0130	26.75	27.16	0.99	8.52	2.00	1.00	89.00	SURCHARGED
31	0067	Pipe	J0051-1	J0052-1	401.42	4576.60	4571.48	1.2800	2.000	0.0130	26.75	25.55	1.05	8.52	2.00	1.00	94.00	SURCHARGED
32	0068	Pipe	J421012	J0050-1	127.27	4582.55	4579.09	2.7200	2.000	0.0130	21.37	37.30	0.57	7.84	2.00	1.00	83.00	SURCHARGED
33	0071	Pipe	J0071-0	J0071-1	6.93	4585.38	4585.32	0.8700	1.500	0.0130	6.37	9.77	0.65	6.19	1.50	1.00	67.00	SURCHARGED
34	0073	Pipe	J0073-0	J0073-1	213.70	4605.89	4605.36	0.2500	2.000	0.0130	16.41	11.27	1.46	8.66	1.17	0.58	0.00	> CAPACITY
35	0074	Pipe	J0074-0	J0074-1	128.38	4609.03	4608.13	0.7000	2.000	0.0130	15.40	18.94	0.81	5.96	2.00	1.00	11.00	SURCHARGED
36	0075	Pipe	J0074-1	J0075-1	166.80	4608.13	4605.98	1.2900	2.000	0.0130	15.85	25.68	0.62	6.77	2.00	1.00	16.00	SURCHARGED
37	0076	Pipe	J0076-0	J0074-0	244.02	4609.87	4609.03	0.3400	2.000	0.0130	15.12	13.27	1.14	4.92	2.00	1.00	11.00	SURCHARGED
38	0077	Pipe	J0077-0	J0076-0	295.53	4610.90	4609.87	0.3500	2.000	0.0130	15.12	13.36	1.13	4.81	2.00	1.00	20.00	SURCHARGED
39	0078	Pipe	J0078-0	J0077-0	319.35	4612.12	4610.90	0.3800	2.000	0.0130	15.12	13.98	1.08	4.81	2.00	1.00	25.00	SURCHARGED
40	0079	Pipe	J0079-0	J0078-0	370.85	4613.74	4612.12	0.4400	2.000	0.0130	15.12	14.95	1.01	4.81	2.00	1.00	22.00	SURCHARGED
41	0082	Pipe	J0080-0	J0080-1	95.65	4614.73	4614.29	0.4600	2.000	0.0130	15.12	15.34	0.99	4.81	2.00	1.00	23.00	SURCHARGED
42	0083	Pipe	J0080-1	J0079-0	98.39	4614.29	4613.74	0.5600	2.000	0.0130	15.12	16.91	0.89	4.81	2.00	1.00	22.00	SURCHARGED
43	0084	Pipe	J0084-0	J42554	45.00	4532.69	4534.04	-3.0000	2.000	0.0130	7.12	39.18	0.18	2.27	2.00	1.00	366.00	SURCHARGED
44	0085	Pipe	J42554	J0085-1	100.78	4534.04	4534.04	0.0000	1.250	0.0130	10.41	0.20	51.18	8.49	1.25	1.00	350.00	SURCHARGED
45	0086	Pipe	J0086-0	J0086-1	37.43	4534.15	4533.20	2.5400	2.000	0.0130	7.12	36.04	0.20	2.29	2.00	1.00	366.00	SURCHARGED
46	0087	Pipe	J0086-1	J0084-0	23.15	4533.20	4532.69	2.2000	2.000	0.0130	7.12	33.58	0.21	2.27	2.00	1.00	370.00	SURCHARGED
47	0088	Pipe	J0088-0	J0086-0	161.38	4533.74	4533.75	-0.0100	2.000	0.0130	2.26	11.40	0.20	0.72	2.00	1.00	366.00	SURCHARGED
48	0089	Pipe	J0089-0	J0089-1	40.62	4534.04	4533.24	1.9700	1.250	0.0130	9.33	9.07	1.03	7.67	1.25	1.00	323.00	SURCHARGED
49	0090	Pipe	J0090-0	J0090-1	40.54	4532.64	4531.38	3.1100	1.250	0.0130	9.32	11.39	0.82	11.16	0.80	0.64	0.00	Calculated
50	0091	Pipe	J0091-0	J0091-1	196.41	4526.22	4525.26	0.4900	1.500	0.0130	9.19	7.34	1.25	8.27	0.90	0.60	0.00	> CAPACITY
51	0094	Pipe	J0094-0	J0094-1	25.14	4522.00	4521.70	1.1900	2.000	0.0130	9.19	24.71	0.37	5.90	0.99	0.50	0.00	Calculated
52	0095	Pipe	J0095-0	J0095-1	125.60	4523.29	4522.22	0.8500	2.000	0.0130	9.19	24.56	0.37	6.42	0.96	0.48	0.00	Calculated
53	0111	Pipe	J0111-0	J0111-1	195.95	4766.53	4762.20	2.2100	1.500	0.0130	7.11	15.61	0.46	8.39	0.72	0.48	0.00	Calculated
54	0112	Pipe	J0112-0	J421172	115.07	4756.80	4741.86	12.9800	1.500	0.0130	7.14	37.85	0.19	8.54	1.03	0.69	0.00	Calculated
55	0113	Pipe	J0111-1	J0112-0	139.91	4762.20	4756.80	3.8600	1.500	0.0130	7.10	20.64	0.34	9.90	0.64	0.43	0.00	Calculated
56	0114	Pipe	J0114-0	J0114-1	76.97	4873.88	4869.56	5.6100	1.500	0.0130	7.14	24.89	0.29	10.93	0.60	0.40	0.00	Calculated
57	0115	Pipe	J0114-1	J0115-1	331.78	4869.56	4836.95	9.8300	1.500	0.0130	7.14	32.93	0.22	12.03	0.55	0.37	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
58	0116	Pipe	J0115-1	J0116-1	54.69	4836.95	4833.51	6.2900	1.500	0.0130	7.13	26.34	0.27	10.33	0.62	0.41	0.00	Calculated
59	0117	Pipe	J0116-1	J0117-1	318.75	4833.51	4819.05	4.5400	1.500	0.0130	7.12	22.37	0.32	10.91	0.59	0.40	0.00	Calculated
60	0118	Pipe	J0117-1	J0118-1	250.40	4819.05	4806.49	5.0200	1.500	0.0130	7.12	23.53	0.30	8.97	0.68	0.46	0.00	Calculated
61	0119	Pipe	J0118-1	J0119-1	124.95	4806.49	4803.84	2.1200	1.500	0.0130	7.11	15.30	0.47	7.81	0.76	0.51	0.00	Calculated
62	0120	Pipe	J0119-1	J0120-1	217.83	4803.84	4794.30	4.3800	1.500	0.0130	7.11	21.98	0.32	10.27	0.62	0.41	0.00	Calculated
63	0121	Pipe	J0120-1	J0121-1	209.70	4794.30	4784.91	4.4800	1.500	0.0130	7.11	22.23	0.32	10.90	0.59	0.40	0.00	Calculated
64	0122	Pipe	J0122-0	J0122-1	33.05	4768.70	4766.60	6.3500	1.500	0.0130	7.11	26.48	0.27	5.74	0.99	0.66	0.00	Calculated
65	0123	Pipe	J0121-1	J0122-0	316.22	4784.91	4768.70	5.1300	1.500	0.0130	7.11	23.78	0.30	10.29	0.62	0.41	0.00	Calculated
66	0124	Pipe	J0122-1	J0111-0	32.81	4766.60	4766.53	0.2100	1.500	0.0130	7.11	4.85	1.46	5.41	1.04	0.70	0.00	> CAPACITY
67	0125	Pipe	J0125-0	J0125-1	204.42	4626.22	4617.41	4.3100	2.000	0.0130	22.86	46.96	0.49	9.95	1.36	0.69	0.00	Calculated
68	0126	Pipe	J0126-0	J0126-1	91.91	4632.19	4629.13	3.3300	2.000	0.0130	13.70	41.28	0.33	6.47	1.32	0.67	0.00	Calculated
69	0127	Pipe	J0127-0	J0073-0	76.18	4606.32	4605.89	0.5600	2.000	0.0130	16.38	17.00	0.96	5.21	2.00	1.00	26.00	SURCHARGED
70	0128	Pipe	J0126-1	J0125-0	222.85	4629.13	4626.22	1.3100	2.000	0.0130	22.86	25.85	0.88	8.41	1.60	0.81	0.00	Calculated
71	0129	Pipe	J0129-0	J0127-0	265.66	4615.74	4606.32	3.5500	2.000	0.0130	22.95	42.60	0.54	10.55	1.55	0.77	0.00	Calculated
72	0130	Pipe	J0125-1	J0129-0	90.94	4617.41	4615.74	1.8400	2.000	0.0130	22.89	30.66	0.75	9.77	1.40	0.70	0.00	Calculated
73	0131	Pipe	J0131.0	J42359	454.58	4591.24	4589.72	0.3300	2.000	0.0130	13.19	13.08	1.01	4.20	2.00	1.00	40.00	SURCHARGED
74	0132	Pipe	J42358	J0131.0	387.78	4617.19	4591.24	6.6900	2.000	0.0130	23.28	58.52	0.40	9.63	1.44	0.72	0.00	Calculated
75	0133	Pipe	J0133.0	J42363	65.92	4589.62	4588.99	0.9600	1.250	0.0130	11.87	6.32	1.88	12.29	0.91	0.74	0.00	> CAPACITY
76	0134	Pipe	J42359	J0133.0	11.91	4589.72	4589.62	0.8400	1.250	0.0130	11.87	5.92	2.01	9.67	1.25	1.00	55.00	SURCHARGED
77	0135	Pipe	JJR062.01-1	JJR060.02-0	14.72	4613.99	4612.85	7.7400	2.000	0.0130	3.67	62.96	0.06	8.37	0.39	0.20	0.00	Calculated
78	0136	Pipe	JJR062.03-1	JJR062.02-0	100.11	4676.73	4674.27	2.4600	2.000	0.0130	5.17	35.46	0.15	9.84	0.45	0.22	0.00	Calculated
79	0137	Pipe	JJR062.02-1	JJR062.01-0	15.56	4650.17	4648.97	7.7100	2.000	0.0130	5.08	62.82	0.08	8.95	0.47	0.24	0.00	Calculated
80	0138	Pipe	JJR060.02-1	JJR060.01-0	12.16	4585.80	4585.48	2.6300	2.000	0.0130	39.45	52.70	0.75	17.57	1.34	0.67	0.00	Calculated
81	0139	Pipe	J42824	J441660-0	4.34	4645.94	4645.74	4.6100	2.000	0.0130	1059.62	48.56	21.82	50.00	2.00	1.00	183.00	SURCHARGED
82	0140	Pipe	J421172	J421180	374.64	4741.86	4732.37	2.5300	1.500	0.0130	7.15	16.72	0.43	4.04	1.50	1.00	37.00	SURCHARGED
83	0141	Pipe	J421180	J421185	28.17	4732.37	4731.42	3.3700	1.500	0.0130	7.15	19.29	0.37	4.05	1.50	1.00	72.00	SURCHARGED
84	0142	Pipe	J421185	J421186	174.96	4731.42	4730.77	0.3700	1.500	0.0130	10.13	6.40	1.58	5.73	1.50	1.00	89.00	SURCHARGED
85	0143	Pipe	J421186	J421187	106.51	4730.77	4730.20	0.5400	1.500	0.0130	10.12	7.68	1.32	5.73	1.50	1.00	89.00	SURCHARGED
86	0144	Pipe	J421187	J421188	94.28	4730.20	4729.81	0.4100	1.500	0.0130	10.13	6.76	1.50	5.73	1.50	1.00	83.00	SURCHARGED
87	0145	Pipe	J421189	J421190	156.03	4728.22	4716.50	7.5100	1.500	0.0130	25.66	28.79	0.89	14.78	1.50	1.00	7.00	SURCHARGED
88	0146	Pipe	J421188	J421189	303.24	4729.81	4728.22	0.5200	1.500	0.0130	25.73	7.61	3.38	14.56	1.50	1.00	38.00	SURCHARGED
89	0147	Pipe	J421190	J421191	154.82	4716.50	4713.49	1.9400	2.000	0.0130	25.65	31.54	0.81	10.82	1.42	0.71	0.00	Calculated
90	0148	Pipe	J421191	J421192	129.30	4713.49	4703.92	7.4000	2.000	0.0130	25.65	61.55	0.42	15.36	1.05	0.52	0.00	Calculated
91	0149	Pipe	J421192	J421193	153.14	4703.92	4694.15	6.3800	2.000	0.0130	25.65	57.14	0.45	14.75	1.08	0.54	0.00	Calculated
92	0150	Pipe	J421193	J421194	111.46	4694.15	4687.36	6.0900	2.000	0.0130	25.66	55.84	0.46	14.08	1.21	0.61	0.00	Calculated
93	0151	Pipe	J421194	J421195	396.50	4687.36	4670.77	4.1800	2.000	0.0130	25.65	46.27	0.55	13.00	1.66	0.83	0.00	Calculated
94	0152	Pipe	J421196	J42964	133.55	4663.74	4660.16	2.6800	2.000	0.0130	23.52	37.04	0.63	7.50	2.00	1.00	54.00	SURCHARGED
95	0153	Pipe	J421195	J421196	194.51	4670.77	4663.74	3.6100	2.000	0.0130	25.65	43.01	0.60	10.86	2.00	1.00	42.00	SURCHARGED
96	0155	Pipe	J431143	J421197	42.34	4739.37	4736.80	6.0700	1.250	0.0130	16.57	15.92	1.04	13.50	1.25	1.00	56.00	SURCHARGED
97	0156	Pipe	J421197	J421200	41.53	4733.85	4733.33	1.2500	1.500	0.0130	8.62	11.75	0.73	4.88	1.50	1.00	76.00	SURCHARGED
98	0157	Pipe	J421200	J421201	182.32	4733.33	4732.57	0.4200	1.500	0.0130	8.62	6.78	1.27	4.93	1.50	1.00	79.00	SURCHARGED
99	0158	Pipe	J421201	J421185	171.69	4732.57	4731.42	0.6700	1.500	0.0130	8.49	8.60	0.99	4.81	1.50	1.00	81.00	SURCHARGED
100	0159	Pipe	J0025-1	J4267	29.09	4529.18	4526.93	7.7300	2.000	0.0130	15.08	62.92	0.24	8.65	2.00	1.00	39.00	SURCHARGED
101	0160	Pipe	JTG010.04-0	J0015-0	140.46	4542.60	4541.32	0.9100	9.833	0.0130	37.39	1509.33	0.02	8.38	1.07	0.11	0.00	Calculated
102	0161	Pipe	JTG010.04-0	J0016-0	126.93	4542.69	4541.17	1.2000	9.833	0.0130	36.02	1730.19	0.02	8.68	1.02	0.10	0.00	Calculated
103	0164	Pipe	JUL130.04-1	JUL130.02-0	548.67	4567.91	4566.45	0.2700	1.500	0.0150	6.25	4.70	1.33	6.01	0.85	0.57	0.00	> CAPACITY
104	0165	Pipe	JUL120.04-1	JUL120.02-0	60.27	4506.91	4505.93	1.6300	5.000	0.0150	75.45	363.02	0.21	6.40	1.95	0.39	0.00	Calculated
105	0166	Pipe	JUL120.06-1	JUL120.04-0	64.48	4541.09	4541.49	-0.6200	2.500	0.0130	75.92	289.11	0.26	4.51	1.34	0.54	0.00	Calculated
106	0167	Pipe	J441211-1	SN-Pepp	201.03	4623.61	4618.80	2.3900	2.500	0.0150	57.21	54.99	1.04	12.18	2.50	1.00	368.00	SURCHARGED
107	0168	Pipe	J421015	J0109-1	555.50	4596.75	4586.99	1.7600	1.500	0.0150	7.35	12.07	0.61	9.57	1.17	0.78	0.00	Calculated
108	0169	Pipe	J0110-1	J0071-0	14.91	4585.43	4585.38	0.3400	1.500	0.0150	6.37	5.27	1.21	3.60	1.50	1.00	69.00	SURCHARGED
109	0170	Pipe	J0071-1	J0050-0	12.52	4585.32	4579.17	49.1200	1.500	0.0150	6.37	63.81	0.10	5.71	1.50	1.00	67.00	SURCHARGED
110	0171	Pipe	J0108-1	J421012	55.50	4586.74	4582.55	7.5500	1.500	0.0150	11.73	25.01	0.47	7.00	1.50	1.00	71.00	SURCHARGED
111	0172	Pipe	J42450	J42554	948.84	4546.90	4534.04	1.3600	1.500	0.0150	10.82	10.60	1.02	6.12	1.50	1.00	121.00	SURCHARGED
112	0173	Pipe	J0012-1	J0011-0	6.44	4587.41	4586.34	16.6100	1.500	0.0150	0.52	37.11	0.01	2.33	1.26	0.84	0.00	Calculated
113	0176	Pipe	J44377-1	J42224	34.17	4546.06	4532.48	39.7400	1.500	0.0150	5.26	57.39	0.09	9.13	0.75	0.50	0.00	Calculated
114	0179	Pipe	J0054-1	J0048-0	19.46	4561.20	4560.70	2.5700	2.000	0.0150	10.70	31.43	0.34	6.29	1.07	0.53	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
115	0180	Pipe	J0075-1	J0127-0	13.83	4605.98	4606.32	-2.4600	2.000	0.0150	12.09	30.74	0.39	5.88	2.00	1.00	27.00	SURCHARGED
116	0182	Pipe	J44269-1	J0014-1	357.60	4720.40	4721.70	-0.3600	1.500	0.0150	7.49	5.49	1.36	5.83	1.02	0.68	0.00	> CAPACITY
117	0183	Pipe	J42533	J441565-1	49.88	4695.91	4693.98	3.8700	4.000	0.0150	27.81	244.88	0.11	4.41	2.03	0.52	0.00	Calculated
118	0186	Pipe	SN-HHBl	J0126-0	171.02	4641.60	4632.19	5.5000	2.500	0.0150	13.07	83.39	0.16	9.82	0.80	0.32	0.00	Calculated
119	0187	Pipe	SN-HillC	J4245	201.06	4621.20	4616.24	2.4700	2.000	0.0150	3.89	30.79	0.13	5.82	0.53	0.27	0.00	Calculated
120	0188	Pipe	JUL080.04-0	J44614-0	136.39	4595.90	4581.74	10.3800	1.500	0.0150	1.79	29.33	0.06	1.97	0.88	0.58	0.00	Calculated
121	0189	Pipe	SN-Rock	JUL070.10-1	262.28	4788.10	4779.12	3.4200	3.000	0.0150	1.43	106.96	0.01	8.01	0.19	0.06	0.00	Calculated
122	0191	Pipe	SN-Mav	J44681.0	101.15	4597.00	4591.92	5.0200	1.000	0.0130	7.34	7.98	0.92	11.19	0.80	0.80	0.00	Calculated
123	0192	Pipe	SN-WildF	J42462	114.84	4592.80	4581.42	9.9100	1.500	0.0150	6.62	28.66	0.23	9.26	0.64	0.43	0.00	Calculated
124	4433	Pipe	J441666-1	SN-Pond	34.38	4628.74	4625.00	10.8800	2.000	0.0130	1606.57	74.61	21.53	50.00	2.00	1.00	418.00	SURCHARGED
125	4442	Pipe	JUL130.08-0	JUL130.06-0	96.06	4592.42	4590.00	2.5200	4.000	0.0130	18.93	227.99	0.08	11.97	0.73	0.18	0.00	Calculated
126	4445	Pipe	J0015-1	JTG010.03-0	89.83	4502.62	4501.85	0.8600	9.833	0.0150	37.15	1268.65	0.03	5.10	1.51	0.15	0.00	Calculated
127	4446	Pipe	J0016-1	JTG010.02-0	83.97	4503.66	4502.15	1.8000	9.833	0.0150	35.87	1837.53	0.02	7.16	1.22	0.12	0.00	Calculated
128	4449	Pipe	J42393	JUL070.02-0	232.19	4585.90	4581.00	2.1100	4.500	0.0130	21.99	281.86	0.08	13.07	0.73	0.16	0.00	Calculated
129	4453	Pipe	J421017	J421016	322.71	4605.36	4601.71	1.1300	1.500	0.0130	7.31	11.17	0.65	6.46	0.91	0.61	0.00	Calculated
130	4455	Pipe	J4260	J4244	14.44	4523.15	4522.27	6.0900	3.000	0.0130	48.36	164.65	0.29	7.12	2.75	0.92	0.00	Calculated
131	4456	Pipe	J4249	J4260	130.28	4522.92	4523.15	-0.1800	3.000	0.0130	48.37	28.02	1.73	6.95	2.87	0.96	0.00	> CAPACITY
132	4466	Pipe	J4244	J4466-1	154.27	4522.27	4520.95	0.8600	3.000	0.0130	48.36	61.70	0.78	11.14	1.78	0.59	0.00	Calculated
133	4469	Pipe	J4289	J4267	587.23	4539.19	4526.93	2.0900	3.000	0.0130	36.04	96.37	0.37	9.46	2.15	0.72	0.00	Calculated
134	4489	Pipe	J42118	J42112	399.05	4610.41	4599.43	2.7500	2.000	0.0130	31.64	37.53	0.84	10.89	0.82	1.00	1.00	SURCHARGED
135	4490	Pipe	J42112	J42117	330.31	4599.43	4597.20	0.6800	2.500	0.0130	31.63	33.70	0.94	9.80	1.01	0.66	0.00	Calculated
136	44174	Pipe	J42420	J42347	45.63	4713.66	4706.85	14.9200	2.500	0.0130	4.04	158.46	0.03	10.10	0.34	0.14	0.00	Calculated
137	44175	Pipe	J42346	J42420	424.21	4747.50	4713.66	7.9800	2.500	0.0130	4.04	115.85	0.03	11.61	0.31	0.12	0.00	Calculated
138	44177	Pipe	J42436	J42348	293.90	4692.40	4677.52	5.0600	2.500	0.0130	4.04	92.29	0.04	9.21	0.36	0.14	0.00	Calculated
139	44178	Pipe	J42347	J42436	398.35	4706.85	4692.40	3.6300	2.500	0.0130	4.04	78.12	0.05	8.25	0.39	0.16	0.00	Calculated
140	44181	Pipe	JUL100.02-1	J42365	197.42	4820.37	4812.97	3.7500	2.000	0.0130	0.58	43.80	0.01	3.96	0.19	0.09	0.00	Calculated
141	44182	Pipe	J42365	J42366	223.61	4812.97	4809.24	1.6700	2.000	0.0130	0.58	29.22	0.02	4.29	0.18	0.09	0.00	Calculated
142	44183	Pipe	J42366	J42367	346.58	4809.24	4786.31	6.6200	2.000	0.0130	0.58	58.19	0.01	5.91	0.14	0.07	0.00	Calculated
143	44184	Pipe	J42368	J42370	153.82	4758.99	4749.05	6.4600	2.000	0.0130	0.58	57.51	0.01	5.78	0.14	0.07	0.00	Calculated
144	44185	Pipe	J42367	J42368	353.15	4786.31	4758.99	7.7400	2.000	0.0130	0.58	62.92	0.01	6.03	0.14	0.07	0.00	Calculated
145	44186	Pipe	JUL080.12-0	J42442	28.71	4777.64	4775.41	7.7700	2.500	0.0130	2.76	114.31	0.02	7.33	0.32	0.13	0.00	Calculated
146	44187	Pipe	J42442	JUL080.10-0	51.79	4775.41	4773.28	4.1100	2.500	0.0130	2.76	83.18	0.03	7.17	0.33	0.13	0.00	Calculated
147	44236	Pipe	J42223	J42156	262.10	4530.32	4527.51	1.0700	4.000	0.0130	42.30	148.73	0.28	7.22	1.96	0.49	0.00	Calculated
148	44237	Pipe	J42156	J42155	254.58	4527.51	4525.14	0.9300	4.000	0.0130	62.57	138.59	0.45	8.40	2.28	0.57	0.00	Calculated
149	44238	Pipe	J42155	J42154	394.76	4525.14	4521.79	0.8500	4.000	0.0130	62.57	132.32	0.47	11.71	1.75	0.44	0.00	Calculated
150	44268	Pipe	J42180	J42181	179.46	4743.73	4730.23	7.5200	2.500	0.0130	0.58	112.50	0.01	6.40	0.12	0.05	0.00	Calculated
151	44269	Pipe	J42181	J44269-1	56.95	4730.23	4722.37	13.8000	2.500	0.0130	0.58	152.38	0.00	7.23	1.25	0.50	0.00	Calculated
152	44275	Pipe	J0014-1	J42178	196.83	4721.70	4703.44	9.2800	1.500	0.0130	8.60	31.99	0.27	13.72	0.58	0.38	0.00	Calculated
153	44276	Pipe	J42178	J42177	144.52	4703.44	4694.19	6.4000	1.500	0.0130	8.60	26.58	0.32	10.72	0.70	0.46	0.00	Calculated
154	44277	Pipe	J42177	J42176	64.40	4694.19	4691.51	4.1600	1.500	0.0130	8.60	21.43	0.40	8.48	0.84	0.56	0.00	Calculated
155	44278	Pipe	J42176	J42175	144.49	4691.51	4688.48	2.1000	1.500	0.0130	8.60	15.21	0.57	6.81	1.01	0.67	0.00	Calculated
156	44279	Pipe	J441032-1	J44279-1	131.14	4592.84	4589.20	2.7800	2.000	0.0130	7.02	37.69	0.19	3.31	2.00	1.00	94.00	SURCHARGED
157	44298	Pipe	J42157	J44298-1	178.93	4512.22	4498.50	7.6700	4.000	0.0130	62.57	397.76	0.16	20.45	1.16	0.29	0.00	Calculated
158	44299	Pipe	J42154	J42157	88.84	4521.79	4512.22	10.7700	4.000	0.0130	62.57	471.45	0.13	18.72	1.23	0.31	0.00	Calculated
159	44333	Pipe	J42224	J42223	77.80	4532.48	4530.32	2.7800	4.000	0.0130	42.33	239.34	0.18	9.01	1.60	0.40	0.00	Calculated
160	44375	Pipe	JUL152.04-1	JUL152.02-0	76.70	4551.14	4550.30	1.1000	2.000	0.0130	8.62	23.67	0.36	8.26	0.81	0.41	0.00	Calculated
161	44377	Pipe	JUL152.02-1	J44377-1	76.96	4547.04	4546.06	1.2700	2.000	0.0130	5.26	25.53	0.21	7.63	0.54	0.27	0.00	Calculated
162	44455	Pipe	J42265	J42264	120.43	4616.61	4608.40	6.8200	2.000	0.0130	8.60	59.07	0.15	11.07	0.59	0.30	0.00	Calculated
163	44458	Pipe	J42175	J42282	60.28	4688.48	4687.53	1.5800	1.500	0.0130	8.60	13.19	0.65	7.20	0.96	0.64	0.00	Calculated
164	44459	Pipe	J42304	J42305	77.03	4686.38	4681.18	6.7500	1.250	0.0130	0.52	16.78	0.03	6.06	0.15	0.12	0.00	Calculated
165	44460	Pipe	J42303	J42304	260.85	4705.22	4686.38	7.2200	1.250	0.0130	0.52	17.36	0.03	6.11	0.15	0.12	0.00	Calculated
166	44461	Pipe	J42309	J42308	286.81	4616.43	4600.22	5.6500	1.500	0.0130	0.52	24.97	0.02	5.13	0.16	0.11	0.00	Calculated
167	44462	Pipe	J42310	J42309	390.19	4636.19	4616.43	5.0600	1.500	0.0130	0.52	23.64	0.02	5.31	0.16	0.10	0.00	Calculated
168	44463	Pipe	J42311	J42310	212.12	4652.14	4636.19	7.5200	1.500	0.0130	0.52	28.80	0.02	5.85	0.15	0.10	0.00	Calculated
169	44464	Pipe	J42312	J42311	173.46	4663.13	4652.14	6.3400	1.500	0.0130	0.52	26.44	0.02	5.77	0.15	0.10	0.00	Calculated
170	44465	Pipe	J42305	J42312	220.69	4681.18	4663.13	8.1800	1.500	0.0130	0.52	30.04	0.02	6.13	0.14	0.10	0.00	Calculated
171	44471	Pipe	J42266	J42265	101.03	4620.24	4616.61	3.5900	2.000	0.0130	8.60	42.88	0.20	10.23	0.63	0.31	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
172	44472	Pipe	J42267	J42266	78.65	4622.52	4620.24	2.9000	2.000	0.0130	8.60	38.52	0.22	8.27	0.73	0.37	0.00	Calculated
173	44473	Pipe	J42268	J42267	286.18	4630.23	4622.52	2.6900	2.000	0.0130	8.60	37.13	0.23	8.55	0.71	0.36	0.00	Calculated
174	44474	Pipe	J42269	J42268	113.63	4633.51	4630.23	2.8900	2.000	0.0130	8.60	38.44	0.22	8.79	0.70	0.35	0.00	Calculated
175	44475	Pipe	J42270	J42269	157.44	4638.41	4633.51	3.1100	2.000	0.0130	8.60	39.91	0.22	8.77	0.70	0.35	0.00	Calculated
176	44476	Pipe	J42271	J42270	146.40	4646.69	4638.41	5.6600	2.000	0.0130	8.60	53.80	0.16	10.40	0.62	0.31	0.00	Calculated
177	44486	Pipe	J42333	J42334	261.69	4610.34	4602.31	3.0700	3.000	0.0130	0.00	116.84	0.00	0.00	0.00	0.00	0.00	Calculated
178	44487	Pipe	J42334	J42335	49.00	4602.31	4601.32	2.0200	3.000	0.0130	0.00	94.81	0.00	0.00	0.00	0.00	0.00	Calculated
179	44488	Pipe	J42336	J44488-1	76.23	4595.34	4592.40	3.8600	3.000	0.0130	0.00	130.99	0.00	0.00	0.00	0.00	0.00	Calculated
180	44489	Pipe	J42335	J42336	160.45	4601.32	4595.34	3.7300	3.000	0.0130	0.00	128.76	0.00	0.00	0.00	0.00	0.00	Calculated
181	44490	Pipe	JUL041.02-1	J42337	157.17	4627.15	4619.90	4.6100	3.000	0.0130	0.00	143.25	0.00	0.00	0.00	0.00	0.00	Calculated
182	44491	Pipe	J42337	J42333	200.01	4619.90	4610.34	4.7800	3.000	0.0130	0.00	145.82	0.00	0.00	0.00	0.00	0.00	Calculated
183	44500	Pipe	J42273	J42271	194.15	4657.67	4646.69	5.6600	2.000	0.0130	8.60	53.80	0.16	11.72	0.57	0.28	0.00	Calculated
184	44501	Pipe	J42274	J42273	167.34	4666.87	4657.67	5.5000	2.000	0.0130	8.60	53.04	0.16	11.45	0.58	0.29	0.00	Calculated
185	44502	Pipe	J42275	J42274	48.57	4670.16	4666.87	6.7700	2.000	0.0130	8.60	58.88	0.15	10.74	0.60	0.30	0.00	Calculated
186	44503	Pipe	J42277	J42275	52.49	4672.54	4670.16	4.5300	2.000	0.0130	8.60	48.17	0.18	9.42	0.66	0.33	0.00	Calculated
187	44504	Pipe	J42278	J42277	116.41	4677.64	4672.54	4.3800	2.000	0.0130	8.60	47.35	0.18	9.46	0.66	0.33	0.00	Calculated
188	44505	Pipe	J42279	J42278	125.33	4682.15	4677.64	3.6000	2.000	0.0130	8.60	42.91	0.20	9.73	0.65	0.32	0.00	Calculated
189	44506	Pipe	J42280	J42279	83.40	4683.00	4682.15	1.0200	2.000	0.0130	8.60	22.84	0.38	6.81	0.84	0.42	0.00	Calculated
190	44507	Pipe	J42282	J42280	320.84	4687.53	4683.00	1.4100	2.000	0.0130	8.60	26.88	0.32	6.24	0.90	0.45	0.00	Calculated
191	44548	Pipe	J44279-1	J42284	3.93	4589.20	4589.18	0.5100	1.250	0.0130	5.71	4.61	1.24	4.65	1.25	1.00	116.00	SURCHARGED
192	44549	Pipe	J42284	J42285	29.77	4589.18	4588.82	1.2100	1.250	0.0130	5.70	7.10	0.80	4.64	1.25	1.00	116.00	SURCHARGED
193	44551	Pipe	J42287	J42286	339.89	4587.63	4586.66	0.2900	1.250	0.0130	5.69	3.45	1.65	4.64	1.25	1.00	110.00	SURCHARGED
194	44563	Pipe	J42285	J44563-1	4.04	4588.82	4588.62	4.9500	1.250	0.0130	5.70	14.37	0.40	4.64	1.25	1.00	117.00	SURCHARGED
195	44564	Pipe	J44563-1	J42287	259.24	4588.62	4587.63	0.3800	1.250	0.0130	5.69	3.99	1.43	4.64	1.25	1.00	117.00	SURCHARGED
196	44576	Pipe	J42458	J42459	397.01	4585.91	4584.43	0.3700	1.250	0.0130	5.69	3.94	1.44	4.64	1.25	1.00	103.00	SURCHARGED
197	44577	Pipe	J42286	J42458	161.64	4586.66	4585.91	0.4600	1.250	0.0130	5.69	4.40	1.29	4.64	1.25	1.00	109.00	SURCHARGED
198	44578	Pipe	J42459	J42460	295.67	4584.43	4582.66	0.6000	1.250	0.0130	5.69	5.00	1.14	4.64	1.25	1.00	103.00	SURCHARGED
199	44579	Pipe	J42460	J42462	294.77	4582.66	4581.42	0.4200	1.250	0.0130	5.69	4.19	1.36	4.95	1.11	0.89	0.00	> CAPACITY
200	44591	Pipe	J42394	J42393	33.11	4586.59	4585.90	2.0800	4.500	0.0130	21.99	283.88	0.08	6.72	1.17	0.26	0.00	Calculated
201	44592	Pipe	JUL070.04-1	J42394	29.29	4590.98	4586.59	14.9900	3.500	0.0130	21.99	389.50	0.06	10.08	0.97	0.28	0.00	Calculated
202	44596	Pipe	J42348	J42349	139.93	4677.52	4670.58	4.9600	2.500	0.0130	4.04	91.35	0.04	7.61	0.41	0.17	0.00	Calculated
203	44597	Pipe	J42349	J42350	137.24	4670.58	4666.48	2.9900	2.500	0.0130	4.04	70.90	0.06	9.10	0.36	0.15	0.00	Calculated
204	44598	Pipe	J42350	J44598-1	97.53	4666.48	4648.85	18.0800	2.500	0.0130	4.04	174.39	0.02	1.45	1.38	0.55	0.00	Calculated
205	44599	Pipe	J44599-0	JUL070.04-0	99.31	4647.46	4647.09	0.3700	2.500	0.0130	4.06	25.04	0.16	5.80	0.50	0.20	0.00	Calculated
206	44600	Pipe	J44598-1	SN-Swain	323.25	4648.85	4654.40	-1.7200	2.500	0.0130	4.04	53.75	0.08	1.37	1.71	0.69	0.00	Calculated
207	44601	Pipe	J42443	JUL080.08-1	37.31	4713.69	4712.70	2.6500	2.500	0.0130	14.59	66.81	0.22	8.50	0.95	0.38	0.00	Calculated
208	44602	Pipe	JUL080.10-1	J42443	45.21	4718.12	4713.69	9.8000	2.500	0.0130	14.59	128.40	0.11	9.39	0.88	0.35	0.00	Calculated
209	44609	Pipe	J42370	J42371	80.61	4749.05	4745.20	4.7800	2.500	0.0130	0.58	89.64	0.01	4.18	0.17	0.07	0.00	Calculated
210	44610	Pipe	J42440	J42180	60.81	4744.06	4743.73	0.5400	2.500	0.0130	0.58	30.22	0.02	3.19	0.20	0.08	0.00	Calculated
211	44611	Pipe	J42371	J42440	72.46	4745.20	4744.06	1.5700	2.500	0.0130	0.58	51.45	0.01	2.64	0.23	0.09	0.00	Calculated
212	44612	Pipe	J44612-0	JUL080.04-1	101.81	4634.84	4634.16	0.6700	2.500	0.0130	18.60	44.16	0.42	6.41	1.43	0.57	0.00	Calculated
213	44614	Pipe	J44614-0	J441024-0	77.22	4581.74	4578.99	3.5600	1.500	0.0130	18.20	19.82	0.92	12.61	1.14	0.76	0.00	Calculated
214	44617	Pipe	JUL080.06-0	J44612-0	26.81	4635.30	4634.84	1.7200	2.000	0.0130	18.60	29.63	0.63	5.92	2.00	1.00	150.00	SURCHARGED
215	44681	Pipe	J44681.0	J42402	105.85	4591.92	4585.83	5.7500	2.500	0.0130	12.50	98.38	0.13	4.00	1.55	0.62	0.00	Calculated
216	44754	Pipe	J42540	J42538	116.87	4597.65	4595.69	1.6800	4.000	0.0130	65.40	186.02	0.35	11.87	1.79	0.45	0.00	Calculated
217	44803	Pipe	J42531	J42530	133.82	4693.08	4692.15	0.6900	4.000	0.0130	66.42	119.75	0.55	10.47	1.99	0.50	0.00	Calculated
218	44819	Pipe	J42532	J42531	163.01	4693.66	4693.08	0.3600	4.000	0.0130	66.68	85.68	0.78	6.68	2.93	0.74	0.00	Calculated
219	44868	Pipe	J42885	J42118	219.08	4616.20	4610.41	2.6400	2.000	0.0130	26.01	36.78	0.71	9.61	0.72	1.00	1.00	SURCHARGED
220	44869	Pipe	JUL132.02-1	J42746	78.47	4760.58	4758.90	2.1400	2.000	0.0130	10.03	33.59	0.30	8.64	0.79	0.40	0.00	Calculated
221	44870	Pipe	J42746	J42745	58.79	4758.90	4755.35	6.0400	2.000	0.0130	10.03	55.59	0.18	9.42	0.74	0.37	0.00	Calculated
222	44871	Pipe	J42747	J42748	51.62	4704.88	4703.71	2.2700	2.000	0.0130	10.02	34.06	0.29	7.37	0.89	0.45	0.00	Calculated
223	44891	Pipe	J42722	JUL120.06-0	302.46	4586.25	4574.18	3.9900	4.500	0.0130	77.17	392.84	0.20	20.13	1.30	0.29	0.00	Calculated
224	44892	Pipe	J42538	J42722	208.08	4595.69	4586.25	4.5400	4.000	0.0130	65.40	305.95	0.21	14.68	1.53	0.38	0.00	Calculated
225	44893	Pipe	J42402	J42722	309.34	4585.83	4586.25	-0.1400	2.500	0.0130	12.54	15.11	0.83	3.40	2.08	0.83	0.00	Calculated
226	441024	Pipe	J441024-0	J441024-1	47.29	4578.99	4576.75	4.7400	4.000	0.0130	18.20	312.63	0.06	5.16	1.30	0.32	0.00	Calculated
227	441025	Pipe	J441024-1	JUL080.02-0	113.84	4576.75	4576.48	0.2400	4.000	0.0130	24.59	69.96	0.35	8.48	1.13	0.28	0.00	Calculated
228	441032	Pipe	J42264	SN-SUMM	292.32	4608.40	4599.80	2.9400	2.000	0.0130	8.60	38.80	0.22	6.81	1.28	0.64	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
229	441048	Pipe	J42829	J42828	142.62	4678.74	4674.06	3.2800	2.000	0.0130	11.20	40.98	0.27	10.22	0.76	0.38	0.00	Calculated
230	441050	Pipe	J42831	J42829	267.72	4695.54	4678.74	6.2800	2.000	0.0130	11.20	56.67	0.20	11.35	0.70	0.35	0.00	Calculated
231	441117	Pipe	J441117-0	J4245	144.04	4617.87	4616.24	1.1300	4.000	0.0130	2.65	152.81	0.02	4.67	0.45	0.11	0.00	Calculated
232	441118	Pipe	J4245	J421019	106.25	4616.24	4610.44	5.4600	1.500	0.0130	7.31	24.54	0.30	8.87	0.71	0.47	0.00	Calculated
233	441173	Pipe	J42888	J42887	125.82	4631.26	4628.69	2.0400	2.500	0.0130	57.80	58.62	0.99	11.77	2.50	1.00	60.00	SURCHARGED
234	441175	Pipe	J42890	J42888	305.22	4637.18	4631.26	1.9400	2.500	0.0130	57.80	57.12	1.01	11.77	2.50	1.00	58.00	SURCHARGED
235	441176	Pipe	J42891	J42890	64.25	4638.52	4637.18	2.0900	2.500	0.0130	27.21	59.24	0.46	6.35	2.50	1.00	56.00	SURCHARGED
236	441182	Pipe	J42901	J42903	204.99	4655.25	4651.21	1.9700	2.500	0.0130	23.45	57.58	0.41	9.68	2.50	1.00	40.00	SURCHARGED
237	441183	Pipe	J42903	J42904	197.78	4651.21	4646.81	2.2200	2.500	0.0130	23.57	61.18	0.39	8.10	2.50	1.00	46.00	SURCHARGED
238	441184	Pipe	J42904	J42905	45.56	4646.81	4645.67	2.5000	2.500	0.0130	23.57	64.88	0.36	6.48	2.50	1.00	49.00	SURCHARGED
239	441185	Pipe	J42905	J42906	118.84	4645.67	4644.64	0.8700	2.500	0.0130	23.57	38.19	0.62	6.08	2.50	1.00	50.00	SURCHARGED
240	441186	Pipe	J42906	J42907	87.78	4644.64	4643.68	1.0900	2.500	0.0130	23.57	42.89	0.55	6.94	2.50	1.00	51.00	SURCHARGED
241	441187	Pipe	J42907	J42908	106.21	4643.68	4642.03	1.5500	2.500	0.0130	23.57	51.12	0.46	8.18	2.50	1.00	52.00	SURCHARGED
242	441193	Pipe	J42908	J42891	209.09	4642.03	4638.52	1.6800	2.500	0.0130	23.57	53.14	0.44	7.78	2.50	1.00	54.00	SURCHARGED
243	441211	Pipe	J441211-0	J441211-1	199.60	4626.54	4625.16	0.6900	2.500	0.0130	57.80	34.11	1.69	11.81	2.50	1.00	60.00	SURCHARGED
244	441212	Pipe	J42887	J441211-0	235.01	4628.69	4626.54	0.9100	2.500	0.0130	57.80	39.23	1.47	11.77	2.50	1.00	64.00	SURCHARGED
245	441262	Pipe	J421018	J421017	47.33	4608.21	4605.36	6.0200	1.500	0.0130	7.31	25.78	0.28	7.74	0.79	0.53	0.00	Calculated
246	441263	Pipe	J421019	J421018	99.23	4610.44	4608.21	2.2500	1.500	0.0130	7.31	15.75	0.46	7.89	0.78	0.52	0.00	Calculated
247	441294	Pipe	J42992	J42993	232.54	4570.69	4569.84	0.3700	1.500	0.0130	5.86	6.35	0.92	3.37	1.50	1.00	36.00	SURCHARGED
248	441307	Pipe	J42998	J42454	137.51	4568.05	4568.24	-0.1400	1.500	0.0130	8.53	3.90	2.18	6.74	1.01	0.67	0.00	> CAPACITY
249	441317	Pipe	J441317-0	J42958	74.75	4717.08	4715.39	2.2600	1.250	0.0130	5.73	9.71	0.59	5.88	0.93	0.74	0.00	Calculated
250	441318	Pipe	J42958	J42959	46.91	4715.39	4715.17	0.4700	2.000	0.0130	5.73	15.49	0.37	3.98	0.93	0.47	0.00	Calculated
251	441350	Pipe	J42461	J441024-1	287.92	4579.30	4576.75	0.8900	1.500	0.0130	8.54	9.89	0.86	5.79	1.35	0.90	0.00	Calculated
252	441371	Pipe	J42462	J42461	52.39	4581.42	4579.30	4.0500	1.500	0.0130	8.72	21.13	0.41	7.19	1.01	0.68	0.00	Calculated
253	441436	Pipe	J42494	J42540	331.86	4599.72	4597.65	0.6200	2.500	0.0130	65.39	32.39	2.02	13.65	2.34	0.94	0.00	> CAPACITY
254	441437	Pipe	J42495	J42494	61.65	4603.33	4599.72	5.8600	2.500	0.0130	65.40	99.26	0.66	13.32	2.50	1.00	29.00	SURCHARGED
255	441438	Pipe	J42496	J42495	116.23	4612.58	4603.33	7.9600	2.500	0.0130	65.40	115.71	0.57	14.35	2.50	1.00	15.00	SURCHARGED
256	441439	Pipe	J42497	J42496	257.91	4632.36	4612.58	7.6700	2.500	0.0130	65.40	113.59	0.58	19.03	2.07	0.84	0.00	Calculated
257	441440	Pipe	J42498	J42497	109.73	4640.79	4632.36	7.6800	2.500	0.0130	65.42	113.69	0.58	18.97	1.73	0.70	0.00	Calculated
258	441441	Pipe	J42499	J42498	122.16	4650.81	4640.79	8.2000	2.500	0.0130	65.41	117.47	0.56	17.87	1.74	0.70	0.00	Calculated
259	441443	Pipe	J42500	J42499	33.63	4652.77	4650.81	5.8300	2.500	0.0130	65.41	99.02	0.66	14.91	2.09	0.84	0.00	Calculated
260	441444	Pipe	J42516	J42500	164.63	4653.02	4652.77	0.1500	4.000	0.0130	65.41	55.98	1.17	5.67	3.96	1.00	0.00	> CAPACITY
261	441445	Pipe	J42517	J42516	91.66	4655.67	4653.02	2.8900	4.000	0.0130	65.41	244.24	0.27	6.80	3.12	0.79	0.00	Calculated
262	441446	Pipe	J42518	J42517	74.23	4656.94	4655.67	1.7100	4.000	0.0130	65.47	187.89	0.35	9.64	2.32	0.59	0.00	Calculated
263	441447	Pipe	J42519	J42518	46.59	4658.11	4656.94	2.5100	4.000	0.0130	65.52	227.63	0.29	8.29	2.44	0.61	0.00	Calculated
264	441448	Pipe	J42520	J42519	297.76	4669.61	4658.11	3.8600	4.000	0.0130	65.64	282.29	0.23	11.23	1.90	0.48	0.00	Calculated
265	441449	Pipe	J42521	J42520	190.79	4670.25	4669.61	0.3400	4.000	0.0130	65.61	83.20	0.79	9.95	2.08	0.52	0.00	Calculated
266	441450	Pipe	J42522	J42521	68.15	4670.60	4670.25	0.5100	4.000	0.0130	65.61	102.94	0.64	6.26	3.11	0.78	0.00	Calculated
267	441451	Pipe	J42523	J42522	279.34	4671.79	4670.60	0.4300	4.000	0.0130	65.63	93.75	0.70	5.87	3.33	0.83	0.00	Calculated
268	441453	Pipe	J42526	J42525	299.59	4673.18	4672.21	0.3200	4.000	0.0130	65.86	81.73	0.81	5.35	3.78	0.95	0.00	Calculated
269	441454	Pipe	J42525	J42523	179.56	4672.21	4671.79	0.2300	4.000	0.0130	65.74	69.47	0.95	5.61	3.53	0.88	0.00	Calculated
270	441455	Pipe	J42528	J42527	87.75	4678.70	4674.07	5.2800	3.000	0.0130	65.98	153.21	0.43	9.99	2.63	0.88	0.00	Calculated
271	441456	Pipe	J42527	J42526	8.33	4674.07	4673.18	10.6800	3.000	0.0130	66.01	218.02	0.30	9.34	3.00	1.00	18.00	SURCHARGED
272	441457	Pipe	J42529	J42528	156.08	4680.22	4678.70	0.9700	4.000	0.0130	66.11	141.75	0.47	9.21	2.36	0.60	0.00	Calculated
273	441458	Pipe	J42530	J42529	407.26	4692.15	4680.22	2.9300	4.000	0.0130	66.34	245.85	0.27	10.88	1.93	0.49	0.00	Calculated
274	441557	Pipe	J441557-0	J42532	17.99	4693.78	4693.66	0.6700	4.000	0.0130	17.03	117.32	0.15	2.14	3.23	0.82	0.00	Calculated
275	441560	Pipe	J441560-0	J42533	361.92	4696.87	4695.91	0.2700	2.000	0.0130	14.07	11.65	1.21	6.47	1.56	0.82	0.00	> CAPACITY
276	441565	Pipe	J441560-0	SN-Weath	49.88	4696.87	4702.20	-10.6900	4.000	0.0130	0.00	469.55	0.00	0.00	1.17	0.29	0.00	Calculated
277	441566	Pipe	J441565-1	J441557-0	177.41	4693.98	4693.78	0.1100	4.000	0.0130	18.84	48.23	0.39	2.19	3.10	0.80	0.00	Calculated
278	441570	Pipe	J42117	J42788	228.57	4597.20	4596.35	0.3700	2.500	0.0130	20.53	25.01	0.82	7.09	1.32	0.65	0.00	Calculated
279	441571	Pipe	J42788	J42813	97.62	4596.35	4595.72	0.6500	2.500	0.0130	59.16	32.95	1.80	12.05	1.82	1.00	1.00	SURCHARGED
280	441585	Pipe	J42809	J42808	104.07	4594.91	4594.64	0.2600	4.000	0.0130	15.34	73.17	0.21	3.82	2.54	0.63	0.00	Calculated
281	441586	Pipe	J42808	JUL130.08-1	194.26	4594.64	4594.64	0.0000	4.000	0.0130	14.39	3.26	4.41	6.13	1.37	0.34	0.00	> CAPACITY
282	441587	Pipe	J42810	J42809	321.57	4595.00	4594.91	0.0300	4.000	0.0130	22.80	24.03	0.95	5.09	2.31	0.60	0.00	Calculated
283	441588	Pipe	J42811	J42810	269.27	4595.04	4595.00	0.0100	4.000	0.0130	42.76	17.51	2.44	6.63	2.27	0.57	0.00	> CAPACITY
284	441589	Pipe	J42812	J42811	58.60	4595.09	4595.04	0.0900	4.000	0.0130	87.95	41.96	2.10	11.59	2.41	0.77	0.00	> CAPACITY
285	441590	Pipe	J42813	J42814	380.67	4595.72	4595.42	0.0800	4.000	0.0130	9.13	40.32	0.23	2.01	2.19	1.00	1.00	SURCHARGED

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
286	441591	Pipe	J42814	J42815	168.72	4595.42	4595.33	0.0500	4.000	0.0130	94.66	33.18	2.85	7.53	2.35	1.00	1.00	SURCHARGED
287	441592	Pipe	J42815	J42816	117.51	4595.33	4595.25	0.0700	4.000	0.0130	215.19	37.48	5.74	34.25	2.36	1.00	0.00	> CAPACITY
288	441593	Pipe	J42816	J42812	134.40	4595.25	4595.09	0.1200	4.000	0.0130	117.85	49.56	2.38	9.90	2.38	0.96	0.00	> CAPACITY
289	441594	Pipe	J4429-0	J42821	64.51	4621.41	4619.88	2.3700	2.000	0.0130	35.82	34.84	1.03	11.40	0.80	1.00	1.00	SURCHARGED
290	441595	Pipe	J42821	J42885	108.21	4619.88	4616.20	3.4000	2.000	0.0130	91.71	41.72	2.20	50.00	0.73	0.50	0.00	> CAPACITY
291	441597	Pipe	J441657-1	J42822	19.11	4638.41	4638.15	1.3600	2.500	0.0130	146.75	47.84	3.07	50.00	2.50	1.00	203.00	SURCHARGED
292	441603	Pipe	J42825	J42824	44.10	4650.38	4645.94	10.0700	2.500	0.0130	647.24	130.15	4.97	50.00	1.99	1.00	0.00	> CAPACITY
293	441605	Pipe	J42827	J42826	31.09	4667.96	4666.54	4.5700	2.500	0.0130	11.20	87.66	0.13	5.09	1.15	0.46	0.00	Calculated
294	441606	Pipe	J42833	J42747	161.30	4716.01	4704.88	6.9000	2.000	0.0130	10.02	59.42	0.17	9.21	0.76	0.38	0.00	Calculated
295	441607	Pipe	J42834	J42833	156.83	4723.25	4716.01	4.6200	2.000	0.0130	10.02	48.61	0.21	11.41	0.65	0.32	0.00	Calculated
296	441608	Pipe	J42745	J42836	40.48	4755.35	4753.59	4.3500	2.000	0.0130	10.03	47.17	0.21	9.20	0.76	0.38	0.00	Calculated
297	441609	Pipe	J42836	J42835	277.79	4753.59	4742.72	3.9100	2.000	0.0130	10.03	44.75	0.22	11.40	0.65	0.32	0.00	Calculated
298	441633	Pipe	J42853	J42854	236.14	4666.81	4651.03	6.6800	2.000	0.0130	10.02	58.48	0.17	13.24	0.74	0.50	0.00	Calculated
299	441634	Pipe	J42854	J42824	60.06	4651.03	4645.94	8.4700	2.000	0.0130	26.88	65.86	0.41	9.72	1.46	1.00	1.00	SURCHARGED
300	441635	Pipe	J42855	J42853	252.34	4668.88	4666.81	0.8200	2.000	0.0130	10.02	20.49	0.49	6.11	1.03	0.52	0.00	Calculated
301	441636	Pipe	J42856	J42855	27.89	4669.95	4668.88	3.8400	2.000	0.0130	10.02	44.31	0.23	6.30	1.01	0.51	0.00	Calculated
302	441637	Pipe	J42857	J42856	163.85	4678.77	4669.95	5.3800	2.000	0.0130	10.02	52.49	0.19	9.05	0.77	0.38	0.00	Calculated
303	441638	Pipe	J42858	J42857	294.07	4696.01	4678.77	5.8600	2.000	0.0130	10.02	54.77	0.18	12.68	0.60	0.30	0.00	Calculated
304	441639	Pipe	J42748	J42859	132.27	4703.71	4700.55	2.3900	2.000	0.0130	10.02	34.97	0.29	8.77	0.78	0.39	0.00	Calculated
305	441640	Pipe	J42859	J42858	121.62	4700.55	4696.01	3.7300	2.000	0.0130	10.02	43.71	0.23	10.34	0.69	0.35	0.00	Calculated
306	441658	Pipe	J441657-0	J441657-1	3.67	4638.51	4638.41	2.7200	2.500	0.0130	5107.27	67.71	75.43	50.00	2.50	1.00	202.00	SURCHARGED
307	441662	Pipe	J441660-0	J441657-0	278.01	4645.74	4638.61	2.5600	2.500	0.0130	95.00	65.69	1.45	38.71	2.50	1.00	178.00	SURCHARGED
308	441663	Pipe	J42822	J441664-0	5.07	4638.15	4637.98	3.3500	2.500	0.0130	2306.82	75.11	30.71	50.00	2.50	1.00	205.00	SURCHARGED
309	441664	Pipe	J441664-0	J441666-1	66.47	4637.98	4628.74	13.9000	2.500	0.0130	81.42	152.93	0.53	16.59	2.50	1.00	207.00	SURCHARGED
310	441667	Pipe	J42826	J441667-1	4.95	4666.54	4666.38	3.2300	2.500	0.0130	11.20	41.22	0.27	6.03	1.01	0.40	0.00	Calculated
311	441668	Pipe	J441667-1	J42825	280.28	4666.34	4650.38	5.6900	2.500	0.0130	11.20	98.64	0.11	12.09	1.02	0.50	0.00	Calculated
312	441671	Pipe	J42828	J42827	146.81	4674.06	4667.96	4.1600	2.000	0.0130	11.20	46.11	0.24	9.86	0.78	0.39	0.00	Calculated
313	441673	Pipe	J42835	J441673-1	384.26	4742.72	4723.40	5.0300	2.000	0.0130	10.03	50.73	0.20	7.33	0.90	0.45	0.00	Calculated
314	441674	Pipe	J441673-1	J42834	6.19	4723.40	4723.25	2.4200	2.000	0.0130	10.02	35.22	0.28	6.96	0.93	0.47	0.00	Calculated
315	441684	Pipe	J42959	J42960	297.62	4715.17	4699.92	5.1200	1.500	0.0130	5.73	23.78	0.24	10.31	0.53	0.35	0.00	Calculated
316	441685	Pipe	J42960	J42961	367.15	4699.92	4683.98	4.3400	1.500	0.0130	5.73	21.89	0.26	10.33	0.53	0.35	0.00	Calculated
317	441686	Pipe	J42961	J42962	226.40	4683.98	4673.12	4.8000	1.500	0.0130	5.73	23.01	0.25	10.16	1.01	0.67	0.00	Calculated
318	441687	Pipe	J42962	J42963	213.27	4673.12	4662.65	4.9100	1.500	0.0130	6.21	23.27	0.27	8.85	1.50	1.00	32.00	SURCHARGED
319	441688	Pipe	J42963	J42964	59.90	4662.65	4660.16	4.1600	1.500	0.0130	6.21	21.42	0.29	3.62	1.50	1.00	60.00	SURCHARGED
320	441689	Pipe	J42964	J42901	270.51	4660.16	4655.25	1.8200	1.500	0.0130	23.30	14.15	1.65	13.19	1.50	1.00	44.00	SURCHARGED
321	441719	Pipe	J4262	J4249	49.27	4523.56	4522.92	1.3000	3.000	0.0130	48.38	76.02	0.64	6.84	3.00	1.00	49.00	SURCHARGED
322	441720	Pipe	J4263	J4262	227.17	4524.03	4523.56	0.2100	3.000	0.0130	48.37	30.34	1.59	6.84	3.00	1.00	49.00	SURCHARGED
323	441721	Pipe	J4264	J4263	266.50	4524.56	4524.03	0.2000	3.000	0.0130	48.37	29.74	1.63	6.84	3.00	1.00	66.00	SURCHARGED
324	441722	Pipe	J4265	J4264	28.63	4524.66	4524.56	0.3500	3.000	0.0130	48.37	39.42	1.23	6.84	3.00	1.00	77.00	SURCHARGED
325	441723	Pipe	J4267	J4265	345.00	4526.93	4524.66	0.6600	3.000	0.0130	48.37	54.10	0.89	6.84	3.00	1.00	48.00	SURCHARGED
326	441727	Pipe	J0041-1	J4272	222.91	4550.28	4547.81	1.1100	2.000	0.0130	10.75	23.81	0.45	5.65	1.18	0.59	0.00	Calculated
327	441731	Pipe	J4272	J4278	77.90	4547.81	4547.22	0.7600	2.000	0.0130	10.71	19.69	0.54	5.11	1.31	0.65	0.00	Calculated
328	441732	Pipe	J4278	J0038-0	286.26	4547.22	4544.91	0.8100	2.000	0.0130	10.79	20.32	0.53	8.59	0.88	0.44	0.00	Calculated
329	441739	Pipe	J0052-1	J4287	328.89	4571.48	4566.95	1.3800	1.250	0.0130	10.70	7.58	1.41	9.08	1.15	0.92	0.00	> CAPACITY
330	441740	Pipe	J4287	J4288	119.03	4566.95	4565.39	1.3100	2.000	0.0130	10.70	25.90	0.41	7.06	0.97	0.49	0.00	Calculated
331	441759	Pipe	J441759-0	J42886	97.57	4508.14	4502.98	5.2900	1.250	0.0130	8.06	14.86	0.54	8.46	0.99	0.79	0.00	Calculated
332	441760	Pipe	J42886	J42893	400.51	4502.98	4496.93	1.5100	1.250	0.0130	8.06	7.94	1.02	6.94	1.19	0.96	0.00	> CAPACITY
333	441761	Pipe	J42893	J441761-1	341.41	4496.93	4491.44	1.6100	1.250	0.0130	8.06	8.19	0.98	7.26	1.07	0.86	0.00	Calculated
334	441792	Pipe	J421016	J421015	310.72	4601.71	4596.75	1.6000	1.500	0.0130	7.31	13.27	0.55	7.18	0.85	0.57	0.00	Calculated
335	441802	Pipe	J4288	J0054-1	270.73	4565.39	4561.20	1.5500	2.000	0.0130	10.71	28.14	0.38	6.66	1.03	0.51	0.00	Calculated
336	441814	Pipe	J441814-0	J4289	333.41	4543.78	4539.19	1.3800	3.000	0.0130	36.14	78.26	0.46	10.61	1.47	0.49	0.00	Calculated
337	441822	Pipe	J42364	J42358	138.70	4621.30	4617.19	2.9600	2.000	0.0130	23.29	38.94	0.60	12.47	1.14	0.57	0.00	Calculated
338	441823	Pipe	J441823.0	J42364	395.77	4636.38	4621.30	3.8100	2.000	0.0130	23.30	44.16	0.53	11.51	1.22	0.61	0.00	Calculated
339	441855	Pipe	J42421	J42346	162.42	4747.96	4747.50	0.2800	2.000	0.0130	4.04	12.04	0.34	5.22	0.59	0.29	0.00	Calculated
340	441866	Pipe	J4224	J42797	406.18	4534.11	4520.54	3.3400	2.500	0.0130	11.93	74.97	0.16	10.84	0.69	0.28	0.00	Calculated
341	441867	Pipe	J4225	J4224	292.92	4537.26	4534.11	1.0800	2.500	0.0130	12.06	42.53	0.28	8.10	0.85	0.34	0.00	Calculated
342	441868	Pipe	J4226	J4225	171.06	4539.66	4537.26	1.4000	2.500	0.0130	11.99	48.58	0.25	6.81	0.97	0.39	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
343	441869	Pipe	J4236	J4226	170.49	4546.45	4539.66	3.9800	2.500	0.0130	11.92	81.86	0.15	8.94	0.79	0.32	0.00	Calculated
344	441870	Pipe	J42363	J4237	89.89	4588.99	4580.68	9.2400	2.500	0.0130	12.03	124.71	0.10	14.30	0.58	0.23	0.00	Calculated
345	441871	Pipe	J4237	J4236	581.40	4580.68	4546.45	5.8900	2.500	0.0130	11.97	99.52	0.12	12.95	0.62	0.25	0.00	Calculated
346	441895	Pipe	J42451	J42450	386.84	4552.23	4546.90	1.3800	4.500	0.0130	13.85	230.83	0.06	5.01	3.11	0.69	0.00	Calculated
347	441896	Pipe	J42452	J42451	491.52	4557.88	4552.23	1.1500	4.500	0.0130	13.86	210.84	0.07	7.45	1.21	0.27	0.00	Calculated
348	441897	Pipe	J42453	J42452	244.03	4559.93	4557.88	0.8400	4.500	0.0130	13.86	180.24	0.08	6.31	0.88	0.20	0.00	Calculated
349	441900	Pipe	J42454	J42453	67.11	4568.24	4559.93	12.3800	1.500	0.0130	8.53	36.96	0.23	12.89	0.68	0.46	0.00	Calculated
350	441901	Pipe	J42997	J42998	38.08	4568.40	4568.05	0.9200	1.500	0.0130	8.53	10.07	0.85	4.83	1.50	1.00	66.00	SURCHARGED
351	441902	Pipe	J42993	J42997	392.75	4569.84	4568.40	0.3700	1.500	0.0130	8.53	6.36	1.34	4.83	1.50	1.00	49.00	SURCHARGED
352	441905	Pipe	J42357	J441823.0	776.30	4670.80	4636.38	4.4300	2.000	0.0130	23.35	47.64	0.49	14.40	1.02	0.51	0.00	Calculated
353	Link-71	Pipe	J0075-1	J421012	780.87	4605.98	4582.55	3.0000	1.500	0.0150	15.28	15.77	0.97	9.27	1.50	1.00	39.00	SURCHARGED
354	Link-72	Pipe	Jun-38	J42453	1672.81	4605.00	4559.93	2.6900	1.500	0.0150	0.00	14.94	0.00	0.00	0.46	0.31	0.00	Calculated
355	Link-73	Pipe	Jun-39	Jun-38	803.94	4618.00	4605.00	1.6200	1.500	0.0150	0.00	11.58	0.00	0.00	0.00	0.00	0.00	Calculated
356	Link-74	Pipe	Jun-40	Jun-39	1360.74	4653.50	4618.00	2.6100	1.500	0.0150	0.00	14.70	0.00	0.00	0.00	0.00	0.00	Calculated
357	Link-75	Pipe	J42117	J42224	1856.23	4597.20	4532.48	3.4900	2.500	0.0150	23.29	66.38	0.35	15.52	1.21	0.49	0.00	Calculated
358	Link-77	Pipe	JUL121.06-1	Jun-41	74.00	4898.50	4885.93	16.9900	3.000	0.0130	0.00	274.90	0.00	0.00	0.00	0.00	0.00	Calculated
359	Link-78	Pipe	JUL121.06-1	Jun-41	64.00	4894.50	4892.60	2.9700	3.000	0.0130	0.00	114.92	0.00	0.00	0.00	0.00	0.00	Calculated
360	Link-79	Pipe	JUL121.06-1	Jun-41	91.46	4894.50	4885.12	10.2600	3.000	0.0130	0.00	213.60	0.00	0.00	0.00	0.00	0.00	Calculated
361	0014	Channel	J44269-1	SN-Still	357.60	4720.40	4729.07	-2.4200	10.000	0.0320	22.32	6744.41	0.00	3.87	3.28	0.33	0.00	
362	0015	Channel	J0015-0	J0015-1	3969.77	4541.32	4502.62	0.9700	10.000	0.0320	37.35	4276.67	0.01	2.73	1.16	0.12	0.00	
363	0016	Channel	J0016-0	J0016-1	3955.22	4541.17	4503.66	0.9500	10.000	0.0320	35.99	4218.14	0.01	3.04	1.00	0.10	0.00	
364	0039	Channel	J0038-0	J42108	81.65	4544.91	4543.78	1.3800	10.000	0.0320	10.85	4340.72	0.00	1.92	0.96	0.10	0.00	
365	0096	Channel	J0085-1	J0089-0	387.83	4534.04	4534.04	0.0000	10.000	0.0320	9.63	69.55	0.14	0.96	3.02	0.30	0.00	
366	0097	Channel	J0089-1	J0090-0	81.84	4533.24	4532.64	0.7300	10.000	0.0320	9.32	3708.74	0.00	1.10	2.37	0.24	0.00	
367	0098	Channel	J0090-1	J0091-0	436.63	4531.38	4526.22	1.1800	10.000	0.0320	9.32	4708.70	0.00	2.12	1.87	0.19	0.00	
368	0099	Channel	J0091-1	J0095-0	79.30	4525.26	4523.29	2.4800	10.000	0.0320	9.19	6075.17	0.00	1.27	0.64	0.06	0.00	
369	0100	Channel	J0095-1	J0094-0	64.36	4522.22	4522.00	0.3400	10.000	0.0320	9.19	2532.42	0.00	0.88	1.05	0.10	0.00	
370	0101	Channel	J0094-1	J0101-1	20.10	4520.37	4518.67	8.4600	10.000	0.0320	9.19	12596.78	0.00	2.80	0.38	0.04	0.00	
371	0103	Channel	J0101-1	J0103-1	1271.76	4518.67	4506.29	0.9700	5.000	0.0320	9.19	673.04	0.01	3.13	0.60	0.12	0.00	
372	0104	Channel	J0103-1	J0104-1	970.47	4506.29	4501.97	0.4500	10.000	0.0320	9.19	2889.91	0.00	1.79	0.47	0.05	0.00	
373	0105	Channel	J4466-1	J0105-1	59.98	4520.95	4519.09	3.1000	10.000	0.0320	48.36	7627.57	0.01	5.65	0.75	0.07	0.00	
374	0108	Channel	J0073-1	J0108-1	429.88	4605.36	4586.74	4.3300	10.000	0.0320	16.04	9014.66	0.00	1.90	2.45	0.25	0.00	
375	0110	Channel	J0109-1	J0110-1	57.37	4586.99	4585.43	2.7200	10.000	0.0320	6.89	7142.54	0.00	0.61	3.30	0.33	0.00	
376	0162	Channel	JPR050.01-1	Out-18	386.14	4719.05	4497.00	57.5100	10.000	0.0320	2.74	32846.27	0.00	5.00	0.05	0.01	0.00	
377	0163	Channel	JUL130.06-1	JUL130.04-0	345.73	4582.55	4581.26	0.3700	10.000	0.0320	18.99	2645.81	0.01	2.25	0.73	0.07	0.00	
378	0174	Channel	JUL080.04-0	SN-Vill	66.45	4595.90	4587.40	12.7900	10.000	0.0320	16.80	15491.55	0.00	2.21	0.78	0.08	0.00	
379	0175	Channel	JUL121.02-0	J441560-0	79.84	4698.77	4696.87	2.3800	10.000	0.0320	15.42	6681.89	0.00	1.06	1.39	0.14	0.00	
380	0177	Channel	J42832	J42831	20.85	4695.82	4695.54	1.3400	10.000	0.0320	11.20	5019.48	0.00	1.94	0.52	0.05	0.00	
381	0178	Channel	J42108	J441814-0	4.47	4544.09	4543.78	6.9400	10.000	0.0320	36.13	11406.70	0.00	1.86	1.49	0.15	0.00	
382	44325	Channel	JUL130.02-1	J44325-1	79.93	4505.04	4502.46	3.2300	10.000	0.0320	6.25	7781.94	0.00	2.83	0.21	0.02	0.00	
383	44373	Channel	J44373-0	JUL152.04-0	68.63	4554.50	4554.21	0.4200	10.000	0.0320	7.22	2815.63	0.00	1.48	0.45	0.05	0.00	
384	44603	Channel	JUL080.08-0	JUL080.06-1	20.32	4695.94	4695.33	3.0000	10.000	0.0320	14.58	9216.48	0.00	4.27	0.32	0.03	0.00	
385	JR060.01	Channel	JJR060.01-0	JJR060.01-1	1048.40	4586.22	4562.00	2.3100	10.000	0.0320	39.42	6583.50	0.01	3.09	4.12	0.41	0.00	
386	JR060.02	Channel	JJR060.02-0	JJR060.02-1	911.67	4611.44	4586.88	2.6900	10.000	0.0320	58.45	7109.32	0.01	2.26	3.23	0.32	0.00	
387	JR062.01	Channel	JJR062.01-0	JJR062.01-1	1344.14	4648.54	4611.92	2.7200	10.000	0.0320	5.07	7149.41	0.00	1.44	1.35	0.13	0.00	
388	JR062.02	Channel	JJR062.02-0	JJR062.02-1	987.43	4674.27	4648.89	2.5700	10.000	0.0320	5.17	6944.25	0.00	1.02	1.02	0.10	0.00	
389	JR062.03	Channel	JJR062.03-0	JJR062.03-1	1361.74	4689.20	4676.73	0.9200	10.000	0.0320	5.27	4144.95	0.00	1.26	0.48	0.05	0.00	
390	JR062.04	Channel	JJR062.04-0	JJR062.04-1	7402.92	4902.18	4697.75	2.7600	10.000	0.0320	7.71	7197.87	0.00	3.05	0.46	0.05	0.00	
391	JR062.05	Channel	JJR062.06-1	JJR062.04-0	507.42	4937.75	4902.18	7.0100	10.000	0.0320	7.87	11468.09	0.00	3.77	0.22	0.02	0.00	
392	JR062.06	Channel	JJR062.07-1	JJR062.06-1	549.26	4947.36	4937.75	1.7500	10.000	0.0320	7.87	5729.35	0.00	3.00	0.25	0.03	0.00	
393	JR062.07	Channel	JJR062.08-1	JJR062.07-1	1068.20	5009.12	4947.36	5.7800	10.000	0.0320	7.88	10415.03	0.00	2.93	0.26	0.03	0.00	
394	JR062.08	Channel	JJR062.09-1	JJR062.08-1	660.91	5034.61	5009.12	3.8600	10.000	0.0320	7.89	8506.42	0.00	3.46	0.22	0.02	0.00	
395	JR062.09	Channel	JJR062.10-1	JJR062.09-1	2215.65	5120.19	5034.61	3.8600	10.000	0.0320	7.90	8512.72	0.00	3.26	0.23	0.02	0.00	
396	JR062.10	Channel	JJR062.11-1	JJR062.10-1	2767.82	5271.65	5120.19	5.4700	10.000	0.0320	7.95	10132.42	0.00	3.50	0.22	0.02	0.00	
397	JR062.11	Channel	JJR062.11-0	JJR062.11-1	6696.13	6211.15	5271.65	14.0300	10.000	0.0320	8.06	16224.43	0.00	4.52	0.18	0.02	0.00	
398	Link-76	Channel	Jun-41	JUL121.02-0	2569.28	4832.00	4698.77	5.1900	10.000	0.0320	0.00	11503.83	0.00	0.00	0.22	0.02	0.00	
399	PR050.01	Channel	JPR050.02-1	JPR050.01-1	3000.19	4835.97	4719.05	3.9000	10.000	0.0320	2.74	8550.73	0.00	2.20	0.12	0.01	0.00	

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
400	PR050.02	Channel	JPR050.02-0	JPR050.02-1	13760.75	6210.37	4835.97	9.9900	10.000	0.0320	3.37	13688.90	0.00	3.14	0.11	0.01	0.00	
401	PR060.02	Channel	JPR060.02-0	JPR060.02-1	3171.45	4898.95	4727.73	5.4000	10.000	0.0320	2.26	10064.25	0.00	2.26	0.10	0.01	0.00	
402	PR060.04	Channel	JPR060.06-1	JPR060.02-0	2063.87	5052.04	4898.95	7.4200	10.000	0.0320	2.31	11796.83	0.00	2.52	0.09	0.01	0.00	
403	PR060.06	Channel	JPR060.06-0	JPR060.06-1	3701.21	5389.84	5052.04	9.1300	10.000	0.0320	2.36	13085.52	0.00	2.70	0.09	0.01	0.00	
404	TG010.01	Channel	JTG010.03-1	JTG010.01-1	477.87	4501.58	4500.00	0.3300	10.000	0.0320	72.97	2490.62	0.03	3.11	1.74	0.17	0.00	
405	TG010.02	Channel	JTG010.02-0	JTG010.03-1	61.15	4502.15	4501.58	0.9300	10.000	0.0320	35.86	4181.89	0.01	1.79	1.53	0.15	0.00	
406	TG010.03	Channel	JTG010.03-0	JTG010.03-1	38.61	4501.85	4501.58	0.7000	10.000	0.0320	37.15	3622.14	0.01	1.67	1.67	0.17	0.00	
407	TG010.04	Channel	JTG010.04-0	JTG010.05-0	4500.00	4544.31	4542.60	0.0400	10.000	0.0320	73.41	4426.18	0.02	4.95	1.20	0.12	0.00	
408	TG010.05	Channel	JTG010.05-0	JTG020.01-1	4907.03	4591.30	4652.00	-1.2400	10.000	0.0320	74.23	4817.46	0.02	5.05	1.24	0.12	0.00	
409	TG010.07	Channel	JTG020.01-1	JTG070.01-1	320.00	4652.00	4652.71	-0.2200	10.000	0.0320	73.50	2040.27	0.04	3.41	1.65	0.16	0.00	
410	TG010.08	Channel	JTG070.01-1	JTG010.08-1	1368.67	4652.71	4669.46	-1.2200	10.000	0.0320	65.90	4791.72	0.01	3.10	1.61	0.16	0.00	
411	TG020.01	Channel	JTG020.02-1	JTG020.01-1	3032.22	4708.14	4652.00	1.8500	10.000	0.0320	0.99	5893.71	0.00	0.98	0.64	0.06	0.00	
412	TG020.02	Channel	JTG020.02-0	JTG020.02-1	12794.68	5929.34	4708.14	9.5400	10.000	0.0320	1.00	13381.71	0.00	1.74	0.07	0.01	0.00	
413	TG030.02	Channel	JTG030.05-1	JTG010.05-0	3085.88	4619.53	4591.30	0.9100	10.000	0.0320	0.00	4142.85	0.00	0.00	0.65	0.06	0.00	
414	TG030.05	Channel	JTG030.05-0	JTG030.05-1	3079.84	4693.33	4619.53	2.4000	10.000	0.0320	0.02	6704.97	0.00	0.00	0.01	0.00	0.00	
415	TG040.01	Channel	JTG040.0-0	JTG030.05-0	5331.64	4959.53	4693.33	4.9900	10.000	0.0320	0.06	9687.01	0.00	0.00	0.01	0.00	0.00	
416	TG060.01	Channel	JTG060.01-0	JTG010.08-1	80241.22	6956.00	4669.46	2.8500	10.000	0.0320	73.65	7311.79	0.01	6.51	1.01	0.10	0.00	
417	TG070.01	Channel	JTG070.02-1	JTG070.01-1	5099.54	4735.62	4652.71	1.6300	10.000	0.0320	64.09	5522.95	0.01	3.77	1.53	0.15	0.00	
418	TG070.02	Channel	JTG070.03-1	JTG070.02-1	14437.34	5142.62	4735.62	2.8200	10.000	0.0320	68.44	7272.55	0.01	6.73	0.94	0.09	0.00	
419	TG070.03	Channel	JTG070.03-0	JTG070.03-1	1132.21	5370.36	5142.62	20.1100	10.000	0.0320	0.00	19426.26	0.00	0.00	0.45	0.04	0.00	
420	UL010.02	Channel	JUL010.04-1	JUL010.02-1	602.83	4495.70	4491.00	0.7800	10.000	0.0320	13.47	3824.59	0.00	2.41	0.51	0.05	0.00	
421	UL010.04	Channel	JUL010.04-0	JUL010.04-1	2983.35	4614.13	4495.70	3.9700	10.000	0.0320	13.78	8630.02	0.00	3.55	0.41	0.04	0.00	
422	UL010.06	Channel	JUL010.08-0	JUL010.04-0	1243.78	4675.67	4614.13	4.9500	10.000	0.0320	13.90	9634.74	0.00	4.30	0.31	0.03	0.00	
423	UL010.08	Channel	JUL010.10-1	JUL010.08-0	2580.17	4812.10	4675.67	5.2900	10.000	0.0320	13.99	9960.10	0.00	4.49	0.30	0.03	0.00	
424	UL010.10	Channel	JUL010.10-0	JUL010.10-1	13317.41	5849.45	4812.10	7.7900	10.000	0.0320	15.01	12088.87	0.00	5.18	0.28	0.03	0.00	
425	UL020.02	Channel	JUL020.02-0	JUL020.02-1	5989.43	4865.89	4490.00	6.2800	10.000	0.0320	16.92	10851.02	0.00	5.11	0.31	0.03	0.00	
426	UL020.06	Channel	JUL020.06-0	JUL020.02-0	3258.08	5072.86	4865.89	6.3500	10.000	0.0320	3.61	10917.06	0.00	2.72	0.16	0.02	0.00	
427	UL020.10	Channel	JUL020.10-0	JUL020.06-0	1432.67	5162.24	5072.86	6.2400	10.000	0.0320	0.00	10818.82	0.00	0.00	0.06	0.01	0.00	
428	UL020.12	Channel	JUL020.12-0	JUL020.10-0	2121.66	5346.59	5162.24	8.6900	10.000	0.0320	0.00	12767.82	0.00	0.00	0.00	0.00	0.00	
429	UL024.02	Channel	UL024.02-0	JUL020.06-0	13152.72	7100.00	5072.86	15.4100	10.000	0.0320	4.19	17004.63	0.00	4.59	0.11	0.01	0.00	
430	UL030.02	Channel	JUL030.02-0	JUL030.02-1	1830.00	4580.07	4501.37	4.3000	10.000	0.0320	5.29	8982.45	0.00	2.93	0.17	0.02	0.00	
431	UL030.04	Channel	JUL030.04-0	JUL030.02-0	140.00	4587.21	4580.07	5.1000	10.000	0.0320	5.34	9781.78	0.00	3.05	0.17	0.02	0.00	
432	UL030.06	Channel	JUL030.08-1	JUL030.04-0	758.01	4618.14	4587.21	4.0800	10.000	0.0320	5.34	8749.55	0.00	2.89	0.18	0.02	0.00	
433	UL030.08	Channel	JUL030.12-1	JUL030.08-1	170.70	4623.65	4618.14	3.2300	10.000	0.0320	5.37	7782.01	0.00	2.69	0.19	0.02	0.00	
434	UL030.12	Channel	JUL030.14-1	JUL030.12-1	2350.79	4769.44	4623.65	6.2000	10.000	0.0320	6.74	10786.73	0.00	4.09	0.18	0.02	0.00	
435	UL030.14	Channel	JUL030.14-0	JUL030.14-1	4235.95	5067.12	4769.44	7.0300	10.000	0.0320	7.42	11482.39	0.00	4.33	0.18	0.02	0.00	
436	UL030.16	Channel	JUL030.16-0	JUL030.14-0	1610.07	5222.41	5067.12	9.6400	10.000	0.0320	5.96	13451.86	0.00	4.55	0.16	0.02	0.00	
437	UL031.02	Channel	JUL031.06-1	JUL030.12-1	4234.96	4887.75	4623.65	6.2400	10.000	0.0320	0.02	10816.64	0.00	0.10	0.10	0.01	0.00	
438	UL031.06	Channel	JUL031.10-1	JUL031.06-1	5104.96	5457.22	4887.75	11.1600	10.000	0.0320	0.03	14466.79	0.00	0.00	0.01	0.00	0.00	
439	UL031.10	Channel	JUL031.10-0	JUL031.10-1	6220.95	6622.71	5457.22	18.7300	10.000	0.0320	0.06	18748.17	0.00	0.00	0.01	0.00	0.00	
440	UL033.01	Channel	JUL033.02-1	JUL030.14-0	2500.16	5352.23	5067.12	11.4000	10.000	0.0320	2.92	14627.00	0.00	2.70	0.14	0.01	0.00	
441	UL033.02	Channel	JUL033.02-0	JUL033.02-1	2601.28	5974.93	5352.23	23.9400	10.000	0.0320	3.35	21192.34	0.00	4.50	0.08	0.01	0.00	
442	UL034.02	Channel	JUL034.02-0	JUL030.16-0	2372.15	5708.23	5222.41	20.4800	10.000	0.0320	5.89	19601.97	0.00	4.93	0.13	0.01	0.00	
443	UL040.02	Channel	JUL040.04-1	J42303	470.01	4745.79	4705.22	8.6300	10.000	0.0320	0.53	12725.71	0.00	0.57	0.09	0.01	0.00	
444	UL040.04	Channel	JUL040.06-1	JUL040.04-1	883.85	4763.85	4745.79	2.0400	10.000	0.0320	0.53	6191.60	0.00	1.08	0.05	0.00	0.00	
445	UL040.06	Channel	JUL040.06-0	JUL040.06-1	5048.33	5281.46	4763.85	10.2500	10.000	0.0320	0.68	13869.49	0.00	1.56	0.05	0.00	0.00	
446	UL041.02	Channel	JUL041.04-1	JUL041.02-1	1969.21	4741.62	4627.15	5.8100	10.000	0.0320	0.00	10443.18	0.00	0.00	0.00	0.00	0.00	
447	UL041.04	Channel	JUL041.04-0	JUL041.04-1	4898.40	5183.21	4741.62	9.0100	10.000	0.0320	0.00	13005.15	0.00	0.00	0.00	0.00	0.00	
448	UL045.02	Channel	JUL045.02-0	JUL040.06-0	6044.57	6540.33	5281.46	20.8300	10.000	0.0320	0.84	19767.00	0.00	2.29	0.04	0.00	0.00	
449	UL062.02	Channel	JUL062.02-0	J42421	1781.47	4933.69	4747.96	10.4300	10.000	0.0320	7.36	13985.72	0.00	2.63	0.48	0.05	0.00	
450	UL065.02	Channel	JUL065.02-0	JUL070.14-0	9093.00	6574.33	5261.14	14.4400	10.000	0.0320	0.00	16460.51	0.00	0.00	0.00	0.00	0.00	
451	UL066.02	Channel	JUL066.02-0	JUL070.12-0	5475.30	6216.13	5214.49	18.2900	10.000	0.0320	0.88	18526.14	0.00	2.40	0.04	0.00	0.00	
452	UL070.02	Channel	JUL070.02-0	JUL070.02-1	1259.30	4581.13	4500.32	6.4200	10.000	0.0320	21.98	10972.38	0.00	5.66	0.36	0.04	0.00	
453	UL070.04	Channel	JUL070.04-0	JUL070.04-1	925.09	4647.09	4590.98	6.0700	10.000	0.0320	10.01	10667.46	0.00	1.95	0.47	0.05	0.00	
454	UL070.06	Channel	JUL070.06-0	JUL070.04-0	254.18	4659.93	4647.09	5.0500	10.000	0.0320	6.52	9735.20	0.00	3.02	0.21	0.02	0.00	
455	UL070.08	Channel	JUL070.10-1	JUL070.06-0	1863.40	4779.12	4659.93	6.4000	10.000	0.0320	2.30	10954.68	0.00	1.82	0.13	0.01	0.00	
456	UL070.10	Channel	JUL070.10-0	JUL070.10-1	3565.83	5083.29	4779.12	8.5300	10.000	0.0320	0.77	12650.59	0.00	1.47	0.05	0.01	0.00	

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
457	UL070.12	Channel	JUL070.12-0	JUL070.10-0	1304.35	5214.49	5083.29	10.0600	10.000	0.0320	0.85	13737.35	0.00	1.96	0.04	0.00	0.00	
458	UL070.14	Channel	JUL070.14-0	JUL070.10-0	1606.64	5261.14	5083.29	11.0700	10.000	0.0320	0.00	14411.22	0.00	0.00	0.02	0.00	0.00	
459	UL080.02	Channel	JUL080.02-0	JUL080.02-1	1930.62	4576.48	4493.46	4.3000	10.000	0.0320	24.58	8982.06	0.00	5.19	0.44	0.04	0.00	
460	UL080.04	Channel	JUL080.04-0	JUL080.04-1	714.38	4595.90	4636.02	-5.6200	10.000	0.0320	18.59	10264.76	0.00	5.73	0.31	0.03	0.00	
461	UL080.06	Channel	JUL080.06-1	JUL080.06-0	1080.62	4695.88	4635.30	5.6100	10.000	0.0320	14.54	10255.60	0.00	0.46	2.47	0.25	0.00	
462	UL080.08	Channel	JUL080.08-1	JUL080.08-0	222.77	4711.67	4696.80	6.6800	10.000	0.0320	14.59	11190.77	0.00	4.37	0.31	0.03	0.00	
463	UL080.10	Channel	JUL080.10-0	JUL080.10-1	762.19	4770.94	4717.35	7.0300	10.000	0.0320	2.74	11485.32	0.00	0.31	0.76	0.08	0.00	
464	UL080.12	Channel	JUL080.12-1	JUL080.12-0	1363.90	4878.08	4776.51	7.4500	10.000	0.0320	7.43	11820.19	0.00	2.87	0.77	0.08	0.00	
465	UL080.14	Channel	JUL080.14-0	JUL080.12-1	1685.14	5014.70	4878.08	8.1100	10.000	0.0320	0.03	12333.10	0.00	0.00	0.09	0.01	0.00	
466	UL080.16	Channel	JUL080.16-0	JUL080.14-0	2068.96	5227.63	5014.70	10.2900	10.000	0.0320	0.03	13895.54	0.00	0.00	0.01	0.00	0.00	
467	UL084.02	Channel	JUL084.02-0	JUL080.16-0	6970.30	6213.33	5227.63	14.1400	10.000	0.0320	0.04	16288.45	0.00	0.00	0.01	0.00	0.00	
468	UL100.02	Channel	JUL100.04-1	SN-KitF	173.34	4826.25	4820.40	3.3700	10.000	0.0320	0.59	7957.22	0.00	0.47	0.15	0.02	0.00	
469	UL100.04	Channel	JUL100.04-0	JUL100.04-1	2172.85	5012.74	4826.25	8.5800	10.000	0.0320	0.65	12689.54	0.00	1.67	0.04	0.00	0.00	
470	UL100.06	Channel	JUL100.06-0	JUL100.04-0	2084.50	5193.10	5012.74	8.6500	10.000	0.0320	0.80	12740.96	0.00	2.10	0.04	0.00	0.00	
471	UL120.02	Channel	JUL120.02-0	JUL120.02-1	57.03	4505.93	4504.59	2.3500	10.000	0.0320	75.45	6639.47	0.01	5.87	1.06	0.11	0.00	
472	UL120.04	Channel	JUL120.04-0	JUL120.04-1	925.41	4541.49	4511.73	3.2200	10.000	0.0320	75.45	7767.52	0.01	6.94	0.91	0.09	0.00	
473	UL120.06	Channel	JUL120.06-0	JUL120.06-1	1129.14	4574.18	4541.09	2.9300	10.000	0.0320	76.97	7414.94	0.01	4.50	1.36	0.14	0.00	
474	UL121.04	Channel	JUL121.04-0	JUL121.06-1	3859.53	5110.19	4831.56	7.2200	10.000	0.0320	0.00	10275.09	0.00	0.00	0.00	0.00	0.00	
475	UL121.06	Channel	JUL121.07-1	JUL121.06-1	3157.89	5027.00	4831.56	6.1900	10.000	0.0320	0.00	8922.51	0.00	0.00	0.00	0.00	0.00	
476	UL121.07	Channel	JUL121.07-0	JUL121.07-1	942.14	5108.32	5027.00	8.6300	10.000	0.0320	0.00	12725.47	0.00	0.00	0.00	0.00	0.00	
477	UL126.02	Channel	JUL126.02-0	JUL121.07-1	13758.00	6720.00	5027.00	12.3100	10.000	0.0320	0.00	15194.41	0.00	0.00	0.00	0.00	0.00	
478	UL130.02	Channel	JUL130.02-0	JUL130.02-1	1842.73	4566.45	4505.04	3.3300	10.000	0.0320	6.25	7907.18	0.00	2.84	0.21	0.02	0.00	
479	UL130.04	Channel	JUL130.04-0	JUL130.04-1	1221.65	4581.26	4567.91	1.0900	10.000	0.0320	18.81	4527.94	0.00	2.48	2.35	0.23	0.00	
480	UL130.06	Channel	JUL130.06-0	JUL130.06-1	176.18	4590.00	4582.55	4.2300	10.000	0.0320	18.93	8907.03	0.00	2.59	0.65	0.06	0.00	
481	UL130.08	Channel	JUL130.08-1	JUL130.08-0	3982.32	4594.64	4592.42	0.0600	10.000	0.0320	4.27	1022.68	0.00	0.62	0.81	0.08	0.00	
482	UL132.02	Channel	JUL132.04-1	JUL132.02-1	2005.42	4840.89	4760.63	4.0000	10.000	0.0320	8.85	8665.23	0.00	1.39	0.58	0.06	0.00	
483	UL132.04	Channel	JUL132.04-0	JUL132.04-1	2995.59	5089.33	4840.89	8.2900	10.000	0.0320	9.34	12473.91	0.00	4.26	0.22	0.02	0.00	
484	UL132.05	Channel	JUL132.05-0	JUL132.04-0	9753.24	6033.00	5089.33	9.6800	10.000	0.0320	3.13	13473.13	0.00	2.85	0.11	0.01	0.00	
485	UL144.02	Channel	JUL144.04-1	J42832	1241.03	4766.71	4695.82	5.7100	10.000	0.0320	11.28	10352.24	0.00	3.07	0.35	0.03	0.00	
486	UL144.04	Channel	JUL144.04-0	JUL144.04-1	3032.13	4958.80	4766.71	6.3400	10.000	0.0320	11.45	10902.13	0.00	4.41	0.25	0.02	0.00	
487	UL148.01	Channel	JUL148.01-0	JUL144.04-0	5433.14	5432.33	4958.80	8.7200	10.000	0.0320	11.23	13186.22	0.00	4.67	0.23	0.02	0.00	
488	UL152.02	Channel	JUL152.02-0	JUL152.02-1	1271.91	4550.30	4549.32	0.0800	10.000	0.0320	5.26	1202.31	0.00	0.95	0.50	0.05	0.00	
489	UL152.04	Channel	JUL152.04-0	JUL152.04-1	1117.05	4554.21	4551.14	0.2700	10.000	0.0320	7.12	2270.73	0.00	1.26	0.79	0.08	0.00	
490	O-200W	Orifice	SN-200W	J0086-0		4536.80	4534.15		2.000		7.12							
491	O-540W	Orifice	SN-540W	J42453		4568.20	4559.93		1.250		7.37							
492	O-610W	Orifice	SN-610W	J42992		4573.00	4570.69		0.417		5.85							
493	O-Comm	Orifice	SN-Comm	J441759-0		4509.40	4508.14		1.250		8.06							
494	O-HHBlv	Orifice	SN-HHBl	J0126-0		4641.60	4632.19		0.500		0.63							
495	O-HHPark	Orifice	SN-HHPa	J441317-0		4727.60	4717.08		1.250		5.73							
496	O-HillC	Orifice	SN-HillC	J4245		4621.20	4616.24		1.500		1.37							
497	O-KitF	Orifice	SN-KitF	JUL100.02-1		4820.40	4820.37		2.000		0.59							
498	O-Mav	Orifice	SN-Mav	J44681.0		4597.00	4591.92		1.000		5.16							
499	O-Orch	Orifice	SN-Orch	J431143		4743.00	4739.37		1.000		6.07							
500	O-Pepp	Orifice	SN-Pepp	J441117-0		4618.80	4617.87		0.500		2.65							
501	O-Pond	Orifice	SN-Pond	J4429-0		4625.00	4621.41		0.667		13.47							
502	O-Rock	Orifice	SN-Rock	JUL070.10-1		4788.10	4779.12		3.000		1.29							
503	O-SMPN	Orifice	SN-SMPN	Out-21		4628.60	4489.00		0.500		1.43							
504	O-SMPS	Orifice	SN-SMPS	SN-SMPN		4628.60	4628.60		1.667		7.99							
505	O-Still	Orifice	SN-Still	J0014-1		4726.40	4721.70		0.417		1.15							
506	O-Summ	Orifice	SN-SUMM	J441032-1		4599.80	4592.84		1.250		7.02							
507	O-Swain	Orifice	SN-Swain	J44599-0		4654.40	4647.46		1.667		4.06							
508	O-Vill	Orifice	SN-Vill	J44614-0		4587.40	4581.74		4.000		16.45							
509	O-Waym	Orifice	SN-Waym	JUL080.10-1		4723.60	4717.35		2.500		13.03							
510	O-Weath	Orifice	SN-Weath	J42533		4702.20	4695.91		4.000		0.00							
511	O-WildF	Orifice	SN-WildF	J42462		4592.80	4581.42		1.500		1.41							
512	O-WildL	Orifice	SN-WildL	JUL070.04-1		4592.80	4590.98		1.500		12.03							

EXISTING CONDITION
100-YEAR STORM

Project Description

File Name ..... SaratogaStormExisting.SPF

Project Options

Flow Units ..... CFS
Elevation Type ..... Elevation
Hydrology Method HEC-1
HEC-1 unit hydrograph method ..... SCS Dimensionless
HEC-1 loss method ..... SCS Curve Number
Link Routing Method ..... Hydrodynamic
Enable Overflow Ponding at Nodes ..... YES
Skip Steady State Analysis Time Periods ... NO

Analysis Options

Start Analysis On ..... Jan 01, 2012 00:00:00
End Analysis On ..... Jan 01, 2012 07:00:00
Start Reporting On ..... Jan 01, 2012 00:00:00
Antecedent Dry Days ..... 0 days
Runoff (Dry Weather) Time Step ..... 0 01:00:00 days hh:mm:ss
Runoff (Wet Weather) Time Step ..... 0 00:05:00 days hh:mm:ss
Reporting Time Step ..... 0 00:05:00 days hh:mm:ss
Routing Time Step ..... 30 seconds

Number of Elements

	Qty
Rain Gages	6
Subbasins	95
Nodes	520
Junctions	476
Outfalls	20
Flow Diversions	0
Inlets	0
Storage Nodes	24
Links	512
Channels	129
Pipes	360
Pumps	0
Orifices	23
Weirs	0
Outlets	0
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	100-Year	Time Series	TS-100yr	Cumulative	inches				0.00	
2	10-Year	Time Series	TS-10yr	Cumulative	inches				0.00	
3	25Year	Time Series	TS-25yr	Cumulative	inches				0.00	
4	2yr	Time Series	2 Yr	Cumulative	inches				0.00	
5	50YR	Time Series	50 YR	Cumulative	inches				0.00	
6	5yr	Time Series	5 Yr	Cumulative	inches				0.00	

Subbasin Summary

SN	Subbasin ID	Area (ac)	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)
1	JR010	263.79	1.72	0.08	21.37	16.39
2	JR012	409.49	1.72	0.09	36.44	25.40
3	JR020	75.12	1.72	0.27	19.98	18.54
4	JR022	159.04	1.72	0.52	83.34	67.75
5	JR023	24.06	1.72	0.59	14.15	17.71
6	JR024	9.50	1.72	1.04	9.86	14.96
7	JR025	23.83	1.72	1.46	34.89	62.33
8	JR030	252.83	1.72	0.28	69.53	51.11
9	JR032	111.91	1.72	0.14	15.67	16.56
10	JR040	26.23	1.72	0.87	22.85	30.96
11	JR050	262.24	1.72	0.16	42.48	36.40
12	JR060	127.06	1.72	0.48	60.73	45.97
13	JR062	437.08	1.72	0.32	138.99	129.08
14	JR063	120.38	1.72	0.12	14.45	15.75
15	JR064	37.13	1.72	0.33	12.40	19.10
16	JR066	82.30	1.72	0.55	45.18	52.82
17	JR070	109.91	1.72	0.49	54.19	56.50
18	JR080	20.40	1.72	0.21	4.18	4.97
19	JR082	135.24	1.72	0.37	49.63	39.92
20	JR083	36.82	1.72	0.57	20.88	26.52
21	JR084	37.71	1.72	0.32	12.07	13.91
22	JR085	25.52	1.72	0.61	15.44	23.44
23	JR086	138.78	1.72	0.66	92.01	124.25
24	JR087	23.81	1.72	0.72	17.21	26.71
25	JR088	37.93	1.72	0.64	24.39	37.50
26	JR089	33.28	1.72	0.37	12.41	18.44
27	JR090	58.55	1.72	0.67	39.11	52.63
28	JR091	18.12	1.72	0.64	11.67	12.05
29	JR092	8.80	1.72	1.30	11.44	17.70
30	PR010	237.16	1.72	0.08	19.21	17.88
31	PR020	390.78	1.72	0.23	89.49	73.75
32	PR030	78.69	1.72	0.23	18.02	20.08
33	PR040	2000.99	1.72	0.16	324.16	159.66
34	PR050	1368.43	1.72	0.14	197.05	108.57
35	PR060	735.89	1.72	0.14	105.97	75.01
36	SS-MN-2	16.92	1.72	0.68	11.44	16.81
37	TG010	327.98	1.72	0.03	10.50	5.75
38	TG020	1440.19	1.72	0.07	96.49	38.99
39	TG030	306.05	1.72	0.03	8.57	5.22
40	TG040	466.81	1.72	0.09	43.88	32.63
41	TG060	40567.11	1.72	0.09	3529.34	946.19
42	TG070	2141.56	1.72	0.18	391.91	165.41
43	UL010	358.46	1.72	0.05	16.85	12.63
44	UL012	765.62	1.72	0.28	214.37	136.10
45	UL020	470.76	1.72	0.08	39.07	33.11
46	UL022	242.19	1.72	0.07	16.47	12.71
47	UL024	933.42	1.72	0.16	151.21	108.55
48	UL030	205.10	1.72	0.01	2.05	1.20
49	UL031	123.80	1.72	0.03	3.47	2.81
50	UL032	233.02	1.72	0.05	10.95	8.31
51	UL033	88.85	1.72	0.28	24.79	27.89
52	UL034	156.46	1.72	0.28	43.81	50.13
53	UL035	586.06	1.72	0.09	55.09	39.19
54	UL040	143.49	1.72	0.51	72.61	110.66
55	UL041	67.25	1.72	0.01	0.67	0.46
56	UL042	76.37	1.72	0.01	0.76	0.57
57	UL043	157.01	1.72	0.04	5.65	4.60
58	UL044	321.32	1.72	0.05	15.10	13.17
59	UL045	422.26	1.72	0.13	53.20	44.44
60	UL050	65.15	1.72	0.40	26.26	39.85
61	UL051	97.15	1.72	0.01	0.97	0.67
62	UL060	78.53	1.72	0.49	38.32	58.47
63	UL061	33.56	1.72	0.23	7.79	13.42
64	UL062	51.61	1.72	0.18	9.34	12.70
65	UL063	92.95	1.72	0.08	7.25	8.80
66	UL064	191.89	1.72	0.03	5.37	4.52
67	UL065	557.40	1.72	0.08	45.15	30.51
68	UL066	262.96	1.72	0.14	37.87	32.29
69	UL070	127.05	1.72	0.08	9.91	10.53
70	UL080	115.43	1.72	0.25	28.74	38.84
71	UL081	107.65	1.72	0.30	32.30	53.42
72	UL082	84.13	1.72	0.11	9.42	13.68
73	UL083	63.50	1.72	0.01	0.64	0.44
74	UL084	562.59	1.72	0.09	52.88	37.62
75	UL090	29.46	1.72	0.30	8.84	13.84
76	UL100	79.57	1.72	0.33	26.58	40.19
77	UL101	37.57	1.72	0.01	0.38	0.35
78	UL102	74.54	1.72	0.01	0.75	0.57
79	UL103	130.47	1.72	0.16	21.14	21.69
80	UL110	186.08	1.72	0.18	33.68	45.81

Subbasin Summary

SN	Subbasin ID	Area (ac)	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)
81	UL120	153.99	1.72	0.40	62.06	94.18
82	UL121	131.78	1.72	0.17	22.14	28.50
83	UL124	406.97	1.72	0.02	6.10	4.14
84	UL126	1502.76	1.72	0.08	121.72	68.51
85	UL130	199.88	1.72	0.21	41.18	39.77
86	UL132	110.79	1.72	0.13	14.85	13.07
87	UL134	292.08	1.72	0.10	30.38	24.68
88	UL136	740.74	1.72	0.16	120.00	72.97
89	UL140	102.56	1.72	0.34	34.77	40.96
90	UL142	57.99	1.72	0.37	21.40	26.25
91	UL144	155.20	1.72	0.43	67.36	99.09
92	UL146	55.82	1.72	0.10	5.36	5.35
93	UL148	301.52	1.72	0.29	88.65	72.41
94	UL150	50.72	1.72	0.53	26.73	37.01
95	UL152	329.01	1.72	0.06	20.07	12.68

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	J0004-0	Junction	4525.19	4530.79	0.00	4536.39	0.00	107.41	4536.39	5.60	0.00	0 00:55	0.00	0.00
2	J0006-0	Junction	4578.80	4586.35	0.00	4593.90	0.00	107.59	4580.98	0.00	5.37	0 00:00	0.00	0.00
3	J0011-0	Junction	4586.34	4592.94	0.00	4599.54	0.00	19.78	4598.06	5.12	0.00	0 00:00	0.00	0.00
4	J0012-1	Junction	4587.41	4592.91	0.00	4598.41	0.00	19.77	4598.07	5.16	0.00	0 00:00	0.00	0.00
5	J0014-1	Junction	4721.70	4725.70	0.00	4732.37	0.00	14.80	4722.44	0.00	3.26	0 00:00	0.00	0.00
6	J0015-0	Junction	4541.32	4550.27	0.00	4556.94	0.00	449.48	4544.71	0.00	6.61	0 00:00	0.00	0.00
7	J0015-1	Junction	4502.62	4509.79	0.00	4516.46	0.00	448.93	4509.65	0.00	2.97	0 00:00	0.00	0.00
8	J0016-0	Junction	4541.17	4546.98	0.00	4553.65	0.00	455.43	4544.61	0.00	6.56	0 00:00	0.00	0.00
9	J0016-1	Junction	4503.66	4512.14	0.00	4518.81	0.00	454.90	4509.80	0.00	3.86	0 00:00	0.00	0.00
10	J0018-0	Junction	4545.56	4548.66	0.00	4551.76	0.00	14.20	4546.57	0.00	2.09	0 00:00	0.00	0.00
11	J0018-1	Junction	4540.09	4544.49	0.00	4548.89	0.00	14.22	4541.13	0.00	3.36	0 00:00	0.00	0.00
12	J0019-0	Junction	4545.76	4549.66	0.00	4553.56	0.00	14.20	4549.42	0.00	0.24	0 00:00	0.00	0.00
13	J0020-1	Junction	4535.12	4539.32	0.00	4543.52	0.00	14.48	4543.52	4.20	0.00	0 01:01	0.00	0.00
14	J0021-1	Junction	4530.51	4534.61	0.00	4538.71	0.00	15.23	4537.85	3.24	0.00	0 00:00	0.00	0.00
15	J0023-0	Junction	4530.35	4533.90	0.00	4537.45	0.00	15.24	4537.45	3.55	0.00	0 00:59	0.01	0.00
16	J0023-1	Junction	4529.68	4534.18	0.00	4538.68	0.00	15.25	4536.88	2.70	0.00	0 00:00	0.00	0.00
17	J0025-1	Junction	4529.18	4532.63	0.00	4536.08	0.00	27.72	4536.08	3.45	0.00	0 01:21	15.68	51.00
18	J0026-1	Junction	4546.71	4549.51	0.00	4552.31	0.00	19.90	4552.31	2.80	0.00	0 02:04	30.18	343.00
19	J0038-0	Junction	4544.91	4550.35	0.00	4550.35	0.00	10.93	4547.31	0.00	7.60	0 00:00	0.00	0.00
20	J0040-0	Junction	4554.09	4558.54	0.00	4562.99	0.00	10.71	4555.19	0.00	3.35	0 00:00	0.00	0.00
21	J0040-1	Junction	4553.18	4557.73	0.00	4562.28	0.00	10.71	4554.21	0.00	3.52	0 00:00	0.00	0.00
22	J0041-0	Junction	4551.21	4555.41	0.00	4559.61	0.00	10.72	4552.30	0.00	3.11	0 00:00	0.00	0.00
23	J0041-1	Junction	4550.28	4555.41	0.00	4567.89	0.00	10.72	4551.30	0.00	4.11	0 00:00	0.00	0.00
24	J0043-0	Junction	4558.86	4564.71	0.00	4570.56	0.00	10.72	4560.33	0.00	4.38	0 00:00	0.00	0.00
25	J0043-1	Junction	4558.42	4563.42	0.00	4568.42	0.00	10.71	4559.40	0.00	4.02	0 00:00	0.00	0.00
26	J0044-1	Junction	4556.59	4561.79	0.00	4566.99	0.00	10.71	4557.53	0.00	4.26	0 00:00	0.00	0.00
27	J0048-0	Junction	4560.70	4566.85	0.00	4579.38	0.00	10.71	4561.67	0.00	5.18	0 00:00	0.00	0.00
28	J0050-0	Junction	4579.17	4587.57	0.00	4595.97	0.00	8.50	4592.13	4.56	0.00	0 00:00	0.00	0.00
29	J0050-1	Junction	4579.09	4587.64	0.00	4596.19	0.00	33.18	4591.99	4.35	0.00	0 00:00	0.00	0.00
30	J0051-1	Junction	4576.60	4581.55	0.00	4586.50	0.00	33.18	4586.50	4.95	0.00	0 00:50	4.16	81.00
31	J0052-1	Junction	4571.48	4575.05	0.00	4578.62	0.00	28.93	4578.62	3.57	0.00	0 02:24	43.74	164.00
32	J0054-1	Junction	4561.20	4566.85	0.00	4572.50	0.00	10.72	4562.37	0.00	4.48	0 00:00	0.00	0.00
33	J0071-0	Junction	4585.38	4589.48	0.00	4593.58	0.00	10.87	4593.21	3.73	0.00	0 00:00	0.00	0.00
34	J0071-1	Junction	4585.32	4588.92	0.00	4592.52	0.00	10.88	4592.52	3.60	0.00	0 01:45	0.85	31.00
35	J0073-0	Junction	4605.89	4616.51	0.00	4627.14	0.00	27.66	4615.51	0.00	1.00	0 00:00	0.00	0.00
36	J0073-1	Junction	4605.36	4612.03	0.00	4618.70	0.00	27.66	4605.83	0.00	9.53	0 00:00	0.00	0.00
37	J0074-0	Junction	4609.03	4618.78	0.00	4628.53	0.00	18.46	4628.53	9.75	0.00	0 00:56	0.00	0.00
38	J0074-1	Junction	4608.13	4617.03	0.00	4625.93	0.00	18.46	4622.22	5.19	0.00	0 00:00	0.00	0.00
39	J0075-1	Junction	4605.98	4617.53	0.00	4629.08	0.00	20.70	4617.68	0.15	0.00	0 00:00	0.00	0.00
40	J0076-0	Junction	4609.87	4618.92	0.00	4627.97	0.00	18.46	4627.97	9.05	0.00	0 00:57	0.00	0.00
41	J0077-0	Junction	4610.90	4619.15	0.00	4627.40	0.00	18.46	4627.40	8.25	0.00	0 00:58	0.00	0.00
42	J0078-0	Junction	4612.12	4620.37	0.00	4628.62	0.00	18.46	4628.62	8.25	0.00	0 00:58	0.00	0.00
43	J0079-0	Junction	4613.74	4621.69	0.00	4629.64	0.00	18.47	4629.64	7.95	0.00	0 00:59	0.00	0.00
44	J0080-0	Junction	4614.73	4619.33	0.00	4623.93	0.00	39.92	4623.93	4.60	0.00	0 01:26	17.83	71.00
45	J0080-1	Junction	4614.29	4620.14	0.00	4625.99	0.00	18.46	4625.99	5.85	0.00	0 00:59	0.00	0.00
46	J0084-0	Junction	4532.69	4542.04	0.00	4551.39	0.00	7.88	4542.61	0.57	0.00	0 00:00	0.00	0.00
47	J0085-1	Junction	4534.04	4543.24	0.00	4549.91	0.00	12.95	4538.35	0.00	5.69	0 00:00	0.00	0.00
48	J0086-0	Junction	4534.15	4542.55	0.00	4542.55	0.00	56.84	4542.55	0.00	0.00	0 01:55	38.21	152.00
49	J0086-1	Junction	4533.20	4541.65	0.00	4550.10	0.00	7.88	4542.60	0.95	0.00	0 00:00	0.00	0.00
50	J0088-0	Junction	4533.74	4542.39	0.00	4551.04	0.00	18.54	4543.48	1.09	0.00	0 00:00	0.00	0.00
51	J0089-0	Junction	4534.04	4540.23	0.00	4546.90	0.00	11.15	4538.34	0.00	5.70	0 00:00	0.00	0.00
52	J0089-1	Junction	4533.24	4540.22	0.00	4546.89	0.00	10.60	4536.10	0.00	7.14	0 00:00	0.00	0.00
53	J0090-0	Junction	4532.64	4537.02	0.00	4543.69	0.00	10.59	4536.10	0.00	6.54	0 00:00	0.00	0.00
54	J0090-1	Junction	4531.38	4536.45	0.00	4543.12	0.00	10.58	4531.77	0.00	9.61	0 00:00	0.00	0.00
55	J0091-0	Junction	4526.22	4531.40	0.00	4538.07	0.00	10.58	4530.49	0.00	5.73	0 00:00	0.00	0.00
56	J0091-1	Junction	4525.26	4530.25	0.00	4536.92	0.00	24.08	4526.70	0.00	8.56	0 00:00	0.00	0.00
57	J0094-0	Junction	4522.00	4527.55	0.00	4534.22	0.00	23.18	4524.51	0.00	7.49	0 00:00	0.00	0.00
58	J0094-1	Junction	4520.37	4527.04	0.00	4533.71	0.00	23.16	4520.71	0.00	9.66	0 00:00	0.00	0.00
59	J0095-0	Junction	4523.70	4530.37	0.00	4537.04	0.00	23.53	4526.69	0.00	7.01	0 00:00	0.00	0.00
60	J0095-1	Junction	4522.22	4530.91	0.00	4537.58	0.00	23.24	4524.52	0.00	7.70	0 00:00	0.00	0.00
61	J0101-1	Junction	4518.67	4525.34	0.00	4532.01	0.00	23.16	4519.60	0.00	9.07	0 00:00	0.00	0.00
62	J0103-1	Junction	4506.29	4512.96	0.00	4519.63	0.00	23.13	4507.33	0.00	8.96	0 00:00	0.00	0.00
63	J0108-1	Junction	4586.74	4593.41	0.00	4600.08	0.00	27.65	4596.42	0.00	0.32	0 00:00	0.00	0.00
64	J0109-1	Junction	4586.99	4593.23	0.00	4599.90	0.00	12.38	4593.98	0.00	3.01	0 00:00	0.00	0.00
65	J0110-1	Junction	4585.43	4590.68	0.00	4597.35	0.00	13.11	4593.98	0.00	1.45	0 00:00	0.00	0.00
66	J0111-0	Junction	4766.53	4774.18	0.00	4781.83	0.00	13.77	4777.91	3.73	0.00	0 00:00	0.00	0.00
67	J0111-1	Junction	4762.20	4767.10	0.00	4772.00	0.00	13.77	4772.00	4.90	0.00	0 00:55	0.00	0.00
68	J0112-0	Junction	4756.80	4762.40	0.00	4768.00	0.00	13.77	4768.00	5.60	0.00	0 01:06	0.49	17.00
69	J0114-0	Junction	4873.88	4881.88	0.00	4889.88	0.00	13.91	4874.90	0.00	6.98	0 00:00	0.00	0.00
70	J0114-1	Junction	4869.56	4878.16	0.00	4886.76	0.00	13.91	4870.24	0.00	7.92	0 00:00	0.00	0.00
71	J0115-1	Junction	4836.95	4845.80	0.00	4854.65	0.00	13.90	4837.97	0.00	7.83	0 00:00	0.00	0.00
72	J0116-1	Junction	4833.51	4841.46	0.00	4849.41	0.00	13.89	4834.43	0.00	7.03	0 00:00	0.00	0.00
73	J0117-1	Junction	4819.05	4825.35	0.00	4831.65	0.00	13.87	4819.88	0.00	5.47	0 00:00	0.00	0.00
74	J0118-1	Junction	4806.49	4814.09	0.00	4821.69	0.00	13.87	4810.25	0.00	3.84	0 00:00	0.00	0.00
75	J0119-1	Junction	4803.84	4808.39	0.00	4812.94	0.00	13.88	4804.79	0.00	3.60	0 00:00	0.00	0.00
76	J0120-1	Junction	4794.30	4798.95	0.00	4803.60	0.00	13.87	4795.22	0.00	3.73	0 00:00	0.00	0.00
77	J0121-1	Junction	4784.91	4790.11	0.00	4795.31	0.00	13.91	4786.00	0.00	4.11	0 00:00	0.00	0.00
78	J0122-0	Junction	4768.70	4777.05	0.00	4785.40	0.00	13.77	4779.95	2.90	0.00	0 00:00	0.00	0.00
79	J0122-1	Junction	4766.60	4775.25	0.00	4783.90	0.00	13.77	4779.13	3.88	0.00	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
80	J0125-0	Junction	4626.22	4632.02	0.00	4637.82	0.00	35.93	4636.44	4.42	0.00	0 00:00	0.00	0.00
81	J0125-1	Junction	4617.41	4622.06	0.00	4626.71	0.00	35.75	4626.71	4.65	0.00	0 01:05	1.26	26.00
82	J0126-0	Junction	4632.19	4638.49	0.00	4644.79	0.00	24.76	4642.86	4.37	0.00	0 00:00	0.00	0.00
83	J0126-1	Junction	4629.13	4634.00	0.00	4657.46	0.00	35.93	4642.19	8.19	0.00	0 00:00	0.00	0.00
84	J0127-0	Junction	4606.32	4617.37	0.00	4628.42	0.00	35.75	4617.98	0.61	0.00	0 00:00	0.00	0.00
85	J0129-0	Junction	4615.74	4620.29	0.00	4624.84	0.00	35.75	4624.17	3.88	0.00	0 00:00	0.00	0.00
86	J0131.0	Junction	4591.24	4594.79	0.00	4598.34	0.00	39.44	4598.34	3.55	0.00	0 01:01	10.17	43.00
87	J0133.0	Junction	4589.62	4590.92	0.00	4594.92	0.00	11.87	4594.92	4.00	0.00	0 00:46	0.00	0.00
88	J421012	Junction	4582.55	4590.95	0.00	4599.35	0.00	25.19	4598.05	7.10	0.00	0 00:00	0.00	0.00
89	J421015	Junction	4596.75	4601.15	0.00	4605.55	0.00	12.63	4605.55	4.40	0.00	0 01:09	0.00	0.00
90	J421016	Junction	4601.71	4610.26	0.00	4618.81	0.00	12.88	4616.42	6.16	0.00	0 00:00	0.00	0.00
91	J421017	Junction	4605.36	4614.06	0.00	4622.76	0.00	12.88	4614.30	0.24	0.00	0 00:00	0.00	0.00
92	J421018	Junction	4608.21	4614.81	0.00	4621.41	0.00	12.99	4615.32	0.51	0.00	0 00:00	0.00	0.00
93	J421019	Junction	4610.44	4615.14	0.00	4619.84	0.00	13.14	4617.31	2.17	0.00	0 00:00	0.00	0.00
94	J42108	Junction	4544.09	4549.89	0.00	4555.69	0.00	65.87	4547.30	0.00	6.79	0 00:00	0.00	0.00
95	J42112	Junction	4599.43	4605.33	0.00	4611.23	0.00	31.64	4607.40	2.07	0.00	0 00:00	0.00	0.00
96	J42117	Junction	4597.20	4602.90	0.00	4608.60	0.00	48.70	4598.35	0.00	4.55	0 00:00	0.00	0.00
97	J421172	Junction	4741.86	4758.76	0.00	4775.66	0.00	13.29	4775.66	16.90	0.00	0 00:45	0.00	0.00
98	J42118	Junction	4610.41	4615.21	0.00	4620.01	0.00	26.01	4614.96	0.00	0.25	0 00:00	0.00	0.00
99	J421180	Junction	4732.37	4749.62	0.00	4766.87	0.00	13.29	4762.57	12.95	0.00	0 00:00	0.00	0.00
100	J421185	Junction	4731.42	4749.37	0.00	4767.32	0.00	13.29	4762.00	12.63	0.00	0 00:00	0.00	0.00
101	J421186	Junction	4730.77	4747.62	0.00	4764.47	0.00	11.28	4761.78	14.16	0.00	0 00:00	0.00	0.00
102	J421187	Junction	4730.20	4746.45	0.00	4762.70	0.00	11.28	4761.64	15.19	0.00	0 00:00	0.00	0.00
103	J421188	Junction	4729.81	4745.66	0.00	4761.51	0.00	37.50	4761.51	15.85	0.00	0 01:00	0.74	13.00
104	J421189	Junction	4728.22	4739.47	0.00	4750.72	0.00	28.60	4736.55	0.00	2.92	0 00:00	0.00	0.00
105	J421190	Junction	4716.50	4729.05	0.00	4741.60	0.00	28.60	4720.05	0.00	9.00	0 00:00	0.00	0.00
106	J421191	Junction	4713.49	4725.79	0.00	4738.09	0.00	28.60	4714.60	0.00	11.19	0 00:00	0.00	0.00
107	J421192	Junction	4703.92	4713.42	0.00	4722.92	0.00	28.61	4705.07	0.00	8.35	0 00:00	0.00	0.00
108	J421193	Junction	4694.15	4701.55	0.00	4708.95	0.00	28.62	4695.34	0.00	6.21	0 00:00	0.00	0.00
109	J421194	Junction	4687.36	4694.76	0.00	4702.16	0.00	28.64	4688.93	0.00	5.83	0 00:00	0.00	0.00
110	J421195	Junction	4670.77	4676.77	0.00	4682.77	0.00	28.60	4682.77	6.00	0.00	0 00:47	0.00	0.00
111	J421196	Junction	4663.74	4670.24	0.00	4676.74	0.00	28.60	4676.74	6.50	0.00	0 01:05	2.84	37.00
112	J421197	Junction	4733.85	4743.45	0.00	4753.05	0.00	36.16	4753.05	9.60	0.00	0 00:55	5.79	30.00
113	J421200	Junction	4733.33	4743.58	0.00	4753.83	0.00	13.29	4753.83	10.25	0.00	0 00:58	0.99	21.00
114	J421201	Junction	4732.57	4746.07	0.00	4759.57	0.00	13.29	4758.05	11.98	0.00	0 00:00	0.00	0.00
115	J42154	Junction	4521.79	4530.29	0.00	4536.96	0.00	103.11	4523.49	0.00	6.80	0 00:00	0.00	0.00
116	J42155	Junction	4525.14	4536.04	0.00	4542.71	0.00	103.11	4528.40	0.00	7.64	0 00:00	0.00	0.00
117	J42156	Junction	4527.51	4540.26	0.00	4546.93	0.00	103.17	4530.97	0.00	9.29	0 00:00	0.00	0.00
118	J42157	Junction	4512.22	4529.67	0.00	4536.34	0.00	103.11	4513.95	0.00	15.72	0 00:00	0.00	0.00
119	J42175	Junction	4688.48	4696.88	0.00	4703.55	0.00	14.80	4691.20	0.00	5.68	0 00:00	0.00	0.00
120	J42176	Junction	4691.51	4699.51	0.00	4706.18	0.00	14.80	4695.17	0.00	4.34	0 00:00	0.00	0.00
121	J42177	Junction	4694.19	4701.99	0.00	4708.66	0.00	14.80	4697.54	0.00	4.45	0 00:00	0.00	0.00
122	J42178	Junction	4703.44	4711.94	0.00	4718.61	0.00	14.80	4704.34	0.00	7.60	0 00:00	0.00	0.00
123	J42180	Junction	4743.73	4755.03	0.00	4761.70	0.00	15.85	4744.36	0.00	10.67	0 00:00	0.00	0.00
124	J42181	Junction	4730.23	4738.33	0.00	4745.00	0.00	15.85	4733.18	0.00	5.15	0 00:00	0.00	0.00
125	J42223	Junction	4530.32	4547.72	0.00	4554.39	0.00	68.70	4532.59	0.00	15.13	0 00:00	0.00	0.00
126	J42224	Junction	4532.48	4548.08	0.00	4554.75	0.00	68.86	4534.63	0.00	13.45	0 00:00	0.00	0.00
127	J4224	Junction	4534.11	4539.51	0.00	4544.91	0.00	12.06	4534.81	0.00	4.70	0 00:00	0.00	0.00
128	J4225	Junction	4537.26	4542.31	0.00	4547.36	0.00	11.98	4538.28	0.00	4.03	0 00:00	0.00	0.00
129	J4226	Junction	4539.66	4544.36	0.00	4549.06	0.00	11.91	4540.60	0.00	3.76	0 00:00	0.00	0.00
130	J42264	Junction	4608.40	4617.30	0.00	4623.97	0.00	14.80	4609.26	0.00	8.04	0 00:00	0.00	0.00
131	J42265	Junction	4616.61	4625.16	0.00	4631.83	0.00	14.80	4617.35	0.00	7.81	0 00:00	0.00	0.00
132	J42266	Junction	4620.24	4630.84	0.00	4637.51	0.00	14.80	4621.23	0.00	9.61	0 00:00	0.00	0.00
133	J42267	Junction	4622.52	4631.27	0.00	4637.94	0.00	14.80	4623.59	0.00	7.68	0 00:00	0.00	0.00
134	J42268	Junction	4630.23	4638.98	0.00	4645.65	0.00	14.80	4631.15	0.00	7.83	0 00:00	0.00	0.00
135	J42269	Junction	4633.51	4641.96	0.00	4648.63	0.00	14.80	4634.53	0.00	7.43	0 00:00	0.00	0.00
136	J42270	Junction	4638.41	4646.21	0.00	4652.88	0.00	14.80	4639.34	0.00	6.87	0 00:00	0.00	0.00
137	J42271	Junction	4646.69	4654.24	0.00	4661.79	0.00	14.80	4647.46	0.00	6.78	0 00:00	0.00	0.00
138	J42273	Junction	4657.67	4666.52	0.00	4673.19	0.00	14.80	4658.45	0.00	8.07	0 00:00	0.00	0.00
139	J42274	Junction	4666.87	4675.87	0.00	4682.54	0.00	14.80	4667.66	0.00	8.21	0 00:00	0.00	0.00
140	J42275	Junction	4670.16	4678.16	0.00	4684.83	0.00	14.80	4671.05	0.00	7.11	0 00:00	0.00	0.00
141	J42277	Junction	4672.54	4680.24	0.00	4686.91	0.00	14.80	4673.54	0.00	6.70	0 00:00	0.00	0.00
142	J42278	Junction	4677.64	4685.14	0.00	4691.81	0.00	14.80	4678.50	0.00	6.64	0 00:00	0.00	0.00
143	J42279	Junction	4682.15	4689.30	0.00	4695.97	0.00	14.80	4683.09	0.00	6.21	0 00:00	0.00	0.00
144	J42280	Junction	4683.00	4690.90	0.00	4697.57	0.00	14.80	4684.44	0.00	6.46	0 00:00	0.00	0.00
145	J42282	Junction	4687.53	4695.98	0.00	4702.65	0.00	14.80	4688.64	0.00	7.34	0 00:00	0.00	0.00
146	J42284	Junction	4589.18	4593.08	0.00	4599.75	0.00	5.72	4599.14	6.06	0.00	0 00:00	0.00	0.00
147	J42285	Junction	4588.82	4592.92	0.00	4599.59	0.00	5.71	4599.06	6.14	0.00	0 00:00	0.00	0.00
148	J42286	Junction	4586.66	4598.71	0.00	4605.38	0.00	5.71	4605.38	6.67	0.00	0 01:09	0.00	0.00
149	J42287	Junction	4587.63	4596.28	0.00	4602.95	0.00	5.71	4597.17	0.89	0.00	0 00:00	0.00	0.00
150	J42302	Junction	4500.54	4509.44	0.00	4518.34	0.00	107.40	4512.01	2.57	0.00	0 00:00	0.00	0.00
151	J42303	Junction	4705.22	4712.12	0.00	4719.02	0.00	54.06	4722.12	6.90	0.00	0 02:02	9.15	42.00
152	J42304	Junction	4686.38	4691.98	0.00	4697.58	0.00	19.77	4693.70	1.72	0.00	0 00:00	0.00	0.00
153	J42305	Junction	4681.18	4687.53	0.00	4693.88	0.00	19.77	4682.13	0.00	5.40	0 00:00	0.00	0.00
154	J42306	Junction	4518.99	4525.39	0.00	4531.79	0.00	107.41	4521.14	0.00	4.25	0 00:00	0.00	0.00
155	J42307	Junction	4545.94	4551.54	0.00	4557.14	0.00	107.93	4548.60	0.00	2.94	0 00:00	0.00	0.00
156	J42308	Junction	4600.22	4608.82	0.00	4617.42	0.00	19.96	4609.46	0.64	0.00	0 00:00	0.00	0.00
157	J42309	Junction	4616.43	4624.03	0.00	4631.63	0.00	19.81	4617.52	0.00	6.51	0 00:00	0.00	0.00
158	J42310	Junction	4636.19	4643.89	0.00	4651.59	0.00	19.92	4637.33	0.00	6.56	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
159	J42311	Junction	4652.14	4657.74	0.00	4663.34	0.00	19.89	4653.13	0.00	4.61	0 00:00	0.00	0.00
160	J42312	Junction	4663.13	4669.03	0.00	4674.93	0.00	19.93	4664.27	0.00	4.76	0 00:00	0.00	0.00
161	J42333	Junction	4610.34	4619.04	0.00	4627.74	0.00	3.54	4610.70	0.00	8.34	0 00:00	0.00	0.00
162	J42334	Junction	4602.31	4610.41	0.00	4618.51	0.00	3.54	4602.78	0.00	7.63	0 00:00	0.00	0.00
163	J42335	Junction	4601.32	4609.92	0.00	4618.52	0.00	3.54	4601.67	0.00	8.25	0 00:00	0.00	0.00
164	J42336	Junction	4595.34	4600.34	0.00	4605.34	0.00	3.54	4595.70	0.00	4.64	0 00:00	0.00	0.00
165	J42337	Junction	4619.90	4626.60	0.00	4633.30	0.00	3.54	4620.23	0.00	6.37	0 00:00	0.00	0.00
166	J42340	Junction	4584.36	4588.76	0.00	4593.16	0.00	3.54	4584.70	0.00	4.06	0 00:00	0.00	0.00
167	J42341	Junction	4590.49	4594.89	0.00	4599.29	0.00	3.54	4591.00	0.00	3.89	0 00:00	0.00	0.00
168	J42346	Junction	4747.50	4757.40	0.00	4767.30	0.00	7.76	4747.96	0.00	9.44	0 00:00	0.00	0.00
169	J42347	Junction	4706.85	4722.55	0.00	4738.25	0.00	7.76	4707.40	0.00	15.15	0 00:00	0.00	0.00
170	J42348	Junction	4677.52	4683.92	0.00	4690.32	0.00	7.76	4678.02	0.00	5.90	0 00:00	0.00	0.00
171	J42349	Junction	4670.58	4676.48	0.00	4682.38	0.00	7.76	4671.25	0.00	5.23	0 00:00	0.00	0.00
172	J42350	Junction	4666.48	4674.28	0.00	4682.08	0.00	7.76	4666.84	0.00	7.44	0 00:00	0.00	0.00
173	J42357	Junction	4670.80	4675.10	0.00	4679.40	0.00	39.85	4672.20	0.00	2.90	0 00:00	0.00	0.00
174	J42358	Junction	4617.19	4622.39	0.00	4627.59	0.00	39.44	4618.50	0.00	3.89	0 00:00	0.00	0.00
175	J42359	Junction	4589.72	4593.12	0.00	4596.52	0.00	13.19	4596.52	3.40	0.00	0 00:46	1.00	45.00
176	J4236	Junction	4546.45	4551.85	0.00	4557.25	0.00	11.97	4547.11	0.00	4.74	0 00:00	0.00	0.00
177	J42363	Junction	4588.99	4592.79	0.00	4596.59	0.00	11.87	4589.59	0.00	3.20	0 00:00	0.00	0.00
178	J42364	Junction	4621.30	4627.60	0.00	4633.90	0.00	39.44	4628.90	1.30	0.00	0 00:00	0.00	0.00
179	J42365	Junction	4812.97	4819.17	0.00	4825.37	0.00	15.85	4814.21	0.00	4.96	0 00:00	0.00	0.00
180	J42366	Junction	4809.24	4818.24	0.00	4827.24	0.00	15.85	4809.99	0.00	8.25	0 00:00	0.00	0.00
181	J42367	Junction	4786.31	4790.81	0.00	4795.31	0.00	15.85	4787.01	0.00	3.80	0 00:00	0.00	0.00
182	J42368	Junction	4758.99	4764.89	0.00	4770.79	0.00	15.85	4759.78	0.00	5.11	0 00:00	0.00	0.00
183	J4237	Junction	4580.68	4585.88	0.00	4591.08	0.00	12.04	4581.27	0.00	4.61	0 00:00	0.00	0.00
184	J42370	Junction	4749.05	4760.55	0.00	4772.05	0.00	15.85	4749.85	0.00	10.70	0 00:00	0.00	0.00
185	J42371	Junction	4745.20	4754.40	0.00	4763.60	0.00	15.85	4746.46	0.00	7.94	0 00:00	0.00	0.00
186	J42393	Junction	4585.90	4597.47	0.00	4609.04	0.00	82.19	4588.27	0.00	9.20	0 00:00	0.00	0.00
187	J42394	Junction	4586.59	4597.69	0.00	4608.79	0.00	82.19	4589.44	0.00	8.25	0 00:00	0.00	0.00
188	J42402	Junction	4585.83	4595.68	0.00	4605.53	0.00	15.35	4588.75	0.00	6.93	0 00:00	0.00	0.00
189	J42420	Junction	4713.66	4725.36	0.00	4737.06	0.00	7.76	4714.07	0.00	11.29	0 00:00	0.00	0.00
190	J42421	Junction	4747.96	4758.26	0.00	4768.56	0.00	12.61	4749.17	0.00	9.09	0 00:00	0.00	0.00
191	J42436	Junction	4689.65	4696.32	0.00	4702.99	0.00	7.76	4692.91	0.00	3.41	0 00:00	0.00	0.00
192	J42438	Junction	4586.41	4592.21	0.00	4598.01	0.00	110.66	4598.01	5.80	0.00	0 01:00	0.08	3.00
193	J4244	Junction	4522.27	4528.57	0.00	4534.87	0.00	49.90	4525.15	0.00	3.42	0 00:00	0.00	0.00
194	J42440	Junction	4744.06	4754.86	0.00	4765.66	0.00	15.85	4745.55	0.00	9.31	0 00:00	0.00	0.00
195	J42442	Junction	4775.41	4781.21	0.00	4787.01	0.00	35.04	4777.12	0.00	4.09	0 00:00	0.00	0.00
196	J42443	Junction	4713.69	4721.59	0.00	4729.49	0.00	44.74	4716.39	0.00	5.20	0 00:00	0.00	0.00
197	J4245	Junction	4616.24	4622.54	0.00	4628.84	0.00	14.12	4619.44	0.00	3.10	0 00:00	0.00	0.00
198	J42450	Junction	4546.90	4554.75	0.00	4562.60	0.00	65.20	4562.60	7.85	0.00	0 01:31	37.06	91.00
199	J42451	Junction	4552.23	4560.13	0.00	4568.03	0.00	65.19	4568.03	7.90	0.00	0 01:23	0.00	0.00
200	J42452	Junction	4557.88	4566.58	0.00	4575.28	0.00	65.20	4575.28	8.70	0.00	0 01:29	0.01	0.00
201	J42453	Junction	4559.93	4570.43	0.00	4580.93	0.00	63.04	4580.93	10.50	0.00	0 01:30	0.00	0.00
202	J42454	Junction	4568.24	4570.99	0.00	4573.74	0.00	11.80	4569.24	0.00	1.75	0 00:00	0.00	0.00
203	J42458	Junction	4585.91	4597.91	0.00	4609.91	0.00	5.71	4602.65	4.74	0.00	0 00:00	0.00	0.00
204	J42459	Junction	4584.43	4595.48	0.00	4606.53	0.00	5.71	4601.41	5.93	0.00	0 00:00	0.00	0.00
205	J42460	Junction	4582.66	4594.71	0.00	4606.76	0.00	5.71	4595.46	0.75	0.00	0 00:00	0.00	0.00
206	J42461	Junction	4579.30	4590.20	0.00	4601.10	0.00	14.39	4585.71	0.00	4.49	0 00:00	0.00	0.00
207	J42462	Junction	4581.42	4595.62	0.00	4609.82	0.00	14.39	4587.73	0.00	7.89	0 00:00	0.00	0.00
208	J4249	Junction	4522.92	4529.59	0.00	4529.59	0.00	49.91	4527.52	0.00	2.07	0 00:00	0.00	0.00
209	J42494	Junction	4599.72	4608.72	0.00	4617.72	0.00	76.85	4615.94	7.22	0.00	0 00:00	0.00	0.00
210	J42495	Junction	4603.33	4612.28	0.00	4621.23	0.00	84.58	4621.23	8.95	0.00	0 01:05	2.70	26.00
211	J42496	Junction	4612.58	4622.18	0.00	4631.78	0.00	84.58	4631.76	9.58	0.00	0 00:00	0.00	0.00
212	J42497	Junction	4632.36	4641.66	0.00	4650.96	0.00	84.58	4650.14	8.48	0.00	0 00:00	0.00	0.00
213	J42498	Junction	4640.79	4649.84	0.00	4658.89	0.00	84.58	4658.89	9.05	0.00	0 00:57	0.00	0.00
214	J42499	Junction	4650.81	4659.71	0.00	4668.61	0.00	92.02	4666.49	6.78	0.00	0 00:00	0.00	0.00
215	J42500	Junction	4652.77	4662.12	0.00	4671.47	0.00	91.72	4671.47	9.35	0.00	0 00:59	0.95	16.00
216	J42516	Junction	4653.02	4664.07	0.00	4675.12	0.00	90.96	4673.54	9.47	0.00	0 00:00	0.00	0.00
217	J42517	Junction	4655.67	4665.42	0.00	4675.17	0.00	89.60	4674.71	9.29	0.00	0 00:00	0.00	0.00
218	J42518	Junction	4656.94	4666.44	0.00	4675.94	0.00	89.40	4675.69	9.25	0.00	0 00:00	0.00	0.00
219	J42519	Junction	4658.11	4667.16	0.00	4676.21	0.00	94.42	4676.21	9.05	0.00	0 00:59	0.01	0.00
220	J42520	Junction	4669.61	4682.46	0.00	4695.31	0.00	97.29	4686.00	3.54	0.00	0 00:00	0.00	0.00
221	J42521	Junction	4670.25	4680.20	0.00	4690.15	0.00	96.57	4684.59	4.39	0.00	0 00:00	0.00	0.00
222	J42522	Junction	4670.60	4680.05	0.00	4689.50	0.00	96.60	4685.55	5.50	0.00	0 00:00	0.00	0.00
223	J42523	Junction	4671.79	4678.79	0.00	4685.79	0.00	96.60	4685.54	6.75	0.00	0 00:00	0.00	0.00
224	J42525	Junction	4672.21	4681.46	0.00	4690.71	0.00	96.60	4685.40	3.94	0.00	0 00:00	0.00	0.00
225	J42526	Junction	4673.18	4681.88	0.00	4690.58	0.00	96.63	4687.52	5.64	0.00	0 00:00	0.00	0.00
226	J42527	Junction	4674.07	4682.32	0.00	4690.57	0.00	96.63	4690.25	7.93	0.00	0 00:00	0.00	0.00
227	J42528	Junction	4678.70	4688.75	0.00	4698.80	0.00	96.63	4693.41	4.66	0.00	0 00:00	0.00	0.00
228	J42529	Junction	4680.22	4686.92	0.00	4693.62	0.00	96.95	4693.62	6.70	0.00	0 00:55	0.76	10.00
229	J42530	Junction	4692.15	4706.20	0.00	4720.25	0.00	100.98	4699.96	0.00	6.24	0 00:00	0.00	0.00
230	J42531	Junction	4693.08	4703.98	0.00	4714.88	0.00	101.11	4700.03	0.00	3.95	0 00:00	0.00	0.00
231	J42532	Junction	4693.66	4702.01	0.00	4710.36	0.00	101.14	4700.63	0.00	1.38	0 00:00	0.00	0.00
232	J42533	Junction	4695.91	4701.91	0.00	4707.91	0.00	23.69	4699.63	0.00	2.28	0 00:00	0.00	0.00
233	J42538	Junction	4595.69	4610.69	0.00	4625.69	0.00	77.32	4597.27	0.00	13.42	0 00:00	0.00	0.00
234	J42540	Junction	4597.65	4612.65	0.00	4627.65	0.00	76.85	4600.12	0.00	12.53	0 00:00	0.00	0.00
235	J42554	Junction	4534.04	4542.18	0.00	4548.85	0.00	13.17	4542.61	0.43	0.00	0 00:00	0.00	0.00
236	J4260	Junction	4523.15	4529.55	0.00	4535.95	0.00	49.91	4526.01	0.00	3.54	0 00:00	0.00	0.00
237	J4262	Junction	4523.56	4529.96	0.00	4536.36	0.00	49.91	4528.59	0.00	1.37	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
238	J4263	Junction	4524.03	4530.03	0.00	4536.03	0.00	49.90	4530.69	0.66	0.00	0 00:00	0.00	0.00
239	J4264	Junction	4524.56	4531.56	0.00	4538.56	0.00	49.91	4533.26	1.70	0.00	0 00:00	0.00	0.00
240	J4265	Junction	4524.66	4532.76	0.00	4540.86	0.00	49.90	4533.97	1.21	0.00	0 00:00	0.00	0.00
241	J4267	Junction	4526.93	4533.08	0.00	4539.23	0.00	63.40	4537.72	4.64	0.00	0 00:00	0.00	0.00
242	J4272	Junction	4547.81	4553.01	0.00	4558.21	0.00	10.74	4549.16	0.00	3.85	0 00:00	0.00	0.00
243	J42722	Junction	4586.25	4594.25	0.00	4602.25	0.00	92.03	4588.10	0.00	6.15	0 00:00	0.00	0.00
244	J42745	Junction	4755.35	4761.10	0.00	4766.85	0.00	40.21	4760.60	0.00	0.50	0 00:00	0.00	0.00
245	J42746	Junction	4758.90	4764.40	0.00	4769.90	0.00	40.21	4764.42	0.02	0.00	0 00:00	0.00	0.00
246	J42747	Junction	4704.88	4709.53	0.00	4714.18	0.00	39.93	4714.18	4.65	0.00	0 02:44	0.83	107.00
247	J42748	Junction	4703.71	4709.86	0.00	4716.01	0.00	38.89	4710.31	0.45	0.00	0 00:00	0.00	0.00
248	J4278	Junction	4547.22	4551.82	0.00	4556.42	0.00	10.74	4548.48	0.00	3.34	0 00:00	0.00	0.00
249	J42788	Junction	4596.35	4603.40	0.00	4610.45	0.00	59.16	4610.45	7.05	0.00	0 00:03	0.01	0.00
250	J42808	Junction	4594.64	4601.49	0.00	4608.34	0.00	15.34	4597.37	0.00	4.12	0 00:00	0.00	0.00
251	J42809	Junction	4594.91	4601.61	0.00	4608.31	0.00	22.80	4597.36	0.00	4.25	0 00:00	0.00	0.00
252	J42810	Junction	4595.00	4600.90	0.00	4606.80	0.00	42.76	4597.36	0.00	3.54	0 00:00	0.00	0.00
253	J42811	Junction	4595.04	4600.54	0.00	4606.04	0.00	87.95	4598.16	0.00	2.38	0 00:00	0.00	0.00
254	J42812	Junction	4595.09	4601.24	0.00	4607.39	0.00	117.85	4604.66	3.42	0.00	0 00:00	0.00	0.00
255	J42813	Junction	4595.72	4601.42	0.00	4607.12	0.00	8.79	4599.72	0.00	1.70	0 00:00	0.00	0.00
256	J42814	Junction	4595.42	4600.92	0.00	4606.42	0.00	9.13	4601.05	0.13	0.00	0 00:00	0.00	0.00
257	J42815	Junction	4595.33	4601.43	0.00	4607.53	0.00	94.66	4601.90	0.47	0.00	0 00:00	0.00	0.00
258	J42816	Junction	4595.25	4601.25	0.00	4607.25	0.00	215.19	4607.25	6.00	0.00	0 00:03	0.89	1.00
259	J42821	Junction	4619.88	4624.58	0.00	4629.28	0.00	35.82	4626.11	1.53	0.00	0 00:00	0.00	0.00
260	J42822	Junction	4638.15	4644.25	0.00	4650.35	0.00	189.81	4650.35	6.10	0.00	0 00:03	0.04	0.00
261	J42824	Junction	4645.94	4654.69	0.00	4663.44	0.00	647.24	4660.36	5.67	0.00	0 00:00	0.00	0.00
262	J42825	Junction	4650.38	4655.43	0.00	4660.48	0.00	43.79	4660.48	5.05	0.00	0 02:18	45.90	119.00
263	J42826	Junction	4666.54	4673.44	0.00	4680.34	0.00	43.80	4670.05	0.00	3.39	0 00:00	0.00	0.00
264	J42827	Junction	4667.96	4673.71	0.00	4679.46	0.00	43.79	4671.64	0.00	2.07	0 00:00	0.00	0.00
265	J42828	Junction	4674.06	4677.66	0.00	4681.26	0.00	43.79	4680.16	2.50	0.00	0 00:00	0.00	0.00
266	J42829	Junction	4678.74	4685.19	0.00	4691.64	0.00	43.79	4688.52	3.33	0.00	0 00:00	0.00	0.00
267	J42831	Junction	4695.54	4700.84	0.00	4706.14	0.00	43.98	4701.53	0.00	4.01	0 00:00	0.00	0.00
268	J42832	Junction	4695.82	4700.77	0.00	4705.72	0.00	73.73	4701.53	0.00	4.29	0 00:00	0.00	0.00
269	J42833	Junction	4716.01	4720.71	0.00	4725.41	0.00	39.93	4721.82	1.11	0.00	0 00:00	0.00	0.00
270	J42834	Junction	4723.25	4729.80	0.00	4736.35	0.00	39.93	4729.31	0.00	0.49	0 00:00	0.00	0.00
271	J42835	Junction	4742.72	4749.37	0.00	4756.02	0.00	40.22	4750.03	0.66	0.00	0 00:00	0.00	0.00
272	J42836	Junction	4753.59	4759.29	0.00	4764.99	0.00	40.21	4757.17	0.00	2.12	0 00:00	0.00	0.00
273	J42853	Junction	4666.81	4672.06	0.00	4677.31	0.00	34.79	4672.05	0.00	0.01	0 00:00	0.00	0.00
274	J42854	Junction	4651.03	4657.83	0.00	4664.63	0.00	35.25	4664.63	6.80	0.00	0 00:00	0.00	0.00
275	J42855	Junction	4668.88	4674.28	0.00	4679.68	0.00	34.79	4676.84	2.56	0.00	0 00:00	0.00	0.00
276	J42856	Junction	4669.95	4674.45	0.00	4678.95	0.00	38.89	4678.95	4.50	0.00	0 02:52	13.35	189.00
277	J42857	Junction	4678.77	4683.37	0.00	4687.97	0.00	38.89	4686.20	2.83	0.00	0 00:00	0.00	0.00
278	J42858	Junction	4696.01	4701.26	0.00	4706.51	0.00	38.89	4697.59	0.00	3.67	0 00:00	0.00	0.00
279	J42859	Junction	4700.55	4707.90	0.00	4715.25	0.00	38.89	4704.03	0.00	3.87	0 00:00	0.00	0.00
280	J4287	Junction	4566.95	4570.85	0.00	4574.75	0.00	10.70	4568.00	0.00	2.85	0 00:00	0.00	0.00
281	J42877	Junction	4500.54	4509.34	0.00	4518.14	0.00	49.73	4500.54	0.00	8.80	0 00:00	0.00	0.00
282	J4288	Junction	4565.39	4569.39	0.00	4573.39	0.00	10.70	4566.28	0.00	3.11	0 00:00	0.00	0.00
283	J42885	Junction	4616.20	4626.17	0.00	4632.84	0.00	91.71	4626.52	0.35	0.00	0 00:00	0.00	0.00
284	J42886	Junction	4502.98	4506.60	0.00	4513.27	0.00	18.36	4513.27	6.67	0.00	0 01:34	7.89	71.00
285	J42887	Junction	4628.69	4635.94	0.00	4643.19	0.00	57.93	4643.19	7.25	0.00	0 00:44	0.00	0.00
286	J42888	Junction	4631.26	4638.76	0.00	4646.26	0.00	57.93	4646.26	7.50	0.00	0 00:43	0.22	29.00
287	J4289	Junction	4539.19	4545.39	0.00	4551.59	0.00	65.12	4551.59	6.20	0.00	0 01:10	0.00	0.00
288	J42890	Junction	4637.18	4645.63	0.00	4654.08	0.00	176.36	4654.08	8.45	0.00	0 01:00	34.25	38.00
289	J42891	Junction	4638.52	4645.92	0.00	4653.32	0.00	50.38	4653.32	7.40	0.00	0 00:58	41.01	63.00
290	J42893	Junction	4496.93	4500.63	0.00	4504.33	0.00	10.18	4504.33	3.70	0.00	0 01:28	0.00	0.00
291	J42901	Junction	4655.25	4661.05	0.00	4666.85	0.00	23.33	4666.85	5.80	0.00	0 00:48	0.00	0.00
292	J42903	Junction	4651.21	4656.91	0.00	4662.61	0.00	25.97	4662.61	5.70	0.00	0 00:47	0.01	0.00
293	J42904	Junction	4646.81	4652.41	0.00	4658.01	0.00	28.27	4658.01	5.60	0.00	0 00:46	0.03	0.00
294	J42905	Junction	4645.67	4651.87	0.00	4658.07	0.00	26.24	4658.07	6.20	0.00	0 00:46	0.01	0.00
295	J42906	Junction	4644.64	4651.14	0.00	4657.64	0.00	26.43	4657.64	6.50	0.00	0 00:46	0.01	0.00
296	J42907	Junction	4643.68	4650.23	0.00	4656.78	0.00	24.68	4656.78	6.55	0.00	0 00:46	0.01	0.00
297	J42908	Junction	4642.03	4649.63	0.00	4657.23	0.00	24.69	4657.23	7.60	0.00	0 00:45	0.00	0.00
298	J42958	Junction	4715.39	4728.89	0.00	4742.39	0.00	7.85	4716.64	0.00	12.25	0 00:00	0.00	0.00
299	J42959	Junction	4715.17	4726.62	0.00	4738.07	0.00	7.85	4715.78	0.00	10.84	0 00:00	0.00	0.00
300	J42960	Junction	4699.92	4706.62	0.00	4713.32	0.00	7.85	4700.57	0.00	6.05	0 00:00	0.00	0.00
301	J42961	Junction	4683.98	4689.48	0.00	4694.98	0.00	7.85	4684.58	0.00	4.90	0 00:00	0.00	0.00
302	J42962	Junction	4673.12	4679.32	0.00	4685.52	0.00	7.85	4685.52	6.20	0.00	0 00:49	0.00	0.00
303	J42963	Junction	4662.65	4668.65	0.00	4674.65	0.00	7.85	4674.65	6.00	0.00	0 01:22	4.73	59.00
304	J42964	Junction	4660.16	4667.46	0.00	4674.76	0.00	24.85	4674.76	7.30	0.00	0 00:45	0.00	0.00
305	J42992	Junction	4570.69	4575.49	0.00	4580.29	0.00	26.95	4580.29	4.80	0.00	0 01:23	15.19	70.00
306	J42993	Junction	4569.84	4574.59	0.00	4579.34	0.00	20.11	4579.34	4.75	0.00	0 01:02	1.88	32.00
307	J42997	Junction	4568.40	4572.55	0.00	4576.70	0.00	11.81	4574.93	2.38	0.00	0 00:00	0.00	0.00
308	J42998	Junction	4568.05	4573.15	0.00	4578.25	0.00	11.81	4573.95	0.80	0.00	0 00:00	0.00	0.00
309	J431143	Junction	4739.37	4742.94	0.00	4746.51	0.00	17.88	4746.51	3.57	0.00	0 01:17	8.65	52.00
310	J441024-0	Junction	4578.99	4590.09	0.00	4601.19	0.00	29.16	4580.12	0.00	9.97	0 00:00	0.00	0.00
311	J441024-1	Junction	4576.75	4588.25	0.00	4599.75	0.00	34.89	4578.93	0.00	9.32	0 00:00	0.00	0.00
312	J441032-1	Junction	4592.84	4599.09	0.00	4605.34	0.00	10.59	4599.84	0.75	0.00	0 00:00	0.00	0.00
313	J441117-0	Junction	4617.87	4629.52	0.00	4636.19	0.00	2.87	4619.45	0.00	10.07	0 00:00	0.00	0.00
314	J441211-0	Junction	4626.54	4631.04	0.00	4635.54	0.00	57.93	4635.54	4.50	0.00	0 01:49	2.43	50.00
315	J441211-1	Junction	4623.61	4630.28	0.00	4636.95	0.00	57.93	4636.95	6.67	0.00	0 00:47	0.00	0.00
316	J441317-0	Junction	4717.08	4727.19	0.00	4737.29	0.00	7.85	4718.22	0.00	8.97	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
317	J441557-0	Junction	4693.78	4701.38	0.00	4708.98	0.00	23.68	4700.60	0.00	0.78	0 00:00	0.00	0.00
318	J441560-0	Junction	4696.87	4705.22	0.00	4713.57	0.00	44.20	4702.47	0.00	4.40	0 00:00	0.00	0.00
319	J441565-1	Junction	4693.98	4708.08	0.00	4722.18	0.00	23.69	4699.65	0.00	8.43	0 00:00	0.00	0.00
320	J441657-0	Junction	4638.41	4643.98	0.00	4650.65	0.00	217.98	4650.65	6.67	0.00	0 00:03	45.44	240.00
321	J441657-1	Junction	4638.41	4644.16	0.00	4649.91	0.00	5107.27	4649.91	5.75	0.00	0 01:33	131.31	303.00
322	J441660-0	Junction	4645.74	4654.22	0.00	4660.89	0.00	1059.62	4660.89	6.67	0.00	0 00:03	8.58	1.00
323	J441664-0	Junction	4637.98	4643.86	0.00	4650.53	0.00	2306.82	4650.53	6.67	0.00	0 00:02	9.21	1.00
324	J441666-1	Junction	4628.74	4643.45	0.00	4650.12	0.00	1687.99	4650.12	6.67	0.00	0 00:02	38.77	52.00
325	J441667-1	Junction	4666.59	4673.26	0.00	4679.93	0.00	43.83	4668.10	0.00	5.16	0 00:00	0.00	0.00
326	J441673-1	Junction	4723.25	4729.80	0.00	4736.35	0.00	39.93	4731.95	2.15	0.00	0 00:00	0.00	0.00
327	J441759-0	Junction	4508.14	4517.96	0.00	4524.63	0.00	45.40	4524.63	6.67	0.00	0 01:38	11.86	48.00
328	J441814-0	Junction	4543.78	4549.57	0.00	4555.37	0.00	65.34	4547.29	0.00	6.49	0 00:00	0.00	0.00
329	J441823.0	Junction	4636.38	4643.08	0.00	4649.78	0.00	39.71	4649.78	6.70	0.00	0 01:00	0.00	0.00
330	J44269-1	Junction	4720.40	4727.07	0.00	4733.74	0.00	38.75	4733.16	2.76	0.00	0 00:00	0.00	0.00
331	J44279-1	Junction	4589.18	4592.62	0.00	4599.29	0.00	10.59	4599.29	6.67	0.00	0 03:41	17.85	297.00
332	J4429-0	Junction	4621.41	4632.89	0.00	4632.89	0.00	13.47	4623.41	0.00	9.48	0 00:00	0.00	0.00
333	J44373-0	Junction	4554.50	4559.43	0.00	4566.10	0.00	12.68	4555.12	0.00	9.38	0 00:00	0.00	0.00
334	J44377-1	Junction	4546.06	4554.75	0.00	4561.42	0.00	10.49	4546.49	0.00	8.26	0 00:00	0.00	0.00
335	J44488-1	Junction	4592.40	4597.30	0.00	4602.20	0.00	3.54	4592.78	0.00	4.52	0 00:00	0.00	0.00
336	J44563-1	Junction	4588.62	4592.48	0.00	4599.15	0.00	5.71	4598.87	6.39	0.00	0 00:00	0.00	0.00
337	J44598-1	Junction	4648.85	4654.25	0.00	4659.65	0.00	7.76	4659.65	5.40	0.00	0 00:49	0.00	0.00
338	J44599-0	Junction	4647.46	4658.96	0.00	4670.46	0.00	7.07	4648.44	0.00	10.52	0 00:00	0.00	0.00
339	J44612-0	Junction	4634.84	4641.34	0.00	4647.84	0.00	34.18	4642.69	1.35	0.00	0 00:00	0.00	0.00
340	J44614-0	Junction	4581.74	4587.59	0.00	4593.44	0.00	29.31	4591.28	3.69	0.00	0 00:00	0.00	0.00
341	J4466-1	Junction	4520.95	4529.97	0.00	4536.64	0.00	49.89	4521.74	0.00	9.21	0 00:00	0.00	0.00
342	J44681.0	Junction	4591.92	4596.82	0.00	4601.72	0.00	15.35	4592.59	0.00	4.23	0 00:00	0.00	0.00
343	JJR060.01-0	Junction	4586.22	4592.89	0.00	4599.56	0.00	79.41	4587.26	0.00	8.96	0 00:00	0.00	0.00
344	JJR060.01-1	Junction	4562.00	4568.67	0.00	4575.34	0.00	79.41	4578.67	6.67	0.00	0 01:48	127.65	312.00
345	JJR060.02-0	Junction	4611.44	4618.11	0.00	4624.78	0.00	129.08	4612.75	0.00	8.69	0 00:00	0.00	0.00
346	JJR060.02-1	Junction	4586.88	4593.55	0.00	4600.22	0.00	128.84	4603.55	6.67	0.00	0 01:23	10.11	24.00
347	JJR062.01-0	Junction	4648.54	4655.21	0.00	4661.88	0.00	44.18	4649.24	0.00	9.30	0 00:00	0.00	0.00
348	JJR062.01-1	Junction	4611.92	4618.59	0.00	4625.26	0.00	44.18	4618.43	0.00	3.49	0 00:00	0.00	0.00
349	JJR062.02-0	Junction	4674.27	4680.94	0.00	4680.94	0.00	44.51	4674.99	0.00	9.28	0 00:00	0.00	0.00
350	JJR062.02-1	Junction	4648.89	4655.56	0.00	4662.23	0.00	44.51	4654.79	0.00	4.10	0 00:00	0.00	0.00
351	JJR062.03-0	Junction	4689.20	4695.87	0.00	4702.54	0.00	143.44	4691.07	0.00	12.59	0 00:00	0.00	0.00
352	JJR062.03-1	Junction	4676.73	4683.40	0.00	4683.40	0.00	143.27	4686.73	0.00	0.00	0 03:03	107.01	126.00
353	JJR062.04-0	Junction	4902.18	4908.85	0.00	4915.52	0.00	157.49	4903.62	0.00	8.56	0 00:00	0.00	0.00
354	JJR062.04-1	Junction	4697.75	4704.42	0.00	4711.09	0.00	155.98	4701.03	0.00	6.72	0 00:00	0.00	0.00
355	JJR062.06-1	Junction	4937.75	4944.42	0.00	4951.09	0.00	157.50	4938.87	0.00	8.88	0 00:00	0.00	0.00
356	JJR062.07-1	Junction	4947.36	4954.03	0.00	4960.70	0.00	157.57	4949.15	0.00	8.21	0 00:00	0.00	0.00
357	JJR062.08-1	Junction	5009.12	5015.79	0.00	5022.46	0.00	157.60	5010.30	0.00	8.82	0 00:00	0.00	0.00
358	JJR062.09-1	Junction	5034.61	5041.28	0.00	5047.95	0.00	157.72	5035.98	0.00	8.63	0 00:00	0.00	0.00
359	JJR062.10-1	Junction	5120.19	5126.86	0.00	5133.53	0.00	158.12	5121.51	0.00	8.68	0 00:00	0.00	0.00
360	JJR062.11-0	Junction	6211.15	6217.82	0.00	6224.49	0.00	159.66	6212.07	0.00	9.08	0 00:00	0.00	0.00
361	JJR062.11-1	Junction	5271.65	5278.32	0.00	5284.99	0.00	159.30	5272.85	0.00	8.80	0 00:00	0.00	0.00
362	JPR050.01-1	Junction	4719.05	4725.72	0.00	4732.39	0.00	99.61	4719.52	0.00	9.53	0 00:00	0.00	0.00
363	JPR050.02-0	Junction	6210.37	6217.04	0.00	6223.71	0.00	108.56	6211.17	0.00	9.20	0 00:00	0.00	0.00
364	JPR050.02-1	Junction	4835.97	4842.64	0.00	4849.31	0.00	106.14	4836.99	0.00	8.98	0 00:00	0.00	0.00
365	JPR060.02-0	Junction	4898.95	4905.62	0.00	4912.29	0.00	74.20	4899.73	0.00	9.22	0 00:00	0.00	0.00
366	JPR060.06-0	Junction	5389.84	5396.51	0.00	5403.18	0.00	75.01	5390.51	0.00	9.33	0 00:00	0.00	0.00
367	JPR060.06-1	Junction	5052.04	5058.71	0.00	5065.38	0.00	74.84	5052.75	0.00	9.29	0 00:00	0.00	0.00
368	JTG010.02-0	Junction	4502.15	4506.51	0.00	4513.18	0.00	450.44	4508.43	0.00	3.72	0 00:00	0.00	0.00
369	JTG010.03-0	Junction	4501.85	4508.45	0.00	4515.12	0.00	443.78	4508.42	0.00	3.43	0 00:00	0.00	0.00
370	JTG010.03-1	Junction	4501.58	4509.72	0.00	4516.39	0.00	894.16	4508.27	0.00	3.31	0 00:00	0.00	0.00
371	JTG010.04-0	Junction	4542.60	4550.98	0.00	4557.65	0.00	904.91	4547.80	0.00	6.51	0 00:00	0.00	0.00
372	JTG010.05-0	Junction	4591.30	4597.97	0.00	4604.64	0.00	915.67	4596.11	0.00	5.19	0 00:00	0.00	0.00
373	JTG010.08-1	Junction	4669.46	4676.13	0.00	4682.80	0.00	893.36	4673.96	0.00	5.50	0 00:00	0.00	0.00
374	JTG020.01-1	Junction	4652.00	4658.67	0.00	4665.34	0.00	915.62	4656.57	0.00	5.43	0 00:00	0.00	0.00
375	JTG020.02-0	Junction	5929.34	5936.01	0.00	5942.68	0.00	39.99	5929.79	0.00	9.55	0 00:00	0.00	0.00
376	JTG020.02-1	Junction	4708.14	4714.81	0.00	4721.48	0.00	39.45	4708.87	0.00	9.27	0 00:00	0.00	0.00
377	JTG030.05-0	Junction	4693.33	4700.00	0.00	4706.67	0.00	36.78	4693.98	0.00	9.35	0 00:00	0.00	0.00
378	JTG030.05-1	Junction	4619.53	4626.20	0.00	4632.87	0.00	36.16	4620.32	0.00	9.21	0 00:00	0.00	0.00
379	JTG040.0-0	Junction	4960.00	4966.00	0.00	6.00	0.00	32.63	4960.49	0.00	9.51	0 00:00	0.00	0.00
380	JTG060.01-0	Junction	6952.33	6959.00	0.00	6965.67	0.00	946.19	6959.66	0.00	6.34	0 00:00	0.00	0.00
381	JTG070.01-1	Junction	4652.71	4659.38	0.00	4666.05	0.00	910.06	4659.36	0.00	3.35	0 00:00	0.00	0.00
382	JTG070.02-1	Junction	4735.62	4742.29	0.00	4748.96	0.00	184.66	4737.43	0.00	8.19	0 00:00	0.00	0.00
383	JTG070.03-0	Junction	5370.36	5377.03	0.00	5383.70	0.00	0.00	5370.36	0.00	10.00	0 00:00	0.00	0.00
384	JTG070.03-1	Junction	5142.62	5149.29	0.00	5155.96	0.00	165.41	5144.08	0.00	8.54	0 00:00	0.00	0.00
385	JUL010.04-0	Junction	4614.13	4620.80	0.00	4627.47	0.00	138.93	4615.35	0.00	8.78	0 00:00	0.00	0.00
386	JUL010.04-1	Junction	4495.70	4502.37	0.00	4509.04	0.00	138.36	4497.67	0.00	8.03	0 00:00	0.00	0.00
387	JUL010.08-0	Junction	4675.67	4682.34	0.00	4689.01	0.00	139.32	4676.82	0.00	8.85	0 00:00	0.00	0.00
388	JUL010.10-0	Junction	5849.45	5856.12	0.00	5862.79	0.00	136.10	5850.43	0.00	9.02	0 00:00	0.00	0.00
389	JUL010.10-1	Junction	4812.10	4818.77	0.00	4825.44	0.00	143.52	4813.23	0.00	8.87	0 00:00	0.00	0.00
390	JUL020.02-0	Junction	4865.89	4872.56	0.00	4879.23	0.00	124.09	4866.89	0.00	9.00	0 00:00	0.00	0.00
391	JUL020.06-0	Junction	5072.86	5079.53	0.00	5086.20	0.00	119.03	5073.79	0.00	9.07	0 00:00	0.00	0.00
392	JUL020.10-0	Junction	5162.24	5168.91	0.00	5175.58	0.00	12.71	5162.50	0.00	9.74	0 00:00	0.00	0.00
393	JUL020.12-0	Junction	5346.59	5353.26	0.00	5359.93	0.00	0.00	5346.59	0.00	10.00	0 00:00	0.00	0.00
394	JUL030.02-0	Junction	4580.07	4586.74	0.00	4593.41	0.00	82.85	4580.96	0.00	9.11	0 00:00	0.00	0.00
395	JUL030.04-0	Junction	4587.21	4593.88	0.00	4600.55	0.00	82.84	4588.09	0.00	9.12	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
396	JUL030.08-1	Junction	4618.14	4624.81	0.00	4631.48	0.00	82.89	4619.05	0.00	9.09	0 00:00	0.00	0.00
397	JUL030.12-1	Junction	4623.65	4630.32	0.00	4636.99	0.00	84.00	4624.66	0.00	8.99	0 00:00	0.00	0.00
398	JUL030.14-0	Junction	5067.12	5073.79	0.00	5080.46	0.00	78.78	5067.86	0.00	9.26	0 00:00	0.00	0.00
399	JUL030.14-1	Junction	4769.44	4776.11	0.00	4782.78	0.00	77.03	4770.20	0.00	9.24	0 00:00	0.00	0.00
400	JUL030.16-0	Junction	5222.41	5229.08	0.00	5235.75	0.00	49.95	5222.93	0.00	9.48	0 00:00	0.00	0.00
401	JUL031.06-1	Junction	4887.75	4894.42	0.00	4901.09	0.00	41.41	4888.26	0.00	9.49	0 00:00	0.00	0.00
402	JUL031.10-0	Junction	6622.71	6629.38	0.00	6636.05	0.00	39.19	6623.08	0.00	9.63	0 00:00	0.00	0.00
403	JUL031.10-1	Junction	5457.22	5463.89	0.00	5470.56	0.00	41.35	5457.66	0.00	9.56	0 00:00	0.00	0.00
404	JUL033.02-0	Junction	5974.93	5981.60	0.00	5988.27	0.00	27.89	5975.21	0.00	9.72	0 00:00	0.00	0.00
405	JUL033.02-1	Junction	5352.23	5358.90	0.00	5365.57	0.00	27.60	5352.57	0.00	9.66	0 00:00	0.00	0.00
406	JUL034.02-0	Junction	5708.23	5714.90	0.00	5721.57	0.00	50.13	5708.65	0.00	9.58	0 00:00	0.00	0.00
407	JUL040.04-1	Junction	4745.79	4752.46	0.00	4759.13	0.00	54.10	4746.35	0.00	9.44	0 00:00	0.00	0.00
408	JUL040.06-0	Junction	5281.46	5288.13	0.00	5294.80	0.00	56.93	5282.00	0.00	9.46	0 00:00	0.00	0.00
409	JUL040.06-1	Junction	4763.85	4770.52	0.00	4777.19	0.00	55.24	4764.78	0.00	9.07	0 00:00	0.00	0.00
410	JUL041.02-1	Junction	4627.15	4637.63	0.00	4644.30	0.00	3.99	4627.49	0.00	10.14	0 00:00	0.00	0.00
411	JUL041.04-0	Junction	5183.21	5189.88	0.00	5196.55	0.00	4.60	5183.34	0.00	9.87	0 00:00	0.00	0.00
412	JUL041.04-1	Junction	4741.62	4748.29	0.00	4754.96	0.00	4.93	4741.75	0.00	9.87	0 00:00	0.00	0.00
413	JUL045.02-0	Junction	6540.33	6547.00	0.00	6553.67	0.00	44.43	6540.71	0.00	9.62	0 00:00	0.00	0.00
414	JUL062.02-0	Junction	4933.69	4940.36	0.00	4947.03	0.00	12.70	4933.92	0.00	9.77	0 00:00	0.00	0.00
415	JUL065.02-0	Junction	6574.33	6581.00	0.00	6587.67	0.00	30.51	6574.67	0.00	9.66	0 00:00	0.00	0.00
416	JUL066.02-0	Junction	6216.13	6222.80	0.00	6229.47	0.00	32.29	6216.46	0.00	9.67	0 00:00	0.00	0.00
417	JUL070.02-0	Junction	4581.13	4587.80	0.00	4594.47	0.00	82.19	4581.92	0.00	9.21	0 00:00	0.00	0.00
418	JUL070.04-0	Junction	4647.09	4655.74	0.00	4662.41	0.00	67.34	4647.80	0.00	9.29	0 00:00	0.00	0.00
419	JUL070.04-1	Junction	4590.98	4604.49	0.00	4611.16	0.00	82.45	4592.89	0.00	11.60	0 00:00	0.00	0.00
420	JUL070.06-0	Junction	4659.93	4666.60	0.00	4673.27	0.00	60.61	4660.65	0.00	9.28	0 00:00	0.00	0.00
421	JUL070.10-0	Junction	5083.29	5089.96	0.00	5096.63	0.00	56.15	5083.86	0.00	9.43	0 00:00	0.00	0.00
422	JUL070.10-1	Junction	4779.12	4812.06	0.00	4818.73	0.00	58.58	4779.76	0.00	32.30	0 00:00	0.00	0.00
423	JUL070.12-0	Junction	5214.49	5221.16	0.00	5227.83	0.00	36.27	5214.91	0.00	9.58	0 00:00	0.00	0.00
424	JUL070.14-0	Junction	5261.14	5267.81	0.00	5274.48	0.00	29.18	5261.50	0.00	9.64	0 00:00	0.00	0.00
425	JUL080.02-0	Junction	4576.48	4585.13	0.00	4591.80	0.00	34.89	4577.02	0.00	9.46	0 00:00	0.00	0.00
426	JUL080.04-0	Junction	4595.90	4602.57	0.00	4609.24	0.00	34.18	4596.26	0.00	9.64	0 00:00	0.00	0.00
427	JUL080.04-1	Junction	4636.02	4642.69	0.00	4649.36	0.00	34.18	4636.54	0.00	9.48	0 00:00	0.00	0.00
428	JUL080.06-0	Junction	4635.30	4638.81	0.00	4642.31	0.00	55.05	4645.11	0.00	0.19	0 00:00	0.00	0.00
429	JUL080.06-1	Junction	4695.88	4702.55	0.00	4709.22	0.00	44.74	4696.45	0.00	9.43	0 00:00	0.00	0.00
430	JUL080.08-0	Junction	4696.80	4703.47	0.00	4710.14	0.00	44.74	4697.53	0.00	9.27	0 00:00	0.00	0.00
431	JUL080.08-1	Junction	4711.67	4718.34	0.00	4725.01	0.00	44.74	4712.21	0.00	9.46	0 00:00	0.00	0.00
432	JUL080.10-0	Junction	4770.94	4777.61	0.00	4784.28	0.00	35.04	4771.40	0.00	9.54	0 00:00	0.00	0.00
433	JUL080.10-1	Junction	4717.35	4724.02	0.00	4730.69	0.00	45.23	4719.68	0.00	7.67	0 00:00	0.00	0.00
434	JUL080.12-0	Junction	4776.51	4783.18	0.00	4789.85	0.00	36.54	4779.22	0.00	7.29	0 00:00	0.00	0.00
435	JUL080.12-1	Junction	4878.08	4884.75	0.00	4891.42	0.00	36.74	4878.55	0.00	9.53	0 00:00	0.00	0.00
436	JUL080.14-0	Junction	5014.70	5021.37	0.00	5028.04	0.00	35.96	5015.15	0.00	9.55	0 00:00	0.00	0.00
437	JUL080.16-0	Junction	5227.63	5234.30	0.00	5240.97	0.00	37.16	5228.05	0.00	9.58	0 00:00	0.00	0.00
438	JUL084.02-0	Junction	6213.33	6220.00	0.00	6226.67	0.00	37.62	6213.72	0.00	9.61	0 00:00	0.00	0.00
439	JUL100.02-1	Junction	4820.37	4825.52	0.00	4832.19	0.00	15.85	4821.23	0.00	4.29	0 00:00	0.00	0.00
440	JUL100.04-0	Junction	5012.74	5019.41	0.00	5026.08	0.00	21.69	5013.06	0.00	9.68	0 00:00	0.00	0.00
441	JUL100.04-1	Junction	4826.25	4832.92	0.00	4839.59	0.00	21.18	4826.67	0.00	9.58	0 00:00	0.00	0.00
442	JUL100.06-0	Junction	5193.10	5199.77	0.00	5206.44	0.00	21.69	5193.43	0.00	9.67	0 00:00	0.00	0.00
443	JUL120.02-0	Junction	4505.93	4512.60	0.00	4519.27	0.00	91.86	4507.20	0.00	8.73	0 00:00	0.00	0.00
444	JUL120.04-0	Junction	4541.49	4548.16	0.00	4554.83	0.00	91.92	4542.52	0.00	8.97	0 00:00	0.00	0.00
445	JUL120.04-1	Junction	4506.91	4513.58	0.00	4520.25	0.00	91.86	4510.13	0.00	11.60	0 00:00	0.00	0.00
446	JUL120.06-0	Junction	4574.18	4580.85	0.00	4587.52	0.00	92.02	4575.23	0.00	8.95	0 00:00	0.00	0.00
447	JUL120.06-1	Junction	4541.09	4547.76	0.00	4554.43	0.00	91.99	4543.03	0.00	8.06	0 00:00	0.00	0.00
448	JUL121.02-0	Junction	4698.77	4705.44	0.00	4712.11	0.00	37.67	4702.47	0.00	6.30	0 00:00	0.00	0.00
449	JUL121.04-0	Junction	5110.19	5116.86	0.00	5123.53	0.00	0.00	5110.19	0.00	10.00	0 00:00	0.00	0.00
450	JUL121.07-0	Junction	5108.32	5114.99	0.00	5121.66	0.00	0.00	5108.32	0.00	10.00	0 00:00	0.00	0.00
451	JUL121.07-1	Junction	5027.00	5033.67	0.00	5040.34	0.00	70.04	5027.77	0.00	9.23	0 00:00	0.00	0.00
452	JUL126.02-0	Junction	6714.13	6720.80	0.00	6727.47	0.00	68.50	6720.58	0.00	9.42	0 00:00	0.00	0.00
453	JUL130.02-0	Junction	4566.45	4573.12	0.00	4579.79	0.00	8.29	4566.70	0.00	9.75	0 00:00	0.00	0.00
454	JUL130.02-1	Junction	4505.04	4511.71	0.00	4518.38	0.00	8.29	4505.29	0.00	9.75	0 00:00	0.00	0.00
455	JUL130.04-0	Junction	4581.26	4587.93	0.00	4594.60	0.00	36.62	4582.08	0.00	9.18	0 00:00	0.00	0.00
456	JUL130.04-1	Junction	4567.91	4574.58	0.00	4581.25	0.00	36.45	4575.99	0.00	1.92	0 00:00	0.00	0.00
457	JUL130.06-0	Junction	4590.00	4603.44	0.00	4610.11	0.00	36.60	4590.55	0.00	12.89	0 00:00	0.00	0.00
458	JUL130.06-1	Junction	4582.55	4589.22	0.00	4595.89	0.00	36.60	4583.85	0.00	8.70	0 00:00	0.00	0.00
459	JUL130.08-0	Junction	4592.42	4604.78	0.00	4611.45	0.00	43.94	4594.03	0.00	10.75	0 00:00	0.00	0.00
460	JUL130.08-1	Junction	4594.64	4602.65	0.00	4609.32	0.00	14.39	4595.31	0.00	9.33	0 00:00	0.00	0.00
461	JUL132.02-1	Junction	4760.63	4767.30	0.00	4773.97	0.00	82.89	4769.12	0.00	1.51	0 00:00	0.00	0.00
462	JUL132.04-0	Junction	5089.33	5096.00	0.00	5102.67	0.00	82.24	5090.05	0.00	9.28	0 00:00	0.00	0.00
463	JUL132.04-1	Junction	4840.89	4847.56	0.00	4854.23	0.00	80.41	4841.78	0.00	9.11	0 00:00	0.00	0.00
464	JUL132.05-0	Junction	6033.00	6039.70	0.00	6046.37	0.00	72.97	6033.64	0.00	9.36	0 00:00	0.00	0.00
465	JUL144.04-0	Junction	4958.80	4965.47	0.00	4972.14	0.00	75.58	4959.54	0.00	9.26	0 00:00	0.00	0.00
466	JUL144.04-1	Junction	4766.71	4773.38	0.00	4780.05	0.00	74.32	4767.47	0.00	9.24	0 00:00	0.00	0.00
467	JUL148.01-0	Junction	5462.33	5469.00	0.00	5475.67	0.00	73.41	5462.99	0.00	9.34	0 00:00	0.00	0.00
468	JUL152.02-0	Junction	4550.30	4558.56	0.00	4565.23	0.00	14.23	4551.44	0.00	8.86	0 00:00	0.00	0.00
469	JUL152.02-1	Junction	4547.04	4555.99	0.00	4562.66	0.00	10.49	4548.22	0.00	11.10	0 00:00	0.00	0.00
470	JUL152.04-0	Junction	4554.21	4559.84	0.00	4566.51	0.00	12.67	4554.87	0.00	9.34	0 00:00	0.00	0.00
471	JUL152.04-1	Junction	4551.14	4558.14	0.00	4564.81	0.00	12.56	4552.63	0.00	8.51	0 00:00	0.00	0.00
472	Jun-38	Junction	4605.00	4615.00	0.00	0.00	0.00	0.00	4605.00	0.00	10.00	0 00:00	0.00	0.00
473	Jun-39	Junction	4618.00	4624.00	0.00	0.00	0.00	0.00	4618.00	0.00	6.00	0 00:00	0.00	0.00
474	Jun-40	Junction	4653.50	4659.50	0.00	0.00	0.00	0.00	4653.50	0.00	6.00	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
475	Jun-41	Junction	4880.00	4887.00	0.00	0.00	0.00	37.21	4880.48	0.00	15.12	0 00:00	0.00	0.00
476	UL024.02-0	Junction	7100.00	7106.67	0.00	7113.34	0.00	108.55	7100.71	0.00	9.29	0 00:00	0.00	0.00
477	J0008-1	Outfall	4494.53					107.40	4494.53					
478	J0104-1	Outfall	4501.97					22.66	4501.97					
479	J0105-1	Outfall	4519.09					49.89	4519.82					
480	J42797	Outfall	4520.54					11.93	4521.21					
481	J441761-1	Outfall	4491.44					10.18	4492.69					
482	J44298-1	Outfall	4498.50					103.11	4499.89					
483	J44325-1	Outfall	4502.46					8.29	4502.71					
484	JPR060.02-1	Outfall	4727.73					73.58	4728.51					
485	JTG010.01-1	Outfall	4500.00					894.14	4506.23					
486	JUL010.02-1	Outfall	4491.00					136.86	4492.91					
487	JUL020.02-1	Outfall	4490.00					122.08	4490.99					
488	JUL030.02-1	Outfall	4501.37					82.77	4502.26					
489	JUL070.02-1	Outfall	4500.32					82.17	4501.11					
490	JUL080.02-1	Outfall	4493.46					34.89	4494.00					
491	JUL120.02-1	Outfall	4504.59					91.86	4505.71					
492	Out-18	Outfall	4489.00					99.61	4489.00					
493	Out-21	Outfall	4489.00					4.76	4489.00					
494	Out-22	Outfall	0.00					46.08	0.00					
495	Out-23	Outfall	0.00					4.97	0.00					
496	Out-24	Outfall	0.00					16.81	0.00					
497	JUL121.06-1	Storage Node	4893.00	4903.50	0.00		0.00	65.03	4895.33				0.00	0.00
498	SN-200W	Storage Node	4536.80	5.20	0.00		20.00	86.14	4551.57				0.10	415.00
499	SN-540W	Storage Node	4568.20	3.20	0.00		20.00	51.11	4640.19				0.38	415.00
500	SN-610W	Storage Node	4573.00	3.40	0.00		20.00	76.46	6189.22				8.89	415.00
501	SN-Comm	Storage Node	4509.40	3.20	0.00		20.00	45.97	4581.00				0.38	415.00
502	SN-HHBl	Storage Node	4641.60	4.20	0.00		20.00	26.52	4643.04				0.00	415.00
503	SN-HHPa	Storage Node	4727.60	2.40	0.00		20.00	18.44	4729.91				0.00	415.00
504	SN-HillC	Storage Node	4621.20	5.20	0.00		20.00	12.05	4621.96				0.00	415.00
505	SN-KitF	Storage Node	4820.40	4.00	0.00		20.00	21.18	4822.45				0.00	364.00
506	SN-Mav	Storage Node	4597.00	5.60	0.00		20.00	45.80	4600.83				0.00	415.00
507	SN-Orch	Storage Node	4743.00	2.80	0.00		20.00	28.22	4747.40				0.01	415.00
508	SN-Pepp	Storage Node	4618.80	10.80	0.00		20.00	57.64	4627.86				0.00	412.00
509	SN-Pond	Storage Node	4625.00	4634.40	0.00		20.00	99.09	4667.39				0.30	328.00
510	SN-Rock	Storage Node	4788.10	10.90	0.00		20.00	8.80	4788.53				0.00	415.00
511	SN-SMPN	Storage Node	4628.60	3.00	0.00		20.00	52.82	4653.08				0.18	415.00
512	SN-SMPS	Storage Node	4628.60	3.20	0.00		20.00	45.68	4653.10				0.12	415.00
513	SN-Still	Storage Node	4726.40	1.00	0.00		20.00	40.19	4733.01				4.92	415.00
514	SN-SUMM	Storage Node	4599.80	7.40	0.00		20.00	14.80	4603.49				0.00	389.00
515	SN-Swain	Storage Node	4654.40	5.80	0.00		20.00	13.64	4655.74				0.00	415.00
516	SN-Vill	Storage Node	4587.40	4.60	0.00		20.00	30.51	4591.38				0.00	370.00
517	SN-Waym	Storage Node	4723.60	6.80	0.00		20.00	53.42	4725.83				0.00	415.00
518	SN-Weath	Storage Node	4702.20	5.80	0.00		20.00	1.67	4702.46				0.00	175.00
519	SN-WildF	Storage Node	4592.80	4.40	0.00		20.00	13.84	4593.46				0.00	415.00
520	SN-WildL	Storage Node	4592.80	4.40	0.00		20.00	58.47	4597.07				0.00	415.00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
1	0001	Pipe	J42306	J42302	251.32	4518.99	4500.54	7.3400	3.000	0.0130	107.40	180.72	0.59	16.64	2.56	0.86	0.00	Calculated
2	0002	Pipe	J44488-1	J42341	61.98	4592.40	4590.49	3.0800	3.000	0.0130	3.54	117.09	0.03	5.44	0.44	0.15	0.00	Calculated
3	0004	Pipe	J0004-0	J42306	174.71	4525.19	4518.99	3.5500	3.000	0.0130	107.41	125.65	0.85	16.82	2.56	0.86	0.00	Calculated
4	0005	Pipe	J42307	J0004-0	648.84	4545.94	4525.19	3.2000	3.000	0.0130	107.41	119.28	0.90	15.56	2.80	0.94	0.00	Calculated
5	0006	Pipe	J0006-0	J42307	859.23	4578.80	4545.94	3.8200	3.000	0.0130	107.93	130.44	0.83	18.55	2.39	0.80	0.00	Calculated
6	0007	Pipe	J42340	J0006-0	140.95	4584.36	4578.80	3.9400	3.000	0.0130	3.54	132.47	0.03	3.21	1.08	0.36	0.00	Calculated
7	0008	Pipe	J42302	J0008-1	199.41	4500.54	4496.64	1.9600	3.000	0.0130	107.40	93.28	1.15	15.19	3.00	1.00	12.00	SURCHARGED
8	0009	Pipe	J42341	J42340	613.10	4590.49	4584.36	1.0000	3.000	0.0130	3.54	66.69	0.05	5.85	0.42	0.14	0.00	Calculated
9	0010	Pipe	J42438	J0006-0	134.44	4586.41	4578.80	5.6600	2.500	0.0130	107.59	97.59	1.10	21.92	2.50	1.00	12.00	SURCHARGED
10	0011	Pipe	J0011-0	J42438	25.73	4586.34	4586.41	-0.2700	2.500	0.0130	19.77	21.39	0.92	6.61	2.50	1.00	24.00	SURCHARGED
11	0013	Pipe	J42308	J0012-1	307.90	4600.22	4587.41	4.1600	1.500	0.0130	19.77	21.43	0.92	11.29	1.50	1.00	44.00	SURCHARGED
12	0017	Pipe	JJR062.04-1	JJR062.03-0	160.92	4697.95	4696.66	0.8000	7.000	0.0130	141.42	571.97	0.25	10.19	2.73	0.39	0.00	Calculated
13	0028	Pipe	J0018-0	J0018-1	263.14	4545.56	4540.09	2.0800	2.000	0.0130	14.22	32.62	0.44	9.32	1.02	0.51	0.00	Calculated
14	0029	Pipe	J0019-0	J0018-0	186.78	4545.76	4545.56	0.1100	2.000	0.0130	14.20	7.40	1.92	5.04	1.68	0.84	0.00	> CAPACITY
15	0030	Pipe	J0018-1	J0020-1	262.46	4540.09	4535.12	1.8900	2.000	0.0130	14.48	31.13	0.47	8.97	1.52	0.76	0.00	Calculated
16	0031	Pipe	J0020-1	J0021-1	269.53	4535.12	4530.51	1.7100	2.000	0.0130	15.23	29.59	0.51	5.79	2.00	1.00	55.00	SURCHARGED
17	0033	Pipe	J0023-0	J0023-1	66.43	4530.35	4529.68	1.0100	2.000	0.0130	15.25	22.72	0.67	5.12	2.00	1.00	71.00	SURCHARGED
18	0034	Pipe	J0021-1	J0023-0	4.79	4530.51	4530.35	3.3400	2.000	0.0130	15.24	41.35	0.37	4.85	2.00	1.00	71.00	SURCHARGED
19	0035	Pipe	J0023-1	J0025-1	69.77	4529.68	4529.18	0.7200	2.000	0.0130	15.24	19.15	0.80	5.76	2.00	1.00	72.00	SURCHARGED
20	0036	Pipe	JJR060.01-1	J0026-1	679.32	4562.10	4546.71	2.2700	1.500	0.0130	19.90	15.81	1.26	11.26	1.50	1.00	355.00	SURCHARGED
21	0037	Pipe	J0026-1	J0019-0	168.43	4546.71	4545.76	0.5600	1.500	0.0130	14.20	7.89	1.80	8.04	1.50	1.00	360.00	SURCHARGED
22	0055	Pipe	J0040-0	J0040-1	58.27	4554.09	4553.18	1.5600	2.000	0.0130	10.71	28.27	0.38	6.30	1.06	0.53	0.00	Calculated
23	0056	Pipe	J0041-0	J0041-1	54.09	4551.21	4550.28	1.7200	2.000	0.0130	10.72	29.66	0.36	6.41	1.05	0.53	0.00	Calculated
24	0057	Pipe	J0040-1	J0041-0	158.86	4553.18	4551.21	1.2400	2.000	0.0130	10.72	25.19	0.43	6.37	1.06	0.53	0.00	Calculated
25	0058	Pipe	J0043-0	J0043-1	92.05	4558.86	4558.42	0.4800	2.000	0.0130	10.71	15.64	0.68	4.87	1.32	0.66	0.00	Calculated
26	0059	Pipe	J0043-1	J0044-1	112.20	4558.42	4556.59	1.6300	2.000	0.0130	10.71	28.89	0.37	7.16	0.96	0.48	0.00	Calculated
27	0062	Pipe	J0044-1	J0040-0	157.83	4556.59	4554.09	1.5800	2.000	0.0130	10.71	28.47	0.38	6.63	1.02	0.51	0.00	Calculated
28	0063	Pipe	J0048-0	J0043-0	109.87	4560.70	4558.86	1.6700	2.000	0.0130	10.72	29.28	0.37	5.44	1.21	0.61	0.00	Calculated
29	0065	Pipe	J0050-0	J0050-1	31.55	4579.17	4579.09	0.2500	2.000	0.0130	8.50	11.39	0.75	3.10	2.00	1.00	161.00	SURCHARGED
30	0066	Pipe	J0050-1	J0051-1	172.79	4579.09	4576.60	1.4400	2.000	0.0130	33.18	27.16	1.22	10.56	2.00	1.00	161.00	SURCHARGED
31	0067	Pipe	J0051-1	J0052-1	401.42	4576.60	4571.48	1.2800	2.000	0.0130	28.93	25.55	1.13	9.21	2.00	1.00	165.00	SURCHARGED
32	0068	Pipe	J421012	J0050-1	127.27	4582.55	4579.09	2.7200	2.000	0.0130	25.19	37.30	0.68	8.02	2.00	1.00	157.00	SURCHARGED
33	0071	Pipe	J0071-0	J0071-1	6.93	4585.38	4585.32	0.8700	1.500	0.0130	10.88	9.77	1.11	6.17	1.50	1.00	143.00	SURCHARGED
34	0073	Pipe	J0073-0	J0073-1	213.70	4605.89	4605.36	0.2500	2.000	0.0130	27.66	11.27	2.46	13.61	1.23	0.62	0.00	> CAPACITY
35	0074	Pipe	J0074-0	J0074-1	128.38	4609.03	4608.13	0.7000	2.000	0.0130	18.46	18.94	0.97	6.27	2.00	1.00	63.00	SURCHARGED
36	0075	Pipe	J0074-1	J0075-1	166.80	4608.13	4605.98	1.2900	2.000	0.0130	18.66	25.68	0.73	7.05	2.00	1.00	63.00	SURCHARGED
37	0076	Pipe	J0076-0	J0074-0	244.02	4609.87	4609.03	0.3400	2.000	0.0130	18.46	13.27	1.39	5.88	2.00	1.00	76.00	SURCHARGED
38	0077	Pipe	J0077-0	J0076-0	295.53	4610.90	4609.87	0.3500	2.000	0.0130	18.46	13.36	1.38	5.88	2.00	1.00	82.00	SURCHARGED
39	0078	Pipe	J0078-0	J0077-0	319.35	4612.12	4610.90	0.3800	2.000	0.0130	18.46	13.98	1.32	5.88	2.00	1.00	86.00	SURCHARGED
40	0079	Pipe	J0079-0	J0078-0	370.85	4613.74	4612.12	0.4400	2.000	0.0130	18.46	14.95	1.23	5.88	2.00	1.00	83.00	SURCHARGED
41	0082	Pipe	J0080-0	J0080-1	95.65	4614.73	4614.29	0.4600	2.000	0.0130	18.46	15.34	1.20	5.88	2.00	1.00	84.00	SURCHARGED
42	0083	Pipe	J0080-1	J0079-0	98.39	4614.29	4613.74	0.5600	2.000	0.0130	18.47	16.91	1.09	5.88	2.00	1.00	83.00	SURCHARGED
43	0084	Pipe	J0084-0	J42554	45.00	4532.69	4534.04	-3.0000	2.000	0.0130	7.88	39.18	0.20	2.51	2.00	1.00	369.00	SURCHARGED
44	0085	Pipe	J42554	J0085-1	100.78	4534.04	4534.04	0.0000	1.250	0.0130	12.95	0.20	63.65	10.55	1.25	1.00	354.00	SURCHARGED
45	0086	Pipe	J0086-0	J0086-1	37.43	4534.15	4533.20	2.5400	2.000	0.0130	7.88	36.04	0.22	2.51	2.00	1.00	369.00	SURCHARGED
46	0087	Pipe	J0086-1	J0084-0	23.15	4533.20	4532.69	2.2000	2.000	0.0130	7.88	33.58	0.23	2.51	2.00	1.00	372.00	SURCHARGED
47	0088	Pipe	J0088-0	J0086-0	161.38	4533.74	4533.75	-0.0100	2.000	0.0130	18.54	11.40	1.63	5.90	2.00	1.00	369.00	SURCHARGED
48	0089	Pipe	J0089-0	J0089-1	40.62	4534.04	4533.24	1.9700	1.250	0.0130	10.60	9.07	1.17	8.64	1.25	1.00	335.00	SURCHARGED
49	0090	Pipe	J0090-0	J0090-1	40.54	4532.64	4531.38	3.1100	1.250	0.0130	10.58	11.39	0.93	12.42	0.82	0.65	0.00	Calculated
50	0091	Pipe	J0091-0	J0091-1	196.41	4526.22	4525.26	0.4900	1.500	0.0130	10.35	7.34	1.41	9.18	1.46	0.98	0.00	> CAPACITY
51	0094	Pipe	J0094-0	J0094-1	25.14	4522.00	4521.70	1.1900	2.000	0.0130	23.16	24.71	0.94	7.88	1.77	0.88	0.00	Calculated
52	0095	Pipe	J0095-0	J0095-1	125.60	4523.29	4522.22	0.8500	2.000	0.0130	23.24	24.56	0.95	7.40	2.00	1.00	37.00	SURCHARGED
53	0111	Pipe	J0111-0	J0111-1	195.95	4766.53	4762.20	2.2100	1.500	0.0130	13.77	15.61	0.88	9.36	1.50	1.00	22.00	SURCHARGED
54	0112	Pipe	J0112-0	J421172	115.07	4756.80	4741.86	12.9800	1.500	0.0130	13.29	37.85	0.35	9.12	1.50	1.00	31.00	SURCHARGED
55	0113	Pipe	J0111-1	J0112-0	139.91	4762.20	4756.80	3.8600	1.500	0.0130	13.77	20.64	0.67	10.64	1.50	1.00	26.00	SURCHARGED
56	0114	Pipe	J0114-0	J0114-1	76.97	4873.88	4869.56	5.6100	1.500	0.0130	13.91	24.89	0.56	12.41	0.91	0.61	0.00	Calculated
57	0115	Pipe	J0114-1	J0115-1	331.78	4869.56	4836.95	9.8300	1.500	0.0130	13.90	32.93	0.42	13.51	0.85	0.57	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
58	0116	Pipe	J0115-1	J0116-1	54.69	4836.95	4833.51	6.2900	1.500	0.0130	13.89	26.34	0.53	11.54	0.96	0.64	0.00	Calculated
59	0117	Pipe	J0116-1	J0117-1	318.75	4833.51	4819.05	4.5400	1.500	0.0130	13.87	22.37	0.62	12.76	0.88	0.59	0.00	Calculated
60	0118	Pipe	J0117-1	J0118-1	250.40	4819.05	4806.49	5.0200	1.500	0.0130	13.87	23.53	0.59	9.84	1.16	0.78	0.00	Calculated
61	0119	Pipe	J0118-1	J0119-1	124.95	4806.49	4803.84	2.1200	1.500	0.0130	13.88	15.30	0.91	8.60	1.30	0.87	0.00	Calculated
62	0120	Pipe	J0119-1	J0120-1	217.83	4803.84	4794.30	4.3800	1.500	0.0130	13.87	21.98	0.63	12.05	0.91	0.62	0.00	Calculated
63	0121	Pipe	J0120-1	J0121-1	209.70	4794.30	4784.91	4.4800	1.500	0.0130	13.91	22.23	0.63	12.25	0.98	0.67	0.00	Calculated
64	0122	Pipe	J0122-0	J0122-1	33.05	4768.70	4766.60	6.3500	1.500	0.0130	13.77	26.48	0.52	7.79	1.50	1.00	21.00	SURCHARGED
65	0123	Pipe	J0121-1	J0122-0	316.22	4784.91	4768.70	5.1300	1.500	0.0130	13.77	23.78	0.58	10.64	1.28	0.86	0.00	Calculated
66	0124	Pipe	J0122-1	J0111-0	32.81	4766.60	4766.53	0.2100	1.500	0.0130	13.77	4.85	2.84	7.79	1.50	1.00	22.00	SURCHARGED
67	0125	Pipe	J0125-0	J0125-1	204.42	4626.22	4617.41	4.3100	2.000	0.0130	35.75	46.96	0.76	11.38	2.00	1.00	32.00	SURCHARGED
68	0126	Pipe	J0126-0	J0126-1	91.91	4632.19	4629.13	3.3300	2.000	0.0130	24.76	41.28	0.60	7.88	2.00	1.00	34.00	SURCHARGED
69	0127	Pipe	J0127-0	J0073-0	76.18	4606.32	4605.89	0.5600	2.000	0.0130	27.66	17.00	1.63	8.80	2.00	1.00	68.00	SURCHARGED
70	0128	Pipe	J0126-1	J0125-0	222.85	4629.13	4626.22	1.3100	2.000	0.0130	35.93	25.85	1.39	11.44	2.00	1.00	33.00	SURCHARGED
71	0129	Pipe	J0129-0	J0127-0	265.66	4615.74	4606.32	3.5500	2.000	0.0130	35.75	42.60	0.84	11.38	2.00	1.00	35.00	SURCHARGED
72	0130	Pipe	J0125-1	J0129-0	90.94	4617.41	4615.74	1.8400	2.000	0.0130	35.75	30.66	1.17	11.38	2.00	1.00	35.00	SURCHARGED
73	0131	Pipe	J0131.0	J42359	454.58	4591.24	4589.72	0.3300	2.000	0.0130	13.19	13.08	1.01	4.20	2.00	1.00	58.00	SURCHARGED
74	0132	Pipe	J42358	J0131.0	387.78	4617.19	4591.24	6.6900	2.000	0.0130	39.44	58.52	0.67	14.19	1.64	0.83	0.00	Calculated
75	0133	Pipe	J0133.0	J42363	65.92	4589.62	4588.99	0.9600	1.250	0.0130	11.87	6.32	1.88	12.29	0.91	0.74	0.00	> CAPACITY
76	0134	Pipe	J42359	J0133.0	11.91	4589.72	4589.62	0.8400	1.250	0.0130	11.87	5.92	2.01	9.67	1.25	1.00	73.00	SURCHARGED
77	0135	Pipe	JJR062.01-1	JJR060.02-0	14.72	4613.99	4612.85	7.7400	2.000	0.0130	43.00	62.96	0.68	15.90	1.61	0.80	0.00	Calculated
78	0136	Pipe	JJR062.03-1	JJR062.02-0	100.11	4676.73	4674.27	2.4600	2.000	0.0130	44.51	35.46	1.26	19.58	1.36	0.68	0.00	> CAPACITY
79	0137	Pipe	JJR062.02-1	JJR062.01-0	15.56	4650.17	4648.97	7.7100	2.000	0.0130	44.18	62.82	0.70	16.22	1.62	0.81	0.00	Calculated
80	0138	Pipe	JJR060.02-1	JJR060.01-0	12.16	4585.80	4585.48	2.6300	2.000	0.0130	79.41	52.70	1.51	31.05	1.52	0.76	0.00	> CAPACITY
81	0139	Pipe	J42824	J441660-0	4.34	4645.94	4645.74	4.6100	2.000	0.0130	1059.62	48.56	21.82	50.00	2.00	1.00	310.00	SURCHARGED
82	0140	Pipe	J421172	J421180	374.64	4741.86	4732.37	2.5300	1.500	0.0130	13.29	16.72	0.79	7.52	1.50	1.00	64.00	SURCHARGED
83	0141	Pipe	J421180	J421185	28.17	4732.37	4731.42	3.3700	1.500	0.0130	13.29	19.29	0.69	7.52	1.50	1.00	150.00	SURCHARGED
84	0142	Pipe	J421185	J421186	174.96	4731.42	4730.77	0.3700	1.500	0.0130	11.28	6.40	1.76	6.39	1.50	1.00	166.00	SURCHARGED
85	0143	Pipe	J421186	J421187	106.51	4730.77	4730.20	0.5400	1.500	0.0130	11.28	7.68	1.47	6.38	1.50	1.00	165.00	SURCHARGED
86	0144	Pipe	J421187	J421188	94.28	4730.20	4729.81	0.4100	1.500	0.0130	11.28	6.76	1.67	6.38	1.50	1.00	157.00	SURCHARGED
87	0145	Pipe	J421189	J421190	156.03	4728.22	4716.50	7.5100	1.500	0.0130	28.60	28.79	0.99	16.18	1.50	1.00	32.00	SURCHARGED
88	0146	Pipe	J421188	J421189	303.24	4729.81	4728.22	0.5200	1.500	0.0130	28.60	7.61	3.76	16.18	1.50	1.00	59.00	SURCHARGED
89	0147	Pipe	J421190	J421191	154.82	4716.50	4713.49	1.9400	2.000	0.0130	28.60	31.54	0.91	10.90	1.56	0.78	0.00	Calculated
90	0148	Pipe	J421191	J421192	129.30	4713.49	4703.92	7.4000	2.000	0.0130	28.61	61.55	0.46	15.63	1.13	0.57	0.00	Calculated
91	0149	Pipe	J421192	J421193	153.14	4703.92	4694.15	6.3800	2.000	0.0130	28.62	57.14	0.50	15.07	1.16	0.58	0.00	Calculated
92	0150	Pipe	J421193	J421194	111.46	4694.15	4687.36	6.0900	2.000	0.0130	28.64	55.84	0.51	14.26	1.38	0.69	0.00	Calculated
93	0151	Pipe	J421194	J421195	396.50	4687.36	4670.77	4.1800	2.000	0.0130	28.60	46.27	0.62	13.27	1.79	0.89	0.00	Calculated
94	0152	Pipe	J421196	J42964	133.55	4663.74	4660.16	2.6800	2.000	0.0130	24.85	37.04	0.67	7.91	2.00	1.00	81.00	SURCHARGED
95	0153	Pipe	J421195	J421196	194.51	4670.77	4663.74	3.6100	2.000	0.0130	28.60	43.01	0.67	10.92	2.00	1.00	68.00	SURCHARGED
96	0155	Pipe	J431143	J421197	42.34	4739.37	4736.80	6.0700	1.250	0.0130	17.88	15.92	1.12	14.57	1.25	1.00	82.00	SURCHARGED
97	0156	Pipe	J421197	J421200	41.53	4733.85	4733.33	1.2500	1.500	0.0130	10.22	11.75	0.87	5.79	1.50	1.00	156.00	SURCHARGED
98	0157	Pipe	J421200	J421201	182.32	4733.33	4732.57	0.4200	1.500	0.0130	13.29	6.78	1.96	7.52	1.50	1.00	159.00	SURCHARGED
99	0158	Pipe	J421201	J421185	171.69	4732.57	4731.42	0.6700	1.500	0.0130	13.29	8.60	1.55	7.52	1.50	1.00	160.00	SURCHARGED
100	0159	Pipe	J0025-1	J4267	29.09	4529.18	4526.93	7.7300	2.000	0.0130	15.24	62.92	0.24	8.72	2.00	1.00	72.00	SURCHARGED
101	0160	Pipe	JTG010.04-0	J0015-0	140.46	4542.60	4541.32	0.9100	9.833	0.0130	449.48	1509.33	0.30	14.12	4.29	0.44	0.00	Calculated
102	0161	Pipe	JTG010.04-0	J0016-0	126.93	4542.69	4541.17	1.2000	9.833	0.0130	455.43	1730.19	0.26	14.40	4.27	0.43	0.00	Calculated
103	0164	Pipe	JUL130.04-1	JUL130.02-0	548.67	4567.91	4566.45	0.2700	1.500	0.0150	8.29	4.70	1.77	7.77	0.87	0.58	0.00	> CAPACITY
104	0165	Pipe	JUL120.04-1	JUL120.02-0	60.27	4506.91	4505.93	1.6300	5.000	0.0150	91.86	363.02	0.25	6.83	2.24	0.45	0.00	Calculated
105	0166	Pipe	JUL120.06-1	JUL120.04-0	64.48	4541.09	4541.49	-0.6200	2.500	0.0130	91.92	289.11	0.32	4.95	1.48	0.59	0.00	Calculated
106	0167	Pipe	J441211-1	SN-Pepp	201.03	4623.61	4618.80	2.3900	2.500	0.0150	57.64	54.99	1.05	12.43	2.50	1.00	370.00	SURCHARGED
107	0168	Pipe	J421015	J0109-1	555.50	4596.75	4586.99	1.7600	1.500	0.0150	12.38	12.07	1.03	9.68	1.50	1.00	43.00	SURCHARGED
108	0169	Pipe	J0110-1	J0071-0	14.91	4585.43	4585.38	0.3400	1.500	0.0150	10.87	5.27	2.06	6.15	1.50	1.00	144.00	SURCHARGED
109	0170	Pipe	J0071-1	J0050-0	12.52	4585.32	4579.17	49.1200	1.500	0.0150	8.50	63.81	0.13	5.77	1.50	1.00	143.00	SURCHARGED
110	0171	Pipe	J0108-1	J421012	55.50	4586.74	4582.55	7.5500	1.500	0.0150	13.58	25.01	0.54	7.68	1.50	1.00	149.00	SURCHARGED
111	0172	Pipe	J42450	J42554	948.84	4546.90	4534.04	1.3600	1.500	0.0150	13.17	10.60	1.24	7.45	1.50	1.00	267.00	SURCHARGED
112	0173	Pipe	J0012-1	J0011-0	6.44	4587.41	4586.34	16.6100	1.500	0.0150	19.78	37.11	0.53	11.19	1.50	1.00	221.00	SURCHARGED
113	0176	Pipe	J44377-1	J42224	34.17	4546.06	4532.48	39.7400	1.500	0.0150	10.49	57.39	0.18	12.48	0.80	0.53	0.00	Calculated
114	0179	Pipe	J0054-1	J0048-0	19.46	4561.20	4560.70	2.5700	2.000	0.0150	10.71	31.43	0.34	6.29	1.07	0.53	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
115	0180	Pipe	J0075-1	J0127-0	13.83	4605.98	4606.32	-2.4600	2.000	0.0150	17.39	30.74	0.57	6.20	2.00	1.00	68.00	SURCHARGED
116	0182	Pipe	J44269-1	J0014-1	357.60	4720.40	4721.70	-0.3600	1.500	0.0150	13.10	5.49	2.39	9.24	1.12	0.75	0.00	> CAPACITY
117	0183	Pipe	J42533	J441565-1	49.88	4695.91	4693.98	3.8700	4.000	0.0150	23.69	244.88	0.10	5.14	3.69	0.97	0.00	Calculated
118	0186	Pipe	SN-HHBl	J0126-0	171.02	4641.60	4632.19	5.5000	2.500	0.0150	23.81	83.39	0.29	10.38	1.96	0.79	0.00	Calculated
119	0187	Pipe	SN-HillC	J4245	201.06	4621.20	4616.24	2.4700	2.000	0.0150	9.34	30.79	0.30	7.32	1.37	0.69	0.00	Calculated
120	0188	Pipe	JUL080.04-0	J44614-0	136.39	4595.90	4581.74	10.3800	1.500	0.0150	3.67	29.33	0.13	3.19	0.93	0.62	0.00	Calculated
121	0189	Pipe	SN-Rock	JUL070.10-1	262.28	4788.10	4779.12	3.4200	3.000	0.0150	3.64	106.96	0.03	9.73	0.46	0.15	0.00	Calculated
122	0191	Pipe	SN-Mav	J44681.0	101.15	4597.00	4591.92	5.0200	1.000	0.0130	8.29	7.98	1.04	11.86	0.83	0.83	0.00	> CAPACITY
123	0192	Pipe	SN-WildF	J42462	114.84	4592.80	4581.42	9.9100	1.500	0.0150	11.36	28.66	0.40	9.66	1.08	0.72	0.00	Calculated
124	4433	Pipe	J441666-1	SN-Pond	34.38	4628.74	4625.00	10.8800	2.000	0.0130	1606.57	74.61	21.53	50.00	2.00	1.00	418.00	SURCHARGED
125	4442	Pipe	JUL130.08-0	JUL130.06-0	96.06	4592.42	4590.00	2.5200	4.000	0.0130	36.60	227.99	0.16	13.33	1.08	0.27	0.00	Calculated
126	4445	Pipe	J0015-1	JTG010.03-0	89.83	4502.62	4501.85	0.8600	9.833	0.0150	443.78	1268.65	0.35	7.92	6.80	0.69	0.00	Calculated
127	4446	Pipe	J0016-1	JTG010.02-0	83.97	4503.66	4502.15	1.8000	9.833	0.0150	450.44	1837.53	0.25	8.92	6.21	0.63	0.00	Calculated
128	4449	Pipe	J42393	JUL070.02-0	232.19	4585.90	4581.00	2.1100	4.500	0.0130	82.19	281.86	0.29	16.50	1.58	0.35	0.00	Calculated
129	4453	Pipe	J421017	J421016	322.71	4605.36	4601.71	1.1300	1.500	0.0130	12.88	11.17	1.15	7.33	1.50	1.00	38.00	SURCHARGED
130	4455	Pipe	J4260	J4244	14.44	4523.15	4522.27	6.0900	3.000	0.0130	49.90	164.65	0.30	7.17	2.87	0.96	0.00	Calculated
131	4456	Pipe	J4249	J4260	130.28	4522.92	4523.15	-0.1800	3.000	0.0130	49.91	28.02	1.78	7.10	2.93	0.98	0.00	> CAPACITY
132	4466	Pipe	J4244	J4466-1	154.27	4522.27	4520.95	0.8600	3.000	0.0130	49.89	61.70	0.81	11.15	1.84	0.61	0.00	Calculated
133	4469	Pipe	J4289	J4267	587.23	4539.19	4526.93	2.0900	3.000	0.0130	63.40	96.37	0.66	9.55	3.00	1.00	20.00	SURCHARGED
134	4489	Pipe	J42118	J42112	399.05	4610.41	4599.43	2.7500	2.000	0.0130	31.64	37.53	0.84	10.89	0.90	1.00	1.00	SURCHARGED
135	4490	Pipe	J42112	J42117	330.31	4599.43	4597.20	0.6800	2.500	0.0130	31.63	33.70	0.94	9.80	1.08	0.66	0.00	Calculated
136	44174	Pipe	J42420	J42347	45.63	4713.66	4706.85	14.9200	2.500	0.0130	7.76	158.46	0.05	11.80	0.48	0.19	0.00	Calculated
137	44175	Pipe	J42346	J42420	424.21	4747.50	4713.66	7.9800	2.500	0.0130	7.76	115.85	0.07	13.68	0.43	0.17	0.00	Calculated
138	44177	Pipe	J42436	J42348	293.90	4692.40	4677.52	5.0600	2.500	0.0130	7.76	92.29	0.08	10.96	0.50	0.20	0.00	Calculated
139	44178	Pipe	J42347	J42436	398.35	4706.85	4692.40	3.6300	2.500	0.0130	7.76	78.12	0.10	9.92	0.54	0.22	0.00	Calculated
140	44181	Pipe	JUL100.02-1	J42365	197.42	4820.37	4812.97	3.7500	2.000	0.0130	15.85	43.80	0.36	9.62	1.05	0.53	0.00	Calculated
141	44182	Pipe	J42365	J42366	223.61	4812.97	4809.24	1.6700	2.000	0.0130	15.85	29.22	0.54	10.17	1.00	0.50	0.00	Calculated
142	44183	Pipe	J42366	J42367	346.58	4809.24	4786.31	6.6200	2.000	0.0130	15.85	58.19	0.27	15.20	0.73	0.37	0.00	Calculated
143	44184	Pipe	J42368	J42370	153.82	4758.99	4749.05	6.4600	2.000	0.0130	15.85	57.51	0.28	13.67	0.79	0.40	0.00	Calculated
144	44185	Pipe	J42367	J42368	353.15	4786.31	4758.99	7.7400	2.000	0.0130	15.85	62.92	0.25	14.95	0.74	0.37	0.00	Calculated
145	44186	Pipe	JUL080.12-0	J42442	28.71	4777.64	4775.41	7.7700	2.500	0.0130	35.04	114.31	0.31	10.26	1.64	0.66	0.00	Calculated
146	44187	Pipe	J42442	JUL080.10-0	51.79	4775.41	4773.28	4.1100	2.500	0.0130	35.04	83.18	0.42	12.19	1.42	0.57	0.00	Calculated
147	44236	Pipe	J42223	J42156	262.10	4530.32	4527.51	1.0700	4.000	0.0130	68.65	148.73	0.46	7.38	2.84	0.71	0.00	Calculated
148	44237	Pipe	J42156	J42155	254.58	4527.51	4525.14	0.9300	4.000	0.0130	103.11	138.59	0.74	9.14	3.32	0.84	0.00	Calculated
149	44238	Pipe	J42155	J42154	394.76	4525.14	4521.79	0.8500	4.000	0.0130	103.11	132.32	0.78	12.60	2.46	0.62	0.00	Calculated
150	44268	Pipe	J42180	J42181	179.46	4743.73	4730.23	7.5200	2.500	0.0130	15.85	112.50	0.14	14.15	1.57	0.63	0.00	Calculated
151	44269	Pipe	J42181	J44269-1	56.95	4730.23	4722.37	13.8000	2.500	0.0130	15.95	152.38	0.10	4.30	2.50	1.00	37.00	SURCHARGED
152	44275	Pipe	J0014-1	J42178	196.83	4721.70	4703.44	9.2800	1.500	0.0130	14.80	31.99	0.46	15.54	0.82	0.55	0.00	Calculated
153	44276	Pipe	J42178	J42177	144.52	4703.44	4694.19	6.4000	1.500	0.0130	14.80	26.58	0.56	11.26	1.20	0.80	0.00	Calculated
154	44277	Pipe	J42177	J42176	64.40	4694.19	4691.51	4.1600	1.500	0.0130	14.80	21.43	0.69	8.69	1.50	1.00	76.00	SURCHARGED
155	44278	Pipe	J42176	J42175	144.49	4691.51	4688.48	2.1000	1.500	0.0130	14.80	15.21	0.97	8.37	1.50	1.00	101.00	SURCHARGED
156	44279	Pipe	J441032-1	J44279-1	131.14	4592.84	4589.20	2.7800	2.000	0.0130	10.59	37.69	0.28	3.37	2.00	1.00	303.00	SURCHARGED
157	44298	Pipe	J42157	J44298-1	178.93	4512.22	4498.50	7.6700	4.000	0.0130	103.11	397.76	0.26	22.68	1.55	0.39	0.00	Calculated
158	44299	Pipe	J42154	J42157	88.84	4521.79	4512.22	10.7700	4.000	0.0130	103.11	471.45	0.22	20.02	1.70	0.43	0.00	Calculated
159	44333	Pipe	J42224	J42223	77.80	4532.48	4530.32	2.7800	4.000	0.0130	68.70	239.34	0.29	9.70	2.21	0.55	0.00	Calculated
160	44375	Pipe	JUL152.04-1	JUL152.02-0	76.70	4551.14	4550.30	1.1000	2.000	0.0130	14.23	23.67	0.60	8.99	1.18	0.59	0.00	Calculated
161	44377	Pipe	JUL152.02-1	J44377-1	76.96	4547.04	4546.06	1.2700	2.000	0.0130	10.49	25.53	0.41	8.81	0.81	0.40	0.00	Calculated
162	44455	Pipe	J42265	J42264	120.43	4616.61	4608.40	6.8200	2.000	0.0130	14.80	59.07	0.25	12.59	0.80	0.40	0.00	Calculated
163	44458	Pipe	J42175	J42282	60.28	4688.48	4687.53	1.5800	1.500	0.0130	14.80	13.19	1.12	9.06	1.31	0.87	0.00	> CAPACITY
164	44459	Pipe	J42304	J42305	77.03	4686.38	4681.18	6.7500	1.250	0.0130	19.77	16.78	1.18	16.11	1.25	1.00	149.00	SURCHARGED
165	44460	Pipe	J42303	J42304	260.85	4705.22	4686.38	7.2200	1.250	0.0130	19.77	17.36	1.14	16.11	1.25	1.00	192.00	SURCHARGED
166	44461	Pipe	J42309	J42308	286.81	4616.43	4600.22	5.6500	1.500	0.0130	19.96	24.97	0.80	13.52	1.29	0.86	0.00	Calculated
167	44462	Pipe	J42310	J42309	390.19	4636.19	4616.43	5.0600	1.500	0.0130	19.81	23.64	0.84	14.30	1.11	0.74	0.00	Calculated
168	44463	Pipe	J42311	J42310	212.12	4652.14	4636.19	7.5200	1.500	0.0130	19.92	28.80	0.69	15.05	1.06	0.71	0.00	Calculated
169	44464	Pipe	J42312	J42311	173.46	4663.13	4652.14	6.3400	1.500	0.0130	19.89	26.44	0.75	14.93	1.05	0.71	0.00	Calculated
170	44465	Pipe	J42305	J42312	220.69	4681.18	4663.13	8.1800	1.500	0.0130	19.93	30.04	0.66	15.46	1.03	0.69	0.00	Calculated
171	44471	Pipe	J42266	J42265	101.03	4620.24	4616.61	3.5900	2.000	0.0130	14.80	42.88	0.35	11.34	0.87	0.43	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
172	44472	Pipe	J42267	J42266	78.65	4622.52	4620.24	2.9000	2.000	0.0130	14.80	38.52	0.38	9.09	1.03	0.51	0.00	Calculated
173	44473	Pipe	J42268	J42267	286.18	4630.23	4622.52	2.6900	2.000	0.0130	14.80	37.13	0.40	9.52	0.99	0.50	0.00	Calculated
174	44474	Pipe	J42269	J42268	113.63	4633.51	4630.23	2.8900	2.000	0.0130	14.80	38.44	0.38	9.84	0.97	0.48	0.00	Calculated
175	44475	Pipe	J42270	J42269	157.44	4638.41	4633.51	3.1100	2.000	0.0130	14.80	39.91	0.37	9.74	0.97	0.49	0.00	Calculated
176	44476	Pipe	J42271	J42270	146.40	4646.69	4638.41	5.6600	2.000	0.0130	14.80	53.80	0.28	11.66	0.85	0.42	0.00	Calculated
177	44486	Pipe	J42333	J42334	261.69	4610.34	4602.31	3.0700	3.000	0.0130	3.54	116.84	0.03	6.05	0.41	0.14	0.00	Calculated
178	44487	Pipe	J42334	J42335	49.00	4602.31	4601.32	2.0200	3.000	0.0130	3.54	94.81	0.04	6.10	0.41	0.14	0.00	Calculated
179	44488	Pipe	J42336	J44488-1	76.23	4595.34	4592.40	3.8600	3.000	0.0130	3.54	130.99	0.03	7.02	0.37	0.12	0.00	Calculated
180	44489	Pipe	J42335	J42336	160.45	4601.32	4595.34	3.7300	3.000	0.0130	3.54	128.76	0.03	7.41	0.36	0.12	0.00	Calculated
181	44490	Pipe	JUL041.02-1	J42337	157.17	4627.15	4619.90	4.6100	3.000	0.0130	3.54	143.25	0.02	8.26	0.33	0.11	0.00	Calculated
182	44491	Pipe	J42337	J42333	200.01	4619.90	4610.34	4.7800	3.000	0.0130	3.54	145.82	0.02	7.92	0.34	0.11	0.00	Calculated
183	44500	Pipe	J42273	J42271	194.15	4657.67	4646.69	5.6600	2.000	0.0130	14.80	53.80	0.28	13.26	0.77	0.39	0.00	Calculated
184	44501	Pipe	J42274	J42273	167.34	4666.87	4657.67	5.5000	2.000	0.0130	14.80	53.04	0.28	12.96	0.78	0.39	0.00	Calculated
185	44502	Pipe	J42275	J42274	48.57	4670.16	4666.87	6.7700	2.000	0.0130	14.80	58.88	0.25	11.82	0.84	0.42	0.00	Calculated
186	44503	Pipe	J42277	J42275	52.49	4672.54	4670.16	4.5300	2.000	0.0130	14.80	48.17	0.31	10.18	0.94	0.47	0.00	Calculated
187	44504	Pipe	J42278	J42277	116.41	4677.64	4672.54	4.3800	2.000	0.0130	14.80	47.35	0.31	10.40	0.93	0.46	0.00	Calculated
188	44505	Pipe	J42279	J42278	125.33	4682.15	4677.64	3.6000	2.000	0.0130	14.80	42.91	0.34	10.85	0.90	0.45	0.00	Calculated
189	44506	Pipe	J42280	J42279	83.40	4683.00	4682.15	1.0200	2.000	0.0130	14.80	22.84	0.65	7.59	1.19	0.60	0.00	Calculated
190	44507	Pipe	J42282	J42280	320.84	4687.53	4683.00	1.4100	2.000	0.0130	14.80	26.88	0.55	6.98	1.28	0.64	0.00	Calculated
191	44548	Pipe	J44279-1	J42284	3.93	4589.20	4589.18	0.5100	1.250	0.0130	5.72	4.61	1.24	4.66	1.25	1.00	313.00	SURCHARGED
192	44549	Pipe	J42284	J42285	29.77	4589.18	4588.82	1.2100	1.250	0.0130	5.71	7.10	0.80	4.65	1.25	1.00	313.00	SURCHARGED
193	44551	Pipe	J42287	J42286	339.89	4587.63	4586.66	0.2900	1.250	0.0130	5.71	3.45	1.65	4.65	1.25	1.00	311.00	SURCHARGED
194	44563	Pipe	J42285	J44563-1	4.04	4588.82	4588.62	4.9500	1.250	0.0130	5.71	14.37	0.40	4.65	1.25	1.00	313.00	SURCHARGED
195	44564	Pipe	J44563-1	J42287	259.24	4588.62	4587.63	0.3800	1.250	0.0130	5.71	3.99	1.43	4.65	1.25	1.00	313.00	SURCHARGED
196	44576	Pipe	J42458	J42459	397.01	4585.91	4584.43	0.3700	1.250	0.0130	5.71	3.94	1.45	4.65	1.25	1.00	311.00	SURCHARGED
197	44577	Pipe	J42286	J42458	161.64	4586.66	4585.91	0.4600	1.250	0.0130	5.71	4.40	1.30	4.65	1.25	1.00	311.00	SURCHARGED
198	44578	Pipe	J42459	J42460	295.67	4584.43	4582.66	0.6000	1.250	0.0130	5.71	5.00	1.14	4.65	1.25	1.00	313.00	SURCHARGED
199	44579	Pipe	J42460	J42462	294.77	4582.66	4581.42	0.4200	1.250	0.0130	5.71	4.19	1.36	4.95	1.25	1.00	32.00	SURCHARGED
200	44591	Pipe	J42394	J42393	33.11	4586.59	4585.90	2.0800	4.500	0.0130	82.19	283.88	0.29	8.60	2.61	0.58	0.00	Calculated
201	44592	Pipe	JUL070.04-1	J42394	29.29	4590.98	4586.59	14.9900	3.500	0.0130	82.19	389.50	0.21	11.81	2.38	0.68	0.00	Calculated
202	44596	Pipe	J42348	J42349	139.93	4677.52	4670.58	4.9600	2.500	0.0130	7.76	91.35	0.08	8.90	0.58	0.23	0.00	Calculated
203	44597	Pipe	J42349	J42350	137.24	4670.58	4666.48	2.9900	2.500	0.0130	7.76	70.90	0.11	10.72	0.51	0.20	0.00	Calculated
204	44598	Pipe	J42350	J44598-1	97.53	4666.48	4648.85	18.0800	2.500	0.0130	7.76	174.39	0.04	2.67	1.43	0.57	0.00	Calculated
205	44599	Pipe	J44599-0	JUL070.04-0	99.31	4647.46	4647.09	0.3700	2.500	0.0130	7.06	25.04	0.28	6.28	0.84	0.34	0.00	Calculated
206	44600	Pipe	J44598-1	SN-Swain	323.25	4648.85	4654.40	-1.7200	2.500	0.0130	7.76	53.75	0.14	1.98	1.92	0.77	0.00	Calculated
207	44601	Pipe	J42443	JUL080.08-1	37.31	4713.69	4712.70	2.6500	2.500	0.0130	44.74	66.81	0.67	10.63	2.00	0.80	0.00	Calculated
208	44602	Pipe	JUL080.10-1	J42443	45.21	4718.12	4713.69	9.8000	2.500	0.0130	44.74	128.40	0.35	10.48	2.03	0.81	0.00	Calculated
209	44609	Pipe	J42370	J42371	80.61	4749.05	4745.20	4.7800	2.500	0.0130	15.85	89.64	0.18	8.29	1.03	0.41	0.00	Calculated
210	44610	Pipe	J42440	J42180	60.81	4744.06	4743.73	0.5400	2.500	0.0130	15.85	30.22	0.52	7.99	1.06	0.42	0.00	Calculated
211	44611	Pipe	J42371	J42440	72.46	4745.20	4744.06	1.5700	2.500	0.0130	15.85	51.45	0.31	5.73	1.37	0.55	0.00	Calculated
212	44612	Pipe	J44612-0	JUL080.04-1	101.81	4634.84	4634.16	0.6700	2.500	0.0130	34.18	44.16	0.77	11.04	1.51	0.60	0.00	Calculated
213	44614	Pipe	J44614-0	J441024-0	77.22	4581.74	4578.99	3.5600	1.500	0.0130	29.16	19.82	1.47	17.78	1.31	0.88	0.00	> CAPACITY
214	44617	Pipe	JUL080.06-0	J44612-0	26.81	4635.30	4634.84	1.7200	2.000	0.0130	34.18	29.63	1.15	10.88	2.00	1.00	281.00	SURCHARGED
215	44681	Pipe	J44681.0	J42402	105.85	4591.92	4585.83	5.7500	2.500	0.0130	15.35	98.38	0.16	4.68	1.58	0.63	0.00	Calculated
216	44754	Pipe	J42540	J42538	116.87	4597.65	4595.69	1.6800	4.000	0.0130	77.32	186.02	0.42	12.21	2.01	0.50	0.00	Calculated
217	44803	Pipe	J42531	J42530	133.82	4693.08	4692.15	0.6900	4.000	0.0130	100.98	119.75	0.84	11.22	4.00	1.00	5.00	SURCHARGED
218	44819	Pipe	J42532	J42531	163.01	4693.66	4693.08	0.3600	4.000	0.0130	101.11	85.68	1.18	8.15	4.00	1.00	9.00	SURCHARGED
219	44868	Pipe	J42885	J42118	219.08	4616.20	4610.41	2.6400	2.000	0.0130	26.01	36.78	0.71	10.03	0.78	1.00	1.00	SURCHARGED
220	44869	Pipe	JUL132.02-1	J42746	78.47	4760.58	4758.90	2.1400	2.000	0.0130	40.21	33.59	1.20	12.80	2.00	1.00	200.00	SURCHARGED
221	44870	Pipe	J42746	J42745	58.79	4758.90	4755.35	6.0400	2.000	0.0130	40.21	55.59	0.72	12.80	2.00	1.00	200.00	SURCHARGED
222	44871	Pipe	J42747	J42748	51.62	4704.88	4703.71	2.2700	2.000	0.0130	38.89	34.06	1.14	12.38	2.00	1.00	224.00	SURCHARGED
223	44891	Pipe	J42722	JUL120.06-0	302.46	4586.25	4574.18	3.9900	4.500	0.0130	92.02	392.84	0.23	20.97	1.45	0.32	0.00	Calculated
224	44892	Pipe	J42538	J42722	208.08	4595.69	4586.25	4.5400	4.000	0.0130	77.79	305.95	0.25	15.29	1.70	0.43	0.00	Calculated
225	44893	Pipe	J42402	J42722	309.34	4585.83	4586.25	-0.1400	2.500	0.0130	15.36	15.11	1.02	3.82	2.17	0.87	0.00	> CAPACITY
226	441024	Pipe	J441024-0	J441024-1	47.29	4578.99	4576.75	4.7400	4.000	0.0130	29.16	312.63	0.09	5.95	1.65	0.41	0.00	Calculated
227	441025	Pipe	J441024-1	JUL080.02-0	113.84	4576.75	4576.48	0.2400	4.000	0.0130	34.89	69.96	0.50	9.28	1.36	0.34	0.00	Calculated
228	441032	Pipe	J42264	SN-SUMM	292.32	4608.40	4599.80	2.9400	2.000	0.0130	14.80	38.80	0.38	7.38	1.43	0.71	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
229	441048	Pipe	J42829	J42828	142.62	4678.74	4674.06	3.2800	2.000	0.0130	43.79	40.98	1.07	13.94	2.00	1.00	109.00	SURCHARGED
230	441050	Pipe	J42831	J42829	267.72	4695.54	4678.74	6.2800	2.000	0.0130	43.79	56.67	0.77	13.94	2.00	1.00	97.00	SURCHARGED
231	441117	Pipe	J441117-0	J4245	144.04	4617.87	4616.24	1.1300	4.000	0.0130	3.32	152.81	0.02	4.78	2.35	0.59	0.00	Calculated
232	441118	Pipe	J4245	J421019	106.25	4616.24	4610.44	5.4600	1.500	0.0130	13.14	24.54	0.54	9.47	1.50	1.00	29.00	SURCHARGED
233	441173	Pipe	J42888	J42887	125.82	4631.26	4628.69	2.0400	2.500	0.0130	57.93	58.62	0.99	11.80	2.50	1.00	82.00	SURCHARGED
234	441175	Pipe	J42890	J42888	305.22	4637.18	4631.26	1.9400	2.500	0.0130	57.93	57.12	1.01	11.80	2.50	1.00	80.00	SURCHARGED
235	441176	Pipe	J42891	J42890	64.25	4638.52	4637.18	2.0900	2.500	0.0130	27.21	59.24	0.46	6.85	2.50	1.00	78.00	SURCHARGED
236	441182	Pipe	J42901	J42903	204.99	4655.25	4651.21	1.9700	2.500	0.0130	24.47	57.58	0.42	9.92	2.50	1.00	62.00	SURCHARGED
237	441183	Pipe	J42903	J42904	197.78	4651.21	4646.81	2.2200	2.500	0.0130	24.68	61.18	0.40	8.23	2.50	1.00	67.00	SURCHARGED
238	441184	Pipe	J42904	J42905	45.56	4646.81	4645.67	2.5000	2.500	0.0130	24.69	64.88	0.38	6.43	2.50	1.00	71.00	SURCHARGED
239	441185	Pipe	J42905	J42906	118.84	4645.67	4644.64	0.8700	2.500	0.0130	24.69	38.19	0.65	6.19	2.50	1.00	72.00	SURCHARGED
240	441186	Pipe	J42906	J42907	87.78	4644.64	4643.68	1.0900	2.500	0.0130	24.68	42.89	0.58	6.94	2.50	1.00	73.00	SURCHARGED
241	441187	Pipe	J42907	J42908	106.21	4643.68	4642.03	1.5500	2.500	0.0130	24.69	51.12	0.48	8.45	2.50	1.00	73.00	SURCHARGED
242	441193	Pipe	J42908	J42891	209.09	4642.03	4638.52	1.6800	2.500	0.0130	24.69	53.14	0.46	7.83	2.50	1.00	75.00	SURCHARGED
243	441211	Pipe	J441211-0	J441211-1	199.60	4626.54	4625.16	0.6900	2.500	0.0130	57.93	34.11	1.70	11.82	2.50	1.00	92.00	SURCHARGED
244	441212	Pipe	J42887	J441211-0	235.01	4628.69	4626.54	0.9100	2.500	0.0130	57.93	39.23	1.48	11.80	2.50	1.00	87.00	SURCHARGED
245	441262	Pipe	J421018	J421017	47.33	4608.21	4605.36	6.0200	1.500	0.0130	12.88	25.78	0.50	8.16	1.50	1.00	38.00	SURCHARGED
246	441263	Pipe	J421019	J421018	99.23	4610.44	4608.21	2.2500	1.500	0.0130	12.99	15.75	0.82	8.56	1.50	1.00	36.00	SURCHARGED
247	441294	Pipe	J42992	J42993	232.54	4570.69	4569.84	0.3700	1.500	0.0130	10.02	6.35	1.58	5.67	1.50	1.00	97.00	SURCHARGED
248	441307	Pipe	J42998	J42454	137.51	4568.05	4568.24	-0.1400	1.500	0.0130	11.80	3.90	3.02	8.72	1.10	0.83	0.00	> CAPACITY
249	441317	Pipe	J441317-0	J42958	74.75	4717.08	4715.39	2.2600	1.250	0.0130	7.85	9.71	0.81	6.50	1.19	0.96	0.00	Calculated
250	441318	Pipe	J42958	J42959	46.91	4715.39	4715.17	0.4700	2.000	0.0130	7.85	15.49	0.51	4.33	1.12	0.56	0.00	Calculated
251	441350	Pipe	J42461	J441024-1	287.92	4579.30	4576.75	0.8900	1.500	0.0130	14.39	9.89	1.46	8.14	1.50	1.00	44.00	SURCHARGED
252	441371	Pipe	J42462	J42461	52.39	4581.42	4579.30	4.0500	1.500	0.0130	14.39	21.13	0.68	8.15	1.50	1.00	33.00	SURCHARGED
253	441436	Pipe	J42494	J42540	331.86	4599.72	4597.65	0.6200	2.500	0.0130	76.85	32.39	2.37	15.69	2.47	0.99	0.00	> CAPACITY
254	441437	Pipe	J42495	J42494	61.65	4603.33	4599.72	5.8600	2.500	0.0130	76.85	99.26	0.77	15.66	2.50	1.00	48.00	SURCHARGED
255	441438	Pipe	J42496	J42495	116.23	4612.58	4603.33	7.9600	2.500	0.0130	84.58	115.71	0.73	17.23	2.50	1.00	35.00	SURCHARGED
256	441439	Pipe	J42497	J42496	257.91	4632.36	4612.58	7.6700	2.500	0.0130	84.58	113.59	0.74	19.10	2.50	1.00	30.00	SURCHARGED
257	441440	Pipe	J42498	J42497	109.73	4640.79	4632.36	7.6800	2.500	0.0130	84.58	113.69	0.74	18.94	2.50	1.00	29.00	SURCHARGED
258	441441	Pipe	J42499	J42498	122.16	4650.81	4640.79	8.2000	2.500	0.0130	84.58	117.47	0.72	18.24	2.50	1.00	28.00	SURCHARGED
259	441443	Pipe	J42500	J42499	33.63	4652.77	4650.81	5.8300	2.500	0.0130	92.02	99.02	0.93	19.48	2.50	1.00	28.00	SURCHARGED
260	441444	Pipe	J42516	J42500	164.63	4653.02	4652.77	0.1500	4.000	0.0130	91.72	55.98	1.64	7.30	4.00	1.00	32.00	SURCHARGED
261	441445	Pipe	J42517	J42516	91.66	4655.67	4653.02	2.8900	4.000	0.0130	90.96	244.24	0.37	7.24	4.00	1.00	29.00	SURCHARGED
262	441446	Pipe	J42518	J42517	74.23	4656.94	4655.67	1.7100	4.000	0.0130	89.60	187.89	0.48	9.65	4.00	1.00	28.00	SURCHARGED
263	441447	Pipe	J42519	J42518	46.59	4658.11	4656.94	2.5100	4.000	0.0130	89.40	227.63	0.39	8.36	4.00	1.00	27.00	SURCHARGED
264	441448	Pipe	J42520	J42519	297.76	4669.61	4658.11	3.8600	4.000	0.0130	94.42	282.29	0.33	11.78	4.00	1.00	18.00	SURCHARGED
265	441449	Pipe	J42521	J42520	190.79	4670.25	4669.61	0.3400	4.000	0.0130	97.29	83.20	1.17	10.64	4.00	1.00	18.00	SURCHARGED
266	441450	Pipe	J42522	J42521	68.15	4670.60	4670.25	0.5100	4.000	0.0130	96.57	102.94	0.94	7.74	4.00	1.00	20.00	SURCHARGED
267	441451	Pipe	J42523	J42522	279.34	4671.79	4670.60	0.4300	4.000	0.0130	96.60	93.75	1.03	7.69	4.00	1.00	24.00	SURCHARGED
268	441453	Pipe	J42526	J42525	299.59	4673.18	4672.21	0.3200	4.000	0.0130	96.60	81.73	1.18	7.69	4.00	1.00	29.00	SURCHARGED
269	441454	Pipe	J42525	J42523	179.56	4672.21	4671.79	0.2300	4.000	0.0130	96.60	69.47	1.39	7.69	4.00	1.00	25.00	SURCHARGED
270	441455	Pipe	J42528	J42527	87.75	4678.70	4674.07	5.2800	3.000	0.0130	96.63	153.21	0.63	13.67	3.00	1.00	28.00	SURCHARGED
271	441456	Pipe	J42527	J42526	8.33	4674.07	4673.18	10.6800	3.000	0.0130	96.63	218.02	0.44	13.67	3.00	1.00	37.00	SURCHARGED
272	441457	Pipe	J42529	J42528	156.08	4680.22	4678.70	0.9700	4.000	0.0130	96.63	141.75	0.68	9.23	4.00	1.00	22.00	SURCHARGED
273	441458	Pipe	J42530	J42529	407.26	4692.15	4680.22	2.9300	4.000	0.0130	96.95	245.85	0.39	11.16	4.00	1.00	5.00	SURCHARGED
274	441557	Pipe	J441557-0	J42532	17.99	4693.78	4693.66	0.6700	4.000	0.0130	23.68	117.32	0.20	4.29	4.00	1.00	20.00	SURCHARGED
275	441560	Pipe	J441560-0	J42533	361.92	4696.87	4695.91	0.2700	2.000	0.0130	22.25	11.65	1.91	8.88	2.00	1.00	18.00	SURCHARGED
276	441565	Pipe	J441560-0	SN-Weath	49.88	4696.87	4702.20	-10.6900	4.000	0.0130	1.67	469.55	0.00	0.25	2.13	0.53	0.00	Calculated
277	441566	Pipe	J441565-1	J441557-0	177.41	4693.98	4693.78	0.1100	4.000	0.0130	23.68	48.23	0.49	3.63	4.00	1.00	18.00	SURCHARGED
278	441570	Pipe	J42117	J42788	228.57	4597.20	4596.35	0.3700	2.500	0.0130	20.53	25.01	0.82	7.09	1.32	0.65	0.00	Calculated
279	441571	Pipe	J42788	J42813	97.62	4596.35	4595.72	0.6500	2.500	0.0130	59.16	32.95	1.80	12.05	1.82	1.00	1.00	SURCHARGED
280	441585	Pipe	J42809	J42808	104.07	4594.91	4594.64	0.2600	4.000	0.0130	15.34	73.17	0.21	3.82	2.54	0.63	0.00	Calculated
281	441586	Pipe	J42808	JUL130.08-1	194.26	4594.64	4594.64	0.0000	4.000	0.0130	14.39	3.26	4.41	6.13	1.37	0.34	0.00	> CAPACITY
282	441587	Pipe	J42810	J42809	321.57	4595.00	4594.91	0.0300	4.000	0.0130	22.80	24.03	0.95	5.09	2.31	0.60	0.00	Calculated
283	441588	Pipe	J42811	J42810	269.27	4595.04	4595.00	0.0100	4.000	0.0130	42.76	17.51	2.44	6.63	2.27	0.57	0.00	> CAPACITY
284	441589	Pipe	J42812	J42811	58.60	4595.09	4595.04	0.0900	4.000	0.0130	87.95	41.96	2.10	11.59	2.41	0.77	0.00	> CAPACITY
285	441590	Pipe	J42813	J42814	380.67	4595.72	4595.42	0.0800	4.000	0.0130	9.13	40.32	0.23	2.20	2.19	1.00	1.00	SURCHARGED

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
286	441591	Pipe	J42814	J42815	168.72	4595.42	4595.33	0.0500	4.000	0.0130	94.66	33.18	2.85	7.53	2.35	1.00	1.00	SURCHARGED
287	441592	Pipe	J42815	J42816	117.51	4595.33	4595.25	0.0700	4.000	0.0130	215.19	37.48	5.74	34.25	2.36	1.00	0.00	> CAPACITY
288	441593	Pipe	J42816	J42812	134.40	4595.25	4595.09	0.1200	4.000	0.0130	117.85	49.56	2.38	9.90	2.38	0.96	0.00	> CAPACITY
289	441594	Pipe	J4429-0	J42821	64.51	4621.41	4619.88	2.3700	2.000	0.0130	35.82	34.84	1.03	11.40	0.89	1.00	1.00	SURCHARGED
290	441595	Pipe	J42821	J42885	108.21	4619.88	4616.20	3.4000	2.000	0.0130	91.71	41.72	2.20	50.00	0.81	0.50	0.00	> CAPACITY
291	441597	Pipe	J441657-1	J42822	19.11	4638.41	4638.15	1.3600	2.500	0.0130	146.75	47.84	3.07	50.00	2.50	1.00	319.00	SURCHARGED
292	441603	Pipe	J42825	J42824	44.10	4650.38	4645.94	10.0700	2.500	0.0130	647.24	130.15	4.97	50.00	2.50	1.00	259.00	SURCHARGED
293	441605	Pipe	J42827	J42826	31.09	4667.96	4666.54	4.5700	2.500	0.0130	43.80	87.66	0.50	8.92	2.50	1.00	109.00	SURCHARGED
294	441606	Pipe	J42833	J42747	161.30	4716.01	4704.88	6.9000	2.000	0.0130	39.93	59.42	0.67	12.71	2.00	1.00	157.00	SURCHARGED
295	441607	Pipe	J42834	J42833	156.83	4723.25	4716.01	4.6200	2.000	0.0130	39.93	48.61	0.82	14.44	2.00	1.00	143.00	SURCHARGED
296	441608	Pipe	J42745	J42836	40.48	4755.35	4753.59	4.3500	2.000	0.0130	40.21	47.17	0.85	13.20	2.00	1.00	79.00	SURCHARGED
297	441609	Pipe	J42836	J42835	277.79	4753.59	4742.72	3.9100	2.000	0.0130	40.22	44.75	0.90	14.76	2.00	1.00	79.00	SURCHARGED
298	441633	Pipe	J42853	J42854	236.14	4666.81	4651.03	6.6800	2.000	0.0130	35.25	58.48	0.60	13.54	2.00	1.00	119.00	SURCHARGED
299	441634	Pipe	J42854	J42824	60.06	4651.03	4645.94	8.4700	2.000	0.0130	35.26	65.86	0.54	11.22	2.00	1.00	265.00	SURCHARGED
300	441635	Pipe	J42855	J42853	252.34	4668.88	4666.81	0.8200	2.000	0.0130	34.79	20.49	1.70	11.12	2.00	1.00	119.00	SURCHARGED
301	441636	Pipe	J42856	J42855	27.89	4669.95	4668.88	3.8400	2.000	0.0130	34.79	44.31	0.79	11.07	2.00	1.00	254.00	SURCHARGED
302	441637	Pipe	J42857	J42856	163.85	4678.77	4669.95	5.3800	2.000	0.0130	38.89	52.49	0.74	12.38	2.00	1.00	215.00	SURCHARGED
303	441638	Pipe	J42858	J42857	294.07	4696.01	4678.77	5.8600	2.000	0.0130	38.89	54.77	0.71	15.27	1.79	0.90	0.00	Calculated
304	441639	Pipe	J42748	J42859	132.27	4703.71	4700.55	2.3900	2.000	0.0130	38.89	34.97	1.11	12.38	2.00	1.00	185.00	SURCHARGED
305	441640	Pipe	J42859	J42858	121.62	4700.55	4696.01	3.7300	2.000	0.0130	38.89	43.71	0.89	13.12	1.79	0.90	0.00	Calculated
306	441658	Pipe	J441657-0	J441657-1	3.67	4638.51	4638.41	2.7200	2.500	0.0130	5107.27	67.71	75.43	50.00	2.50	1.00	319.00	SURCHARGED
307	441662	Pipe	J441660-0	J441657-0	278.01	4645.74	4638.61	2.5600	2.500	0.0130	95.00	65.69	1.45	38.71	2.50	1.00	308.00	SURCHARGED
308	441663	Pipe	J42822	J441664-0	5.07	4638.15	4637.98	3.3500	2.500	0.0130	2306.82	75.11	30.71	50.00	2.50	1.00	320.00	SURCHARGED
309	441664	Pipe	J441664-0	J441666-1	66.47	4637.98	4628.74	13.9000	2.500	0.0130	81.42	152.93	0.53	16.59	2.50	1.00	321.00	SURCHARGED
310	441667	Pipe	J42826	J441667-1	4.95	4666.54	4666.38	3.2300	2.500	0.0130	43.83	41.22	1.06	10.39	2.01	0.80	0.00	> CAPACITY
311	441668	Pipe	J441667-1	J42825	280.28	4666.34	4650.38	5.6900	2.500	0.0130	43.79	98.64	0.44	10.47	2.01	0.80	0.00	Calculated
312	441671	Pipe	J42828	J42827	146.81	4674.06	4667.96	4.1600	2.000	0.0130	43.79	46.11	0.95	13.94	2.00	1.00	109.00	SURCHARGED
313	441673	Pipe	J42835	J441673-1	384.26	4742.72	4723.40	5.0300	2.000	0.0130	39.93	50.73	0.79	13.23	2.00	1.00	87.00	SURCHARGED
314	441674	Pipe	J441673-1	J42834	6.19	4723.40	4723.25	2.4200	2.000	0.0130	39.93	35.22	1.13	12.71	2.00	1.00	143.00	SURCHARGED
315	441684	Pipe	J42959	J42960	297.62	4715.17	4699.92	5.1200	1.500	0.0130	7.85	23.78	0.33	11.13	0.63	0.42	0.00	Calculated
316	441685	Pipe	J42960	J42961	367.15	4699.92	4683.98	4.3400	1.500	0.0130	7.85	21.89	0.36	11.20	0.63	0.42	0.00	Calculated
317	441686	Pipe	J42961	J42962	226.40	4683.98	4673.12	4.8000	1.500	0.0130	7.85	23.01	0.34	10.64	1.05	0.70	0.00	Calculated
318	441687	Pipe	J42962	J42963	213.27	4673.12	4662.65	4.9100	1.500	0.0130	7.85	23.27	0.34	9.37	1.50	1.00	60.00	SURCHARGED
319	441688	Pipe	J42963	J42964	59.90	4662.65	4660.16	4.1600	1.500	0.0130	7.80	21.42	0.36	4.41	1.50	1.00	90.00	SURCHARGED
320	441689	Pipe	J42964	J42901	270.51	4660.16	4655.25	1.8200	1.500	0.0130	23.33	14.15	1.65	13.23	1.50	1.00	66.00	SURCHARGED
321	441719	Pipe	J4262	J4249	49.27	4523.56	4522.92	1.3000	3.000	0.0130	49.91	76.02	0.66	7.06	3.00	1.00	81.00	SURCHARGED
322	441720	Pipe	J4263	J4262	227.17	4524.03	4523.56	0.2100	3.000	0.0130	49.91	30.34	1.65	7.06	3.00	1.00	81.00	SURCHARGED
323	441721	Pipe	J4264	J4263	266.50	4524.56	4524.03	0.2000	3.000	0.0130	49.90	29.74	1.68	7.06	3.00	1.00	103.00	SURCHARGED
324	441722	Pipe	J4265	J4264	28.63	4524.66	4524.56	0.3500	3.000	0.0130	49.91	39.42	1.27	7.06	3.00	1.00	132.00	SURCHARGED
325	441723	Pipe	J4267	J4265	345.00	4526.93	4524.66	0.6600	3.000	0.0130	49.90	54.10	0.92	7.06	3.00	1.00	81.00	SURCHARGED
326	441727	Pipe	J0041-1	J4272	222.91	4550.28	4547.81	1.1100	2.000	0.0130	10.74	23.81	0.45	5.74	1.18	0.59	0.00	Calculated
327	441731	Pipe	J4272	J4278	77.90	4547.81	4547.22	0.7600	2.000	0.0130	10.74	19.69	0.55	5.65	1.31	0.65	0.00	Calculated
328	441732	Pipe	J4278	J0038-0	286.26	4547.22	4544.91	0.8100	2.000	0.0130	10.93	20.32	0.54	8.59	1.52	0.76	0.00	Calculated
329	441739	Pipe	J0052-1	J4287	328.89	4571.48	4566.95	1.3800	1.250	0.0130	10.70	7.58	1.41	9.09	1.15	0.92	0.00	> CAPACITY
330	441740	Pipe	J4287	J4288	119.03	4566.95	4565.39	1.3100	2.000	0.0130	10.70	25.90	0.41	7.06	0.97	0.49	0.00	Calculated
331	441759	Pipe	J441759-0	J42886	97.57	4508.14	4502.98	5.2900	1.250	0.0130	18.36	14.86	1.24	14.96	1.25	1.00	155.00	SURCHARGED
332	441760	Pipe	J42886	J42893	400.51	4502.98	4496.93	1.5100	1.250	0.0130	10.18	7.94	1.28	8.30	1.25	1.00	178.00	SURCHARGED
333	441761	Pipe	J42893	J441761-1	341.41	4496.93	4491.44	1.6100	1.250	0.0130	10.18	8.19	1.24	8.30	1.25	1.00	164.00	SURCHARGED
334	441792	Pipe	J421016	J421015	310.72	4601.71	4596.75	1.6000	1.500	0.0130	12.63	13.27	0.95	7.83	1.50	1.00	39.00	SURCHARGED
335	441802	Pipe	J4288	J0054-1	270.73	4565.39	4561.20	1.5500	2.000	0.0130	10.72	28.14	0.38	6.68	1.03	0.51	0.00	Calculated
336	441814	Pipe	J441814-0	J4289	333.41	4543.78	4539.19	1.3800	3.000	0.0130	65.12	78.26	0.83	11.21	3.00	1.00	13.00	SURCHARGED
337	441822	Pipe	J42364	J42358	138.70	4621.30	4617.19	2.9600	2.000	0.0130	39.44	38.94	1.01	14.24	1.64	0.83	0.00	> CAPACITY
338	441823	Pipe	J441823.0	J42364	395.77	4636.38	4621.30	3.8100	2.000	0.0130	39.44	44.16	0.89	12.55	1.99	1.00	5.00	SURCHARGED
339	441855	Pipe	J42421	J42346	162.42	4747.96	4747.50	0.2800	2.000	0.0130	7.76	12.04	0.64	6.26	0.83	0.42	0.00	Calculated
340	441866	Pipe	J4224	J42797	406.18	4534.11	4520.54	3.3400	2.500	0.0130	11.93	74.97	0.16	10.84	0.69	0.28	0.00	Calculated
341	441867	Pipe	J4225	J4224	292.92	4537.26	4534.11	1.0800	2.500	0.0130	12.06	42.53	0.28	8.10	0.85	0.34	0.00	Calculated
342	441868	Pipe	J4226	J4225	171.06	4539.66	4537.26	1.4000	2.500	0.0130	11.98	48.58	0.25	6.79	0.98	0.39	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
343	441869	Pipe	J4236	J4226	170.49	4546.45	4539.66	3.9800	2.500	0.0130	11.91	81.86	0.15	8.93	0.79	0.32	0.00	Calculated
344	441870	Pipe	J42363	J4237	89.89	4588.99	4580.68	9.2400	2.500	0.0130	12.04	124.71	0.10	14.30	0.58	0.23	0.00	Calculated
345	441871	Pipe	J4237	J4236	581.40	4580.68	4546.45	5.8900	2.500	0.0130	11.97	99.52	0.12	12.95	0.62	0.25	0.00	Calculated
346	441895	Pipe	J42451	J42450	386.84	4552.23	4546.90	1.3800	4.500	0.0130	65.20	230.83	0.28	5.51	4.50	1.00	179.00	SURCHARGED
347	441896	Pipe	J42452	J42451	491.52	4557.88	4552.23	1.1500	4.500	0.0130	65.19	210.84	0.31	7.79	4.50	1.00	106.00	SURCHARGED
348	441897	Pipe	J42453	J42452	244.03	4559.93	4557.88	0.8400	4.500	0.0130	65.20	180.24	0.36	6.93	4.50	1.00	6.00	SURCHARGED
349	441900	Pipe	J42454	J42453	67.11	4568.24	4559.93	12.3800	1.500	0.0130	14.21	36.96	0.38	13.71	1.10	0.83	0.00	Calculated
350	441901	Pipe	J42997	J42998	38.08	4568.40	4568.05	0.9200	1.500	0.0130	11.81	10.07	1.17	6.68	1.50	1.00	107.00	SURCHARGED
351	441902	Pipe	J42993	J42997	392.75	4569.84	4568.40	0.3700	1.500	0.0130	11.81	6.36	1.86	6.68	1.50	1.00	101.00	SURCHARGED
352	441905	Pipe	J42357	J441823.0	776.30	4670.80	4636.38	4.4300	2.000	0.0130	39.71	47.64	0.83	15.58	1.66	0.85	0.00	Calculated
353	Link-71	Pipe	J0075-1	J421012	780.87	4605.98	4582.55	3.0000	1.500	0.0150	16.74	15.77	1.06	9.68	1.50	1.00	86.00	SURCHARGED
354	Link-72	Pipe	Jun-38	J42453	1672.81	4605.00	4559.93	2.6900	1.500	0.0150	0.00	14.94	0.00	0.00	0.75	0.50	0.00	Calculated
355	Link-73	Pipe	Jun-39	Jun-38	803.94	4618.00	4605.00	1.6200	1.500	0.0150	0.00	11.58	0.00	0.00	0.00	0.00	0.00	Calculated
356	Link-74	Pipe	Jun-40	Jun-39	1360.74	4653.50	4618.00	2.6100	1.500	0.0150	0.00	14.70	0.00	0.00	0.00	0.00	0.00	Calculated
357	Link-75	Pipe	J42117	J42224	1856.23	4597.20	4532.48	3.4900	2.500	0.0150	28.05	66.38	0.42	15.52	1.64	0.66	0.00	Calculated
358	Link-77	Pipe	JUL121.06-1	Jun-41	74.00	4898.50	4885.93	16.9900	3.000	0.0130	0.00	274.90	0.00	0.00	0.00	0.00	0.00	Calculated
359	Link-78	Pipe	JUL121.06-1	Jun-41	64.00	4894.50	4892.60	2.9700	3.000	0.0130	12.43	114.92	0.11	9.05	0.75	0.25	0.00	Calculated
360	Link-79	Pipe	JUL121.06-1	Jun-41	91.46	4894.50	4885.12	10.2600	3.000	0.0130	24.77	213.60	0.12	17.63	0.76	0.25	0.00	Calculated
361	0014	Channel	J44269-1	SN-Still	357.60	4720.40	4729.07	-2.4200	10.000	0.0320	38.75	6744.41	0.01	4.24	6.97	0.70	0.00	
362	0015	Channel	J0015-0	J0015-1	3969.77	4541.32	4502.62	0.9700	10.000	0.0320	448.93	4276.67	0.10	4.33	5.20	0.52	0.00	
363	0016	Channel	J0016-0	J0016-1	3955.22	4541.17	4503.66	0.9500	10.000	0.0320	454.90	4218.14	0.11	4.99	4.78	0.48	0.00	
364	0039	Channel	J0038-0	J42108	81.65	4544.91	4543.78	1.3800	10.000	0.0320	14.12	4340.72	0.00	2.00	2.79	0.28	0.00	
365	0096	Channel	J0085-1	J0089-0	387.83	4534.04	4534.04	0.0000	10.000	0.0320	11.15	69.55	0.16	0.99	4.31	0.43	0.00	
366	0097	Channel	J0089-1	J0090-0	81.84	4533.24	4532.64	0.7300	10.000	0.0320	10.59	3708.74	0.00	1.15	3.16	0.32	0.00	
367	0098	Channel	J0090-1	J0091-0	436.63	4531.38	4526.22	1.1800	10.000	0.0320	10.58	4708.70	0.00	2.14	2.32	0.23	0.00	
368	0099	Channel	J0091-1	J0095-0	79.30	4525.26	4523.29	2.4800	10.000	0.0320	23.53	6075.17	0.00	1.49	2.20	0.22	0.00	
369	0100	Channel	J0095-1	J0094-0	64.36	4522.22	4522.00	0.3400	10.000	0.0320	23.18	2532.42	0.01	0.81	2.41	0.24	0.00	
370	0101	Channel	J0094-1	J0101-1	20.10	4520.37	4518.67	8.4600	10.000	0.0320	23.16	12596.78	0.00	3.22	0.64	0.06	0.00	
371	0103	Channel	J0101-1	J0103-1	1271.76	4518.67	4506.29	0.9700	5.000	0.0320	23.13	673.04	0.03	3.95	0.98	0.20	0.00	
372	0104	Channel	J0103-1	J0104-1	970.47	4506.29	4501.97	0.4500	10.000	0.0320	22.66	2889.91	0.01	2.51	0.78	0.08	0.00	
373	0105	Channel	J4466-1	J0105-1	59.98	4520.95	4519.09	3.1000	10.000	0.0320	49.89	7627.57	0.01	5.70	0.76	0.08	0.00	
374	0108	Channel	J0073-1	J0108-1	429.88	4605.36	4586.74	4.3300	10.000	0.0320	27.65	9014.66	0.00	2.10	4.99	0.50	0.00	
375	0110	Channel	J0109-1	J0110-1	57.37	4586.99	4585.43	2.7200	10.000	0.0320	13.11	7142.54	0.00	0.63	7.77	0.78	0.00	
376	0162	Channel	JPR050.01-1	Out-18	386.14	4719.05	4497.00	57.5100	10.000	0.0320	99.61	32846.27	0.00	19.61	0.46	0.05	0.00	
377	0163	Channel	JUL130.06-1	JUL130.04-0	345.73	4582.55	4581.26	0.3700	10.000	0.0320	36.62	2645.81	0.01	2.85	1.06	0.11	0.00	
378	0174	Channel	JUL080.04-0	SN-Vill	66.45	4595.90	4587.40	12.7900	10.000	0.0320	30.51	15491.55	0.00	2.51	2.15	0.22	0.00	
379	0175	Channel	JUL121.02-0	J441560-0	79.84	4698.77	4696.87	2.3800	10.000	0.0320	44.19	6681.89	0.01	1.24	4.65	0.46	0.00	
380	0177	Channel	J42832	J42831	20.85	4695.82	4695.54	1.3400	10.000	0.0320	43.98	5019.48	0.01	2.65	5.84	0.59	0.00	
381	0178	Channel	J42108	J441814-0	4.47	4544.09	4543.78	6.9400	10.000	0.0320	65.34	11406.70	0.01	1.95	3.35	0.34	0.00	
382	44325	Channel	JUL130.02-1	J44325-1	79.93	4505.04	4502.46	3.2300	10.000	0.0320	8.29	7781.94	0.00	3.14	0.25	0.03	0.00	
383	44373	Channel	J44373-0	JUL152.04-0	68.63	4554.50	4554.21	0.4200	10.000	0.0320	12.67	2815.63	0.00	1.77	0.64	0.06	0.00	
384	44603	Channel	JUL080.08-0	JUL080.06-1	20.32	4695.94	4695.33	3.0000	10.000	0.0320	44.74	9216.48	0.00	6.08	0.65	0.07	0.00	
385	JR060.01	Channel	JJR060.01-0	JJR060.01-1	1048.40	4586.22	4562.00	2.3100	10.000	0.0320	79.41	6583.50	0.01	3.37	5.50	0.55	0.00	
386	JR060.02	Channel	JJR060.02-0	JJR060.02-1	911.67	4611.44	4586.88	2.6900	10.000	0.0320	128.84	7109.32	0.02	2.56	5.64	0.56	0.00	
387	JR062.01	Channel	JJR062.01-0	JJR062.01-1	1344.14	4648.54	4611.92	2.7200	10.000	0.0320	44.18	7149.41	0.01	2.58	3.60	0.36	0.00	
388	JR062.02	Channel	JJR062.02-0	JJR062.02-1	987.43	4674.27	4648.89	2.5700	10.000	0.0320	44.51	6944.25	0.01	2.39	3.31	0.33	0.00	
389	JR062.03	Channel	JJR062.03-0	JJR062.03-1	1361.74	4689.20	4676.73	0.9200	10.000	0.0320	143.27	4144.95	0.03	2.59	5.94	0.59	0.00	
390	JR062.04	Channel	JJR062.04-0	JJR062.04-1	7402.92	4902.18	4697.75	2.7600	10.000	0.0320	155.98	7197.87	0.02	7.51	2.33	0.23	0.00	
391	JR062.05	Channel	JJR062.06-1	JJR062.04-0	507.42	4937.75	4902.18	7.0100	10.000	0.0320	157.49	11468.09	0.01	9.90	1.28	0.13	0.00	
392	JR062.06	Channel	JJR062.07-1	JJR062.06-1	549.26	4947.36	4937.75	1.7500	10.000	0.0320	157.50	5729.35	0.03	8.42	1.45	0.15	0.00	
393	JR062.07	Channel	JJR062.08-1	JJR062.07-1	1068.20	5009.12	4947.36	5.7800	10.000	0.0320	157.57	10415.03	0.02	8.21	1.48	0.15	0.00	
394	JR062.08	Channel	JJR062.09-1	JJR062.08-1	660.91	5034.61	5009.12	3.8600	10.000	0.0320	157.60	8506.42	0.02	9.84	1.28	0.13	0.00	
395	JR062.09	Channel	JJR062.10-1	JJR062.09-1	2215.65	5120.19	5034.61	3.8600	10.000	0.0320	157.72	8512.72	0.02	9.22	1.35	0.13	0.00	
396	JR062.10	Channel	JJR062.11-1	JJR062.10-1	2767.82	5271.65	5120.19	5.4700	10.000	0.0320	158.12	10132.42	0.02	10.04	1.26	0.13	0.00	
397	JR062.11	Channel	JJR062.11-0	JJR062.11-1	6696.13	6211.15	5271.65	14.0300	10.000	0.0320	159.30	16224.43	0.01	12.50	1.06	0.11	0.00	
398	Link-76	Channel	Jun-41	JUL121.02-0	2569.28	4832.00	4698.77	5.1900	10.000	0.0320	37.17	11503.83	0.00	5.16	2.04	0.20	0.00	
399	PR050.01	Channel	JPR050.02-1	JPR050.01-1	3000.19	4835.97	4719.05	3.9000	10.000	0.0320	99.61	8550.73	0.01	8.14	1.02	0.10	0.00	

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
400	PR050.02	Channel	JPR050.02-0	JPR050.02-1	13760.75	6210.37	4835.97	9.9900	10.000	0.0320	106.14	13688.90	0.01	10.76	0.90	0.09	0.00	
401	PR060.02	Channel	JPR060.02-0	JPR060.02-1	3171.45	4898.95	4727.73	5.4000	10.000	0.0320	73.58	10064.25	0.01	8.21	0.77	0.08	0.00	
402	PR060.04	Channel	JPR060.06-1	JPR060.02-0	2063.87	5052.04	4898.95	7.4200	10.000	0.0320	74.20	11796.83	0.01	8.75	0.74	0.07	0.00	
403	PR060.06	Channel	JPR060.06-0	JPR060.06-1	3701.21	5389.84	5052.04	9.1300	10.000	0.0320	74.84	13085.52	0.01	9.57	0.69	0.07	0.00	
404	TG010.01	Channel	JTG010.03-1	JTG010.01-1	477.87	4501.58	4500.00	0.3300	10.000	0.0320	894.14	2490.62	0.36	6.04	6.46	0.65	0.00	
405	TG010.02	Channel	JTG010.02-0	JTG010.03-1	61.15	4502.15	4501.58	0.9300	10.000	0.0320	450.42	4181.89	0.11	3.03	6.48	0.65	0.00	
406	TG010.03	Channel	JTG010.03-0	JTG010.03-1	38.61	4501.85	4501.58	0.7000	10.000	0.0320	443.78	3622.14	0.12	2.88	6.63	0.66	0.00	
407	TG010.04	Channel	JTG010.04-0	JTG010.05-0	4500.00	4544.31	4542.60	0.0400	10.000	0.0320	904.91	4426.18	0.20	9.82	4.73	0.47	0.00	
408	TG010.05	Channel	JTG010.05-0	JTG020.01-1	4907.03	4591.30	4652.00	-1.2400	10.000	0.0320	914.32	4817.46	0.19	10.14	4.68	0.47	0.00	
409	TG010.07	Channel	JTG020.01-1	JTG070.01-1	320.00	4652.00	4652.71	-0.2200	10.000	0.0320	905.00	2040.27	0.44	7.61	5.61	0.56	0.00	
410	TG010.08	Channel	JTG070.01-1	JTG010.08-1	1368.67	4652.71	4669.46	-1.2200	10.000	0.0320	879.68	4791.72	0.18	7.48	5.57	0.56	0.00	
411	TG020.01	Channel	JTG020.02-1	JTG020.01-1	3032.22	4708.14	4652.00	1.8500	10.000	0.0320	39.16	5893.71	0.01	1.80	2.45	0.25	0.00	
412	TG020.02	Channel	JTG020.02-0	JTG020.02-1	12794.68	5929.34	4708.14	9.5400	10.000	0.0320	39.45	13381.71	0.00	6.72	0.59	0.06	0.00	
413	TG030.02	Channel	JTG030.05-1	JTG010.05-0	3085.88	4619.53	4591.30	0.9100	10.000	0.0320	31.53	4142.85	0.01	3.23	2.46	0.25	0.00	
414	TG030.05	Channel	JTG030.05-0	JTG030.05-1	3079.84	4693.33	4619.53	2.4000	10.000	0.0320	36.16	6704.97	0.01	5.32	0.70	0.07	0.00	
415	TG040.01	Channel	JTG040.0-0	JTG030.05-0	5331.64	4959.53	4693.33	4.9900	10.000	0.0320	32.06	9687.01	0.00	5.98	0.56	0.06	0.00	
416	TG060.01	Channel	JTG060.01-0	JTG010.08-1	80241.22	6956.00	4669.46	2.8500	10.000	0.0320	893.36	7311.79	0.12	13.36	4.07	0.41	0.00	
417	TG070.01	Channel	JTG070.02-1	JTG070.01-1	5099.54	4735.62	4652.71	1.6300	10.000	0.0320	179.36	5522.95	0.03	4.91	3.65	0.36	0.00	
418	TG070.02	Channel	JTG070.03-1	JTG070.02-1	14437.34	5142.62	4735.62	2.8200	10.000	0.0320	161.47	7272.55	0.02	7.45	1.64	0.16	0.00	
419	TG070.03	Channel	JTG070.03-0	JTG070.03-1	1132.21	5370.36	5142.62	20.1100	10.000	0.0320	0.00	19426.26	0.00	0.00	0.73	0.07	0.00	
420	UL010.02	Channel	JUL010.04-1	JUL010.02-1	602.83	4495.70	4491.00	0.7800	10.000	0.0320	136.86	3824.59	0.04	5.08	1.94	0.19	0.00	
421	UL010.04	Channel	JUL010.04-0	JUL010.04-1	2983.35	4614.13	4495.70	3.9700	10.000	0.0320	138.36	8630.02	0.02	6.68	1.59	0.16	0.00	
422	UL010.06	Channel	JUL010.08-0	JUL010.04-0	1243.78	4675.67	4614.13	4.9500	10.000	0.0320	138.93	9634.74	0.01	9.53	1.18	0.12	0.00	
423	UL010.08	Channel	JUL010.10-1	JUL010.08-0	2580.17	4812.10	4675.67	5.2900	10.000	0.0320	139.32	9960.10	0.01	10.00	1.14	0.11	0.00	
424	UL010.10	Channel	JUL010.10-0	JUL010.10-1	13317.41	5849.45	4812.10	7.7900	10.000	0.0320	132.72	12088.87	0.01	10.68	1.05	0.11	0.00	
425	UL020.02	Channel	JUL020.02-0	JUL020.02-1	5989.43	4865.89	4490.00	6.2800	10.000	0.0320	122.08	10851.02	0.01	10.23	1.00	0.10	0.00	
426	UL020.06	Channel	JUL020.06-0	JUL020.02-0	3258.08	5072.86	4865.89	6.3500	10.000	0.0320	109.67	10917.06	0.01	9.57	0.96	0.10	0.00	
427	UL020.10	Channel	JUL020.10-0	JUL020.06-0	1432.67	5162.24	5072.86	6.2400	10.000	0.0320	12.47	10818.82	0.00	2.95	0.59	0.06	0.00	
428	UL020.12	Channel	JUL020.12-0	JUL020.10-0	2121.66	5346.59	5162.24	8.6900	10.000	0.0320	0.00	12767.82	0.00	0.00	0.13	0.01	0.00	
429	UL024.02	Channel	UL024.02-0	JUL020.06-0	13152.72	7100.00	5072.86	15.4100	10.000	0.0320	106.66	17004.63	0.01	12.98	0.81	0.08	0.00	
430	UL030.02	Channel	JUL030.02-0	JUL030.02-1	1830.00	4580.07	4501.37	4.3000	10.000	0.0320	82.77	8982.45	0.01	7.91	0.89	0.09	0.00	
431	UL030.04	Channel	JUL030.04-0	JUL030.02-0	140.00	4587.21	4580.07	5.1000	10.000	0.0320	82.85	9781.78	0.01	7.95	0.89	0.09	0.00	
432	UL030.06	Channel	JUL030.08-1	JUL030.04-0	758.01	4618.14	4587.21	4.0800	10.000	0.0320	82.84	8749.55	0.01	7.75	0.91	0.09	0.00	
433	UL030.08	Channel	JUL030.12-1	JUL030.08-1	170.70	4623.65	4618.14	3.2300	10.000	0.0320	82.89	7782.01	0.01	7.01	0.99	0.10	0.00	
434	UL030.12	Channel	JUL030.14-1	JUL030.12-1	2350.79	4769.44	4623.65	6.2000	10.000	0.0320	76.50	10786.73	0.01	9.23	0.83	0.08	0.00	
435	UL030.14	Channel	JUL030.14-0	JUL030.14-1	4235.95	5067.12	4769.44	7.0300	10.000	0.0320	77.03	11482.39	0.01	9.39	0.74	0.07	0.00	
436	UL030.16	Channel	JUL030.16-0	JUL030.14-0	1610.07	5222.41	5067.12	9.6400	10.000	0.0320	49.42	13451.86	0.00	8.84	0.62	0.06	0.00	
437	UL031.02	Channel	JUL031.06-1	JUL030.12-1	4234.96	4887.75	4623.65	6.2400	10.000	0.0320	39.03	10816.64	0.00	4.60	0.75	0.08	0.00	
438	UL031.06	Channel	JUL031.10-1	JUL031.06-1	5104.96	5457.22	4887.75	11.1600	10.000	0.0320	40.21	14466.79	0.00	8.39	0.47	0.05	0.00	
439	UL031.10	Channel	JUL031.10-0	JUL031.10-1	6220.95	6622.71	5457.22	18.7300	10.000	0.0320	38.73	18748.17	0.00	9.04	0.40	0.04	0.00	
440	UL033.01	Channel	JUL033.02-1	JUL030.14-0	2500.16	5352.23	5067.12	11.4000	10.000	0.0320	26.66	14627.00	0.00	5.02	0.54	0.05	0.00	
441	UL033.02	Channel	JUL033.02-0	JUL033.02-1	2601.28	5974.93	5352.23	23.9400	10.000	0.0320	27.60	21192.34	0.00	8.79	0.31	0.03	0.00	
442	UL034.02	Channel	JUL034.02-0	JUL030.16-0	2372.15	5708.23	5222.41	20.4800	10.000	0.0320	49.95	19601.97	0.00	9.80	0.47	0.05	0.00	
443	UL040.02	Channel	JUL040.04-1	J42303	470.01	4745.79	4705.22	8.6300	10.000	0.0320	54.06	12725.71	0.00	2.92	5.26	0.53	0.00	
444	UL040.04	Channel	JUL040.06-1	JUL040.04-1	883.85	4763.85	4745.79	2.0400	10.000	0.0320	54.10	6191.60	0.01	6.32	0.74	0.07	0.00	
445	UL040.06	Channel	JUL040.06-0	JUL040.06-1	5048.33	5281.46	4763.85	10.2500	10.000	0.0320	54.68	13869.49	0.00	7.02	0.73	0.07	0.00	
446	UL041.02	Channel	JUL041.04-1	JUL041.02-1	1969.21	4741.62	4627.15	5.8100	10.000	0.0320	3.99	10443.18	0.00	2.37	0.23	0.02	0.00	
447	UL041.04	Channel	JUL041.04-0	JUL041.04-1	4898.40	5183.21	4741.62	9.0100	10.000	0.0320	4.48	13005.15	0.00	3.81	0.13	0.01	0.00	
448	UL045.02	Channel	JUL045.02-0	JUL040.06-0	6044.57	6540.33	5281.46	20.8300	10.000	0.0320	43.84	19767.00	0.00	9.41	0.46	0.05	0.00	
449	UL062.02	Channel	JUL062.02-0	J42421	1781.47	4933.69	4747.96	10.4300	10.000	0.0320	12.61	13985.72	0.00	3.02	0.69	0.07	0.00	
450	UL065.02	Channel	JUL065.02-0	JUL070.14-0	9093.00	6574.33	5261.14	14.4400	10.000	0.0320	29.18	16460.51	0.00	8.04	0.34	0.03	0.00	
451	UL066.02	Channel	JUL066.02-0	JUL070.12-0	5475.30	6216.13	5214.49	18.2900	10.000	0.0320	31.92	18526.14	0.00	8.22	0.37	0.04	0.00	
452	UL070.02	Channel	JUL070.02-0	JUL070.02-1	1259.30	4581.13	4500.32	6.4200	10.000	0.0320	82.17	10972.38	0.01	9.01	0.79	0.08	0.00	
453	UL070.04	Channel	JUL070.04-0	JUL070.04-1	925.09	4647.09	4590.98	6.0700	10.000	0.0320	67.31	10667.46	0.01	4.10	1.31	0.13	0.00	
454	UL070.06	Channel	JUL070.06-0	JUL070.04-0	254.18	4659.93	4647.09	5.0500	10.000	0.0320	60.57	9735.20	0.01	7.40	0.72	0.07	0.00	
455	UL070.08	Channel	JUL070.10-1	JUL070.06-0	1863.40	4779.12	4659.93	6.4000	10.000	0.0320	58.06	10954.68	0.01	7.50	0.68	0.07	0.00	
456	UL070.10	Channel	JUL070.10-0	JUL070.10-1	3565.83	5083.29	4779.12	8.5300	10.000	0.0320	55.47	12650.59	0.00	8.16	0.61	0.06	0.00	

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
457	UL070.12	Channel	JUL070.12-0	JUL070.10-0	1304.35	5214.49	5083.29	10.0600	10.000	0.0320	35.65	13737.35	0.00	7.70	0.48	0.05	0.00	
458	UL070.14	Channel	JUL070.14-0	JUL070.10-0	1606.64	5261.14	5083.29	11.0700	10.000	0.0320	28.04	14411.22	0.00	5.66	0.46	0.05	0.00	
459	UL080.02	Channel	JUL080.02-0	JUL080.02-1	1930.62	4576.48	4493.46	4.3000	10.000	0.0320	34.89	8982.06	0.00	5.88	0.54	0.05	0.00	
460	UL080.04	Channel	JUL080.04-0	JUL080.04-1	714.38	4595.90	4636.02	-5.6200	10.000	0.0320	34.18	10264.76	0.00	7.17	0.44	0.04	0.00	
461	UL080.06	Channel	JUL080.06-1	JUL080.06-0	1080.62	4695.88	4635.30	5.6100	10.000	0.0320	44.71	10255.60	0.00	0.53	5.15	0.51	0.00	
462	UL080.08	Channel	JUL080.08-1	JUL080.08-0	222.77	4711.67	4696.80	6.6800	10.000	0.0320	44.74	11190.77	0.00	6.23	0.64	0.06	0.00	
463	UL080.10	Channel	JUL080.10-0	JUL080.10-1	762.19	4770.94	4717.35	7.0300	10.000	0.0320	35.03	11485.32	0.00	1.96	1.40	0.14	0.00	
464	UL080.12	Channel	JUL080.12-1	JUL080.12-0	1363.90	4878.08	4776.51	7.4500	10.000	0.0320	36.54	11820.19	0.00	3.24	1.58	0.16	0.00	
465	UL080.14	Channel	JUL080.14-0	JUL080.12-1	1685.14	5014.70	4878.08	8.1100	10.000	0.0320	35.73	12333.10	0.00	7.14	0.46	0.05	0.00	
466	UL080.16	Channel	JUL080.16-0	JUL080.14-0	2068.96	5227.63	5014.70	10.2900	10.000	0.0320	35.96	13895.54	0.00	7.63	0.43	0.04	0.00	
467	UL084.02	Channel	JUL084.02-0	JUL080.16-0	6970.30	6213.33	5227.63	14.1400	10.000	0.0320	36.75	16288.45	0.00	8.61	0.40	0.04	0.00	
468	UL100.02	Channel	JUL100.04-1	SN-KitF	173.34	4826.25	4820.40	3.3700	10.000	0.0320	20.89	7957.22	0.00	1.95	1.21	0.12	0.00	
469	UL100.04	Channel	JUL100.04-0	JUL100.04-1	2172.85	5012.74	4826.25	8.5800	10.000	0.0320	21.18	12689.54	0.00	5.47	0.37	0.04	0.00	
470	UL100.06	Channel	JUL100.06-0	JUL100.04-0	2084.50	5193.10	5012.74	8.6500	10.000	0.0320	21.58	12740.96	0.00	6.31	0.32	0.03	0.00	
471	UL120.02	Channel	JUL120.02-0	JUL120.02-1	57.03	4505.93	4504.59	2.3500	10.000	0.0320	91.86	6639.47	0.01	6.21	1.19	0.12	0.00	
472	UL120.04	Channel	JUL120.04-0	JUL120.04-1	925.41	4541.49	4511.73	3.2200	10.000	0.0320	91.86	7767.52	0.01	7.41	1.03	0.10	0.00	
473	UL120.06	Channel	JUL120.06-0	JUL120.06-1	1129.14	4574.18	4541.09	2.9300	10.000	0.0320	91.99	7414.94	0.01	5.08	1.49	0.15	0.00	
474	UL121.04	Channel	JUL121.04-0	JUL121.06-1	3859.53	5110.19	4831.56	7.2200	10.000	0.0320	0.00	10275.09	0.00	0.00	1.16	0.12	0.00	
475	UL121.06	Channel	JUL121.07-1	JUL121.06-1	3157.89	5027.00	4831.56	6.1900	10.000	0.0320	65.03	8922.51	0.01	7.20	1.46	0.15	0.00	
476	UL121.07	Channel	JUL121.07-0	JUL121.07-1	942.14	5108.32	5027.00	8.6300	10.000	0.0320	0.00	12725.47	0.00	0.00	0.39	0.04	0.00	
477	UL126.02	Channel	JUL126.02-0	JUL121.07-1	13758.00	6720.00	5027.00	12.3100	10.000	0.0320	67.06	15194.41	0.00	10.03	0.67	0.07	0.00	
478	UL130.02	Channel	JUL130.02-0	JUL130.02-1	1842.73	4566.45	4505.04	3.3300	10.000	0.0320	8.29	7907.18	0.00	3.16	0.25	0.03	0.00	
479	UL130.04	Channel	JUL130.04-0	JUL130.04-1	1221.65	4581.26	4567.91	1.0900	10.000	0.0320	36.45	4527.94	0.01	2.82	4.22	0.42	0.00	
480	UL130.06	Channel	JUL130.06-0	JUL130.06-1	176.18	4590.00	4582.55	4.2300	10.000	0.0320	36.60	8907.03	0.00	3.32	0.93	0.09	0.00	
481	UL130.08	Channel	JUL130.08-1	JUL130.08-0	3982.32	4594.64	4592.42	0.0600	10.000	0.0320	5.83	1022.68	0.01	0.62	1.13	0.11	0.00	
482	UL132.02	Channel	JUL132.04-1	JUL132.02-1	2005.42	4840.89	4760.63	4.0000	10.000	0.0320	80.04	8665.23	0.01	2.18	4.54	0.45	0.00	
483	UL132.04	Channel	JUL132.04-0	JUL132.04-1	2995.59	5089.33	4840.89	8.2900	10.000	0.0320	80.41	12473.91	0.01	8.65	0.80	0.08	0.00	
484	UL132.05	Channel	JUL132.05-0	JUL132.04-0	9753.24	6033.00	5089.33	9.6800	10.000	0.0320	71.82	13473.13	0.01	9.27	0.68	0.07	0.00	
485	UL144.02	Channel	JUL144.04-1	J42832	1241.03	4766.71	4695.82	5.7100	10.000	0.0320	73.73	10352.24	0.01	4.70	3.14	0.31	0.00	
486	UL144.04	Channel	JUL144.04-0	JUL144.04-1	3032.13	4958.80	4766.71	6.3400	10.000	0.0320	74.32	10902.13	0.01	8.63	0.75	0.08	0.00	
487	UL148.01	Channel	JUL148.01-0	JUL144.04-0	5433.14	5432.33	4958.80	8.7200	10.000	0.0320	72.60	13186.22	0.01	9.20	0.70	0.07	0.00	
488	UL152.02	Channel	JUL152.02-0	JUL152.02-1	1271.91	4550.30	4549.32	0.0800	10.000	0.0320	10.49	1202.31	0.01	1.25	0.73	0.07	0.00	
489	UL152.04	Channel	JUL152.04-0	JUL152.04-1	1117.05	4554.21	4551.14	0.2700	10.000	0.0320	12.56	2270.73	0.01	1.41	1.06	0.11	0.00	
490	O-200W	Orifice	SN-200W	J0086-0		4536.80	4534.15		2.000		46.49							
491	O-540W	Orifice	SN-540W	J42453		4568.20	4559.93		1.250		51.08							
492	O-610W	Orifice	SN-610W	J42992		4573.00	4570.69		0.417		26.95							
493	O-Comm	Orifice	SN-Comm	J441759-0		4509.40	4508.14		1.250		45.40							
494	O-HHBlv	Orifice	SN-HHBl	J0126-0		4641.60	4632.19		0.500		1.05							
495	O-HHPark	Orifice	SN-HHPa	J441317-0		4727.60	4717.08		1.250		7.85							
496	O-HillC	Orifice	SN-HillC	J4245		4621.20	4616.24		1.500		2.70							
497	O-KitF	Orifice	SN-KitF	JUL100.02-1		4820.40	4820.37		2.000		15.85							
498	O-Mav	Orifice	SN-Mav	J44681.0		4597.00	4591.92		1.000		7.06							
499	O-Orch	Orifice	SN-Orch	J431143		4743.00	4739.37		1.000		6.13							
500	O-Pepp	Orifice	SN-Pepp	J441117-0		4618.80	4617.87		0.500		2.87							
501	O-Pond	Orifice	SN-Pond	J4429-0		4625.00	4621.41		0.667		13.47							
502	O-Rock	Orifice	SN-Rock	JUL070.10-1		4788.10	4779.12		3.000		2.30							
503	O-SMPN	Orifice	SN-SMPN	Out-21		4628.60	4489.00		0.500		4.76							
504	O-SMPS	Orifice	SN-SMPS	SN-SMPN		4628.60	4628.60		1.667		37.41							
505	O-Still	Orifice	SN-Still	J0014-1		4726.40	4721.70		0.417		1.70							
506	O-Summ	Orifice	SN-SUMM	J441032-1		4599.80	4592.84		1.250		10.59							
507	O-Swain	Orifice	SN-Swain	J44599-0		4654.40	4647.46		1.667		7.07							
508	O-Vill	Orifice	SN-Vill	J44614-0		4587.40	4581.74		4.000		26.39							
509	O-Waym	Orifice	SN-Waym	JUL080.10-1		4723.60	4717.35		2.500		22.77							
510	O-Weath	Orifice	SN-Weath	J42533		4702.20	4695.91		4.000		1.44							
511	O-WildF	Orifice	SN-WildF	J42462		4592.80	4581.42		1.500		2.22							
512	O-WildL	Orifice	SN-WildL	JUL070.04-1		4592.80	4590.98		1.500		16.34							

FULL BUILD-OUT CONDITION - NORTH
25-YEAR STORM

Project Description

File Name ..... SaratogaStormFuture North.SPF

Project Options

Flow Units ..... CFS
Elevation Type ..... Elevation
Hydrology Method HEC-1
HEC-1 unit hydrograph method ..... SCS Dimensionless
HEC-1 loss method ..... SCS Curve Number
Link Routing Method ..... Hydrodynamic
Enable Overflow Ponding at Nodes ..... YES
Skip Steady State Analysis Time Periods ... NO

Analysis Options

Start Analysis On ..... Jan 01, 2012 00:00:00
End Analysis On ..... Jan 01, 2012 12:00:00
Start Reporting On ..... Jan 01, 2012 00:00:00
Antecedent Dry Days ..... 0 days
Runoff (Dry Weather) Time Step ..... 0 01:00:00 days hh:mm:ss
Runoff (Wet Weather) Time Step ..... 0 00:01:00 days hh:mm:ss
Reporting Time Step ..... 0 00:01:00 days hh:mm:ss
Routing Time Step ..... 15 seconds

Number of Elements

	Qty
Rain Gages	3
Subbasins	44
Nodes	215
Junctions	166
Outfalls	8
Flow Diversions	0
Inlets	0
Storage Nodes	41
Links	215
Channels	6
Pipes	165
Pumps	0
Orifices	10
Weirs	0
Outlets	34
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	100-Year	Time Series	TS-100yr	Cumulative	inches				0.00	
2	10-Year	Time Series	TS-10yr	Cumulative	inches				0.00	
3	25 Year	Time Series	TS-25yr	Cumulative	inches				0.00	

Subbasin Summary

SN	Subbasin ID	Area (ac)	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)
1	JR010	230.62	1.03	0.62	142.52	158.14
2	JR012	348.01	1.03	0.43	150.34	228.01
3	JR020	75.12	1.03	0.88	66.18	81.56
4	JR022	159.04	1.03	0.75	119.92	78.20
5	JR023	24.06	1.03	0.36	8.59	12.06
6	JR024	9.50	1.03	0.56	5.32	7.89
7	JR025	23.83	1.03	0.85	20.33	20.57
8	JR030	140.20	1.03	0.62	86.78	107.35
9	JR031	57.94	1.03	0.76	43.80	56.26
10	JR032A	48.48	1.03	0.25	11.97	19.33
11	JR032B	24.38	1.03	0.26	6.34	9.14
12	JR035	103.96	1.03	0.28	29.21	40.51
13	JR040	26.23	1.03	0.44	11.65	17.56
14	JR050	233.24	1.03	0.63	146.01	153.37
15	JR060	39.27	1.03	0.81	31.97	53.09
16	JR061	87.78	1.03	0.80	69.79	105.47
17	JR063	112.79	1.03	0.62	69.70	101.42
18	JR064A	27.36	1.03	0.32	8.76	14.40
19	JR064B	83.20	1.03	0.27	22.38	29.48
20	JR065	94.86	1.03	0.83	78.26	120.71
21	JR066	81.90	1.03	0.29	23.67	31.35
22	JR067	140.60	1.03	0.41	58.21	69.44
23	JR068	78.41	1.03	0.87	68.45	100.86
24	JR069	123.21	1.03	0.83	102.76	158.76
25	JR070	109.91	1.03	0.75	82.10	101.00
26	JR079	55.29	1.03	0.88	48.66	65.39
27	JR080	170.63	1.03	0.88	149.64	205.49
28	JR082	20.20	1.03	0.88	17.74	27.35
29	JR083	36.82	1.03	0.75	27.76	42.74
30	JR084	37.71	1.03	0.26	9.77	12.43
31	JR085	25.52	1.03	0.34	8.68	15.27
32	JR086	138.78	1.03	0.37	51.49	77.95
33	JR087	23.81	1.03	0.38	8.98	13.37
34	JR088	37.93	1.03	0.31	11.72	21.59
35	JR089	33.28	1.03	0.28	9.25	15.56
36	JR090	58.55	1.03	0.37	21.66	34.36
37	JR091	18.12	1.03	0.62	11.23	17.87
38	JR092	8.80	1.03	0.92	8.06	9.46
39	PR010	174.64	1.03	0.26	45.41	61.87
40	PR020	353.66	1.03	0.30	105.74	135.90
41	PR030	78.69	1.03	0.32	25.10	31.89
42	PR040	2000.99	1.03	0.19	388.19	207.82
43	PR050	1368.43	1.03	0.11	149.16	90.11
44	PR060	735.89	1.03	0.28	208.26	175.40

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	1001	Junction	4538.00	4544.00	4538.00	4544.00	0.00	116.00	4539.82	0.00	4.18	0 00:00	0.00	0.00
2	J0018-0	Junction	4545.56	4548.66	0.00	4551.76	0.00	6.00	4546.15	0.00	2.51	0 00:00	0.00	0.00
3	J0018-1	Junction	4540.09	4544.49	0.00	4548.89	0.00	6.00	4540.70	0.00	3.79	0 00:00	0.00	0.00
4	J0019-0	Junction	4545.76	4549.66	0.00	4553.56	0.00	6.00	4546.99	0.00	2.67	0 00:00	0.00	0.00
5	J0020-1	Junction	4535.12	4539.32	0.00	4543.52	0.00	6.00	4535.73	0.00	3.59	0 00:00	0.00	0.00
6	J0021-1	Junction	4530.51	4534.61	0.00	4538.71	0.00	6.00	4531.41	0.00	3.20	0 00:00	0.00	0.00
7	J0023-0	Junction	4530.35	4533.90	0.00	4537.45	0.00	6.02	4531.24	0.00	2.66	0 00:00	0.00	0.00
8	J0026-1	Junction	4546.71	4549.51	0.00	4552.31	0.00	6.00	4547.76	0.00	8.95	0 00:00	0.00	0.00
9	J0038-0	Junction	4544.91	4550.35	0.00	4550.35	0.00	25.00	4546.22	0.00	4.13	0 00:00	0.00	0.00
10	J0040-0	Junction	4554.09	4558.54	0.00	4562.99	0.00	10.00	4555.03	0.00	3.51	0 00:00	0.00	0.00
11	J0040-1	Junction	4553.18	4557.73	0.00	4562.28	0.00	10.00	4554.11	0.00	3.62	0 00:00	0.00	0.00
12	J0041-0	Junction	4551.21	4555.41	0.00	4559.61	0.00	10.00	4552.14	0.00	3.27	0 00:00	0.00	0.00
13	J0041-1	Junction	4550.28	4555.41	0.00	4567.89	0.00	10.00	4551.22	0.00	4.19	0 00:00	0.00	0.00
14	J0043-0	Junction	4558.86	4564.71	0.00	4570.56	0.00	10.00	4560.12	0.00	4.59	0 00:00	0.00	0.00
15	J0043-1	Junction	4558.42	4563.42	0.00	4568.42	0.00	10.00	4559.30	0.00	4.12	0 00:00	0.00	0.00
16	J0044-1	Junction	4556.59	4561.79	0.00	4566.99	0.00	10.00	4557.45	0.00	4.34	0 00:00	0.00	0.00
17	J0048-0	Junction	4560.70	4566.85	0.00	4579.38	0.00	10.00	4561.58	0.00	5.27	0 00:00	0.00	0.00
18	J0050-0	Junction	4579.17	4587.57	0.00	4595.97	0.00	21.99	4581.52	0.00	6.05	0 00:00	0.00	0.00
19	J0050-1	Junction	4579.09	4587.64	0.00	4596.19	0.00	45.95	4580.78	0.00	6.86	0 00:00	0.00	0.00
20	J0051-1	Junction	4576.60	4581.55	0.00	4586.50	0.00	0.00	4576.60	0.00	4.95	0 00:00	0.00	0.00
21	J0052-1	Junction	4571.48	4575.05	0.00	4578.62	0.00	0.00	4571.48	0.00	3.57	0 00:00	0.00	0.00
22	J0054-1	Junction	4561.20	4566.85	0.00	4572.50	0.00	10.00	4562.14	0.00	4.71	0 00:00	0.00	0.00
23	J0071-0	Junction	4585.38	4589.48	0.00	4593.58	0.00	3.99	4586.05	0.00	3.43	0 00:00	0.00	0.00
24	J0071-1	Junction	4585.32	4588.92	0.00	4592.52	0.00	3.99	4585.56	0.00	3.36	0 00:00	0.00	0.00
25	J0073-0	Junction	4605.89	4616.51	0.00	4627.14	0.00	0.00	4605.89	0.00	10.62	0 00:00	0.00	0.00
26	J0073-1	Junction	4605.36	4612.03	0.00	4618.70	0.00	0.00	4605.36	0.00	6.67	0 00:00	0.00	0.00
27	J0074-0	Junction	4609.03	4618.78	0.00	4628.53	0.00	11.00	4610.21	0.00	8.57	0 00:00	0.00	0.00
28	J0074-1	Junction	4608.13	4617.03	0.00	4625.93	0.00	11.00	4609.10	0.00	7.93	0 00:00	0.00	0.00
29	J0075-1	Junction	4605.98	4617.53	0.00	4629.08	0.00	24.00	4607.11	0.00	10.42	0 00:00	0.00	0.00
30	J0076-0	Junction	4609.87	4618.92	0.00	4627.97	0.00	11.00	4611.32	0.00	7.60	0 00:00	0.00	0.00
31	J0077-0	Junction	4610.90	4619.15	0.00	4627.40	0.00	11.00	4612.37	0.00	6.78	0 00:00	0.00	0.00
32	J0078-0	Junction	4612.12	4620.37	0.00	4628.62	0.00	11.00	4613.53	0.00	6.84	0 00:00	0.00	0.00
33	J0079-0	Junction	4613.74	4621.69	0.00	4629.64	0.00	11.00	4615.06	0.00	6.63	0 00:00	0.00	0.00
34	J0080-0	Junction	4614.73	4619.33	0.00	4623.93	0.00	11.00	4616.15	0.00	3.18	0 00:00	0.00	0.00
35	J0080-1	Junction	4614.29	4620.14	0.00	4625.99	0.00	11.00	4615.63	0.00	4.51	0 00:00	0.00	0.00
36	J0084-0	Junction	4532.69	4542.04	0.00	4551.39	0.00	24.26	4535.70	0.00	6.34	0 00:00	0.00	0.00
37	J0086-0	Junction	4534.15	4542.55	0.00	4542.55	0.00	24.26	4536.94	0.00	5.61	0 00:00	0.00	0.00
38	J0086-1	Junction	4533.20	4541.65	0.00	4550.10	0.00	24.26	4536.25	0.00	5.40	0 00:00	0.00	0.00
39	J0108-1	Junction	4586.74	4593.41	0.00	4600.08	0.00	0.00	4586.74	0.00	6.67	0 00:00	0.00	0.00
40	J0109-1	Junction	4586.99	4593.23	0.00	4599.90	0.00	3.99	4587.16	0.00	9.83	0 00:00	0.00	0.00
41	J0110-1	Junction	4585.43	4590.68	0.00	4597.35	0.00	3.99	4586.25	0.00	9.18	0 00:00	0.00	0.00
42	J0125-0	Junction	4626.22	4632.02	0.00	4637.82	0.00	13.00	4626.94	0.00	5.08	0 00:00	0.00	0.00
43	J0125-1	Junction	4617.41	4622.06	0.00	4626.71	0.00	13.00	4618.42	0.00	3.64	0 00:00	0.00	0.00
44	J0126-0	Junction	4632.19	4638.49	0.00	4644.79	0.00	11.00	4632.94	0.00	5.55	0 00:00	0.00	0.00
45	J0126-1	Junction	4629.13	4634.00	0.00	4657.46	0.00	13.00	4630.19	0.00	3.81	0 00:00	0.00	0.00
46	J0127-0	Junction	4606.32	4617.37	0.00	4628.42	0.00	0.00	4606.32	0.00	11.05	0 00:00	0.00	0.00
47	J0129-0	Junction	4615.74	4620.29	0.00	4624.84	0.00	13.00	4616.49	0.00	3.80	0 00:00	0.00	0.00
48	J421012	Junction	4582.55	4590.95	0.00	4599.35	0.00	24.00	4583.86	0.00	7.09	0 00:00	0.00	0.00
49	J421015	Junction	4596.75	4601.15	0.00	4605.55	0.00	3.99	4597.40	0.00	3.75	0 00:00	0.00	0.00
50	J421016	Junction	4601.71	4610.26	0.00	4618.81	0.00	3.99	4602.27	0.00	7.99	0 00:00	0.00	0.00
51	J421017	Junction	4605.36	4614.06	0.00	4622.76	0.00	3.99	4606.00	0.00	8.06	0 00:00	0.00	0.00
52	J421018	Junction	4608.21	4614.81	0.00	4621.41	0.00	3.99	4608.62	0.00	6.19	0 00:00	0.00	0.00
53	J421019	Junction	4610.44	4615.14	0.00	4619.84	0.00	3.99	4610.98	0.00	4.16	0 00:00	0.00	0.00
54	J421185	Junction	4731.42	4749.37	0.00	4767.32	0.00	17.26	4732.83	0.00	16.54	0 00:00	0.00	0.00
55	J421186	Junction	4730.77	4747.62	0.00	4764.47	0.00	6.71	4732.04	0.00	15.58	0 00:00	0.00	0.00
56	J421187	Junction	4730.20	4746.45	0.00	4762.70	0.00	6.71	4731.51	0.00	14.94	0 00:00	0.00	0.00
57	J421188	Junction	4729.81	4745.66	0.00	4761.51	0.00	6.71	4730.94	0.00	14.72	0 00:00	0.00	0.00
58	J421189	Junction	4728.22	4739.47	0.00	4750.72	0.00	17.23	4729.07	0.00	10.40	0 00:00	0.00	0.00
59	J421190	Junction	4716.50	4729.05	0.00	4741.60	0.00	17.22	4717.66	0.00	11.39	0 00:00	0.00	0.00
60	J421191	Junction	4713.49	4725.79	0.00	4738.09	0.00	17.22	4714.25	0.00	11.54	0 00:00	0.00	0.00
61	J421192	Junction	4703.92	4713.42	0.00	4722.92	0.00	17.22	4704.71	0.00	8.71	0 00:00	0.00	0.00
62	J421193	Junction	4694.15	4701.55	0.00	4708.95	0.00	17.22	4694.94	0.00	6.61	0 00:00	0.00	0.00
63	J421194	Junction	4687.36	4694.76	0.00	4702.16	0.00	32.46	4688.63	0.00	6.13	0 00:00	0.00	0.00
64	J421195	Junction	4670.77	4676.77	0.00	4682.77	0.00	32.46	4672.16	0.00	4.61	0 00:00	0.00	0.00
65	J421196	Junction	4663.74	4670.24	0.00	4676.74	0.00	32.46	4665.44	0.00	4.80	0 00:00	0.00	0.00
66	J421197	Junction	4733.85	4743.45	0.00	4753.05	0.00	5.25	4734.73	0.00	8.72	0 00:00	0.00	0.00
67	J421200	Junction	4733.33	4743.58	0.00	4753.83	0.00	5.25	4734.37	0.00	9.21	0 00:00	0.00	0.00
68	J421201	Junction	4732.57	4746.07	0.00	4759.57	0.00	5.25	4733.47	0.00	12.60	0 00:00	0.00	0.00
69	J4244	Junction	4522.27	4528.57	0.00	4534.87	0.00	52.01	4524.59	0.00	3.98	0 00:00	0.00	0.00
70	J4245	Junction	4616.24	4622.54	0.00	4628.84	0.00	3.99	4616.65	0.00	5.89	0 00:00	0.00	0.00
71	J42450	Junction	4546.90	4554.75	0.00	4562.60	0.00	155.00	4549.49	0.00	5.26	0 00:00	0.00	0.00
72	J42451	Junction	4552.23	4560.13	0.00	4568.03	0.00	155.00	4555.23	0.00	4.90	0 00:00	0.00	0.00
73	J42452	Junction	4557.88	4566.58	0.00	4575.28	0.00	154.99	4561.03	0.00	5.55	0 00:00	0.00	0.00
74	J42453	Junction	4559.93	4570.43	0.00	4580.93	0.00	136.99	4563.34	0.00	7.09	0 00:00	0.00	0.00
75	J42454	Junction	4568.24	4570.99	0.00	4573.74	0.00	11.69	4568.76	0.00	2.23	0 00:00	0.00	0.00
76	J4249	Junction	4522.92	4529.59	0.00	4529.59	0.00	52.03	4526.80	0.00	2.79	0 00:00	0.00	0.00
77	J42554	Junction	4531.50	4542.18	0.00	4542.18	0.00	184.82	4534.98	0.00	7.20	0 00:00	0.00	0.00
78	J4260	Junction	4523.15	4529.55	0.00	4535.95	0.00	52.03	4525.37	0.00	4.18	0 00:00	0.00	0.00
79	J4262	Junction	4523.56	4529.96	0.00	4536.36	0.00	52.02	4527.52	0.00	2.44	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
80	J4263	Junction	4524.03	4530.03	0.00	4536.03	0.00	52.03	4529.31	0.00	0.72	0 00:00	0.00	0.00
81	J4264	Junction	4524.56	4531.56	0.00	4538.56	0.00	31.09	4530.12	0.00	1.44	0 00:00	0.00	0.00
82	J4265	Junction	4524.66	4532.76	0.00	4540.86	0.00	31.05	4530.30	0.00	2.46	0 00:00	0.00	0.00
83	J4267	Junction	4526.93	4533.08	0.00	4539.23	0.00	31.05	4532.51	0.00	0.57	0 00:00	0.00	0.00
84	J4272	Junction	4547.81	4553.01	0.00	4558.21	0.00	10.00	4548.93	0.00	4.08	0 00:00	0.00	0.00
85	J4278	Junction	4547.22	4551.82	0.00	4556.42	0.00	10.00	4548.24	0.00	3.58	0 00:00	0.00	0.00
86	J4287	Junction	4566.95	4570.85	0.00	4574.75	0.00	10.02	4567.88	0.00	2.97	0 00:00	0.00	0.00
87	J42877	Junction	4500.54	4509.34	0.00	4509.34	0.00	5.00	4502.02	0.00	7.32	0 00:00	0.00	0.00
88	J4288	Junction	4565.39	4569.39	0.00	4573.39	0.00	10.00	4566.23	0.00	3.16	0 00:00	0.00	0.00
89	J42886	Junction	4502.98	4506.60	0.00	4513.27	0.00	12.30	4504.21	0.00	2.39	0 00:00	0.00	0.00
90	J42887	Junction	4628.69	4635.94	0.00	4643.19	0.00	147.61	4633.63	0.00	2.31	0 00:00	0.00	0.00
91	J42888	Junction	4631.26	4638.76	0.00	4646.26	0.00	147.61	4636.03	0.00	2.73	0 00:00	0.00	0.00
92	J4289	Junction	4539.19	4545.39	0.00	4551.59	0.00	25.01	4540.23	0.00	5.16	0 00:00	0.00	0.00
93	J42890	Junction	4637.18	4645.63	0.00	4654.08	0.00	147.62	4640.41	0.00	5.22	0 00:00	0.00	0.00
94	J42891	Junction	4638.52	4645.92	0.00	4653.32	0.00	38.23	4641.41	0.00	4.51	0 00:00	0.00	0.00
95	J42893	Junction	4496.93	4500.63	0.00	4504.33	0.00	12.30	4498.13	0.00	2.50	0 00:00	0.00	0.00
96	J42901	Junction	4655.25	4661.05	0.00	4666.85	0.00	38.11	4656.88	0.00	4.17	0 00:00	0.00	0.00
97	J42903	Junction	4651.21	4656.91	0.00	4662.61	0.00	38.11	4652.79	0.00	4.12	0 00:00	0.00	0.00
98	J42904	Junction	4646.81	4652.41	0.00	4658.01	0.00	38.11	4649.13	0.00	3.28	0 00:00	0.00	0.00
99	J42905	Junction	4645.67	4651.87	0.00	4658.07	0.00	38.09	4648.35	0.00	3.52	0 00:00	0.00	0.00
100	J42906	Junction	4644.64	4651.14	0.00	4657.64	0.00	38.09	4646.86	0.00	4.28	0 00:00	0.00	0.00
101	J42907	Junction	4643.68	4650.23	0.00	4656.78	0.00	38.10	4645.61	0.00	4.62	0 00:00	0.00	0.00
102	J42908	Junction	4642.03	4649.63	0.00	4657.23	0.00	38.11	4643.87	0.00	5.76	0 00:00	0.00	0.00
103	J42958	Junction	4715.39	4728.89	0.00	4742.39	0.00	6.91	4716.43	0.00	12.46	0 00:00	0.00	0.00
104	J42959	Junction	4715.17	4726.62	0.00	4738.07	0.00	6.91	4715.73	0.00	10.89	0 00:00	0.00	0.00
105	J42960	Junction	4699.92	4706.62	0.00	4713.32	0.00	6.91	4700.51	0.00	6.11	0 00:00	0.00	0.00
106	J42961	Junction	4683.98	4689.48	0.00	4694.98	0.00	6.91	4684.56	0.00	4.92	0 00:00	0.00	0.00
107	J42962	Junction	4673.12	4679.32	0.00	4685.52	0.00	6.91	4673.69	0.00	5.63	0 00:00	0.00	0.00
108	J42963	Junction	4662.65	4668.65	0.00	4674.65	0.00	6.91	4663.29	0.00	5.36	0 00:00	0.00	0.00
109	J42964	Junction	4660.16	4667.46	0.00	4674.76	0.00	38.11	4661.81	0.00	5.65	0 00:00	0.00	0.00
110	J42992	Junction	4570.69	4575.49	0.00	4580.29	0.00	6.32	4571.98	0.00	3.51	0 00:00	0.00	0.00
111	J42993	Junction	4569.84	4574.59	0.00	4579.34	0.00	11.72	4571.33	0.00	3.26	0 00:00	0.00	0.00
112	J42997	Junction	4568.40	4572.55	0.00	4576.70	0.00	11.70	4570.04	0.00	2.51	0 00:00	0.00	0.00
113	J42998	Junction	4568.05	4573.15	0.00	4578.25	0.00	11.69	4569.85	0.00	3.30	0 00:00	0.00	0.00
114	J431143	Junction	4739.37	4742.94	0.00	4746.51	0.00	5.25	4739.92	0.00	3.02	0 00:00	0.00	0.00
115	J441117-0	Junction	4617.87	4629.52	0.00	4636.19	0.00	2.98	4618.27	0.00	11.25	0 00:00	0.00	0.00
116	J441211-0	Junction	4626.54	4631.04	0.00	4635.54	0.00	147.61	4630.06	0.00	0.98	0 00:00	0.00	0.00
117	J441211-1	Junction	4623.61	4630.28	0.00	4636.95	0.00	147.42	4628.55	0.00	1.73	0 00:00	0.00	0.00
118	J441317-0	Junction	4717.08	4727.19	0.00	4737.29	0.00	6.91	4717.96	0.00	9.23	0 00:00	0.00	0.00
119	J441759-0	Junction	4508.14	4517.96	0.00	4524.63	0.00	10.30	4509.20	0.00	8.76	0 00:00	0.00	0.00
120	J4466-1	Junction	4520.95	4529.97	0.00	4536.64	0.00	52.01	4522.79	0.00	7.18	0 00:00	0.00	0.00
121	JJR060.01-0	Junction	4586.22	4592.89	0.00	4599.56	0.00	6.00	4586.45	0.00	9.77	0 00:00	0.00	0.00
122	JJR060.01-1	Junction	4561.00	4568.67	0.00	4575.34	0.00	6.00	4561.26	0.00	10.74	0 00:00	0.00	0.00
123	JJR060.02-0	Junction	4611.44	4618.11	0.00	4624.78	0.00	6.00	4611.66	0.00	9.78	0 00:00	0.00	0.00
124	JJR060.02-1	Junction	4586.88	4593.55	0.00	4600.22	0.00	6.00	4587.38	0.00	9.50	0 00:00	0.00	0.00
125	JJR062.01-0	Junction	4648.54	4655.21	0.00	4661.88	0.00	0.00	4648.54	0.00	10.00	0 00:00	0.00	0.00
126	JJR062.01-1	Junction	4611.92	4618.59	0.00	4625.26	0.00	0.00	4611.92	0.00	10.00	0 00:00	0.00	0.00
127	JJR062.02-1	Junction	4648.89	4655.56	0.00	4662.23	0.00	0.00	4648.89	0.00	6.67	0 00:00	0.00	0.00
128	JJR062.03-0	Junction	4689.20	4695.87	0.00	4702.54	0.00	84.04	4691.77	0.00	11.89	0 00:00	0.00	0.00
129	JJR062.04-1	Junction	4697.75	4704.42	0.00	4711.09	0.00	84.00	4699.99	0.00	4.96	0 00:00	0.00	0.00
130	JPR050.01-1	Junction	4719.05	4725.72	0.00	4732.39	0.00	13.00	4719.94	0.00	5.78	0 00:00	0.00	0.00
131	Jun-135	Junction	4535.99	4541.99	0.00	0.00	0.00	15.00	4536.98	0.00	5.01	0 00:00	0.00	0.00
132	Jun-148	Junction	4568.49	4578.00	0.00	4578.00	0.00	128.52	4571.33	0.00	6.67	0 00:00	0.00	0.00
133	Jun-149	Junction	4716.00	4726.00	0.00	4726.00	0.00	75.77	4717.86	0.00	8.14	0 00:00	0.00	0.00
134	Jun-150	Junction	4605.00	4615.00	0.00	4617.00	0.00	128.52	4607.37	0.00	7.63	0 00:00	0.00	0.00
135	Jun-151	Junction	4515.73	4523.73	0.00	4523.73	0.00	199.82	4518.36	0.00	10.82	0 00:00	0.00	0.00
136	Jun-159	Junction	4694.00	4701.00	0.00	0.00	0.00	8.00	4694.71	0.00	6.29	0 00:00	0.00	0.00
137	Jun-171	Junction	4716.00	4721.00	4716.00	4721.00	0.00	25.00	4716.85	0.00	4.15	0 00:00	0.00	0.00
138	Jun-173	Junction	4654.00	4670.00	4654.00	4670.00	0.00	59.00	4655.97	0.00	14.03	0 00:00	0.00	0.00
139	Jun-174	Junction	4557.00	4563.00	4557.00	4563.00	0.00	59.00	4558.74	0.00	4.26	0 00:00	0.00	0.00
140	Jun-179	Junction	4643.71	4650.00	4643.71	0.00	0.00	4.01	4644.13	0.00	5.87	0 00:00	0.00	0.00
141	Jun-180	Junction	4664.65	4670.00	4664.65	0.00	0.00	4.00	4665.36	0.00	4.64	0 00:00	0.00	0.00
142	Jun-181	Junction	4664.20	4670.00	4664.20	0.00	0.00	4.03	4664.71	0.00	5.29	0 00:00	0.00	0.00
143	Jun-182	Junction	4636.96	4641.46	4636.96	4641.46	0.00	4.00	4637.46	0.00	4.00	0 00:00	0.00	0.00
144	Jun-183	Junction	4634.42	4638.52	4634.42	4638.52	0.00	4.02	4634.80	0.00	3.72	0 00:00	0.00	0.00
145	Jun-185	Junction	4529.00	4534.00	4529.00	4534.00	0.00	2.00	4529.42	0.00	4.58	0 00:00	0.00	0.00
146	Jun-188	Junction	4529.68	4534.18	1236.00	4542.00	0.00	6.04	4531.18	0.00	3.00	0 00:00	0.00	0.00
147	Jun-190	Junction	4543.09	4549.89	0.00	4555.69	0.00	25.00	4544.81	0.00	5.08	0 00:00	0.00	0.00
148	Jun-191	Junction	4672.00	4678.00	0.00	4678.00	0.00	25.00	4673.73	0.00	4.27	0 00:00	0.00	0.00
149	Jun-195	Junction	4677.00	4683.00	4677.00	4683.00	0.00	13.00	4678.16	0.00	4.84	0 00:00	0.00	0.00
150	Jun-196	Junction	4660.00	4666.00	4660.00	4666.00	0.00	110.00	4662.42	0.00	3.58	0 00:00	0.00	0.00
151	Jun-198	Junction	4507.00	4513.00	4507.00	4513.00	0.00	12.30	4507.82	0.00	5.18	0 00:00	0.00	0.00
152	Jun-213	Junction	4569.00	4578.00	4572.00	4578.00	0.00	45.95	4572.90	0.00	5.10	0 00:00	0.00	0.00
153	Jun-214	Junction	4550.00	4556.00	4550.00	4556.00	0.00	45.95	4551.64	0.00	4.36	0 00:00	0.00	0.00
154	Jun-216	Junction	4498.00	4512.00	0.00	4512.00	0.00	172.00	4509.57	0.00	2.43	0 00:00	0.00	0.00
155	Jun-218	Junction	4620.00	4623.00	4617.00	4623.00	0.00	36.13	4620.99	0.00	2.01	0 00:00	0.00	0.00
156	Jun-219	Junction	4608.00	4616.00	4610.00	4616.00	0.00	36.11	4610.02	0.00	5.98	0 00:00	0.00	0.00
157	Jun-220	Junction	4675.00	4681.00	4675.00	4681.00	0.00	28.21	4675.85	0.00	5.15	0 00:00	0.00	0.00
158	Jun-222	Junction	4577.00	4583.00	4577.00	4583.00	0.00	116.00	4579.95	0.00	3.05	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
159	Jun-223	Junction	4620.00	4626.00	4620.00	4626.00	0.00	70.00	4622.18	0.00	3.82	0 00:00	0.00	0.00
160	Jun-241	Junction	4627.00	4635.00	4623.00	4635.00	0.00	11.70	4628.30	0.00	6.70	0 00:00	0.00	0.00
161	Jun-247	Junction	4552.00	4558.00	4552.00	4558.00	0.00	25.00	4553.54	0.00	4.46	0 00:00	0.00	0.00
162	Jun-250	Junction	4568.00	4574.00	0.00	0.00	0.00	10.00	4569.24	0.00	4.76	0 00:00	0.00	0.00
163	Jun-251	Junction	4624.00	4630.00	4624.00	4630.00	0.00	117.12	4626.82	0.00	3.18	0 00:00	0.00	0.00
164	Jun-252	Junction	4529.00	4534.00	0.00	0.00	0.00	123.00	4531.79	0.00	23.71	0 00:00	0.00	0.00
165	Jun-253	Junction	4618.00	4624.00	2937.00	4622.00	0.00	92.45	4620.88	0.00	3.12	0 00:00	0.00	0.00
166	Jun-254	Junction	4637.00	4643.00	0.00	0.00	0.00	0.00	4637.00	0.00	6.00	0 00:00	0.00	0.00
167	J441761-1	Outfall	4491.44					12.30	4492.58					
168	Jun-152	Outfall	4492.00					199.77	4494.62					
169	Jun-175	Outfall	4503.00					59.00	4504.71					
170	Jun-187	Outfall	4509.00					52.01	4510.78					
171	Jun-215	Outfall	4506.00					45.95	4507.62					
172	Jun-217	Outfall	4493.00					172.00	4497.50					
173	Jun-221	Outfall	4300.00					116.00	4301.81					
174	Out-32	Outfall	4495.03					5.00	4495.89					
175	SN-200W	Storage Node	4536.80	4542.00	0.00		20.00	78.20	4541.86				0.00	0.00
176	SN-540W	Storage Node	4568.20	3.20	0.00		20.00	0.00	4568.20				0.00	0.00
177	SN-610W	Storage Node	4573.00	4576.40	0.00		20.00	28.83	4576.17				0.00	0.00
178	SN-Comm	Storage Node	4509.40	4519.40	0.00		0.00	53.09	4512.93				0.00	0.00
179	SN-HHPa	Storage Node	4727.60	2.40	0.00		20.00	15.56	4729.53				0.00	719.00
180	SN-HillC	Storage Node	4685.00	4695.00	0.00		0.00	17.87	4691.15				0.00	0.00
181	SN-JR010	Storage Node	4586.00	4596.00	0.00		0.00	158.14	4592.32				0.00	0.00
182	SN-JR012	Storage Node	4618.00	4628.00	0.00		0.00	228.01	4624.30				0.00	0.00
183	SN-JR020	Storage Node	4554.00	4564.00	0.00		0.00	81.56	4559.57				0.00	0.00
184	SN-JR031	Storage Node	4554.00	4564.00	0.00		0.00	56.26	4559.01				0.00	0.00
185	SN-JR032	Storage Node	4660.00	4670.00	0.00		0.00	9.14	4663.45				0.00	0.00
186	SN-JR035	Storage Node	4558.00	4568.00	0.00		0.00	40.51	4562.17				0.00	0.00
187	SN-JR050	Storage Node	4620.00	4630.00	0.00		0.00	107.35	4626.12				0.00	0.00
188	SN-JR061	Storage Node	4632.00	4646.00	0.00		0.00	105.46	4637.87				0.00	0.00
189	SN-JR063	Storage Node	4620.00	4630.00	0.00		0.00	101.42	4625.85				0.00	0.00
190	SN-JR065	Storage Node	4660.00	4670.00	0.00		0.00	158.76	4666.77				0.00	0.00
191	SN-JR065a	Storage Node	4690.00	4698.00	0.00		0.00	120.71	4696.09				0.00	0.00
192	SN-JR068	Storage Node	4632.00	4646.00	0.00		0.00	100.86	4637.69				0.00	0.00
193	SN-JR070	Storage Node	4565.00	4575.00	0.00		0.00	100.99	4570.77				0.00	0.00
194	SN-JR079	Storage Node	4635.00	4645.00	0.00		0.00	65.38	4640.24				0.00	0.00
195	SN-JR080	Storage Node	4690.00	4700.00	0.00		0.00	205.49	4696.90				0.00	0.00
196	SN-JR082	Storage Node	4685.00	4695.00	0.00		0.00	27.35	4689.35				0.00	0.00
197	SN-JR083	Storage Node	4685.00	4695.00	0.00		0.00	42.74	4689.66				0.00	0.00
198	SN-Orch	Storage Node	4743.00	2.80	0.00		20.00	27.84	4745.34				0.00	719.00
199	SN-Pepp	Storage Node	4618.80	10.80	0.00		20.00	146.83	4628.55				0.00	718.00
200	SN-PR010	Storage Node	4756.00	4766.00	0.00		0.00	61.86	4760.51				0.00	0.00
201	SN-PR020	Storage Node	4720.00	4730.00	0.00		0.00	29.48	4723.77				0.00	0.00
202	SN-PR030	Storage Node	4710.00	4720.00	0.00		0.00	31.89	4714.41				0.00	0.00
203	SN-PR040	Storage Node	4720.00	4735.00	0.00		0.00	160.00	4727.79				0.00	0.00
204	SN-PR050	Storage Node	4750.00	4770.00	0.00		0.00	83.49	4757.12				0.00	0.00
205	SN-PR060	Storage Node	5410.00	5420.00	0.00		0.00	175.40	5417.81				0.00	0.00
206	SN-SMPN	Storage Node	4628.60	3.00	0.00		20.00	31.35	4630.61				0.00	719.00
207	SN-SMPS	Storage Node	4628.60	3.20	0.00		20.00	17.82	4630.53				0.00	719.00
208	Stor-34	Storage Node	4632.00	4646.00	0.00		0.00	69.44	4637.16				0.00	0.00
209	Stor-41	Storage Node	4620.00	4630.00	0.00		0.00	153.36	4626.94				0.00	0.00
210	Stor-43	Storage Node	4505.00	4515.00	0.00		0.00	17.56	4508.91				0.00	0.00
211	Stor-44	Storage Node	4720.00	4730.00	0.00		0.00	135.90	4725.36				0.00	0.00
212	Stor-45	Storage Node	4700.00	15.00	0.00		0.00	19.32	4703.80				0.00	710.00
213	Stor-46	Storage Node	5000.00	15.00	0.00		0.00	9.46	5003.86				0.00	717.00
214	Stor-47	Storage Node	4730.00	15.00	0.00		0.00	207.82	4735.58				0.00	691.00
215	Stor-48	Storage Node	4760.00	15.00	0.00		0.00	90.11	4763.73				0.00	696.00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
1	0017	Pipe	JJR062.04-1	JJR062.03-0	160.92	4697.95	4696.66	0.8000	7.000	0.0130	84.04	571.97	0.15	10.48	1.92	0.28	0.00	Calculated
2	0028	Pipe	J0018-0	J0018-1	263.14	4545.56	4540.09	2.0800	2.000	0.0130	6.00	32.62	0.18	7.56	0.60	0.30	0.00	Calculated
3	0029	Pipe	J0019-0	J0018-0	186.78	4545.76	4545.56	0.1100	2.000	0.0130	6.00	7.40	0.81	3.59	1.05	0.53	0.00	Calculated
4	0030	Pipe	J0018-1	J0020-1	262.46	4540.09	4535.12	1.8900	2.000	0.0130	6.00	31.13	0.19	7.40	0.61	0.30	0.00	Calculated
5	0031	Pipe	J0020-1	J0021-1	269.53	4535.12	4530.51	1.7100	2.000	0.0130	6.00	29.59	0.20	5.98	0.75	0.38	0.00	Calculated
6	0033	Pipe	J0023-0	Jun-188	66.43	4530.35	4529.68	1.0100	2.000	0.0130	6.04	22.72	0.27	7.05	1.19	0.60	0.00	Calculated
7	0034	Pipe	J0021-1	J0023-0	4.79	4530.51	4530.35	3.3400	2.000	0.0130	6.02	41.35	0.15	5.28	0.89	0.45	0.00	Calculated
8	0037	Pipe	J0026-1	J0019-0	168.43	4546.71	4545.76	0.5600	1.500	0.0130	6.00	7.89	0.76	4.16	1.14	0.76	0.00	Calculated
9	0055	Pipe	J0040-0	J0040-1	58.27	4554.09	4553.18	1.5600	2.000	0.0130	10.00	28.27	0.35	6.92	0.94	0.47	0.00	Calculated
10	0056	Pipe	J0041-0	J0041-1	54.09	4551.21	4550.28	1.7200	2.000	0.0130	10.00	29.66	0.34	6.94	0.93	0.47	0.00	Calculated
11	0057	Pipe	J0040-1	J0041-0	158.86	4553.18	4551.21	1.2400	2.000	0.0130	10.00	25.19	0.40	6.99	0.93	0.47	0.00	Calculated
12	0058	Pipe	J0043-0	J0043-1	92.05	4558.86	4558.42	0.4800	2.000	0.0130	10.00	15.64	0.64	5.10	1.20	0.60	0.00	Calculated
13	0059	Pipe	J0043-1	J0044-1	112.20	4558.42	4556.59	1.6300	2.000	0.0130	10.00	28.89	0.35	7.63	0.87	0.43	0.00	Calculated
14	0062	Pipe	J0044-1	J0040-0	157.83	4556.59	4554.09	1.5800	2.000	0.0130	10.00	28.47	0.35	7.26	0.90	0.45	0.00	Calculated
15	0063	Pipe	J0048-0	J0043-0	109.87	4560.70	4558.86	1.6700	2.000	0.0130	10.00	29.28	0.34	5.83	1.07	0.54	0.00	Calculated
16	0065	Pipe	J0050-0	J0050-1	31.55	4579.17	4579.09	0.2500	2.000	0.0130	21.99	11.39	1.93	7.28	1.84	0.92	0.00	> CAPACITY
17	0067	Pipe	J0051-1	J0052-1	401.42	4576.60	4571.48	1.2800	2.000	0.0130	0.00	25.55	0.00	0.00	0.00	0.00	0.00	Calculated
18	0068	Pipe	J421012	J0050-1	127.27	4582.55	4579.09	2.7200	2.000	0.0130	24.00	37.30	0.64	11.48	1.50	0.75	0.00	Calculated
19	0071	Pipe	J0071-0	J0071-1	6.93	4585.38	4585.32	0.8700	1.500	0.0130	3.99	9.77	0.41	8.88	0.45	0.30	0.00	Calculated
20	0073	Pipe	J0073-0	J0073-1	213.70	4605.89	4605.36	0.2500	2.000	0.0130	0.00	11.27	0.00	0.00	0.00	0.00	0.00	Calculated
21	0074	Pipe	J0074-0	J0074-1	128.38	4609.03	4608.13	0.7000	2.000	0.0130	11.00	18.94	0.58	5.96	1.14	0.57	0.00	Calculated
22	0075	Pipe	J0074-1	J0075-1	166.80	4608.13	4605.98	1.2900	2.000	0.0130	11.00	25.68	0.43	8.02	1.05	0.53	0.00	Calculated
23	0076	Pipe	J0076-0	J0074-0	244.02	4609.87	4609.03	0.3400	2.000	0.0130	11.00	13.27	0.83	5.02	1.32	0.66	0.00	Calculated
24	0077	Pipe	J0077-0	J0076-0	295.53	4610.90	4609.87	0.3500	2.000	0.0130	11.00	13.36	0.82	4.48	1.46	0.73	0.00	Calculated
25	0078	Pipe	J0078-0	J0077-0	319.35	4612.12	4610.90	0.3800	2.000	0.0130	11.00	13.98	0.79	4.54	1.44	0.72	0.00	Calculated
26	0079	Pipe	J0079-0	J0078-0	370.85	4613.74	4612.12	0.4400	2.000	0.0130	11.00	14.95	0.74	4.81	1.37	0.68	0.00	Calculated
27	0082	Pipe	J0080-0	J0080-1	95.65	4614.73	4614.29	0.4600	2.000	0.0130	11.00	15.34	0.72	4.76	1.38	0.69	0.00	Calculated
28	0083	Pipe	J0080-1	J0079-0	98.39	4614.29	4613.74	0.5600	2.000	0.0130	11.00	16.91	0.65	4.95	1.33	0.67	0.00	Calculated
29	0084	Pipe	J0084-0	J42554	45.00	4532.69	4532.00	1.5300	2.000	0.0130	24.51	28.01	0.87	8.97	2.00	1.00	84.00	SURCHARGED
30	0086	Pipe	J0086-0	J0086-1	37.43	4534.15	4533.20	2.5400	2.000	0.0130	24.26	36.04	0.67	7.75	2.00	1.00	72.00	SURCHARGED
31	0087	Pipe	J0086-1	J0084-0	23.15	4533.20	4532.69	2.2000	2.000	0.0130	24.26	33.58	0.72	7.90	2.00	1.00	87.00	SURCHARGED
32	0108	Pipe	J0073-1	J0108-1	429.88	4605.36	4586.74	4.3300	2.000	0.0130	0.00	47.08	0.00	0.00	0.00	0.00	0.00	Calculated
33	0125	Pipe	J0125-0	J0125-1	204.42	4626.22	4617.41	4.3100	2.000	0.0130	13.00	46.96	0.28	10.02	0.86	0.43	0.00	Calculated
34	0126	Pipe	J0126-0	J0126-1	91.91	4632.19	4629.13	3.3300	2.000	0.0130	11.00	41.28	0.27	8.34	0.90	0.45	0.00	Calculated
35	0127	Pipe	J0127-0	J0073-0	76.18	4606.32	4605.89	0.5600	2.000	0.0130	0.00	17.00	0.00	0.00	0.00	0.00	0.00	Calculated
36	0128	Pipe	J0126-1	J0125-0	222.85	4629.13	4626.22	1.3100	2.000	0.0130	13.00	25.85	0.50	8.15	1.03	0.52	0.00	Calculated
37	0129	Pipe	J0129-0	J0075-1	265.66	4615.74	4605.98	3.6700	2.000	0.0130	13.00	43.36	0.30	10.28	0.94	0.47	0.00	Calculated
38	0130	Pipe	J0125-1	J0129-0	90.94	4617.41	4615.74	1.8400	2.000	0.0130	13.00	30.66	0.42	9.80	0.88	0.44	0.00	Calculated
39	0135	Pipe	JJR062.01-1	JJR060.02-0	14.72	4613.99	4612.85	7.7400	3.000	0.0130	0.00	572.59	0.00	0.00	0.00	0.00	0.00	Calculated
40	0137	Pipe	JJR062.02-1	JJR062.01-0	15.56	4650.17	4648.97	7.7100	2.000	0.0130	0.00	62.82	0.00	0.00	0.00	0.00	0.00	Calculated
41	0138	Pipe	JJR060.02-1	JJR060.01-0	12.16	4586.88	4586.22	5.4300	3.000	0.0130	6.00	479.35	0.01	3.47	0.36	0.12	0.00	Calculated
42	0142	Pipe	J421185	J421186	174.96	4731.42	4730.77	0.3700	1.500	0.0130	6.71	6.40	1.05	4.05	1.34	0.89	0.00	> CAPACITY
43	0143	Pipe	J421186	J421187	106.51	4730.77	4730.20	0.5400	1.500	0.0130	6.71	7.68	0.87	4.15	1.29	0.86	0.00	Calculated
44	0144	Pipe	J421187	J421188	94.28	4730.20	4729.81	0.4100	1.500	0.0130	6.71	6.76	0.99	4.36	1.22	0.81	0.00	Calculated
45	0145	Pipe	J421189	J421190	156.03	4728.22	4716.50	7.5100	1.500	0.0130	17.22	28.79	0.60	13.69	1.00	0.67	0.00	Calculated
46	0146	Pipe	J421188	J421189	303.24	4729.81	4728.22	0.5200	1.500	0.0130	6.70	7.61	0.88	5.46	0.99	0.66	0.00	Calculated
47	0147	Pipe	J421190	J421191	154.82	4716.50	4713.49	1.9400	2.000	0.0130	17.22	31.54	0.55	11.50	0.96	0.48	0.00	Calculated
48	0148	Pipe	J421191	J421192	129.30	4713.49	4703.92	7.4000	2.000	0.0130	17.22	61.55	0.28	15.21	0.78	0.39	0.00	Calculated
49	0149	Pipe	J421192	J421193	153.14	4703.92	4694.15	6.3800	2.000	0.0130	17.22	57.14	0.30	14.95	0.79	0.39	0.00	Calculated
50	0150	Pipe	J421193	J421194	111.46	4694.15	4687.36	6.0900	2.000	0.0130	17.22	55.84	0.31	11.95	0.99	0.49	0.00	Calculated
51	0151	Pipe	J421194	J421195	396.50	4687.36	4670.77	4.1800	2.000	0.0130	32.46	46.27	0.70	14.66	1.33	0.66	0.00	Calculated
52	0152	Pipe	J421196	J42964	133.55	4663.74	4660.16	2.6800	2.000	0.0130	32.45	37.04	0.88	11.61	1.67	0.84	0.00	Calculated
53	0153	Pipe	J421195	J421196	194.51	4670.77	4663.74	3.6100	2.000	0.0130	32.46	43.01	0.75	12.48	1.54	0.77	0.00	Calculated
54	0155	Pipe	J431143	J421197	42.34	4739.37	4736.80	6.0700	1.250	0.0130	5.25	15.92	0.33	10.77	0.52	0.42	0.00	Calculated
55	0156	Pipe	J421197	J421200	41.53	4733.85	4733.33	1.2500	1.500	0.0130	5.25	11.75	0.45	4.42	0.96	0.64	0.00	Calculated
56	0157	Pipe	J421200	J421201	182.32	4733.33	4732.57	0.4200	1.500	0.0130	5.25	6.78	0.77	4.49	0.97	0.65	0.00	Calculated
57	0158	Pipe	J421201	J421185	171.69	4732.57	4731.42	0.6700	1.500	0.0130	5.25	8.60	0.61	5.40	1.11	0.74	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
58	0167	Pipe	J441211-1	SN-Pepp	201.03	4623.61	4618.80	2.3900	4.000	0.0130	146.83	222.19	0.66	12.35	4.00	1.00	545.00	SURCHARGED
59	0168	Pipe	J421015	J0109-1	555.50	4596.75	4586.99	1.7600	1.500	0.0130	3.99	13.92	0.29	10.23	0.41	0.27	0.00	Calculated
60	0169	Pipe	J0110-1	J0071-0	14.91	4585.43	4585.38	0.3400	1.500	0.0130	3.99	6.08	0.66	4.57	0.74	0.49	0.00	Calculated
61	0170	Pipe	J0071-1	J0050-0	12.52	4585.32	4579.17	49.1200	1.500	0.0130	3.99	73.62	0.05	7.10	0.87	0.58	0.00	Calculated
62	0171	Pipe	J0108-1	J421012	55.50	4586.74	4582.55	7.5500	2.000	0.0130	0.00	62.16	0.00	0.00	0.65	0.33	0.00	Calculated
63	0172	Pipe	J42450	J42554	948.84	4546.90	4531.50	1.6200	4.500	0.0130	155.01	250.53	0.62	13.78	3.02	0.67	0.00	Calculated
64	0179	Pipe	J0054-1	J0048-0	19.46	4561.20	4560.70	2.5700	2.000	0.0130	10.00	36.26	0.28	7.15	0.91	0.46	0.00	Calculated
65	386	Pipe	J42451	J42450	386.84	4552.23	4546.90	1.3800	4.500	0.0130	155.00	230.83	0.67	14.96	2.79	0.62	0.00	Calculated
66	1325	Pipe	J42554	Jun-151	1324.56	4531.50	4515.73	1.1900	4.500	0.0130	184.82	214.57	0.86	16.08	3.05	0.68	0.00	Calculated
67	4453	Pipe	J421017	J421016	322.71	4605.36	4601.71	1.1300	1.500	0.0130	3.99	11.17	0.36	6.00	0.60	0.40	0.00	Calculated
68	4455	Pipe	J4260	J4244	14.44	4523.15	4522.27	6.0900	3.000	0.0130	52.01	164.65	0.32	9.08	2.27	0.76	0.00	Calculated
69	4456	Pipe	J4249	J4260	130.28	4522.92	4523.15	-0.1800	3.000	0.0130	52.03	28.02	1.86	7.98	2.61	0.87	0.00	> CAPACITY
70	4466	Pipe	J4244	J4466-1	154.27	4522.27	4520.95	0.8600	3.000	0.0130	52.01	61.70	0.84	9.95	2.08	0.69	0.00	Calculated
71	4469	Pipe	J4289	J4267	587.23	4539.19	4526.93	2.0900	3.000	0.0130	25.00	96.37	0.26	8.22	2.02	0.67	0.00	Calculated
72	441117	Pipe	J441117-0	J4245	144.04	4617.87	4616.24	1.1300	4.000	0.0130	2.98	152.81	0.02	4.55	0.40	0.10	0.00	Calculated
73	441118	Pipe	J4245	J421019	106.25	4616.24	4610.44	5.4600	1.500	0.0130	3.99	24.54	0.16	8.27	0.48	0.32	0.00	Calculated
74	441173	Pipe	J42888	J42887	125.82	4631.26	4628.69	2.0400	4.000	0.0130	147.61	205.29	0.72	11.75	4.00	1.00	8.00	SURCHARGED
75	441175	Pipe	J42890	J42888	305.22	4636.68	4631.26	1.7800	4.000	0.0130	147.61	200.05	0.74	13.29	3.61	0.90	0.00	Calculated
76	441176	Pipe	J42891	J42890	64.25	4638.52	4637.18	2.0900	2.500	0.0130	38.35	59.24	0.65	8.21	2.50	1.00	8.00	SURCHARGED
77	441182	Pipe	J42901	J42903	204.99	4655.25	4651.21	1.9700	2.500	0.0130	38.11	57.58	0.66	11.46	1.60	0.64	0.00	Calculated
78	441183	Pipe	J42903	J42904	197.78	4651.21	4646.81	2.2200	2.500	0.0130	38.11	61.18	0.62	9.76	1.95	0.78	0.00	Calculated
79	441184	Pipe	J42904	J42905	45.56	4646.81	4645.67	2.5000	2.500	0.0130	38.09	64.88	0.59	7.91	2.41	0.96	0.00	Calculated
80	441185	Pipe	J42905	J42906	118.84	4645.67	4644.64	0.8700	2.500	0.0130	38.09	38.19	1.00	7.94	2.36	0.94	0.00	Calculated
81	441186	Pipe	J42906	J42907	87.78	4644.64	4643.68	1.0900	2.500	0.0130	38.10	42.89	0.89	8.80	2.07	0.83	0.00	Calculated
82	441187	Pipe	J42907	J42908	106.21	4643.68	4642.03	1.5500	2.500	0.0130	38.11	51.12	0.75	9.85	1.89	0.75	0.00	Calculated
83	441193	Pipe	J42908	J42891	209.09	4642.03	4638.52	1.6800	2.500	0.0130	38.23	53.14	0.72	9.33	2.17	0.87	0.00	Calculated
84	441211	Pipe	J441211-0	J441211-1	199.60	4626.54	4623.61	1.4700	4.000	0.0130	147.42	174.04	0.85	13.51	3.45	0.86	0.00	Calculated
85	441212	Pipe	J42887	J441211-0	235.01	4628.69	4626.54	0.9100	4.000	0.0130	147.61	137.39	1.07	12.06	3.76	0.94	0.00	> CAPACITY
86	441262	Pipe	J421018	J421017	47.33	4608.21	4605.36	6.0200	1.500	0.0130	3.99	25.78	0.15	7.22	0.53	0.35	0.00	Calculated
87	441263	Pipe	J421019	J421018	99.23	4610.44	4608.21	2.2500	1.500	0.0130	3.99	15.75	0.25	7.16	0.53	0.35	0.00	Calculated
88	441294	Pipe	J42992	J42993	232.54	4570.69	4569.84	0.3700	1.500	0.0130	6.32	6.35	1.00	4.39	1.25	0.83	0.00	Calculated
89	441307	Pipe	J42998	J42454	137.51	4568.05	4568.24	-0.1400	2.000	0.0130	11.69	8.41	1.39	6.19	1.16	0.58	0.00	> CAPACITY
90	441317	Pipe	J441317-0	J42958	74.75	4717.08	4715.39	2.2600	1.250	0.0130	6.91	9.71	0.71	6.85	0.96	0.77	0.00	Calculated
91	441318	Pipe	J42958	J42959	46.91	4715.39	4715.17	0.4700	2.000	0.0130	6.91	15.49	0.45	4.49	0.98	0.49	0.00	Calculated
92	441684	Pipe	J42959	J42960	297.62	4715.17	4699.92	5.1200	1.500	0.0130	6.91	23.78	0.29	11.09	0.57	0.38	0.00	Calculated
93	441685	Pipe	J42960	J42961	367.15	4699.92	4683.98	4.3400	1.500	0.0130	6.91	21.89	0.32	10.83	0.58	0.39	0.00	Calculated
94	441686	Pipe	J42961	J42962	226.40	4683.98	4673.12	4.8000	1.500	0.0130	6.91	23.01	0.30	11.16	0.57	0.38	0.00	Calculated
95	441687	Pipe	J42962	J42963	213.27	4673.12	4662.65	4.9100	1.500	0.0130	6.91	23.27	0.30	10.86	0.60	0.40	0.00	Calculated
96	441688	Pipe	J42963	J42964	59.90	4662.65	4660.16	4.1600	1.500	0.0130	6.91	21.42	0.32	6.32	1.04	0.70	0.00	Calculated
97	441689	Pipe	J42964	J42901	270.51	4660.16	4655.25	1.8200	2.500	0.0130	38.11	55.26	0.69	11.18	1.64	0.66	0.00	Calculated
98	441719	Pipe	J4262	J4249	49.27	4523.56	4522.92	1.3000	3.000	0.0130	52.03	76.02	0.68	7.36	3.00	1.00	210.00	SURCHARGED
99	441720	Pipe	J4263	J4262	227.17	4524.03	4523.56	0.2100	3.000	0.0130	52.02	30.34	1.71	7.36	3.00	1.00	210.00	SURCHARGED
100	441721	Pipe	J4264	J4263	266.50	4524.56	4524.03	0.2000	3.000	0.0130	31.05	29.74	1.04	4.39	3.00	1.00	219.00	SURCHARGED
101	441722	Pipe	J4265	J4264	28.63	4524.66	4524.56	0.3500	3.000	0.0130	31.09	39.42	0.79	4.40	3.00	1.00	219.00	SURCHARGED
102	441723	Pipe	J4267	J4265	345.00	4526.93	4524.66	0.6600	3.000	0.0130	31.05	54.10	0.57	4.95	3.00	1.00	181.00	SURCHARGED
103	441727	Pipe	J0041-1	J4272	222.91	4550.28	4547.81	1.1100	2.000	0.0130	10.00	23.81	0.42	6.15	1.03	0.51	0.00	Calculated
104	441731	Pipe	J4272	J4278	77.90	4547.81	4547.22	0.7600	2.000	0.0130	10.00	19.69	0.51	5.89	1.07	0.53	0.00	Calculated
105	441732	Pipe	J4278	J0038-0	286.26	4547.22	4544.91	0.8100	2.000	0.0130	10.00	20.32	0.49	5.33	1.16	0.58	0.00	Calculated
106	441739	Pipe	J0052-1	J4287	328.89	4571.48	4566.95	1.3800	2.000	0.0130	0.00	26.55	0.00	0.00	0.47	0.23	0.00	Calculated
107	441740	Pipe	J4287	J4288	119.03	4566.95	4565.39	1.3100	2.000	0.0130	10.00	25.90	0.39	7.33	0.90	0.45	0.00	Calculated
108	441759	Pipe	J441759-0	Jun-198	26.36	4508.14	4507.00	4.3200	1.250	0.0130	10.30	13.43	0.77	10.40	0.94	0.75	0.00	Calculated
109	441760	Pipe	J42886	J42893	400.51	4502.98	4496.93	1.5100	1.500	0.0130	12.30	12.91	0.95	8.04	1.21	0.81	0.00	Calculated
110	441761	Pipe	J42893	J441761-1	341.41	4496.93	4491.44	1.6100	1.500	0.0130	12.30	13.32	0.92	8.33	1.17	0.78	0.00	Calculated
111	441792	Pipe	J421016	J421015	310.72	4601.71	4596.75	1.6000	1.500	0.0130	3.99	13.27	0.30	5.96	0.61	0.40	0.00	Calculated
112	441802	Pipe	J4288	J0054-1	270.73	4565.39	4561.20	1.5500	2.000	0.0130	10.00	28.14	0.36	7.39	0.89	0.45	0.00	Calculated
113	441896	Pipe	J42452	J42451	491.52	4557.88	4552.23	1.1500	4.500	0.0130	155.00	210.84	0.74	13.40	3.07	0.68	0.00	Calculated
114	441897	Pipe	J42453	J42452	244.03	4559.93	4557.88	0.8400	4.500	0.0130	136.99	180.24	0.76	11.10	3.28	0.73	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
115	441900	Pipe	J42454	J42453	67.11	4568.24	4559.93	12.3800	2.000	0.0130	11.69	79.61	0.15	7.93	1.26	0.63	0.00	Calculated
116	441901	Pipe	J42997	J42998	38.08	4568.40	4568.05	0.9200	2.000	0.0130	11.69	21.69	0.54	4.07	1.72	0.86	0.00	Calculated
117	441902	Pipe	J42993	J42997	392.75	4569.84	4568.40	0.3700	2.000	0.0130	11.70	13.70	0.85	4.44	1.56	0.78	0.00	Calculated
118	Link-100	Pipe	Jun-150	Jun-148	1438.39	4605.00	4568.49	2.5400	3.500	0.0130	128.52	160.29	0.80	16.79	2.60	0.74	0.00	Calculated
119	Link-101	Pipe	Jun-148	J42453	400.38	4568.49	4559.93	2.1400	3.500	0.0130	128.52	147.11	0.87	14.19	3.12	0.89	0.00	Calculated
120	Link-108	Pipe	JPR050.01-1	Jun-195	2130.00	4719.05	4677.00	1.9700	2.000	0.0130	13.00	31.79	0.41	8.71	1.03	0.51	0.00	Calculated
121	Link-112	Pipe	Jun-171	Jun-191	728.57	4716.00	4672.00	6.0400	2.500	0.0130	25.00	100.80	0.25	12.04	1.29	0.52	0.00	Calculated
122	Link-114	Pipe	Jun-173	Jun-174	4040.04	4654.00	4557.00	2.4000	2.500	0.0130	59.00	63.56	0.93	15.12	1.86	0.74	0.00	Calculated
123	Link-115	Pipe	Jun-174	Jun-175	1718.75	4557.00	4503.00	3.1400	2.500	0.0130	59.00	72.70	0.81	16.33	1.73	0.69	0.00	Calculated
124	Link-119	Pipe	Jun-180	Jun-181	54.60	4664.65	4664.20	0.8200	1.500	0.0130	4.03	9.54	0.42	6.15	0.61	0.41	0.00	Calculated
125	Link-120	Pipe	Jun-181	Jun-179	756.57	4664.20	4643.71	2.7100	1.500	0.0130	4.01	17.29	0.23	8.72	0.46	0.31	0.00	Calculated
126	Link-121	Pipe	Jun-179	Jun-182	194.97	4643.71	4636.96	3.4600	2.000	0.0130	4.00	42.09	0.10	7.39	0.46	0.23	0.00	Calculated
127	Link-122	Pipe	Jun-182	Jun-183	114.54	4636.96	4634.42	2.2200	2.000	0.0130	4.02	33.69	0.12	8.02	0.44	0.22	0.00	Calculated
128	Link-123	Pipe	Jun-183	J0126-0	31.29	4634.42	4632.19	7.1300	2.000	0.0130	4.02	60.39	0.07	8.96	0.56	0.28	0.00	Calculated
129	Link-125	Pipe	Jun-185	Jun-198	1361.09	4529.00	4507.00	1.6200	1.500	0.0130	2.03	13.35	0.15	6.29	0.61	0.40	0.00	Calculated
130	Link-128	Pipe	J4466-1	Jun-187	856.39	4520.95	4509.00	1.4000	3.000	0.0130	52.01	78.79	0.66	11.66	1.81	0.60	0.00	Calculated
131	Link-133	Pipe	Jun-190	J4289	901.18	4543.09	4539.19	0.4300	3.000	0.0130	25.01	43.88	0.57	7.89	1.38	0.46	0.00	Calculated
132	Link-136	Pipe	Jun-191	Jun-173	2667.96	4672.00	4654.00	0.6700	2.500	0.0130	25.00	33.69	0.74	8.68	1.79	0.72	0.00	Calculated
133	Link-137	Pipe	J0038-0	Jun-190	87.58	4544.91	4543.09	2.0800	3.000	0.0150	25.00	83.33	0.30	7.03	1.51	0.50	0.00	Calculated
134	Link-141	Pipe	J421185	J421189	688.27	4731.42	4728.22	0.4600	2.000	0.0150	10.53	13.37	0.79	5.77	1.13	0.56	0.00	Calculated
135	Link-145	Pipe	Jun-195	Jun-196	1230.52	4677.00	4660.00	1.3800	2.000	0.0150	13.00	23.04	0.56	8.87	1.54	0.77	0.00	Calculated
136	Link-148	Pipe	Jun-198	J42886	77.02	4507.00	4502.98	5.2200	1.500	0.0130	12.30	24.00	0.51	9.59	1.02	0.68	0.00	Calculated
137	Link-152	Pipe	JJR062.03-0	Jun-196	1357.37	4689.20	4660.00	2.1500	3.000	0.0150	84.01	84.78	0.99	13.75	2.47	0.82	0.00	Calculated
138	Link-153	Pipe	Jun-159	Jun-196	920.30	4694.00	4660.00	3.6900	1.500	0.0150	8.00	17.50	0.46	8.77	1.11	0.74	0.00	Calculated
139	Link-157	Pipe	J0050-1	Jun-213	943.17	4579.09	4569.00	1.0700	2.500	0.0150	29.32	36.77	0.80	6.81	2.09	0.84	0.00	Calculated
140	Link-158	Pipe	Jun-213	Jun-214	1737.18	4569.00	4550.00	1.0900	2.500	0.0150	36.72	37.18	0.99	11.64	2.07	0.83	0.00	Calculated
141	Link-160	Pipe	Jun-220	Jun-218	1780.00	4675.00	4620.00	3.0900	2.000	0.0130	15.09	39.77	0.38	10.98	0.92	0.46	0.00	Calculated
142	Link-161	Pipe	Jun-218	Jun-219	875.00	4620.00	4608.00	1.3700	2.500	0.0150	13.71	41.63	0.33	4.47	1.50	0.60	0.00	Calculated
143	Link-162	Pipe	Jun-223	Jun-222	2712.52	4620.00	4577.00	1.5900	3.500	0.0150	70.52	109.78	0.64	14.69	2.49	0.71	0.00	Calculated
144	Link-163	Pipe	Jun-222	1001	2817.09	4577.00	4538.00	1.3800	4.000	0.0150	116.00	146.48	0.79	14.87	2.38	0.60	0.00	Calculated
145	Link-165	Pipe	J0050-1	Jun-213	943.17	4579.09	4572.00	0.7500	2.000	0.0150	16.64	17.00	0.98	6.33	1.58	0.79	0.00	Calculated
146	Link-166	Pipe	Jun-213	Jun-214	1737.18	4572.00	4550.00	1.2700	2.000	0.0150	9.23	22.06	0.42	4.38	1.27	0.64	0.00	Calculated
147	Link-169	Pipe	Jun-214	Jun-215	1487.51	4550.00	4506.00	2.9600	2.500	0.0150	45.95	61.14	0.75	13.56	1.63	0.65	0.00	Calculated
148	Link-171	Pipe	Jun-216	Jun-217	1095.61	4498.00	4493.00	0.4600	4.500	0.0150	172.00	115.13	1.49	10.81	4.50	1.00	285.00	SURCHARGED
149	Link-172	Pipe	Jun-220	Jun-218	1770.15	4675.00	4617.00	3.2800	2.000	0.0150	13.11	34.56	0.38	9.54	0.92	0.46	0.00	Calculated
150	Link-173	Pipe	Jun-218	Jun-219	867.05	4617.00	4610.00	0.8100	2.000	0.0150	10.10	21.06	0.48	6.58	0.98	0.49	0.00	Calculated
151	Link-174	Pipe	Jun-218	Jun-219	867.05	4617.00	4610.00	0.8100	2.500	0.0150	12.30	38.18	0.32	6.87	0.98	0.39	0.00	Calculated
152	Link-176	Pipe	Jun-219	Jun-150	226.56	4608.00	4605.00	1.3200	2.500	0.0150	36.11	40.91	0.88	14.03	2.20	0.88	0.00	Calculated
153	Link-179	Pipe	1001	Jun-221	4844.40	4538.00	4300.00	4.9100	4.000	0.0150	116.00	275.93	0.42	20.94	1.81	0.45	0.00	Calculated
154	Link-206	Pipe	Jun-250	J4287	148.93	4568.00	4566.95	0.7100	2.000	0.0150	10.02	16.46	0.61	5.78	1.09	0.54	0.00	Calculated
155	Link-208	Pipe	J0075-1	J421012	780.87	4605.98	4582.55	3.0000	2.000	0.0130	24.00	39.19	0.61	11.98	1.22	0.61	0.00	Calculated
156	Link-209	Pipe	Jun-196	Jun-251	1481.92	4660.00	4624.00	2.4300	3.500	0.0150	110.12	135.90	0.81	14.41	2.62	0.75	0.00	Calculated
157	Link-210	Pipe	Jun-247	Jun-216	2358.51	4552.00	4507.00	1.9100	2.000	0.0150	25.33	27.08	0.94	9.69	1.76	0.88	0.00	Calculated
158	Link-211	Pipe	Jun-241	Jun-253	1446.36	4627.00	4618.00	0.6200	2.000	0.0150	11.69	15.47	0.76	4.95	1.65	0.82	0.00	Calculated
159	Link-213	Pipe	Jun-188	J4267	61.41	4529.68	4526.93	4.4800	2.000	0.0150	6.37	41.49	0.15	7.26	1.75	0.88	0.00	Calculated
160	Link-214	Pipe	Jun-252	Jun-216	1767.97	4529.00	4498.00	1.7500	4.000	0.0150	123.00	164.85	0.75	10.82	3.40	0.85	0.00	Calculated
161	Link-215	Pipe	Jun-251	Jun-252	3664.89	4624.00	4552.00	1.9600	3.500	0.0150	117.00	122.22	0.96	14.27	2.78	0.80	0.00	Calculated
162	Link-216	Pipe	J42877	Out-32	2398.90	4500.54	4495.03	0.2300	1.500	0.0130	5.00	5.03	0.99	3.39	1.17	0.78	0.00	Calculated
163	Link-217	Pipe	Jun-253	Jun-150	941.00	4618.00	4605.00	1.3800	3.500	0.0150	92.42	102.49	0.90	11.95	2.63	0.75	0.00	Calculated
164	Link-81	Pipe	Jun-135	Jun-151	2565.16	4535.99	4524.18	0.4600	5.000	0.0130	15.00	176.72	0.08	5.46	0.99	0.20	0.00	Calculated
165	Link-98	Pipe	Jun-149	Jun-253	3750.00	4716.00	4618.00	2.6100	3.000	0.0130	75.77	107.82	0.70	14.51	2.37	0.79	0.00	Calculated
166	0110	Channel	J0109-1	J0110-1	57.37	4586.99	4585.43	2.7200	10.000	0.0320	3.99	7142.54	0.00	0.74	0.49	0.05	0.00	
167	JR060.01	Channel	JJR060.01-0	JJR060.01-1	1048.40	4586.22	4562.00	2.3100	10.000	0.0320	6.00	6583.50	0.00	2.56	0.22	0.02	0.00	
168	JR060.02	Channel	JJR060.02-0	JJR060.02-1	911.67	4611.44	4586.88	2.6900	10.000	0.0320	6.00	7109.32	0.00	2.09	0.36	0.04	0.00	
169	JR062.01	Channel	JJR062.01-0	JJR062.01-1	1344.14	4648.54	4611.92	2.7200	10.000	0.0320	0.00	7149.41	0.00	0.00	0.00	0.00	0.00	
170	Link-103	Channel	Jun-151	Jun-152	2649.00	4515.73	4492.00	0.9000	5.000	0.0320	199.77	858.64	0.23	5.90	2.63	0.53	0.00	
171	Link-134	Channel	JJR060.01-1	J0026-1	992.89	4561.00	4546.71	1.4400	10.000	0.0320	6.00	5196.35	0.00	1.77	0.65	0.07	0.00	

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
172	O-200W	Orifice	SN-200W	J0086-0		4536.80	4534.15		1.750		24.26							
173	O-540W	Orifice	SN-540W	J42453		4568.20	4559.93		1.250		0.00							
174	O-610W	Orifice	SN-610W	J42992		4573.00	4570.69		1.000		6.32							
175	O-Comm	Orifice	SN-Comm	J441759-0		4509.40	4508.14		1.250		10.30							
176	O-HHPark	Orifice	SN-HHPa	J441317-0		4727.60	4717.08		1.250		6.91							
177	O-Orch	Orifice	SN-Orch	J431143		4743.00	4739.37		1.000		5.25							
178	O-Pepp	Orifice	SN-Pepp	J441117-0		4618.80	4617.87		0.500		2.98							
179	Orifice-27	Orifice	SN-HillC	J4245		4685.00	4616.24		0.330		1.03							
180	O-SMPN	Orifice	SN-SMPN	Jun-241		4628.60	4627.00		1.670		11.70							
181	O-SMPS	Orifice	SN-SMPS	SN-SMPN		4628.60	4628.60		1.667		5.71							
182	OUT-JR010	Outlet	SN-JR010	Jun-222		4586.00	4577.00				46.00							
183	OUT-JR012	Outlet	SN-JR012	Jun-223		4618.00	4620.00				70.00							
184	OUT-JR020	Outlet	SN-JR020	Jun-135		4554.00	4535.99				15.00							
185	OUT-JR032	Outlet	SN-JR032	Jun-253		4660.00	4618.00				5.00							
186	OUT-JR050	Outlet	SN-JR050	Jun-247		4620.00	4552.00				14.00							
187	OUT-JR062	Outlet	SN-JR068	J0038-0		4632.00	4544.91				15.00							
188	OUT-JR063	Outlet	SN-JR063	Jun-247		4620.00	4552.00				11.00							
189	OUT-JR070	Outlet	SN-JR070	J4263		4565.00	4524.03				21.00							
190	OUT-JR080	Outlet	SN-JR080	Jun-173		4690.00	4654.00				34.00							
191	OUT-JR082	Outlet	SN-JR079	J0080-0		4635.00	4614.73				11.00							
192	Outlet-100	Outlet	Stor-45	Jun-218		4700.00	4620.00				7.95							
193	Outlet-101	Outlet	Stor-46	J0126-1		5000.00	4629.13				2.00							
194	Outlet-102	Outlet	SN-JR061	Jun-252		4632.00	4529.00				6.00							
195	Outlet-103	Outlet	Stor-47	SN-PR040		4730.00	4720.00				160.00							
196	Outlet-104	Outlet	Stor-48	SN-PR050		4760.00	4750.00				83.49							
197	Outlet-105	Outlet	SN-JR065a	Jun-251		4690.00	4624.00				5.00							
198	Outlet-84	Outlet	SN-JR082	Jun-180		4685.00	4664.65				4.00							
199	Outlet-86	Outlet	SN-JR061	Jun-251		4632.00	4624.00				2.00							
200	Outlet-87	Outlet	Stor-34	J0050-0		4632.00	4579.17				18.00							
201	Outlet-90	Outlet	SN-JR031	J42554		4554.00	4531.50				12.00							
202	Outlet-91	Outlet	SN-JR035	J42452		4558.00	4557.88				18.00							
203	Outlet-92	Outlet	SN-JR065a	Jun-196		4690.00	4660.00				5.00							
204	Outlet-93	Outlet	Stor-41	Jun-216		4620.00	4498.00				24.00							
205	Outlet-95	Outlet	SN-JR083	J0126-0		4685.00	4632.19				7.00							
206	Outlet-96	Outlet	SN-JR065	JJR060.02-0		4660.00	4611.44				6.00							
207	Outlet-97	Outlet	Stor-43	J42877		4505.00	4500.54				5.00							
208	Outlet-98	Outlet	Stor-44	Jun-149		4720.00	4716.00				58.00							
209	Outlet-99	Outlet	SN-JR061	Jun-185		4632.00	4529.00				2.00							
210	OUT-PR010	Outlet	SN-PR010	Jun-220		4756.00	4675.00				28.21							
211	OUT-PR020	Outlet	SN-PR020	Jun-149		4720.00	4716.00				17.77							
212	OUT-PR030	Outlet	SN-PR030	Jun-159		4710.00	4694.00				8.00							
213	OUT-PR040	Outlet	SN-PR040	JJR062.04-1		4720.00	4697.75				84.00							
214	OUT-PR050	Outlet	SN-PR050	JPR050.01-1		4750.00	4719.05				13.00							
215	OUT-PR060	Outlet	SN-PR060	Jun-171		5410.00	4716.00				25.00							

FULL BUILD-OUT CONDITION - NORTH
100-YEAR STORM

Project Description

File Name ..... SaratogaStormFuture North.SPF

Project Options

Flow Units ..... CFS
Elevation Type ..... Elevation
Hydrology Method HEC-1
HEC-1 unit hydrograph method ..... SCS Dimensionless
HEC-1 loss method ..... SCS Curve Number
Link Routing Method ..... Hydrodynamic
Enable Overflow Ponding at Nodes ..... YES
Skip Steady State Analysis Time Periods ... NO

Analysis Options

Start Analysis On ..... Jan 01, 2012 00:00:00
End Analysis On ..... Jan 01, 2012 12:00:00
Start Reporting On ..... Jan 01, 2012 00:00:00
Antecedent Dry Days ..... 0 days
Runoff (Dry Weather) Time Step ..... 0 01:00:00 days hh:mm:ss
Runoff (Wet Weather) Time Step ..... 0 00:01:00 days hh:mm:ss
Reporting Time Step ..... 0 00:01:00 days hh:mm:ss
Routing Time Step ..... 15 seconds

Number of Elements

	Qty
Rain Gages	3
Subbasins	44
Nodes	215
Junctions	166
Outfalls	8
Flow Diversions	0
Inlets	0
Storage Nodes	41
Links	215
Channels	6
Pipes	165
Pumps	0
Orifices	10
Weirs	0
Outlets	34
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	100-Year	Time Series	TS-100yr	Cumulative	inches				0.00	
2	10-Year	Time Series	TS-10yr	Cumulative	inches				0.00	
3	25 Year	Time Series	TS-25yr	Cumulative	inches				0.00	

Subbasin Summary

SN	Subbasin ID	Area (ac)	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)
1	JR010	230.62	1.72	1.07	246.76	273.81
2	JR012	348.01	1.72	0.76	262.75	388.80
3	JR020	75.12	1.72	1.50	112.68	141.09
4	JR022	159.04	1.72	1.32	209.30	139.61
5	JR023	24.06	1.72	0.74	17.90	24.69
6	JR024	9.50	1.72	1.04	9.86	14.50
7	JR025	23.83	1.72	1.46	34.89	35.98
8	JR030	140.20	1.72	1.08	151.70	186.63
9	JR031	57.94	1.72	1.32	76.65	99.51
10	JR032A	48.48	1.72	0.43	20.80	32.77
11	JR032B	24.38	1.72	0.53	12.80	16.60
12	JR035	103.96	1.72	0.56	57.80	73.51
13	JR040	26.23	1.72	0.87	22.85	33.70
14	JR050	233.24	1.72	1.11	259.83	274.25
15	JR060	39.27	1.72	1.40	55.14	91.72
16	JR061	87.78	1.72	1.36	119.56	181.00
17	JR063	112.79	1.72	1.05	117.98	172.64
18	JR064A	27.36	1.72	0.54	14.77	24.41
19	JR064B	83.20	1.72	0.57	47.17	57.72
20	JR065	94.86	1.72	1.40	133.18	206.39
21	JR066	81.90	1.72	0.55	44.96	55.47
22	JR067	140.60	1.72	0.76	107.42	124.00
23	JR068	78.41	1.72	1.49	117.07	174.42
24	JR069	123.21	1.72	1.40	172.25	269.93
25	JR070	109.91	1.72	1.30	142.33	176.43
26	JR079	55.29	1.72	1.50	82.71	112.73
27	JR080	170.63	1.72	1.49	254.07	352.81
28	JR082	20.20	1.72	1.49	30.06	46.74
29	JR083	36.82	1.72	1.30	47.79	73.44
30	JR084	37.71	1.72	0.51	19.35	22.64
31	JR085	25.52	1.72	0.61	15.44	25.83
32	JR086	138.78	1.72	0.66	92.01	133.46
33	JR087	23.81	1.72	0.72	17.21	24.06
34	JR088	37.93	1.72	0.54	20.56	36.43
35	JR089	33.28	1.72	0.49	16.34	26.38
36	JR090	58.55	1.72	0.76	44.21	66.86
37	JR091	18.12	1.72	1.13	20.39	32.10
38	JR092	8.80	1.72	1.56	13.68	16.38
39	PR010	174.64	1.72	0.53	91.69	113.43
40	PR020	353.66	1.72	0.63	223.51	275.60
41	PR030	78.69	1.72	0.66	52.09	63.81
42	PR040	2000.99	1.72	0.44	886.44	474.24
43	PR050	1368.43	1.72	0.30	411.90	243.65
44	PR060	735.89	1.72	0.57	418.72	343.15

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	1001	Junction	4538.00	4544.00	4538.00	4544.00	0.00	116.01	4539.82	0.00	4.18	0 00:00	0.00	0.00
2	J0018-0	Junction	4545.56	4548.66	0.00	4551.76	0.00	6.00	4546.15	0.00	2.51	0 00:00	0.00	0.00
3	J0018-1	Junction	4540.09	4544.49	0.00	4548.89	0.00	6.00	4540.70	0.00	3.79	0 00:00	0.00	0.00
4	J0019-0	Junction	4545.76	4549.66	0.00	4553.56	0.00	6.00	4546.99	0.00	2.67	0 00:00	0.00	0.00
5	J0020-1	Junction	4535.12	4539.32	0.00	4543.52	0.00	6.00	4535.73	0.00	3.59	0 00:00	0.00	0.00
6	J0021-1	Junction	4530.51	4534.61	0.00	4538.71	0.00	6.00	4531.40	0.00	3.21	0 00:00	0.00	0.00
7	J0023-0	Junction	4530.35	4533.90	0.00	4537.45	0.00	6.04	4531.22	0.00	2.68	0 00:00	0.00	0.00
8	J0026-1	Junction	4546.71	4549.51	0.00	4552.31	0.00	6.00	4547.76	0.00	8.95	0 00:00	0.00	0.00
9	J0038-0	Junction	4544.91	4550.35	0.00	4550.35	0.00	25.01	4546.22	0.00	4.13	0 00:00	0.00	0.00
10	J0040-0	Junction	4554.09	4558.54	0.00	4562.99	0.00	10.00	4555.03	0.00	3.51	0 00:00	0.00	0.00
11	J0040-1	Junction	4553.18	4557.73	0.00	4562.28	0.00	10.00	4554.11	0.00	3.62	0 00:00	0.00	0.00
12	J0041-0	Junction	4551.21	4555.41	0.00	4559.61	0.00	10.00	4552.14	0.00	3.27	0 00:00	0.00	0.00
13	J0041-1	Junction	4550.28	4555.41	0.00	4567.89	0.00	10.00	4551.22	0.00	4.19	0 00:00	0.00	0.00
14	J0043-0	Junction	4558.86	4564.71	0.00	4570.56	0.00	10.00	4560.12	0.00	4.59	0 00:00	0.00	0.00
15	J0043-1	Junction	4558.42	4563.42	0.00	4568.42	0.00	10.00	4559.30	0.00	4.12	0 00:00	0.00	0.00
16	J0044-1	Junction	4556.59	4561.79	0.00	4566.99	0.00	10.00	4557.45	0.00	4.34	0 00:00	0.00	0.00
17	J0048-0	Junction	4560.70	4566.85	0.00	4579.38	0.00	10.00	4561.58	0.00	5.27	0 00:00	0.00	0.00
18	J0050-0	Junction	4579.17	4587.57	0.00	4595.97	0.00	23.18	4581.67	0.00	5.90	0 00:00	0.00	0.00
19	J0050-1	Junction	4579.09	4587.64	0.00	4596.19	0.00	47.19	4580.82	0.00	6.82	0 00:00	0.00	0.00
20	J0051-1	Junction	4576.60	4581.55	0.00	4586.50	0.00	0.00	4576.60	0.00	4.95	0 00:00	0.00	0.00
21	J0052-1	Junction	4571.48	4575.05	0.00	4578.62	0.00	0.00	4571.48	0.00	3.57	0 00:00	0.00	0.00
22	J0054-1	Junction	4561.20	4566.85	0.00	4572.50	0.00	10.00	4562.14	0.00	4.71	0 00:00	0.00	0.00
23	J0071-0	Junction	4585.38	4589.48	0.00	4593.58	0.00	5.14	4586.15	0.00	3.33	0 00:00	0.00	0.00
24	J0071-1	Junction	4585.32	4588.92	0.00	4592.52	0.00	5.14	4585.60	0.00	3.32	0 00:00	0.00	0.00
25	J0073-0	Junction	4605.89	4616.51	0.00	4627.14	0.00	0.00	4605.89	0.00	10.62	0 00:00	0.00	0.00
26	J0073-1	Junction	4605.36	4612.03	0.00	4618.70	0.00	0.00	4605.36	0.00	6.67	0 00:00	0.00	0.00
27	J0074-0	Junction	4609.03	4618.78	0.00	4628.53	0.00	11.00	4610.21	0.00	8.57	0 00:00	0.00	0.00
28	J0074-1	Junction	4608.13	4617.03	0.00	4625.93	0.00	11.00	4609.10	0.00	7.93	0 00:00	0.00	0.00
29	J0075-1	Junction	4605.98	4617.53	0.00	4629.08	0.00	24.00	4607.11	0.00	10.42	0 00:00	0.00	0.00
30	J0076-0	Junction	4609.87	4618.92	0.00	4627.97	0.00	11.00	4611.32	0.00	7.60	0 00:00	0.00	0.00
31	J0077-0	Junction	4610.90	4619.15	0.00	4627.40	0.00	11.00	4612.37	0.00	6.78	0 00:00	0.00	0.00
32	J0078-0	Junction	4612.12	4620.37	0.00	4628.62	0.00	11.00	4613.53	0.00	6.84	0 00:00	0.00	0.00
33	J0079-0	Junction	4613.74	4621.69	0.00	4629.64	0.00	11.00	4615.06	0.00	6.63	0 00:00	0.00	0.00
34	J0080-0	Junction	4614.73	4619.33	0.00	4623.93	0.00	11.00	4616.15	0.00	3.18	0 00:00	0.00	0.00
35	J0080-1	Junction	4614.29	4620.14	0.00	4625.99	0.00	11.00	4615.63	0.00	4.51	0 00:00	0.00	0.00
36	J0084-0	Junction	4532.69	4542.04	0.00	4551.39	0.00	39.82	4543.87	1.83	0.00	0 00:00	0.00	0.00
37	J0086-0	Junction	4534.15	4542.55	0.00	4542.55	0.00	137.71	4542.55	0.00	0.00	0 03:47	59.67	71.00
38	J0086-1	Junction	4533.20	4541.65	0.00	4550.10	0.00	39.82	4543.86	2.21	0.00	0 00:00	0.00	0.00
39	J0108-1	Junction	4586.74	4593.41	0.00	4600.08	0.00	0.00	4586.74	0.00	6.67	0 00:00	0.00	0.00
40	J0109-1	Junction	4586.99	4593.23	0.00	4599.90	0.00	5.14	4587.19	0.00	9.80	0 00:00	0.00	0.00
41	J0110-1	Junction	4585.43	4590.68	0.00	4597.35	0.00	5.14	4586.38	0.00	9.05	0 00:00	0.00	0.00
42	J0125-0	Junction	4626.22	4632.02	0.00	4637.82	0.00	13.00	4626.94	0.00	5.08	0 00:00	0.00	0.00
43	J0125-1	Junction	4617.41	4622.06	0.00	4626.71	0.00	13.00	4618.42	0.00	3.64	0 00:00	0.00	0.00
44	J0126-0	Junction	4632.19	4638.49	0.00	4644.79	0.00	11.00	4632.94	0.00	5.55	0 00:00	0.00	0.00
45	J0126-1	Junction	4629.13	4634.00	0.00	4657.46	0.00	13.00	4630.19	0.00	3.81	0 00:00	0.00	0.00
46	J0127-0	Junction	4606.32	4617.37	0.00	4628.42	0.00	0.00	4606.32	0.00	11.05	0 00:00	0.00	0.00
47	J0129-0	Junction	4615.74	4620.29	0.00	4624.84	0.00	13.00	4616.49	0.00	3.80	0 00:00	0.00	0.00
48	J421012	Junction	4582.55	4590.95	0.00	4599.35	0.00	24.00	4583.86	0.00	7.09	0 00:00	0.00	0.00
49	J421015	Junction	4596.75	4601.15	0.00	4605.55	0.00	5.16	4597.50	0.00	3.65	0 00:00	0.00	0.00
50	J421016	Junction	4601.71	4610.26	0.00	4618.81	0.00	5.21	4602.36	0.00	7.90	0 00:00	0.00	0.00
51	J421017	Junction	4605.36	4614.06	0.00	4622.76	0.00	5.39	4606.12	0.00	7.94	0 00:00	0.00	0.00
52	J421018	Junction	4608.21	4614.81	0.00	4621.41	0.00	5.37	4608.70	0.00	6.11	0 00:00	0.00	0.00
53	J421019	Junction	4610.44	4615.14	0.00	4619.84	0.00	5.52	4611.09	0.00	4.05	0 00:00	0.00	0.00
54	J421185	Junction	4731.42	4749.37	0.00	4767.32	0.00	33.01	4749.33	0.00	0.04	0 00:00	0.00	0.00
55	J421186	Junction	4730.77	4747.62	0.00	4764.47	0.00	11.16	4749.74	2.12	0.00	0 00:00	0.00	0.00
56	J421187	Junction	4730.20	4746.45	0.00	4762.70	0.00	10.82	4749.23	2.78	0.00	0 00:00	0.00	0.00
57	J421188	Junction	4729.81	4745.66	0.00	4761.51	0.00	10.82	4747.34	1.68	0.00	0 00:00	0.00	0.00
58	J421189	Junction	4728.22	4739.47	0.00	4750.72	0.00	33.01	4750.72	11.25	0.00	0 03:11	0.00	0.00
59	J421190	Junction	4716.50	4729.05	0.00	4741.60	0.00	32.00	4718.38	0.00	10.67	0 00:00	0.00	0.00
60	J421191	Junction	4713.49	4725.79	0.00	4738.09	0.00	30.65	4714.56	0.00	11.23	0 00:00	0.00	0.00
61	J421192	Junction	4703.92	4713.42	0.00	4722.92	0.00	31.01	4710.37	0.00	3.05	0 00:00	0.00	0.00
62	J421193	Junction	4694.15	4701.55	0.00	4708.95	0.00	30.58	4708.95	7.40	0.00	0 02:49	0.00	0.00
63	J421194	Junction	4687.36	4694.76	0.00	4702.16	0.00	53.14	4702.16	7.40	0.00	0 02:55	1.02	17.00
64	J421195	Junction	4670.77	4676.77	0.00	4682.77	0.00	47.67	4682.77	6.00	0.00	0 03:02	3.45	30.00
65	J421196	Junction	4663.74	4670.24	0.00	4676.74	0.00	44.14	4676.74	6.50	0.00	0 02:49	0.00	5.00
66	J421197	Junction	4733.85	4743.45	0.00	4753.05	0.00	13.84	4753.05	9.60	0.00	0 03:10	0.00	0.00
67	J421200	Junction	4733.33	4743.58	0.00	4753.83	0.00	13.83	4753.33	9.75	0.00	0 00:00	0.00	0.00
68	J421201	Junction	4732.57	4746.07	0.00	4759.57	0.00	13.83	4750.08	4.01	0.00	0 00:00	0.00	0.00
69	J4244	Junction	4522.27	4528.57	0.00	4534.87	0.00	51.95	4524.59	0.00	3.98	0 00:00	0.00	0.00
70	J4245	Junction	4616.24	4622.54	0.00	4628.84	0.00	5.64	4616.73	0.00	5.81	0 00:00	0.00	0.00
71	J42450	Junction	4546.90	4554.75	0.00	4562.60	0.00	173.56	4549.84	0.00	4.91	0 00:00	0.00	0.00
72	J42451	Junction	4552.23	4560.13	0.00	4568.03	0.00	173.56	4555.49	0.00	4.64	0 00:00	0.00	0.00
73	J42452	Junction	4557.88	4566.58	0.00	4575.28	0.00	173.56	4561.34	0.00	5.24	0 00:00	0.00	0.00
74	J42453	Junction	4559.93	4570.43	0.00	4580.93	0.00	155.56	4563.75	0.00	6.68	0 00:00	0.00	0.00
75	J42454	Junction	4568.24	4570.99	0.00	4573.74	0.00	21.76	4569.05	0.00	1.94	0 00:00	0.00	0.00
76	J4249	Junction	4522.92	4529.59	0.00	4529.59	0.00	51.95	4526.77	0.00	2.82	0 00:00	0.00	0.00
77	J42554	Junction	4531.50	4542.18	0.00	4542.18	0.00	224.10	4542.18	0.00	0.00	0 03:47	0.00	0.00
78	J4260	Junction	4523.15	4529.55	0.00	4535.95	0.00	51.95	4525.36	0.00	4.19	0 00:00	0.00	0.00
79	J4262	Junction	4523.56	4529.96	0.00	4536.36	0.00	51.95	4527.49	0.00	2.47	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
80	J4263	Junction	4524.03	4530.03	0.00	4536.03	0.00	51.95	4529.29	0.00	0.74	0 00:00	0.00	0.00
81	J4264	Junction	4524.56	4531.56	0.00	4538.56	0.00	30.95	4530.08	0.00	1.48	0 00:00	0.00	0.00
82	J4265	Junction	4524.66	4532.76	0.00	4540.86	0.00	30.95	4530.26	0.00	2.50	0 00:00	0.00	0.00
83	J4267	Junction	4526.93	4533.08	0.00	4539.23	0.00	30.95	4532.12	0.00	0.96	0 00:00	0.00	0.00
84	J4272	Junction	4547.81	4553.01	0.00	4558.21	0.00	10.00	4548.93	0.00	4.08	0 00:00	0.00	0.00
85	J4278	Junction	4547.22	4551.82	0.00	4556.42	0.00	10.00	4548.27	0.00	3.55	0 00:00	0.00	0.00
86	J4287	Junction	4566.95	4570.85	0.00	4574.75	0.00	10.02	4567.88	0.00	2.97	0 00:00	0.00	0.00
87	J42877	Junction	4500.54	4509.34	0.00	4509.34	0.00	5.00	4502.02	0.00	7.32	0 00:00	0.00	0.00
88	J4288	Junction	4565.39	4569.39	0.00	4573.39	0.00	10.00	4566.23	0.00	3.16	0 00:00	0.00	0.00
89	J42886	Junction	4502.98	4506.60	0.00	4513.27	0.00	14.18	4507.92	1.32	0.00	0 00:00	0.00	0.00
90	J42887	Junction	4628.69	4635.94	0.00	4643.19	0.00	197.57	4643.19	7.25	0.00	0 03:32	0.00	0.00
91	J42888	Junction	4631.26	4638.76	0.00	4646.26	0.00	197.58	4646.26	7.50	0.00	0 03:32	0.00	0.00
92	J4289	Junction	4539.19	4545.39	0.00	4551.59	0.00	25.01	4540.23	0.00	5.16	0 00:00	0.00	0.00
93	J42890	Junction	4637.18	4645.63	0.00	4654.08	0.00	199.27	4653.37	7.74	0.00	0 00:00	0.00	0.00
94	J42891	Junction	4638.52	4645.92	0.00	4653.32	0.00	49.77	4653.32	7.40	0.00	0 02:57	6.01	17.00
95	J42893	Junction	4496.93	4500.63	0.00	4504.33	0.00	14.18	4502.47	1.84	0.00	0 00:00	0.00	0.00
96	J42901	Junction	4655.25	4661.05	0.00	4666.85	0.00	53.58	4666.85	5.80	0.00	0 02:48	0.00	0.00
97	J42903	Junction	4651.21	4656.91	0.00	4662.61	0.00	53.59	4662.61	5.70	0.00	0 02:48	0.00	0.00
98	J42904	Junction	4646.81	4652.41	0.00	4658.01	0.00	53.59	4658.01	5.60	0.00	0 03:06	7.72	31.00
99	J42905	Junction	4645.67	4651.87	0.00	4658.07	0.00	49.74	4657.73	5.86	0.00	0 00:00	0.00	0.00
100	J42906	Junction	4644.64	4651.14	0.00	4657.64	0.00	49.75	4657.49	6.35	0.00	0 00:00	0.00	0.00
101	J42907	Junction	4643.68	4650.23	0.00	4656.78	0.00	49.76	4656.72	6.49	0.00	0 00:00	0.00	0.00
102	J42908	Junction	4642.03	4649.63	0.00	4657.23	0.00	49.76	4654.84	5.21	0.00	0 00:00	0.00	0.00
103	J42958	Junction	4715.39	4728.89	0.00	4742.39	0.00	22.16	4723.52	0.00	5.37	0 00:00	0.00	0.00
104	J42959	Junction	4715.17	4726.62	0.00	4738.07	0.00	22.16	4723.12	0.00	3.50	0 00:00	0.00	0.00
105	J42960	Junction	4699.92	4706.62	0.00	4713.32	0.00	22.35	4713.32	6.70	0.00	0 03:01	0.00	0.00
106	J42961	Junction	4683.98	4689.48	0.00	4694.98	0.00	22.36	4694.98	5.50	0.00	0 03:01	0.00	0.00
107	J42962	Junction	4673.12	4679.32	0.00	4685.52	0.00	20.48	4685.52	6.20	0.00	0 03:01	0.00	0.00
108	J42963	Junction	4662.65	4668.65	0.00	4674.65	0.00	20.48	4674.65	6.00	0.00	0 02:49	0.27	7.00
109	J42964	Junction	4660.16	4667.46	0.00	4674.76	0.00	53.59	4674.76	7.30	0.00	0 02:48	0.00	0.00
110	J42992	Junction	4570.69	4575.49	0.00	4580.29	0.00	47.93	4580.29	4.80	0.00	0 03:20	11.42	39.00
111	J42993	Junction	4569.84	4574.59	0.00	4579.34	0.00	21.76	4577.69	3.10	0.00	0 00:00	0.00	0.00
112	J42997	Junction	4568.40	4572.55	0.00	4576.70	0.00	21.76	4574.24	1.69	0.00	0 00:00	0.00	0.00
113	J42998	Junction	4568.05	4573.15	0.00	4578.25	0.00	21.76	4573.46	0.31	0.00	0 00:00	0.00	0.00
114	J431143	Junction	4739.37	4742.94	0.00	4746.51	0.00	27.61	4746.51	3.57	0.00	0 03:13	2.95	19.00
115	J441117-0	Junction	4617.87	4629.52	0.00	4636.19	0.00	4.43	4618.36	0.00	11.16	0 00:00	0.00	0.00
116	J441211-0	Junction	4626.54	4631.04	0.00	4635.54	0.00	197.57	4635.54	4.50	0.00	0 03:32	50.51	246.00
117	J441211-1	Junction	4623.61	4630.28	0.00	4636.95	0.00	197.57	4636.95	6.67	0.00	0 03:32	0.20	1.00
118	J441317-0	Junction	4717.08	4727.19	0.00	4737.29	0.00	22.16	4731.22	4.03	0.00	0 00:00	0.00	0.00
119	J441759-0	Junction	4508.14	4517.96	0.00	4524.63	0.00	12.75	4511.08	0.00	6.88	0 00:00	0.00	0.00
120	J4466-1	Junction	4520.95	4529.97	0.00	4536.64	0.00	51.95	4522.79	0.00	7.18	0 00:00	0.00	0.00
121	JJR060.01-0	Junction	4586.22	4592.89	0.00	4599.56	0.00	6.00	4586.45	0.00	9.77	0 00:00	0.00	0.00
122	JJR060.01-1	Junction	4561.00	4568.67	0.00	4575.34	0.00	6.00	4561.26	0.00	10.74	0 00:00	0.00	0.00
123	JJR060.02-0	Junction	4611.44	4618.11	0.00	4624.78	0.00	6.00	4611.66	0.00	9.78	0 00:00	0.00	0.00
124	JJR060.02-1	Junction	4586.88	4593.55	0.00	4600.22	0.00	6.00	4587.38	0.00	9.50	0 00:00	0.00	0.00
125	JJR062.01-0	Junction	4648.54	4655.21	0.00	4661.88	0.00	0.00	4648.54	0.00	10.00	0 00:00	0.00	0.00
126	JJR062.01-1	Junction	4611.92	4618.59	0.00	4625.26	0.00	0.00	4611.92	0.00	10.00	0 00:00	0.00	0.00
127	JJR062.02-1	Junction	4648.89	4655.56	0.00	4662.23	0.00	0.00	4648.89	0.00	6.67	0 00:00	0.00	0.00
128	JJR062.03-0	Junction	4689.20	4695.87	0.00	4702.54	0.00	84.05	4691.77	0.00	11.89	0 00:00	0.00	0.00
129	JJR062.04-1	Junction	4697.75	4704.42	0.00	4711.09	0.00	84.00	4699.99	0.00	4.96	0 00:00	0.00	0.00
130	JPR050.01-1	Junction	4719.05	4725.72	0.00	4732.39	0.00	13.00	4719.94	0.00	5.78	0 00:00	0.00	0.00
131	Jun-135	Junction	4535.99	4541.99	0.00	0.00	0.00	15.00	4536.98	0.00	5.01	0 00:00	0.00	0.00
132	Jun-148	Junction	4568.49	4578.00	0.00	4578.00	0.00	135.70	4571.64	0.00	6.36	0 00:00	0.00	0.00
133	Jun-149	Junction	4716.00	4726.00	0.00	4726.00	0.00	76.00	4717.86	0.00	8.14	0 00:00	0.00	0.00
134	Jun-150	Junction	4605.00	4615.00	0.00	4617.00	0.00	135.71	4607.47	0.00	7.53	0 00:00	0.00	0.00
135	Jun-151	Junction	4515.73	4523.73	0.00	4523.73	0.00	230.00	4518.54	0.00	10.64	0 00:00	0.00	0.00
136	Jun-159	Junction	4694.00	4701.00	0.00	0.00	0.00	8.00	4694.71	0.00	6.29	0 00:00	0.00	0.00
137	Jun-171	Junction	4716.00	4721.00	4716.00	4721.00	0.00	25.00	4716.85	0.00	4.15	0 00:00	0.00	0.00
138	Jun-173	Junction	4654.00	4670.00	4654.00	4670.00	0.00	59.00	4655.97	0.00	14.03	0 00:00	0.00	0.00
139	Jun-174	Junction	4557.00	4563.00	4557.00	4563.00	0.00	59.00	4558.74	0.00	4.26	0 00:00	0.00	0.00
140	Jun-179	Junction	4643.71	4650.00	4643.71	0.00	0.00	4.01	4644.13	0.00	5.87	0 00:00	0.00	0.00
141	Jun-180	Junction	4664.65	4670.00	4664.65	0.00	0.00	4.00	4665.36	0.00	4.64	0 00:00	0.00	0.00
142	Jun-181	Junction	4664.20	4670.00	4664.20	0.00	0.00	4.03	4664.71	0.00	5.29	0 00:00	0.00	0.00
143	Jun-182	Junction	4636.96	4641.46	4636.96	4641.46	0.00	4.00	4637.46	0.00	4.00	0 00:00	0.00	0.00
144	Jun-183	Junction	4634.42	4638.52	4634.42	4638.52	0.00	4.02	4634.80	0.00	3.72	0 00:00	0.00	0.00
145	Jun-185	Junction	4529.00	4534.00	4529.00	4534.00	0.00	2.00	4529.42	0.00	4.58	0 00:00	0.00	0.00
146	Jun-188	Junction	4529.68	4534.18	1236.00	4542.00	0.00	6.08	4531.17	0.00	3.01	0 00:00	0.00	0.00
147	Jun-190	Junction	4543.09	4549.89	0.00	4555.69	0.00	25.01	4544.81	0.00	5.08	0 00:00	0.00	0.00
148	Jun-191	Junction	4672.00	4678.00	0.00	4678.00	0.00	25.00	4673.73	0.00	4.27	0 00:00	0.00	0.00
149	Jun-195	Junction	4677.00	4683.00	4677.00	4683.00	0.00	13.00	4678.08	0.00	4.92	0 00:00	0.00	0.00
150	Jun-196	Junction	4660.00	4666.00	4660.00	4666.00	0.00	110.00	4662.43	0.00	3.57	0 00:00	0.00	0.00
151	Jun-198	Junction	4507.00	4513.00	4507.00	4513.00	0.00	14.74	4509.81	0.00	3.19	0 00:00	0.00	0.00
152	Jun-213	Junction	4569.00	4578.00	4572.00	4578.00	0.00	47.14	4572.96	0.00	5.04	0 00:00	0.00	0.00
153	Jun-214	Junction	4550.00	4556.00	4550.00	4556.00	0.00	47.14	4551.67	0.00	4.33	0 00:00	0.00	0.00
154	Jun-216	Junction	4498.00	4512.00	0.00	4512.00	0.00	172.00	4509.57	0.00	2.43	0 00:00	0.00	0.00
155	Jun-218	Junction	4620.00	4623.00	4617.00	4623.00	0.00	39.70	4621.04	0.00	1.96	0 00:00	0.00	0.00
156	Jun-219	Junction	4608.00	4616.00	4610.00	4616.00	0.00	39.70	4610.72	0.00	5.28	0 00:00	0.00	0.00
157	Jun-220	Junction	4675.00	4681.00	4675.00	4681.00	0.00	31.00	4675.90	0.00	5.10	0 00:00	0.00	0.00
158	Jun-222	Junction	4577.00	4583.00	4577.00	4583.00	0.00	116.00	4579.95	0.00	3.05	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
159	Jun-223	Junction	4620.00	4626.00	4620.00	4626.00	0.00	70.00	4622.03	0.00	3.97	0 00:00	0.00	0.00
160	Jun-241	Junction	4627.00	4635.00	4623.00	4635.00	0.00	15.54	4629.72	0.00	5.28	0 00:00	0.00	0.00
161	Jun-247	Junction	4552.00	4558.00	4552.00	4558.00	0.00	25.00	4553.54	0.00	4.46	0 00:00	0.00	0.00
162	Jun-250	Junction	4568.00	4574.00	0.00	0.00	0.00	10.00	4569.24	0.00	4.76	0 00:00	0.00	0.00
163	Jun-251	Junction	4624.00	4630.00	4624.00	4630.00	0.00	117.15	4626.82	0.00	3.18	0 00:00	0.00	0.00
164	Jun-252	Junction	4529.00	4534.00	0.00	0.00	0.00	123.00	4531.79	0.00	23.71	0 00:00	0.00	0.00
165	Jun-253	Junction	4618.00	4624.00	2937.00	4622.00	0.00	96.13	4621.02	0.00	2.98	0 00:00	0.00	0.00
166	Jun-254	Junction	4637.00	4643.00	0.00	0.00	0.00	0.00	4637.00	0.00	6.00	0 00:00	0.00	0.00
167	J441761-1	Outfall	4491.44					14.18	4492.94					
168	Jun-152	Outfall	4492.00					229.60	4494.80					
169	Jun-175	Outfall	4503.00					59.00	4504.71					
170	Jun-187	Outfall	4509.00					51.95	4510.78					
171	Jun-215	Outfall	4506.00					47.14	4507.65					
172	Jun-217	Outfall	4493.00					172.00	4497.50					
173	Jun-221	Outfall	4300.00					116.00	4301.81					
174	Out-32	Outfall	4495.03					5.00	4495.89					
175	SN-200W	Storage Node	4536.80	4542.00	0.00		20.00	139.61	4677.55				0.73	84.00
176	SN-540W	Storage Node	4568.20	3.20	0.00		20.00	0.00	4568.20				0.00	0.00
177	SN-610W	Storage Node	4573.00	4576.40	0.00		20.00	55.05	4733.68				0.86	60.00
178	SN-Comm	Storage Node	4509.40	4519.40	0.00		0.00	91.71	4515.12				0.00	0.00
179	SN-HHPa	Storage Node	4727.60	2.40	0.00		20.00	26.38	4742.66				0.08	599.00
180	SN-HillC	Storage Node	4685.00	4695.00	0.00		0.00	32.10	4693.49				0.00	0.00
181	SN-JR010	Storage Node	4586.00	4596.00	0.00		0.00	273.81	4594.10				0.00	0.00
182	SN-JR012	Storage Node	4618.00	4628.00	0.00		0.00	388.80	4626.11				0.00	0.00
183	SN-JR020	Storage Node	4554.00	4564.00	0.00		0.00	141.09	4560.70				0.00	0.00
184	SN-JR031	Storage Node	4554.00	4564.00	0.00		0.00	99.51	4559.99				0.00	0.00
185	SN-JR032	Storage Node	4660.00	4670.00	0.00		0.00	16.60	4663.96				0.00	0.00
186	SN-JR035	Storage Node	4558.00	4568.00	0.00		0.00	73.51	4563.21				0.00	0.00
187	SN-JR050	Storage Node	4620.00	4630.00	0.00		0.00	186.63	4627.45				0.00	0.00
188	SN-JR061	Storage Node	4632.00	4646.00	0.00		0.00	181.00	4639.02				0.00	0.00
189	SN-JR063	Storage Node	4620.00	4630.00	0.00		0.00	172.64	4626.96				0.00	0.00
190	SN-JR065	Storage Node	4660.00	4670.00	0.00		0.00	269.93	4668.07				0.00	0.00
191	SN-JR065a	Storage Node	4690.00	4698.00	0.00		0.00	206.39	4697.28				0.00	0.00
192	SN-JR068	Storage Node	4632.00	4646.00	0.00		0.00	174.42	4638.84				0.00	0.00
193	SN-JR070	Storage Node	4565.00	4575.00	0.00		0.00	176.43	4572.10				0.00	0.00
194	SN-JR079	Storage Node	4635.00	4645.00	0.00		0.00	112.73	4641.20				0.00	0.00
195	SN-JR080	Storage Node	4690.00	4700.00	0.00		0.00	352.81	4698.59				0.00	0.00
196	SN-JR082	Storage Node	4685.00	4695.00	0.00		0.00	46.73	4689.94				0.00	0.00
197	SN-JR083	Storage Node	4685.00	4695.00	0.00		0.00	73.44	4690.41				0.00	0.00
198	SN-Orch	Storage Node	4743.00	2.80	0.00		20.00	48.10	4797.41				0.28	599.00
199	SN-Pepp	Storage Node	4618.80	10.80	0.00		20.00	197.57	4640.06				1.74	597.00
200	SN-PR010	Storage Node	4756.00	4766.00	0.00		0.00	113.43	4761.74				0.00	0.00
201	SN-PR020	Storage Node	4720.00	4730.00	0.00		0.00	57.72	4724.84				0.00	0.00
202	SN-PR030	Storage Node	4710.00	4720.00	0.00		0.00	63.81	4715.43				0.00	0.00
203	SN-PR040	Storage Node	4720.00	4735.00	0.00		0.00	160.00	4731.27				0.00	0.00
204	SN-PR050	Storage Node	4750.00	4770.00	0.00		0.00	108.00	4760.69				0.00	0.00
205	SN-PR060	Storage Node	5410.00	5420.00	0.00		0.00	343.15	5420.00				43.90	78.00
206	SN-SMPN	Storage Node	4628.60	3.00	0.00		20.00	55.47	4631.51				0.00	599.00
207	SN-SMPS	Storage Node	4628.60	3.20	0.00		20.00	29.59	4631.27				0.00	599.00
208	Stor-34	Storage Node	4632.00	4646.00	0.00		0.00	124.00	4638.43				0.00	0.00
209	Stor-41	Storage Node	4620.00	4630.00	0.00		0.00	274.25	4628.76				0.00	0.00
210	Stor-43	Storage Node	4505.00	4515.00	0.00		0.00	33.70	4509.56				0.00	0.00
211	Stor-44	Storage Node	4720.00	4730.00	0.00		0.00	275.60	4727.58				0.00	0.00
212	Stor-45	Storage Node	4700.00	15.00	0.00		0.00	32.77	4704.29				0.00	599.00
213	Stor-46	Storage Node	5000.00	15.00	0.00		0.00	16.38	5004.26				0.00	597.00
214	Stor-47	Storage Node	4730.00	15.00	0.00		0.00	474.24	4740.96				0.00	470.00
215	Stor-48	Storage Node	4760.00	15.00	0.00		0.00	243.65	4767.70				0.00	579.00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
1	0017	Pipe	JJR062.04-1	JJR062.03-0	160.92	4697.95	4696.66	0.8000	7.000	0.0130	84.05	571.97	0.15	9.77	1.92	0.28	0.00	Calculated
2	0028	Pipe	J0018-0	J0018-1	263.14	4545.56	4540.09	2.0800	2.000	0.0130	6.00	32.62	0.18	7.56	0.60	0.30	0.00	Calculated
3	0029	Pipe	J0019-0	J0018-0	186.78	4545.76	4545.56	0.1100	2.000	0.0130	6.00	7.40	0.81	3.59	1.05	0.53	0.00	Calculated
4	0030	Pipe	J0018-1	J0020-1	262.46	4540.09	4535.12	1.8900	2.000	0.0130	6.00	31.13	0.19	7.40	0.61	0.30	0.00	Calculated
5	0031	Pipe	J0020-1	J0021-1	269.53	4535.12	4530.51	1.7100	2.000	0.0130	6.00	29.59	0.20	5.98	0.75	0.37	0.00	Calculated
6	0033	Pipe	J0023-0	Jun-188	66.43	4530.35	4529.68	1.0100	2.000	0.0130	6.08	22.72	0.27	7.05	1.18	0.59	0.00	Calculated
7	0034	Pipe	J0021-1	J0023-0	4.79	4530.51	4530.35	3.3400	2.000	0.0130	6.04	41.35	0.15	5.28	0.88	0.44	0.00	Calculated
8	0037	Pipe	J0026-1	J0019-0	168.43	4546.71	4545.76	0.5600	1.500	0.0130	6.00	7.89	0.76	4.16	1.14	0.76	0.00	Calculated
9	0055	Pipe	J0040-0	J0040-1	58.27	4554.09	4553.18	1.5600	2.000	0.0130	10.00	28.27	0.35	6.92	0.94	0.47	0.00	Calculated
10	0056	Pipe	J0041-0	J0041-1	54.09	4551.21	4550.28	1.7200	2.000	0.0130	10.00	29.66	0.34	6.94	0.93	0.47	0.00	Calculated
11	0057	Pipe	J0040-1	J0041-0	158.86	4553.18	4551.21	1.2400	2.000	0.0130	10.00	25.19	0.40	6.99	0.93	0.47	0.00	Calculated
12	0058	Pipe	J0043-0	J0043-1	92.05	4558.86	4558.42	0.4800	2.000	0.0130	10.00	15.64	0.64	5.10	1.20	0.60	0.00	Calculated
13	0059	Pipe	J0043-1	J0044-1	112.20	4558.42	4556.59	1.6300	2.000	0.0130	10.00	28.89	0.35	7.63	0.87	0.43	0.00	Calculated
14	0062	Pipe	J0044-1	J0040-0	157.83	4556.59	4554.09	1.5800	2.000	0.0130	10.00	28.47	0.35	7.26	0.90	0.45	0.00	Calculated
15	0063	Pipe	J0048-0	J0043-0	109.87	4560.70	4558.86	1.6700	2.000	0.0130	10.00	29.28	0.34	5.83	1.07	0.54	0.00	Calculated
16	0065	Pipe	J0050-0	J0050-1	31.55	4579.17	4579.09	0.2500	2.000	0.0130	23.19	11.39	2.04	7.61	1.86	0.93	0.00	> CAPACITY
17	0067	Pipe	J0051-1	J0052-1	401.42	4576.60	4571.48	1.2800	2.000	0.0130	0.00	25.55	0.00	0.00	0.00	0.00	0.00	Calculated
18	0068	Pipe	J421012	J0050-1	127.27	4582.55	4579.09	2.7200	2.000	0.0130	24.00	37.30	0.64	11.52	1.52	0.76	0.00	Calculated
19	0071	Pipe	J0071-0	J0071-1	6.93	4585.38	4585.32	0.8700	1.500	0.0130	5.14	9.77	0.53	9.40	0.52	0.35	0.00	Calculated
20	0073	Pipe	J0073-0	J0073-1	213.70	4605.89	4605.36	0.2500	2.000	0.0130	0.00	11.27	0.00	0.00	0.00	0.00	0.00	Calculated
21	0074	Pipe	J0074-0	J0074-1	128.38	4609.03	4608.13	0.7000	2.000	0.0130	11.00	18.94	0.58	5.96	1.14	0.57	0.00	Calculated
22	0075	Pipe	J0074-1	J0075-1	166.80	4608.13	4605.98	1.2900	2.000	0.0130	11.00	25.68	0.43	8.01	1.05	0.53	0.00	Calculated
23	0076	Pipe	J0076-0	J0074-0	244.02	4609.87	4609.03	0.3400	2.000	0.0130	11.00	13.27	0.83	5.02	1.32	0.66	0.00	Calculated
24	0077	Pipe	J0077-0	J0076-0	295.53	4610.90	4609.87	0.3500	2.000	0.0130	11.00	13.36	0.82	4.48	1.46	0.73	0.00	Calculated
25	0078	Pipe	J0078-0	J0077-0	319.35	4612.12	4610.90	0.3800	2.000	0.0130	11.00	13.98	0.79	4.55	1.44	0.72	0.00	Calculated
26	0079	Pipe	J0079-0	J0078-0	370.85	4613.74	4612.12	0.4400	2.000	0.0130	11.00	14.95	0.74	4.82	1.37	0.68	0.00	Calculated
27	0082	Pipe	J0080-0	J0080-1	95.65	4614.73	4614.29	0.4600	2.000	0.0130	11.00	15.34	0.72	4.76	1.38	0.69	0.00	Calculated
28	0083	Pipe	J0080-1	J0079-0	98.39	4614.29	4613.74	0.5600	2.000	0.0130	11.00	16.91	0.65	4.95	1.33	0.67	0.00	Calculated
29	0084	Pipe	J0084-0	J42554	45.00	4532.69	4532.00	1.5300	2.000	0.0130	39.82	28.01	1.42	12.68	2.00	1.00	182.00	SURCHARGED
30	0086	Pipe	J0086-0	J0086-1	37.43	4534.15	4533.20	2.5400	2.000	0.0130	39.82	36.04	1.10	12.68	2.00	1.00	191.00	SURCHARGED
31	0087	Pipe	J0086-1	J0084-0	23.15	4533.20	4532.69	2.2000	2.000	0.0130	39.82	33.58	1.19	12.68	2.00	1.00	204.00	SURCHARGED
32	0108	Pipe	J0073-1	J0108-1	429.88	4605.36	4586.74	4.3300	2.000	0.0130	0.00	47.08	0.00	0.00	0.00	0.00	0.00	Calculated
33	0125	Pipe	J0125-0	J0125-1	204.42	4626.22	4617.41	4.3100	2.000	0.0130	13.00	46.96	0.28	10.02	0.86	0.43	0.00	Calculated
34	0126	Pipe	J0126-0	J0126-1	91.91	4632.19	4629.13	3.3300	2.000	0.0130	11.00	41.28	0.27	8.33	0.90	0.45	0.00	Calculated
35	0127	Pipe	J0127-0	J0073-0	76.18	4606.32	4605.89	0.5600	2.000	0.0130	0.00	17.00	0.00	0.00	0.00	0.00	0.00	Calculated
36	0128	Pipe	J0126-1	J0125-0	222.85	4629.13	4626.22	1.3100	2.000	0.0130	13.00	25.85	0.50	8.15	1.03	0.52	0.00	Calculated
37	0129	Pipe	J0129-0	J0075-1	265.66	4615.74	4605.98	3.6700	2.000	0.0130	13.00	43.36	0.30	10.29	0.94	0.47	0.00	Calculated
38	0130	Pipe	J0125-1	J0129-0	90.94	4617.41	4615.74	1.8400	2.000	0.0130	13.00	30.66	0.42	9.80	0.88	0.44	0.00	Calculated
39	0135	Pipe	JJR062.01-1	JJR060.02-0	14.72	4613.99	4612.85	7.7400	3.000	0.0130	0.00	572.59	0.00	0.00	0.00	0.00	0.00	Calculated
40	0137	Pipe	JJR062.02-1	JJR062.01-0	15.56	4650.17	4648.97	7.7100	2.000	0.0130	0.00	62.82	0.00	0.00	0.00	0.00	0.00	Calculated
41	0138	Pipe	JJR060.02-1	JJR060.01-0	12.16	4586.88	4586.22	5.4300	3.000	0.0130	6.00	479.35	0.01	3.54	0.36	0.12	0.00	Calculated
42	0142	Pipe	J421185	J421186	174.96	4731.42	4730.77	0.3700	1.500	0.0130	11.16	6.40	1.74	6.32	1.50	1.00	43.00	SURCHARGED
43	0143	Pipe	J421186	J421187	106.51	4730.77	4730.20	0.5400	1.500	0.0130	10.82	7.68	1.41	6.13	1.50	1.00	41.00	SURCHARGED
44	0144	Pipe	J421187	J421188	94.28	4730.20	4729.81	0.4100	1.500	0.0130	10.82	6.76	1.60	6.12	1.50	1.00	36.00	SURCHARGED
45	0145	Pipe	J421189	J421190	156.03	4728.22	4716.50	7.5100	1.500	0.0130	32.00	28.79	1.11	18.11	1.50	1.00	23.00	SURCHARGED
46	0146	Pipe	J421188	J421189	303.24	4729.81	4728.22	0.5200	1.500	0.0130	10.81	7.61	1.42	6.12	1.50	1.00	23.00	SURCHARGED
47	0147	Pipe	J421190	J421191	154.82	4716.50	4713.49	1.9400	2.000	0.0130	30.65	31.54	0.97	12.91	1.47	0.74	0.00	Calculated
48	0148	Pipe	J421191	J421192	129.30	4713.49	4703.92	7.4000	2.000	0.0130	31.01	61.55	0.50	17.68	1.51	0.75	0.00	Calculated
49	0149	Pipe	J421192	J421193	153.14	4703.92	4694.15	6.3800	2.000	0.0130	30.58	57.14	0.54	16.59	2.00	1.00	9.00	SURCHARGED
50	0150	Pipe	J421193	J421194	111.46	4694.15	4687.36	6.0900	2.000	0.0130	30.58	55.84	0.55	14.39	2.00	1.00	31.00	SURCHARGED
51	0151	Pipe	J421194	J421195	396.50	4687.36	4670.77	4.1800	2.000	0.0130	47.67	46.27	1.03	15.17	2.00	1.00	34.00	SURCHARGED
52	0152	Pipe	J421196	J42964	133.55	4663.74	4660.16	2.6800	2.000	0.0130	44.13	37.04	1.19	14.05	2.00	1.00	38.00	SURCHARGED
53	0153	Pipe	J421195	J421196	194.51	4670.77	4663.74	3.6100	2.000	0.0130	44.14	43.01	1.03	14.05	2.00	1.00	38.00	SURCHARGED
54	0155	Pipe	J431143	J421197	42.34	4739.37	4736.80	6.0700	1.250	0.0130	13.84	15.92	0.87	12.27	1.25	1.00	25.00	SURCHARGED
55	0156	Pipe	J421197	J421200	41.53	4733.85	4733.33	1.2500	1.500	0.0130	13.83	11.75	1.18	7.83	1.50	1.00	45.00	SURCHARGED
56	0157	Pipe	J421200	J421201	182.32	4733.33	4732.57	0.4200	1.500	0.0130	13.83	6.78	2.04	7.83	1.50	1.00	44.00	SURCHARGED
57	0158	Pipe	J421201	J421185	171.69	4732.57	4731.42	0.6700	1.500	0.0130	13.84	8.60	1.61	7.83	1.50	1.00	44.00	SURCHARGED

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
58	0167	Pipe	J441211-1	SN-Pepp	201.03	4623.61	4618.80	2.3900	4.000	0.0130	197.57	222.19	0.89	15.72	4.00	1.00	550.00	SURCHARGED
59	0168	Pipe	J421015	J0109-1	555.50	4596.75	4586.99	1.7600	1.500	0.0130	5.14	13.92	0.37	10.82	0.47	0.31	0.00	Calculated
60	0169	Pipe	J0110-1	J0071-0	14.91	4585.43	4585.38	0.3400	1.500	0.0130	5.14	6.08	0.85	4.90	0.86	0.57	0.00	Calculated
61	0170	Pipe	J0071-1	J0050-0	12.52	4585.32	4579.17	49.1200	1.500	0.0130	5.18	73.62	0.07	7.21	0.89	0.59	0.00	Calculated
62	0171	Pipe	J0108-1	J421012	55.50	4586.74	4582.55	7.5500	2.000	0.0130	0.00	62.16	0.00	0.00	0.65	0.33	0.00	Calculated
63	0172	Pipe	J42450	J42554	948.84	4546.90	4531.50	1.6200	4.500	0.0130	173.63	250.53	0.69	13.99	3.72	0.83	0.00	Calculated
64	0179	Pipe	J0054-1	J0048-0	19.46	4561.20	4560.70	2.5700	2.000	0.0130	10.00	36.26	0.28	7.15	0.91	0.46	0.00	Calculated
65	386	Pipe	J42451	J42450	386.84	4552.23	4546.90	1.3800	4.500	0.0130	173.56	230.83	0.75	15.32	3.09	0.69	0.00	Calculated
66	1325	Pipe	J42554	Jun-151	1324.56	4531.50	4515.73	1.1900	4.500	0.0130	215.00	214.57	1.00	16.39	3.65	0.81	0.00	> CAPACITY
67	4453	Pipe	J421017	J421016	322.71	4605.36	4601.71	1.1300	1.500	0.0130	5.21	11.17	0.47	6.54	0.70	0.47	0.00	Calculated
68	4455	Pipe	J4260	J4244	14.44	4523.15	4522.27	6.0900	3.000	0.0130	51.95	164.65	0.32	9.08	2.26	0.75	0.00	Calculated
69	4456	Pipe	J4249	J4260	130.28	4522.92	4523.15	-0.1800	3.000	0.0130	51.95	28.02	1.85	7.97	2.61	0.87	0.00	> CAPACITY
70	4466	Pipe	J4244	J4466-1	154.27	4522.27	4520.95	0.8600	3.000	0.0130	51.95	61.70	0.84	9.95	2.08	0.69	0.00	Calculated
71	4469	Pipe	J4289	J4267	587.23	4539.19	4526.93	2.0900	3.000	0.0130	25.00	96.37	0.26	8.75	2.02	0.67	0.00	Calculated
72	441117	Pipe	J441117-0	J4245	144.04	4617.87	4616.24	1.1300	4.000	0.0130	4.44	152.81	0.03	5.16	0.47	0.12	0.00	Calculated
73	441118	Pipe	J4245	J421019	106.25	4616.24	4610.44	5.4600	1.500	0.0130	5.52	24.54	0.22	9.16	0.56	0.38	0.00	Calculated
74	441173	Pipe	J42888	J42887	125.82	4631.26	4628.69	2.0400	4.000	0.0130	197.57	205.29	0.96	15.72	4.00	1.00	283.00	SURCHARGED
75	441175	Pipe	J42890	J42888	305.22	4636.68	4631.26	1.7800	4.000	0.0130	197.58	200.05	0.99	15.72	4.00	1.00	36.00	SURCHARGED
76	441176	Pipe	J42891	J42890	64.25	4638.52	4637.18	2.0900	2.500	0.0130	49.77	59.24	0.84	10.14	2.50	1.00	42.00	SURCHARGED
77	441182	Pipe	J42901	J42903	204.99	4655.25	4651.21	1.9700	2.500	0.0130	53.59	57.58	0.93	11.57	2.50	1.00	38.00	SURCHARGED
78	441183	Pipe	J42903	J42904	197.78	4651.21	4646.81	2.2200	2.500	0.0130	53.59	61.18	0.88	10.92	2.50	1.00	41.00	SURCHARGED
79	441184	Pipe	J42904	J42905	45.56	4646.81	4645.67	2.5000	2.500	0.0130	49.74	64.88	0.77	10.13	2.50	1.00	49.00	SURCHARGED
80	441185	Pipe	J42905	J42906	118.84	4645.67	4644.64	0.8700	2.500	0.0130	49.75	38.19	1.30	10.13	2.50	1.00	48.00	SURCHARGED
81	441186	Pipe	J42906	J42907	87.78	4644.64	4643.68	1.0900	2.500	0.0130	49.76	42.89	1.16	10.14	2.50	1.00	41.00	SURCHARGED
82	441187	Pipe	J42907	J42908	106.21	4643.68	4642.03	1.5500	2.500	0.0130	49.76	51.12	0.97	10.14	2.50	1.00	39.00	SURCHARGED
83	441193	Pipe	J42908	J42891	209.09	4642.03	4638.52	1.6800	2.500	0.0130	49.77	53.14	0.94	10.14	2.50	1.00	39.00	SURCHARGED
84	441211	Pipe	J441211-0	J441211-1	199.60	4626.54	4623.61	1.4700	4.000	0.0130	197.57	174.04	1.14	15.72	4.00	1.00	346.00	SURCHARGED
85	441212	Pipe	J42887	J441211-0	235.01	4628.69	4626.54	0.9100	4.000	0.0130	197.57	137.39	1.44	15.72	4.00	1.00	330.00	SURCHARGED
86	441262	Pipe	J421018	J421017	47.33	4608.21	4605.36	6.0200	1.500	0.0130	5.39	25.78	0.21	7.94	0.61	0.41	0.00	Calculated
87	441263	Pipe	J421019	J421018	99.23	4610.44	4608.21	2.2500	1.500	0.0130	5.37	15.75	0.34	7.74	0.62	0.42	0.00	Calculated
88	441294	Pipe	J42992	J42993	232.54	4570.69	4569.84	0.3700	1.500	0.0130	16.55	6.35	2.61	9.37	1.50	1.00	73.00	SURCHARGED
89	441307	Pipe	J42998	J42454	137.51	4568.05	4568.24	-0.1400	2.000	0.0130	21.76	8.41	2.59	9.25	1.40	0.70	0.00	> CAPACITY
90	441317	Pipe	J441317-0	J42958	74.75	4717.08	4715.39	2.2600	1.250	0.0130	22.16	9.71	2.28	18.06	1.25	1.00	20.00	SURCHARGED
91	441318	Pipe	J42958	J42959	46.91	4715.39	4715.17	0.4700	2.000	0.0130	22.16	15.49	1.43	7.33	2.00	1.00	3.00	SURCHARGED
92	441684	Pipe	J42959	J42960	297.62	4715.17	4699.92	5.1200	1.500	0.0130	22.35	23.78	0.94	14.44	1.50	1.00	4.00	SURCHARGED
93	441685	Pipe	J42960	J42961	367.15	4699.92	4683.98	4.3400	1.500	0.0130	22.36	21.89	1.02	13.86	1.50	1.00	6.00	SURCHARGED
94	441686	Pipe	J42961	J42962	226.40	4683.98	4673.12	4.8000	1.500	0.0130	20.48	23.01	0.89	12.20	1.50	1.00	8.00	SURCHARGED
95	441687	Pipe	J42962	J42963	213.27	4673.12	4662.65	4.9100	1.500	0.0130	20.48	23.27	0.88	11.59	1.50	1.00	16.00	SURCHARGED
96	441688	Pipe	J42963	J42964	59.90	4662.65	4660.16	4.1600	1.500	0.0130	17.33	21.42	0.81	9.81	1.50	1.00	35.00	SURCHARGED
97	441689	Pipe	J42964	J42901	270.51	4660.16	4655.25	1.8200	2.500	0.0130	53.58	55.26	0.97	11.43	2.50	1.00	36.00	SURCHARGED
98	441719	Pipe	J4262	J4249	49.27	4523.56	4522.92	1.3000	3.000	0.0130	51.95	76.02	0.68	7.35	3.00	1.00	343.00	SURCHARGED
99	441720	Pipe	J4263	J4262	227.17	4524.03	4523.56	0.2100	3.000	0.0130	51.95	30.34	1.71	7.35	3.00	1.00	343.00	SURCHARGED
100	441721	Pipe	J4264	J4263	266.50	4524.56	4524.03	0.2000	3.000	0.0130	30.95	29.74	1.04	4.38	3.00	1.00	380.00	SURCHARGED
101	441722	Pipe	J4265	J4264	28.63	4524.66	4524.56	0.3500	3.000	0.0130	30.95	39.42	0.79	4.38	3.00	1.00	379.00	SURCHARGED
102	441723	Pipe	J4267	J4265	345.00	4526.93	4524.66	0.6600	3.000	0.0130	30.95	54.10	0.57	5.00	3.00	1.00	79.00	SURCHARGED
103	441727	Pipe	J0041-1	J4272	222.91	4550.28	4547.81	1.1100	2.000	0.0130	10.00	23.81	0.42	6.15	1.03	0.52	0.00	Calculated
104	441731	Pipe	J4272	J4278	77.90	4547.81	4547.22	0.7600	2.000	0.0130	10.00	19.69	0.51	5.88	1.09	0.54	0.00	Calculated
105	441732	Pipe	J4278	J0038-0	286.26	4547.22	4544.91	0.8100	2.000	0.0130	10.02	20.32	0.49	7.33	1.16	0.58	0.00	Calculated
106	441739	Pipe	J0052-1	J4287	328.89	4571.48	4566.95	1.3800	2.000	0.0130	0.00	26.55	0.00	0.00	0.47	0.23	0.00	Calculated
107	441740	Pipe	J4287	J4288	119.03	4566.95	4565.39	1.3100	2.000	0.0130	10.00	25.90	0.39	7.33	0.90	0.45	0.00	Calculated
108	441759	Pipe	J441759-0	Jun-198	26.36	4508.14	4507.00	4.3200	1.250	0.0130	12.74	13.43	0.95	10.71	1.25	1.00	125.00	SURCHARGED
109	441760	Pipe	J42886	J42893	400.51	4502.98	4496.93	1.5100	1.500	0.0130	14.18	12.91	1.10	8.07	1.50	1.00	149.00	SURCHARGED
110	441761	Pipe	J42893	J441761-1	341.41	4496.93	4491.44	1.6100	1.500	0.0130	14.18	13.32	1.06	8.45	1.50	1.00	138.00	SURCHARGED
111	441792	Pipe	J421016	J421015	310.72	4601.71	4596.75	1.6000	1.500	0.0130	5.16	13.27	0.39	6.49	0.70	0.47	0.00	Calculated
112	441802	Pipe	J4288	J0054-1	270.73	4565.39	4561.20	1.5500	2.000	0.0130	10.00	28.14	0.36	7.39	0.89	0.45	0.00	Calculated
113	441896	Pipe	J42452	J42451	491.52	4557.88	4552.23	1.1500	4.500	0.0130	173.56	210.84	0.82	13.63	3.36	0.75	0.00	Calculated
114	441897	Pipe	J42453	J42452	244.03	4559.93	4557.88	0.8400	4.500	0.0130	155.56	180.24	0.86	11.32	3.64	0.81	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
115	441900	Pipe	J42454	J42453	67.11	4568.24	4559.93	12.3800	2.000	0.0130	21.76	79.61	0.27	9.25	1.40	0.70	0.00	Calculated
116	441901	Pipe	J42997	J42998	38.08	4568.40	4568.05	0.9200	2.000	0.0130	21.76	21.69	1.00	6.93	2.00	1.00	67.00	SURCHARGED
117	441902	Pipe	J42993	J42997	392.75	4569.84	4568.40	0.3700	2.000	0.0130	21.76	13.70	1.59	6.93	2.00	1.00	67.00	SURCHARGED
118	Link-100	Pipe	Jun-150	Jun-148	1438.39	4605.00	4568.49	2.5400	3.500	0.0130	135.70	160.29	0.85	16.82	2.81	0.80	0.00	Calculated
119	Link-101	Pipe	Jun-148	J42453	400.38	4568.49	4559.93	2.1400	3.500	0.0130	135.68	147.11	0.92	14.44	3.33	0.95	0.00	Calculated
120	Link-108	Pipe	JPR050.01-1	Jun-195	2130.00	4719.05	4677.00	1.9700	2.000	0.0130	13.00	31.79	0.41	8.93	0.98	0.49	0.00	Calculated
121	Link-112	Pipe	Jun-171	Jun-191	728.57	4716.00	4672.00	6.0400	2.500	0.0130	25.00	100.80	0.25	12.50	1.29	0.52	0.00	Calculated
122	Link-114	Pipe	Jun-173	Jun-174	4040.04	4654.00	4557.00	2.4000	2.500	0.0130	59.00	63.56	0.93	15.12	1.86	0.74	0.00	Calculated
123	Link-115	Pipe	Jun-174	Jun-175	1718.75	4557.00	4503.00	3.1400	2.500	0.0130	59.00	72.70	0.81	16.33	1.73	0.69	0.00	Calculated
124	Link-119	Pipe	Jun-180	Jun-181	54.60	4664.65	4664.20	0.8200	1.500	0.0130	4.03	9.54	0.42	6.18	0.61	0.41	0.00	Calculated
125	Link-120	Pipe	Jun-181	Jun-179	756.57	4664.20	4643.71	2.7100	1.500	0.0130	4.01	17.29	0.23	8.73	0.46	0.31	0.00	Calculated
126	Link-121	Pipe	Jun-179	Jun-182	194.97	4643.71	4636.96	3.4600	2.000	0.0130	4.00	42.09	0.10	7.39	0.46	0.23	0.00	Calculated
127	Link-122	Pipe	Jun-182	Jun-183	114.54	4636.96	4634.42	2.2200	2.000	0.0130	4.02	33.69	0.12	8.02	0.44	0.22	0.00	Calculated
128	Link-123	Pipe	Jun-183	J0126-0	31.29	4634.42	4632.19	7.1300	2.000	0.0130	4.02	60.39	0.07	8.96	0.55	0.28	0.00	Calculated
129	Link-125	Pipe	Jun-185	Jun-198	1361.09	4529.00	4507.00	1.6200	1.500	0.0130	2.02	13.35	0.15	6.27	0.95	0.63	0.00	Calculated
130	Link-128	Pipe	J4466-1	Jun-187	856.39	4520.95	4509.00	1.4000	3.000	0.0130	51.95	78.79	0.66	11.66	1.81	0.60	0.00	Calculated
131	Link-133	Pipe	Jun-190	J4289	901.18	4543.09	4539.19	0.4300	3.000	0.0130	25.01	43.88	0.57	7.89	1.38	0.46	0.00	Calculated
132	Link-136	Pipe	Jun-191	Jun-173	2667.96	4672.00	4654.00	0.6700	2.500	0.0130	25.00	33.69	0.74	8.68	1.79	0.72	0.00	Calculated
133	Link-137	Pipe	J0038-0	Jun-190	87.58	4544.91	4543.09	2.0800	3.000	0.0150	25.01	83.33	0.30	7.01	1.51	0.50	0.00	Calculated
134	Link-141	Pipe	J421185	J421189	688.27	4731.42	4728.22	0.4600	2.000	0.0150	22.26	13.37	1.67	7.12	2.00	1.00	16.00	SURCHARGED
135	Link-145	Pipe	Jun-195	Jun-196	1230.52	4677.00	4660.00	1.3800	2.000	0.0150	13.00	23.04	0.56	5.02	1.54	0.77	0.00	Calculated
136	Link-148	Pipe	Jun-198	J42886	77.02	4507.00	4502.98	5.2200	1.500	0.0130	14.18	24.00	0.59	9.63	1.50	1.00	105.00	SURCHARGED
137	Link-152	Pipe	JJR062.03-0	Jun-196	1357.37	4689.20	4660.00	2.1500	3.000	0.0150	84.01	84.78	0.99	13.75	2.47	0.82	0.00	Calculated
138	Link-153	Pipe	Jun-159	Jun-196	920.30	4694.00	4660.00	3.6900	1.500	0.0150	8.00	17.50	0.46	8.88	1.11	0.74	0.00	Calculated
139	Link-157	Pipe	J0050-1	Jun-213	943.17	4579.09	4569.00	1.0700	2.500	0.0150	30.24	36.77	0.82	6.86	2.11	0.85	0.00	Calculated
140	Link-158	Pipe	Jun-213	Jun-214	1737.18	4569.00	4550.00	1.0900	2.500	0.0150	36.92	37.18	0.99	11.64	2.09	0.83	0.00	Calculated
141	Link-160	Pipe	Jun-220	Jun-218	1780.00	4675.00	4620.00	3.0900	2.000	0.0130	16.59	39.77	0.42	11.51	0.97	0.49	0.00	Calculated
142	Link-161	Pipe	Jun-218	Jun-219	875.00	4620.00	4608.00	1.3700	2.500	0.0150	15.11	41.63	0.36	4.50	1.77	0.71	0.00	Calculated
143	Link-162	Pipe	Jun-223	Jun-222	2712.52	4620.00	4577.00	1.5900	3.500	0.0150	70.00	109.78	0.64	12.88	2.49	0.71	0.00	Calculated
144	Link-163	Pipe	Jun-222	1001	2817.09	4577.00	4538.00	1.3800	4.000	0.0150	116.01	146.48	0.79	14.88	2.38	0.60	0.00	Calculated
145	Link-165	Pipe	J0050-1	Jun-213	943.17	4579.09	4572.00	0.7500	2.000	0.0150	16.90	17.00	0.99	6.34	1.60	0.80	0.00	Calculated
146	Link-166	Pipe	Jun-213	Jun-214	1737.18	4572.00	4550.00	1.2700	2.000	0.0150	10.22	22.06	0.46	4.67	1.31	0.66	0.00	Calculated
147	Link-169	Pipe	Jun-214	Jun-215	1487.51	4550.00	4506.00	2.9600	2.500	0.0150	47.14	61.14	0.77	13.63	1.66	0.66	0.00	Calculated
148	Link-171	Pipe	Jun-216	Jun-217	1095.61	4498.00	4493.00	0.4600	4.500	0.0150	172.00	115.13	1.49	10.81	4.50	1.00	535.00	SURCHARGED
149	Link-172	Pipe	Jun-220	Jun-218	1770.15	4675.00	4617.00	3.2800	2.000	0.0150	14.41	34.56	0.42	10.00	0.97	0.49	0.00	Calculated
150	Link-173	Pipe	Jun-218	Jun-219	867.05	4617.00	4610.00	0.8100	2.000	0.0150	11.04	21.06	0.52	6.73	1.04	0.52	0.00	Calculated
151	Link-174	Pipe	Jun-218	Jun-219	867.05	4617.00	4610.00	0.8100	2.500	0.0150	13.55	38.18	0.35	7.05	1.04	0.41	0.00	Calculated
152	Link-176	Pipe	Jun-219	Jun-150	226.56	4608.00	4605.00	1.3200	2.500	0.0150	39.70	40.91	0.97	14.03	2.49	0.99	0.00	Calculated
153	Link-179	Pipe	1001	Jun-221	4844.40	4538.00	4300.00	4.9100	4.000	0.0150	116.00	275.93	0.42	20.94	1.81	0.45	0.00	Calculated
154	Link-206	Pipe	Jun-250	J4287	148.93	4568.00	4566.95	0.7100	2.000	0.0150	10.02	16.46	0.61	5.78	1.09	0.54	0.00	Calculated
155	Link-208	Pipe	J0075-1	J421012	780.87	4605.98	4582.55	3.0000	2.000	0.0130	24.00	39.19	0.61	11.98	1.22	0.61	0.00	Calculated
156	Link-209	Pipe	Jun-196	Jun-251	1481.92	4660.00	4624.00	2.4300	3.500	0.0150	110.15	135.90	0.81	14.45	2.62	0.75	0.00	Calculated
157	Link-210	Pipe	Jun-247	Jun-216	2358.51	4552.00	4507.00	1.9100	2.000	0.0150	25.34	27.08	0.94	9.69	1.76	0.88	0.00	Calculated
158	Link-211	Pipe	Jun-241	Jun-253	1446.36	4627.00	4618.00	0.6200	2.000	0.0150	15.13	15.47	0.98	5.52	2.00	1.00	43.00	SURCHARGED
159	Link-213	Pipe	Jun-188	J4267	61.41	4529.68	4526.93	4.4800	2.000	0.0150	6.38	41.49	0.15	7.26	1.74	0.87	0.00	Calculated
160	Link-214	Pipe	Jun-252	Jun-216	1767.97	4529.00	4498.00	1.7500	4.000	0.0150	123.00	164.85	0.75	10.82	3.40	0.85	0.00	Calculated
161	Link-215	Pipe	Jun-251	Jun-252	3664.89	4624.00	4552.00	1.9600	3.500	0.0150	117.00	122.22	0.96	14.27	2.78	0.80	0.00	Calculated
162	Link-216	Pipe	J42877	Out-32	2398.90	4500.54	4495.03	0.2300	1.500	0.0130	5.00	5.03	0.99	3.39	1.17	0.78	0.00	Calculated
163	Link-217	Pipe	Jun-253	Jun-150	941.00	4618.00	4605.00	1.3800	3.500	0.0150	96.08	102.49	0.94	12.28	2.74	0.78	0.00	Calculated
164	Link-81	Pipe	Jun-135	Jun-151	2565.16	4535.99	4524.18	0.4600	5.000	0.0130	15.00	176.72	0.08	5.46	0.99	0.20	0.00	Calculated
165	Link-98	Pipe	Jun-149	Jun-253	3750.00	4716.00	4618.00	2.6100	3.000	0.0130	76.00	107.82	0.70	14.76	2.43	0.81	0.00	Calculated
166	0110	Channel	J0109-1	J0110-1	57.37	4586.99	4585.43	2.7200	10.000	0.0320	5.14	7142.54	0.00	0.82	0.57	0.06	0.00	
167	JR060.01	Channel	JJR060.01-0	JJR060.01-1	1048.40	4586.22	4562.00	2.3100	10.000	0.0320	6.00	6583.50	0.00	2.56	0.22	0.02	0.00	
168	JR060.02	Channel	JJR060.02-0	JJR060.02-1	911.67	4611.44	4586.88	2.6900	10.000	0.0320	6.00	7109.32	0.00	2.18	0.36	0.04	0.00	
169	JR062.01	Channel	JJR062.01-0	JJR062.01-1	1344.14	4648.54	4611.92	2.7200	10.000	0.0320	0.00	7149.41	0.00	0.00	0.00	0.00	0.00	
170	Link-103	Channel	Jun-151	Jun-152	2649.00	4515.73	4492.00	0.9000	5.000	0.0320	229.60	858.64	0.27	6.12	2.80	0.56	0.00	
171	Link-134	Channel	JJR060.01-1	J0026-1	992.89	4561.00	4546.71	1.4400	10.000	0.0320	6.00	5196.35	0.00	1.82	0.65	0.07	0.00	

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
172	O-200W	Orifice	SN-200W	J0086-0		4536.80	4534.15		1.750		137.71							
173	O-540W	Orifice	SN-540W	J42453		4568.20	4559.93		1.250		0.00							
174	O-610W	Orifice	SN-610W	J42992		4573.00	4570.69		1.000		47.93							
175	O-Comm	Orifice	SN-Comm	J441759-0		4509.40	4508.14		1.250		12.75							
176	O-HHPark	Orifice	SN-HHPa	J441317-0		4727.60	4717.08		1.250		22.16							
177	O-Orch	Orifice	SN-Orch	J431143		4743.00	4739.37		1.000		27.61							
178	O-Pepp	Orifice	SN-Pepp	J441117-0		4618.80	4617.87		0.500		4.43							
179	Orifice-27	Orifice	SN-HillC	J4245		4685.00	4616.24		0.330		1.22							
180	O-SMPN	Orifice	SN-SMPN	Jun-241		4628.60	4627.00		1.670		15.54							
181	O-SMPS	Orifice	SN-SMPS	SN-SMPN		4628.60	4628.60		1.667		8.31							
182	OUT-JR010	Outlet	SN-JR010	Jun-222		4586.00	4577.00				46.00							
183	OUT-JR012	Outlet	SN-JR012	Jun-223		4618.00	4620.00				70.00							
184	OUT-JR020	Outlet	SN-JR020	Jun-135		4554.00	4535.99				15.00							
185	OUT-JR032	Outlet	SN-JR032	Jun-253		4660.00	4618.00				5.00							
186	OUT-JR050	Outlet	SN-JR050	Jun-247		4620.00	4552.00				14.00							
187	OUT-JR062	Outlet	SN-JR068	J0038-0		4632.00	4544.91				15.00							
188	OUT-JR063	Outlet	SN-JR063	Jun-247		4620.00	4552.00				11.00							
189	OUT-JR070	Outlet	SN-JR070	J4263		4565.00	4524.03				21.00							
190	OUT-JR080	Outlet	SN-JR080	Jun-173		4690.00	4654.00				34.00							
191	OUT-JR082	Outlet	SN-JR079	J0080-0		4635.00	4614.73				11.00							
192	Outlet-100	Outlet	Stor-45	Jun-218		4700.00	4620.00				8.70							
193	Outlet-101	Outlet	Stor-46	J0126-1		5000.00	4629.13				2.00							
194	Outlet-102	Outlet	SN-JR061	Jun-252		4632.00	4529.00				6.00							
195	Outlet-103	Outlet	Stor-47	SN-PR040		4730.00	4720.00				160.00							
196	Outlet-104	Outlet	Stor-48	SN-PR050		4760.00	4750.00				108.00							
197	Outlet-105	Outlet	SN-JR065a	Jun-251		4690.00	4624.00				5.00							
198	Outlet-84	Outlet	SN-JR082	Jun-180		4685.00	4664.65				4.00							
199	Outlet-86	Outlet	SN-JR061	Jun-251		4632.00	4624.00				2.00							
200	Outlet-87	Outlet	Stor-34	J0050-0		4632.00	4579.17				18.00							
201	Outlet-90	Outlet	SN-JR031	J42554		4554.00	4531.50				12.00							
202	Outlet-91	Outlet	SN-JR035	J42452		4558.00	4557.88				18.00							
203	Outlet-92	Outlet	SN-JR065a	Jun-196		4690.00	4660.00				5.00							
204	Outlet-93	Outlet	Stor-41	Jun-216		4620.00	4498.00				24.00							
205	Outlet-95	Outlet	SN-JR083	J0126-0		4685.00	4632.19				7.00							
206	Outlet-96	Outlet	SN-JR065	JJR060.02-0		4660.00	4611.44				6.00							
207	Outlet-97	Outlet	Stor-43	J42877		4505.00	4500.54				5.00							
208	Outlet-98	Outlet	Stor-44	Jun-149		4720.00	4716.00				58.00							
209	Outlet-99	Outlet	SN-JR061	Jun-185		4632.00	4529.00				2.00							
210	OUT-PR010	Outlet	SN-PR010	Jun-220		4756.00	4675.00				31.00							
211	OUT-PR020	Outlet	SN-PR020	Jun-149		4720.00	4716.00				18.00							
212	OUT-PR030	Outlet	SN-PR030	Jun-159		4710.00	4694.00				8.00							
213	OUT-PR040	Outlet	SN-PR040	JJR062.04-1		4720.00	4697.75				84.00							
214	OUT-PR050	Outlet	SN-PR050	JPR050.01-1		4750.00	4719.05				13.00							
215	OUT-PR060	Outlet	SN-PR060	Jun-171		5410.00	4716.00				25.00							

FULL BUILD-OUT CONDITION - SOUTH
25-YEAR STORM

Project Description

File Name ..... SaratogaStormFuture South.SPF

Project Options

Flow Units ..... CFS
Elevation Type ..... Elevation
Hydrology Method HEC-1
HEC-1 unit hydrograph method ..... SCS Dimensionless
HEC-1 loss method ..... SCS Curve Number
Link Routing Method ..... Hydrodynamic
Enable Overflow Ponding at Nodes ..... YES
Skip Steady State Analysis Time Periods ... NO

Analysis Options

Start Analysis On ..... Jan 01, 2012 00:00:00
End Analysis On ..... Jan 01, 2012 12:00:00
Start Reporting On ..... Jan 01, 2012 00:00:00
Antecedent Dry Days ..... 0 days
Runoff (Dry Weather) Time Step ..... 0 01:00:00 days hh:mm:ss
Runoff (Wet Weather) Time Step ..... 0 00:05:00 days hh:mm:ss
Reporting Time Step ..... 0 00:05:00 days hh:mm:ss
Routing Time Step ..... 30 seconds

Number of Elements

	Qty
Rain Gages	5
Subbasins	55
Nodes	313
Junctions	259
Outfalls	11
Flow Diversions	0
Inlets	0
Storage Nodes	43
Links	309
Channels	72
Pipes	193
Pumps	0
Orifices	13
Weirs	0
Outlets	31
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	100-Year	Time Series	TS-100yr	Cumulative	inches				0.00	
2	10-Year	Time Series	TS-10yr	Cumulative	inches				0.00	
3	25yr	Time Series	TS-25yr	Cumulative	inches				0.00	
4	2Yr	Time Series	TS-2yr	Cumulative	inches				0.00	
5	5Yr	Time Series	TS-5yr	Cumulative	inches				0.00	

Subbasin Summary

SN	Subbasin ID	Area (ac)	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)
1	Sub-02	16.92	1.03	0.40	6.78	9.92
2	UL010	358.46	1.03	0.49	177.08	257.29
3	UL012	765.62	1.03	0.05	34.45	17.67
4	UL020	470.76	1.03	0.62	290.93	391.06
5	UL022	242.19	1.03	0.28	67.33	95.38
6	UL024	933.42	1.03	0.01	9.33	4.28
7	UL030	205.10	1.03	0.45	92.91	131.65
8	UL031	123.80	1.03	0.28	34.42	52.20
9	UL032	233.02	1.03	0.26	59.89	82.88
10	UL033	88.85	1.03	0.05	4.00	3.31
11	UL034	156.46	1.03	0.05	7.04	5.94
12	UL035	586.06	1.03	0.00	0.00	0.19
13	UL040	143.49	1.03	0.30	42.90	65.97
14	UL041	67.25	1.03	0.28	18.70	28.79
15	UL042	76.37	1.03	0.26	19.63	30.26
16	UL043	157.01	1.03	0.26	40.35	61.30
17	UL044	321.32	1.03	0.24	76.15	117.17
18	UL045	422.26	1.03	0.00	1.69	1.00
19	UL050	65.15	1.03	0.24	15.44	23.40
20	UL051	97.15	1.03	0.28	27.01	41.95
21	UL060	78.53	1.03	0.29	22.62	34.34
22	UL061	33.56	1.03	0.31	10.37	14.68
23	UL062	51.61	1.03	0.33	16.98	26.85
24	UL063	92.95	1.03	0.31	28.72	45.34
25	UL064	191.89	1.03	0.28	53.35	82.13
26	UL065	557.40	1.03	0.00	0.00	0.00
27	UL066	262.96	1.03	0.01	1.58	0.91
28	UL070	127.05	1.03	0.38	48.41	71.96
29	UL080	115.43	1.03	0.43	49.98	67.95
30	UL081	107.65	1.03	0.34	36.60	61.63
31	UL082	84.13	1.03	0.35	29.45	45.76
32	UL083	63.50	1.03	0.34	21.59	34.08
33	UL084	562.59	1.03	0.00	0.00	0.18
34	UL090	29.46	1.03	0.34	10.02	13.61
35	UL100	79.57	1.03	0.34	27.05	33.84
36	UL101	37.57	1.03	0.36	13.53	22.13
37	UL102	74.54	1.03	0.31	23.03	36.38
38	UL103	130.47	1.03	0.01	1.30	0.83
39	UL110	75.22	1.03	0.26	19.33	28.11
40	UL115	110.87	1.03	0.29	31.93	49.64
41	UL120	153.99	1.03	0.34	52.36	79.36
42	UL121	131.78	1.03	0.33	43.36	59.09
43	UL124	406.97	1.03	0.26	104.59	133.97
44	UL126	1502.76	1.03	0.00	0.00	0.00
45	UL130	199.88	1.03	0.60	119.33	140.50
46	UL132	110.79	1.03	0.34	37.67	51.23
47	UL134	292.08	1.03	0.34	99.31	135.07
48	UL136	740.74	1.03	0.02	14.81	6.50
49	UL140	102.56	1.03	0.38	39.08	46.57
50	UL142	57.99	1.03	0.32	18.50	23.17
51	UL144	155.20	1.03	0.34	52.77	79.99
52	UL146	55.82	1.03	0.34	18.98	29.95
53	UL148	301.52	1.03	0.06	16.58	10.45
54	UL150	50.72	1.03	0.31	15.67	21.66
55	UL152	329.01	1.03	0.62	203.33	191.19

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	J0004-0	Junction	4525.19	4530.79	0.00	4536.39	0.00	108.32	4527.81	0.00	2.98	0 00:00	0.00	0.00
2	J0006-0	Junction	4578.80	4586.35	0.00	4593.90	0.00	110.53	4580.95	0.00	5.40	0 00:00	0.00	0.00
3	J0011-0	Junction	4586.34	4592.94	0.00	4599.54	0.00	83.35	4590.02	0.00	2.92	0 00:00	0.00	0.00
4	J0012-1	Junction	4587.41	4592.91	0.00	4598.41	0.00	18.93	4590.13	0.00	2.78	0 00:00	0.00	0.00
5	J0014-1	Junction	4721.70	4725.70	0.00	4732.37	0.00	6.19	4722.15	0.00	3.55	0 00:00	0.00	0.00
6	J0131.0	Junction	4591.24	4594.79	0.00	4598.34	0.00	13.31	4592.87	0.00	1.92	0 00:00	0.00	0.00
7	J42112	Junction	4599.43	4605.33	0.00	4611.23	0.00	35.17	4601.64	0.00	3.69	0 00:00	0.00	0.00
8	J42117	Junction	4597.20	4602.90	0.00	4608.60	0.00	35.17	4598.34	0.00	4.56	0 00:00	0.00	0.00
9	J42118	Junction	4610.41	4615.21	0.00	4620.01	0.00	35.17	4612.02	0.00	3.19	0 00:00	0.00	0.00
10	J42154	Junction	4521.79	4530.29	0.00	4536.96	0.00	114.64	4523.39	0.00	6.90	0 00:00	0.00	0.00
11	J42155	Junction	4525.14	4536.04	0.00	4542.71	0.00	114.70	4528.22	0.00	7.82	0 00:00	0.00	0.00
12	J42156	Junction	4527.51	4540.26	0.00	4546.93	0.00	114.77	4530.76	0.00	9.50	0 00:00	0.00	0.00
13	J42157	Junction	4512.22	4529.67	0.00	4536.34	0.00	114.63	4513.87	0.00	15.80	0 00:00	0.00	0.00
14	J42175	Junction	4688.48	4696.88	0.00	4703.55	0.00	6.19	4689.28	0.00	7.60	0 00:00	0.00	0.00
15	J42176	Junction	4691.51	4699.51	0.00	4706.18	0.00	6.19	4692.20	0.00	7.31	0 00:00	0.00	0.00
16	J42177	Junction	4694.19	4701.99	0.00	4708.66	0.00	6.19	4694.78	0.00	7.21	0 00:00	0.00	0.00
17	J42178	Junction	4703.44	4711.94	0.00	4718.61	0.00	6.19	4703.93	0.00	8.01	0 00:00	0.00	0.00
18	J42180	Junction	4743.73	4755.03	0.00	4761.70	0.00	7.00	4744.18	0.00	10.85	0 00:00	0.00	0.00
19	J42181	Junction	4730.23	4738.33	0.00	4745.00	0.00	7.00	4730.58	0.00	7.75	0 00:00	0.00	0.00
20	J42223	Junction	4530.32	4547.72	0.00	4554.39	0.00	107.01	4533.27	0.00	14.45	0 00:00	0.00	0.00
21	J42224	Junction	4532.48	4548.08	0.00	4554.75	0.00	106.76	4535.11	0.00	12.97	0 00:00	0.00	0.00
22	J4224	Junction	4534.11	4539.51	0.00	4544.91	0.00	35.31	4535.37	0.00	4.14	0 00:00	0.00	0.00
23	J4225	Junction	4537.26	4542.31	0.00	4547.36	0.00	35.32	4539.14	0.00	3.17	0 00:00	0.00	0.00
24	J4226	Junction	4539.66	4544.36	0.00	4549.06	0.00	35.33	4541.46	0.00	2.90	0 00:00	0.00	0.00
25	J42264	Junction	4608.40	4617.30	0.00	4623.97	0.00	37.87	4617.67	0.37	0.00	0 00:00	0.00	0.00
26	J42265	Junction	4616.61	4625.16	0.00	4631.83	0.00	37.94	4618.45	0.00	6.71	0 00:00	0.00	0.00
27	J42266	Junction	4620.24	4630.84	0.00	4637.51	0.00	37.97	4622.11	0.00	8.73	0 00:00	0.00	0.00
28	J42267	Junction	4622.52	4631.27	0.00	4637.94	0.00	37.97	4627.07	0.00	4.20	0 00:00	0.00	0.00
29	J42268	Junction	4630.23	4638.98	0.00	4645.65	0.00	37.97	4638.46	0.00	0.52	0 00:00	0.00	0.00
30	J42269	Junction	4633.51	4641.96	0.00	4648.63	0.00	37.97	4640.73	0.00	1.23	0 00:00	0.00	0.00
31	J42270	Junction	4638.41	4646.21	0.00	4652.88	0.00	37.97	4645.52	0.00	0.69	0 00:00	0.00	0.00
32	J42271	Junction	4646.69	4654.24	0.00	4661.79	0.00	38.21	4651.10	0.00	3.14	0 00:00	0.00	0.00
33	J42273	Junction	4657.67	4666.52	0.00	4673.19	0.00	38.12	4659.01	0.00	7.51	0 00:00	0.00	0.00
34	J42274	Junction	4666.87	4675.87	0.00	4682.54	0.00	38.12	4668.26	0.00	7.61	0 00:00	0.00	0.00
35	J42275	Junction	4670.16	4678.16	0.00	4684.83	0.00	38.12	4671.68	0.00	6.48	0 00:00	0.00	0.00
36	J42277	Junction	4672.54	4680.24	0.00	4686.91	0.00	38.12	4674.35	0.00	5.89	0 00:00	0.00	0.00
37	J42278	Junction	4677.64	4685.14	0.00	4691.81	0.00	38.12	4679.23	0.00	5.91	0 00:00	0.00	0.00
38	J42279	Junction	4682.15	4689.30	0.00	4695.97	0.00	38.12	4683.90	0.00	5.40	0 00:00	0.00	0.00
39	J42280	Junction	4683.00	4690.90	0.00	4697.57	0.00	6.19	4683.92	0.00	6.98	0 00:00	0.00	0.00
40	J42282	Junction	4687.53	4695.98	0.00	4702.65	0.00	6.19	4688.18	0.00	7.80	0 00:00	0.00	0.00
41	J42284	Junction	4589.18	4593.08	0.00	4599.75	0.00	4.48	4591.54	0.00	1.54	0 00:00	0.00	0.00
42	J42285	Junction	4588.82	4592.92	0.00	4599.59	0.00	4.48	4591.28	0.00	1.64	0 00:00	0.00	0.00
43	J42286	Junction	4586.66	4598.71	0.00	4605.38	0.00	4.42	4588.15	0.00	10.56	0 00:00	0.00	0.00
44	J42287	Junction	4587.63	4596.28	0.00	4602.95	0.00	4.46	4592.28	0.00	4.00	0 00:00	0.00	0.00
45	J42302	Junction	4500.54	4509.44	0.00	4518.34	0.00	108.17	4510.42	0.98	0.00	0 00:00	0.00	0.00
46	J42303	Junction	4705.22	4712.12	0.00	4719.02	0.00	18.93	4719.02	6.90	0.00	0 00:44	0.00	0.00
47	J42304	Junction	4686.38	4691.98	0.00	4697.58	0.00	18.93	4692.83	0.85	0.00	0 00:00	0.00	0.00
48	J42305	Junction	4681.18	4687.53	0.00	4693.88	0.00	18.93	4682.06	0.00	5.47	0 00:00	0.00	0.00
49	J42306	Junction	4518.99	4525.39	0.00	4531.79	0.00	108.18	4520.86	0.00	4.53	0 00:00	0.00	0.00
50	J42307	Junction	4545.94	4551.54	0.00	4557.14	0.00	108.92	4548.28	0.00	3.26	0 00:00	0.00	0.00
51	J42308	Junction	4600.22	4608.82	0.00	4617.42	0.00	18.93	4601.42	0.00	7.40	0 00:00	0.00	0.00
52	J42309	Junction	4616.43	4624.03	0.00	4631.63	0.00	18.93	4617.42	0.00	6.61	0 00:00	0.00	0.00
53	J42310	Junction	4636.19	4643.89	0.00	4651.59	0.00	18.93	4637.25	0.00	6.64	0 00:00	0.00	0.00
54	J42311	Junction	4652.14	4657.74	0.00	4663.34	0.00	18.93	4653.05	0.00	4.69	0 00:00	0.00	0.00
55	J42312	Junction	4663.13	4669.03	0.00	4674.93	0.00	18.93	4664.14	0.00	4.89	0 00:00	0.00	0.00
56	J42333	Junction	4610.34	4619.04	0.00	4627.74	0.00	39.20	4611.57	0.00	7.47	0 00:00	0.00	0.00
57	J42334	Junction	4602.31	4610.41	0.00	4618.51	0.00	39.20	4603.94	0.00	6.47	0 00:00	0.00	0.00
58	J42335	Junction	4601.32	4609.92	0.00	4618.52	0.00	39.20	4602.55	0.00	7.37	0 00:00	0.00	0.00
59	J42336	Junction	4595.34	4600.34	0.00	4605.34	0.00	39.20	4596.67	0.00	3.67	0 00:00	0.00	0.00
60	J42337	Junction	4619.90	4626.60	0.00	4633.30	0.00	39.20	4621.02	0.00	5.58	0 00:00	0.00	0.00
61	J42340	Junction	4584.36	4588.76	0.00	4593.16	0.00	39.20	4585.56	0.00	3.20	0 00:00	0.00	0.00
62	J42341	Junction	4590.49	4594.89	0.00	4599.29	0.00	39.20	4592.27	0.00	2.62	0 00:00	0.00	0.00
63	J42346	Junction	4747.50	4757.40	0.00	4767.30	0.00	26.85	4748.35	0.00	9.05	0 00:00	0.00	0.00
64	J42347	Junction	4706.85	4722.55	0.00	4738.25	0.00	26.85	4707.90	0.00	14.65	0 00:00	0.00	0.00
65	J42348	Junction	4677.52	4683.92	0.00	4690.32	0.00	26.82	4678.50	0.00	5.42	0 00:00	0.00	0.00
66	J42349	Junction	4670.58	4676.48	0.00	4682.38	0.00	26.83	4671.77	0.00	4.71	0 00:00	0.00	0.00
67	J42350	Junction	4666.48	4674.28	0.00	4682.08	0.00	26.84	4667.33	0.00	6.95	0 00:00	0.00	0.00
68	J42357	Junction	4670.80	4675.10	0.00	4679.40	0.00	13.31	4671.53	0.00	3.57	0 00:00	0.00	0.00
69	J42358	Junction	4617.19	4622.39	0.00	4627.59	0.00	13.31	4617.84	0.00	4.55	0 00:00	0.00	0.00
70	J42359	Junction	4589.72	4593.12	0.00	4596.52	0.00	13.30	4590.61	0.00	2.51	0 00:00	0.00	0.00
71	J4236	Junction	4546.45	4551.85	0.00	4557.25	0.00	35.35	4547.65	0.00	4.20	0 00:00	0.00	0.00
72	J42363	Junction	4588.99	4592.79	0.00	4596.59	0.00	35.40	4590.01	0.00	2.78	0 00:00	0.00	0.00
73	J42364	Junction	4621.30	4627.60	0.00	4633.90	0.00	13.31	4622.18	0.00	5.42	0 00:00	0.00	0.00
74	J42365	Junction	4812.97	4819.17	0.00	4825.37	0.00	7.00	4813.69	0.00	5.48	0 00:00	0.00	0.00
75	J42366	Junction	4809.24	4818.24	0.00	4827.24	0.00	7.03	4809.72	0.00	8.52	0 00:00	0.00	0.00
76	J42367	Junction	4786.31	4790.81	0.00	4795.31	0.00	7.00	4786.76	0.00	4.05	0 00:00	0.00	0.00
77	J42368	Junction	4758.99	4764.89	0.00	4770.79	0.00	7.00	4759.48	0.00	5.41	0 00:00	0.00	0.00
78	J4237	Junction	4580.68	4585.88	0.00	4591.08	0.00	35.40	4581.71	0.00	4.17	0 00:00	0.00	0.00
79	J42370	Junction	4749.05	4760.55	0.00	4772.05	0.00	7.00	4749.53	0.00	11.02	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
80	J42371	Junction	4745.20	4754.40	0.00	4763.60	0.00	7.00	4745.89	0.00	8.51	0 00:00	0.00	0.00
81	J42393	Junction	4585.90	4597.47	0.00	4609.04	0.00	104.58	4588.08	0.00	9.39	0 00:00	0.00	0.00
82	J42394	Junction	4586.59	4597.69	0.00	4608.79	0.00	104.58	4589.23	0.00	8.46	0 00:00	0.00	0.00
83	J42402	Junction	4585.83	4595.68	0.00	4605.53	0.00	16.00	4588.44	0.00	7.24	0 00:00	0.00	0.00
84	J42420	Junction	4713.66	4725.36	0.00	4737.06	0.00	26.86	4714.45	0.00	10.91	0 00:00	0.00	0.00
85	J42436	Junction	4689.65	4696.32	0.00	4702.99	0.00	26.81	4693.35	0.00	2.97	0 00:00	0.00	0.00
86	J42440	Junction	4744.06	4754.86	0.00	4765.66	0.00	7.00	4744.88	0.00	9.98	0 00:00	0.00	0.00
87	J42442	Junction	4775.41	4781.21	0.00	4787.01	0.00	38.18	4776.89	0.00	4.32	0 00:00	0.00	0.00
88	J42443	Junction	4713.69	4721.59	0.00	4729.49	0.00	42.27	4715.57	0.00	6.02	0 00:00	0.00	0.00
89	J42458	Junction	4585.91	4597.91	0.00	4609.91	0.00	4.42	4587.30	0.00	10.61	0 00:00	0.00	0.00
90	J42459	Junction	4584.43	4595.48	0.00	4606.53	0.00	4.42	4585.34	0.00	10.14	0 00:00	0.00	0.00
91	J42460	Junction	4582.66	4594.71	0.00	4606.76	0.00	4.42	4583.85	0.00	10.86	0 00:00	0.00	0.00
92	J42461	Junction	4579.30	4590.20	0.00	4601.10	0.00	6.99	4581.15	0.00	9.05	0 00:00	0.00	0.00
93	J42462	Junction	4581.42	4595.62	0.00	4609.82	0.00	6.99	4582.10	0.00	13.52	0 00:00	0.00	0.00
94	J42494	Junction	4599.72	4608.72	0.00	4608.72	0.00	33.77	4601.91	0.00	6.81	0 00:00	0.00	0.00
95	J42495	Junction	4603.33	4612.28	0.00	4621.23	0.00	33.69	4604.57	0.00	7.71	0 00:00	0.00	0.00
96	J42496	Junction	4612.58	4622.18	0.00	4631.78	0.00	33.69	4613.56	0.00	8.62	0 00:00	0.00	0.00
97	J42497	Junction	4632.36	4641.66	0.00	4650.96	0.00	33.69	4633.33	0.00	8.33	0 00:00	0.00	0.00
98	J42498	Junction	4640.79	4649.84	0.00	4658.89	0.00	33.69	4641.82	0.00	8.02	0 00:00	0.00	0.00
99	J42499	Junction	4650.81	4659.71	0.00	4668.61	0.00	33.69	4651.80	0.00	7.91	0 00:00	0.00	0.00
100	J42500	Junction	4652.77	4662.12	0.00	4671.47	0.00	33.69	4654.07	0.00	8.05	0 00:00	0.00	0.00
101	J42516	Junction	4653.02	4664.07	0.00	4675.12	0.00	33.69	4654.90	0.00	9.17	0 00:00	0.00	0.00
102	J42517	Junction	4655.67	4665.42	0.00	4675.17	0.00	33.69	4656.84	0.00	8.58	0 00:00	0.00	0.00
103	J42518	Junction	4656.94	4666.44	0.00	4675.94	0.00	33.70	4658.27	0.00	8.17	0 00:00	0.00	0.00
104	J42519	Junction	4658.11	4667.16	0.00	4676.21	0.00	33.81	4659.42	0.00	7.74	0 00:00	0.00	0.00
105	J42520	Junction	4669.61	4682.46	0.00	4695.31	0.00	34.30	4670.54	0.00	11.92	0 00:00	0.00	0.00
106	J42521	Junction	4670.25	4680.20	0.00	4690.15	0.00	33.71	4672.00	0.00	8.20	0 00:00	0.00	0.00
107	J42522	Junction	4670.60	4680.05	0.00	4689.50	0.00	33.69	4672.48	0.00	7.57	0 00:00	0.00	0.00
108	J42523	Junction	4671.79	4678.79	0.00	4685.79	0.00	33.69	4673.60	0.00	5.19	0 00:00	0.00	0.00
109	J42525	Junction	4672.21	4681.46	0.00	4690.71	0.00	33.69	4674.28	0.00	7.18	0 00:00	0.00	0.00
110	J42526	Junction	4673.18	4681.88	0.00	4690.58	0.00	33.44	4675.13	0.00	6.75	0 00:00	0.00	0.00
111	J42527	Junction	4674.07	4682.32	0.00	4690.57	0.00	33.44	4675.73	0.00	6.59	0 00:00	0.00	0.00
112	J42528	Junction	4678.70	4688.75	0.00	4698.80	0.00	33.44	4679.75	0.00	9.00	0 00:00	0.00	0.00
113	J42529	Junction	4680.22	4686.92	0.00	4693.62	0.00	33.44	4681.65	0.00	5.27	0 00:00	0.00	0.00
114	J42530	Junction	4692.15	4706.20	0.00	4720.25	0.00	33.44	4693.15	0.00	13.05	0 00:00	0.00	0.00
115	J42531	Junction	4693.08	4703.98	0.00	4714.88	0.00	33.44	4694.60	0.00	9.38	0 00:00	0.00	0.00
116	J42532	Junction	4693.66	4702.01	0.00	4710.36	0.00	33.44	4695.46	0.00	6.55	0 00:00	0.00	0.00
117	J42533	Junction	4695.91	4701.91	0.00	4707.91	0.00	33.44	4697.15	0.00	4.76	0 00:00	0.00	0.00
118	J42538	Junction	4595.69	4610.69	0.00	4625.69	0.00	79.56	4597.19	0.00	13.50	0 00:00	0.00	0.00
119	J42540	Junction	4597.65	4612.65	0.00	4627.65	0.00	33.77	4598.94	0.00	13.71	0 00:00	0.00	0.00
120	J42722	Junction	4586.25	4594.25	0.00	4602.25	0.00	92.43	4587.92	0.00	6.33	0 00:00	0.00	0.00
121	J42745	Junction	4755.35	4761.10	0.00	4766.85	0.00	20.00	4756.47	0.00	4.63	0 00:00	0.00	0.00
122	J42746	Junction	4758.90	4764.40	0.00	4769.90	0.00	20.00	4759.85	0.00	4.55	0 00:00	0.00	0.00
123	J42747	Junction	4704.88	4709.53	0.00	4714.18	0.00	20.00	4706.22	0.00	3.31	0 00:00	0.00	0.00
124	J42748	Junction	4703.71	4709.86	0.00	4716.01	0.00	20.00	4704.90	0.00	4.96	0 00:00	0.00	0.00
125	J42788	Junction	4596.35	4603.40	0.00	4610.45	0.00	9.75	4597.77	0.00	5.63	0 00:00	0.00	0.00
126	J42808	Junction	4594.64	4601.49	0.00	4608.34	0.00	30.08	4596.70	0.00	4.79	0 00:00	0.00	0.00
127	J42809	Junction	4594.91	4601.61	0.00	4608.31	0.00	30.17	4596.98	0.00	4.63	0 00:00	0.00	0.00
128	J42810	Junction	4595.00	4600.90	0.00	4606.80	0.00	30.30	4597.55	0.00	3.35	0 00:00	0.00	0.00
129	J42811	Junction	4595.04	4600.54	0.00	4606.04	0.00	9.88	4597.58	0.00	2.96	0 00:00	0.00	0.00
130	J42812	Junction	4595.09	4601.24	0.00	4607.39	0.00	9.77	4597.59	0.00	3.65	0 00:00	0.00	0.00
131	J42813	Junction	4595.72	4601.42	0.00	4607.12	0.00	9.75	4597.71	0.00	3.71	0 00:00	0.00	0.00
132	J42814	Junction	4595.42	4600.92	0.00	4606.42	0.00	9.75	4597.66	0.00	3.26	0 00:00	0.00	0.00
133	J42815	Junction	4595.33	4601.43	0.00	4607.53	0.00	9.76	4597.63	0.00	3.80	0 00:00	0.00	0.00
134	J42816	Junction	4595.25	4601.25	0.00	4607.25	0.00	9.76	4597.61	0.00	3.64	0 00:00	0.00	0.00
135	J42821	Junction	4619.88	4624.58	0.00	4629.28	0.00	35.17	4621.58	0.00	3.00	0 00:00	0.00	0.00
136	J42824	Junction	4645.94	4654.69	0.00	0.00	0.00	20.00	4647.35	0.00	7.34	0 00:00	0.00	0.00
137	J42833	Junction	4716.01	4720.71	0.00	4725.41	0.00	20.00	4716.81	0.00	3.90	0 00:00	0.00	0.00
138	J42834	Junction	4723.25	4729.80	0.00	4736.35	0.00	20.00	4724.22	0.00	5.58	0 00:00	0.00	0.00
139	J42835	Junction	4742.72	4749.37	0.00	4756.02	0.00	20.00	4743.59	0.00	5.78	0 00:00	0.00	0.00
140	J42836	Junction	4753.59	4759.29	0.00	4764.99	0.00	20.00	4754.58	0.00	4.71	0 00:00	0.00	0.00
141	J42853	Junction	4666.81	4672.06	0.00	4677.31	0.00	20.00	4667.65	0.00	4.41	0 00:00	0.00	0.00
142	J42854	Junction	4651.03	4657.83	0.00	4664.63	0.00	20.00	4651.86	0.00	5.97	0 00:00	0.00	0.00
143	J42855	Junction	4668.88	4674.28	0.00	4679.68	0.00	20.00	4670.57	0.00	3.71	0 00:00	0.00	0.00
144	J42856	Junction	4669.95	4674.45	0.00	4678.95	0.00	20.00	4671.38	0.00	3.07	0 00:00	0.00	0.00
145	J42857	Junction	4678.77	4683.37	0.00	4687.97	0.00	20.00	4679.70	0.00	3.67	0 00:00	0.00	0.00
146	J42858	Junction	4696.01	4701.26	0.00	4706.51	0.00	20.00	4696.86	0.00	4.40	0 00:00	0.00	0.00
147	J42859	Junction	4700.55	4707.90	0.00	4715.25	0.00	20.00	4701.59	0.00	6.31	0 00:00	0.00	0.00
148	J42885	Junction	4616.20	4626.17	0.00	4632.84	0.00	35.17	4617.99	0.00	8.18	0 00:00	0.00	0.00
149	J441024-0	Junction	4578.99	4590.09	4578.99	4590.09	0.00	79.11	4581.19	0.00	8.90	0 00:00	0.00	0.00
150	J441024-1	Junction	4576.75	4588.25	0.00	4599.75	0.00	86.62	4579.92	0.00	8.33	0 00:00	0.00	0.00
151	J441032-1	Junction	4592.84	4599.09	0.00	4605.34	0.00	4.42	4593.30	0.00	5.79	0 00:00	0.00	0.00
152	J441557-0	Junction	4693.78	4701.38	0.00	4708.98	0.00	33.44	4695.77	0.00	5.61	0 00:00	0.00	0.00
153	J441560-0	Junction	4696.87	4710.00	0.00	4713.57	0.00	63.74	4705.52	0.00	6.35	0 00:00	0.00	0.00
154	J441565-1	Junction	4693.98	4708.08	0.00	4722.18	0.00	33.44	4696.31	0.00	11.77	0 00:00	0.00	0.00
155	J441657-0	Junction	4638.41	4643.98	0.00	4650.65	0.00	20.00	4639.12	0.00	4.86	0 00:00	0.00	0.00
156	J441660-0	Junction	4645.74	4654.22	0.00	4660.89	0.00	20.00	4646.73	0.00	7.49	0 00:00	0.00	0.00
157	J441673-1	Junction	4723.25	4729.80	0.00	4736.35	0.00	20.00	4724.84	0.00	4.96	0 00:00	0.00	0.00
158	J441823.0	Junction	4636.38	4643.08	0.00	4649.78	0.00	13.31	4637.13	0.00	5.95	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
159	J44269-1	Junction	4721.40	4727.07	0.00	4733.74	0.00	7.00	4724.24	0.00	7.16	0 00:00	0.00	0.00
160	J44279-1	Junction	4589.18	4592.62	0.00	4599.29	0.00	4.42	4591.64	0.00	0.98	0 00:00	0.00	0.00
161	J4429-0	Junction	4621.41	4632.89	0.00	4632.89	0.00	24.17	4622.97	0.00	9.92	0 00:00	0.00	0.00
162	J44373-0	Junction	4554.50	4559.43	0.00	4566.10	0.00	66.00	4556.18	0.00	8.32	0 00:00	0.00	0.00
163	J44377-1	Junction	4546.06	4554.75	0.00	4561.42	0.00	55.95	4552.07	0.00	2.68	0 00:00	0.00	0.00
164	J44488-1	Junction	4592.40	4597.30	0.00	4602.20	0.00	39.20	4593.92	0.00	3.38	0 00:00	0.00	0.00
165	J44563-1	Junction	4588.62	4592.48	0.00	4599.15	0.00	4.47	4591.16	0.00	1.32	0 00:00	0.00	0.00
166	J44598-1	Junction	4658.85	4664.25	0.00	4659.65	0.00	26.84	4660.27	0.00	3.98	0 00:00	0.00	0.00
167	J44599-0	Junction	4647.46	4658.96	0.00	4670.46	0.00	12.62	4648.68	0.00	10.28	0 00:00	0.00	0.00
168	J44612-0	Junction	4634.84	4641.34	0.00	4647.84	0.00	87.04	4638.42	0.00	2.92	0 00:00	0.00	0.00
169	J44681.0	Junction	4591.92	4596.82	0.00	4601.72	0.00	16.00	4592.60	0.00	4.22	0 00:00	0.00	0.00
170	JUL010.04-0	Junction	4614.13	4620.80	0.00	4627.47	0.00	220.40	4615.70	0.00	8.43	0 00:00	0.00	0.00
171	JUL010.04-1	Junction	4495.70	4502.37	0.00	4509.04	0.00	216.00	4498.14	0.00	7.56	0 00:00	0.00	0.00
172	JUL010.08-0	Junction	4675.67	4682.34	0.00	4689.01	0.00	222.74	4677.16	0.00	8.51	0 00:00	0.00	0.00
173	JUL010.10-0	Junction	5849.45	5856.12	0.00	5862.79	0.00	17.67	5849.73	0.00	9.72	0 00:00	0.00	0.00
174	JUL010.10-1	Junction	4812.10	4818.77	0.00	4825.44	0.00	257.31	4813.57	0.00	8.53	0 00:00	0.00	0.00
175	JUL020.02-0	Junction	4865.89	4872.56	0.00	4879.23	0.00	138.18	4866.96	0.00	8.93	0 00:00	0.00	0.00
176	JUL020.06-0	Junction	5072.86	5079.53	0.00	5086.20	0.00	46.41	5073.41	0.00	9.45	0 00:00	0.00	0.00
177	JUL020.10-0	Junction	5162.24	5168.91	0.00	5175.58	0.00	46.12	5162.82	0.00	9.42	0 00:00	0.00	0.00
178	JUL020.12-0	Junction	5346.59	5353.26	0.00	5359.93	0.00	0.00	5346.59	0.00	10.00	0 00:00	0.00	0.00
179	JUL030.02-0	Junction	4580.07	4586.74	0.00	4593.41	0.00	112.00	4581.13	0.00	8.94	0 00:00	0.00	0.00
180	JUL030.04-0	Junction	4587.21	4593.88	0.00	4600.55	0.00	112.00	4588.24	0.00	8.97	0 00:00	0.00	0.00
181	JUL030.08-1	Junction	4618.14	4624.81	0.00	4631.48	0.00	112.02	4619.22	0.00	8.92	0 00:00	0.00	0.00
182	JUL030.12-1	Junction	4623.65	4630.32	0.00	4636.99	0.00	112.50	4624.83	0.00	8.82	0 00:00	0.00	0.00
183	JUL030.14-0	Junction	5067.12	5073.79	0.00	5080.46	0.00	50.92	5067.69	0.00	9.43	0 00:00	0.00	0.00
184	JUL030.14-1	Junction	4769.44	4776.11	0.00	4782.78	0.00	50.35	4770.03	0.00	9.41	0 00:00	0.00	0.00
185	JUL030.16-0	Junction	5222.41	5229.08	0.00	5235.75	0.00	5.90	5222.55	0.00	9.86	0 00:00	0.00	0.00
186	JUL031.06-1	Junction	4887.75	4894.42	0.00	4901.09	0.00	62.70	4888.43	0.00	9.32	0 00:00	0.00	0.00
187	JUL031.10-0	Junction	6622.71	6629.38	0.00	6636.05	0.00	0.19	6622.72	0.00	9.99	0 00:00	0.00	0.00
188	JUL031.10-1	Junction	5457.22	5463.89	0.00	5470.56	0.00	22.04	5457.52	0.00	9.70	0 00:00	0.00	0.00
189	JUL033.02-0	Junction	5974.93	5981.60	0.00	5988.27	0.00	3.31	5975.01	0.00	9.92	0 00:00	0.00	0.00
190	JUL033.02-1	Junction	5352.23	5358.90	0.00	5365.57	0.00	3.35	5352.32	0.00	9.91	0 00:00	0.00	0.00
191	JUL034.02-0	Junction	5708.23	5714.90	0.00	5721.57	0.00	5.94	5708.35	0.00	9.88	0 00:00	0.00	0.00
192	JUL040.06-0	Junction	5281.46	5288.13	0.00	5294.80	0.00	61.33	5282.03	0.00	9.43	0 00:00	0.00	0.00
193	JUL040.06-1	Junction	4897.00	4903.00	0.00	4903.00	0.00	60.57	4903.98	0.00	3.02	0 00:00	0.00	0.00
194	JUL041.02-1	Junction	4627.15	4637.63	0.00	4644.30	0.00	39.29	4628.32	0.00	9.31	0 00:00	0.00	0.00
195	JUL041.04-0	Junction	5183.21	5189.88	0.00	5196.55	0.00	0.00	5183.21	0.00	10.00	0 00:00	0.00	0.00
196	JUL041.04-1	Junction	4741.62	4748.29	0.00	4748.29	0.00	39.45	4742.15	0.00	9.47	0 00:00	0.00	0.00
197	JUL045.02-0	Junction	6540.33	6547.00	0.00	6553.67	0.00	1.00	6540.37	0.00	9.96	0 00:00	0.00	0.00
198	JUL065.02-0	Junction	6574.33	6581.00	0.00	6587.67	0.00	0.00	6574.33	0.00	10.00	0 00:00	0.00	0.00
199	JUL066.02-0	Junction	6216.13	6222.80	0.00	6229.47	0.00	0.91	6216.17	0.00	9.96	0 00:00	0.00	0.00
200	JUL070.02-0	Junction	4581.13	4587.80	0.00	4594.47	0.00	104.58	4582.04	0.00	9.09	0 00:00	0.00	0.00
201	JUL070.04-0	Junction	4647.09	4655.74	0.00	4662.41	0.00	92.69	4647.95	0.00	9.14	0 00:00	0.00	0.00
202	JUL070.04-1	Junction	4590.98	4604.49	0.00	4611.16	0.00	92.67	4592.75	0.00	11.74	0 00:00	0.00	0.00
203	JUL070.06-0	Junction	4659.93	4666.60	0.00	4673.27	0.00	80.10	4660.77	0.00	9.16	0 00:00	0.00	0.00
204	JUL070.10-0	Junction	5083.29	5089.96	0.00	5096.63	0.00	35.63	5083.73	0.00	9.56	0 00:00	0.00	0.00
205	JUL070.10-1	Junction	4779.12	4812.06	0.00	4818.73	0.00	56.37	4779.75	0.00	32.31	0 00:00	0.00	0.00
206	JUL070.12-0	Junction	5214.49	5221.16	0.00	5227.83	0.00	35.75	5214.91	0.00	9.58	0 00:00	0.00	0.00
207	JUL070.14-0	Junction	5261.14	5267.81	0.00	5274.48	0.00	0.00	5261.14	0.00	10.00	0 00:00	0.00	0.00
208	JUL080.02-0	Junction	4576.48	4585.13	0.00	4591.80	0.00	101.07	4577.39	0.00	9.09	0 00:00	0.00	0.00
209	JUL080.04-0	Junction	4595.90	4602.57	0.00	4609.24	0.00	87.03	4596.56	0.00	9.34	0 00:00	0.00	0.00
210	JUL080.04-1	Junction	4634.00	4642.69	0.00	4649.36	0.00	87.04	4634.90	0.00	9.10	0 00:00	0.00	0.00
211	JUL080.06-0	Junction	4635.30	4642.00	0.00	4642.31	0.00	42.27	4638.47	0.00	6.83	0 00:00	0.00	0.00
212	JUL080.06-1	Junction	4695.88	4702.55	0.00	4709.22	0.00	42.27	4696.43	0.00	9.45	0 00:00	0.00	0.00
213	JUL080.08-0	Junction	4696.80	4703.47	0.00	4710.14	0.00	42.27	4697.44	0.00	9.36	0 00:00	0.00	0.00
214	JUL080.08-1	Junction	4711.67	4718.34	0.00	4725.01	0.00	42.27	4712.20	0.00	9.47	0 00:00	0.00	0.00
215	JUL080.10-0	Junction	4770.94	4777.61	0.00	4784.28	0.00	38.18	4771.43	0.00	9.51	0 00:00	0.00	0.00
216	JUL080.10-1	Junction	4717.35	4724.02	0.00	4730.69	0.00	42.28	4719.37	0.00	7.98	0 00:00	0.00	0.00
217	JUL080.12-0	Junction	4776.51	4783.18	0.00	4789.85	0.00	38.27	4779.02	0.00	7.49	0 00:00	0.00	0.00
218	JUL080.12-1	Junction	4878.08	4884.75	0.00	4891.42	0.00	38.30	4878.56	0.00	9.52	0 00:00	0.00	0.00
219	JUL080.14-0	Junction	5014.70	5021.37	0.00	5028.04	0.00	10.99	5014.92	0.00	9.78	0 00:00	0.00	0.00
220	JUL080.16-0	Junction	5227.63	5234.30	0.00	5240.97	0.00	11.14	5227.84	0.00	9.79	0 00:00	0.00	0.00
221	JUL084.02-0	Junction	6213.33	6220.00	0.00	6226.67	0.00	0.18	6213.34	0.00	9.99	0 00:00	0.00	0.00
222	JUL100.02-1	Junction	4820.37	4825.52	0.00	4832.19	0.00	7.00	4820.91	0.00	4.61	0 00:00	0.00	0.00
223	JUL100.04-0	Junction	5012.74	5019.41	0.00	5026.08	0.00	13.18	5012.99	0.00	9.75	0 00:00	0.00	0.00
224	JUL100.06-0	Junction	5193.10	5199.77	0.00	5206.44	0.00	0.83	5193.14	0.00	9.96	0 00:00	0.00	0.00
225	JUL120.02-0	Junction	4505.93	4512.60	0.00	4519.27	0.00	90.90	4507.12	0.00	8.81	0 00:00	0.00	0.00
226	JUL120.04-0	Junction	4541.49	4548.16	0.00	4554.83	0.00	91.31	4542.51	0.00	8.98	0 00:00	0.00	0.00
227	JUL120.04-1	Junction	4506.91	4513.58	0.00	4520.25	0.00	90.90	4510.10	0.00	11.63	0 00:00	0.00	0.00
228	JUL120.06-0	Junction	4574.18	4580.85	0.00	4587.52	0.00	92.46	4575.23	0.00	8.95	0 00:00	0.00	0.00
229	JUL120.06-1	Junction	4541.09	4547.76	0.00	4554.43	0.00	92.15	4543.02	0.00	8.07	0 00:00	0.00	0.00
230	JUL121.02-0	Junction	4698.77	4710.00	0.00	4712.11	0.00	85.82	4705.52	0.00	8.25	0 00:00	0.00	0.00
231	JUL121.04-0	Junction	5110.19	5116.86	0.00	5123.53	0.00	0.00	5110.19	0.00	10.00	0 00:00	0.00	0.00
232	JUL121.07-0	Junction	5108.32	5114.99	0.00	5121.66	0.00	0.00	5108.32	0.00	10.00	0 00:00	0.00	0.00
233	JUL121.07-1	Junction	5027.00	5033.67	0.00	5040.34	0.00	79.57	5027.84	0.00	9.16	0 00:00	0.00	0.00
234	JUL126.02-0	Junction	6714.13	6720.80	0.00	6727.47	0.00	0.00	6720.00	0.00	10.00	0 00:00	0.00	0.00
235	JUL130.02-0	Junction	4566.45	4573.12	0.00	4579.79	0.00	14.97	4566.80	0.00	9.65	0 00:00	0.00	0.00
236	JUL130.02-1	Junction	4505.04	4511.71	0.00	4518.38	0.00	14.97	4505.40	0.00	9.64	0 00:00	0.00	0.00
237	JUL130.04-0	Junction	4581.26	4587.93	0.00	4594.60	0.00	68.82	4584.72	0.00	6.54	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
238	JUL130.04-1	Junction	4567.91	4574.58	0.00	4581.25	0.00	98.09	4584.58	6.67	0.00	0 01:39	88.89	152.00
239	JUL130.06-0	Junction	4590.00	4603.44	0.00	4610.11	0.00	62.62	4590.76	0.00	12.68	0 00:00	0.00	0.00
240	JUL130.06-1	Junction	4582.55	4589.22	0.00	4595.89	0.00	62.61	4584.85	0.00	7.70	0 00:00	0.00	0.00
241	JUL130.08-0	Junction	4592.42	4604.78	0.00	4611.45	0.00	63.60	4594.09	0.00	10.69	0 00:00	0.00	0.00
242	JUL130.08-1	Junction	4594.64	4602.65	0.00	4609.32	0.00	30.00	4596.10	0.00	8.54	0 00:00	0.00	0.00
243	JUL132.02-1	Junction	4760.63	4767.30	0.00	4773.97	0.00	20.00	4761.90	0.00	8.73	0 00:00	0.00	0.00
244	JUL152.02-0	Junction	4550.30	4558.56	0.00	4565.23	0.00	65.82	4554.56	0.00	5.74	0 00:00	0.00	0.00
245	JUL152.02-1	Junction	4547.04	4555.99	0.00	4562.66	0.00	73.31	4554.51	0.00	4.81	0 00:00	0.00	0.00
246	JUL152.04-0	Junction	4554.21	4559.84	0.00	4566.51	0.00	66.00	4555.95	0.00	8.26	0 00:00	0.00	0.00
247	JUL152.04-1	Junction	4551.14	4558.14	0.00	4564.81	0.00	66.00	4555.71	0.00	5.43	0 00:00	0.00	0.00
248	Jun-131	Junction	4559.02	4563.45	0.00	0.00	0.00	29.59	4560.98	0.00	2.47	0 00:00	0.00	0.00
249	Jun-132	Junction	4546.17	4552.17	0.00	0.00	0.00	55.76	4548.30	0.00	3.87	0 00:00	0.00	0.00
250	Jun-192	Junction	4745.00	4759.00	0.00	4712.12	0.00	18.93	4759.00	0.00	0.00	0 01:01	0.00	0.00
251	Jun-194	Junction	4704.00	6.00	0.00	0.00	0.00	13.85	4704.75	0.00	1.25	0 00:00	0.00	0.00
252	Jun-195	Junction	4964.00	4970.00	0.00	0.00	0.00	6.50	4964.39	0.00	9.61	0 00:00	0.00	0.00
253	Jun-203	Junction	4691.00	4695.00	0.00	0.00	0.00	11.00	4691.99	0.00	3.01	0 00:00	0.00	0.00
254	Jun-204	Junction	4960.00	4966.00	0.00	4966.00	0.00	16.59	4960.32	0.00	9.68	0 00:00	0.00	0.00
255	Jun-206	Junction	4834.00	4840.00	4834.00	4840.00	0.00	11.00	4834.77	0.00	5.23	0 00:00	0.00	0.00
256	Jun-207	Junction	4895.00	4901.00	0.00	0.00	0.00	18.93	4895.91	0.00	5.09	0 00:00	0.00	0.00
257	Jun-208	Junction	4880.00	4887.00	0.00	4898.00	0.00	63.52	4888.64	0.00	9.36	0 00:00	0.00	0.00
258	Stor-28	Junction	4860.00	4874.00	0.00	4874.00	0.00	20.00	4860.26	0.00	13.74	0 00:00	0.00	0.00
259	UL024.02-0	Junction	7100.00	7106.67	0.00	7113.34	0.00	4.28	7100.10	0.00	9.90	0 00:00	0.00	0.00
260	J0008-1	Outfall	4494.53					108.17	4494.53					
261	J42797	Outfall	4520.54					35.30	4521.75					
262	J44298-1	Outfall	4498.50					114.64	4499.97					
263	J44325-1	Outfall	4502.46					14.97	4502.81					
264	JUL010.02-1	Outfall	4491.00					207.20	4493.39					
265	JUL020.02-1	Outfall	4490.00					138.01	4491.07					
266	JUL030.02-1	Outfall	4501.37					111.97	4502.43					
267	JUL070.02-1	Outfall	4500.32					104.56	4501.22					
268	JUL080.02-1	Outfall	4493.46					85.88	4494.37					
269	JUL120.02-1	Outfall	4504.59					90.90	4505.70					
270	Out-28	Outfall	0.00					9.92	0.00					
271	JUL040.04-1	Storage Node	4900.00	4910.00	0.00		0.00	30.26	4904.22				0.00	0.00
272	JUL121.06-1	Storage Node	4893.00	4903.50	0.00		0.00	75.36	4895.54				0.00	0.00
273	Jun-200	Storage Node	4960.00	4970.00	0.00		0.00	0.00	4960.00				0.00	0.00
274	Jun-205	Storage Node	4835.00	4845.00	0.00		0.00	30.22	4843.32				0.00	0.00
275	SN-Mav	Storage Node	4597.00	4602.60	0.00		20.00	40.57	4600.78				0.00	0.00
276	SN-NEW-UL134	Storage Node	4860.00	4874.00	0.00		0.00	78.01	4866.89				0.00	0.00
277	SN-Pond	Storage Node	4625.00	4634.40	0.00		20.00	97.43	4633.45				0.00	0.00
278	SN-Rock	Storage Node	4788.10	10.90	0.00		20.00	45.34	4790.02				0.00	720.00
279	SN-Still	Storage Node	4723.40	4724.40	0.00		20.00	2.38	4724.24				0.00	0.00
280	SN-SUMM	Storage Node	4599.80	7.40	0.00		20.00	37.87	4606.60				0.00	720.00
281	SN-Swain	Storage Node	4654.40	5.80	0.00		20.00	41.32	4656.60				0.00	720.00
282	SN-UL020	Storage Node	4886.00	4900.00	0.00		0.00	391.06	4893.96				0.00	0.00
283	SN-UL022	Storage Node	5183.00	5193.00	0.00		0.00	95.38	5187.79				0.00	0.00
284	SN-UL030	Storage Node	4908.00	4918.00	0.00		0.00	131.65	4913.59				0.00	0.00
285	SN-UL031	Storage Node	5478.00	5488.00	0.00		0.00	52.20	5482.35				0.00	0.00
286	SN-UL032	Storage Node	5088.00	5098.00	0.00		0.00	82.88	5092.59				0.00	0.00
287	SN-UL041	Storage Node	4762.00	4772.00	0.00		0.00	0.00	4762.00				0.00	0.00
288	SN-UL042	Storage Node	4896.00	4910.00	0.00		0.00	49.83	4903.98				0.00	0.00
289	SN-UL043	Storage Node	5204.00	5214.00	0.00		0.00	0.00	5204.00				0.00	0.00
290	SN-UL044	Storage Node	5302.00	5312.00	0.00		0.00	117.17	5306.77				0.00	0.00
291	SN-UL051	Storage Node	4691.00	4701.00	0.00		0.00	41.95	4695.38				0.00	0.00
292	SN-UL064	Storage Node	5235.00	5245.00	0.00		0.00	82.13	5239.68				0.00	0.00
293	SN-UL070	Storage Node	4680.00	4690.00	0.00		0.00	71.96	4684.82				0.00	0.00
294	SN-UL082	Storage Node	4899.00	4909.00	0.00		0.00	45.76	4903.45				0.00	0.00
295	SN-UL083	Storage Node	5248.00	5258.00	0.00		0.00	34.08	5252.21				0.00	0.00
296	SN-UL101	Storage Node	5033.00	5043.00	0.00		0.00	22.13	5036.94				0.00	0.00
297	SN-UL102	Storage Node	5033.00	5043.00	0.00		0.00	36.38	5037.21				0.00	0.00
298	SN-UL115	Storage Node	5033.00	5043.00	0.00		0.00	49.64	5037.58				0.00	0.00
299	SN-UL121	Storage Node	4718.00	4728.00	0.00		0.00	59.09	4722.03				0.00	0.00
300	SN-UL124	Storage Node	5047.00	5057.00	0.00		0.00	133.97	5051.90				0.00	0.00
301	SN-UL130	Storage Node	4612.00	4622.00	0.00		0.00	140.50	4618.03				0.00	0.00
302	SN-UL134	Storage Node	5110.00	5120.00	0.00		0.00	135.07	5115.33				0.00	0.00
303	SN-UL140	Storage Node	4577.00	4587.00	0.00		0.00	46.57	4581.02				0.00	0.00
304	SN-UL152	Storage Node	4575.00	4585.00	0.00		0.00	191.19	4581.73				0.00	0.00
305	SN-Vill	Storage Node	4587.40	4595.40	0.00		20.00	87.01	4591.14				0.00	0.00
306	SN-Waym	Storage Node	4723.60	6.80	0.00		20.00	61.63	4729.63				0.00	720.00
307	SN-Weath	Storage Node	4702.20	4712.20	0.00		20.00	62.84	4705.36				0.00	0.00
308	SN-WildF	Storage Node	4592.80	4.40	0.00		20.00	13.61	4595.66				0.00	720.00
309	SN-WildL	Storage Node	4592.80	4.40	0.00		20.00	34.34	4595.46				0.00	720.00
310	Stor-39	Storage Node	4680.00	10.00	0.00		0.00	79.36	4682.19				0.00	720.00
311	Stor-39·1	Storage Node	4841.00	4851.00	0.00		0.00	0.00	4841.00				0.00	0.00
312	Stor-41	Storage Node	4745.00	4755.00	0.00		0.00	90.09	4749.75				0.00	0.00
313	Stor-45	Storage Node	5000.00	15.00	0.00		0.00	51.23	5004.51				0.00	720.00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
1	0001	Pipe	J42306	J42302	251.32	4518.99	4500.54	7.3400	3.000	0.0130	108.17	180.72	0.60	17.62	2.43	0.81	0.00	Calculated
2	0002	Pipe	J44488-1	J42341	61.98	4592.40	4590.49	3.0800	3.000	0.0130	39.20	117.09	0.33	9.84	1.65	0.55	0.00	Calculated
3	0004	Pipe	J0004-0	J42306	174.71	4525.19	4518.99	3.5500	3.000	0.0130	108.18	125.65	0.86	19.73	2.23	0.75	0.00	Calculated
4	0005	Pipe	J42307	J0004-0	648.84	4545.94	4525.19	3.2000	3.000	0.0130	108.32	119.28	0.91	17.35	2.47	0.83	0.00	Calculated
5	0006	Pipe	J0006-0	J42307	859.23	4578.80	4545.94	3.8200	3.000	0.0130	108.92	130.44	0.84	19.23	2.24	0.75	0.00	Calculated
6	0007	Pipe	J42340	J0006-0	140.95	4584.36	4578.80	3.9400	3.000	0.0130	39.19	132.47	0.30	12.51	1.58	0.53	0.00	Calculated
7	0008	Pipe	J42302	J0008-1	199.41	4500.54	4496.64	1.9600	3.000	0.0130	108.17	93.28	1.16	15.30	3.00	1.00	17.00	SURCHARGED
8	0009	Pipe	J42341	J42340	613.10	4590.49	4584.36	1.0000	3.000	0.0130	39.20	66.69	0.59	11.19	1.49	0.50	0.00	Calculated
9	0011	Pipe	J0011-0	J0006-0	160.18	4586.34	4578.80	4.7100	2.500	0.0130	83.36	88.99	0.94	18.45	2.31	0.93	0.00	Calculated
10	0013	Pipe	J42308	J0012-1	307.90	4600.22	4587.41	4.1600	1.500	0.0130	18.93	21.43	0.88	14.11	1.28	0.86	0.00	Calculated
11	0131	Pipe	J0131.0	J42359	454.58	4591.24	4589.72	0.3300	2.000	0.0130	13.30	13.08	1.02	6.52	1.25	0.62	0.00	> CAPACITY
12	0132	Pipe	J42358	J0131.0	387.78	4617.19	4591.24	6.6900	2.000	0.0130	13.31	58.52	0.23	7.71	1.14	0.57	0.00	Calculated
13	0134	Pipe	J42359	J42363	11.91	4589.72	4588.99	6.1300	2.500	0.0130	13.32	101.55	0.13	11.23	0.95	0.38	0.00	Calculated
14	0139	Pipe	J42824	J441660-0	4.34	4645.94	4645.74	4.6100	2.000	0.0130	20.00	48.56	0.41	10.19	1.20	0.60	0.00	Calculated
15	0164	Pipe	JUL130.04-1	JUL130.02-0	548.67	4567.91	4566.45	0.2700	1.500	0.0130	14.97	5.42	2.76	13.10	0.93	0.62	0.00	> CAPACITY
16	0165	Pipe	JUL120.04-1	JUL120.02-0	60.27	4506.91	4505.93	1.6300	5.000	0.0130	90.90	418.86	0.22	6.92	2.18	0.44	0.00	Calculated
17	0166	Pipe	JUL120.06-1	JUL120.04-0	64.48	4541.09	4541.49	-0.6200	2.500	0.0130	91.31	289.11	0.32	4.96	1.47	0.59	0.00	Calculated
18	0173	Pipe	J0012-1	J0011-0	6.44	4587.41	4586.34	16.6100	2.500	0.0130	20.02	167.19	0.12	12.16	2.50	1.00	3.00	SURCHARGED
19	0176	Pipe	J44377-1	J42224	34.17	4546.06	4532.48	39.7400	1.500	0.0130	55.95	66.22	0.84	31.66	1.50	1.00	208.00	SURCHARGED
20	0182	Pipe	J44269-1	J0014-1	357.60	4721.40	4721.70	-0.0800	1.500	0.0130	5.65	3.04	1.86	4.65	0.97	0.65	0.00	> CAPACITY
21	0183	Pipe	J42533	J441565-1	49.88	4695.91	4693.98	3.8700	4.000	0.0130	33.44	282.55	0.12	6.15	1.79	0.45	0.00	Calculated
22	0191	Pipe	SN-Mav	J44681.0	101.15	4597.00	4591.92	5.0200	1.000	0.0130	8.98	7.98	1.13	12.75	0.84	0.84	0.00	> CAPACITY
23	4442	Pipe	JUL130.08-0	JUL130.06-0	96.06	4592.42	4590.00	2.5200	4.000	0.0130	62.62	227.99	0.27	19.40	1.22	0.30	0.00	Calculated
24	4449	Pipe	J42393	JUL070.02-0	232.19	4585.90	4581.00	2.1100	4.500	0.0130	104.58	281.86	0.37	21.62	1.55	0.34	0.00	Calculated
25	4489	Pipe	J42118	J42112	399.05	4610.41	4599.43	2.7500	2.000	0.0130	35.17	37.53	0.94	11.79	1.80	0.90	0.00	Calculated
26	4490	Pipe	J42112	J42117	330.31	4599.43	4597.20	0.6800	2.500	0.0130	35.17	33.70	1.04	10.28	1.68	0.67	0.00	> CAPACITY
27	44174	Pipe	J42420	J42347	45.63	4713.66	4706.85	14.9200	2.500	0.0130	26.85	158.46	0.17	16.46	0.91	0.37	0.00	Calculated
28	44175	Pipe	J42346	J42420	424.21	4747.50	4713.66	7.9800	2.500	0.0130	26.86	115.85	0.23	19.23	0.82	0.33	0.00	Calculated
29	44177	Pipe	J42436	J42348	293.90	4692.40	4677.52	5.0600	2.500	0.0130	26.82	92.29	0.29	15.32	0.96	0.39	0.00	Calculated
30	44178	Pipe	J42347	J42436	398.35	4706.85	4692.40	3.6300	2.500	0.0130	26.81	78.12	0.34	14.09	1.02	0.41	0.00	Calculated
31	44181	Pipe	JUL100.02-1	J42365	197.42	4820.37	4812.97	3.7500	2.000	0.0130	7.00	43.80	0.16	8.32	0.63	0.32	0.00	Calculated
32	44182	Pipe	J42365	J42366	223.61	4812.97	4809.24	1.6700	2.000	0.0130	7.03	29.22	0.24	9.04	0.60	0.30	0.00	Calculated
33	44183	Pipe	J42366	J42367	346.58	4809.24	4786.31	6.6200	2.000	0.0130	7.00	58.19	0.12	12.35	0.47	0.24	0.00	Calculated
34	44184	Pipe	J42368	J42370	153.82	4758.99	4749.05	6.4600	2.000	0.0130	7.00	57.51	0.12	11.98	0.48	0.24	0.00	Calculated
35	44185	Pipe	J42367	J42368	353.15	4786.31	4758.99	7.7400	2.000	0.0130	7.00	62.92	0.11	12.51	0.47	0.23	0.00	Calculated
36	44186	Pipe	JUL080.12-0	J42442	28.71	4777.64	4775.41	7.7700	2.500	0.0130	38.18	114.31	0.33	13.14	1.43	0.57	0.00	Calculated
37	44187	Pipe	J42442	JUL080.10-0	51.79	4775.41	4773.28	4.1100	2.500	0.0130	38.18	83.18	0.46	14.33	1.33	0.53	0.00	Calculated
38	44236	Pipe	J42223	J42156	262.10	4530.32	4527.51	1.0700	4.000	0.0130	106.71	148.73	0.72	10.50	3.07	0.77	0.00	Calculated
39	44237	Pipe	J42156	J42155	254.58	4527.51	4525.14	0.9300	4.000	0.0130	114.70	138.59	0.83	10.76	3.15	0.79	0.00	Calculated
40	44238	Pipe	J42155	J42154	394.76	4525.14	4521.79	0.8500	4.000	0.0130	114.64	132.32	0.87	15.04	2.33	0.58	0.00	Calculated
41	44268	Pipe	J42180	J42181	179.46	4743.73	4730.23	7.5200	2.500	0.0130	7.00	112.50	0.06	13.74	0.40	0.16	0.00	Calculated
42	44269	Pipe	J42181	J44269-1	56.95	4730.23	4721.40	15.5000	2.500	0.0130	7.00	161.51	0.04	7.01	1.43	0.57	0.00	Calculated
43	44275	Pipe	J0014-1	J42178	196.83	4721.70	4703.44	9.2800	1.500	0.0130	6.19	31.99	0.19	12.98	0.47	0.31	0.00	Calculated
44	44276	Pipe	J42178	J42177	144.52	4703.44	4694.19	6.4000	1.500	0.0130	6.19	26.58	0.23	10.72	0.54	0.36	0.00	Calculated
45	44277	Pipe	J42177	J42176	64.40	4694.19	4691.51	4.1600	1.500	0.0130	6.19	21.43	0.29	8.61	0.64	0.43	0.00	Calculated
46	44278	Pipe	J42176	J42175	144.49	4691.51	4688.48	2.1000	1.500	0.0130	6.19	15.21	0.41	7.09	0.74	0.50	0.00	Calculated
47	44279	Pipe	J441032-1	J44279-1	131.14	4592.84	4589.20	2.7800	2.000	0.0130	4.42	37.69	0.12	3.86	1.23	0.62	0.00	Calculated
48	44298	Pipe	J42157	J44298-1	178.93	4512.22	4498.50	7.6700	4.000	0.0130	114.64	397.76	0.29	25.25	1.55	0.39	0.00	Calculated
49	44299	Pipe	J42154	J42157	88.84	4521.79	4512.22	10.7700	4.000	0.0130	114.63	471.45	0.24	23.91	1.62	0.41	0.00	Calculated
50	44333	Pipe	J42224	J42223	77.80	4532.48	4530.32	2.7800	4.000	0.0130	107.01	239.34	0.45	11.75	2.79	0.70	0.00	Calculated
51	44375	Pipe	JUL152.04-1	JUL152.02-0	76.70	4551.14	4550.30	1.1000	3.000	0.0130	65.82	69.80	0.94	14.64	3.00	1.00	121.00	SURCHARGED
52	44377	Pipe	JUL152.02-1	J44377-1	76.96	4547.04	4546.06	1.2700	2.500	0.0130	55.95	46.29	1.21	12.94	2.50	1.00	199.00	SURCHARGED
53	44455	Pipe	J42265	J42264	120.43	4616.61	4608.40	6.8200	2.000	0.0130	37.87	59.07	0.64	13.44	1.92	0.96	0.00	Calculated
54	44458	Pipe	J42175	J42282	60.28	4688.48	4687.53	1.5800	1.500	0.0130	6.19	13.19	0.47	7.31	0.72	0.48	0.00	Calculated
55	44459	Pipe	J42304	J42305	77.03	4686.38	4681.18	6.7500	1.250	0.0130	18.93	16.78	1.13	15.43	1.25	1.00	143.00	SURCHARGED
56	44460	Pipe	J42303	J42304	260.85	4705.22	4686.38	7.2200	1.250	0.0130	18.93	17.36	1.09	15.43	1.25	1.00	142.00	SURCHARGED
57	44461	Pipe	J42309	J42308	286.81	4616.43	4600.22	5.6500	1.500	0.0130	18.93	24.97	0.76	14.32	1.09	0.73	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
58	44462	Pipe	J42310	J42309	390.19	4636.19	4616.43	5.0600	1.500	0.0130	18.93	23.64	0.80	14.74	1.02	0.68	0.00	Calculated
59	44463	Pipe	J42311	J42310	212.12	4652.14	4636.19	7.5200	1.500	0.0130	18.93	28.80	0.66	15.45	0.98	0.66	0.00	Calculated
60	44464	Pipe	J42312	J42311	173.46	4663.13	4652.14	6.3400	1.500	0.0130	18.93	26.44	0.72	15.62	0.97	0.65	0.00	Calculated
61	44465	Pipe	J42305	J42312	220.69	4681.18	4663.13	8.1800	1.500	0.0130	18.93	30.04	0.63	16.23	0.95	0.63	0.00	Calculated
62	44471	Pipe	J42266	J42265	101.03	4620.24	4616.61	3.5900	2.000	0.0130	37.94	42.88	0.88	14.75	1.85	0.93	0.00	Calculated
63	44472	Pipe	J42267	J42266	78.65	4622.52	4620.24	2.9000	2.000	0.0130	37.97	38.52	0.99	12.24	1.93	0.97	0.00	Calculated
64	44473	Pipe	J42268	J42267	286.18	4630.23	4622.52	2.6900	2.000	0.0130	37.97	37.13	1.02	12.09	2.00	1.00	13.00	SURCHARGED
65	44474	Pipe	J42269	J42268	113.63	4633.51	4630.23	2.8900	2.000	0.0130	37.97	38.44	0.99	12.09	2.00	1.00	13.00	SURCHARGED
66	44475	Pipe	J42270	J42269	157.44	4638.41	4633.51	3.1100	2.000	0.0130	37.97	39.91	0.95	12.09	2.00	1.00	13.00	SURCHARGED
67	44476	Pipe	J42271	J42270	146.40	4646.69	4638.41	5.6600	2.000	0.0130	37.97	53.80	0.71	14.25	2.00	1.00	5.00	SURCHARGED
68	44486	Pipe	J42333	J42334	261.69	4610.34	4602.31	3.0700	3.000	0.0130	39.20	116.84	0.34	11.83	1.43	0.48	0.00	Calculated
69	44487	Pipe	J42334	J42335	49.00	4602.31	4601.32	2.0200	3.000	0.0130	39.20	94.81	0.41	11.83	1.43	0.48	0.00	Calculated
70	44488	Pipe	J42336	J44488-1	76.23	4595.34	4592.40	3.8600	3.000	0.0130	39.20	130.99	0.30	11.82	1.43	0.48	0.00	Calculated
71	44489	Pipe	J42335	J42336	160.45	4601.32	4595.34	3.7300	3.000	0.0130	39.20	128.76	0.30	13.63	1.28	0.43	0.00	Calculated
72	44490	Pipe	JUL041.02-1	J42337	157.17	4627.15	4619.90	4.6100	3.000	0.0130	39.20	143.25	0.27	15.85	1.14	0.38	0.00	Calculated
73	44491	Pipe	J42337	J42333	200.01	4619.90	4610.34	4.7800	3.000	0.0130	39.20	145.82	0.27	15.30	1.17	0.39	0.00	Calculated
74	44500	Pipe	J42273	J42271	194.15	4657.67	4646.69	5.6600	2.000	0.0130	38.21	53.80	0.71	16.93	1.67	0.84	0.00	Calculated
75	44501	Pipe	J42274	J42273	167.34	4666.87	4657.67	5.5000	2.000	0.0130	38.12	53.04	0.72	17.10	1.36	0.68	0.00	Calculated
76	44502	Pipe	J42275	J42274	48.57	4670.16	4666.87	6.7700	2.000	0.0130	38.12	58.88	0.65	15.64	1.44	0.73	0.00	Calculated
77	44503	Pipe	J42277	J42275	52.49	4672.54	4670.16	4.5300	2.000	0.0130	38.12	48.17	0.79	13.68	1.65	0.83	0.00	Calculated
78	44504	Pipe	J42278	J42277	116.41	4677.64	4672.54	4.3800	2.000	0.0130	38.12	47.35	0.81	13.43	1.68	0.85	0.00	Calculated
79	44505	Pipe	J42279	J42278	125.33	4682.15	4677.64	3.6000	2.000	0.0130	38.12	42.91	0.89	13.63	1.66	0.84	0.00	Calculated
80	44506	Pipe	J42280	J42279	83.40	4683.00	4682.15	1.0200	2.000	0.0130	6.19	22.84	0.27	6.44	1.32	0.67	0.00	Calculated
81	44507	Pipe	J42282	J42280	320.84	4687.53	4683.00	1.4100	2.000	0.0130	6.19	26.88	0.23	6.22	0.73	0.37	0.00	Calculated
82	44548	Pipe	J44279-1	J42284	3.93	4589.20	4589.18	0.5100	1.250	0.0130	4.48	4.61	0.97	3.97	1.25	1.00	313.00	SURCHARGED
83	44549	Pipe	J42284	J42285	29.77	4589.18	4588.82	1.2100	1.250	0.0130	4.48	7.10	0.63	4.17	1.25	1.00	313.00	SURCHARGED
84	44551	Pipe	J42287	J42286	339.89	4587.63	4586.66	0.2900	1.250	0.0130	4.42	3.45	1.28	3.60	1.25	1.00	203.00	SURCHARGED
85	44563	Pipe	J42285	J44563-1	4.04	4588.82	4588.62	4.9500	1.250	0.0130	4.47	14.37	0.31	3.77	1.25	1.00	375.00	SURCHARGED
86	44564	Pipe	J44563-1	J42287	259.24	4588.62	4587.63	0.3800	1.250	0.0130	4.46	3.99	1.12	3.64	1.25	1.00	405.00	SURCHARGED
87	44576	Pipe	J42458	J42459	397.01	4585.91	4584.43	0.3700	1.250	0.0130	4.42	3.94	1.12	3.91	1.08	0.87	0.00	> CAPACITY
88	44577	Pipe	J42286	J42458	161.64	4586.66	4585.91	0.4600	1.250	0.0130	4.42	4.40	1.00	3.60	1.25	1.00	187.00	SURCHARGED
89	44578	Pipe	J42459	J42460	295.67	4584.43	4582.66	0.6000	1.250	0.0130	4.42	5.00	0.88	4.05	1.05	0.84	0.00	Calculated
90	44579	Pipe	J42460	J42462	294.77	4582.66	4581.42	0.4200	1.250	0.0130	4.42	4.19	1.05	4.13	1.02	0.81	0.00	> CAPACITY
91	44591	Pipe	J42394	J42393	33.11	4586.59	4585.90	2.0800	4.500	0.0130	104.58	283.88	0.37	12.03	2.41	0.54	0.00	Calculated
92	44592	Pipe	JUL070.04-1	J42394	29.29	4590.98	4586.59	14.9900	3.500	0.0130	92.57	389.50	0.24	14.49	2.21	0.63	0.00	Calculated
93	44596	Pipe	J42348	J42349	139.93	4677.52	4670.58	4.9600	2.500	0.0130	26.83	91.35	0.29	13.13	1.08	0.43	0.00	Calculated
94	44597	Pipe	J42349	J42350	137.24	4670.58	4666.48	2.9900	2.500	0.0130	26.84	70.90	0.38	14.20	1.02	0.41	0.00	Calculated
95	44598	Pipe	J42350	J44598-1	97.53	4666.48	4648.85	18.0800	2.500	0.0130	26.84	114.73	0.23	12.46	1.12	0.46	0.00	Calculated
96	44599	Pipe	J44599-0	JUL070.04-0	99.31	4647.46	4647.09	0.3700	2.500	0.0130	12.62	25.04	0.50	7.31	1.04	0.41	0.00	Calculated
97	44600	Pipe	J44598-1	SN-Swain	323.25	4648.85	4654.40	-1.7200	2.500	0.0130	26.90	48.13	0.56	10.52	1.52	0.61	0.00	Calculated
98	44601	Pipe	J42443	JUL080.08-1	37.31	4713.69	4712.70	2.6500	2.500	0.0130	42.27	66.81	0.63	12.20	1.66	0.66	0.00	Calculated
99	44602	Pipe	JUL080.10-1	J42443	45.21	4718.12	4713.69	9.8000	2.500	0.0130	42.27	128.40	0.33	13.10	1.56	0.63	0.00	Calculated
100	44609	Pipe	J42370	J42371	80.61	4749.05	4745.20	4.7800	2.500	0.0130	7.00	89.64	0.08	8.07	0.58	0.23	0.00	Calculated
101	44610	Pipe	J42440	J42180	60.81	4744.06	4743.73	0.5400	2.500	0.0130	7.00	30.22	0.23	7.16	0.63	0.25	0.00	Calculated
102	44611	Pipe	J42371	J42440	72.46	4745.20	4744.06	1.5700	2.500	0.0130	7.00	51.45	0.14	5.63	0.75	0.30	0.00	Calculated
103	44612	Pipe	J44612-0	JUL080.04-1	101.81	4634.84	4634.16	0.6700	3.000	0.0130	87.04	134.23	0.65	7.25	2.40	0.80	0.00	Calculated
104	44617	Pipe	JUL080.06-0	J44612-0	26.81	4635.30	4634.84	1.7200	3.000	0.0130	45.95	215.14	0.21	3.74	3.00	1.00	16.00	SURCHARGED
105	44681	Pipe	J44681.0	J42402	105.85	4591.92	4585.83	5.7500	2.500	0.0130	16.00	98.38	0.16	4.85	1.59	0.64	0.00	Calculated
106	44754	Pipe	J42540	J42538	116.87	4597.65	4595.69	1.6800	4.000	0.0130	33.77	186.02	0.18	11.82	1.26	0.32	0.00	Calculated
107	44803	Pipe	J42531	J42530	133.82	4693.08	4692.15	0.6900	4.000	0.0130	33.44	119.75	0.28	9.88	1.26	0.31	0.00	Calculated
108	44819	Pipe	J42532	J42531	163.01	4693.66	4693.08	0.3600	4.000	0.0130	33.44	85.68	0.39	6.79	1.66	0.41	0.00	Calculated
109	44868	Pipe	J42885	J42118	219.08	4616.20	4610.41	2.6400	2.000	0.0130	35.17	36.78	0.96	12.55	1.70	0.85	0.00	Calculated
110	44869	Pipe	JUL132.02-1	J42746	78.47	4760.58	4758.90	2.1400	2.000	0.0130	20.00	33.59	0.60	11.15	1.11	0.56	0.00	Calculated
111	44870	Pipe	J42746	J42745	58.79	4758.90	4755.35	6.0400	2.000	0.0130	20.00	55.59	0.36	12.18	1.04	0.52	0.00	Calculated
112	44871	Pipe	J42747	J42748	51.62	4704.88	4703.71	2.2700	2.000	0.0130	20.00	34.06	0.59	9.54	1.27	0.63	0.00	Calculated
113	44891	Pipe	J42722	JUL120.06-0	302.46	4586.25	4574.18	3.9900	4.500	0.0130	92.46	392.84	0.24	22.89	1.35	0.30	0.00	Calculated
114	44892	Pipe	J42538	J42722	208.08	4595.69	4586.25	4.5400	4.000	0.0130	79.56	305.95	0.26	17.19	1.58	0.40	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
115	44893	Pipe	J42402	J42722	309.34	4585.83	4586.25	-0.1400	2.500	0.0130	16.00	15.11	1.06	4.23	2.08	0.83	0.00	> CAPACITY
116	441024	Pipe	J441024-0	J441024-1	47.29	4578.99	4576.75	4.7400	4.000	0.0130	80.06	312.63	0.26	9.38	2.68	0.67	0.00	Calculated
117	441025	Pipe	J441024-1	JUL080.02-0	113.84	4576.75	4576.48	0.2400	4.000	0.0130	101.07	69.96	1.44	16.33	2.04	0.51	0.00	> CAPACITY
118	441032	Pipe	J42264	SN-SUMM	292.32	4608.40	4599.80	2.9400	2.000	0.0130	37.87	38.80	0.98	12.06	2.00	1.00	25.00	SURCHARGED
119	441350	Pipe	J42461	J441024-1	287.92	4579.30	4576.75	0.8900	1.500	0.0130	7.24	9.89	0.73	5.11	1.50	1.00	37.00	SURCHARGED
120	441371	Pipe	J42462	J42461	52.39	4581.42	4579.30	4.0500	1.500	0.0130	6.99	21.13	0.33	7.32	1.07	0.72	0.00	Calculated
121	441436	Pipe	J42494	J42540	331.86	4599.72	4597.65	0.6200	2.500	0.0130	33.77	32.39	1.04	9.27	1.74	0.70	0.00	> CAPACITY
122	441437	Pipe	J42495	J42494	61.65	4603.33	4599.72	5.8600	2.500	0.0130	33.69	99.26	0.34	9.42	1.71	0.69	0.00	Calculated
123	441438	Pipe	J42496	J42495	116.23	4612.58	4603.33	7.9600	2.500	0.0130	33.69	115.71	0.29	15.99	1.11	0.44	0.00	Calculated
124	441439	Pipe	J42497	J42496	257.91	4632.36	4612.58	7.6700	2.500	0.0130	33.69	113.59	0.30	18.95	0.98	0.39	0.00	Calculated
125	441440	Pipe	J42498	J42497	109.73	4640.79	4632.36	7.6800	2.500	0.0130	33.69	113.69	0.30	18.35	1.00	0.40	0.00	Calculated
126	441441	Pipe	J42499	J42498	122.16	4650.81	4640.79	8.2000	2.500	0.0130	33.69	117.47	0.29	18.10	1.01	0.40	0.00	Calculated
127	441443	Pipe	J42500	J42499	33.63	4652.77	4650.81	5.8300	2.500	0.0130	33.69	99.02	0.34	15.37	1.14	0.46	0.00	Calculated
128	441444	Pipe	J42516	J42500	164.63	4653.02	4652.77	0.1500	4.000	0.0130	33.69	55.98	0.60	7.25	1.59	0.40	0.00	Calculated
129	441445	Pipe	J42517	J42516	91.66	4655.67	4653.02	2.8900	4.000	0.0130	33.69	244.24	0.14	7.67	1.52	0.38	0.00	Calculated
130	441446	Pipe	J42518	J42517	74.23	4656.94	4655.67	1.7100	4.000	0.0130	33.69	187.89	0.18	10.02	1.25	0.31	0.00	Calculated
131	441447	Pipe	J42519	J42518	46.59	4658.11	4656.94	2.5100	4.000	0.0130	33.70	227.63	0.15	9.29	1.32	0.33	0.00	Calculated
132	441448	Pipe	J42520	J42519	297.76	4669.61	4658.11	3.8600	4.000	0.0130	33.81	282.29	0.12	11.68	1.12	0.28	0.00	Calculated
133	441449	Pipe	J42521	J42520	190.79	4670.25	4669.61	0.3400	4.000	0.0130	34.30	83.20	0.41	9.31	1.34	0.33	0.00	Calculated
134	441450	Pipe	J42522	J42521	68.15	4670.60	4670.25	0.5100	4.000	0.0130	33.71	102.94	0.33	6.11	1.81	0.45	0.00	Calculated
135	441451	Pipe	J42523	J42522	279.34	4671.79	4670.60	0.4300	4.000	0.0130	33.69	93.75	0.36	5.96	1.84	0.46	0.00	Calculated
136	441453	Pipe	J42526	J42525	299.59	4673.18	4672.21	0.3200	4.000	0.0130	33.44	81.73	0.41	5.29	2.01	0.50	0.00	Calculated
137	441454	Pipe	J42525	J42523	179.56	4672.21	4671.79	0.2300	4.000	0.0130	33.69	69.47	0.48	5.59	1.94	0.48	0.00	Calculated
138	441455	Pipe	J42528	J42527	87.75	4678.70	4674.07	5.2800	3.000	0.0130	33.44	153.21	0.22	10.79	1.35	0.45	0.00	Calculated
139	441456	Pipe	J42527	J42526	8.33	4674.07	4673.18	10.6800	3.000	0.0130	33.44	218.02	0.15	7.53	1.80	0.60	0.00	Calculated
140	441457	Pipe	J42529	J42528	156.08	4680.22	4678.70	0.9700	4.000	0.0130	33.44	141.75	0.24	10.05	1.24	0.31	0.00	Calculated
141	441458	Pipe	J42530	J42529	407.26	4692.15	4680.22	2.9300	4.000	0.0130	33.44	245.85	0.14	10.38	1.21	0.30	0.00	Calculated
142	441557	Pipe	J441557-0	J42532	17.99	4693.78	4693.66	0.6700	4.000	0.0130	33.44	117.32	0.29	5.70	1.89	0.47	0.00	Calculated
143	441565	Pipe	J441560-0	SN-Weath	49.88	4696.87	4702.20	-10.6900	4.000	0.0130	62.84	469.55	0.13	6.33	3.58	0.90	0.00	Calculated
144	441566	Pipe	J441565-1	J441557-0	177.41	4693.98	4693.78	0.1100	4.000	0.0130	33.44	48.23	0.69	4.82	2.16	0.54	0.00	Calculated
145	441570	Pipe	J42117	J42788	228.57	4597.20	4596.35	0.3700	2.500	0.0130	9.75	25.01	0.39	4.57	1.23	0.49	0.00	Calculated
146	441571	Pipe	J42788	J42813	97.62	4596.35	4595.72	0.6500	2.500	0.0130	9.75	32.95	0.30	3.83	1.70	0.68	0.00	Calculated
147	441585	Pipe	J42809	J42808	104.07	4594.91	4594.64	0.2600	4.000	0.0130	30.08	73.17	0.41	4.83	2.06	0.51	0.00	Calculated
148	441586	Pipe	J42808	JUL130.08-1	194.26	4594.64	4594.64	0.0000	4.000	0.0130	30.00	3.26	9.20	6.72	1.75	0.44	0.00	> CAPACITY
149	441587	Pipe	J42810	J42809	321.57	4595.00	4594.91	0.0300	4.000	0.0130	30.17	24.03	1.26	4.04	2.30	0.58	0.00	> CAPACITY
150	441588	Pipe	J42811	J42810	269.27	4595.04	4595.00	0.0100	4.000	0.0130	10.12	17.51	0.58	2.17	2.54	0.64	0.00	Calculated
151	441589	Pipe	J42812	J42811	58.60	4595.09	4595.04	0.0900	4.000	0.0130	9.88	41.96	0.24	2.05	2.51	0.63	0.00	Calculated
152	441590	Pipe	J42813	J42814	380.67	4595.72	4595.42	0.0800	4.000	0.0130	9.75	40.32	0.24	2.20	2.11	0.53	0.00	Calculated
153	441591	Pipe	J42814	J42815	168.72	4595.42	4595.33	0.0500	4.000	0.0130	9.76	33.18	0.29	2.14	2.26	0.57	0.00	Calculated
154	441592	Pipe	J42815	J42816	117.51	4595.33	4595.25	0.0700	4.000	0.0130	9.76	37.48	0.26	2.17	2.32	0.58	0.00	Calculated
155	441593	Pipe	J42816	J42812	134.40	4595.25	4595.09	0.1200	4.000	0.0130	9.77	49.56	0.20	2.11	2.42	0.61	0.00	Calculated
156	441595	Pipe	J42821	J42885	108.21	4619.88	4616.20	3.4000	2.000	0.0130	35.17	41.72	0.84	12.15	1.75	0.87	0.00	Calculated
157	441606	Pipe	J42833	J42747	161.30	4716.01	4704.88	6.9000	2.000	0.0130	20.00	59.42	0.34	11.70	1.07	0.53	0.00	Calculated
158	441607	Pipe	J42834	J42833	156.83	4723.25	4716.01	4.6200	2.000	0.0130	20.00	48.61	0.41	14.88	0.89	0.44	0.00	Calculated
159	441608	Pipe	J42745	J42836	40.48	4755.35	4753.59	4.3500	2.000	0.0130	20.00	47.17	0.42	11.90	1.06	0.53	0.00	Calculated
160	441609	Pipe	J42836	J42835	277.79	4753.59	4742.72	3.9100	2.000	0.0130	20.00	44.75	0.45	13.94	0.93	0.47	0.00	Calculated
161	441633	Pipe	J42853	J42854	236.14	4666.81	4651.03	6.6800	2.000	0.0130	20.00	58.48	0.34	16.12	0.83	0.42	0.00	Calculated
162	441634	Pipe	J42854	J42824	60.06	4651.03	4645.94	8.4700	2.000	0.0130	20.00	65.86	0.30	11.08	1.12	0.56	0.00	Calculated
163	441638	Pipe	J42858	J42857	294.07	4696.01	4678.77	5.8600	2.000	0.0130	20.00	54.77	0.37	14.81	0.89	0.44	0.00	Calculated
164	441639	Pipe	J42748	J42859	132.27	4703.71	4700.55	2.3900	2.000	0.0130	20.00	34.97	0.57	10.82	1.14	0.57	0.00	Calculated
165	441640	Pipe	J42859	J42858	121.62	4700.55	4696.01	3.7300	2.000	0.0130	20.00	43.71	0.46	12.79	1.00	0.50	0.00	Calculated
166	441662	Pipe	J441660-0	J441657-0	278.01	4645.74	4638.61	2.5600	2.500	0.0130	20.00	65.69	0.30	11.39	0.97	0.39	0.00	Calculated
167	441673	Pipe	J42835	J441673-1	384.26	4742.72	4723.40	5.0300	2.000	0.0130	20.00	50.73	0.39	10.65	1.15	0.58	0.00	Calculated
168	441674	Pipe	J441673-1	J42834	6.19	4723.40	4723.25	2.4200	2.000	0.0130	20.00	35.22	0.57	10.11	1.20	0.60	0.00	Calculated
169	441822	Pipe	J42364	J42358	138.70	4621.30	4617.19	2.9600	2.000	0.0130	13.31	38.94	0.34	12.02	0.77	0.38	0.00	Calculated
170	441823	Pipe	J441823.0	J42364	395.77	4636.38	4621.30	3.8100	2.000	0.0130	13.31	44.16	0.30	11.00	0.82	0.41	0.00	Calculated
171	441866	Pipe	J4224	J42797	406.18	4534.11	4520.54	3.3400	2.500	0.0130	35.30	74.97	0.47	14.63	1.22	0.49	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
172	441867	Pipe	J4225	J4224	292.92	4537.26	4534.11	1.0800	2.500	0.0130	35.31	42.53	0.83	10.87	1.56	0.63	0.00	Calculated
173	441868	Pipe	J4226	J4225	171.06	4539.66	4537.26	1.4000	2.500	0.0130	35.32	48.58	0.73	9.11	1.83	0.74	0.00	Calculated
174	441869	Pipe	J4236	J4226	170.49	4546.45	4539.66	3.9800	2.500	0.0130	35.33	81.86	0.43	11.49	1.50	0.60	0.00	Calculated
175	441870	Pipe	J42363	J4237	89.89	4588.99	4580.68	9.2400	2.500	0.0130	35.40	124.71	0.28	18.74	1.02	0.41	0.00	Calculated
176	441871	Pipe	J4237	J4236	581.40	4580.68	4546.45	5.8900	2.500	0.0130	35.35	99.52	0.36	16.71	1.11	0.45	0.00	Calculated
177	441905	Pipe	J42357	J441823.0	776.30	4670.80	4636.38	4.4300	2.000	0.0130	13.31	47.64	0.28	12.61	0.74	0.37	0.00	Calculated
178	Link-111	Pipe	Jun-192	J42303	450.70	4745.00	4705.22	8.8300	1.250	0.0130	18.93	19.19	0.99	16.52	1.25	1.00	128.00	SURCHARGED
179	Link-140	Pipe	Jun-194	SN-Mav	1878.63	4704.00	4597.00	5.7000	2.000	0.0150	13.85	46.79	0.30	11.93	1.37	0.69	0.00	Calculated
180	Link-142	Pipe	J42855	J42853	252.34	4668.88	4666.81	0.8200	2.000	0.0130	20.00	20.49	0.98	9.56	1.26	0.63	0.00	Calculated
181	Link-144	Pipe	J42856	J42855	27.89	4669.95	4668.88	3.8400	2.000	0.0130	20.00	44.31	0.45	7.61	1.56	0.78	0.00	Calculated
182	Link-146	Pipe	J42857	J42856	163.83	4678.77	4669.95	5.3800	2.000	0.0150	20.00	45.49	0.44	10.39	1.18	0.59	0.00	Calculated
183	Link-155	Pipe	Jun-203	J42821	2461.44	4691.00	4619.88	2.8900	1.500	0.0150	11.34	15.47	0.73	10.36	1.22	0.81	0.00	Calculated
184	Link-161	Pipe	J441657-0	SN-Pond	130.26	4638.41	4625.00	10.2900	2.500	0.0150	20.00	114.06	0.18	6.01	1.60	0.64	0.00	Calculated
185	Link-162	Pipe	Jun-206	Jun-203	2630.01	4834.00	4691.00	5.4400	1.500	0.0150	11.00	21.23	0.52	10.64	0.88	0.59	0.00	Calculated
186	Link-164	Pipe	Jun-207	Jun-192	1615.67	4895.00	4745.00	9.2800	1.500	0.0150	18.93	27.74	0.68	16.14	1.20	0.80	0.00	Calculated
187	Link-165	Pipe	J42117	Jun-132	1842.72	4597.20	4546.17	2.7700	2.500	0.0130	26.35	68.26	0.39	15.48	1.60	0.64	0.00	Calculated
188	Link-167	Pipe	JUL121.06-1	Jun-208	64.00	4894.50	4892.60	2.9700	3.000	0.0130	18.04	114.92	0.16	9.80	0.92	0.31	0.00	Calculated
189	Link-168	Pipe	JUL121.06-1	Jun-208	81.00	4894.50	4885.12	11.5800	3.000	0.0130	45.48	226.97	0.20	8.99	2.02	0.67	0.00	Calculated
190	Link-169	Pipe	JUL121.06-1	Jun-208	74.00	4898.50	4885.93	16.9900	3.000	0.0130	0.00	274.90	0.00	0.00	1.36	0.45	0.00	Calculated
191	Link-78	Pipe	Jun-131	Jun-132	1983.31	4559.02	4546.17	0.6500	2.500	0.0130	29.81	33.02	0.90	8.62	1.95	0.78	0.00	Calculated
192	Link-79	Pipe	Jun-132	J42224	22.35	4546.17	4532.48	61.2500	1.500	0.0130	54.07	82.21	0.66	30.76	1.50	1.00	37.00	SURCHARGED
193	Link-89	Pipe	J4429-0	J42821	61.63	4621.41	4619.88	2.4800	2.000	0.0130	24.17	35.64	0.68	8.80	1.63	0.82	0.00	Calculated
194	0014	Channel	J44269-1	SN-Still	357.60	4721.40	4723.40	-0.5600	10.000	0.0320	5.08	3239.29	0.00	0.21	1.84	0.18	0.00	
195	0163	Channel	JUL130.06-1	JUL130.04-0	345.73	4582.55	4581.26	0.3700	10.000	0.0320	68.82	2645.81	0.03	3.36	2.80	0.29	0.00	
196	0174	Channel	JUL080.04-0	SN-Vill	66.45	4595.90	4587.40	12.7900	10.000	0.0320	87.01	15491.55	0.01	3.66	2.18	0.22	0.00	
197	0175	Channel	JUL121.02-0	J441560-0	79.84	4698.77	4696.87	2.3800	15.000	0.0320	63.74	16881.80	0.00	0.36	7.70	0.51	0.00	
198	44325	Channel	JUL130.02-1	J44325-1	79.93	4505.04	4502.46	3.2300	10.000	0.0320	14.97	7781.94	0.00	3.92	0.36	0.04	0.00	
199	44373	Channel	J44373-0	JUL152.04-0	68.63	4554.50	4554.21	0.4200	10.000	0.0320	66.00	2815.63	0.02	2.99	1.71	0.17	0.00	
200	44603	Channel	JUL080.08-0	JUL080.06-1	20.32	4695.94	4695.33	3.0000	10.000	0.0320	42.27	9216.48	0.00	6.31	0.60	0.06	0.00	
201	Link-147	Channel	JUL100.04-0	JUL080.12-1	1719.35	5012.74	4878.08	7.8300	10.000	0.0320	13.16	12121.89	0.00	3.58	0.37	0.04	0.00	
202	Link-153	Channel	Jun-195	Jun-204	662.66	4964.00	4960.00	0.6000	10.000	0.0320	6.43	3365.25	0.00	1.71	0.35	0.04	0.00	
203	Link-157	Channel	Jun-204	Jun-205	2259.76	4960.00	4835.00	5.5300	10.000	0.0320	16.36	10187.25	0.00	0.20	4.30	0.43	0.00	
204	Link-166	Channel	Jun-208	JUL121.02-0	2490.26	4888.00	4698.77	7.6000	10.000	0.0320	63.28	11940.04	0.01	1.03	3.65	0.36	0.00	
205	Link-74	Channel	Stor-28	JUL132.02-1	623.50	4860.00	4760.63	15.9400	10.000	0.0320	20.00	17291.89	0.00	2.67	0.77	0.08	0.00	
206	UL010.02	Channel	JUL010.04-1	JUL010.02-1	602.83	4495.70	4491.00	0.7800	10.000	0.0320	207.20	3824.59	0.05	5.78	2.40	0.24	0.00	
207	UL010.04	Channel	JUL010.04-0	JUL010.04-1	2983.35	4614.13	4495.70	3.9700	10.000	0.0320	216.00	8630.02	0.03	8.98	1.99	0.20	0.00	
208	UL010.06	Channel	JUL010.08-0	JUL010.04-0	1243.78	4675.67	4614.13	4.9500	10.000	0.0320	220.40	9634.74	0.02	11.22	1.51	0.15	0.00	
209	UL010.08	Channel	JUL010.10-1	JUL010.08-0	2580.17	4812.10	4675.67	5.2900	10.000	0.0320	222.74	9960.10	0.02	11.77	1.48	0.15	0.00	
210	UL010.10	Channel	JUL010.10-0	JUL010.10-1	13317.41	5849.45	4812.10	7.7900	10.000	0.0320	16.08	12088.87	0.00	3.99	0.74	0.07	0.00	
211	UL020.02	Channel	JUL020.02-0	JUL020.02-1	5989.43	4865.89	4490.00	6.2800	10.000	0.0320	138.01	10851.02	0.01	10.65	1.07	0.11	0.00	
212	UL020.06	Channel	JUL020.06-0	JUL020.02-0	3258.08	5072.86	4865.89	6.3500	10.000	0.0320	44.18	10917.06	0.00	4.71	0.81	0.08	0.00	
213	UL020.10	Channel	JUL020.10-0	JUL020.06-0	1432.67	5162.24	5072.86	6.2400	10.000	0.0320	46.39	10818.82	0.00	9.05	0.55	0.06	0.00	
214	UL020.12	Channel	JUL020.12-0	JUL020.10-0	2121.66	5346.59	5162.24	8.6900	10.000	0.0320	0.00	12767.82	0.00	0.00	0.29	0.03	0.00	
215	UL024.02	Channel	UL024.02-0	JUL020.06-0	13152.72	7100.00	5072.86	15.4100	10.000	0.0320	4.08	17004.63	0.00	2.61	0.30	0.03	0.00	
216	UL030.02	Channel	JUL030.02-0	JUL030.02-1	1830.00	4580.07	4501.37	4.3000	10.000	0.0320	111.97	8982.45	0.01	8.75	1.06	0.11	0.00	
217	UL030.04	Channel	JUL030.04-0	JUL030.02-0	140.00	4587.21	4580.07	5.1000	10.000	0.0320	112.00	9781.78	0.01	8.88	1.04	0.10	0.00	
218	UL030.06	Channel	JUL030.08-1	JUL030.04-0	758.01	4618.14	4587.21	4.0800	10.000	0.0320	112.00	8749.55	0.01	8.58	1.07	0.11	0.00	
219	UL030.08	Channel	JUL030.12-1	JUL030.08-1	170.70	4623.65	4618.14	3.2300	10.000	0.0320	112.02	7782.01	0.01	7.82	1.16	0.12	0.00	
220	UL030.12	Channel	JUL030.14-1	JUL030.12-1	2350.79	4769.44	4623.65	6.2000	10.000	0.0320	49.96	10786.73	0.00	4.81	0.88	0.09	0.00	
221	UL030.14	Channel	JUL030.14-0	JUL030.14-1	4235.95	5067.12	4769.44	7.0300	10.000	0.0320	50.35	11482.39	0.00	7.76	0.58	0.06	0.00	
222	UL030.16	Channel	JUL030.16-0	JUL030.14-0	1610.07	5222.41	5067.12	9.6400	10.000	0.0320	5.58	13451.86	0.00	1.46	0.36	0.04	0.00	
223	UL031.02	Channel	JUL031.06-1	JUL030.12-1	4234.96	4887.75	4623.65	6.2400	10.000	0.0320	62.54	10816.64	0.01	7.05	0.93	0.09	0.00	
224	UL031.06	Channel	JUL031.10-1	JUL031.06-1	5104.96	5457.22	4887.75	11.1600	10.000	0.0320	21.70	14466.79	0.00	4.04	0.49	0.05	0.00	
225	UL031.10	Channel	JUL031.10-0	JUL031.10-1	6220.95	6622.71	5457.22	18.7300	10.000	0.0320	0.11	18748.17	0.00	0.44	0.15	0.02	0.00	
226	UL033.01	Channel	JUL033.02-1	JUL030.14-0	2500.16	5352.23	5067.12	11.4000	10.000	0.0320	2.90	14627.00	0.00	0.92	0.33	0.03	0.00	
227	UL033.02	Channel	JUL033.02-0	JUL033.02-1	2601.28	5974.93	5352.23	23.9400	10.000	0.0320	3.35	21192.34	0.00	4.54	0.08	0.01	0.00	
228	UL034.02	Channel	JUL034.02-0	JUL030.16-0	2372.15	5708.23	5222.41	20.4800	10.000	0.0320	5.90	19601.97	0.00	5.04	0.13	0.01	0.00	

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
229	UL040.04	Channel	JUL040.06-1	SN-UL042	68.20	4897.00	4896.00	1.4700	10.000	0.0320	49.83	5244.94	0.01	0.29	7.48	0.75	0.00	
230	UL040.06	Channel	JUL040.06-0	JUL040.06-1	3571.31	5281.46	4763.85	14.4900	10.000	0.0320	60.57	14211.66	0.00	0.99	3.72	0.37	0.00	
231	UL041.02	Channel	JUL041.04-1	JUL041.02-1	1969.21	4741.62	4627.15	5.8100	10.000	0.0320	39.29	10443.18	0.00	4.42	0.85	0.08	0.00	
232	UL041.04	Channel	JUL041.04-0	JUL041.04-1	4898.40	5183.21	4741.62	9.0100	10.000	0.0320	0.00	13005.15	0.00	0.00	0.26	0.03	0.00	
233	UL045.02	Channel	JUL045.02-0	JUL040.06-0	6044.57	6540.33	5281.46	20.8300	10.000	0.0320	0.94	19767.00	0.00	1.24	0.28	0.03	0.00	
234	UL065.02	Channel	JUL065.02-0	JUL070.14-0	9093.00	6574.33	5261.14	14.4400	10.000	0.0320	0.00	16460.51	0.00	0.00	0.00	0.00	0.00	
235	UL066.02	Channel	JUL066.02-0	JUL070.12-0	5475.30	6216.13	5214.49	18.2900	10.000	0.0320	0.88	18526.14	0.00	1.30	0.21	0.02	0.00	
236	UL070.02	Channel	JUL070.02-0	JUL070.02-1	1259.30	4581.13	4500.32	6.4200	10.000	0.0320	104.56	10972.38	0.01	9.78	0.91	0.09	0.00	
237	UL070.04	Channel	JUL070.04-0	JUL070.04-1	925.09	4647.09	4590.98	6.0700	10.000	0.0320	92.67	10667.46	0.01	5.63	1.31	0.13	0.00	
238	UL070.06	Channel	JUL070.06-0	JUL070.04-0	254.18	4659.93	4647.09	5.0500	10.000	0.0320	80.10	9735.20	0.01	8.09	0.85	0.08	0.00	
239	UL070.08	Channel	JUL070.10-1	JUL070.06-0	1863.40	4779.12	4659.93	6.4000	10.000	0.0320	55.93	10954.68	0.01	6.66	0.73	0.07	0.00	
240	UL070.10	Channel	JUL070.10-0	JUL070.10-1	3565.83	5083.29	4779.12	8.5300	10.000	0.0320	35.50	12650.59	0.00	6.38	0.53	0.05	0.00	
241	UL070.12	Channel	JUL070.12-0	JUL070.10-0	1304.35	5214.49	5083.29	10.0600	10.000	0.0320	35.63	13737.35	0.00	7.77	0.43	0.04	0.00	
242	UL070.14	Channel	JUL070.14-0	JUL070.10-0	1606.64	5261.14	5083.29	11.0700	10.000	0.0320	0.00	14411.22	0.00	0.01	0.22	0.02	0.00	
243	UL080.02	Channel	JUL080.02-0	JUL080.02-1	1930.62	4576.48	4493.46	4.3000	10.000	0.0320	85.88	8982.06	0.01	8.02	0.90	0.09	0.00	
244	UL080.04	Channel	JUL080.04-0	JUL080.04-1	714.38	4595.90	4634.00	-5.3300	10.000	0.0320	87.03	10003.01	0.01	9.61	0.78	0.08	0.00	
245	UL080.06	Channel	JUL080.06-1	JUL080.06-0	1080.62	4695.88	4635.30	5.6100	10.000	0.0320	42.27	10255.60	0.00	2.42	1.82	0.18	0.00	
246	UL080.08	Channel	JUL080.08-1	JUL080.08-0	222.77	4711.67	4696.80	6.6800	10.000	0.0320	42.27	11190.77	0.00	6.47	0.58	0.06	0.00	
247	UL080.10	Channel	JUL080.10-0	JUL080.10-1	762.19	4770.94	4717.35	7.0300	10.000	0.0320	38.18	11485.32	0.00	2.44	1.25	0.13	0.00	
248	UL080.12	Channel	JUL080.12-1	JUL080.12-0	1363.90	4878.08	4776.51	7.4500	10.000	0.0320	38.27	11820.19	0.00	1.97	1.50	0.15	0.00	
249	UL080.14	Channel	JUL080.14-0	JUL080.12-1	1685.14	5014.70	4878.08	8.1100	10.000	0.0320	10.97	12333.10	0.00	3.08	0.35	0.04	0.00	
250	UL080.16	Channel	JUL080.16-0	JUL080.14-0	2068.96	5227.63	5014.70	10.2900	10.000	0.0320	10.99	13895.54	0.00	4.89	0.22	0.02	0.00	
251	UL084.02	Channel	JUL084.02-0	JUL080.16-0	6970.30	6213.33	5227.63	14.1400	10.000	0.0320	0.09	16288.45	0.00	0.47	0.10	0.01	0.00	
252	UL100.06	Channel	JUL100.06-0	JUL100.04-0	2084.50	5193.10	5012.74	8.6500	10.000	0.0320	0.77	12740.96	0.00	1.04	0.15	0.01	0.00	
253	UL120.02	Channel	JUL120.02-0	JUL120.02-1	57.03	4505.93	4504.59	2.3500	10.000	0.0320	90.90	6639.47	0.01	6.43	1.14	0.11	0.00	
254	UL120.04	Channel	JUL120.04-0	JUL120.04-1	925.41	4541.49	4511.73	3.2200	10.000	0.0320	90.90	7767.52	0.01	7.40	1.02	0.10	0.00	
255	UL120.06	Channel	JUL120.06-0	JUL120.06-1	1129.14	4574.18	4541.09	2.9300	10.000	0.0320	92.15	7414.94	0.01	4.82	1.49	0.15	0.00	
256	UL121.04	Channel	JUL121.04-0	JUL121.06-1	3859.53	5110.19	4831.56	7.2200	10.000	0.0320	0.00	10275.09	0.00	0.00	1.27	0.13	0.00	
257	UL121.06	Channel	JUL121.07-1	JUL121.06-1	3157.89	5027.00	4831.56	6.1900	10.000	0.0320	75.36	8922.51	0.01	3.63	1.67	0.17	0.00	
258	UL121.07	Channel	JUL121.07-0	JUL121.07-1	942.14	5108.32	5027.00	8.6300	10.000	0.0320	0.00	12725.47	0.00	0.00	0.42	0.04	0.00	
259	UL126.02	Channel	JUL126.02-0	JUL121.07-1	13758.00	6720.00	5027.00	12.3100	10.000	0.0320	0.00	15194.41	0.00	0.02	0.42	0.04	0.00	
260	UL130.02	Channel	JUL130.02-0	JUL130.02-1	1842.73	4566.45	4505.04	3.3300	10.000	0.0320	14.97	7907.18	0.00	3.95	0.35	0.04	0.00	
261	UL130.04	Channel	JUL130.04-0	JUL130.04-1	1221.65	4581.26	4567.91	1.0900	10.000	0.0320	98.09	4527.94	0.02	0.63	6.69	0.67	0.00	
262	UL130.06	Channel	JUL130.06-0	JUL130.06-1	176.18	4590.00	4582.55	4.2300	10.000	0.0320	62.61	8907.03	0.01	4.44	1.49	0.15	0.00	
263	UL130.08	Channel	JUL130.08-1	JUL130.08-0	3982.32	4594.64	4592.42	0.0600	10.000	0.0320	22.60	1022.68	0.02	1.11	1.56	0.16	0.00	
264	UL152.02	Channel	JUL152.02-0	JUL152.02-1	1271.91	4550.30	4549.32	0.0800	10.000	0.0320	73.31	1202.31	0.06	2.40	4.72	0.47	0.00	
265	UL152.04	Channel	JUL152.04-0	JUL152.04-1	1117.05	4554.21	4551.14	0.2700	10.000	0.0320	66.00	2270.73	0.03	2.57	3.16	0.32	0.00	
266	O-Mav	Orifice	SN-Mav	J44681.0		4597.00	4591.92		1.000		7.01							
267	O-Pond	Orifice	SN-Pond	J4429-0		4625.00	4621.41		1.500		24.17							
268	Orifice-27	Orifice	SN-Weath	J42533		4702.20	4695.91		2.500		33.44							
269	Orifice-28	Orifice	Stor-41	JUL041.04-1		4745.00	4741.62		2.320		39.45							
270	O-Rock	Orifice	SN-Rock	JUL070.10-1		4788.10	4779.12		3.000		21.80							
271	O-Still	Orifice	SN-Still	J0014-1		4723.40	4721.70		0.420		0.54							
272	O-Summ	Orifice	SN-SUMM	J441032-1		4599.80	4592.84		0.670		4.42							
273	O-Swain	Orifice	SN-Swain	J44599-0		4654.40	4647.46		1.670		12.62							
274	O-UL042	Orifice	SN-UL042	Jun-207		4896.00	4895.00		1.000		10.93							
275	O-Vill	Orifice	SN-Vill	J441024-0		4587.40	4578.99		4.000		79.11							
276	O-Waym	Orifice	SN-Waym	JUL080.10-1		4723.60	4717.35		0.667		4.10							
277	O-WildF	Orifice	SN-WildF	J42462		4592.80	4581.42		0.670		2.76							
278	O-WildL	Orifice	SN-WildL	J42394		4592.80	4586.59		1.500		12.03							
279	Outlet-100	Outlet	SN-UL101	JUL100.02-1		5033.00	4820.37				7.00							
280	Outlet-102	Outlet	Jun-200	Jun-204		4960.00	4960.00				0.00							
281	Outlet-105	Outlet	SN-NEW-UL134	Stor-28		4860.00	4860.00				20.00							
282	Outlet-106	Outlet	Stor-45	SN-NEW-UL134		5000.00	4860.00				20.01							
283	Outlet-108	Outlet	Jun-205	Jun-206		4835.00	4834.00				11.00							
284	Outlet-91	Outlet	SN-UL115	Jun-194		5033.00	4704.00				13.85							
285	Outlet-92	Outlet	Stor-39·1	Jun-205		4841.00	4835.00				0.00							

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
286	Outlet-95	Outlet	Stor-39	J42525		4680.00	4672.21				15.39							
287	Outlet-96	Outlet	Stor-39	J42494		4680.00	4599.72				5.13							
288	Outlet-97	Outlet	Stor-39	J42538		4680.00	4595.69				58.80							
289	OUT-UL020	Outlet	SN-UL020	JUL020.02-0		4886.00	4865.89				94.00							
290	OUT-UL022	Outlet	SN-UL022	JUL020.10-0		5183.00	5162.24				46.12							
291	OUT-UL030	Outlet	SN-UL030	JUL031.06-1		4908.00	4887.75				41.00							
292	OUT-UL031	Outlet	SN-UL031	JUL031.10-1		5478.00	5457.22				22.04							
293	OUT-UL032	Outlet	SN-UL032	JUL030.14-0		5088.00	5067.12				43.45							
294	OUT-UL041	Outlet	SN-UL041	JUL041.04-1		4762.00	4741.62				0.00							
295	OUT-UL043	Outlet	SN-UL043	JUL041.04-0		5204.00	5183.21				0.00							
296	OUT-UL044	Outlet	SN-UL044	JUL040.06-0		5302.00	5281.46				61.33							
297	OUT-UL051	Outlet	SN-UL051	J42357		4691.00	4670.80				13.31							
298	OUT-UL064	Outlet	SN-UL064	JUL070.12-0		5235.00	5214.49				35.75							
299	OUT-UL070	Outlet	SN-UL070	JUL070.06-0		4680.00	4659.93				24.18							
300	OUT-UL082	Outlet	SN-UL082	JUL080.12-1		4899.00	4878.08				14.39							
301	OUT-UL083	Outlet	SN-UL083	JUL080.16-0		5248.00	5227.63				11.14							
302	OUT-UL102	Outlet	SN-UL102	JUL100.04-0		5033.00	5012.74				12.85							
303	OUT-UL121	Outlet	SN-UL121	JUL121.02-0		4718.00	4698.77				38.68							
304	OUT-UL124	Outlet	SN-UL124	JUL121.07-1		5047.00	5027.00				79.57							
305	OUT-UL130	Outlet	SN-UL130	JUL130.08-0		4612.00	4592.42				41.00							
306	OUT-UL134	Outlet	SN-UL134	SN-NEW-UL134		5110.00	4860.00				58.00							
307	OUT-UL140	Outlet	SN-UL140	Jun-131		4577.00	4559.02				29.59							
308	OUT-UL152	Outlet	SN-UL152	J44373-0		4575.00	4554.50				66.00							
309	UL040.02	Outlet	JUL040.04-1	Jun-207		4900.00	4895.00				8.00							

FULL BUILD-OUT CONDITION - SOUTH
100-YEAR STORM

Project Description

File Name ..... SaratogaStormFuture South.SPF

Project Options

Flow Units ..... CFS
Elevation Type ..... Elevation
Hydrology Method HEC-1
HEC-1 unit hydrograph method ..... SCS Dimensionless
HEC-1 loss method ..... SCS Curve Number
Link Routing Method ..... Hydrodynamic
Enable Overflow Ponding at Nodes ..... YES
Skip Steady State Analysis Time Periods ... NO

Analysis Options

Start Analysis On ..... Jan 01, 2012 00:00:00
End Analysis On ..... Jan 01, 2012 12:00:00
Start Reporting On ..... Jan 01, 2012 00:00:00
Antecedent Dry Days ..... 0 days
Runoff (Dry Weather) Time Step ..... 0 01:00:00 days hh:mm:ss
Runoff (Wet Weather) Time Step ..... 0 00:05:00 days hh:mm:ss
Reporting Time Step ..... 0 00:05:00 days hh:mm:ss
Routing Time Step ..... 30 seconds

Number of Elements

	Qty
Rain Gages	5
Subbasins	55
Nodes	313
Junctions	259
Outfalls	11
Flow Diversions	0
Inlets	0
Storage Nodes	43
Links	309
Channels	72
Pipes	193
Pumps	0
Orifices	13
Weirs	0
Outlets	31
Pollutants	0
Land Uses	0

Rainfall Details

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	100-Year	Time Series	TS-100yr	Cumulative	inches				0.00	
2	10-Year	Time Series	TS-10yr	Cumulative	inches				0.00	
3	25yr	Time Series	TS-25yr	Cumulative	inches				0.00	
4	2Yr	Time Series	TS-2yr	Cumulative	inches				0.00	
5	5Yr	Time Series	TS-5yr	Cumulative	inches				0.00	

Subbasin Summary

SN	Subbasin ID	Area (ac)	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)
1	Sub-02	16.92	1.72	0.68	11.44	16.81
2	UL010	358.46	1.72	0.85	304.69	435.86
3	UL012	765.62	1.72	0.28	214.37	136.10
4	UL020	470.76	1.72	1.04	488.65	668.84
5	UL022	242.19	1.72	0.51	124.49	163.85
6	UL024	933.42	1.72	0.16	151.21	108.55
7	UL030	205.10	1.72	0.76	156.29	222.13
8	UL031	123.80	1.72	0.49	60.04	88.90
9	UL032	233.02	1.72	0.47	108.35	142.96
10	UL033	88.85	1.72	0.28	24.79	27.89
11	UL034	156.46	1.72	0.28	43.81	50.13
12	UL035	586.06	1.72	0.09	55.09	39.19
13	UL040	143.49	1.72	0.51	72.61	112.70
14	UL041	67.25	1.72	0.47	31.67	49.19
15	UL042	76.37	1.72	0.44	33.37	51.70
16	UL043	157.01	1.72	0.46	71.75	104.49
17	UL044	321.32	1.72	0.43	138.81	201.07
18	UL045	422.26	1.72	0.13	53.20	44.44
19	UL050	65.15	1.72	0.40	26.26	39.85
20	UL051	97.15	1.72	0.47	45.76	71.94
21	UL060	78.53	1.72	0.49	38.32	58.47
22	UL061	33.56	1.72	0.52	17.52	24.76
23	UL062	51.61	1.72	0.56	28.75	45.65
24	UL063	92.95	1.72	0.52	48.61	77.09
25	UL064	191.89	1.72	0.49	93.07	140.35
26	UL065	557.40	1.72	0.08	45.15	30.51
27	UL066	262.96	1.72	0.14	37.87	32.29
28	UL070	127.05	1.72	0.64	81.57	122.15
29	UL080	115.43	1.72	0.73	84.03	116.51
30	UL081	107.65	1.72	0.57	61.79	103.69
31	UL082	84.13	1.72	0.59	49.72	78.48
32	UL083	63.50	1.72	0.57	36.45	57.94
33	UL084	562.59	1.72	0.09	52.88	37.62
34	UL090	29.46	1.72	0.57	16.91	23.34
35	UL100	79.57	1.72	0.57	45.67	57.37
36	UL101	37.57	1.72	0.61	22.84	37.08
37	UL102	74.54	1.72	0.52	38.98	61.86
38	UL103	130.47	1.72	0.16	21.14	21.69
39	UL110	75.22	1.72	0.44	32.87	47.57
40	UL115	110.87	1.72	0.49	54.10	85.13
41	UL120	153.99	1.72	0.57	88.39	135.13
42	UL121	131.78	1.72	0.56	73.80	101.32
43	UL124	406.97	1.72	0.44	179.47	227.58
44	UL126	1502.76	1.72	0.08	121.72	68.51
45	UL130	199.88	1.72	1.02	204.08	241.27
46	UL132	110.79	1.72	0.61	67.91	89.21
47	UL134	292.08	1.72	0.59	172.91	232.21
48	UL136	740.74	1.72	0.18	131.85	79.80
49	UL140	102.56	1.72	0.65	66.25	79.75
50	UL142	57.99	1.72	0.54	31.31	39.28
51	UL144	155.20	1.72	0.59	90.95	136.23
52	UL146	55.82	1.72	0.59	32.71	50.94
53	UL148	301.52	1.72	0.29	88.65	72.41
54	UL150	50.72	1.72	0.53	26.73	37.01
55	UL152	329.01	1.72	1.04	340.85	326.90

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	J0004-0	Junction	4525.19	4530.79	0.00	4536.39	0.00	125.75	4536.39	5.60	0.00	0 02:53	0.00	0.00
2	J0006-0	Junction	4578.80	4586.35	0.00	4593.90	0.00	131.85	4593.90	7.55	0.00	0 02:54	0.00	0.00
3	J0011-0	Junction	4586.34	4592.94	0.00	4599.54	0.00	115.45	4598.87	5.93	0.00	0 00:00	0.00	0.00
4	J0012-1	Junction	4587.41	4592.91	0.00	4598.41	0.00	31.21	4598.41	5.50	0.00	0 03:00	6.80	21.00
5	J0014-1	Junction	4721.70	4725.70	0.00	4732.37	0.00	6.60	4722.16	0.00	3.54	0 00:00	0.00	0.00
6	J0131.0	Junction	4591.24	4594.79	0.00	4598.34	0.00	15.00	4597.25	2.46	0.00	0 00:00	0.00	0.00
7	J42112	Junction	4599.43	4605.33	0.00	4611.23	0.00	40.72	4611.23	5.90	0.00	0 03:19	0.00	0.00
8	J42117	Junction	4597.20	4602.90	0.00	4608.60	0.00	39.95	4598.39	0.00	4.51	0 00:00	0.00	0.00
9	J42118	Junction	4610.41	4615.21	0.00	4620.01	0.00	44.67	4620.01	4.80	0.00	0 03:18	0.00	0.00
10	J42154	Junction	4521.79	4530.29	0.00	4536.96	0.00	131.34	4523.54	0.00	6.75	0 00:00	0.00	0.00
11	J42155	Junction	4525.14	4536.04	0.00	4542.71	0.00	131.41	4528.60	0.00	7.44	0 00:00	0.00	0.00
12	J42156	Junction	4527.51	4540.26	0.00	4546.93	0.00	132.72	4531.62	0.00	8.64	0 00:00	0.00	0.00
13	J42157	Junction	4512.22	4529.67	0.00	4536.34	0.00	131.34	4514.01	0.00	15.66	0 00:00	0.00	0.00
14	J42175	Junction	4688.48	4696.88	0.00	4703.55	0.00	9.52	4703.55	6.67	0.00	0 02:58	0.00	0.00
15	J42176	Junction	4691.51	4699.51	0.00	4706.18	0.00	8.67	4706.18	6.67	0.00	0 02:58	0.00	0.00
16	J42177	Junction	4694.19	4701.99	0.00	4708.66	0.00	7.71	4708.66	6.67	0.00	0 02:58	0.00	0.00
17	J42178	Junction	4703.44	4711.94	0.00	4718.61	0.00	6.59	4703.95	0.00	7.99	0 00:00	0.00	0.00
18	J42180	Junction	4743.73	4755.03	0.00	4761.70	0.00	7.00	4744.18	0.00	10.85	0 00:00	0.00	0.00
19	J42181	Junction	4730.23	4738.33	0.00	4745.00	0.00	7.00	4730.58	0.00	7.75	0 00:00	0.00	0.00
20	J42223	Junction	4530.32	4547.72	0.00	4554.39	0.00	113.66	4533.54	0.00	14.18	0 00:00	0.00	0.00
21	J42224	Junction	4532.48	4548.08	0.00	4554.75	0.00	113.66	4535.27	0.00	12.81	0 00:00	0.00	0.00
22	J4224	Junction	4534.11	4539.51	0.00	4544.91	0.00	51.69	4535.73	0.00	3.78	0 00:00	0.00	0.00
23	J4225	Junction	4537.26	4542.31	0.00	4547.36	0.00	51.69	4544.09	1.78	0.00	0 00:00	0.00	0.00
24	J4226	Junction	4539.66	4544.36	0.00	4549.06	0.00	51.69	4546.61	2.25	0.00	0 00:00	0.00	0.00
25	J42264	Junction	4608.40	4617.30	0.00	4623.97	0.00	41.82	4618.47	1.17	0.00	0 00:00	0.00	0.00
26	J42265	Junction	4616.61	4625.16	0.00	4631.83	0.00	42.40	4625.36	0.20	0.00	0 00:00	0.00	0.00
27	J42266	Junction	4620.24	4630.84	0.00	4637.51	0.00	42.36	4629.60	0.00	1.24	0 00:00	0.00	0.00
28	J42267	Junction	4622.52	4631.27	0.00	4637.94	0.00	42.33	4633.49	2.22	0.00	0 00:00	0.00	0.00
29	J42268	Junction	4630.23	4638.98	0.00	4645.65	0.00	42.31	4643.18	4.20	0.00	0 00:00	0.00	0.00
30	J42269	Junction	4633.51	4641.96	0.00	4648.63	0.00	42.28	4647.73	5.77	0.00	0 00:00	0.00	0.00
31	J42270	Junction	4638.41	4646.21	0.00	4652.88	0.00	44.13	4652.88	6.67	0.00	0 03:23	1.20	29.00
32	J42271	Junction	4646.69	4654.24	0.00	4661.79	0.00	44.13	4661.42	7.18	0.00	0 00:00	0.00	0.00
33	J42273	Junction	4657.67	4666.52	0.00	4673.19	0.00	45.83	4673.19	6.67	0.00	0 02:56	0.00	0.00
34	J42274	Junction	4666.87	4675.87	0.00	4682.54	0.00	45.37	4680.52	4.65	0.00	0 00:00	0.00	0.00
35	J42275	Junction	4670.16	4678.16	0.00	4684.83	0.00	45.61	4683.84	5.68	0.00	0 00:00	0.00	0.00
36	J42277	Junction	4672.54	4680.24	0.00	4686.91	0.00	45.51	4686.91	6.67	0.00	0 02:57	0.00	0.00
37	J42278	Junction	4677.64	4685.14	0.00	4691.81	0.00	46.08	4691.81	6.67	0.00	0 02:56	0.00	0.00
38	J42279	Junction	4682.15	4689.30	0.00	4695.97	0.00	61.88	4695.97	6.67	0.00	0 03:05	4.97	25.00
39	J42280	Junction	4683.00	4690.90	0.00	4697.57	0.00	9.71	4697.57	6.67	0.00	0 02:56	0.00	0.00
40	J42282	Junction	4687.53	4695.98	0.00	4702.65	0.00	8.61	4702.65	6.67	0.00	0 02:58	0.00	0.00
41	J42284	Junction	4589.18	4593.08	0.00	4599.75	0.00	5.99	4599.07	5.99	0.00	0 00:00	0.00	0.00
42	J42285	Junction	4588.82	4592.92	0.00	4599.59	0.00	5.98	4598.64	5.72	0.00	0 00:00	0.00	0.00
43	J42286	Junction	4586.66	4598.71	0.00	4605.38	0.00	5.97	4592.94	0.00	5.77	0 00:00	0.00	0.00
44	J42287	Junction	4587.63	4596.28	0.00	4602.95	0.00	5.97	4596.03	0.00	0.25	0 00:00	0.00	0.00
45	J42302	Junction	4500.54	4509.44	0.00	4518.34	0.00	125.74	4518.34	8.90	0.00	0 02:51	0.00	0.00
46	J42303	Junction	4705.22	4712.12	0.00	4719.02	0.00	19.11	4719.02	6.90	0.00	0 02:43	0.00	0.00
47	J42304	Junction	4686.38	4691.98	0.00	4697.58	0.00	19.11	4692.92	0.94	0.00	0 00:00	0.00	0.00
48	J42305	Junction	4681.18	4687.53	0.00	4693.88	0.00	19.11	4682.07	0.00	5.46	0 00:00	0.00	0.00
49	J42306	Junction	4518.99	4525.39	0.00	4531.79	0.00	125.75	4521.34	0.00	4.05	0 00:00	0.00	0.00
50	J42307	Junction	4545.94	4551.54	0.00	4557.14	0.00	130.05	4557.14	5.60	0.00	0 02:54	0.01	0.00
51	J42308	Junction	4600.22	4608.82	0.00	4617.42	0.00	19.11	4617.42	8.60	0.00	0 02:51	0.00	0.00
52	J42309	Junction	4616.43	4624.03	0.00	4631.63	0.00	19.11	4617.63	0.00	6.40	0 00:00	0.00	0.00
53	J42310	Junction	4636.19	4643.89	0.00	4651.59	0.00	19.11	4637.26	0.00	6.63	0 00:00	0.00	0.00
54	J42311	Junction	4652.14	4657.74	0.00	4663.34	0.00	19.11	4653.05	0.00	4.69	0 00:00	0.00	0.00
55	J42312	Junction	4663.13	4669.03	0.00	4674.93	0.00	19.11	4664.15	0.00	4.88	0 00:00	0.00	0.00
56	J42333	Junction	4610.34	4619.04	0.00	4627.74	0.00	44.87	4611.67	0.00	7.37	0 00:00	0.00	0.00
57	J42334	Junction	4602.31	4610.41	0.00	4618.51	0.00	44.87	4604.08	0.00	6.33	0 00:00	0.00	0.00
58	J42335	Junction	4601.32	4609.92	0.00	4618.52	0.00	44.87	4602.65	0.00	7.27	0 00:00	0.00	0.00
59	J42336	Junction	4595.34	4600.34	0.00	4605.34	0.00	44.87	4596.80	0.00	3.54	0 00:00	0.00	0.00
60	J42337	Junction	4619.90	4626.60	0.00	4633.30	0.00	44.87	4621.11	0.00	5.49	0 00:00	0.00	0.00
61	J42340	Junction	4584.36	4588.76	0.00	4593.16	0.00	44.87	4593.16	4.40	0.00	0 03:04	0.00	0.00
62	J42341	Junction	4590.49	4594.89	0.00	4599.29	0.00	44.87	4592.43	0.00	2.46	0 00:00	0.00	0.00
63	J42346	Junction	4747.50	4757.40	0.00	4767.30	0.00	45.65	4748.63	0.00	8.77	0 00:00	0.00	0.00
64	J42347	Junction	4706.85	4722.55	0.00	4738.25	0.00	45.62	4708.29	0.00	14.26	0 00:00	0.00	0.00
65	J42348	Junction	4677.52	4683.92	0.00	4690.32	0.00	45.60	4678.89	0.00	5.03	0 00:00	0.00	0.00
66	J42349	Junction	4670.58	4676.48	0.00	4682.38	0.00	45.59	4672.26	0.00	4.22	0 00:00	0.00	0.00
67	J42350	Junction	4666.48	4674.28	0.00	4682.08	0.00	45.59	4667.68	0.00	6.60	0 00:00	0.00	0.00
68	J42357	Junction	4670.80	4675.10	0.00	4679.40	0.00	15.00	4671.57	0.00	3.53	0 00:00	0.00	0.00
69	J42358	Junction	4617.19	4622.39	0.00	4627.59	0.00	15.00	4617.88	0.00	4.51	0 00:00	0.00	0.00
70	J42359	Junction	4589.72	4593.12	0.00	4596.52	0.00	15.16	4590.75	0.00	2.37	0 00:00	0.00	0.00
71	J4236	Junction	4546.45	4551.85	0.00	4557.25	0.00	52.44	4548.68	0.00	3.17	0 00:00	0.00	0.00
72	J42363	Junction	4588.99	4592.79	0.00	4596.59	0.00	52.51	4590.30	0.00	2.49	0 00:00	0.00	0.00
73	J42364	Junction	4621.30	4627.60	0.00	4633.90	0.00	15.00	4622.25	0.00	5.35	0 00:00	0.00	0.00
74	J42365	Junction	4812.97	4819.17	0.00	4825.37	0.00	7.00	4813.70	0.00	5.47	0 00:00	0.00	0.00
75	J42366	Junction	4809.24	4818.24	0.00	4827.24	0.00	7.04	4809.72	0.00	8.52	0 00:00	0.00	0.00
76	J42367	Junction	4786.31	4790.81	0.00	4795.31	0.00	7.00	4786.76	0.00	4.05	0 00:00	0.00	0.00
77	J42368	Junction	4758.99	4764.89	0.00	4770.79	0.00	7.00	4759.48	0.00	5.41	0 00:00	0.00	0.00
78	J4237	Junction	4580.68	4585.88	0.00	4591.08	0.00	52.52	4581.97	0.00	3.91	0 00:00	0.00	0.00
79	J42370	Junction	4749.05	4760.55	0.00	4772.05	0.00	7.00	4749.53	0.00	11.02	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
80	J42371	Junction	4745.20	4754.40	0.00	4763.60	0.00	7.00	4745.89	0.00	8.51	0 00:00	0.00	0.00
81	J42393	Junction	4585.90	4597.47	0.00	4609.04	0.00	166.79	4588.80	0.00	8.67	0 00:00	0.00	0.00
82	J42394	Junction	4586.59	4597.69	0.00	4608.79	0.00	166.79	4590.22	0.00	7.47	0 00:00	0.00	0.00
83	J42402	Junction	4585.83	4595.68	0.00	4605.53	0.00	18.59	4588.91	0.00	6.77	0 00:00	0.00	0.00
84	J42420	Junction	4713.66	4725.36	0.00	4737.06	0.00	45.63	4714.77	0.00	10.59	0 00:00	0.00	0.00
85	J42436	Junction	4689.65	4696.32	0.00	4702.99	0.00	45.59	4693.70	0.00	2.62	0 00:00	0.00	0.00
86	J42440	Junction	4744.06	4754.86	0.00	4765.66	0.00	7.00	4744.88	0.00	9.98	0 00:00	0.00	0.00
87	J42442	Junction	4775.41	4781.21	0.00	4787.01	0.00	77.39	4779.12	0.00	2.09	0 00:00	0.00	0.00
88	J42443	Junction	4713.69	4721.59	0.00	4729.49	0.00	80.43	4718.72	0.00	2.87	0 00:00	0.00	0.00
89	J42458	Junction	4585.91	4597.91	0.00	4609.91	0.00	5.97	4591.37	0.00	6.54	0 00:00	0.00	0.00
90	J42459	Junction	4584.43	4595.48	0.00	4606.53	0.00	5.97	4587.80	0.00	7.68	0 00:00	0.00	0.00
91	J42460	Junction	4582.66	4594.71	0.00	4606.76	0.00	5.97	4585.08	0.00	9.63	0 00:00	0.00	0.00
92	J42461	Junction	4579.30	4590.20	0.00	4601.10	0.00	8.85	4582.80	0.00	7.40	0 00:00	0.00	0.00
93	J42462	Junction	4581.42	4595.62	0.00	4609.82	0.00	8.83	4582.63	0.00	12.99	0 00:00	0.00	0.00
94	J42494	Junction	4599.72	4608.72	0.00	4608.72	0.00	57.56	4608.72	0.00	0.00	0 02:58	0.00	0.00
95	J42495	Junction	4603.33	4612.28	0.00	4621.23	0.00	56.57	4609.63	0.00	2.65	0 00:00	0.00	0.00
96	J42496	Junction	4612.58	4622.18	0.00	4631.78	0.00	56.81	4614.29	0.00	7.89	0 00:00	0.00	0.00
97	J42497	Junction	4632.36	4641.66	0.00	4650.96	0.00	56.77	4633.63	0.00	8.03	0 00:00	0.00	0.00
98	J42498	Junction	4640.79	4649.84	0.00	4658.89	0.00	56.76	4642.23	0.00	7.61	0 00:00	0.00	0.00
99	J42499	Junction	4650.81	4659.71	0.00	4668.61	0.00	56.74	4652.18	0.00	7.53	0 00:00	0.00	0.00
100	J42500	Junction	4652.77	4662.12	0.00	4671.47	0.00	56.79	4654.66	0.00	7.46	0 00:00	0.00	0.00
101	J42516	Junction	4653.02	4664.07	0.00	4675.12	0.00	56.91	4655.57	0.00	8.50	0 00:00	0.00	0.00
102	J42517	Junction	4655.67	4665.42	0.00	4675.17	0.00	56.85	4657.35	0.00	8.07	0 00:00	0.00	0.00
103	J42518	Junction	4656.94	4666.44	0.00	4675.94	0.00	56.81	4658.79	0.00	7.65	0 00:00	0.00	0.00
104	J42519	Junction	4658.11	4667.16	0.00	4676.21	0.00	57.16	4659.96	0.00	7.20	0 00:00	0.00	0.00
105	J42520	Junction	4669.61	4682.46	0.00	4695.31	0.00	58.79	4670.84	0.00	11.62	0 00:00	0.00	0.00
106	J42521	Junction	4670.25	4680.20	0.00	4690.15	0.00	56.90	4672.59	0.00	7.61	0 00:00	0.00	0.00
107	J42522	Junction	4670.60	4680.05	0.00	4689.50	0.00	56.39	4673.17	0.00	6.88	0 00:00	0.00	0.00
108	J42523	Junction	4671.79	4678.79	0.00	4685.79	0.00	56.33	4674.31	0.00	4.48	0 00:00	0.00	0.00
109	J42525	Junction	4672.21	4681.46	0.00	4690.71	0.00	56.31	4675.10	0.00	6.36	0 00:00	0.00	0.00
110	J42526	Junction	4673.18	4681.88	0.00	4690.58	0.00	56.30	4675.98	0.00	5.90	0 00:00	0.00	0.00
111	J42527	Junction	4674.07	4682.32	0.00	4690.57	0.00	56.30	4676.57	0.00	5.75	0 00:00	0.00	0.00
112	J42528	Junction	4678.70	4688.75	0.00	4698.80	0.00	56.30	4680.21	0.00	8.54	0 00:00	0.00	0.00
113	J42529	Junction	4680.22	4686.92	0.00	4693.62	0.00	56.30	4682.15	0.00	4.77	0 00:00	0.00	0.00
114	J42530	Junction	4692.15	4706.20	0.00	4720.25	0.00	56.30	4693.45	0.00	12.75	0 00:00	0.00	0.00
115	J42531	Junction	4693.08	4703.98	0.00	4714.88	0.00	56.30	4695.10	0.00	8.88	0 00:00	0.00	0.00
116	J42532	Junction	4693.66	4702.01	0.00	4710.36	0.00	56.30	4696.08	0.00	5.93	0 00:00	0.00	0.00
117	J42533	Junction	4695.91	4701.91	0.00	4707.91	0.00	56.30	4697.70	0.00	4.21	0 00:00	0.00	0.00
118	J42538	Junction	4595.69	4610.69	0.00	4625.69	0.00	133.84	4597.77	0.00	12.92	0 00:00	0.00	0.00
119	J42540	Junction	4597.65	4612.65	0.00	4627.65	0.00	57.56	4599.49	0.00	13.16	0 00:00	0.00	0.00
120	J42722	Junction	4586.25	4594.25	0.00	4602.25	0.00	148.72	4588.44	0.00	5.81	0 00:00	0.00	0.00
121	J42745	Junction	4755.35	4761.10	0.00	4766.85	0.00	20.00	4756.47	0.00	4.63	0 00:00	0.00	0.00
122	J42746	Junction	4758.90	4764.40	0.00	4769.90	0.00	20.00	4759.85	0.00	4.55	0 00:00	0.00	0.00
123	J42747	Junction	4704.88	4709.53	0.00	4714.18	0.00	20.00	4706.22	0.00	3.31	0 00:00	0.00	0.00
124	J42748	Junction	4703.71	4709.86	0.00	4716.01	0.00	20.00	4704.90	0.00	4.96	0 00:00	0.00	0.00
125	J42788	Junction	4596.35	4603.40	0.00	4610.45	0.00	10.20	4598.26	0.00	5.14	0 00:00	0.00	0.00
126	J42808	Junction	4594.64	4601.49	0.00	4608.34	0.00	44.56	4597.15	0.00	4.34	0 00:00	0.00	0.00
127	J42809	Junction	4594.91	4601.61	0.00	4608.31	0.00	44.70	4597.49	0.00	4.12	0 00:00	0.00	0.00
128	J42810	Junction	4595.00	4600.90	0.00	4606.80	0.00	44.80	4598.19	0.00	2.71	0 00:00	0.00	0.00
129	J42811	Junction	4595.04	4600.54	0.00	4606.04	0.00	11.54	4598.19	0.00	2.35	0 00:00	0.00	0.00
130	J42812	Junction	4595.09	4601.24	0.00	4607.39	0.00	11.37	4598.20	0.00	3.04	0 00:00	0.00	0.00
131	J42813	Junction	4595.72	4601.42	0.00	4607.12	0.00	10.18	4598.23	0.00	3.19	0 00:00	0.00	0.00
132	J42814	Junction	4595.42	4600.92	0.00	4606.42	0.00	10.44	4598.22	0.00	2.70	0 00:00	0.00	0.00
133	J42815	Junction	4595.33	4601.43	0.00	4607.53	0.00	10.90	4598.21	0.00	3.22	0 00:00	0.00	0.00
134	J42816	Junction	4595.25	4601.25	0.00	4607.25	0.00	11.14	4598.20	0.00	3.05	0 00:00	0.00	0.00
135	J42821	Junction	4619.88	4624.58	0.00	4629.28	0.00	51.42	4629.28	4.70	0.00	0 03:19	5.55	45.00
136	J42824	Junction	4645.94	4654.69	0.00	0.00	0.00	29.24	4654.69	0.00	0.00	0 03:19	0.03	0.00
137	J42833	Junction	4716.01	4720.71	0.00	4725.41	0.00	20.00	4716.81	0.00	3.90	0 00:00	0.00	0.00
138	J42834	Junction	4723.25	4729.80	0.00	4736.35	0.00	20.00	4724.22	0.00	5.58	0 00:00	0.00	0.00
139	J42835	Junction	4742.72	4749.37	0.00	4756.02	0.00	20.00	4743.59	0.00	5.78	0 00:00	0.00	0.00
140	J42836	Junction	4753.59	4759.29	0.00	4764.99	0.00	20.00	4754.58	0.00	4.71	0 00:00	0.00	0.00
141	J42853	Junction	4666.81	4672.06	0.00	4677.31	0.00	20.00	4667.65	0.00	4.41	0 00:00	0.00	0.00
142	J42854	Junction	4651.03	4657.83	0.00	4664.63	0.00	24.44	4664.63	6.80	0.00	0 03:19	0.00	0.00
143	J42855	Junction	4668.88	4674.28	0.00	4679.68	0.00	20.00	4670.57	0.00	3.71	0 00:00	0.00	0.00
144	J42856	Junction	4669.95	4674.45	0.00	4678.95	0.00	20.00	4671.38	0.00	3.07	0 00:00	0.00	0.00
145	J42857	Junction	4678.77	4683.37	0.00	4687.97	0.00	20.00	4679.70	0.00	3.67	0 00:00	0.00	0.00
146	J42858	Junction	4696.01	4701.26	0.00	4706.51	0.00	20.00	4696.86	0.00	4.40	0 00:00	0.00	0.00
147	J42859	Junction	4700.55	4707.90	0.00	4715.25	0.00	20.00	4701.59	0.00	6.31	0 00:00	0.00	0.00
148	J42885	Junction	4616.20	4626.17	0.00	4632.84	0.00	44.69	4626.18	0.01	0.00	0 00:00	0.00	0.00
149	J441024-0	Junction	4578.99	4590.09	4578.99	4590.09	0.00	115.77	4581.88	0.00	8.21	0 00:00	0.00	0.00
150	J441024-1	Junction	4576.75	4588.25	0.00	4599.75	0.00	125.26	4580.73	0.00	7.52	0 00:00	0.00	0.00
151	J441032-1	Junction	4592.84	4599.09	0.00	4605.34	0.00	6.34	4599.42	0.33	0.00	0 00:00	0.00	0.00
152	J441557-0	Junction	4693.78	4701.38	0.00	4708.98	0.00	56.30	4696.51	0.00	4.87	0 00:00	0.00	0.00
153	J441560-0	Junction	4696.87	4710.00	0.00	4713.57	0.00	109.07	4709.15	0.00	2.72	0 00:00	0.00	0.00
154	J441565-1	Junction	4693.98	4708.08	0.00	4722.18	0.00	56.30	4697.20	0.00	10.88	0 00:00	0.00	0.00
155	J441657-0	Junction	4638.41	4643.98	0.00	4650.65	0.00	63.20	4650.65	6.67	0.00	0 03:18	10.89	32.00
156	J441660-0	Junction	4645.74	4654.22	0.00	4660.89	0.00	35.47	4656.41	2.19	0.00	0 00:00	0.00	0.00
157	J441673-1	Junction	4723.25	4729.80	0.00	4736.35	0.00	20.00	4724.84	0.00	4.96	0 00:00	0.00	0.00
158	J441823.0	Junction	4636.38	4643.08	0.00	4649.78	0.00	15.00	4637.18	0.00	5.90	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
159	J44269-1	Junction	4721.40	4727.07	0.00	4733.74	0.00	7.00	4724.40	0.00	7.00	0 00:00	0.00	0.00
160	J44279-1	Junction	4589.18	4592.62	0.00	4599.29	0.00	6.34	4599.29	6.67	0.00	0 06:08	0.09	21.00
161	J4429-0	Junction	4621.41	4632.89	0.00	4632.89	0.00	40.43	4632.59	0.00	0.30	0 00:00	0.00	0.00
162	J44373-0	Junction	4554.50	4559.43	0.00	4566.10	0.00	66.00	4557.00	0.00	7.50	0 00:00	0.00	0.00
163	J44377-1	Junction	4546.06	4554.75	0.00	4561.42	0.00	57.45	4553.05	0.00	1.70	0 00:00	0.00	0.00
164	J44488-1	Junction	4592.40	4597.30	0.00	4602.20	0.00	44.87	4594.08	0.00	3.22	0 00:00	0.00	0.00
165	J44563-1	Junction	4588.62	4592.48	0.00	4599.15	0.00	5.97	4598.43	5.95	0.00	0 00:00	0.00	0.00
166	J44598-1	Junction	4658.85	4664.25	0.00	4659.65	0.00	45.59	4661.01	0.00	3.24	0 00:00	0.00	0.00
167	J44599-0	Junction	4647.46	4658.96	0.00	4670.46	0.00	17.39	4648.94	0.00	10.02	0 00:00	0.00	0.00
168	J44612-0	Junction	4634.84	4641.34	0.00	4647.84	0.00	130.95	4639.93	0.00	1.41	0 00:00	0.00	0.00
169	J44681.0	Junction	4591.92	4596.82	0.00	4601.72	0.00	18.59	4592.66	0.00	4.16	0 00:00	0.00	0.00
170	JUL010.04-0	Junction	4614.13	4620.80	0.00	4627.47	0.00	394.91	4616.30	0.00	7.83	0 00:00	0.00	0.00
171	JUL010.04-1	Junction	4495.70	4502.37	0.00	4509.04	0.00	389.02	4499.07	0.00	6.63	0 00:00	0.00	0.00
172	JUL010.08-0	Junction	4675.67	4682.34	0.00	4689.01	0.00	396.48	4677.73	0.00	7.94	0 00:00	0.00	0.00
173	JUL010.10-0	Junction	5849.45	5856.12	0.00	5862.79	0.00	136.10	5850.43	0.00	9.02	0 00:00	0.00	0.00
174	JUL010.10-1	Junction	4812.10	4818.77	0.00	4825.44	0.00	436.70	4814.13	0.00	7.97	0 00:00	0.00	0.00
175	JUL020.02-0	Junction	4865.89	4872.56	0.00	4879.23	0.00	241.91	4867.36	0.00	8.53	0 00:00	0.00	0.00
176	JUL020.06-0	Junction	5072.86	5079.53	0.00	5086.20	0.00	154.07	5073.97	0.00	8.89	0 00:00	0.00	0.00
177	JUL020.10-0	Junction	5162.24	5168.91	0.00	5175.58	0.00	48.00	5162.86	0.00	9.38	0 00:00	0.00	0.00
178	JUL020.12-0	Junction	5346.59	5353.26	0.00	5359.93	0.00	0.00	5346.59	0.00	10.00	0 00:00	0.00	0.00
179	JUL030.02-0	Junction	4580.07	4586.74	0.00	4593.41	0.00	196.31	4581.53	0.00	8.54	0 00:00	0.00	0.00
180	JUL030.04-0	Junction	4587.21	4593.88	0.00	4600.55	0.00	196.31	4588.64	0.00	8.57	0 00:00	0.00	0.00
181	JUL030.08-1	Junction	4618.14	4624.81	0.00	4631.48	0.00	196.33	4619.63	0.00	8.51	0 00:00	0.00	0.00
182	JUL030.12-1	Junction	4623.65	4630.32	0.00	4636.99	0.00	197.24	4625.28	0.00	8.37	0 00:00	0.00	0.00
183	JUL030.14-0	Junction	5067.12	5073.79	0.00	5080.46	0.00	122.38	5068.08	0.00	9.04	0 00:00	0.00	0.00
184	JUL030.14-1	Junction	4769.44	4776.11	0.00	4782.78	0.00	120.59	4770.42	0.00	9.02	0 00:00	0.00	0.00
185	JUL030.16-0	Junction	5222.41	5229.08	0.00	5235.75	0.00	49.95	5222.93	0.00	9.48	0 00:00	0.00	0.00
186	JUL031.06-1	Junction	4887.75	4894.42	0.00	4901.09	0.00	104.18	4888.66	0.00	9.09	0 00:00	0.00	0.00
187	JUL031.10-0	Junction	6622.71	6629.38	0.00	6636.05	0.00	39.19	6623.08	0.00	9.63	0 00:00	0.00	0.00
188	JUL031.10-1	Junction	5457.22	5463.89	0.00	5470.56	0.00	63.73	5457.79	0.00	9.43	0 00:00	0.00	0.00
189	JUL033.02-0	Junction	5974.93	5981.60	0.00	5988.27	0.00	27.89	5975.21	0.00	9.72	0 00:00	0.00	0.00
190	JUL033.02-1	Junction	5352.23	5358.90	0.00	5365.57	0.00	27.61	5352.57	0.00	9.66	0 00:00	0.00	0.00
191	JUL034.02-0	Junction	5708.23	5714.90	0.00	5721.57	0.00	50.13	5708.65	0.00	9.58	0 00:00	0.00	0.00
192	JUL040.06-0	Junction	5281.46	5288.13	0.00	5294.80	0.00	107.84	5282.25	0.00	9.21	0 00:00	0.00	0.00
193	JUL040.06-1	Junction	4897.00	4903.00	0.00	4903.00	0.00	107.58	4904.98	0.00	2.02	0 00:00	0.00	0.00
194	JUL041.02-1	Junction	4627.15	4637.63	0.00	4644.30	0.00	44.91	4628.41	0.00	9.22	0 00:00	0.00	0.00
195	JUL041.04-0	Junction	5183.21	5189.88	0.00	5196.55	0.00	0.00	5183.21	0.00	10.00	0 00:00	0.00	0.00
196	JUL041.04-1	Junction	4741.62	4748.29	0.00	4748.29	0.00	44.99	4742.19	0.00	9.43	0 00:00	0.00	0.00
197	JUL045.02-0	Junction	6540.33	6547.00	0.00	6553.67	0.00	44.44	6540.71	0.00	9.62	0 00:00	0.00	0.00
198	JUL065.02-0	Junction	6574.33	6581.00	0.00	6587.67	0.00	30.51	6574.67	0.00	9.66	0 00:00	0.00	0.00
199	JUL066.02-0	Junction	6216.13	6222.80	0.00	6229.47	0.00	32.29	6216.46	0.00	9.67	0 00:00	0.00	0.00
200	JUL070.02-0	Junction	4581.13	4587.80	0.00	4594.47	0.00	166.79	4582.32	0.00	8.81	0 00:00	0.00	0.00
201	JUL070.04-0	Junction	4647.09	4655.74	0.00	4662.41	0.00	151.47	4648.23	0.00	8.86	0 00:00	0.00	0.00
202	JUL070.04-1	Junction	4590.98	4604.49	0.00	4611.16	0.00	151.46	4593.68	0.00	10.81	0 00:00	0.00	0.00
203	JUL070.06-0	Junction	4659.93	4666.60	0.00	4673.27	0.00	134.59	4661.07	0.00	8.86	0 00:00	0.00	0.00
204	JUL070.10-0	Junction	5083.29	5089.96	0.00	5096.63	0.00	89.63	5084.05	0.00	9.24	0 00:00	0.00	0.00
205	JUL070.10-1	Junction	4779.12	4812.06	0.00	4818.73	0.00	109.87	4780.05	0.00	32.01	0 00:00	0.00	0.00
206	JUL070.12-0	Junction	5214.49	5221.16	0.00	5227.83	0.00	69.89	5215.11	0.00	9.38	0 00:00	0.00	0.00
207	JUL070.14-0	Junction	5261.14	5267.81	0.00	5274.48	0.00	29.17	5261.50	0.00	9.64	0 00:00	0.00	0.00
208	JUL080.02-0	Junction	4576.48	4585.13	0.00	4591.80	0.00	141.54	4577.60	0.00	8.88	0 00:00	0.00	0.00
209	JUL080.04-0	Junction	4595.90	4602.57	0.00	4609.24	0.00	130.94	4596.74	0.00	9.16	0 00:00	0.00	0.00
210	JUL080.04-1	Junction	4634.00	4642.69	0.00	4649.36	0.00	131.00	4635.14	0.00	8.86	0 00:00	0.00	0.00
211	JUL080.06-0	Junction	4635.30	4642.00	0.00	4642.31	0.00	80.42	4639.98	0.00	5.32	0 00:00	0.00	0.00
212	JUL080.06-1	Junction	4695.88	4702.55	0.00	4709.22	0.00	80.43	4696.69	0.00	9.19	0 00:00	0.00	0.00
213	JUL080.08-0	Junction	4696.80	4703.47	0.00	4710.14	0.00	80.43	4697.76	0.00	9.04	0 00:00	0.00	0.00
214	JUL080.08-1	Junction	4711.67	4718.34	0.00	4725.01	0.00	80.43	4712.44	0.00	9.23	0 00:00	0.00	0.00
215	JUL080.10-0	Junction	4770.94	4777.61	0.00	4784.28	0.00	77.39	4771.68	0.00	9.26	0 00:00	0.00	0.00
216	JUL080.10-1	Junction	4717.35	4724.02	0.00	4730.69	0.00	89.39	4722.54	0.00	4.81	0 00:00	0.00	0.00
217	JUL080.12-0	Junction	4776.51	4783.18	0.00	4789.85	0.00	90.01	4782.04	0.00	4.47	0 00:00	0.00	0.00
218	JUL080.12-1	Junction	4878.08	4884.75	0.00	4891.42	0.00	90.27	4878.87	0.00	9.21	0 00:00	0.00	0.00
219	JUL080.14-0	Junction	5014.70	5021.37	0.00	5028.04	0.00	48.98	5015.24	0.00	9.46	0 00:00	0.00	0.00
220	JUL080.16-0	Junction	5227.63	5234.30	0.00	5240.97	0.00	49.45	5228.14	0.00	9.49	0 00:00	0.00	0.00
221	JUL084.02-0	Junction	6213.33	6220.00	0.00	6226.67	0.00	37.62	6213.72	0.00	9.61	0 00:00	0.00	0.00
222	JUL100.02-1	Junction	4820.37	4825.52	0.00	4832.19	0.00	7.00	4820.91	0.00	4.61	0 00:00	0.00	0.00
223	JUL100.04-0	Junction	5012.74	5019.41	0.00	5026.08	0.00	35.97	5013.19	0.00	9.55	0 00:00	0.00	0.00
224	JUL100.06-0	Junction	5193.10	5199.77	0.00	5206.44	0.00	21.69	5193.43	0.00	9.67	0 00:00	0.00	0.00
225	JUL120.02-0	Junction	4505.93	4512.60	0.00	4519.27	0.00	146.24	4507.50	0.00	8.43	0 00:00	0.00	0.00
226	JUL120.04-0	Junction	4541.49	4548.16	0.00	4554.83	0.00	146.74	4542.83	0.00	8.66	0 00:00	0.00	0.00
227	JUL120.04-1	Junction	4506.91	4513.58	0.00	4520.25	0.00	146.24	4511.34	0.00	10.39	0 00:00	0.00	0.00
228	JUL120.06-0	Junction	4574.18	4580.85	0.00	4587.52	0.00	148.75	4575.56	0.00	8.62	0 00:00	0.00	0.00
229	JUL120.06-1	Junction	4541.09	4547.76	0.00	4554.43	0.00	148.29	4543.44	0.00	7.65	0 00:00	0.00	0.00
230	JUL121.02-0	Junction	4698.77	4710.00	0.00	4712.11	0.00	148.24	4709.15	0.00	4.62	0 00:00	0.00	0.00
231	JUL121.04-0	Junction	5110.19	5116.86	0.00	5123.53	0.00	0.00	5110.19	0.00	10.00	0 00:00	0.00	0.00
232	JUL121.07-0	Junction	5108.32	5114.99	0.00	5121.66	0.00	0.00	5108.32	0.00	10.00	0 00:00	0.00	0.00
233	JUL121.07-1	Junction	5027.00	5033.67	0.00	5040.34	0.00	147.66	5028.22	0.00	8.78	0 00:00	0.00	0.00
234	JUL126.02-0	Junction	6714.13	6720.80	0.00	6727.47	0.00	68.50	6720.57	0.00	9.43	0 00:00	0.00	0.00
235	JUL130.02-0	Junction	4566.45	4573.12	0.00	4579.79	0.00	14.97	4566.80	0.00	9.65	0 00:00	0.00	0.00
236	JUL130.02-1	Junction	4505.04	4511.71	0.00	4518.38	0.00	14.97	4505.40	0.00	9.64	0 00:00	0.00	0.00
237	JUL130.04-0	Junction	4581.26	4587.93	0.00	4594.60	0.00	79.45	4584.75	0.00	6.51	0 00:00	0.00	0.00

Node Summary

SN	Element ID	Element Type	Invert Elevation (ft)	Ground/Rim (Max) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Max HGL Elevation Attained (ft)	Max Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
238	JUL130.04-1	Junction	4567.91	4574.58	0.00	4581.25	0.00	114.50	4584.58	6.67	0.00	0 03:46	164.88	264.00
239	JUL130.06-0	Junction	4590.00	4603.44	0.00	4610.11	0.00	72.96	4590.83	0.00	12.61	0 00:00	0.00	0.00
240	JUL130.06-1	Junction	4582.55	4589.22	0.00	4595.89	0.00	72.96	4584.91	0.00	7.64	0 00:00	0.00	0.00
241	JUL130.08-0	Junction	4592.42	4604.78	0.00	4611.45	0.00	74.38	4594.24	0.00	10.54	0 00:00	0.00	0.00
242	JUL130.08-1	Junction	4594.64	4602.65	0.00	4609.32	0.00	44.40	4596.47	0.00	8.17	0 00:00	0.00	0.00
243	JUL132.02-1	Junction	4760.63	4767.30	0.00	4773.97	0.00	20.00	4761.90	0.00	8.73	0 00:00	0.00	0.00
244	JUL152.02-0	Junction	4550.30	4558.56	0.00	4565.23	0.00	65.78	4555.65	0.00	4.65	0 00:00	0.00	0.00
245	JUL152.02-1	Junction	4547.04	4555.99	0.00	4562.66	0.00	73.22	4555.63	0.00	3.69	0 00:00	0.00	0.00
246	JUL152.04-0	Junction	4554.21	4559.84	0.00	4566.51	0.00	66.00	4556.92	0.00	7.29	0 00:00	0.00	0.00
247	JUL152.04-1	Junction	4551.14	4558.14	0.00	4564.81	0.00	66.00	4556.85	0.00	4.29	0 00:00	0.00	0.00
248	Jun-131	Junction	4559.02	4563.45	0.00	0.00	0.00	35.45	4563.45	0.00	0.00	0 03:20	3.38	58.00
249	Jun-132	Junction	4546.17	4552.17	0.00	0.00	0.00	62.83	4552.17	0.00	0.00	0 03:17	0.02	4.00
250	Jun-192	Junction	4745.00	4759.00	0.00	4712.12	0.00	19.60	4759.00	0.00	0.00	0 03:12	1.06	163.00
251	Jun-194	Junction	4704.00	6.00	0.00	0.00	0.00	15.00	4704.78	0.00	1.22	0 00:00	0.00	0.00
252	Jun-195	Junction	4964.00	4970.00	0.00	0.00	0.00	79.80	4965.73	0.00	8.27	0 00:00	0.00	0.00
253	Jun-203	Junction	4691.00	4695.00	0.00	0.00	0.00	11.00	4691.99	0.00	3.01	0 00:00	0.00	0.00
254	Jun-204	Junction	4960.00	4966.00	0.00	4966.00	0.00	138.63	4961.11	0.00	8.89	0 00:00	0.00	0.00
255	Jun-206	Junction	4834.00	4840.00	4834.00	4840.00	0.00	11.00	4834.77	0.00	5.23	0 00:00	0.00	0.00
256	Jun-207	Junction	4895.00	4901.00	0.00	0.00	0.00	19.60	4895.93	0.00	5.07	0 00:00	0.00	0.00
257	Jun-208	Junction	4880.00	4887.00	0.00	4898.00	0.00	131.13	4888.98	0.00	9.02	0 00:00	0.00	0.00
258	Stor-28	Junction	4860.00	4874.00	0.00	4874.00	0.00	20.00	4860.26	0.00	13.74	0 00:00	0.00	0.00
259	UL024.02-0	Junction	7100.00	7106.67	0.00	7113.34	0.00	108.55	7100.71	0.00	9.29	0 00:00	0.00	0.00
260	J0008-1	Outfall	4494.53					125.74	4494.53					
261	J42797	Outfall	4520.54					51.68	4522.07					
262	J44298-1	Outfall	4498.50					131.35	4500.08					
263	J44325-1	Outfall	4502.46					14.97	4502.81					
264	JUL010.02-1	Outfall	4491.00					377.91	4494.28					
265	JUL020.02-1	Outfall	4490.00					241.23	4491.47					
266	JUL030.02-1	Outfall	4501.37					196.27	4502.82					
267	JUL070.02-1	Outfall	4500.32					166.78	4501.50					
268	JUL080.02-1	Outfall	4493.46					123.39	4494.58					
269	JUL120.02-1	Outfall	4504.59					146.24	4506.05					
270	Out-28	Outfall	0.00					16.81	0.00					
271	JUL040.04-1	Storage Node	4900.00	4910.00	0.00		0.00	51.70	4904.86				0.00	0.00
272	JUL121.06-1	Storage Node	4893.00	4903.50	0.00		0.00	144.40	4896.31				0.00	0.00
273	Jun-200	Storage Node	4960.00	4970.00	0.00		0.00	0.00	4960.00				0.00	0.00
274	Jun-205	Storage Node	4835.00	4845.00	0.00		0.00	144.62	4845.00				26.14	84.00
275	SN-Mav	Storage Node	4597.00	4602.60	0.00		20.00	61.15	4602.47				0.00	0.00
276	SN-NEW-UL134	Storage Node	4860.00	4874.00	0.00		0.00	80.00	4868.38				0.00	0.00
277	SN-Pond	Storage Node	4625.00	4634.40	0.00		20.00	153.98	4654.09				0.58	63.00
278	SN-Rock	Storage Node	4788.10	10.90	0.00		20.00	77.09	4790.97				0.00	720.00
279	SN-Still	Storage Node	4723.40	4724.40	0.00		20.00	2.38	4724.40				0.00	0.00
280	SN-SUMM	Storage Node	4599.80	7.40	0.00		20.00	41.82	4613.43				0.29	720.00
281	SN-Swain	Storage Node	4654.40	5.80	0.00		20.00	70.26	4657.83				0.00	720.00
282	SN-UL020	Storage Node	4886.00	4900.00	0.00		0.00	668.84	4896.35				0.00	0.00
283	SN-UL022	Storage Node	5183.00	5193.00	0.00		0.00	163.85	5189.09				0.00	0.00
284	SN-UL030	Storage Node	4908.00	4918.00	0.00		0.00	222.13	4914.95				0.00	0.00
285	SN-UL031	Storage Node	5478.00	5488.00	0.00		0.00	88.90	5483.17				0.00	0.00
286	SN-UL032	Storage Node	5088.00	5098.00	0.00		0.00	142.96	5093.76				0.00	0.00
287	SN-UL041	Storage Node	4762.00	4772.00	0.00		0.00	0.00	4762.00				0.00	0.00
288	SN-UL042	Storage Node	4896.00	4910.00	0.00		0.00	87.07	4904.98				0.00	0.00
289	SN-UL043	Storage Node	5204.00	5214.00	0.00		0.00	0.00	5204.00				0.00	0.00
290	SN-UL044	Storage Node	5302.00	5312.00	0.00		0.00	201.07	5308.10				0.00	0.00
291	SN-UL051	Storage Node	4691.00	4701.00	0.00		0.00	71.94	4696.08				0.00	0.00
292	SN-UL064	Storage Node	5235.00	5245.00	0.00		0.00	140.35	5240.71				0.00	0.00
293	SN-UL070	Storage Node	4680.00	4690.00	0.00		0.00	122.15	4685.78				0.00	0.00
294	SN-UL082	Storage Node	4899.00	4909.00	0.00		0.00	78.48	4904.18				0.00	0.00
295	SN-UL083	Storage Node	5248.00	5258.00	0.00		0.00	57.94	5252.84				0.00	0.00
296	SN-UL101	Storage Node	5033.00	5043.00	0.00		0.00	37.08	5037.47				0.00	0.00
297	SN-UL102	Storage Node	5033.00	5043.00	0.00		0.00	61.86	5037.86				0.00	0.00
298	SN-UL115	Storage Node	5033.00	5043.00	0.00		0.00	85.13	5038.34				0.00	0.00
299	SN-UL121	Storage Node	4718.00	4728.00	0.00		0.00	101.32	4722.96				0.00	0.00
300	SN-UL124	Storage Node	5047.00	5057.00	0.00		0.00	227.58	5053.43				0.00	0.00
301	SN-UL130	Storage Node	4612.00	4622.00	0.00		0.00	241.27	4619.62				0.00	0.00
302	SN-UL134	Storage Node	5110.00	5120.00	0.00		0.00	232.21	5116.83				0.00	0.00
303	SN-UL140	Storage Node	4577.00	4587.00	0.00		0.00	79.75	4581.92				0.00	0.00
304	SN-UL152	Storage Node	4575.00	4585.00	0.00		0.00	326.90	4583.79				0.00	0.00
305	SN-Vill	Storage Node	4587.40	4595.40	0.00		20.00	130.93	4592.90				0.00	0.00
306	SN-Waym	Storage Node	4723.60	6.80	0.00		20.00	103.69	4944.67				1.18	720.00
307	SN-Weath	Storage Node	4702.20	4712.20	0.00		20.00	107.43	4708.87				0.00	0.00
308	SN-WildF	Storage Node	4592.80	4.40	0.00		20.00	23.34	4597.17				0.00	720.00
309	SN-WildL	Storage Node	4592.80	4.40	0.00		20.00	58.47	4597.07				0.00	720.00
310	Stor-39	Storage Node	4680.00	10.00	0.00		0.00	135.13	4683.43				0.00	720.00
311	Stor-39·1	Storage Node	4841.00	4851.00	0.00		0.00	0.00	4841.00				0.00	0.00
312	Stor-41	Storage Node	4745.00	4755.00	0.00		0.00	153.68	4750.82				0.00	0.00
313	Stor-45	Storage Node	5000.00	15.00	0.00		0.00	89.21	5005.43				0.00	720.00

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
1	0001	Pipe	J42306	J42302	251.32	4518.99	4500.54	7.3400	3.000	0.0130	125.74	180.72	0.70	18.89	2.68	0.89	0.00	Calculated
2	0002	Pipe	J44488-1	J42341	61.98	4592.40	4590.49	3.0800	3.000	0.0130	44.87	117.09	0.38	10.55	1.81	0.60	0.00	Calculated
3	0004	Pipe	J0004-0	J42306	174.71	4525.19	4518.99	3.5500	3.000	0.0130	125.75	125.65	1.00	19.72	2.68	0.89	0.00	> CAPACITY
4	0005	Pipe	J42307	J0004-0	648.84	4545.94	4525.19	3.2000	3.000	0.0130	125.75	119.28	1.05	17.79	3.00	1.00	29.00	SURCHARGED
5	0006	Pipe	J0006-0	J42307	859.23	4578.80	4545.94	3.8200	3.000	0.0130	130.05	130.44	1.00	19.45	3.00	1.00	27.00	SURCHARGED
6	0007	Pipe	J42340	J0006-0	140.95	4584.36	4578.80	3.9400	3.000	0.0130	50.83	132.47	0.38	13.24	3.00	1.00	13.00	SURCHARGED
7	0008	Pipe	J42302	J0008-1	199.41	4500.54	4496.64	1.9600	3.000	0.0130	125.74	93.28	1.35	17.79	3.00	1.00	39.00	SURCHARGED
8	0009	Pipe	J42341	J42340	613.10	4590.49	4584.36	1.0000	3.000	0.0130	44.87	66.69	0.67	11.48	2.45	0.82	0.00	Calculated
9	0011	Pipe	J0011-0	J0006-0	160.18	4586.34	4578.80	4.7100	2.500	0.0130	115.43	88.99	1.30	23.51	2.50	1.00	28.00	SURCHARGED
10	0013	Pipe	J42308	J0012-1	307.90	4600.22	4587.41	4.1600	1.500	0.0130	20.68	21.43	0.97	14.15	1.50	1.00	29.00	SURCHARGED
11	0131	Pipe	J0131.0	J42359	454.58	4591.24	4589.72	0.3300	2.000	0.0130	15.16	13.08	1.16	6.60	1.48	0.74	0.00	> CAPACITY
12	0132	Pipe	J42358	J0131.0	387.78	4617.19	4591.24	6.6900	2.000	0.0130	15.00	58.52	0.26	7.68	1.35	0.67	0.00	Calculated
13	0134	Pipe	J42359	J42363	11.91	4589.72	4588.99	6.1300	2.500	0.0130	15.12	101.55	0.15	11.71	1.16	0.46	0.00	Calculated
14	0139	Pipe	J42824	J441660-0	4.34	4645.94	4645.74	4.6100	2.000	0.0130	22.06	48.56	0.45	10.53	2.00	1.00	39.00	SURCHARGED
15	0164	Pipe	JUL130.04-1	JUL130.02-0	548.67	4567.91	4566.45	0.2700	1.500	0.0130	14.97	5.42	2.76	13.10	0.93	0.62	0.00	> CAPACITY
16	0165	Pipe	JUL120.04-1	JUL120.02-0	60.27	4506.91	4505.93	1.6300	5.000	0.0130	146.24	418.86	0.35	8.12	2.98	0.60	0.00	Calculated
17	0166	Pipe	JUL120.06-1	JUL120.04-0	64.48	4541.09	4541.49	-0.6200	2.500	0.0130	146.74	289.11	0.51	6.38	1.84	0.74	0.00	Calculated
18	0173	Pipe	J0012-1	J0011-0	6.44	4587.41	4586.34	16.6100	2.500	0.0130	23.69	167.19	0.14	12.34	2.50	1.00	32.00	SURCHARGED
19	0176	Pipe	J44377-1	J42224	34.17	4546.06	4532.48	39.7400	1.500	0.0130	57.45	66.22	0.87	32.51	1.50	1.00	356.00	SURCHARGED
20	0182	Pipe	J44269-1	J0014-1	357.60	4721.40	4721.70	-0.0800	1.500	0.0130	5.99	3.04	1.97	4.89	0.98	0.65	0.00	> CAPACITY
21	0183	Pipe	J42533	J441565-1	49.88	4695.91	4693.98	3.8700	4.000	0.0130	56.30	282.55	0.20	6.80	2.50	0.63	0.00	Calculated
22	0191	Pipe	SN-Mav	J44681.0	101.15	4597.00	4591.92	5.0200	1.000	0.0130	9.96	7.98	1.25	13.75	0.87	0.87	0.00	> CAPACITY
23	4442	Pipe	JUL130.08-0	JUL130.06-0	96.06	4592.42	4590.00	2.5200	4.000	0.0130	72.96	227.99	0.32	20.04	1.33	0.33	0.00	Calculated
24	4449	Pipe	J42393	JUL070.02-0	232.19	4585.90	4581.00	2.1100	4.500	0.0130	166.79	281.86	0.59	23.77	2.04	0.45	0.00	Calculated
25	4489	Pipe	J42118	J42112	399.05	4610.41	4599.43	2.7500	2.000	0.0130	40.72	37.53	1.09	12.96	2.00	1.00	266.00	SURCHARGED
26	4490	Pipe	J42112	J42117	330.31	4599.43	4597.20	0.6800	2.500	0.0130	39.95	33.70	1.19	10.42	1.84	0.74	0.00	> CAPACITY
27	44174	Pipe	J42420	J42347	45.63	4713.66	4706.85	14.9200	2.500	0.0130	45.62	158.46	0.29	18.08	1.28	0.51	0.00	Calculated
28	44175	Pipe	J42346	J42420	424.21	4747.50	4713.66	7.9800	2.500	0.0130	45.63	115.85	0.39	21.45	1.12	0.45	0.00	Calculated
29	44177	Pipe	J42436	J42348	293.90	4692.40	4677.52	5.0600	2.500	0.0130	45.60	92.29	0.49	17.12	1.33	0.53	0.00	Calculated
30	44178	Pipe	J42347	J42436	398.35	4706.85	4692.40	3.6300	2.500	0.0130	45.59	78.12	0.58	16.01	1.41	0.56	0.00	Calculated
31	44181	Pipe	JUL100.02-1	J42365	197.42	4820.37	4812.97	3.7500	2.000	0.0130	7.00	43.80	0.16	8.41	0.63	0.32	0.00	Calculated
32	44182	Pipe	J42365	J42366	223.61	4812.97	4809.24	1.6700	2.000	0.0130	7.04	29.22	0.24	9.08	0.60	0.30	0.00	Calculated
33	44183	Pipe	J42366	J42367	346.58	4809.24	4786.31	6.6200	2.000	0.0130	7.00	58.19	0.12	12.35	0.47	0.24	0.00	Calculated
34	44184	Pipe	J42368	J42370	153.82	4758.99	4749.05	6.4600	2.000	0.0130	7.00	57.51	0.12	11.98	0.48	0.24	0.00	Calculated
35	44185	Pipe	J42367	J42368	353.15	4786.31	4758.99	7.7400	2.000	0.0130	7.00	62.92	0.11	12.52	0.47	0.23	0.00	Calculated
36	44186	Pipe	JUL080.12-0	J42442	28.71	4777.64	4775.41	7.7700	2.500	0.0130	77.39	114.31	0.68	15.77	2.50	1.00	92.00	SURCHARGED
37	44187	Pipe	J42442	JUL080.10-0	51.79	4775.41	4773.28	4.1100	2.500	0.0130	77.39	83.18	0.93	16.89	2.20	0.88	0.00	Calculated
38	44236	Pipe	J42223	J42156	262.10	4530.32	4527.51	1.0700	4.000	0.0130	113.67	148.73	0.76	10.57	3.59	0.90	0.00	Calculated
39	44237	Pipe	J42156	J42155	254.58	4527.51	4525.14	0.9300	4.000	0.0130	131.41	138.59	0.95	10.87	3.72	0.93	0.00	Calculated
40	44238	Pipe	J42155	J42154	394.76	4525.14	4521.79	0.8500	4.000	0.0130	131.34	132.32	0.99	15.21	2.59	0.65	0.00	Calculated
41	44268	Pipe	J42180	J42181	179.46	4743.73	4730.23	7.5200	2.500	0.0130	7.00	112.50	0.06	13.74	0.40	0.16	0.00	Calculated
42	44269	Pipe	J42181	J44269-1	56.95	4730.23	4721.40	15.5000	2.500	0.0130	7.00	161.51	0.04	7.08	1.43	0.57	0.00	Calculated
43	44275	Pipe	J0014-1	J42178	196.83	4721.70	4703.44	9.2800	1.500	0.0130	6.59	31.99	0.21	13.20	0.49	0.33	0.00	Calculated
44	44276	Pipe	J42178	J42177	144.52	4703.44	4694.19	6.4000	1.500	0.0130	6.59	26.58	0.25	10.88	0.97	0.65	0.00	Calculated
45	44277	Pipe	J42177	J42176	64.40	4694.19	4691.51	4.1600	1.500	0.0130	7.02	21.43	0.33	8.72	1.50	1.00	25.00	SURCHARGED
46	44278	Pipe	J42176	J42175	144.49	4691.51	4688.48	2.1000	1.500	0.0130	7.28	15.21	0.48	7.19	1.50	1.00	28.00	SURCHARGED
47	44279	Pipe	J441032-1	J44279-1	131.14	4592.84	4589.20	2.7800	2.000	0.0130	6.34	37.69	0.17	3.87	2.00	1.00	45.00	SURCHARGED
48	44298	Pipe	J42157	J44298-1	178.93	4512.22	4498.50	7.6700	4.000	0.0130	131.35	397.76	0.33	26.04	1.68	0.42	0.00	Calculated
49	44299	Pipe	J42154	J42157	88.84	4521.79	4512.22	10.7700	4.000	0.0130	131.34	471.45	0.28	24.49	1.76	0.44	0.00	Calculated
50	44333	Pipe	J42224	J42223	77.80	4532.48	4530.32	2.7800	4.000	0.0130	113.66	239.34	0.47	11.76	2.97	0.75	0.00	Calculated
51	44375	Pipe	JUL152.04-1	JUL152.02-0	76.70	4551.14	4550.30	1.1000	3.000	0.0130	65.78	69.80	0.94	15.27	3.00	1.00	271.00	SURCHARGED
52	44377	Pipe	JUL152.02-1	J44377-1	76.96	4547.04	4546.06	1.2700	2.500	0.0130	57.45	46.29	1.24	12.93	2.50	1.00	348.00	SURCHARGED
53	44455	Pipe	J42265	J42264	120.43	4616.61	4608.40	6.8200	2.000	0.0130	41.82	59.07	0.71	14.05	2.00	1.00	37.00	SURCHARGED
54	44458	Pipe	J42175	J42282	60.28	4688.48	4687.53	1.5800	1.500	0.0130	7.28	13.19	0.55	7.42	1.50	1.00	29.00	SURCHARGED
55	44459	Pipe	J42304	J42305	77.03	4686.38	4681.18	6.7500	1.250	0.0130	19.11	16.78	1.14	15.58	1.25	1.00	249.00	SURCHARGED
56	44460	Pipe	J42303	J42304	260.85	4705.22	4686.38	7.2200	1.250	0.0130	19.11	17.36	1.10	15.58	1.25	1.00	248.00	SURCHARGED
57	44461	Pipe	J42309	J42308	286.81	4616.43	4600.22	5.6500	1.500	0.0130	19.11	24.97	0.77	14.17	1.35	0.90	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
58	44462	Pipe	J42310	J42309	390.19	4636.19	4616.43	5.0600	1.500	0.0130	19.11	23.64	0.81	14.77	1.10	0.73	0.00	Calculated
59	44463	Pipe	J42311	J42310	212.12	4652.14	4636.19	7.5200	1.500	0.0130	19.11	28.80	0.66	15.68	0.99	0.66	0.00	Calculated
60	44464	Pipe	J42312	J42311	173.46	4663.13	4652.14	6.3400	1.500	0.0130	19.11	26.44	0.72	15.66	0.98	0.65	0.00	Calculated
61	44465	Pipe	J42305	J42312	220.69	4681.18	4663.13	8.1800	1.500	0.0130	19.11	30.04	0.64	16.20	0.95	0.63	0.00	Calculated
62	44471	Pipe	J42266	J42265	101.03	4620.24	4616.61	3.5900	2.000	0.0130	42.40	42.88	0.99	14.79	2.00	1.00	37.00	SURCHARGED
63	44472	Pipe	J42267	J42266	78.65	4622.52	4620.24	2.9000	2.000	0.0130	42.36	38.52	1.10	13.48	2.00	1.00	37.00	SURCHARGED
64	44473	Pipe	J42268	J42267	286.18	4630.23	4622.52	2.6900	2.000	0.0130	42.33	37.13	1.14	13.47	2.00	1.00	40.00	SURCHARGED
65	44474	Pipe	J42269	J42268	113.63	4633.51	4630.23	2.8900	2.000	0.0130	42.31	38.44	1.10	13.47	2.00	1.00	40.00	SURCHARGED
66	44475	Pipe	J42270	J42269	157.44	4638.41	4633.51	3.1100	2.000	0.0130	42.28	39.91	1.06	13.46	2.00	1.00	40.00	SURCHARGED
67	44476	Pipe	J42271	J42270	146.40	4646.69	4638.41	5.6600	2.000	0.0130	44.13	53.80	0.82	14.28	2.00	1.00	37.00	SURCHARGED
68	44486	Pipe	J42333	J42334	261.69	4610.34	4602.31	3.0700	3.000	0.0130	44.87	116.84	0.38	12.15	1.55	0.52	0.00	Calculated
69	44487	Pipe	J42334	J42335	49.00	4602.31	4601.32	2.0200	3.000	0.0130	44.87	94.81	0.47	12.16	1.55	0.52	0.00	Calculated
70	44488	Pipe	J42336	J44488-1	76.23	4595.34	4592.40	3.8600	3.000	0.0130	44.87	130.99	0.34	12.05	1.57	0.52	0.00	Calculated
71	44489	Pipe	J42335	J42336	160.45	4601.32	4595.34	3.7300	3.000	0.0130	44.87	128.76	0.35	13.93	1.40	0.47	0.00	Calculated
72	44490	Pipe	JUL041.02-1	J42337	157.17	4627.15	4619.90	4.6100	3.000	0.0130	44.87	143.25	0.31	16.32	1.24	0.41	0.00	Calculated
73	44491	Pipe	J42337	J42333	200.01	4619.90	4610.34	4.7800	3.000	0.0130	44.87	145.82	0.31	15.74	1.27	0.42	0.00	Calculated
74	44500	Pipe	J42273	J42271	194.15	4657.67	4646.69	5.6600	2.000	0.0130	44.13	53.80	0.82	16.99	2.00	1.00	36.00	SURCHARGED
75	44501	Pipe	J42274	J42273	167.34	4666.87	4657.67	5.5000	2.000	0.0130	45.83	53.04	0.86	17.12	2.00	1.00	34.00	SURCHARGED
76	44502	Pipe	J42275	J42274	48.57	4670.16	4666.87	6.7700	2.000	0.0130	45.37	58.88	0.77	16.05	2.00	1.00	33.00	SURCHARGED
77	44503	Pipe	J42277	J42275	52.49	4672.54	4670.16	4.5300	2.000	0.0130	45.61	48.17	0.95	15.11	2.00	1.00	33.00	SURCHARGED
78	44504	Pipe	J42278	J42277	116.41	4677.64	4672.54	4.3800	2.000	0.0130	45.51	47.35	0.96	14.49	2.00	1.00	34.00	SURCHARGED
79	44505	Pipe	J42279	J42278	125.33	4682.15	4677.64	3.6000	2.000	0.0130	46.08	42.91	1.07	14.69	2.00	1.00	34.00	SURCHARGED
80	44506	Pipe	J42280	J42279	83.40	4683.00	4682.15	1.0200	2.000	0.0130	9.72	22.84	0.43	7.07	2.00	1.00	34.00	SURCHARGED
81	44507	Pipe	J42282	J42280	320.84	4687.53	4683.00	1.4100	2.000	0.0130	9.71	26.88	0.36	6.34	2.00	1.00	30.00	SURCHARGED
82	44548	Pipe	J44279-1	J42284	3.93	4589.20	4589.18	0.5100	1.250	0.0130	5.99	4.61	1.30	4.88	1.25	1.00	498.00	SURCHARGED
83	44549	Pipe	J42284	J42285	29.77	4589.18	4588.82	1.2100	1.250	0.0130	5.98	7.10	0.84	4.87	1.25	1.00	498.00	SURCHARGED
84	44551	Pipe	J42287	J42286	339.89	4587.63	4586.66	0.2900	1.250	0.0130	5.97	3.45	1.73	4.87	1.25	1.00	403.00	SURCHARGED
85	44563	Pipe	J42285	J44563-1	4.04	4588.82	4588.62	4.9500	1.250	0.0130	5.97	14.37	0.42	4.87	1.25	1.00	513.00	SURCHARGED
86	44564	Pipe	J44563-1	J42287	259.24	4588.62	4587.63	0.3800	1.250	0.0130	5.97	3.99	1.50	4.87	1.25	1.00	515.00	SURCHARGED
87	44576	Pipe	J42458	J42459	397.01	4585.91	4584.43	0.3700	1.250	0.0130	5.97	3.94	1.51	4.87	1.25	1.00	64.00	SURCHARGED
88	44577	Pipe	J42286	J42458	161.64	4586.66	4585.91	0.4600	1.250	0.0130	5.97	4.40	1.36	4.87	1.25	1.00	389.00	SURCHARGED
89	44578	Pipe	J42459	J42460	295.67	4584.43	4582.66	0.6000	1.250	0.0130	5.97	5.00	1.19	4.87	1.25	1.00	64.00	SURCHARGED
90	44579	Pipe	J42460	J42462	294.77	4582.66	4581.42	0.4200	1.250	0.0130	5.97	4.19	1.43	5.15	1.19	0.95	0.00	> CAPACITY
91	44591	Pipe	J42394	J42393	33.11	4586.59	4585.90	2.0800	4.500	0.0130	166.79	283.88	0.59	13.51	3.26	0.72	0.00	Calculated
92	44592	Pipe	JUL070.04-1	J42394	29.29	4590.98	4586.59	14.9900	3.500	0.0130	151.29	389.50	0.39	16.79	3.10	0.89	0.00	Calculated
93	44596	Pipe	J42348	J42349	139.93	4677.52	4670.58	4.9600	2.500	0.0130	45.59	91.35	0.50	14.57	1.52	0.61	0.00	Calculated
94	44597	Pipe	J42349	J42350	137.24	4670.58	4666.48	2.9900	2.500	0.0130	45.59	70.90	0.64	15.61	1.43	0.57	0.00	Calculated
95	44598	Pipe	J42350	J44598-1	97.53	4666.48	4648.85	18.0800	2.500	0.0130	45.59	114.73	0.40	13.13	1.67	0.67	0.00	Calculated
96	44599	Pipe	J44599-0	JUL070.04-0	99.31	4647.46	4647.09	0.3700	2.500	0.0130	17.39	25.04	0.69	7.37	1.31	0.52	0.00	Calculated
97	44600	Pipe	J44598-1	SN-Swain	323.25	4648.85	4654.40	-1.7200	2.500	0.0130	45.53	48.13	0.95	11.92	2.18	0.88	0.00	Calculated
98	44601	Pipe	J42443	JUL080.08-1	37.31	4713.69	4712.70	2.6500	2.500	0.0130	80.43	66.81	1.20	16.38	2.50	1.00	127.00	SURCHARGED
99	44602	Pipe	JUL080.10-1	J42443	45.21	4718.12	4713.69	9.8000	2.500	0.0130	80.43	128.40	0.63	16.38	2.50	1.00	120.00	SURCHARGED
100	44609	Pipe	J42370	J42371	80.61	4749.05	4745.20	4.7800	2.500	0.0130	7.00	89.64	0.08	8.07	0.58	0.23	0.00	Calculated
101	44610	Pipe	J42440	J42180	60.81	4744.06	4743.73	0.5400	2.500	0.0130	7.00	30.22	0.23	7.16	0.63	0.25	0.00	Calculated
102	44611	Pipe	J42371	J42440	72.46	4745.20	4744.06	1.5700	2.500	0.0130	7.00	51.45	0.14	5.64	0.75	0.30	0.00	Calculated
103	44612	Pipe	J44612-0	JUL080.04-1	101.81	4634.84	4634.16	0.6700	3.000	0.0130	131.00	134.23	0.98	9.64	2.72	0.91	0.00	Calculated
104	44617	Pipe	JUL080.06-0	J44612-0	26.81	4635.30	4634.84	1.7200	3.000	0.0130	84.20	215.14	0.39	5.61	3.00	1.00	153.00	SURCHARGED
105	44681	Pipe	J44681.0	J42402	105.85	4591.92	4585.83	5.7500	2.500	0.0130	18.59	98.38	0.19	5.53	1.62	0.65	0.00	Calculated
106	44754	Pipe	J42540	J42538	116.87	4597.65	4595.69	1.6800	4.000	0.0130	57.61	186.02	0.31	13.50	1.95	0.49	0.00	Calculated
107	44803	Pipe	J42531	J42530	133.82	4693.08	4692.15	0.6900	4.000	0.0130	56.30	119.75	0.47	11.43	1.66	0.41	0.00	Calculated
108	44819	Pipe	J42532	J42531	163.01	4693.66	4693.08	0.3600	4.000	0.0130	56.30	85.68	0.66	7.86	2.22	0.55	0.00	Calculated
109	44868	Pipe	J42885	J42118	219.08	4616.20	4610.41	2.6400	2.000	0.0130	44.67	36.78	1.21	14.33	2.00	1.00	266.00	SURCHARGED
110	44869	Pipe	JUL132.02-1	J42746	78.47	4760.58	4758.90	2.1400	2.000	0.0130	20.00	33.59	0.60	11.15	1.11	0.56	0.00	Calculated
111	44870	Pipe	J42746	J42745	58.79	4758.90	4755.35	6.0400	2.000	0.0130	20.00	55.59	0.36	12.18	1.04	0.52	0.00	Calculated
112	44871	Pipe	J42747	J42748	51.62	4704.88	4703.71	2.2700	2.000	0.0130	20.00	34.06	0.59	9.54	1.27	0.63	0.00	Calculated
113	44891	Pipe	J42722	JUL120.06-0	302.46	4586.25	4574.18	3.9900	4.500	0.0130	148.75	392.84	0.38	25.34	1.78	0.40	0.00	Calculated
114	44892	Pipe	J42538	J42722	208.08	4595.69	4586.25	4.5400	4.000	0.0130	133.87	305.95	0.44	19.63	2.12	0.53	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
115	44893	Pipe	J42402	J42722	309.34	4585.83	4586.25	-0.1400	2.500	0.0130	18.59	15.11	1.23	4.69	2.34	0.94	0.00	> CAPACITY
116	441024	Pipe	J441024-0	J441024-1	47.29	4578.99	4576.75	4.7400	4.000	0.0130	117.84	312.63	0.38	11.15	3.37	0.85	0.00	Calculated
117	441025	Pipe	J441024-1	JUL080.02-0	113.84	4576.75	4576.48	0.2400	4.000	0.0130	141.54	69.96	2.02	18.80	2.50	0.63	0.00	> CAPACITY
118	441032	Pipe	J42264	SN-SUMM	292.32	4608.40	4599.80	2.9400	2.000	0.0130	41.82	38.80	1.08	13.31	2.00	1.00	81.00	SURCHARGED
119	441350	Pipe	J42461	J441024-1	287.92	4579.30	4576.75	0.8900	1.500	0.0130	8.85	9.89	0.90	5.37	1.50	1.00	197.00	SURCHARGED
120	441371	Pipe	J42462	J42461	52.39	4581.42	4579.30	4.0500	1.500	0.0130	8.85	21.13	0.42	7.48	1.34	0.90	0.00	Calculated
121	441436	Pipe	J42494	J42540	331.86	4599.72	4597.65	0.6200	2.500	0.0130	57.56	32.39	1.78	12.81	2.16	0.87	0.00	> CAPACITY
122	441437	Pipe	J42495	J42494	61.65	4603.33	4599.72	5.8600	2.500	0.0130	56.57	99.26	0.57	11.52	2.50	1.00	240.00	SURCHARGED
123	441438	Pipe	J42496	J42495	116.23	4612.58	4603.33	7.9600	2.500	0.0130	56.57	115.71	0.49	16.01	2.10	0.84	0.00	Calculated
124	441439	Pipe	J42497	J42496	257.91	4632.36	4612.58	7.6700	2.500	0.0130	56.81	113.59	0.50	20.62	1.49	0.60	0.00	Calculated
125	441440	Pipe	J42498	J42497	109.73	4640.79	4632.36	7.6800	2.500	0.0130	56.77	113.69	0.50	20.86	1.35	0.54	0.00	Calculated
126	441441	Pipe	J42499	J42498	122.16	4650.81	4640.79	8.2000	2.500	0.0130	56.76	117.47	0.48	19.95	1.40	0.56	0.00	Calculated
127	441443	Pipe	J42500	J42499	33.63	4652.77	4650.81	5.8300	2.500	0.0130	56.74	99.02	0.57	16.75	1.62	0.65	0.00	Calculated
128	441444	Pipe	J42516	J42500	164.63	4653.02	4652.77	0.1500	4.000	0.0130	56.79	55.98	1.01	7.94	2.22	0.55	0.00	> CAPACITY
129	441445	Pipe	J42517	J42516	91.66	4655.67	4653.02	2.8900	4.000	0.0130	56.91	244.24	0.23	8.44	2.12	0.53	0.00	Calculated
130	441446	Pipe	J42518	J42517	74.23	4656.94	4655.67	1.7100	4.000	0.0130	56.85	187.89	0.30	10.66	1.76	0.44	0.00	Calculated
131	441447	Pipe	J42519	J42518	46.59	4658.11	4656.94	2.5100	4.000	0.0130	56.81	227.63	0.25	10.04	1.84	0.46	0.00	Calculated
132	441448	Pipe	J42520	J42519	297.76	4669.61	4658.11	3.8600	4.000	0.0130	57.16	282.29	0.20	12.93	1.52	0.38	0.00	Calculated
133	441449	Pipe	J42521	J42520	190.79	4670.25	4669.61	0.3400	4.000	0.0130	58.79	83.20	0.71	10.99	1.77	0.44	0.00	Calculated
134	441450	Pipe	J42522	J42521	68.15	4670.60	4670.25	0.5100	4.000	0.0130	56.90	102.94	0.55	7.13	2.45	0.61	0.00	Calculated
135	441451	Pipe	J42523	J42522	279.34	4671.79	4670.60	0.4300	4.000	0.0130	56.39	93.75	0.60	6.70	2.54	0.64	0.00	Calculated
136	441453	Pipe	J42526	J42525	299.59	4673.18	4672.21	0.3200	4.000	0.0130	56.31	81.73	0.69	5.88	2.85	0.71	0.00	Calculated
137	441454	Pipe	J42525	J42523	179.56	4672.21	4671.79	0.2300	4.000	0.0130	56.33	69.47	0.81	6.22	2.71	0.68	0.00	Calculated
138	441455	Pipe	J42528	J42527	87.75	4678.70	4674.07	5.2800	3.000	0.0130	56.30	153.21	0.37	11.20	2.01	0.67	0.00	Calculated
139	441456	Pipe	J42527	J42526	8.33	4674.07	4673.18	10.6800	3.000	0.0130	56.30	218.02	0.26	8.52	2.65	0.88	0.00	Calculated
140	441457	Pipe	J42529	J42528	156.08	4680.22	4678.70	0.9700	4.000	0.0130	56.30	141.75	0.40	10.87	1.72	0.43	0.00	Calculated
141	441458	Pipe	J42530	J42529	407.26	4692.15	4680.22	2.9300	4.000	0.0130	56.30	245.85	0.23	11.83	1.62	0.40	0.00	Calculated
142	441557	Pipe	J441557-0	J42532	17.99	4693.78	4693.66	0.6700	4.000	0.0130	56.30	117.32	0.48	6.57	2.58	0.64	0.00	Calculated
143	441565	Pipe	J441560-0	SN-Weath	49.88	4696.87	4702.20	-10.6900	4.000	0.0130	107.43	469.55	0.23	8.58	4.00	1.00	283.00	SURCHARGED
144	441566	Pipe	J441565-1	J441557-0	177.41	4693.98	4693.78	0.1100	4.000	0.0130	56.30	48.23	1.17	5.61	2.98	0.74	0.00	> CAPACITY
145	441570	Pipe	J42117	J42788	228.57	4597.20	4596.35	0.3700	2.500	0.0130	10.20	25.01	0.41	4.61	1.51	0.61	0.00	Calculated
146	441571	Pipe	J42788	J42813	97.62	4596.35	4595.72	0.6500	2.500	0.0130	10.18	32.95	0.31	3.86	2.20	0.88	0.00	Calculated
147	441585	Pipe	J42809	J42808	104.07	4594.91	4594.64	0.2600	4.000	0.0130	44.56	73.17	0.61	5.62	2.54	0.63	0.00	Calculated
148	441586	Pipe	J42808	JUL130.08-1	194.26	4594.64	4594.64	0.0000	4.000	0.0130	44.40	3.26	13.62	8.09	2.15	0.54	0.00	> CAPACITY
149	441587	Pipe	J42810	J42809	321.57	4595.00	4594.91	0.0300	4.000	0.0130	44.70	24.03	1.86	4.65	2.87	0.72	0.00	> CAPACITY
150	441588	Pipe	J42811	J42810	269.27	4595.04	4595.00	0.0100	4.000	0.0130	11.84	17.51	0.68	2.21	3.17	0.79	0.00	Calculated
151	441589	Pipe	J42812	J42811	58.60	4595.09	4595.04	0.0900	4.000	0.0130	11.54	41.96	0.28	2.08	3.13	0.78	0.00	Calculated
152	441590	Pipe	J42813	J42814	380.67	4595.72	4595.42	0.0800	4.000	0.0130	10.44	40.32	0.26	2.24	2.65	0.66	0.00	Calculated
153	441591	Pipe	J42814	J42815	168.72	4595.42	4595.33	0.0500	4.000	0.0130	10.90	33.18	0.33	2.17	2.83	0.71	0.00	Calculated
154	441592	Pipe	J42815	J42816	117.51	4595.33	4595.25	0.0700	4.000	0.0130	11.14	37.48	0.30	2.20	2.91	0.73	0.00	Calculated
155	441593	Pipe	J42816	J42812	134.40	4595.25	4595.09	0.1200	4.000	0.0130	11.37	49.56	0.23	2.14	3.03	0.76	0.00	Calculated
156	441595	Pipe	J42821	J42885	108.21	4619.88	4616.20	3.4000	2.000	0.0130	44.69	41.72	1.07	14.23	2.00	1.00	369.00	SURCHARGED
157	441606	Pipe	J42833	J42747	161.30	4716.01	4704.88	6.9000	2.000	0.0130	20.00	59.42	0.34	11.70	1.07	0.53	0.00	Calculated
158	441607	Pipe	J42834	J42833	156.83	4723.25	4716.01	4.6200	2.000	0.0130	20.00	48.61	0.41	14.88	0.89	0.44	0.00	Calculated
159	441608	Pipe	J42745	J42836	40.48	4755.35	4753.59	4.3500	2.000	0.0130	20.00	47.17	0.42	11.90	1.06	0.53	0.00	Calculated
160	441609	Pipe	J42836	J42835	277.79	4753.59	4742.72	3.9100	2.000	0.0130	20.00	44.75	0.45	13.94	0.93	0.47	0.00	Calculated
161	441633	Pipe	J42853	J42854	236.14	4666.81	4651.03	6.6800	2.000	0.0130	21.13	58.48	0.36	16.15	1.31	0.70	0.00	Calculated
162	441634	Pipe	J42854	J42824	60.06	4651.03	4645.94	8.4700	2.000	0.0130	22.19	65.86	0.34	11.20	1.90	1.00	0.00	SURCHARGED
163	441638	Pipe	J42858	J42857	294.07	4696.01	4678.77	5.8600	2.000	0.0130	20.00	54.77	0.37	14.81	0.89	0.44	0.00	Calculated
164	441639	Pipe	J42748	J42859	132.27	4703.71	4700.55	2.3900	2.000	0.0130	20.00	34.97	0.57	10.82	1.14	0.57	0.00	Calculated
165	441640	Pipe	J42859	J42858	121.62	4700.55	4696.01	3.7300	2.000	0.0130	20.00	43.71	0.46	12.79	1.00	0.50	0.00	Calculated
166	441662	Pipe	J441660-0	J441657-0	278.01	4645.74	4638.61	2.5600	2.500	0.0130	22.09	65.69	0.34	11.39	2.50	1.00	37.00	SURCHARGED
167	441673	Pipe	J42835	J441673-1	384.26	4742.72	4723.40	5.0300	2.000	0.0130	20.00	50.73	0.39	10.65	1.15	0.58	0.00	Calculated
168	441674	Pipe	J441673-1	J42834	6.19	4723.40	4723.25	2.4200	2.000	0.0130	20.00	35.22	0.57	10.11	1.20	0.60	0.00	Calculated
169	441822	Pipe	J42364	J42358	138.70	4621.30	4617.19	2.9600	2.000	0.0130	15.00	38.94	0.39	12.38	0.82	0.41	0.00	Calculated
170	441823	Pipe	J441823.0	J42364	395.77	4636.38	4621.30	3.8100	2.000	0.0130	15.00	44.16	0.34	11.34	0.88	0.44	0.00	Calculated
171	441866	Pipe	J4224	J42797	406.18	4534.11	4520.54	3.3400	2.500	0.0130	51.68	74.97	0.69	15.90	1.56	0.63	0.00	Calculated

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
172	441867	Pipe	J4225	J4224	292.92	4537.26	4534.11	1.0800	2.500	0.0130	51.69	42.53	1.22	11.95	2.05	0.82	0.00	> CAPACITY
173	441868	Pipe	J4226	J4225	171.06	4539.66	4537.26	1.4000	2.500	0.0130	51.69	48.58	1.06	10.53	2.50	1.00	19.00	SURCHARGED
174	441869	Pipe	J4236	J4226	170.49	4546.45	4539.66	3.9800	2.500	0.0130	51.69	81.86	0.63	11.61	2.32	0.95	0.00	Calculated
175	441870	Pipe	J42363	J4237	89.89	4588.99	4580.68	9.2400	2.500	0.0130	52.52	124.71	0.42	20.42	1.30	0.52	0.00	Calculated
176	441871	Pipe	J4237	J4236	581.40	4580.68	4546.45	5.8900	2.500	0.0130	52.44	99.52	0.53	17.72	1.70	0.70	0.00	Calculated
177	441905	Pipe	J42357	J441823.0	776.30	4670.80	4636.38	4.4300	2.000	0.0130	15.00	47.64	0.31	13.02	0.79	0.39	0.00	Calculated
178	Link-111	Pipe	Jun-192	J42303	450.70	4745.00	4705.22	8.8300	1.250	0.0130	19.11	19.19	1.00	16.53	1.25	1.00	223.00	SURCHARGED
179	Link-140	Pipe	Jun-194	SN-Mav	1878.63	4704.00	4597.00	5.7000	2.000	0.0150	15.00	46.79	0.32	11.83	1.39	0.69	0.00	Calculated
180	Link-142	Pipe	J42855	J42853	252.34	4668.88	4666.81	0.8200	2.000	0.0130	20.00	20.49	0.98	9.69	1.26	0.63	0.00	Calculated
181	Link-144	Pipe	J42856	J42855	27.89	4669.95	4668.88	3.8400	2.000	0.0130	20.00	44.31	0.45	7.61	1.56	0.78	0.00	Calculated
182	Link-146	Pipe	J42857	J42856	163.83	4678.77	4669.95	5.3800	2.000	0.0150	20.00	45.49	0.44	10.39	1.18	0.59	0.00	Calculated
183	Link-155	Pipe	Jun-203	J42821	2461.44	4691.00	4619.88	2.8900	1.500	0.0150	11.31	15.47	0.73	10.36	1.22	0.81	0.00	Calculated
184	Link-161	Pipe	J441657-0	SN-Pond	130.26	4638.41	4625.00	10.2900	2.500	0.0150	42.33	114.06	0.37	8.62	2.50	1.00	49.00	SURCHARGED
185	Link-162	Pipe	Jun-206	Jun-203	2630.01	4834.00	4691.00	5.4400	1.500	0.0150	11.00	21.23	0.52	10.64	0.88	0.59	0.00	Calculated
186	Link-164	Pipe	Jun-207	Jun-192	1615.67	4895.00	4745.00	9.2800	1.500	0.0150	19.60	27.74	0.71	16.16	1.22	0.81	0.00	Calculated
187	Link-165	Pipe	J42117	Jun-132	1842.72	4597.20	4546.17	2.7700	2.500	0.0130	31.20	68.26	0.46	15.66	1.84	0.74	0.00	Calculated
188	Link-167	Pipe	JUL121.06-1	Jun-208	64.00	4894.50	4892.60	2.9700	3.000	0.0130	42.05	114.92	0.37	11.55	1.54	0.51	0.00	Calculated
189	Link-168	Pipe	JUL121.06-1	Jun-208	81.00	4894.50	4885.12	11.5800	3.000	0.0130	89.08	226.97	0.39	14.65	2.41	0.80	0.00	Calculated
190	Link-169	Pipe	JUL121.06-1	Jun-208	74.00	4898.50	4885.93	16.9900	3.000	0.0130	0.00	274.90	0.00	0.00	1.50	0.50	0.00	Calculated
191	Link-78	Pipe	Jun-131	Jun-132	1983.31	4559.02	4546.17	0.6500	2.500	0.0130	33.74	33.02	1.02	8.65	2.50	1.00	67.00	SURCHARGED
192	Link-79	Pipe	Jun-132	J42224	22.35	4546.17	4532.48	61.2500	1.500	0.0130	61.34	82.21	0.75	34.71	1.50	1.00	100.00	SURCHARGED
193	Link-89	Pipe	J4429-0	J42821	61.63	4621.41	4619.88	2.4800	2.000	0.0130	40.42	35.64	1.13	12.87	2.00	1.00	275.00	SURCHARGED
194	0014	Channel	J44269-1	SN-Still	357.60	4721.40	4723.40	-0.5600	10.000	0.0320	5.88	3239.29	0.00	0.22	2.00	0.20	0.00	
195	0163	Channel	JUL130.06-1	JUL130.04-0	345.73	4582.55	4581.26	0.3700	10.000	0.0320	79.45	2645.81	0.03	3.67	2.91	0.29	0.00	
196	0174	Channel	JUL080.04-0	SN-Vill	66.45	4595.90	4587.40	12.7900	10.000	0.0320	130.93	15491.55	0.01	4.13	3.14	0.31	0.00	
197	0175	Channel	JUL121.02-0	J441560-0	79.84	4698.77	4696.87	2.3800	15.000	0.0320	109.07	16881.80	0.01	0.43	11.33	0.76	0.00	
198	44325	Channel	JUL130.02-1	J44325-1	79.93	4505.04	4502.46	3.2300	10.000	0.0320	14.97	7781.94	0.00	3.92	0.36	0.04	0.00	
199	44373	Channel	J44373-0	JUL152.04-0	68.63	4554.50	4554.21	0.4200	10.000	0.0320	66.00	2815.63	0.02	3.02	2.59	0.26	0.00	
200	44603	Channel	JUL080.08-0	JUL080.06-1	20.32	4695.94	4695.33	3.0000	10.000	0.0320	80.43	9216.48	0.01	7.73	0.88	0.09	0.00	
201	Link-147	Channel	JUL100.04-0	JUL080.12-1	1719.35	5012.74	4878.08	7.8300	10.000	0.0320	35.67	12121.89	0.00	5.78	0.59	0.06	0.00	
202	Link-153	Channel	Jun-195	Jun-204	662.66	4964.00	4960.00	0.6000	10.000	0.0320	79.66	3365.25	0.02	4.46	1.40	0.14	0.00	
203	Link-157	Channel	Jun-204	Jun-205	2259.76	4960.00	4835.00	5.5300	10.000	0.0320	138.16	10187.25	0.01	1.39	5.31	0.53	0.00	
204	Link-166	Channel	Jun-208	JUL121.02-0	2490.26	4888.00	4698.77	7.6000	10.000	0.0320	131.04	11940.04	0.01	1.32	5.46	0.55	0.00	
205	Link-74	Channel	Stor-28	JUL132.02-1	623.50	4860.00	4760.63	15.9400	10.000	0.0320	20.00	17291.89	0.00	2.72	0.77	0.08	0.00	
206	UL010.02	Channel	JUL010.04-1	JUL010.02-1	602.83	4495.70	4491.00	0.7800	10.000	0.0320	377.91	3824.59	0.10	6.83	3.32	0.33	0.00	
207	UL010.04	Channel	JUL010.04-0	JUL010.04-1	2983.35	4614.13	4495.70	3.9700	10.000	0.0320	389.02	8630.02	0.05	10.30	2.75	0.28	0.00	
208	UL010.06	Channel	JUL010.08-0	JUL010.04-0	1243.78	4675.67	4614.13	4.9500	10.000	0.0320	394.91	9634.74	0.04	13.31	2.10	0.21	0.00	
209	UL010.08	Channel	JUL010.10-1	JUL010.08-0	2580.17	4812.10	4675.67	5.2900	10.000	0.0320	396.48	9960.10	0.04	13.88	2.04	0.20	0.00	
210	UL010.10	Channel	JUL010.10-0	JUL010.10-1	13317.41	5849.45	4812.10	7.7900	10.000	0.0320	132.65	12088.87	0.01	9.68	1.15	0.12	0.00	
211	UL020.02	Channel	JUL020.02-0	JUL020.02-1	5989.43	4865.89	4490.00	6.2800	10.000	0.0320	241.23	10851.02	0.02	12.72	1.47	0.15	0.00	
212	UL020.06	Channel	JUL020.06-0	JUL020.02-0	3258.08	5072.86	4865.89	6.3500	10.000	0.0320	147.91	10917.06	0.01	9.16	1.29	0.13	0.00	
213	UL020.10	Channel	JUL020.10-0	JUL020.06-0	1432.67	5162.24	5072.86	6.2400	10.000	0.0320	49.00	10818.82	0.00	9.15	0.84	0.08	0.00	
214	UL020.12	Channel	JUL020.12-0	JUL020.10-0	2121.66	5346.59	5162.24	8.6900	10.000	0.0320	0.00	12767.82	0.00	0.00	0.31	0.03	0.00	
215	UL024.02	Channel	UL024.02-0	JUL020.06-0	13152.72	7100.00	5072.86	15.4100	10.000	0.0320	106.07	17004.63	0.01	10.23	0.90	0.09	0.00	
216	UL030.02	Channel	JUL030.02-0	JUL030.02-1	1830.00	4580.07	4501.37	4.3000	10.000	0.0320	196.27	8982.45	0.02	10.46	1.45	0.15	0.00	
217	UL030.04	Channel	JUL030.04-0	JUL030.02-0	140.00	4587.21	4580.07	5.1000	10.000	0.0320	196.31	9781.78	0.02	10.54	1.44	0.14	0.00	
218	UL030.06	Channel	JUL030.08-1	JUL030.04-0	758.01	4618.14	4587.21	4.0800	10.000	0.0320	196.31	8749.55	0.02	10.24	1.48	0.15	0.00	
219	UL030.08	Channel	JUL030.12-1	JUL030.08-1	170.70	4623.65	4618.14	3.2300	10.000	0.0320	196.33	7782.01	0.03	9.27	1.60	0.16	0.00	
220	UL030.12	Channel	JUL030.14-1	JUL030.12-1	2350.79	4769.44	4623.65	6.2000	10.000	0.0320	118.06	10786.73	0.01	7.58	1.29	0.13	0.00	
221	UL030.14	Channel	JUL030.14-0	JUL030.14-1	4235.95	5067.12	4769.44	7.0300	10.000	0.0320	120.59	11482.39	0.01	10.62	0.96	0.10	0.00	
222	UL030.16	Channel	JUL030.16-0	JUL030.14-0	1610.07	5222.41	5067.12	9.6400	10.000	0.0320	49.20	13451.86	0.00	6.00	0.73	0.07	0.00	
223	UL031.02	Channel	JUL031.06-1	JUL030.12-1	4234.96	4887.75	4623.65	6.2400	10.000	0.0320	103.32	10816.64	0.01	7.16	1.26	0.13	0.00	
224	UL031.06	Channel	JUL031.10-1	JUL031.06-1	5104.96	5457.22	4887.75	11.1600	10.000	0.0320	63.18	14466.79	0.00	7.48	0.74	0.07	0.00	
225	UL031.10	Channel	JUL031.10-0	JUL031.10-1	6220.95	6622.71	5457.22	18.7300	10.000	0.0320	38.73	18748.17	0.00	7.56	0.47	0.05	0.00	
226	UL033.01	Channel	JUL033.02-1	JUL030.14-0	2500.16	5352.23	5067.12	11.4000	10.000	0.0320	26.63	14627.00	0.00	3.64	0.65	0.06	0.00	
227	UL033.02	Channel	JUL033.02-0	JUL033.02-1	2601.28	5974.93	5352.23	23.9400	10.000	0.0320	27.61	21192.34	0.00	8.86	0.31	0.03	0.00	
228	UL034.02	Channel	JUL034.02-0	JUL030.16-0	2372.15	5708.23	5222.41	20.4800	10.000	0.0320	49.95	19601.97	0.00	9.96	0.46	0.05	0.00	

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
229	UL040.04	Channel	JUL040.06-1	SN-UL042	68.20	4897.00	4896.00	1.4700	10.000	0.0320	87.07	5244.94	0.02	0.49	8.48	0.85	0.00	
230	UL040.06	Channel	JUL040.06-0	JUL040.06-1	3571.31	5281.46	4763.85	14.4900	10.000	0.0320	107.58	14211.66	0.01	1.64	4.22	0.42	0.00	
231	UL041.02	Channel	JUL041.04-1	JUL041.02-1	1969.21	4741.62	4627.15	5.8100	10.000	0.0320	44.91	10443.18	0.00	4.50	0.92	0.09	0.00	
232	UL041.04	Channel	JUL041.04-0	JUL041.04-1	4898.40	5183.21	4741.62	9.0100	10.000	0.0320	0.00	13005.15	0.00	0.00	0.28	0.03	0.00	
233	UL045.02	Channel	JUL045.02-0	JUL040.06-0	6044.57	6540.33	5281.46	20.8300	10.000	0.0320	43.84	19767.00	0.00	6.69	0.59	0.06	0.00	
234	UL065.02	Channel	JUL065.02-0	JUL070.14-0	9093.00	6574.33	5261.14	14.4400	10.000	0.0320	29.17	16460.51	0.00	8.04	0.34	0.03	0.00	
235	UL066.02	Channel	JUL066.02-0	JUL070.12-0	5475.30	6216.13	5214.49	18.2900	10.000	0.0320	31.89	18526.14	0.00	6.12	0.48	0.05	0.00	
236	UL070.02	Channel	JUL070.02-0	JUL070.02-1	1259.30	4581.13	4500.32	6.4200	10.000	0.0320	166.78	10972.38	0.02	11.39	1.18	0.12	0.00	
237	UL070.04	Channel	JUL070.04-0	JUL070.04-1	925.09	4647.09	4590.98	6.0700	10.000	0.0320	151.46	10667.46	0.01	5.88	1.92	0.19	0.00	
238	UL070.06	Channel	JUL070.06-0	JUL070.04-0	254.18	4659.93	4647.09	5.0500	10.000	0.0320	134.58	9735.20	0.01	9.64	1.14	0.11	0.00	
239	UL070.08	Channel	JUL070.10-1	JUL070.06-0	1863.40	4779.12	4659.93	6.4000	10.000	0.0320	109.59	10954.68	0.01	8.78	1.03	0.10	0.00	
240	UL070.10	Channel	JUL070.10-0	JUL070.10-1	3565.83	5083.29	4779.12	8.5300	10.000	0.0320	89.22	12650.59	0.01	9.10	0.84	0.08	0.00	
241	UL070.12	Channel	JUL070.12-0	JUL070.10-0	1304.35	5214.49	5083.29	10.0600	10.000	0.0320	69.44	13737.35	0.01	9.46	0.68	0.07	0.00	
242	UL070.14	Channel	JUL070.14-0	JUL070.10-0	1606.64	5261.14	5083.29	11.0700	10.000	0.0320	28.03	14411.22	0.00	4.59	0.55	0.06	0.00	
243	UL080.02	Channel	JUL080.02-0	JUL080.02-1	1930.62	4576.48	4493.46	4.3000	10.000	0.0320	123.39	8982.06	0.01	9.04	1.12	0.11	0.00	
244	UL080.04	Channel	JUL080.04-0	JUL080.04-1	714.38	4595.90	4634.00	-5.3300	10.000	0.0320	130.94	10003.01	0.01	11.00	0.99	0.10	0.00	
245	UL080.06	Channel	JUL080.06-1	JUL080.06-0	1080.62	4695.88	4635.30	5.6100	10.000	0.0320	80.42	10255.60	0.01	2.75	2.61	0.26	0.00	
246	UL080.08	Channel	JUL080.08-1	JUL080.08-0	222.77	4711.67	4696.80	6.6800	10.000	0.0320	80.43	11190.77	0.01	7.94	0.86	0.09	0.00	
247	UL080.10	Channel	JUL080.10-0	JUL080.10-1	762.19	4770.94	4717.35	7.0300	10.000	0.0320	77.38	11485.32	0.01	2.84	2.96	0.30	0.00	
248	UL080.12	Channel	JUL080.12-1	JUL080.12-0	1363.90	4878.08	4776.51	7.4500	10.000	0.0320	90.01	11820.19	0.01	2.62	3.13	0.31	0.00	
249	UL080.14	Channel	JUL080.14-0	JUL080.12-1	1685.14	5014.70	4878.08	8.1100	10.000	0.0320	48.81	12333.10	0.00	6.48	0.67	0.07	0.00	
250	UL080.16	Channel	JUL080.16-0	JUL080.14-0	2068.96	5227.63	5014.70	10.2900	10.000	0.0320	48.98	13895.54	0.00	8.49	0.52	0.05	0.00	
251	UL084.02	Channel	JUL084.02-0	JUL080.16-0	6970.30	6213.33	5227.63	14.1400	10.000	0.0320	36.99	16288.45	0.00	7.63	0.45	0.04	0.00	
252	UL100.06	Channel	JUL100.06-0	JUL100.04-0	2084.50	5193.10	5012.74	8.6500	10.000	0.0320	21.44	12740.96	0.00	5.13	0.39	0.04	0.00	
253	UL120.02	Channel	JUL120.02-0	JUL120.02-1	57.03	4505.93	4504.59	2.3500	10.000	0.0320	146.24	6639.47	0.02	7.40	1.50	0.15	0.00	
254	UL120.04	Channel	JUL120.04-0	JUL120.04-1	925.41	4541.49	4511.73	3.2200	10.000	0.0320	146.24	7767.52	0.02	8.62	1.33	0.13	0.00	
255	UL120.06	Channel	JUL120.06-0	JUL120.06-1	1129.14	4574.18	4541.09	2.9300	10.000	0.0320	148.29	7414.94	0.02	5.84	1.86	0.19	0.00	
256	UL121.04	Channel	JUL121.04-0	JUL121.06-1	3859.53	5110.19	4831.56	7.2200	10.000	0.0320	0.00	10275.09	0.00	0.00	1.66	0.17	0.00	
257	UL121.06	Channel	JUL121.07-1	JUL121.06-1	3157.89	5027.00	4831.56	6.1900	10.000	0.0320	144.40	8922.51	0.02	4.63	2.25	0.22	0.00	
258	UL121.07	Channel	JUL121.07-0	JUL121.07-1	942.14	5108.32	5027.00	8.6300	10.000	0.0320	0.00	12725.47	0.00	0.00	0.61	0.06	0.00	
259	UL126.02	Channel	JUL126.02-0	JUL121.07-1	13758.00	6720.00	5027.00	12.3100	10.000	0.0320	66.66	15194.41	0.00	6.37	0.90	0.09	0.00	
260	UL130.02	Channel	JUL130.02-0	JUL130.02-1	1842.73	4566.45	4505.04	3.3300	10.000	0.0320	14.97	7907.18	0.00	3.95	0.35	0.04	0.00	
261	UL130.04	Channel	JUL130.04-0	JUL130.04-1	1221.65	4581.26	4567.91	1.0900	10.000	0.0320	114.50	4527.94	0.03	0.73	6.73	0.67	0.00	
262	UL130.06	Channel	JUL130.06-0	JUL130.06-1	176.18	4590.00	4582.55	4.2300	10.000	0.0320	72.96	8907.03	0.01	4.71	1.59	0.16	0.00	
263	UL130.08	Channel	JUL130.08-1	JUL130.08-0	3982.32	4594.64	4592.42	0.0600	10.000	0.0320	33.38	1022.68	0.03	1.35	1.81	0.18	0.00	
264	UL152.02	Channel	JUL152.02-0	JUL152.02-1	1271.91	4550.30	4549.32	0.0800	10.000	0.0320	73.22	1202.31	0.06	2.39	5.83	0.58	0.00	
265	UL152.04	Channel	JUL152.04-0	JUL152.04-1	1117.05	4554.21	4551.14	0.2700	10.000	0.0320	66.00	2270.73	0.03	2.63	4.21	0.42	0.00	
266	O-Mav	Orifice	SN-Mav	J44681.0		4597.00	4591.92		1.000		8.63							
267	O-Pond	Orifice	SN-Pond	J4429-0		4625.00	4621.41		1.500		40.43							
268	Orifice-27	Orifice	SN-Weath	J42533		4702.20	4695.91		2.500		56.30							
269	Orifice-28	Orifice	Stor-41	JUL041.04-1		4745.00	4741.62		2.320		44.99							
270	O-Rock	Orifice	SN-Rock	JUL070.10-1		4788.10	4779.12		3.000		40.02							
271	O-Still	Orifice	SN-Still	J0014-1		4723.40	4721.70		0.420		0.60							
272	O-Summ	Orifice	SN-SUMM	J441032-1		4599.80	4592.84		0.670		6.34							
273	O-Swain	Orifice	SN-Swain	J44599-0		4654.40	4647.46		1.670		17.39							
274	O-UL042	Orifice	SN-UL042	Jun-207		4896.00	4895.00		1.000		11.60							
275	O-Vill	Orifice	SN-Vill	J441024-0		4587.40	4578.99		4.000		115.77							
276	O-Waym	Orifice	SN-Waym	JUL080.10-1		4723.60	4717.35		0.667		25.55							
277	O-WildF	Orifice	SN-WildF	J42462		4592.80	4581.42		0.670		3.49							
278	O-WildL	Orifice	SN-WildL	J42394		4592.80	4586.59		1.500		16.34							
279	Outlet-100	Outlet	SN-UL101	JUL100.02-1		5033.00	4820.37				7.00							
280	Outlet-102	Outlet	Jun-200	Jun-204		4960.00	4960.00				0.00							
281	Outlet-105	Outlet	SN-NEW-UL134	Stor-28		4860.00	4860.00				20.00							
282	Outlet-106	Outlet	Stor-45	SN-NEW-UL134		5000.00	4860.00				22.00							
283	Outlet-108	Outlet	Jun-205	Jun-206		4835.00	4834.00				11.00							
284	Outlet-91	Outlet	SN-UL115	Jun-194		5033.00	4704.00				15.00							
285	Outlet-92	Outlet	Stor-39·1	Jun-205		4841.00	4835.00				0.00							

Link Summary

SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (%)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
286	Outlet-95	Outlet	Stor-39	J42525		4680.00	4672.21				42.96							
287	Outlet-96	Outlet	Stor-39	J42494		4680.00	4599.72				14.32							
288	Outlet-97	Outlet	Stor-39	J42538		4680.00	4595.69				77.71							
289	OUT-UL020	Outlet	SN-UL020	JUL020.02-0		4886.00	4865.89				94.00							
290	OUT-UL022	Outlet	SN-UL022	JUL020.10-0		5183.00	5162.24				48.00							
291	OUT-UL030	Outlet	SN-UL030	JUL031.06-1		4908.00	4887.75				41.00							
292	OUT-UL031	Outlet	SN-UL031	JUL031.10-1		5478.00	5457.22				25.00							
293	OUT-UL032	Outlet	SN-UL032	JUL030.14-0		5088.00	5067.12				47.00							
294	OUT-UL041	Outlet	SN-UL041	JUL041.04-1		4762.00	4741.62				0.00							
295	OUT-UL043	Outlet	SN-UL043	JUL041.04-0		5204.00	5183.21				0.00							
296	OUT-UL044	Outlet	SN-UL044	JUL040.06-0		5302.00	5281.46				64.00							
297	OUT-UL051	Outlet	SN-UL051	J42357		4691.00	4670.80				15.00							
298	OUT-UL064	Outlet	SN-UL064	JUL070.12-0		5235.00	5214.49				38.00							
299	OUT-UL070	Outlet	SN-UL070	JUL070.06-0		4680.00	4659.93				25.00							
300	OUT-UL082	Outlet	SN-UL082	JUL080.12-1		4899.00	4878.08				16.00							
301	OUT-UL083	Outlet	SN-UL083	JUL080.16-0		5248.00	5227.63				12.62							
302	OUT-UL102	Outlet	SN-UL102	JUL100.04-0		5033.00	5012.74				14.62							
303	OUT-UL121	Outlet	SN-UL121	JUL121.02-0		4718.00	4698.77				46.64							
304	OUT-UL124	Outlet	SN-UL124	JUL121.07-1		5047.00	5027.00				81.00							
305	OUT-UL130	Outlet	SN-UL130	JUL130.08-0		4612.00	4592.42				41.00							
306	OUT-UL134	Outlet	SN-UL134	SN-NEW-UL134		5110.00	4860.00				58.00							
307	OUT-UL140	Outlet	SN-UL140	Jun-131		4577.00	4559.02				35.45							
308	OUT-UL152	Outlet	SN-UL152	J44373-0		4575.00	4554.50				66.00							
309	UL040.02	Outlet	JUL040.04-1	Jun-207		4900.00	4895.00				8.00							

FULL BUILD-OUT CONDITION - TICKVILLE
100-YEAR STORM

Pr□□□□□D□□□r□□□□□

File Name SaratogaStormFuture Tickville.SPF

Pr□□□□□O□□□□□

Flow Units	CFS
Elevation Type	Elevation
Hydrology Method	HEC-1
HEC-1 unit hydrograph method	SCS Dimensionless
HEC-1 loss method	SCS Curve Number
Link Routing Method	Hydrodynamic
Enable Overflow Ponding at Nodes	YES
Skip Steady State Analysis Time Periods	NO

A□□□□□□ O□□□□□

Start Analysis On	Jan 01, 2012	00:00:00
End Analysis On	Jan 01, 2012	16:00:00
Start Reporting On	Jan 01, 2012	00:00:00
Antecedent Dry Days	0	days
Runoff (Dry Weather) Time Step	0 01:00:00	days hh:mm:ss
Runoff (Wet Weather) Time Step	0 00:05:00	days hh:mm:ss
Reporting Time Step	0 00:05:00	days hh:mm:ss
Routing Time Step	30	seconds

N□□ □□r □□E□□□ □□□□

	□ty
Rain Gages	2
Subbasins	6
Nodes	2□
Junctions	17
Outfalls	2
Flow Diversions	0
Inlets	0
Storage Nodes	5
Links	22
Channels	15
Pipes	2
Pumps	0
Orifices	0
Weirs	0
Outlets	5
Pollutants	0
Land Uses	0

R□□□□□□D□□□□□

SN	Rain Gage ID	Data Source	Data Source ID	Rainfall Type	Rain Units	State	County	Return Period (years)	Rainfall Depth (inches)	Rainfall Distribution
1	100-Year	Time Series	TS-100yr	Cumulative	inches				0.00	
2	10-Year	Time Series	TS-10yr	Cumulative	inches				0.00	

S□□□□□□□ S□□ □ □r□

SN	Subbasin ID	Area (ac)	Total Rainfall (in)	Total Runoff (in)	Total Runoff Volume (ac-in)	Peak Runoff (cfs)
1	TG010	327□9□	1□72	1□0□	3□0□□□	33□□06
2	TG020	15□9□7□	1□72	0□55	□69□59	393□5□
3	TG030	306□05	1□72	0□□9	272□69	3□9□27
□	TG0□0	□66□□1	1□72	0□27	127□□□	101□70
5	TG060	□0567□11	1□72	0□11	□5□□□0□	97□□55
6	TG070	21□1□56	1□72	0□23	□9□9□	213□□5

N□d□S□□ □ □r□

SN	Element ID	Element Type	Invert Elevation (ft)	Ground□Rim (Ma□) Elevation (ft)	Initial Water Elevation (ft)	Surcharge Elevation (ft)	Ponded Area (ft²)	Peak Inflow (cfs)	Ma□HGL Elevation Attained (ft)	Ma□ Surcharge Depth Attained (ft)	Min Freeboard Attained (ft)	Time of Peak Flooding Occurrence (days hh:mm)	Total Flooded Volume (ac-in)	Total Time Flooded (min)
1	J0016-0	Junction	□5□5□00	□553□65	0□00	□553□65	0□00	960□37	□552□13	0□00	2□70	0 00:00	0□00	0□00
2	JTG010□02-0	Junction	□502□15	□513□1□	0□00	□513□1□	0□00	960□2□	□50□□72	0□00	□□□6	0 00:00	0□00	0□00
3	JTG010□03-1	Junction	□501□5□	□509□72	0□00	□516□39	0□00	960□26	□50□□27	0□00	3□31	0 00:00	0□00	0□00
□	JTG010□0□-0	Junction	□5□6□00	□557□65	0□00	□557□65	0□00	971□97	□55□□27	0□00	3□3□	0 00:00	0□00	0□00
5	JTG010□05-0	Junction	□591□30	□597□97	0□00	□60□□6□	0□00	973□□5	□596□26	0□00	5□0□	0 00:00	0□00	0□00
6	JTG010□0□-1	Junction	□669□□6	□676□13	0□00	□6□2□□0	0□00	95□□39	□673□□□	0□00	5□5□	0 00:00	0□00	0□00
7	JTG020□01-1	Junction	□652□00	□65□□67	0□00	□665□3□	0□00	916□72	□656□□9	0□00	5□51	0 00:00	0□00	0□00
□	JTG020□02-0	Junction	5929□3□	5936□01	0□00	59□2□6□	0□00	0□00	5929□3□	0□00	10□00	0 00:00	0□00	0□00
9	JTG020□02-1	Junction	□70□□1□	□71□□□1	0□00	□721□□□	0□00	39□00	□70□□□7	0□00	9□27	0 00:00	0□00	0□00
10	JTG030□05-0	Junction	□693□33	□700□00	0□00	□706□67	0□00	3□□00	□69□□0□	0□00	9□29	0 00:00	0□00	0□00
11	JTG030□05-1	Junction	□619□53	□626□20	0□00	□632□□7	0□00	50□00	□620□57	0□00	□□96	0 00:00	0□00	0□00
12	JTG0□0□0-0	Junction	□960□00	□966□00	0□00	6□00	0□00	3□□00	□960□50	0□00	9□50	0 00:00	0□00	0□00
13	JTG070□01-1	Junction	□652□71	□659□3□	0□00	□666□05	0□00	□79□07	□659□03	0□00	3□6□	0 00:00	0□00	0□00
1□	JTG070□02-1	Junction	□735□62	□7□2□29	0□00	□7□□□96	0□00	16□□00	□737□3□	0□00	□□2□	0 00:00	0□00	0□00
15	JTG070□03-1	Junction	51□2□62	51□9□29	0□00	5155□96	0□00	16□□00	51□□□10	0□00	□□52	0 00:00	0□00	0□00
16	Jun-193	Junction	□66□□00	□670□00	□66□□00	□670□00	0□00	50□00	□66□□79	0□00	9□21	0 00:00	0□00	0□00
17	Jun-197	Junction	6952□33	6962□33	0□00	0□00	0□00	97□□5□	6956□13	0□00	6□20	0 00:00	0□00	0□00
1□	JTG010□01-1	Outfall	□500□00					960□25	□506□□5					
19	Out-2□	Outfall	□500□00					66□00	□500□00					
20	SN-TG010	Storage Node	□563□00	□573□00	0□00		0□00	33□□0□	□572□57				0□00	0□00
21	SN-TG030	Storage Node	□71□□00	□72□□00	0□00		0□00	3□9□26	□723□19				0□00	0□00
22	SN-TG0□0	Storage Node	□9□0□00	□990□00	0□00		0□00	101□69	□9□6□12				0□00	0□00
23	SN-TG070	Storage Node	5163□00	5173□00	0□00		0□00	213□□□	516□□97				0□00	0□00
2□	Stor-□1	Storage Node	59□0□00	5960□00	0□00		0□00	393□5□	5953□67				0□00	0□00

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SN	Element ID	Element Type	From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Average Slope (□)	Diameter or Height (ft)	Manning's Roughness	Peak Flow (cfs)	Design Flow Capacity (cfs)	Peak Flow/ Design Flow Ratio	Peak Flow Velocity (ft/sec)	Peak Flow Depth (ft)	Peak Flow Depth/ Total Depth Ratio	Total Time Surcharged (min)	Reported Condition
1	0016	Pipe	J0016-0	JTG010□02-0	3955□22	□5□5□00	□502□15	1□0□00	□□000	0□0130	960□2□	9□9□3□	1□01	20□9□	6□□5	0□□6	0□00	□CAPACITY
2	0161	Pipe	JTG010□0□-0	J0016-0	126□93	□5□6□00	□5□5□00	0□7900	9□□33	0□0130	960□37	1□03□37	0□6□	15□59	7□70	0□7□	0□00	Calculated
3	Link-1□1	Channel	Jun-193	JTG030□05-1	1□7□□05	□66□□00	□619□53	2□3700	10□000	0□0320	50□00	6672□31	0□01	□□69	0□91	0□09	0□00	
□	Link-1□5	Channel	JTG020□01-1	JTG010□05-0	□527□13	□652□00	□591□30	1□3□00	10□000	0□0320	916□09	5015□52	0□1□	9□99	□□72	0□□7	0□00	
5	Link-1□7	Channel	Jun-197	JTG010□0□-1	□02□1□22	6952□33	□669□□6	2□□500	10□000	0□0320	95□□39	7305□92	0□13	15□1□	□□0□	0□□0	0□00	
6	TG010□01	Channel	JTG010□03-1	JTG010□01-1	□77□□7	□501□5□	□500□00	0□3300	10□000	0□0320	960□25	2□90□62	0□39	6□32	6□57	0□66	0□00	
7	TG010□02	Channel	JTG010□02-0	JTG010□03-1	61□15	□502□15	□501□5□	0□9300	10□000	0□0320	960□26	□1□1□□9	0□23	6□23	6□63	0□66	0□00	
□	TG010□0□	Channel	JTG010□05-0	JTG010□0□-0	□500□00	□591□30	□5□6□00	1□0100	10□000	0□0320	971□97	□3□5□□6	0□22	6□□□	6□60	0□66	0□00	
9	TG010□07	Channel	JTG020□01-1	JTG070□01-1	320□00	□652□00	□652□71	-0□2200	10□000	0□0320	□77□72	20□0□27	0□□3	7□□2	5□□0	0□5□	0□00	
10	TG010□0□	Channel	JTG070□01-1	JTG010□0□-1	136□□67	□652□71	□669□□6	-1□2200	10□000	0□0320	□□9□57	□791□72	0□1□	7□63	5□37	0□5□	0□00	
11	TG020□01	Channel	JTG020□02-1	JTG020□01-1	3032□22	□70□□1□	□652□00	1□□500	10□000	0□0320	39□00	5□93□71	0□01	□□61	2□61	0□26	0□00	
12	TG020□02	Channel	JTG020□02-0	JTG020□02-1	1279□□6□	5929□3□	□70□□1□	9□5□00	10□000	0□0320	0□00	133□1□71	0□00	0□00	0□37	0□0□	0□00	
13	TG030□02	Channel	JTG030□05-1	JTG010□05-0	30□5□□□	□619□53	□591□30	0□9100	10□000	0□0320	50□00	□1□2□□5	0□01	3□01	2□76	0□2□	0□00	
1□	TG030□05	Channel	JTG030□05-0	Jun-193	1□91□32	□693□33	□66□□00	1□5500	10□000	0□0320	3□□00	5393□95	0□01	3□95	0□75	0□07	0□00	
15	TG0□0□01	Channel	JTG0□0□0-0	JTG030□05-0	5331□6□	□959□53	□693□33	□□9900	10□000	0□0320	3□□00	96□7□01	0□00	6□□3	0□61	0□06	0□00	
16	TG070□01	Channel	JTG070□02-1	JTG070□01-1	5099□5□	□735□62	□652□71	1□6300	10□000	0□0320	163□□7	5522□95	0□03	5□62	3□50	0□35	0□00	
17	TG070□02	Channel	JTG070□03-1	JTG070□02-1	1□□37□3□	51□2□62	□735□62	2□□200	10□000	0□0320	16□□00	7272□55	0□02	9□1□	1□60	0□16	0□00	
1□	Outlet-9□	Outlet	Stor-□1	JTG020□02-1		59□0□00	□70□□1□				39□00							
19	OUT-TG010	Outlet	SN-TG010	Out-2□		□563□00	□500□00				66□00							
20	OUT-TG030	Outlet	SN-TG030	Jun-193		□71□□00	□66□□00				16□00							
21	OUT-TG0□0	Outlet	SN-TG0□0	JTG0□0□0-0		□9□0□00	□960□00				3□00							
22	OUT-TG070	Outlet	SN-TG070	JTG070□03-1		5163□00	51□2□62				16□□00							

APPENDIX C
COST ESTIMATE

Table C-1
Conceptual Cost Estimate - Pipes
Saratoga Springs Storm Drainage Capital Facility Plan

Project Identifier	Project Name	Pipe Length (ft)	Diameter (in)	Catch Basin / Inlet Box (EA)	Junction Box / Manhole (EA)	Outlet Works (EA)	Asphalt Road Repair (yd^2)	Contingency (10%)	Engineering, Legal, Admin. (10%)	Estimated Project Cost (includes Contingency, Engineering, Admin, and Legal Fees)
PS1	Harbor Parkway	1616	18	4	5	0	0	$ 17,664	$ 17,664	$ 212,000
PN1	Redwood Rd. Near Grandview Blvd	2200	30	5	7	0	2736	$ 42,090	$ 42,090	$ 505,100
PN2a	Pony Express 1	2728	42	6	9	0	143	$ 54,984	$ 54,984	$ 659,800
PN2b	Pony Express 2	7661	48	19	25	1	0	$ 181,532	$ 181,532	$ 2,178,400
PN3a	Fairfield Road	1780	24	4	5	0	2084	$ 29,671	$ 29,671	$ 356,100
PN3b	800 West (Fairfield to 400 N)	1102	30	2	3	0	2221	$ 24,312	$ 24,312	$ 291,700
PN4	Talus Ridge Phase 2	2433	36	6	8	0	3332	$ 54,152	$ 54,152	$ 649,800
PN5	800 West (Sunrise Mdws to 400 N)	1446	24	3	4	0	1687	$ 23,985	$ 23,985	$ 287,800
PN6a	Pioneer Crossing to Market St.	2790	24	6	9	0	3255	$ 46,851	$ 46,851	$ 562,200
PN6b	Market St. Outfall	1096	54	2	3	1	1695	$ 37,778	$ 37,778	$ 453,300
PN7	Tickville Gulch	3974	96	9	13	1	0	$ 235,738	$ 235,738	$ 2,200,000
PN8a	1200 North 1	1371	42	3	4	0	0	$ 27,118	$ 27,118	$ 325,400
PN8b	1200 North 2	3884	42	9	12	0	0	$ 77,232	$ 77,232	$ 926,800
PN8c	Redwood Rd. (1200 N to Market)	1768	48	4	5	0	0	$ 41,132	$ 41,132	$ 493,600
PN9	800 West (DN4 to 1200 N)	3362	24	8	11	0	3922	$ 56,734	$ 56,734	$ 680,800
PN10	Pioneer Crossing (DN3 to 1200 N)	1358	36	3	4	0	0	$ 22,131	$ 22,131	$ 265,600
PN11	1200 North 3	926	18	2	3	1	0	$ 11,594	$ 11,594	$ 139,100
PN12	Harvest Hills to Jordan River 1	4290	30	10	14	1	2276	$ 70,938	$ 70,938	$ 851,300
PN13	Harvest Moon Dr. 1	866	48	4	1	0	1294	$ 25,575	$ 25,575	$ 306,900
PN14	Harvest Moon Dr. 2	680	24	1	5	0	793	$ 12,412	$ 12,412	$ 148,900
PN15a	Redwood Road (to 1500 N)	4043	30	10	13	0	5028	$ 77,632	$ 77,632	$ 931,600
PN15b	1500 North (Redwood to Jordan River)	5748	30	14	19	1	6093	$ 107,588	$ 107,588	$ 1,291,100
PN16	1900 North/Redwood Rd	20	24	0	0	0	23	$ 298	$ 298	$ 11,600
PN17	Meadow Crest Bypass	5092	18	12	16	0	0	$ 55,588	$ 55,588	$ 667,100
PN18	SR-73	843	36	2	2	0	0	$ 13,584	$ 13,584	$ 163,000

Table C-2
Conceptual Cost Estimate - Culverts
Saratoga Springs Storm Drainage Capital Facility Plan

Project Identifier	Project Name	Quantity (EA)	Estimated Project Cost (includes Contingency, Engineering, Admin, and Legal Fees)
CS1	Redwood Road & Little Canyon	1	$ 110,000
CS2	Redwood Road & Olaf Canyon	1	$ 110,000
CS3	Redwood Road & Limekiln Canyon	1	$ 110,000
CS4	Bonneville Dr. & Olaf Canyon	1	$ 110,000
CS5	Bonneville Dr. & Limekiln Canyon	1	$ 72,000
CS6	Foothill Blvd. 1	1	$ 110,000
CS7	Foothill Blvd. 2	1	$ 72,000
CS8	Foothill Blvd & Clark Canyon	1	$ 72,000
CS9	Foothill Blvd 3	1	$ 72,000
CS10	Foothill Blvd 4	1	$ 72,000
CS11	Foothill Blvd & Israel Canyon	1	$ 110,000
CS12	Village Court Rd.	1	$ 110,000
CN1	Foothill Blvd 5	1	$ 110,000
CN2	Foothill Blvd 6	1	$ 110,000
CN3	Foothill Blvd & Tickville Wash	1	$ 150,000
CN4	Mountain View Corridor 1	1	$ 110,000
CN5	Mountain View Corridor 2	1	$ 110,000
CN6	Saratoga Parkway 1	1	$ 150,000
CN7	Saratoga Parkway 2	1	$ 110,000
CN8	Mountain View Corridor 3	1	$ 110,000
CN9	Mountain View Corridor 4	1	$ 110,000
CN10	Tickville Gulch Redwood Rd	1	$ 150,000
CN11	400 North and Riverside Drive	1	$ 110,000

Table C-3
Conceptual Cost Estimate - Open Channel
Saratoga Springs Storm Drainage Capital Facility Plan

Project Identifier	Project Name	Channel Length (ft)	Excavation (yd^3)	Rip Rap (yd^3)	Landscaping (yd^2)	Contingency (10%)	Engineering, Legal, Admin. (10%)	Estimated Project Cost (includes Contingency, Engineering, Admin, and Legal Fees)
OCS1	Village Parkway & Redwood Road	1986	1860	0	990	$ 2,802	$ 2,802	$ 33,620
OCS2	Clark Canyon	1260	1180	0	630	$ 1,778	$ 1,778	$ 21,340
OCS3	Limekiln Canyon	1896	1780	0	940	$ 2,680	$ 2,680	$ 32,160
OCN1	Clay Pit Reroute	670	630	0	330	$ 948	$ 948	$ 11,380
OCN2	Tickville Gulch	700	2830	21	720	$ 4,106	$ 4,106	$ 49,270
OCN3	400 North East of Redwood	2649	10700	0	1320	$ 15,244	$ 15,244	$ 182,930

Table C-4
Conceptual Cost Estimate - Detention Basins
Saratoga Springs Storm Drainage Capital Facility Plan

Project Identifier	Project Name	Volume (acre-ft)	Footprint (acre)	Excavation and Hauling (yd^3)	Landscaping	Inlet Apron	Outlet Structure	Emergency Spillway	Land Acquisition	Contingency (10%)	Engineering, Legal, Admin. (10%)	Estimated Project Cost (includes Contingency, Engineering, Admin, and Legal Fees)
DS1	Harbor Park Way	8.5	2.833333	$ 854,481	$ 37,026	$ 12,000	$ 16,000	$ 5,000	$ -	$ 92,500	$ 92,500	**$ 1,109,500**
DS2	Colt Drive	2.8	1.4	$ 76,501	$ 10,570	$ 12,000	$ 16,000	$ 5,000	$ 196,000	$ 31,600	$ 31,600	**$ 379,300**
DN1	Clay Pit 1	12.1	4.033333	$ 330,592	$ 52,708	$ 12,000	$ 16,000	$ 5,000	$ 564,667	$ 98,100	$ 98,100	**$ 1,177,200**
DN2	Clay Pit 2	15.0	5	$ 409,825	$ 65,340	$ 12,000	$ 16,000	$ 5,000	$ 700,000	$ 120,800	$ 120,800	**$ 1,449,800**
DN3	Mountain View Corridor 1	34.3	8.575	$1,081,308	$112,058	$ 12,000	$ 16,000	$ 5,000	$ 1,200,500	$ 242,700	$ 242,700	**$ 2,912,300**
DN4	Mountain View Corridor 2	29.7	7.425	$ 936,293	$ 97,030	$ 12,000	$ 16,000	$ 5,000	$ 1,039,500	$ 210,600	$ 210,600	**$ 2,527,000**

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Bowen Collins
& Associates, Inc.
CONSULTING ENGINEERS

CITY OF SARATOGA SPRINGS

City Council
Staff Report

Talus Ridge Plat D
Final Plat
Tuesday, August 18, 2015
Public Meeting

Report Date:	Tuesday, August 11, 2015
Applicant:	Edge Homes
Owner:	Timp Land Holdings, LLC
Location:	Approximately 1100 West Talus Ridge Blvd
Major Street Access:	800 West, Talus Ridge Blvd
Parcel Number(s) & Size:	a portion of 58:034:0543, ~ 40 acres
Parcel Zoning:	R-3, Low Density Residential
Adjacent Zoning:	A, R-3, RR
Current Use of Parcel:	Undeveloped, vacant
Adjacent Uses:	Low Density Residential, Rural Residential, Agricultural
Previous Meetings:	2/13/14 and 2/27/14, PC review of Concept Plan and Rezone request 3/25/14, CC review of Concept Plan and Rezone request 6/12/14, PC review of Preliminary Plat
Previous Approvals:	7/1/14, CC approval of Preliminary Plat 9/2/14, CC approval of open space and phasing plan 9/2/14, CC approval of Final Plat A 12/12/14, CC approval of Final Plat B 5/19/15, CC approval of Final Plat C
Type of Action:	Administrative
Land Use Authority:	City Council
Future Routing:	None
Author:	Sarah Carroll, Senior Planner

A. Executive Summary: This is a request for final plat approval for Talus Ridge Plat D which consists 10.28 acres in the R-3 zone and includes 24 lots and 1.33 acres of open space.

Recommendation:
Staff recommends that the City Council conduct a public meeting, take public comment at their discretion, discuss the proposed final plat, and choose from

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the options in Section "H" of this report. Options include approval with conditions, continuation of the item, or denial.

B. **Background:** The preliminary plat for the entire Talus Ridge development was approved by the City Council on July 1, 2014 and consisted of 216 total lots, 81 of which were in the 9,000-9,999 square foot range. Plat A included 8 lots in this size range. Plat B included 30 lots ranging in size from 9,000-9,999 square feet and 9 corner lots between 9,900-10,999 square feet. Plat C included 2 lots in the 9,000-9,999 square foot range and 2 corner lots between 9,900-10,999 square feet. Plat D includes 4 lots in the 9,000-9,999 square foot range and 5 corner lots between 9,900-10,999 square feet. This is a running total of 60 lots with reductions.

The lot size reduction was previously granted by the City Council because of additional benefits granted to the City including:

- The developer will bury the canal and construct a trail within the canal right of way
- The developer will construct a 77 foot wide right of way running east/west through the property
- Two of the open spaces are large parks that have a wide public frontage which is an enhancement to the park space
- The developer will be installing master planned storm drain lines and culinary and secondary water lines.

The boundary of Plat D is consistent with the phasing plan that was approved by the City Council on September 2, 2014 (attached). The running totals for the project are below:

Plat	# lots	# lot reductions	Total Acreage	Total Open Space	Cumulative Open Space
A	31	8	16.65	3.59	21.56%
B	49	39	22.63	6.56	25.84%
C	23	4	8	0	21.46%
D	24	9	10.28	1.33	**19.94%**
TOTALS	**127**	**60**	**57.56**	**11.48**	

C. **Specific Request:** This is a request for Final Plat approval for Plat D of the Talus Ridge Development.

D. **Process:** Section 19.13.04 of the City Code states that Final Plats require approval by the City Council. No public hearing is required.

E. **Community Review:** Prior to City Council review of the proposed final plat, the Preliminary Plat was reviewed by the Planning Commission at a public hearing on June 12, 2014 and by the City Council at a public meeting on July 1, 2014. The public hearing with the Planning Commission was noticed as a public hearing in the *Daily Herald* and notices were mailed to all property owners within 300 feet of the subject property.

During the public hearing with the Planning Commission and at the subsequent City Council meeting, neighboring residents in the Agricultural zone made the following comments:

- Support was given for placing notification on the title and/or plat that neighboring properties have animals and agricultural rights.
- Animals contribute to smells, noise, flies, dust, etc. Future buyers need to be aware of this.
- If a vinyl fence is placed between the future lots and the agricultural properties it will be easily broken by animals. They currently have a barb-wire fence. A pre-cast fence was suggested.
- Children are attracted to animals and it's important that measures are taken to prevent harm to children.

In order to address these concerns, one of the conditions of the preliminary plat approval was that a note be placed on the title to notify the buyers of neighboring agricultural rights. Condition number 3 in Section "H" of this report addresses this condition. The applicant and neighboring agricultural property owners were encouraged to work toward a solution on fencing. The applicant proposed vinyl fencing and was willing to share costs with neighboring property owners for a concrete fence. *(The proposed plans do not include a fence; the code did not require fencing between Agricultural and residential property when the preliminary plat was approved.)*

F. **General Plan:** The site is designated as Low Density Residential on the adopted Future Land Use Map. The General Plan states that areas designated as Low Density Residential are "designed to provide areas for residential subdivisions with an overall density of 1 to 4 units per acre. This area is to be characterized by neighborhoods with streets designed to the City's urban standards, single-family detached dwellings and open spaces."

Finding: consistent. The overall project is 88.80 acres and requires 15% open space (13.32 acres); the project includes 15.03% open space. The sensitive lands may not be considered when calculating density. The sensitive lands include the detention areas, the drainage channel, and the canal right of way which constitute 4.09 acres of property, resulting in a net area of 84.71 acres. 216 lots are proposed; thus the density is 2.55 units per acre (216 units/84.71 acres).

G. **Code Criteria:** Applicable code sections are reviewed below. Please see the attached "Planning Review Checklist" for additional details.

- 19.04, Land Use Zones – Complies (lot size reduction discussed below)
- 19.05.02, Supplemental Regulations – Complies
- 19.06, Landscaping and Fencing – Complies
- 19.12, Subdivisions – Complies
- 19.13, Process - Complies

Additional Discussion:

Minimum Lot Sizes: complies, as approved with the Preliminary Plat.

19.04.13(4) states that the minimum lot size in the R-3 zone is 10,000 square feet and outlines criteria that may be evaluated for consideration of a lot size reduction to 9,000 square feet. During the Preliminary Plat review, the City Council granted approval of 81

lots in the 9,000 to 9,999 square foot size range. Plat D includes 4 lots ranging in size from 9,000-9,999 square feet and 5 corner lots between 9,900-10,999 square feet.

H. Recommendation and Alternatives:

Staff recommends that the City Council review the Final Plat and select from the options below.

Recommended Motion – Approval:

"I move that the City Council approve the Talus Ridge Plat D Final Plat, located at approximately 1100 West Talus Ridge Blvd, with the findings and conditions below:

Findings:

1. The proposed final plat is consistent with the General Plan as explained in the findings in Section "F" of this report, which findings are incorporated herein by this reference.
2. The proposed final plat meets all the requirements in the Land Development Code as explained in Section "G" of this report, which findings are incorporated herein by this reference.

Conditions:

1. That all requirements of the City Engineer are met, including those listed in the attached report.
2. That all requirements of the Fire Chief are met.
3. Notification of the neighboring Agricultural rights shall be placed on the title to notify future buyers of abutting uses. This document shall be recorded concurrently with the final plat.
4. The landscape plans are approved as proposed with one condition:
    a. Within the drainage channel invasive species shall be removed, and native vegetation restored.
5. The restroom plans are approved as proposed with the following conditions:
    a. Public Works shall approve the fixture schedule/items.
    b. The exterior shall be split face concrete block and a minimum of two colors shall be used.
6. The fencing around the open space shall be six foot tall semi-private white vinyl as indicated on the plans.
7. Any other conditions as articulated by the City Council: _____
    _____

Alternative Motions:

Alternative Motion A – Continuance

The City Council may choose to continue the item. "I move to **continue** the final plat to another meeting on [DATE], with direction to the applicant and Staff on information and/or changes needed to render a decision, as follows:

_____

_____

_____

Alternative Motion B – Denial
The City Council may choose to deny the application. "I move that the City Council deny the Talus Ridge Plat D Final Plat, generally located at 1100 West Talus Ridge Blvd, with the findings below."

1. The final plat is not consistent with the General Plan, as articulated by the City Council: _____, and/or,
2. The final plat is not consistent with Section [19.04, 19.05.02, 19.06, 19.12, 19.13] of the Code, as articulated by the City Council: _____.

I. Exhibits:

1. Engineering Staff Report (pages 6-7)
2. Planning Review Checklist (pages 8-11)
3. Zoning / Location map (page 12)
4. Overall Phasing Plan and Open Space Plan (page 13)
5. Proposed Final Plat (pages 14-15)
6. Restroom Plans (page 16)
7. Landscape Plans (pages 17-18)

City Council
Staff Report

Author: Jeremy D. Lapin, City Engineer
Subject: Talus Ridge Plat D – Final Plat
Date: August 18, 2015
Type of Item: Final Plat Approval

Description:

A. Topic: The Applicant has submitted a Final Plat application. Staff has reviewed the submittal and provides the following recommendations.

B. Background:

Applicant:	*Edge Homes - Timp Land Holdings, LLC*
Request:	*Final Plat Approval*
Location:	*Approx. 1100 West Talus Ridge Blvd*
Acreage:	*10.28 acres - 24 lots and 1.33 acres of Open Space*

C. Recommendation: Staff recommends the approval of final plat subject to the following conditions:

D. Conditions:

A. Meet all engineering conditions and requirements in the construction of the subdivision and recording of the plats. Review and inspection fees must be paid as indicated by the City prior to any construction being performed on the project.

B. All review comments and redlines provided by the City Engineer are to be complied with and implemented into the Final plat and construction drawings.

C. Developer must secure water rights as required by the City Engineer, City Attorney, and development code.

D. Submit easements for all off-site utilities not located in the public right-of-way.

E. Developer is required to ensure that there are no adverse effects to future homeowners due to the grading practices employed during construction of these plats.

F. Project must meet the City Ordinance for Storm Water release (0.2 cfs/acre for all developed property) and all UPDES and NPDES project construction requirements.

G. Final plats and plans shall include an Erosion Control Plan that complies with all City, UPDES and NPDES storm water pollution prevention requirements.

H. All work to conform to the City of Saratoga Springs Standard Technical Specifications, most recent edition.

I. Project bonding must be completed as approved by the City Engineer prior to recordation of plats.

J. Developer may be required by the Saratoga Springs Fire Chief to perform fire flow tests prior to final plat approval and prior to the commencement of the warranty period.

K. Submittal of a Mylar and electronic version of the as-built drawings in AutoCAD format to the City Engineer is required prior acceptance of site improvements and the commencement of the warranty period.

L. Developer shall bury and/or relocate the power lines that are within this plat.

M. All roads shall be designed and constructed to City standards and shall incorporate all geotechnical recommendations as per the applicable soils report.

N. Developer shall provide a finished grading plan for all lots and shall stabilize and reseed all disturbed areas. Slopes within lots may not be steeper than 4:1 (Horizontal: Vertical).

O. The existing control structures for ponds A and B shall be modified for the new contributing area and for the addition of the offsite Drainage. The orifice structures shall be sized for the total contributing drainage areas, be multi-staged to ensure low flows are detained while the 100-year flow can safely pass and shall be protected from clogging with a snout.

P. All the existing manholes shall be adjusted to grade and collared within the roadway.

Q. The entire frontage for lot 401 must be improved with Plat D.

R. A restroom shall be installed in the Park that was part of Plat B. The design of the bathroom shall be submitted to and approved by the parks department prior to installation.

S. A spillway from the debris basin shall be installed to allow overflows to be safely routed into the adjacent ROW and away from adjacent properties.

T. Open spaces shall have metered points of connection from the secondary water system.

APPLICATION REVIEW CHECKLIST

(8/20/2014 Format)

Application Information

Date Received:	5/29/15
Project Name:	Talus D Final
Project Request / Type:	Final Plat
Body:	City Council
Meeting Type:	Public Meeting
Applicant:	Edge Homes
Owner (if different):	Timp Land Holdings, LLC
Location:	~1100 West Talus Ridge Blvd
Major Street Access:	800 West
Parcel Number(s) and size:	58:034:0543, ~ 40 acres
General Plan Designation:	Low Density Res
Zone:	R-3
Adjacent Zoning:	R-3, A, RR
Current Use:	vacant, undeveloped
Adjacent Uses:	residential, agricultural
Previous Meetings:	Prelim Plat approved
Land Use Authority:	City Council
Future Routing:	None
Planner:	Sarah Carroll

Section 19.13 – Application Submittal

- Application Complete: yes
- Rezone Required: no
- General Plan Amendment required: no
- Additional Related Application(s) required: none

Section 19.13.04 – Process

- DRC:
  - 6/8/15: restroom plans needed, landscape plans needed
  - 6/15/15: waiting for restroom and landscape plans
  - 6/21/15: tentative for 7/7 CC pending resubmittal –waiting on restroom and landscape plans
  - 6/29/15: tentative for 7/21 CC pending resubmittal –waiting on restroom and landscape plans
  - 7/13/15: received restroom plans on 7/6/15 – DRC reviewed plans, forward to public works for comments
  - 7/20/15: tentative for 8/4 pending resubmittal – waiting on landscape plans

    - 7/27/15: received landscape plans on 7/20/15, tentative for 8/18
    - 8/3/15: confirmed for 8/18/15 CC - revised restroom and landscape plans are under review
- UDC: N/A for single fam
- Neighborhood Meeting: N/A
- PC: N/A for final. Prelim previously approved
- CC: scheduled for 8/18/15 CC meeting

General Review

Building Department

- No Comments

Fire Department

- Meet turn-around radius for cul-de-sacs. 96' diameter required. See Cityworks review letter

GIS / Addressing

- See Cityworks review letter: addresses provided

Public Works

- No comments received

Code Review

- 19.04, Land Use Zones - Complies
    - Zone: R-3
    - Use: Permitted Use - single family residential
    - Density: up to 3 units per acre allowed - Plat D is 10.28 acres with 24 lots (2.33 units per acre)
    - Minimum lot size: 9,000 square foot minimum granted by City Council during Preliminary Plat review.
    - Setbacks:
        - The setback detail meets requirements and indicates:
            - 25' front
            - 20' corner side
            - 8' min side yard, 20' total
            - 25' rear
    - Lot width: 70' wide required at front setback
    - Lot Frontage: 35' required on a public or private street
    - Height: 35' max
    - Lot Coverage: 50% max
    - Dwelling size: 1,250 square feet of living space, minimum required above grade
    - Open Space / Landscaping: 15% required – overall development complies, see overall open space and phasing plan.
        - Plat A included 3.59 acres of open space (21.53%) within 16.67 acres, and a proposed tot lot and two benches. Plat B included 6.57 acres of open space (29%)

within 22.63 acres to be developed with: a basketball half-court, a playground, a lacrosse field, and a trail along the canal. A restroom is also proposed in the Plat B park and will be constructed with Phase D. Plat C is 8.00 acres and does not include open space. Plat D is currently proposed and includes 1.33 acres of open space.

        - The cumulative open space within Plats A, B, C and D is 11.48 acres within 57.56 acres (19.94 %), thus exceeding the requirement for 15% open space. The applicant is banking open space for future phases.
    - Sensitive Lands: no more than 50% of required open space – overall development complies, see overall open space plan
        - The sensitive lands within the overall project consist of the proposed detention basins, the area of the drainage channel that will be preserved, and the canal right of way; totaling 4.09 acres (30% of the total open space). The base density was calculated after subtracting the sensitive lands and results in a density of 2.55 units per acre. No more than 50% of the required open space is comprised of sensitive lands.
    - Trash: Individual cans will be used

- 19.05.02, Supplemental Regulations
    - Flood Plain: N/A
    - Water & sewage: Will connect to City infrastructure
    - Transportation Master Plan: Complies – no lots will block a planned road
    - Property access: all lots have access onto a public street

- 19.06, Landscaping and Fencing
    - Landscaping Plan: planting plan, planting schedule, topography, irrigation, fencing and data table provided on plans
    - Planting Standards & Design: meets requirements
    - Amount: table does not apply to parks in R-3 zone
    - Additional Requirements: park strips shall be landscaped by the abutting owner, except those have a rear property line abutting Talus Ridge Blvd. Those will be landscaped by the developer and maintained by the City.
    - Fencing & Screening: Semi-private fencing is required along open space. Semi-private fencing is shown. The applicant prefers the color to be white to match their product. The park will be City-owned; the City requires six foot fencing around this park.
    - Clear Sight Triangle: no plants or fencing taller than 3' allowed.

- 19.09, Off Street Parking
    - Each home will have, at a minimum a 20 deep driveway that is wide enough for two cars.

- 19.10, Hillside Development: N/A

- 19.12, Subdivisions
        - Final Plat requirements apply, 19.012.03(4). Complies.
        - General Subdivision Improvements, 19.12.06. Complies.

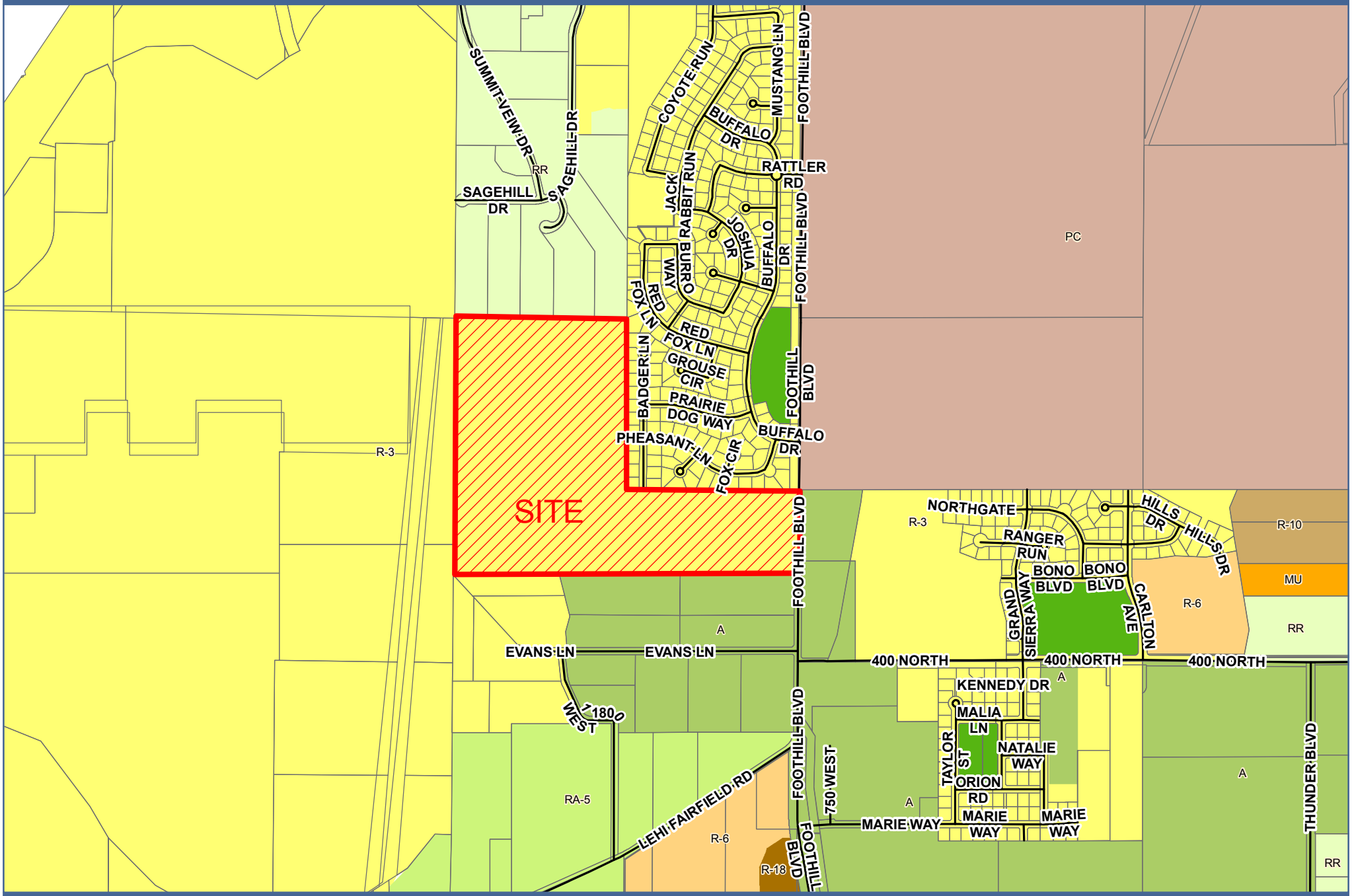
        - Maximum block length is 1,000 feet. Complies.
        - If a block is more than 800 feet in length a pedestrian walkway is required through the block. Complies.
        - Connecting streets are required: The plans indicate stub streets in all directions to provide connections. Complies.
        - Pedestrian walkways, trials, and other logical linkages are required.
        - Driveway location for lots next to an arterial: N/A
        - Access: Two separate means of access are required whenever the total number of dwelling units exceeds 50. Complies.
        - Lot design: The design shall not create lots that are not buildable due to size, shape, topography, terrain, etc. Complies.
        - Lot frontage: all lots shall have frontage on a road that meets City standards. Complies.
        - Flag lots: None proposed.
        - Public roads may not be included in lots. Complies.
        - Property lines: Side property lines shall be at approximate right angles to the street line or radial to the street line. Complies.
        - Corner lots: Corner lots shall be platted ten percent larger than the minimum for the zone. Complies with approved lot reduction of 9,000 square feet; corner lots are 9,900 or larger.
        - Boundary: No lot shall be divided by a municipal boundary line. Complies.
        - Remnants: Remnants of property that do not meet the code requirements shall not be left in a subdivision. Complies.
        - Double access lots are not permitted with the exception of corner lots. Complies.
        - Arterials: Subdivisions along arterials shall comply with the adopted arterial cross section.

- Section 19.13, Process
    - General Considerations:
        - General Plan: Low Density Residential. Complies.
        - Natural Features: None
        - Community & Public Facilities: Complies with approved open space and phasing plan and code requirements for open space.
    - Notice / Land Use Authority: The City Council is the land use authority for final plats. Mailed notices are not required for final plats.
    - Development Agreement / MDA: N/A for this project.
    - Payment in Lieu of Open Space: N/A for this project.
    - 19.13.09(9) requires a phasing plan for phased developments. Complies.
        - A phasing and open space plan was approved by the City Council on September 2, 2014.

- 19.18, Signs: none proposed

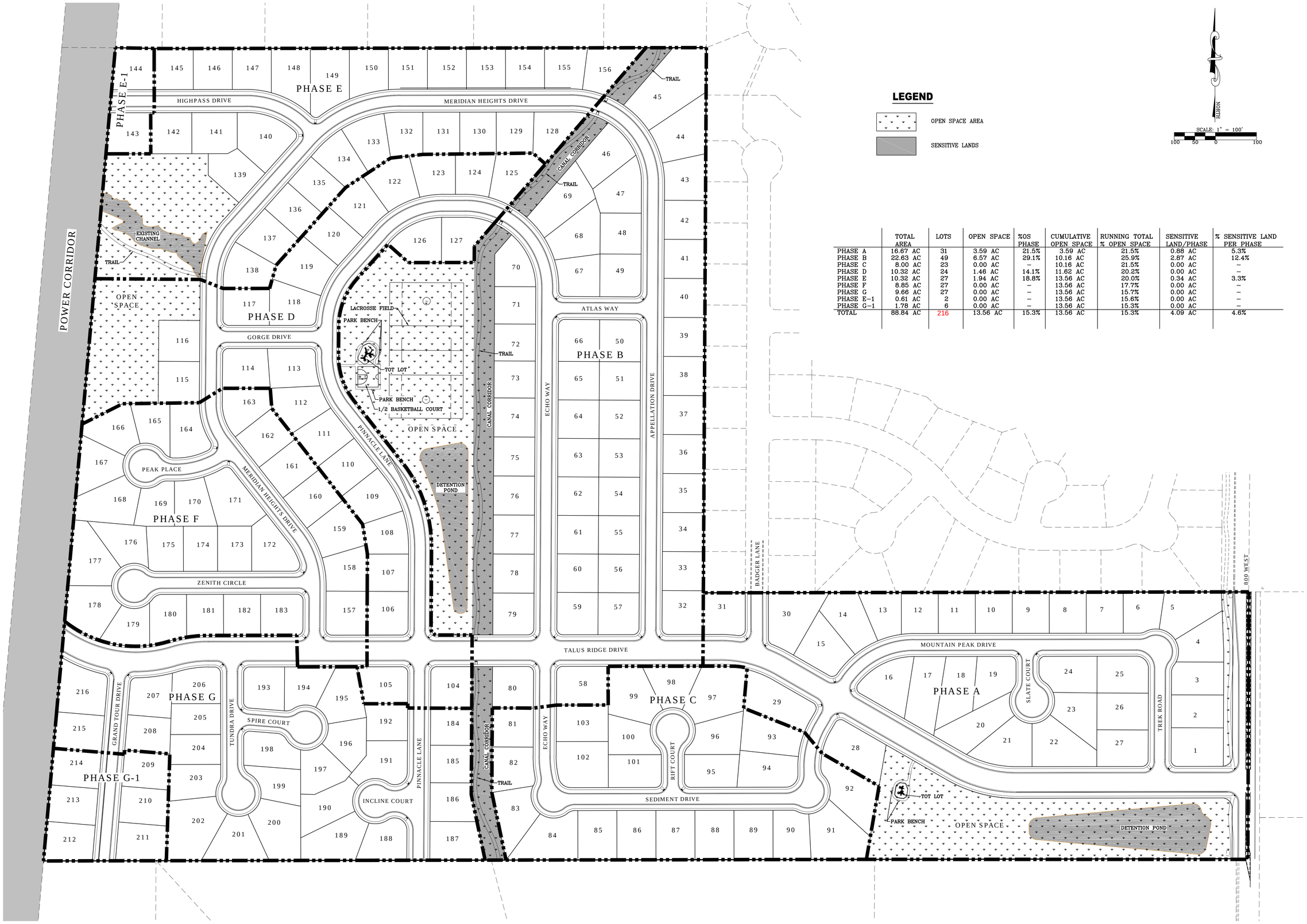
- 19.27, Addressing
    - Reviewed by GIS

Location Map



Talus Ridge

0 435 870 1,740 Feet



LEGEND

OPEN SPACE AREA

SENSITIVE LANDS

SCALE: 1" = 100'

100 50 0 100

	TOTAL AREA	LOTS	OPEN SPACE	%OS PHASE	CUMULATIVE OPEN SPACE	RUNNING TOTAL % OPEN SPACE	SENSITIVE LAND/PHASE	% SENSITIVE LAND PER PHASE
PHASE A	16.67 AC	31	3.59 AC	21.5%	3.59 AC	21.5%	0.88 AC	5.3%
PHASE B	22.63 AC	49	6.57 AC	29.1%	10.16 AC	25.9%	2.87 AC	12.4%
PHASE C	8.00 AC	23	0.00 AC	–	10.16 AC	21.5%	0.00 AC	–
PHASE D	10.32 AC	24	1.46 AC	14.1%	11.62 AC	20.2%	0.00 AC	–
PHASE E	10.32 AC	27	1.94 AC	18.8%	13.56 AC	20.0%	0.34 AC	3.3%
PHASE F	8.85 AC	27	0.00 AC	–	13.56 AC	17.7%	0.00 AC	–
PHASE G	9.66 AC	27	0.00 AC	–	13.56 AC	15.7%	0.00 AC	–
PHASE E–1	0.61 AC	2	0.00 AC	–	13.56 AC	15.6%	0.00 AC	–
PHASE G–1	1.78 AC	6	0.00 AC	–	13.56 AC	15.3%	0.00 AC	–
TOTAL	88.84 AC	216	13.56 AC	15.3%	13.56 AC	15.3%	4.09 AC	4.6%

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TALUS RIDGE

SARATOGA SPRING, UTAH

OPEN SPACE EXHIBIT

REVISIONS

1 -
2 -
3 -
4 -
5 -

LEI PROJECT #: 2013-1795

DRAWN BY: BLS

CHECKED BY: NKW

SCALE: 1" = 100'

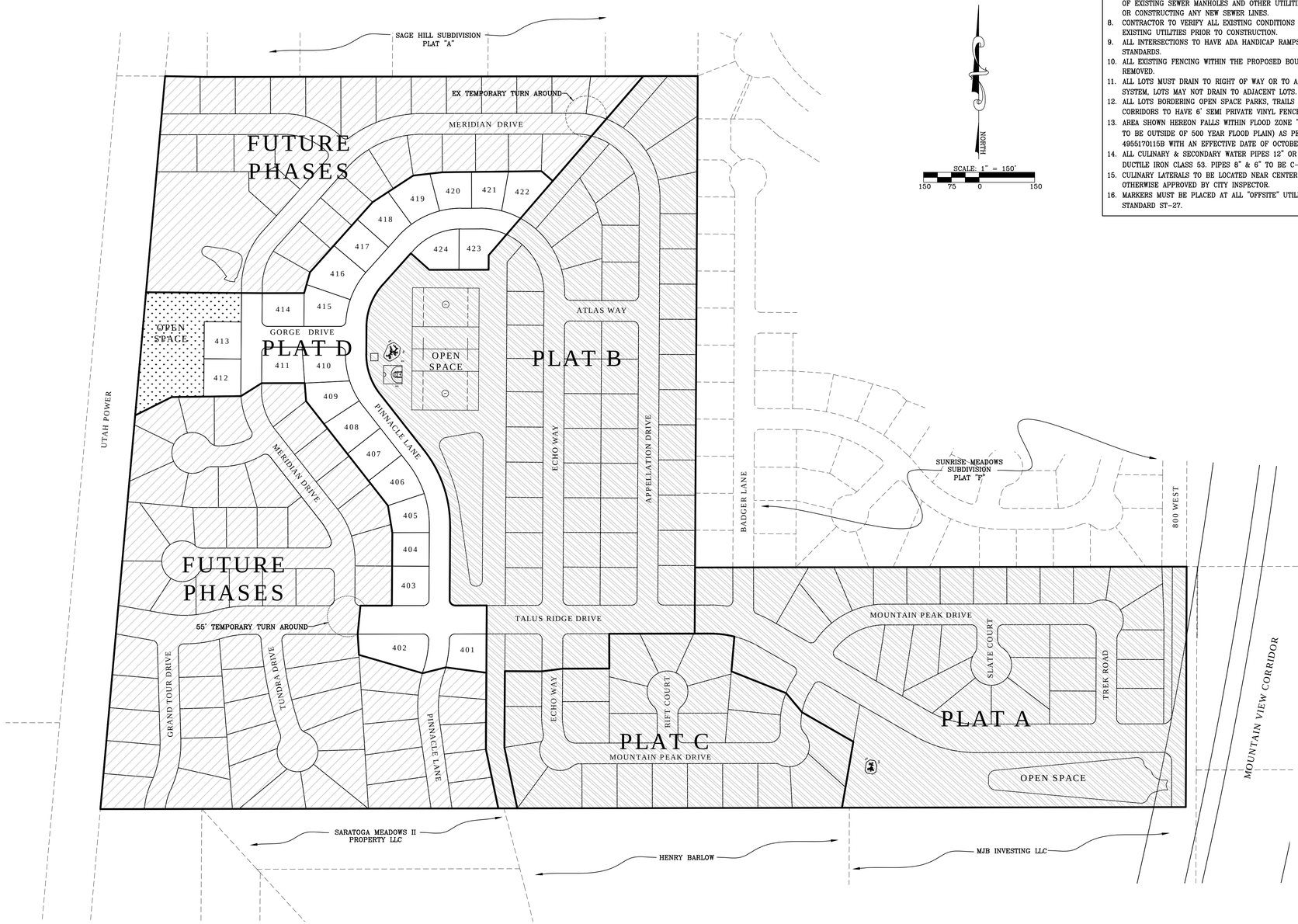
DATE: /25/2014

SHEET 1

TALUS RIDGE

PLAT "D"

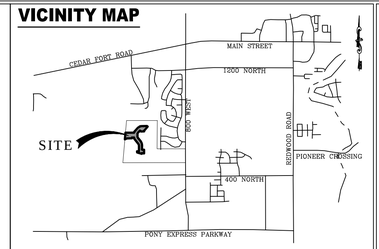
A PORTION OF SECTION 22 & SECTION 21,
T5S, R1W, SLB&M,
SARATOGA SPRING CITY, UTAH



NOTES

1. ALL CONSTRUCTION SHALL COMPLY TO THE STANDARD TECHNICAL SPECIFICATIONS AND DRAWINGS FOR THE CITY OF SARATOGA SPRINGS, UTAH.
2. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERT ELEVATIONS OF EXISTING STORM DRAIN STRUCTURES AND OTHER UTILITIES BEFORE STAKING OR CONSTRUCTING ANY NEW STORM DRAIN LINES
3. EXISTING UTILITIES HAVE BEEN NOTED TO THE BEST OF ENGINEERS KNOWLEDGE, IT IS OWNERS AND CONTRACTORS RESPONSIBILITY TO LOCATE UTILITIES IN FIELD AND NOTIFY ENGINEER AND CITY IF DISCREPANCIES EXIST.
4. POST-APPROVAL ALTERATIONS TO LIGHTING PLANS OR INTENDED SUBSTITUTIONS FOR APPROVED LIGHTING EQUIPMENT SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL.
5. THE CITY RESERVES THE RIGHT TO CONDUCT POST-INSTALLATION INSPECTIONS TO VERIFY COMPLIANCE WITH THE CITY'S REQUIREMENTS AND APPROVED LIGHTING PLAN COMMITMENTS, AND IF DEEMED APPROPRIATE BY THE CITY, TO REQUIRE REMEDIAL ACTION AT NO EXPENSE TO THE CITY.
6. ALL EXTERIOR LIGHTING SHALL MEET IESNA FULL-CUTOFF CRITERIA UNLESS OTHERWISE APPROVED BY THE CITY.
7. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERT ELEVATIONS OF EXISTING SEWER MANHOLES AND OTHER UTILITIES BEFORE STAKEING OR CONSTRUCTING ANY NEW SEWER LINES.
8. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
9. ALL INTERSECTIONS TO HAVE ADA HANDICAP RAMPS ACCORDING TO CITY STANDARDS.
10. ALL EXISTING FENCING WITHIN THE PROPOSED BOUNDARY TO BE REMOVED.
11. ALL LOTS MUST DRAIN TO RIGHT OF WAY OR TO A SWALE/YARD DRAIN SYSTEM, LOTS MAY NOT DRAIN TO ADJACENT LOTS.
12. ALL LOTS BORDERING OPEN SPACE PARKS, TRAILS & EASEMENT CORRIDORS TO HAVE 6' SEMI PRIVATE VINYL FENCE.
13. AREA SHOWN HEREON FALLS WITHIN FLOOD ZONE "X" (AREA DETERMINED TO BE OUTSIDE OF 500 YEAR FLOOD PLAIN) AS PER FIRM MAP NO. 4955170115B WITH AN EFFECTIVE DATE OF OCTOBER 15, 1982.
14. ALL CULINARY & SECONDARY WATER PIPES 12" OR LARGER TO BE DUCTILE IRON CLASS 53. PIPES 8" & 6" TO BE C-900 PVC.
15. CULINARY LATERALS TO BE LOCATED NEAR CENTER OF LOT UNLESS OTHERWISE APPROVED BY CITY INSPECTOR.
16. MARKERS MUST BE PLACED AT ALL "OFFSITE" UTILITIES PER CITY STANDARD ST-27.

VICINITY MAP



TABULATIONS

PLAT "D"

ZONING	R-3	
SINGLE FAMILY LOTS	24 LOTS	
DENSITY	2.30 UNITS/ ACRE	
LOT AREA	5.94 ACRES	(57%)
ROW AREA	3.17 ACRES	(30%)
OPEN SPACE	1.33 ACRES	(13%)
TOTAL AREA	±10.44 ACRES	
IMPERVIOUS AREA	2.20 ACRES	(21%)
LANDSCAPE AREA	8.24 ACRES	(79%)
TOTAL AREA	±10.44 ACRES	

PLATS A, B, C & D OVERALL

ZONING	R-3	
SINGLE FAMILY LOTS	127 LOTS	
DENSITY	2.20 UNITS/ ACRE	
LOT AREA	31.85 ACRES	(55%)
ROW AREA	14.05 ACRES	(24%)
OPEN SPACE AREA	11.82 ACRES	(21%)
TOTAL AREA	±57.72 ACRES	
IMPERVIOUS AREA	11.29 ACRES	(20%)
LANDSCAPE AREA	46.43 ACRES	(80%)
TOTAL AREA	±57.72 ACRES	

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	COVER
	PLAT "D"
SHEET 1	EXISTING CONDITIONS & DEMOLITION PLAN
SHEET 2	OVERALL SITE PLAN
SHEET 3	UTILITY PLAN
SHEET 4	GRADING PLAN
SHEET 5	LOT GRADING PLAN
SHEET 6	TALUS RIDGE DRIVE PLAN & PROFILE
SHEET 7	PINNACLE LANE PLAN & PROFILE
SHEET 8	PINNACLE LANE PLAN & PROFILE
SHEET 9	GORGE DRIVE & MERIDIAN DRIVE PLAN & PROFILES
SHEET 10	STRIPING & SIGNAGE PLAN
SHEET 11	EROSION CONTROL PLAN
SHEET D-2	CITY DETAILS
SHEET D-3	CITY DETAILS
SHEET D-4	CITY DETAILS
SHEET D-5	CITY DETAILS
SHEET D-6	CITY DETAILS
SHEET D-7	CITY DETAILS
SHEET LP-01	LANDSCAPE PLAN
SHEET LP-02	LANDSCAPE PLAN
SHEET IP-01	IRRIGATION PLAN
SHEET IP-02	IRRIGATION PLAN

LEGEND

- CENTERLINE
- SEWER
- PRESSURIZED IRRIGATION
- STORM DRAIN
- CULINARY WATER
- STORM DRAIN MANHOLE
- SEWER MANHOLE
- CURB INLET
- FIRE HYDRANT
- LIGHT POLE
- MONUMENT
- FLOW ARROWS
- EXISTING SEWER MH
- EXISTING STORM DRAIN MH

OWNER / DEVELOPER

EDGEhomes
480 WEST 800 NORTH
OREM, UTAH 84057
(801)494-0150

ENGINEER

LEI CONSULTING ENGINEERS
AND SURVEYORS
3302 NORTH MAIN
SPANISH FORK, UTAH 84660
(801)798-0555

LEI
ENGINEERS
SURVEYORS
PLANNERS
3302 N. Main Street
Spanish Fork, UT 84660
Phone: 801.798.0555
Fax: 801.798.9393
office@lei-eng.com
www.lei-eng.com

STATE OF UTAH
NATHAN K. WALTER
No. 7973888-2202
PROFESSIONAL ENGINEER

TALUS RIDGE PLAT "D"
SARATOGA SPRINGS CITY, UTAH
COVER

REVISIONS
1 -
2 -
3 -
4 -
5 -

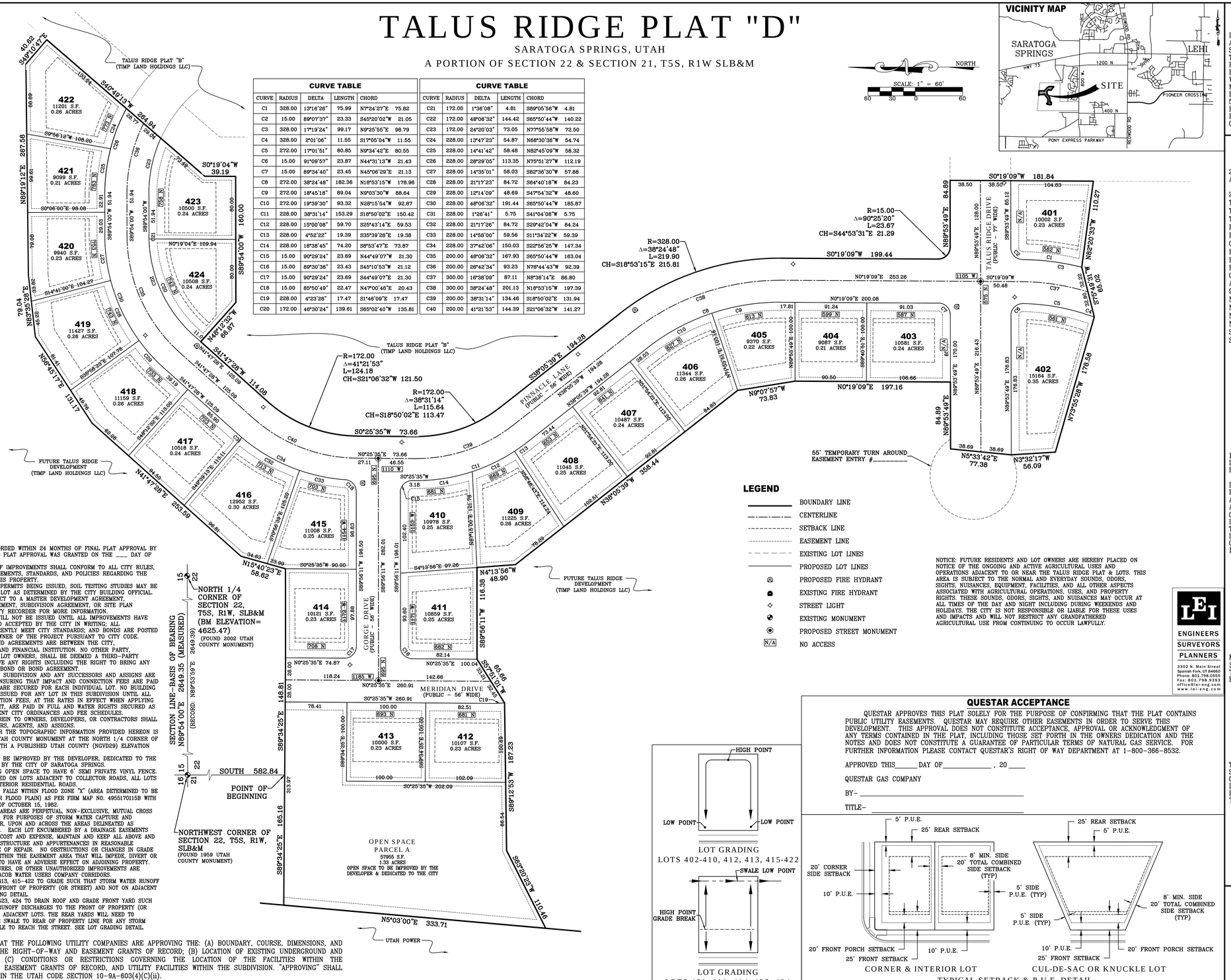
LEI PROJECT #: 2013-1795
DRAWN BY: BLS
CHECKED BY: NKW
SCALE: 1" = 150'
DATE: /5/2015

SHEET
COVER

TALUS RIDGE PLAT "D"

SARATOGA SPRINGS, UTAH

A PORTION OF SECTION 22 & SECTION 21, T5S, R1W SLB&M



CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	CHORD
C1	328.00	13°16'26"	75.99	N7°24'27"E 75.82
C2	15.00	89°07'37"	23.33	S45°20'02"W 21.05
C3	328.00	17°19'24"	99.17	N9°25'55"E 98.79
C4	328.00	2°01'06"	11.55	S17°05'04"W 11.55
C5	272.00	17°01'51"	80.85	N9°34'42"E 80.55
C6	15.00	91°09'57"	23.87	N44°31'13"W 21.43
C7	15.00	89°34'40"	23.45	N45°06'29"E 21.13
C8	272.00	38°24'48"	182.36	N18°53'15"W 178.96
C9	272.00	18°45'18"	89.04	N9°03'30"W 88.64
C10	272.00	19°39'30"	93.32	N28°15'54"W 92.87
C11	228.00	38°31'14"	153.29	S18°50'02"E 150.42
C12	228.00	15°00'08"	59.70	S25°43'14"E 59.53
C13	228.00	4°52'22"	19.39	S35°39'28"E 19.38
C14	228.00	18°38'45"	74.20	S8°53'47"E 73.87
C15	15.00	90°29'24"	23.69	N44°49'07"W 21.30
C16	15.00	89°30'36"	23.43	S45°10'53"W 21.12
C17	15.00	90°29'24"	23.69	S44°49'07"E 21.30
C18	15.00	85°50'49"	22.47	N47°00'46"E 20.43
C19	228.00	4°23'28"	17.47	S1°46'09"E 17.47
C20	172.00	46°30'24"	139.61	S65°02'40"W 135.81

CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	CHORD
C21	172.00	1°36'08"	4.81	S89°05'56"W 4.81
C22	172.00	48°06'32"	144.42	S65°50'44"W 140.22
C23	172.00	24°20'03"	73.05	N77°55'58"W 72.50
C24	228.00	13°47'23"	54.87	N68°30'38"W 54.74
C25	228.00	14°41'42"	58.48	N82°45'09"W 58.32
C26	228.00	28°29'05"	113.35	N75°51'27"W 112.19
C27	228.00	14°35'01"	58.03	S82°36'30"W 57.88
C28	228.00	21°17'23"	84.72	S64°40'18"W 84.23
C29	228.00	12°14'09"	48.69	S47°54'32"W 48.60
C30	228.00	48°06'32"	191.44	S65°50'44"W 185.87
C31	228.00	1°26'41"	5.75	S41°04'08"W 5.75
C32	228.00	21°17'26"	84.72	S29°42'04"W 84.24
C33	228.00	14°58'00"	59.56	S11°34'22"W 59.39
C34	228.00	37°42'06"	150.03	S22°56'25"W 147.34
C35	200.00	48°06'32"	167.93	S65°50'44"W 163.04
C36	200.00	26°42'34"	93.23	N76°44'43"W 92.39
C37	300.00	16°38'09"	87.11	N8°38'14"E 86.80
C38	300.00	38°24'48"	201.13	N18°53'15"W 197.39
C39	200.00	38°31'14"	134.46	S18°50'02"E 131.94
C40	200.00	41°21'53"	144.39	S21°06'32"W 141.27

VICINITY MAP

SURVEYOR'S CERTIFICATE

I, CHAD A. POULSEN, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR, AND THAT I HOLD A LICENSE, CERTIFICATE NO. 501182, IN ACCORDANCE WITH THE PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT FOUND IN TITLE 58, CHAPTER 22 OF THE UTAH CODE. 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, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS, AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRIBED ON THIS PLAT IN ACCORDANCE WITH UTAH CODE SECTION 17-23-17, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN UTAH CODE SECTION 54-8A-2, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ALSO CERTIFY THAT I HAVE FILED, OR WILL FILE WITHIN 90 DAYS THE RECORDATION OF THIS PLAT, A MAP OF THE SURVEY I HAVE COMPLETED WITH THE UTAH COUNTY SURVEYOR.

BOUNDARY DESCRIPTION

A PORTION OF THE NORTHWEST QUARTER OF SECTION 22 & THE NORTHEAST QUARTER OF SECTION 21, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE & MERIDIAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT LOCATED SOUTH 582.84 FEET FROM THE NORTHWEST CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE & MERIDIAN; THENCE S89°34'25"E 148.81 FEET; THENCE N69°56'11"E 113.00 FEET; THENCE N15°40'23"E 58.62 FEET; THENCE N41°47'28"E 253.59 FEET; THENCE N56°45'17"E 131.17 FEET; THENCE N83°35'28"E 79.04 FEET; THENCE N89°19'12"E 267.58 FEET; THENCE S49°10'47"E 40.62 FEET; THENCE ALONG THE BOUNDARY LINE OF TALUS RIDGE PLAT "B" THE FOLLOWING TWELVE (12) COURSES: S40°49'13"W 264.94 FEET; S0°19'04"W 39.19 FEET; S89°54'00"W 160.00 FEET; N48°12'32"W 66.87 FEET; S41°47'28"W 114.08 FEET; ALONG THE ARC OF A 172.00 FOOT RADIUS CURVE TO THE LEFT 124.18 FEET THROUGH A CENTRAL ANGLE OF 41°21'53" (CHORD: S21°06'32"W 121.50 FEET); S0°25'35"W 73.66 FEET; ALONG THE ARC OF A 172.00 FOOT RADIUS CURVE TO THE LEFT 115.64 FEET THROUGH A CENTRAL ANGLE OF 38°31'14" (CHORD: S18°50'02"E 113.47 FEET); S38°05'39"E 194.28 FEET; ALONG THE ARC OF A 328.00 FOOT RADIUS CURVE TO THE RIGHT 219.90 FEET THROUGH A CENTRAL ANGLE OF 38°24'48" (CHORD: S18°53'15"E 215.81 FEET); S0°19'09"W 199.44 FEET; ALONG THE ARC OF A 15.00 FOOT RADIUS CURVE TO THE LEFT 23.67 FEET THROUGH A CENTRAL ANGLE OF 90°25'20" (CHORD: S44°53'31"E 21.29 FEET); N89°53'49"E 84.89 FEET; S0°19'09"W 181.84 FEET; THENCE N82°20'33"W 110.27 FEET; THENCE S75°49'31"W 65.02 FEET; THENCE N73°55'28"W 178.58 FEET; THENCE N3°32'17"W 56.09 FEET; THENCE N5°33'42"E 77.38 FEET; THENCE N89°53'49"E 84.89 FEET; THENCE N0°19'09"E 197.16 FEET; THENCE N9°07'57"W 73.83 FEET; THENCE N38°05'39"W 358.44 FEET; THENCE N41°56'W 48.90 FEET; THENCE S89°56'11"W 116.38 FEET; THENCE S57°51'01"W 65.66 FEET; THENCE S89°12'53"W 187.23 FEET; THENCE S63°20'23"W 110.46 FEET; THENCE N5°03'00"E 333.71 FEET; THENCE S89°34'25"E 165.16 FEET TO THE POINT OF BEGINNING.

CONTAINS: ±10.44 ACRES
OF LOTS: 24

DATE

SURVEYOR'S NAME
(See Seal Below)
LICENSE NO. 501182

OWNERS DEDICATION

KNOW ALL MEN BY THESE PRESENTS THAT _____, THE _____ UNDERSIGNED OWNER(S) OF THE ABOVE DESCRIBED TRACT OF LAND HAVING CAUSED SAME TO BE SUBDIVIDED INTO LOTS AND STREETS TO BE HEREAFTER KNOWN AS

TALUS RIDGE SUBDIVISION

DO HEREBY DEDICATE FOR THE PERPETUAL USE OF THE PUBLIC AND/OR CITY ALL PARCELS OF LAND, EASEMENTS, RIGHT-OF-WAY, AND PUBLIC AMENITIES SHOWN ON THIS PLAT AS INTENDED FOR PUBLIC AND/OR CITY USE. THE OWNER(S) VOLUNTARILY DEFEND, INDEMNIFY, AND SAVE HARMLESS THE CITY AGAINST ANY EASEMENTS OR OTHER ENCUMBRANCE ON A DEDICATED STREET WHICH WILL INTERFERE WITH CITY'S USE, MAINTENANCE, AND OPERATION OF THE STREET. THE OWNER(S) VOLUNTARILY DEFEND, INDEMNIFY, AND HOLD HARMLESS THE CITY FROM ANY DAMAGE CLAIMED BY PERSONS WITHIN OR WITHOUT THIS SUBDIVISION TO HAVE BEEN CAUSED BY ALTERATIONS OF THE GROUND SURFACE, VEGETATION, DRAINAGE, OR SURFACE OR SUB-SURFACE WATER FLOWS WITHIN THIS SUBDIVISION OR BY ESTABLISHMENT OR CONSTRUCTION OF THE ROADS WITHIN THIS SUBDIVISION.
IN WITNESS WHEREOF _____ HAVE HEREUNTO SET _____ THIS _____ DAY OF _____, A.D. 20____.

WASATCH LAND COMPANY
BY: GORDON P. JONES, PRESIDENT

OWNER'S ACKNOWLEDGMENT

STATE OF UTAH
S.S.
COUNTY OF UTAH

ON THE _____ DAY OF _____, A.D. 20____ PERSONALLY APPEARED BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, IN AND FOR THE COUNTY OF UTAH 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

A NOTARY PUBLIC COMMISSIONED IN UTAH

NOTARY ADDRESS

PRINTED FULL NAME OF NOTARY

APPROVAL BY LEGISLATIVE BODY

THE CITY COUNCIL OF THE CITY OF SARATOGA SPRINGS, COUNTY OF UTAH, APPROVES THIS SUBDIVISION SUBJECT TO THE CONDITIONS AND RESTRICTIONS STATED HEREON, AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS AND RESTRICTIONS STATED HEREON, AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR THE PUBLIC PURPOSE OF THE PERPETUAL USE OF THE PUBLIC.
THIS_____DAY OF_____, A.D. 20_____.

CITY MAYOR

ATTEST_____
CLERK-RECORDER
(See Seal Below)

PLAT "D"

TALUS RIDGE

SUBDIVISION
SARATOGA SPRINGS UTAH COUNTY, UTAH

LOCATED IN A PORTION OF SECTION 22 & SECTION 21, TOWNSHIP 5 SOUTH, RANGE 1 WEST SALT LAKE BASE AND MERIDIAN
SARATOGA SPRINGS CITY, UTAH COUNTY, UTAH

NOTES:

1. PLAT MUST BE RECORDED WITHIN 24 MONTHS OF FINAL PLAT APPROVAL BY CITY COUNCIL. FINAL PLAT APPROVAL WAS GRANTED ON THE ____ DAY OF _____, 20____.
2. THE INSTALLATION OF IMPROVEMENTS SHALL CONFORM TO ALL CITY RULES, ORDINANCES, REQUIREMENTS, STANDARDS, AND POLICIES REGARDING THE DEVELOPMENT OF THIS PROPERTY.
3. PRIOR TO BUILDING PERMITS BEING ISSUED, SOIL TESTING STUDIES MAY BE REQUIRED ON EACH LOT AS DETERMINED BY THE CITY BUILDING OFFICIAL.
4. PLAT MAY BE SUBJECT TO A MASTER DEVELOPMENT AGREEMENT, DEVELOPMENT AGREEMENT, SUBDIVISION AGREEMENT, OR SITE PLAN AGREEMENT. SEE CITY RECORDER FOR MORE INFORMATION.
5. BUILDING PERMITS WILL NOT BE ISSUED UNTIL ALL IMPROVEMENTS HAVE BEEN INSTALLED AND ACCEPTED BY THE CITY IN WRITING; ALL IMPROVEMENTS CURRENTLY MEET CITY STANDARDS; AND BONDS ARE POSTED BY THE CURRENT OWNER OF THE PROJECT PURSUANT TO CITY CODE.
6. ALL BONDS AND BOND AGREEMENTS ARE BETWEEN THE CITY, DEVELOPER/OWNER AND FINANCIAL INSTITUTION. NO OTHER PARTY, INCLUDING UNIT OR LOT OWNERS, SHALL BE DEEMED A THIRD-PARTY BENEFICIARY OR HAVE ANY RIGHTS INCLUDING THE RIGHT TO BRING ANY ACTION UNDER ANY BOND OR BOND AGREEMENT.
7. THE OWNER OF THIS SUBDIVISION AND ANY SUCCESSORS AND ASSIGNS ARE RESPONSIBLE FOR ENSURING THAT IMPACT AND CONNECTION FEES ARE PAID AND WATER RIGHTS ARE SECURED FOR EACH INDIVIDUAL LOT. NO BUILDING PERMITS SHALL BE ISSUED FOR ANY LOT IN THIS SUBDIVISION UNTIL ALL IMPACT AND CONNECTION FEES, AT THE RATES IN EFFECT WHEN APPLYING FOR BUILDING PERMIT, ARE PAID IN FULL AND WATER RIGHTS SECURED AS SPECIFIED BY CURRENT CITY ORDINANCES AND FEE SCHEDULES.
8. ANY REFERENCE HEREIN TO OWNERS, DEVELOPERS, OR CONTRACTORS SHALL APPLY TO SUCCESSORS, AGENTS, AND ASSIGNS.
9. THE BENCHMARK FOR THE TOPOGRAPHIC INFORMATION PROVIDED HEREON IS THE FOUND 2002 UTAH COUNTY MONUMENT AT THE NORTH 1/4 CORNER OF SAID SECTION 22, WITH A PUBLISHED UTAH COUNTY (NGVD29) ELEVATION OF 4,625.47 FEET.
10. ALL OPEN SPACE TO BE IMPROVED BY THE DEVELOPER, DEDICATED TO THE CITY, & MAINTAINED BY THE CITY OF SARATOGA SPRINGS.
11. ALL LOTS BORDERING OPEN SPACE TO HAVE 6' SEMI PRIVATE VINYL FENCE.
12. NO ACCESS PERMITTED ON LOTS ADJACENT TO COLLECTOR ROADS, ALL LOTS TO ACCESS FROM INTERIOR RESIDENTIAL ROADS.
13. AREA SHOWN HEREON FALLS WITHIN FLOOD ZONE "X" (AREA DETERMINED TO BE OUTSIDE OF 500 YEAR FLOOD PLAIN) AS PER FIRM MAP NO. 49551C0115B WITH AN EFFECTIVE DATE OF OCTOBER 15, 1982.
14. DRAINAGE EASEMENT AREAS ARE PERPETUAL, NON-EXCLUSIVE, MUTUAL CROSS DRAINAGE EASEMENTS FOR PURPOSES OF STORM WATER CAPTURE AND CONVEYANCE ON, OVER, UPON AND ACROSS THE AREAS DELINEATED AS DRAINAGE EASEMENTS. EACH LOT ENCUMBERED BY A DRAINAGE EASEMENTS SHALL, AT IT'S SOLE COST AND EXPENSE, MAINTAIN AND KEEP ALL ABOVE AND BELOW GRADE INFRASTRUCTURE AND APPURTENANCES IN REASONABLE CONDITION AND STATE OF REPAIR. NO OBSTRUCTIONS OR CHANGES IN GRADE SHALL BE LOCATED WITHIN THE EASEMENT AREA THAT WILL IMPEDE, DIVERT OR CAUSE THE RUNOFF TO HAVE AN ADVERSE EFFECT ON ADJOINING PROPERTY.
15. NO FOLIAGE, STRUCTURES, OR OTHER UNAUTHORIZED IMPROVEMENTS ARE ALLOWED IN WELBY JACOB WATER USERS COMPANY CORRIDORS.
16. LOTS 402-410, 412, 413, 415-422 TO GRADE SUCH THAT STORM WATER RUNOFF DISCHARGES TO THE FRONT OF PROPERTY (OR STREET) AND NOT ON ADJACENT LOTS. SEE LOT GRADING DETAIL.
17. LOTS 401, 411, 414, 423, 424 TO DRAIN ROOF AND GRADE FRONT YARD SUCH THAT STORM WATER RUNOFF DISCHARGES TO THE FRONT OF PROPERTY (OR STREET) AND NOT ON ADJACENT LOTS. THE REAR YARDS WILL NEED TO MAINTAIN A DRAINAGE SWALE TO REAR OF PROPERTY LINE FOR ANY STORM WATER RUNOFF UNABLE TO REACH THE STREET. SEE LOT GRADING DETAIL.

BY SIGNING THIS PLAT THE FOLLOWING UTILITY COMPANIES ARE APPROVING THE: (A) BOUNDARY, COURSE, DIMENSIONS, AND INTENDED USE OF THE RIGHT-OF-WAY AND EASEMENT GRANTS OF RECORD; (B) LOCATION OF EXISTING UNDERGROUND AND UTILITY FACILITIES; (C) CONDITIONS OR RESTRICTIONS GOVERNING THE LOCATION OF THE FACILITIES WITHIN THE RIGHT-OF-WAY, AND EASEMENT GRANTS OF RECORD, AND UTILITY FACILITIES WITHIN THE SUBDIVISION. "APPROVING" SHALL HAVE THE MEANING IN THE UTAH CODE SECTION 10-9A-603(4)(C)(ii).

LEGEND

- BOUNDARY LINE
- CENTERLINE
- SETBACK LINE
- EASEMENT LINE
- EXISTING LOT LINES
- PROPOSED LOT LINES
- PROPOSED FIRE HYDRANT
- EXISTING FIRE HYDRANT
- STREET LIGHT
- EXISTING MONUMENT
- PROPOSED STREET MONUMENT
- N/A NO ACCESS

NOTICE: FUTURE RESIDENTS AND LOT OWNERS ARE HEREBY PLACED ON NOTICE OF THE ONGOING AND ACTIVE AGRICULTURAL USES AND OPERATIONS ADJACENT TO OR NEAR THE TALUS RIDGE PLAT & LOTS. THIS AREA IS SUBJECT TO THE NORMAL AND EVERYDAY SOUNDS, ODORS, SIGHTS, NUISANCES, EQUIPMENT, FACILITIES, AND ALL OTHER ASPECTS ASSOCIATED WITH AGRICULTURAL OPERATIONS, USES, AND PROPERTY RIGHTS. THESE SOUNDS, ODORS, SIGHTS, AND NUISANCES MAY OCCUR AT ALL TIMES OF THE DAY AND NIGHT INCLUDING DURING WEEKENDS AND HOLIDAYS. THE CITY IS NOT RESPONSIBLE OR LIABLE FOR THESE USES AND IMPACTS AND WILL NOT RESTRICT ANY GRANDFATHERED AGRICULTURAL USE FROM CONTINUING TO OCCUR LAWFULLY.

LEI
ENGINEERS
SURVEYORS
PLANNERS
3302 N. Main Street
Spanish Fork, UT 84660
Phone: 801.798.0555
Fax: 801.798.9393
office@lei-eng.com
www.lei-eng.com

QUESTAR ACCEPTANCE

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 ACCEPTANCE, APPROVAL OR ACKNOWLEDGMENT OF ANY TERMS CONTAINED IN THE PLAT, INCLUDING THOSE SET FORTH 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.

APPROVED THIS_____DAY OF_____, 20____

QUESTAR GAS COMPANY

BY- _____

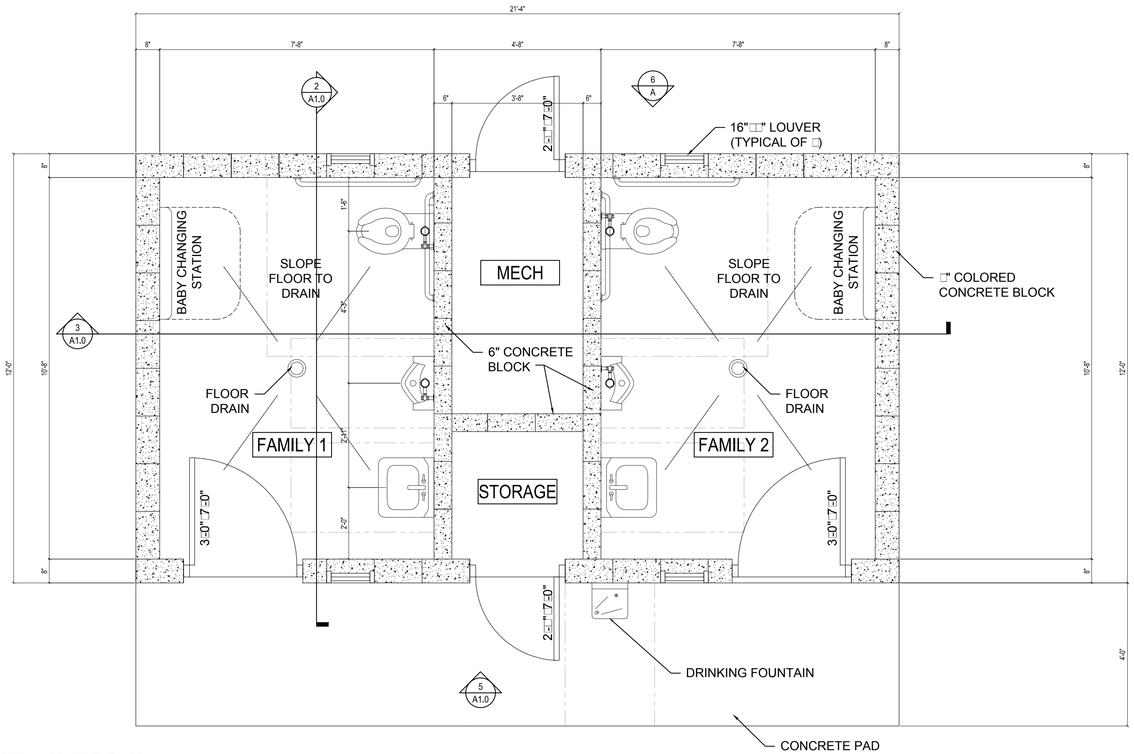
TITLE- _____

QUESTAR GAS COMPANY	ROCKY MOUNTAIN POWER	FIRE CHIEF APPROVAL	PLANNING COMMISSION REVIEW	SARATOGA SPRINGS ENGINEER APPROVAL	SARATOGA SPRINGS ATTORNEY	LEHI CITY POST OFFICE
APPROVED THIS _____ DAY OF _____, A.D. 20____.	APPROVED THIS _____ DAY OF _____, A.D. 20____.	APPROVED BY THE FIRE CHIEF ON THIS DAY OF _____, A.D. 20____.	REVIEWED BY THE PLANNING COMMISSION ON THIS DAY OF _____, A.D. 20____.	APPROVED BY THE CITY ENGINEER ON THIS DAY OF _____, A.D. 20____.	APPROVED BY SARATOGA SPRINGS ATTORNEY ON THIS _____ DAY OF _____, A.D. 20____.	APPROVED BY POST OFFICE REPRESENTATIVE ON THIS _____ DAY OF _____, A.D. 20____.
QUESTAR GAS COMPANY	ROCKY MOUNTAIN POWER	CITY FIRE CHIEF	CHAIRMAN, PLANNING COMMISSION	CITY ENGINEER	SARATOGA SPRINGS ATTORNEY	LEHI CITY POST OFFICE REPRESENTATIVE

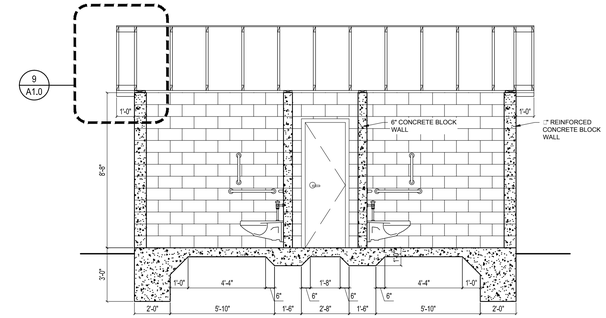
COMCAST CABLE TELEVISION	CENTURYLINK
APPROVED THIS _____ DAY OF _____, A.D. 20____.	APPROVED THIS _____ DAY OF _____, A.D. 20____.
COMCAST CABLE TELEVISION	QWEST

SURVEYOR'S SEAL	NOTARY PUBLIC SEAL	CITY-COUNTY ENGINEER SEAL	COUNTY-RECORDER SEAL

This form approved by Utah County and the municipalities therein.



1 A1.0 FLOOR PLAN
SCALE : 1□2" □ 1□0"



2 A1.0 SECTION
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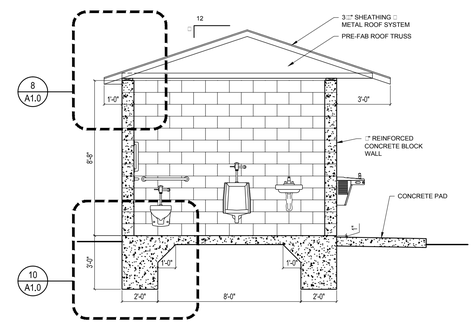
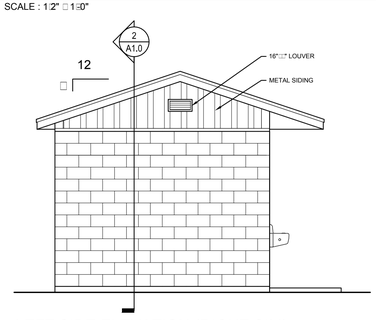
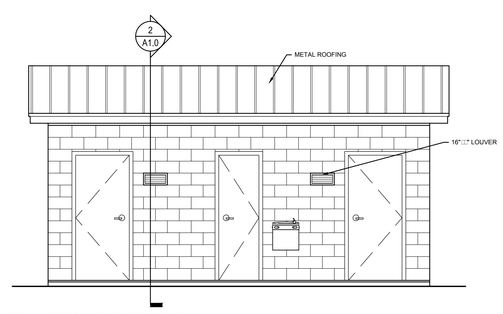


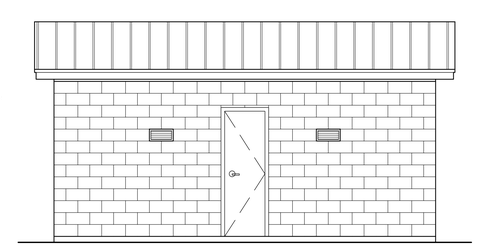
3 A1.0 SECTION
SCALE : 1□" □ 1□0"



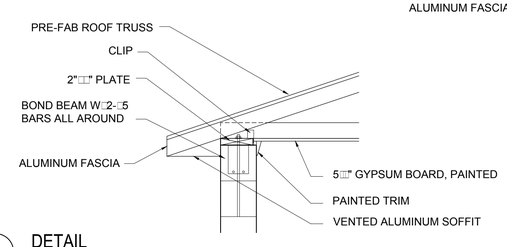
4 A1.0 LEFT SIDE ELEVATION (RIGHT SIM)
SCALE : 1□" □ 1□0"



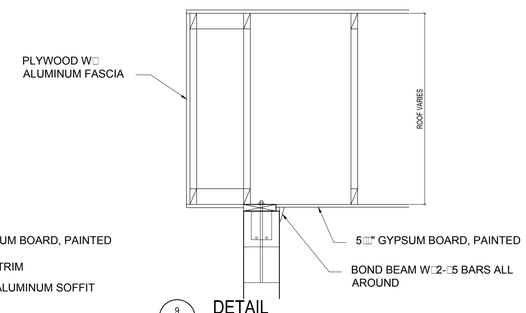
5 A1.0 FRONT ELEVATION
SCALE : 1□" □ 1□0"



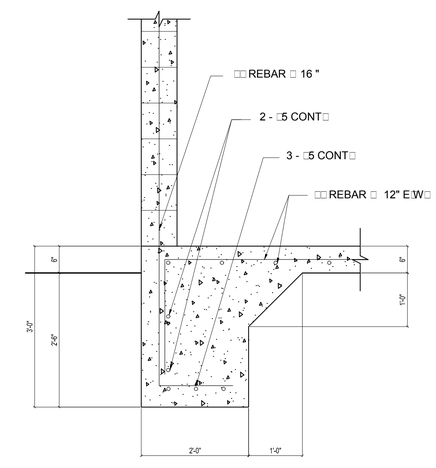
6 A1.0 REAR ELEVATION
SCALE : 1□" □ 1□0"



8 A1.0 DETAIL
SCALE : 3□" □ 1□0"



9 A1.0 DETAIL
SCALE : 3□" □ 1□0"



10 A1.0 DETAIL
SCALE : 3□" □ 1□0"

PRELIMINARY NOT FOR CONSTRUCTION

THESE DRA INGS OR ANY PARTS THEREOF AS INSTRUMENTS OF SERVICE REMAIN THE PROPERTY OF THE ARCHITECTS AND MAY NOT BE REPRODUCED OR USED ON OTHER OR OTHER PURPOSES WITHOUT THEIR WRITTEN CONSENT

PLOT DATE: 7/31/2015 C:\Users\matthew\Desktop\Toilet Building\A1.0 FLOOR PLAN, ELEVATIONS.dwg

LEI
ENGINEERS
SURVEYORS
PLANNERS
3302 N. Main Street
Spanish Fork, UT 84660
Phone: 801.798.0555

HARRIS ARCHITECTURE
3520 N UNIVERSITY AVENUE #200, PROVO UT 84604
801-377-6303 | WWW.HARRIS-ARCHITECTURE.COM

EDGEHomes
480 W 800 N Suite 200 - Orem UT, 84057 - 801.494.0150

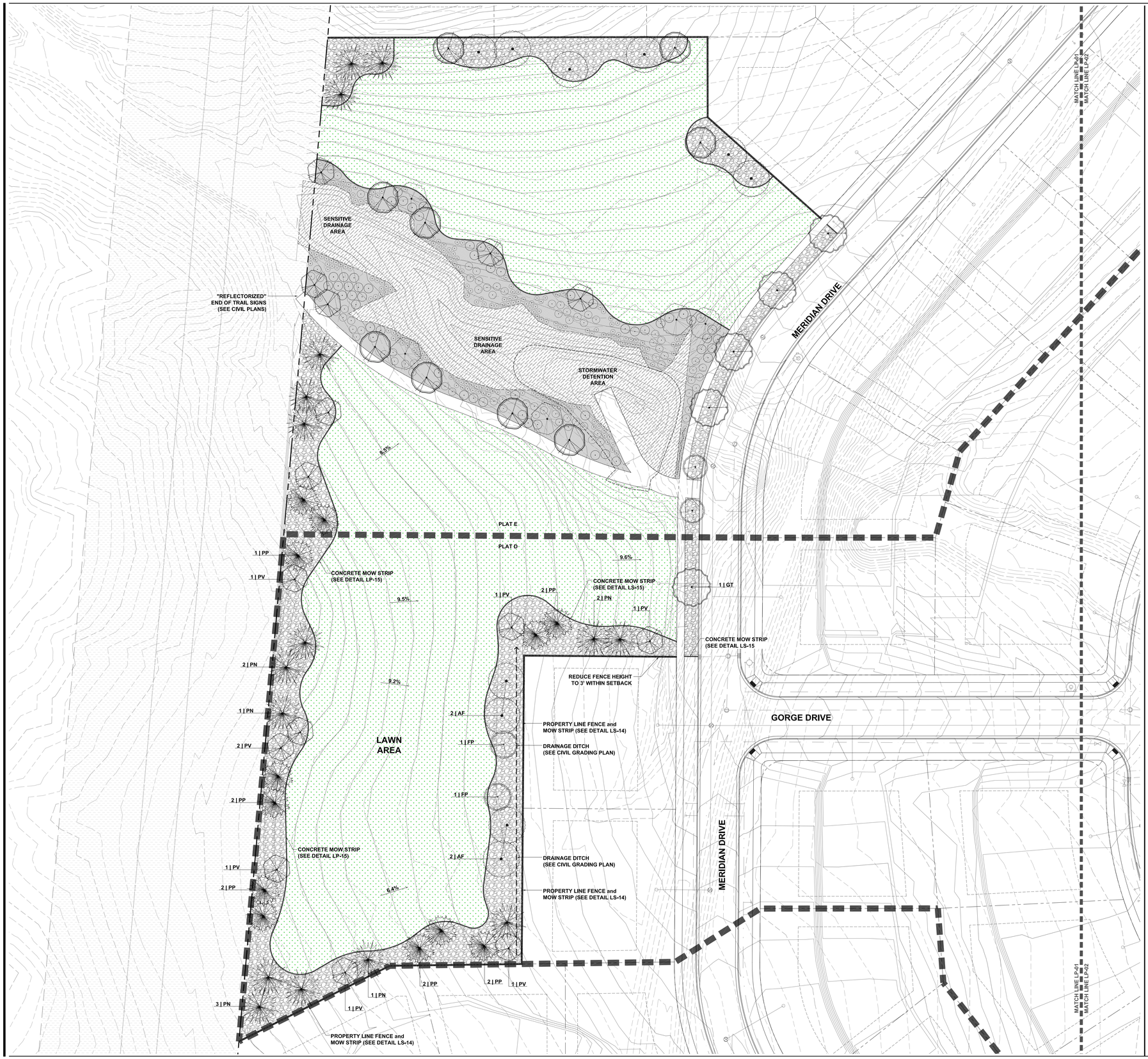
PLAN: TALUS RIDGE TOILET ROOM

SHEET:

SUBDIVISION: TALUS RIDGE	LOT #:
	PARK:
CITY: SARATOGA SPRINGS	STATE: UT

DATE: 07/31/2015

SHEET #: A1□0



PROPOSED PLANT MATERIALS

	SCIENTIFIC NAME	COMMON NAME	SIZE	QTY.
TREES				
AF	*Acer x freemanii* 'Autumn Blaze'	Maple	2.5" cal.	4
FP	*Fraxinus pennsylvanica* 'Summit'	Green Ash	2.5" cal.	2
GT	*Gleditsia triacanthos* 'Skyline'	Honeylocust	2.5" cal.	20
SS	*Malus* 'Spring Snow'	Flowering Crabapple	2.5" cal.	2
PP	*Picea pungens*	Colorado Spruce	6' - 7'	10
PN	*Pinus nigra*	Austrian Pine	6' - 7'	10
PV	*Prunus virginiana* 'Canada Red Select'	Chokecherry	2.5" cal.	8
			Total:	**56**

LANDSCAPE MATERIALS LEGEND

Lawn Areas (40,370.0 sq. ft.)
Lawn areas shall be a hydroseed mix or cut sod. Hydroseed mix shall match City standard and shall be applied to a prepared base of six inches (6") of screened top soil. Cut sod shall be applied to a prepared base of four inches (4") of screened top soil. Apply hydroseed or sod once irrigation and finish grading has been completed. All lawn areas shall be 100% irrigated with pop-up spray heads and rotors.

Decorative Rock Areas (27,215.0 sq. ft.)
Decorative rock areas shall include planter beds within the open space and landscaped parkstrips. Planter beds should be constructed with twelve inches (12") of screened top soil for planting and shall be finished with two inch (2") and four inch (4") Southtown rock blend. Apply decorative rock to a depth of four inches (4"). Prior to installation of decorative rock, it is recommended that DeWitt Pro5 weed barrier be applied to the planter beds. All trees within decorative rock areas shall be watered by point-source drip irrigation.

Sensitive Drainage Area (14,310.0 sq. ft.)
Sensitive drainage area to remain undisturbed in natural condition. No landscape improvements are proposed within this area. Any disturbance created by civil improvements should be repaired back to natural conditions.

Concrete Mow Curb (785.0 lin. ft.)
Concrete mow strip shall be six inch by six inch (6" x 6") flat concrete curbing, stained light brown to complement decorative rock mulch. Concrete mow strip shall be installed once finish grading has been completed, but prior to installation of plant materials and sod.

LANDSCAPE and IRRIGATION DETAILS:

Refer to the following Saratoga Springs' Landscape and Irrigation details on sheets LP-03 and IP-03 for additional information:

LS-1	Main Line Isolation Valve 4"+	PI-1	Trench Detail
LS-2	Quick Coupler	PI-2	Concrete Thrust Blocks
LS-3	Remote Control Valve	PI-3	1" Single and Dual Service Laterals
LS-4	Stainless Steel Enclosure in Strong Box	PI-4	Parks and Open Space Connection
LS-5	Stainless Steel Enclosure	PI-5A	1" Single Service Lateral Box
LS-6	Large Rotary Head Pop-Up Sprinkler	PI-5B	1 1/2" Dual Service Lateral Box
LS-7	Medium/Small Area Sprinkler Head	PI-5C	Parts List For Single/Dual Service Lateral Boxes
LS-8	Manual Drain Valve		
LS-9	Sleeving Detail	PI-6	2" Service Lateral
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LS-14	Vinyl Fence With Mow Strip	PI-11	RPZ Backflow Preventer For Main Lines
LS-15	Concrete Mow Curb	PI-12	2" Blow Off Valve
		PI-13	Collar for Water Valves

TREE PLANTING NOTES:

1. All deciduous trees shown on this Landscape Plan shall be two and one half inch caliper (2.5" cal.) balled and burlapped nursery stock. Balled and burlapped trees showing obvious signs of damage to the root ball and/or trunk shall not be acceptable.
2. All conifer trees shown on this Landscape Plan shall be six to seven feet (6' - 7') in height, balled and burlapped nursery stock. Balled and burlapped trees showing obvious signs of damage to the root ball and/or trunk shall not be acceptable.
3. Tree holes shall be dug two times (2x) the diameter of the root ball and only as deep as the root ball.
4. Tree root ball shall be at least twelve (12") inches in diameter per each one (1") inch of tree caliper and at least eighteen (18") inches deep. Root ball shall be wrapped tightly with no loose parts.
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6. Trees shall only be lifted by the wire basket. Never lift trees by grasping trunk or limbs, or by attaching any type of sling or choker.
7. Do not remove the wire basket from balled and burlapped trees during planting. Bend the top wire loops down into hole after cutting twine or rope from around the tree trunk.
8. Once the hole has been backfilled two thirds (2/3) the depth, cut and remove the top third of burlap.
9. Remove all strings, rope, stakes, taping, tags, flagging, and any other such items.
10. Backfill hole with excavated material and compact only enough to hold tree in place. Never use mechanical compaction. Top soil, mulch, or peat moss may be added to excavated material if high quantities of clay soils are present, but should not completely replace excavated material. Backfill material should cover root flare slightly, but should not be piled against trunk.
11. Water generously to soak entire root ball and backfill material. Additional backfill material may need to be added as soil settles below root flare.
12. Form a mulch ring around the base of the tree. Mulch ring shall be five feet (5') in diameter and three (3") to (4") inches deep. Do not pile excessive mulch or decorative rock around tree trunks.

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CUT / FILL CALCULATIONS:

1. PHASE D (FINISHED GRADE)
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   FILL = 19,166 CU.YD.
   EXCESS (FILL) = 4,093 CU.YD.

0 7.5 15 30 60

SCALE: 1"=30'

No.	Revision/Issue	Date

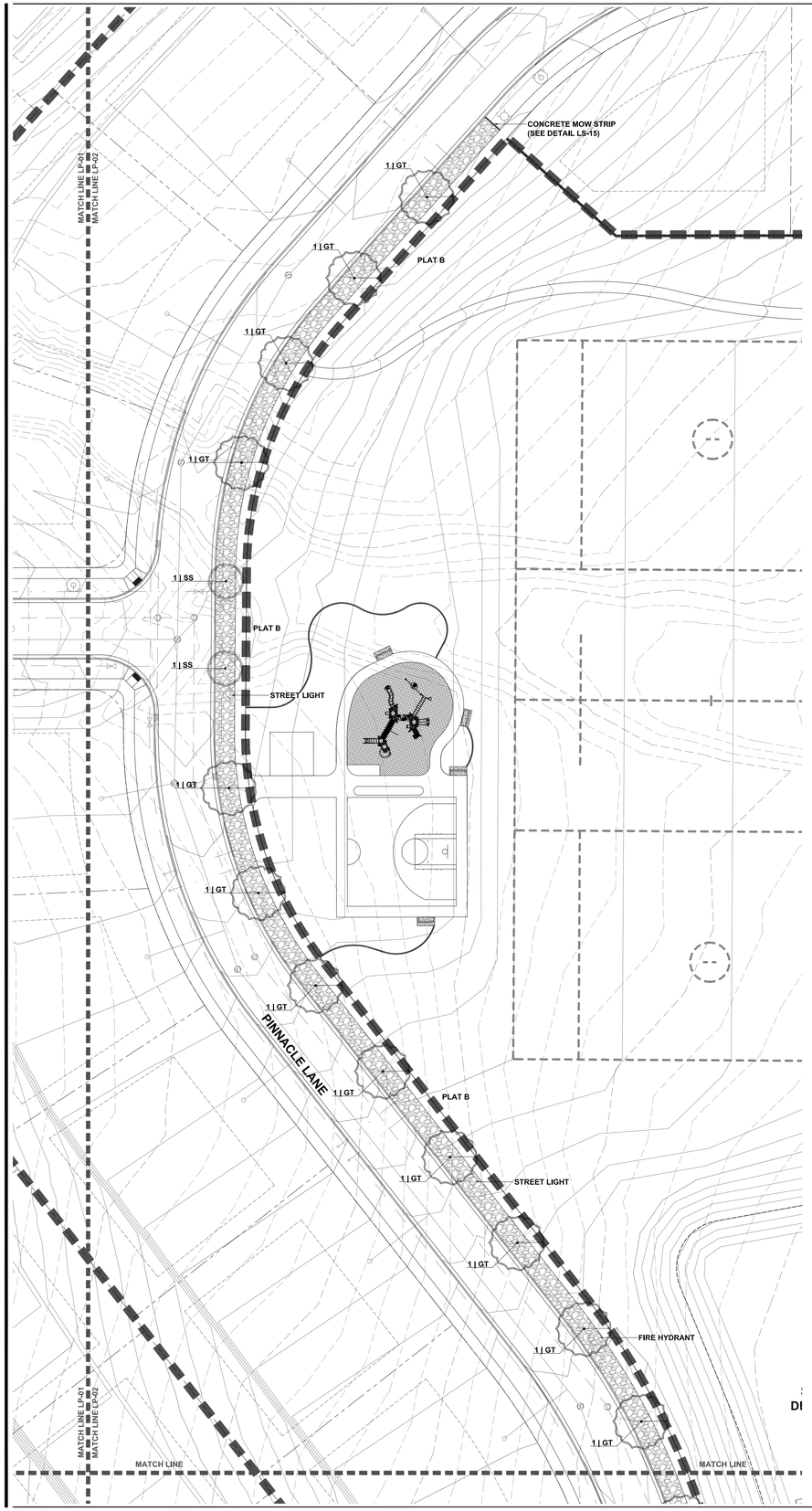
Designed By: AKC
Drawn By: AKC
Reviewed By: AKC

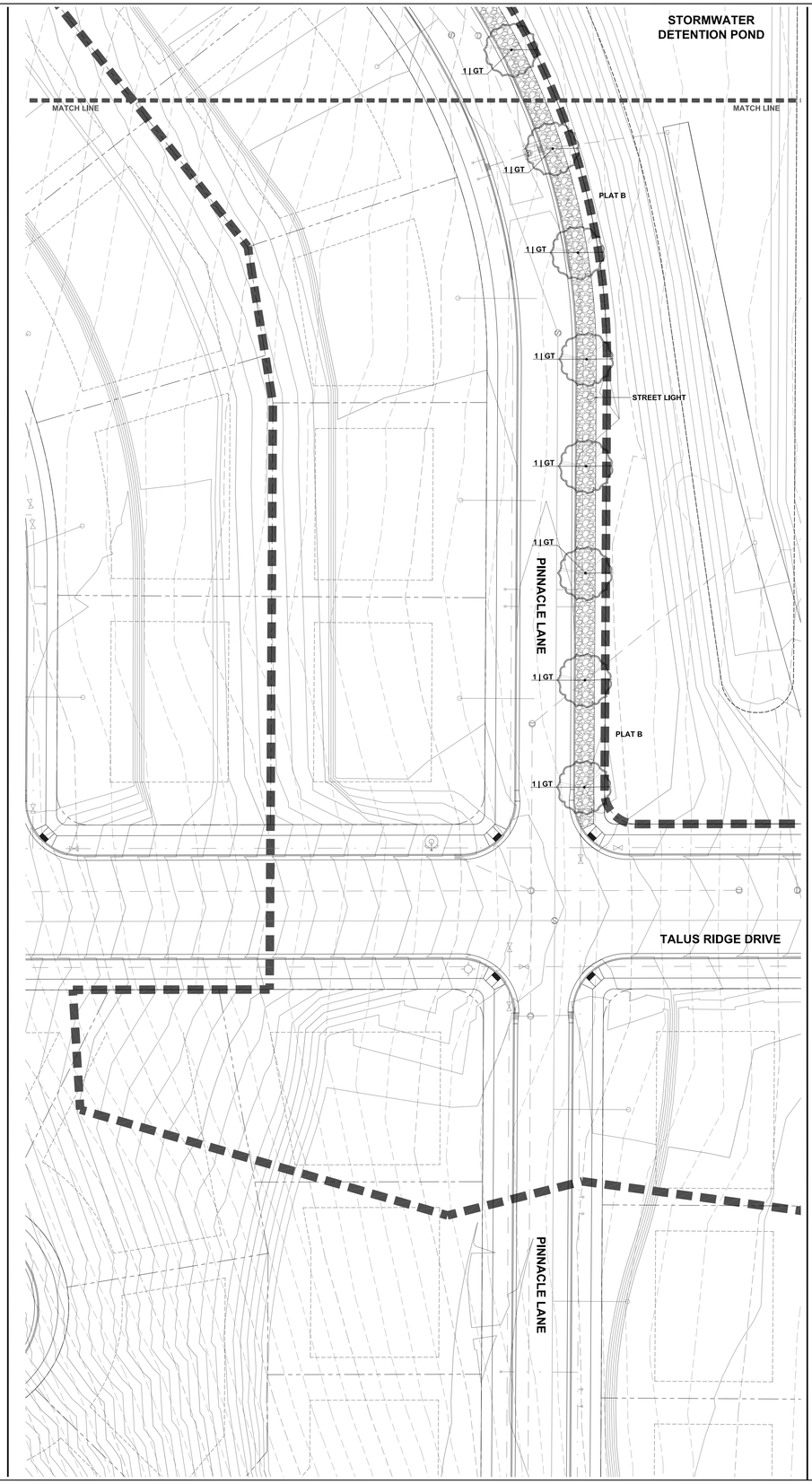
State of Utah — ADAM K. CASTOR — No. 7703962 — 8/3/15 — Licensed Landscape Architect

TALUS RIDGE
SARATOGA SPRINGS, UT
PLAT D
OPEN SPACE LANDSCAPE

EDGE HOMES

Date: 8/3/15	Drawing: LANDSCAPE PLAN
Issue: FINAL	Sheet: LP-01
Project: 14-7002	





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   EXCESS (FILL) = 4,093 CU.YD.

0 7.5 15 30 60

SCALE: 1"=30'

No.	Revision/Issue	Date

Designed By: AKC
Drawn By: AKC
Reviewed By: AKC

State of Utah
ADAM K. CASTOR
No. 7703962
8/3/15
Licensed Landscape Architect

TALUS RIDGE
SARATOGA SPRINGS, UT
PLAT D
OPEN SPACE LANDSCAPE

EDGE HOMES

Date: 8/3/15
Drawing: LANDSCAPE PLAN
Issue: FINAL
Sheet: LP-02
Project: 14-7002

RESOLUTION NO. R15-36 (8-18-15)

ADDENDUM TO RESOLUTION OF THE CITY OF SARATOGA SPRINGS PERTAINING TO THE CITY STREET LIGHTING SPECIAL IMPROVEMENT DISTRICT TO INCLUDE ADDITIONAL SUBDIVISION LOTS. (Talus Ridge Plat D)

WHEREAS, on May 10, 2001, the City Council adopted Resolution No. 01-0510-01 creating a street lighting special improvement district (the "Lighting SID") consisting of all lots and parcels included within the Subdivisions set out in said Resolution for the maintenance of street lighting within the Lighting SID.

WHEREAS, *Utah Code Ann.* § 17A-3-307 provides that additional properties may be added to the special improvement district and assessed upon the conditions set out therein.

WHEREAS, the City Council has given final plat approval to Talus Ridge Plat D (the "Subdivision") conditioned upon all lots in the Subdivision being included in the Lighting SID.

WHEREAS, the City Council finds that the inclusion of all of the lots covered by the Subdivision in the Lighting SID will benefit the Subdivision by maintaining street lighting improvements, after installation of such by the developer of the Subdivision, which is necessary for public safety, and will not adversely affect the owners of the lots already included within the Lighting SID.

WHEREAS, the owners of the property covered by the Subdivision have given written consent: (i) to have all lots and parcels covered by that Subdivision included within the Lighting SID, (ii) to the improvements to that property (maintenance of the street lighting), (iii) to payment of the assessments for the maintenance of street lighting within the Lighting SID, and (iv) waiving any right to protest the Lighting SID and/or assessments currently being assessed for all lots in the Lighting SID (which consent is or shall be attached as Exhibit 1 to this Resolution).

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SARATOGA SPRINGS THAT:

1. All lots and parcels in the Subdivision be added to and included in the Lighting SID based upon the above findings and the written consent attached as Exhibit 1 to this Resolution.

2. City staff is directed to file a copy of this Resolution, as an Addendum to Resolution No. 01-0510-01 creating the Lighting SID, as required by *Utah Code Ann.* § 17A-3-307.

3. Assessments will be hereafter levied against owners of all lots within the Subdivision on the same basis as assessments are being levied against other lots included in the Lighting SID.

4. The provisions of this Resolution shall take effect upon the passage and publication of this Resolution as required by law.

Passed this 18th day of August, 2015 on motion by

Councilor _____, seconded by Councilor _____.

CITY OF SARATOGA SPRINGS
A UTAH MUNICIPAL CORPORATION

Signed: _____
Mayor Date

Attest: _____
Recorder Date

CONSENT OF OWNER OF PROPERTY
TO BE INCLUDED IN STREET LIGHTING SPECIAL IMPROVEMENT DISTRICT

WHEREAS the City of Saratoga Springs (the "City"), by and through its City Council, has created a Street Lighting Special Improvement District (the "Lighting SID") to pay for maintenance of street lighting within the subdivisions covered by the Lighting SID.

WHEREAS the undersigned ("Developer") is the developer of Talus Ridge Plat D (the "Subdivision") located within the City for which the City Council has given or is expected to give final plat approval.

WHEREAS, *Utah Code Ann.* § 17A-3-307 provides that before the completion of the improvements covered by a special improvement district, additional properties may be added to the special improvement district and assessed upon the conditions set out therein. Since the improvements covered by the Lighting SID are the maintenance of street lighting in the Lighting SID, said improvements are not completed so additional properties may be added to the Lighting SID pursuant to said § 17A-3-307.

WHEREAS, the City is requiring that the Subdivision be included within the Lighting SID in order to provide for the maintenance of street lighting within the Subdivision as a condition of final approval of the Subdivision.

WHEREAS, Developer, as the owner of the property covered by the Subdivision, is required by *Utah Code Ann.* § 17A-3-307 to give written consent to having the property covered by that Subdivision included within the Lighting SID and to consent to the proposed improvements to the property covered by the Subdivision and to waive any right to protest the Lighting SID.

NOW THEREFORE, Developer hereby consents to including the lots and parcels within the Subdivision in the Lighting SID. On behalf of itself and all lot purchasers and/or successors in interests, Developer consents and agrees as follows:

1. Consents to have all property covered by the Subdivision and all lots and parcels created by the Subdivision included within the Lighting SID. The legal description and the tax identification number(s) of the property covered by the Subdivision are set out in Exhibit A attached to this Consent.

2. Consents to the improvements with respect to the property covered by the Subdivision -- that is the maintenance of street lighting within the Subdivision. The street lighting within the Subdivision will be installed by Developer as part of the "Subdivision Improvements."

3. Agrees to the assessments by the Lighting SID for the maintenance of street lighting within the Lighting SID.

4. Waives any right to protest against the Lighting SID and/or the assessments currently being assessed for all lots in the Lighting SID.

Dated this ____ day of _____, 2015.

DEVELOPER:

Name:
Authorized
Signature:
Its:

CITY OF SARATOGA SPRINGS

City Council
Staff Report

Talus Ridge Plat E
Final Plat
Tuesday, August 18, 2015
Public Meeting

Report Date:	Tuesday, August 11, 2015
Applicant:	Edge Homes
Owner:	Timp Land Holdings, LLC
Location:	Approximately 1100 West Talus Ridge Blvd
Major Street Access:	800 West, Talus Ridge Blvd
Parcel Number(s) & Size:	a portion of 58:034:0543, ~ 40 acres
Parcel Zoning:	R-3, Low Density Residential
Adjacent Zoning:	A, R-3, RR
Current Use of Parcel:	Undeveloped, vacant
Adjacent Uses:	Low Density Residential, Rural Residential, Agricultural
Previous Meetings:	2/13/14 and 2/27/14, PC review of Concept Plan and Rezone request 3/25/14, CC review of Concept Plan and Rezone request 6/12/14, PC review of Preliminary Plat
Previous Approvals:	7/1/14, CC approval of Preliminary Plat 9/2/14, CC approval of open space and phasing plan 9/2/14, CC approval of Final Plat A 12/12/14, CC approval of Final Plat B 5/19/15, CC approval of Final Plat C
Type of Action:	Administrative
Land Use Authority:	City Council
Future Routing:	None
Author:	Sarah Carroll, Senior Planner

A. Executive Summary: This is a request for final plat approval for Talus Ridge Plat E which consists 10.46 acres in the R-3 zone and includes 27 lots and 2.07 acres of open space.

Recommendation:
Staff recommends that the City Council conduct a public meeting, take public comment at their discretion, discuss the proposed final plat, and choose from

Sarah Carroll, Senior Planner
1307 North Commerce Drive, Suite 200 • Saratoga Springs, Utah 84045
scarroll@saratogaspringscity.com • 801-766-9793 x106 • 801-766-9794 fax

the options in Section "H" of this report. Options include approval with conditions, continuation of the item, or denial.

B. **Background:** The preliminary plat for the entire Talus Ridge development was approved by the City Council on July 1, 2014 and consisted of 216 total lots, 81 of which were in the 9,000-9,999 square foot range. Plat A included 8 lots in this size range. Plat B included 30 lots ranging in size from 9,000-9,999 square feet and 9 corner lots between 9,900-10,999 square feet. Plat C included 2 lots in the 9,000-9,999 square foot range and 2 corner lots between 9,900-10,999 square feet. Plat D includes 4 lots in the 9,000-9,999 square foot range and 5 corner lots between 9,900-10,999 square feet. Plat E includes 14 lots in the 9,000-9,999 square foot range. This is a running total of 74 lots with reductions.

The lot size reduction was previously granted by the City Council because of additional benefits granted to the City including:

- The developer will bury the canal and construct a trail within the canal right of way
- The developer will construct a 77 foot wide right of way running east/west through the property
- Two of the open spaces are large parks that have a wide public frontage which is an enhancement to the park space
- The developer will be installing master planned storm drain lines and culinary and secondary water lines.

The boundary of Plat E is consistent with the phasing plan that was approved by the City Council on September 2, 2014 (attached). The running totals for the project are below:

Plat	# lots	# lot reductions	Total Acreage	Total Open Space	Cumulative Open Space
A	31	8	16.65	3.59	21.56%
B	49	39	22.63	6.56	25.84%
C	23	4	8	0	21.46%
D	24	9	10.28	1.33	19.94%
E	27	14	10.46	2.07	**19.92%**
TOTALS	**154**	**74**	**68.02**	**13.55**	

C. **Specific Request:** This is a request for Final Plat approval for Plat E of the Talus Ridge Development.

D. **Process:** Section 19.13.04 of the City Code states that Final Plats require approval by the City Council. No public hearing is required.

E. **Community Review:** Prior to City Council review of the proposed final plat, the Preliminary Plat was reviewed by the Planning Commission at a public hearing on June 12, 2014 and by the City Council at a public meeting on July 1, 2014. The public hearing with the Planning Commission was noticed as a public hearing in the *Daily Herald* and notices were mailed to all property owners within 300 feet of the subject property.

During the public hearing with the Planning Commission and at the subsequent City Council meeting, neighboring residents in the Agricultural zone made the following comments:

- Support was given for placing notification on the title and/or plat that neighboring properties have animals and agricultural rights.
- Animals contribute to smells, noise, flies, dust, etc. Future buyers need to be aware of this.
- If a vinyl fence is placed between the future lots and the agricultural properties it will be easily broken by animals. They currently have a barb-wire fence. A pre-cast fence was suggested.
- Children are attracted to animals and it's important that measures are taken to prevent harm to children.

In order to address these concerns, one of the conditions of the preliminary plat approval was that a note be placed on the title to notify the buyers of neighboring agricultural rights. Condition number 3 in Section "H" of this report addresses this condition. The applicant and neighboring agricultural property owners were encouraged to work toward a solution on fencing. The applicant proposed vinyl fencing and was willing to share costs with neighboring property owners for a concrete fence. *(The proposed plans do not include a fence; the code did not require fencing between Agricultural and residential property when the preliminary plat was approved.)*

F. **General Plan:** The site is designated as Low Density Residential on the adopted Future Land Use Map. The General Plan states that areas designated as Low Density Residential are "designed to provide areas for residential subdivisions with an overall density of 1 to 4 units per acre. This area is to be characterized by neighborhoods with streets designed to the City's urban standards, single-family detached dwellings and open spaces."

Finding: consistent. The overall project is 88.80 acres and requires 15% open space (13.32 acres); the project includes 15.03% open space. The sensitive lands may not be considered when calculating density. The sensitive lands include the detention areas, the drainage channel, and the canal right of way which constitute 4.09 acres of property, resulting in a net area of 84.71 acres. 216 lots are proposed; thus the density is 2.55 units per acre (216 units/84.71 acres).

G. **Code Criteria:** Applicable code sections are reviewed below. Please see the attached "Planning Review Checklist" for additional details.

- 19.04, Land Use Zones – Complies (lot size reduction discussed below)
- 19.05.02, Supplemental Regulations – Complies
- 19.06, Landscaping and Fencing – Complies
- 19.12, Subdivisions – Complies
- 19.13, Process - Complies

Additional Discussion:

Minimum Lot Sizes: complies, as approved with the Preliminary Plat.

19.04.13(4) states that the minimum lot size in the R-3 zone is 10,000 square feet and outlines criteria that may be evaluated for consideration of a lot size reduction to 9,000 square feet. During the Preliminary Plat review, the City Council granted approval of 81

lots in the 9,000 to 9,999 square foot size range. Plat E includes 14 lots ranging in size from 9,000-9,999 square feet.

H. Recommendation and Alternatives:

Staff recommends that the City Council review the Final Plat and select from the options below.

Recommended Motion – Approval:

"I move that the City Council approve the Talus Ridge Plat E Final Plat, located at approximately 1100 West Talus Ridge Blvd, with the findings and conditions below:

Findings:

1. The proposed final plat is consistent with the General Plan as explained in the findings in Section "F" of this report, which findings are incorporated herein by this reference.
2. The proposed final plat meets all the requirements in the Land Development Code as explained in Section "G" of this report, which findings are incorporated herein by this reference.

Conditions:

1. That all requirements of the City Engineer are met, including those listed in the attached report.
2. That all requirements of the Fire Chief are met.
3. Notification of the neighboring Agricultural rights shall be placed on the title to notify future buyers of abutting uses. This document shall be recorded concurrently with the final plat.
4. The landscape plans are approved as proposed.
5. The fencing around the open space shall be six foot tall semi-private white vinyl.
6. Any other conditions as articulated by the City Council: _____
   _____

Alternative Motions:

Alternative Motion A – Continuance

The City Council may choose to continue the item. "I move to **continue** the final plat to another meeting on [DATE], with direction to the applicant and Staff on information and/or changes needed to render a decision, as follows:

_____

_____

_____

Alternative Motion B – Denial

The City Council may choose to deny the application. "I move that the City Council deny the Talus Ridge Plat E Final Plat, generally located at 1100 West Talus Ridge Blvd, with the findings below."

1. The final plat is not consistent with the General Plan, as articulated by the City Council: _____, and/or,

2. The final plat is not consistent with Section [19.04, 19.05.02, 19.06, 19.12, 19.13] of the Code, as articulated by the City Council: _____.

I. Exhibits:

1. Engineering Staff Report (pages 6-7)
2. Planning Review Checklist (pages 8-11)
3. Zoning / Location map (page 12)
4. Overall Phasing Plan and Open Space Plan (page 13)
5. Proposed Final Plat (pages 14-15)
6. Landscape Plans (page 16)

City Council
Staff Report

Author: Jeremy D. Lapin, City Engineer
Subject: Talus Ridge Plat E – Final Plat
Date: August 18, 2015
Type of Item: Final Plat Approval

Description:

A. Topic: The Applicant has submitted a Final Plat application. Staff has reviewed the submittal and provides the following recommendations.

B. Background:

Applicant:	*Edge Homes - Timp Land Holdings, LLC*
Request:	*Final Plat Approval*
Location:	*Approximately 1100 West Talus Ridge Blvd*
Acreage:	*10.46 acres - 27 lots and 2.07 acres of Open Space*

C. Recommendation: Staff recommends the approval of final plat subject to the following conditions:

D. Conditions:

A. Meet all engineering conditions and requirements in the construction of the subdivision and recording of the plats. Review and inspection fees must be paid as indicated by the City prior to any construction being performed on the project.

B. All review comments and redlines provided by the City Engineer are to be complied with and implemented into the Final plat and construction drawings.

C. Developer must secure water rights as required by the City Engineer, City Attorney, and development code.

D. Submit easements for all off-site utilities not located in the public right-of-way.

E. Developer is required to ensure that there are no adverse effects to future homeowners due to the grading practices employed during construction of these plats.

F. Project must meet the City Ordinance for Storm Water release (0.2 cfs/acre for all developed property) and all UPDES and NPDES project construction requirements.

G. Final plats and plans shall include an Erosion Control Plan that complies with all City, UPDES and NPDES storm water pollution prevention requirements.

H. All work to conform to the City of Saratoga Springs Standard Technical Specifications, most recent edition.

I. Project bonding must be completed as approved by the City Engineer prior to recordation of plats.

J. Developer may be required by the Saratoga Springs Fire Chief to perform fire flow tests prior to final plat approval and prior to the commencement of the warranty period.

K. Submittal of a Mylar and electronic version of the as-built drawings in AutoCAD format to the City Engineer is required prior acceptance of site improvements and the commencement of the warranty period.

L. Developer shall bury and/or relocate the power lines that are within this plat.

M. All roads shall be designed and constructed to City standards and shall incorporate all geotechnical recommendations as per the applicable soils report.

N. Developer shall provide a finished grading plan for all lots and shall stabilize and reseed all disturbed areas. Slopes within lots may not be steeper than 4:1 (Horizontal: Vertical).

O. A spillway from the debris basin shall be installed to allow overflows to be safely routed into the adjacent ROW and away from adjacent properties.

P. Open spaces shall have metered points of connection from the secondary water

Q. The existing control structures for ponds A and B shall be modified for the new contributing area and for the addition of the offsite Drainage. The orifice structures shall be sized for the total contributing drainage areas, be multi-staged to ensure low flows are detained while the 100-year flow can safely pass and shall be protected from clogging with a snout.

R. All the existing manholes shall be adjusted to grade and collared within the roadway.

S. Native areas, including the existing drainage, shall be improved in accordance with City Standards and Specifications including the removal of all invasive species and the replanting with native species to ensure a minimum vegetative coverage of 70%. All open space areas, including native areas, shall be irrigated.

APPLICATION REVIEW CHECKLIST

(8/20/2014 Format)

Application Information

Date Received:	7/13/15
Project Name:	**Talus E Final**
Project Request / Type:	Final Plat
Body:	City Council
Meeting Type:	Public Meeting
Applicant:	Edge Homes
Owner (if different):	Timp Land Holdings, LLC
Location:	~1100 West Talus Ridge Blvd
Major Street Access:	800 West
Parcel Number(s) and size:	58:034:0543, ~ 40 acres
General Plan Designation:	Low Density Res
Zone:	R-3
Adjacent Zoning:	R-3, A, RR
Current Use:	vacant, undeveloped
Adjacent Uses:	residential, agricultural
Previous Meetings:	Prelim Plat approved
Land Use Authority:	City Council
Future Routing:	None
Planner:	Sarah Carroll

Section 19.13 – Application Submittal

- Application Complete: yes
- Rezone Required: no
- General Plan Amendment required: no
- Additional Related Application(s) required: none

Section 19.13.04 – Process

- DRC:
  - 7/20/15: tentative for 8/4 pending resubmittal – waiting on landscape plans
  - 7/27/15: received landscape plans on 7/20/15, tentative for 8/18
  - 8/3/15: confirmed for 8/18/15 CC - revised landscape plans are under review
- UDC: N/A for single fam
- Neighborhood Meeting: N/A
- PC: N/A for final. Prelim previously approved
- CC: scheduled for 8/18/15 CC meeting

General Review

Building Department

- No concerns

Fire Department

- Meet turn-around radius for cul-de-sacs. 96’ diameter required. See Cityworks review letter

GIS / Addressing

- Addresses should be double checked before recordation. See Cityworks review letter.

Code Review

- 19.04, Land Use Zones - Complies
    - Zone: R-3
    - Use: Permitted Use - single family residential
    - Density: up to 3 units per acre allowed - Plat E is 10.46 acres with 27 lots (2.58 units per acre)
    - Minimum lot size: 9,000 square foot minimum granted by City Council during Preliminary Plat review.
    - Setbacks:
        - The setback detail meets requirements and indicates:
            - 25’ front
            - 20’ corner side
            - 8’ min side yard, 20’ total
            - 25’ rear
    - Lot width: 70’ wide required at front setback
    - Lot Frontage: 35’ required on a public or private street
    - Height: 35’ max
    - Lot Coverage: 50% max
    - Dwelling size: 1,250 square feet of living space, minimum required above grade
    - Open Space / Landscaping: 15% required – overall development complies, see overall open space and phasing plan
        - Plat A included 3.59 acres of open space (21.53%) within 16.67 acres, and a proposed tot lot and two benches. Plat B included 6.57 acres of open space (29%) within 22.63 acres to be developed with: a basketball half-court, a playground, a lacrosse field, and a trail along the canal. A restroom is also proposed in the Plat B park and will be constructed with Phase D. Plat C is 8.00 acres and does not include open space. Plat D includes 1.33 acres of open space. Plat E is currently proposed and includes 2.07 acres of open space.
        - The cumulative open space within Plats A, B, C, D, and E is 13.55 acres within 68.02 acres (19.92 %), thus exceeding the requirement for 15% open space. The applicant is banking open space for future phases.

- Sensitive Lands: no more than 50% of required open space – overall development complies, see overall open space plan
    - The sensitive lands within the overall project consist of the proposed detention basins, the area of the drainage channel that will be preserved, and the canal right of way; totaling 4.09 acres (30% of the total open space). The base density was calculated after subtracting the sensitive lands and results in a density of 2.55 units per acre. No more than 50% of the required open space is comprised of sensitive lands.
- Trash: Individual cans will be used

- 19.05.02, Supplemental Regulations
    - Flood Plain: N/A
    - Water & sewage: Will connect to City infrastructure
    - Transportation Master Plan: Complies – no lots will block a planned road
    - Property access: all lots have access onto a public street

- 19.06, Landscaping and Fencing
    - Landscaping Plan: planting plan, planting schedule, topography, irrigation, fencing and data table provided on plans
    - Planting Standards & Design: meets requirements
    - Amount: table does not apply to parks in R-3 zone
    - Additional Requirements: park strips shall be landscaped by the abutting owner, except those have a rear property line abutting Talus Ridge Blvd. Those will be landscaped by the developer and maintained by the City.
    - Fencing & Screening: Semi-private fencing is required along open space. Semi-private fencing is shown. The applicant prefers the color to be white to match their product. The park will be City-owned; the City requires six foot fencing around this park.
    - Clear Sight Triangle: no plants or fencing taller than 3' allowed.

- 19.09, Off Street Parking
    - Each home will have, at a minimum, a 20 deep driveway that is wide enough for two cars.

- 19.10, Hillside Development: N/A

- 19.12, Subdivisions
    - Final Plat requirements apply, 19.012.03(4). Complies.
    - General Subdivision Improvements, 19.12.06. Complies.
        - Maximum block length is 1,000 feet. Complies.
        - If a block is more than 800 feet in length a pedestrian walkway is required through the block. Complies.
        - Connecting streets are required: The plans indicate stub streets in all directions to provide connections. Complies.
        - Pedestrian walkways, trials, and other logical linkages are required.
        - Driveway location for lots next to an arterial: N/A
        - Access: Two separate means of access are required whenever the total number of dwelling units exceeds 50. Complies.

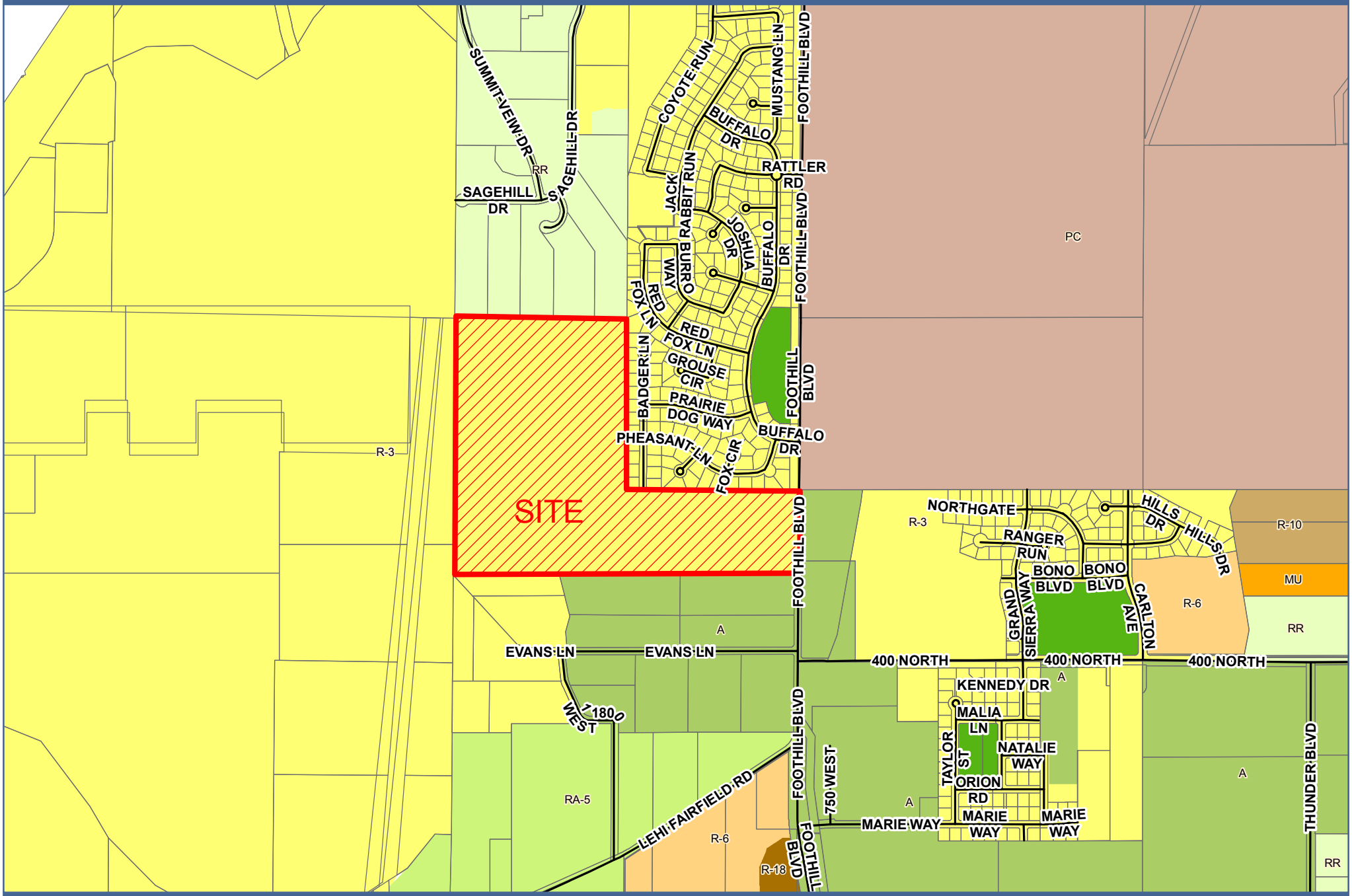
        - Lot design: The design shall not create lots that are not buildable due to size, shape, topography, terrain, etc. Complies. (Edge Homes indicate they have home plans that will fit lot 510)
        - Lot frontage: all lots shall have frontage on a road that meets City standards. Complies.
        - Flag lots: None proposed.
        - Public roads may not be included in lots. Complies.
        - Property lines: Side property lines shall be at approximate right angles to the street line or radial to the street line. Complies. (Edge Homes indicate they have home plans that will fit lot 510)
        - Corner lots: Corner lots shall be platted ten percent larger than the minimum for the zone. Complies with approved lot reduction of 9,000 square feet; corner lots are 9,900 or larger.
        - Boundary: No lot shall be divided by a municipal boundary line. Complies.
        - Remnants: Remnants of property that do not meet the code requirements shall not be left in a subdivision. Complies.
        - Double access lots are not permitted with the exception of corner lots. Complies.
        - Arterials: Subdivisions along arterials shall comply with the adopted arterial cross section.

- Section 19.13, Process
    - General Considerations:
        - General Plan: Low Density Residential. Complies.
        - Natural Features: None
        - Community & Public Facilities: Complies with approved open space and phasing plan and code requirements for open space.
    - Notice / Land Use Authority: The City Council is the land use authority for final plats. Mailed notices are not required for final plats.
    - Development Agreement / MDA: N/A for this project.
    - Payment in Lieu of Open Space: N/A for this project.
    - 19.13.09(9) requires a phasing plan for phased developments. Complies.
        - A phasing and open space plan was approved by the City Council on September 2, 2014.

- 19.18, Signs: none proposed

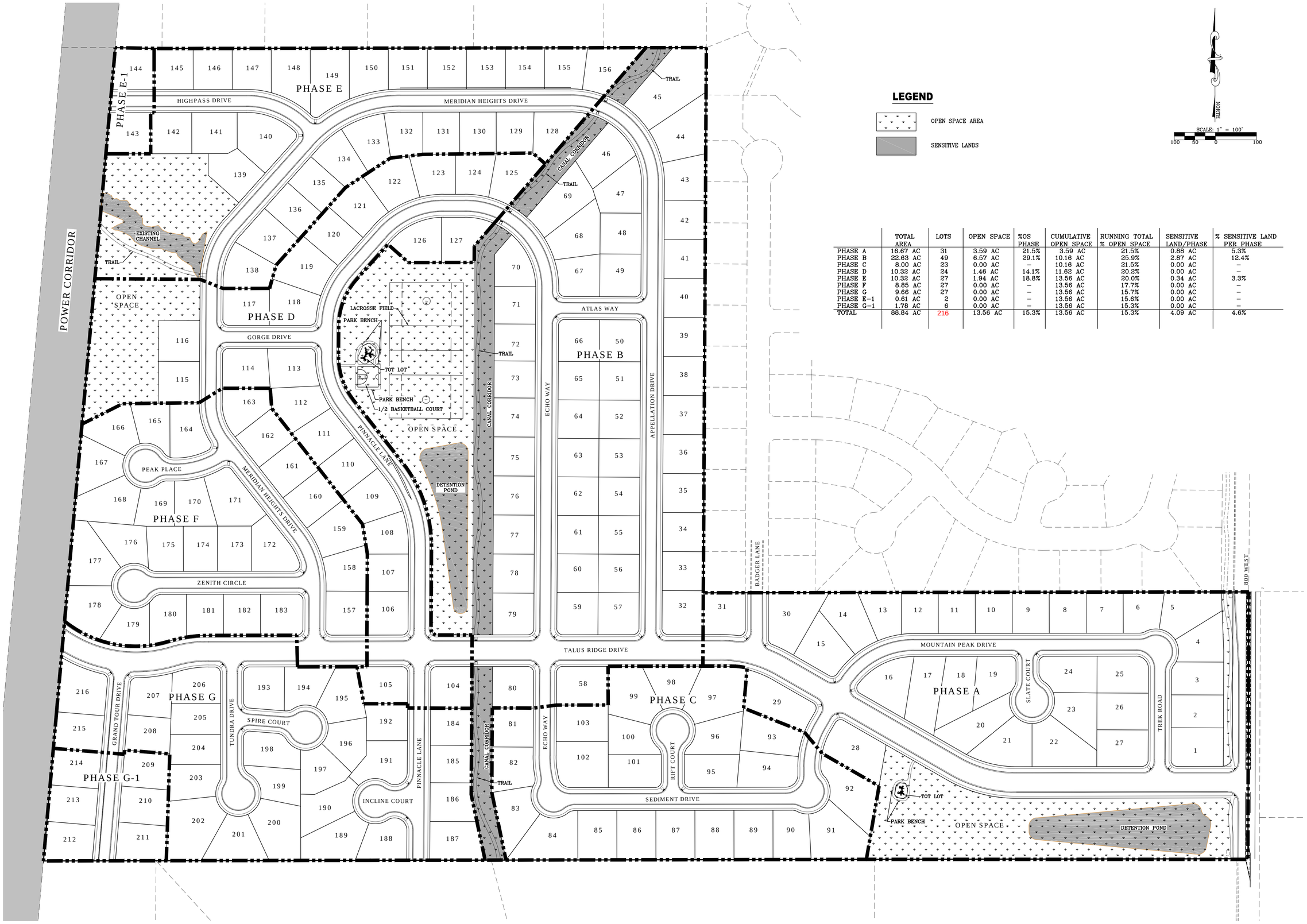
- 19.27, Addressing
    - Reviewed by GIS

Location Map



Talus Ridge

0 435 870 1,740 Feet



LEGEND

OPEN SPACE AREA

SENSITIVE LANDS

SCALE: 1" = 100'

100 50 0 100

	TOTAL AREA	LOTS	OPEN SPACE	%OS PHASE	CUMULATIVE OPEN SPACE	RUNNING TOTAL % OPEN SPACE	SENSITIVE LAND/PHASE	% SENSITIVE LAND PER PHASE
PHASE A	16.67 AC	31	3.59 AC	21.5%	3.59 AC	21.5%	0.88 AC	5.3%
PHASE B	22.63 AC	49	6.57 AC	29.1%	10.16 AC	25.9%	2.87 AC	12.4%
PHASE C	8.00 AC	23	0.00 AC	–	10.16 AC	21.5%	0.00 AC	–
PHASE D	10.32 AC	24	1.46 AC	14.1%	11.62 AC	20.2%	0.00 AC	–
PHASE E	10.32 AC	27	1.94 AC	18.8%	13.56 AC	20.0%	0.34 AC	3.3%
PHASE F	8.85 AC	27	0.00 AC	–	13.56 AC	17.7%	0.00 AC	–
PHASE G	9.66 AC	27	0.00 AC	–	13.56 AC	15.7%	0.00 AC	–
PHASE E–1	0.61 AC	2	0.00 AC	–	13.56 AC	15.6%	0.00 AC	–
PHASE G–1	1.78 AC	6	0.00 AC	–	13.56 AC	15.3%	0.00 AC	–
TOTAL	88.84 AC	216	13.56 AC	15.3%	13.56 AC	15.3%	4.09 AC	4.6%

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TALUS RIDGE

SARATOGA SPRING, UTAH

OPEN SPACE EXHIBIT

REVISIONS

1 -
2 -
3 -
4 -
5 -

LEI PROJECT #: 2013-1795

DRAWN BY: BLS

CHECKED BY: NKW

SCALE: 1" = 100'

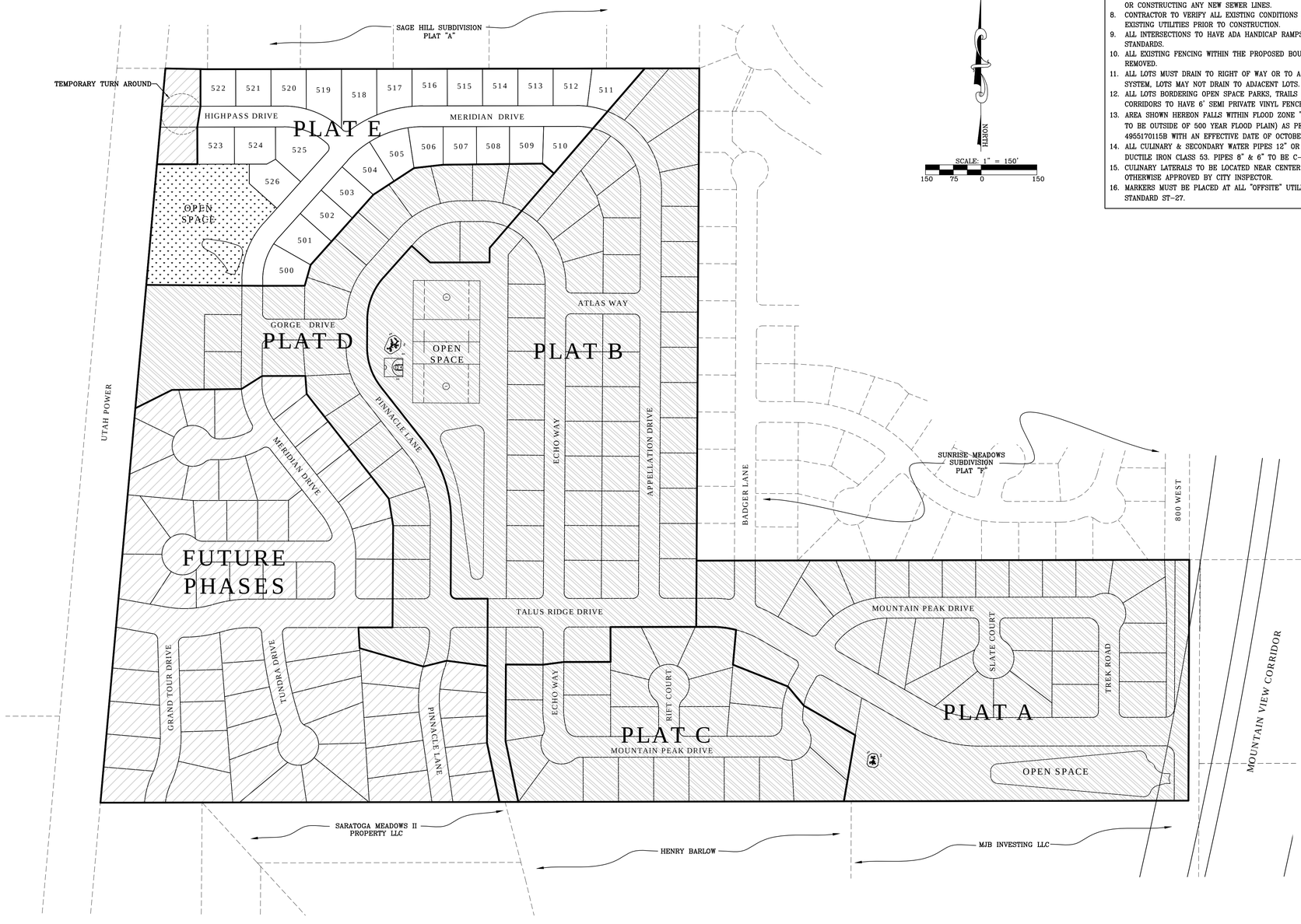
DATE: /25/2014

SHEET 1

TALUS RIDGE

PLAT "E"

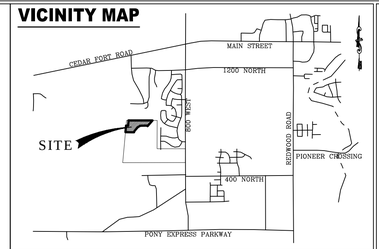
A PORTION OF SECTION 22 & SECTION 21,
T5S, R1W, SLB&M,
SARATOGA SPRING CITY, UTAH



NOTES

1. ALL CONSTRUCTION SHALL COMPLY TO THE STANDARD TECHNICAL SPECIFICATIONS AND DRAWINGS FOR THE CITY OF SARATOGA SPRINGS, UTAH.
2. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERT ELEVATIONS OF EXISTING STORM DRAIN STRUCTURES AND OTHER UTILITIES BEFORE STAKING OR CONSTRUCTING ANY NEW STORM DRAIN LINES
3. EXISTING UTILITIES HAVE BEEN NOTED TO THE BEST OF ENGINEERS KNOWLEDGE, IT IS OWNERS AND CONTRACTORS RESPONSIBILITY TO LOCATE UTILITIES IN FIELD AND NOTIFY ENGINEER AND CITY IF DISCREPANCIES EXIST.
4. POST-APPROVAL ALTERATIONS TO LIGHTING PLANS OR INTENDED SUBSTITUTIONS FOR APPROVED LIGHTING EQUIPMENT SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL.
5. THE CITY RESERVES THE RIGHT TO CONDUCT POST-INSTALLATION INSPECTIONS TO VERIFY COMPLIANCE WITH THE CITY'S REQUIREMENTS AND APPROVED LIGHTING PLAN COMMITMENTS, AND IF DEEMED APPROPRIATE BY THE CITY, TO REQUIRE REMEDIAL ACTION AT NO EXPENSE TO THE CITY.
6. ALL EXTERIOR LIGHTING SHALL MEET IESNA FULL-CUTOFF CRITERIA UNLESS OTHERWISE APPROVED BY THE CITY.
7. CONTRACTOR SHALL FIELD VERIFY LOCATIONS AND INVERT ELEVATIONS OF EXISTING SEWER MANHOLES AND OTHER UTILITIES BEFORE STAKEING OR CONSTRUCTING ANY NEW SEWER LINES.
8. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS AND LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
9. ALL INTERSECTIONS TO HAVE ADA HANDICAP RAMPS ACCORDING TO CITY STANDARDS.
10. ALL EXISTING FENCING WITHIN THE PROPOSED BOUNDARY TO BE REMOVED.
11. ALL LOTS MUST DRAIN TO RIGHT OF WAY OR TO A SWALE/YARD DRAIN SYSTEM, LOTS MAY NOT DRAIN TO ADJACENT LOTS.
12. ALL LOTS BORDERING OPEN SPACE PARKS, TRAILS & EASEMENT CORRIDORS TO HAVE 6' SEMI PRIVATE VINYL FENCE.
13. AREA SHOWN HEREON FALLS WITHIN FLOOD ZONE "X" (AREA DETERMINED TO BE OUTSIDE OF 500 YEAR FLOOD PLAIN) AS PER FIRM MAP NO. 4955170115B WITH AN EFFECTIVE DATE OF OCTOBER 15, 1982.
14. ALL CULINARY & SECONDARY WATER PIPES 12" OR LARGER TO BE DUCTILE IRON CLASS 53. PIPES 8" & 6" TO BE C-900 PVC.
15. CULINARY LATERALS TO BE LOCATED NEAR CENTER OF LOT UNLESS OTHERWISE APPROVED BY CITY INSPECTOR.
16. MARKERS MUST BE PLACED AT ALL "OFFSITE" UTILITIES PER CITY STANDARD ST-27.

VICINITY MAP



TABULATIONS

PLAT "E"

ZONING	R-3	
SINGLE FAMILY LOTS	27 LOTS	
DENSITY	2.58 UNITS/ ACRE	
LOT AREA	6.37 ACRES	(61%)
ROW AREA	2.02 ACRES	(19%)
OPEN SPACE	2.07 ACRES	(20%)
TOTAL AREA	±10.46 ACRES	
IMPERVIOUS AREA	1.45 ACRES	(14%)
LANDSCAPE AREA	9.01 ACRES	(86%)
TOTAL AREA	±10.46 ACRES	

PLATS A, B, C, D, & E OVERALL

ZONING	R-3	
SINGLE FAMILY LOTS	154 LOTS	
DENSITY	2.26 UNITS/ ACRE	
LOT AREA	38.22 ACRES	(56%)
ROW AREA	15.91 ACRES	(23%)
OPEN SPACE AREA	13.89 ACRES	(20%)
TOTAL AREA	±68.02 ACRES	
IMPERVIOUS AREA	12.64 ACRES	(19%)
LANDSCAPE AREA	55.38 ACRES	(81%)
TOTAL AREA	±68.02 ACRES	

TABLE OF CONTENTS

	COVER
	PLAT "E"
SHEET 1	EXISTING CONDITIONS & DEMOLITION PLAN
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SHEET 3	UTILITY PLAN
SHEET 4	GRADING PLAN
SHEET 5	LOT GRADING PLAN
SHEET 6	MERIDIAN DRIVE #1 P&P
SHEET 7	MERIDIAN DRIVE #2 & HIGH PASS DR. P&P
SHEET 8	STRIPING & SIGNAGE PLAN
SHEET 9	EROSION CONTROL PLAN
SHEET D-1	CITY DETAILS
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SHEET D-3	CITY DETAILS
SHEET D-4	CITY DETAILS
SHEET D-5	CITY DETAILS
SHEET D-6	CITY DETAILS
SHEET D-7	CITY DETAILS
SHEET LP-01	LANDSCAPE PLAN
SHEET IP-01	IRRIGATION PLAN

LEGEND

- CENTERLINE
- SEWER
- PRESSURIZED IRRIGATION
- STORM DRAIN
- CULINARY WATER
- STORM DRAIN MANHOLE
- SEWER MANHOLE
- CURB INLET
- FIRE HYDRANT
- LIGHT POLE
- MONUMENT
- FLOW ARROWS
- EXISTING SEWER MH
- EXISTING STORM DRAIN MH

OWNER / DEVELOPER

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ENGINEER

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AND SURVEYORS
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www.lei-eng.com

STATE OF UTAH
NATHAN K. WALTER
No. 7973888-2202
7/10/15
PROFESSIONAL ENGINEER

TALUS RIDGE PLAT "E"
SARATOGA SPRINGS CITY, UTAH
COVER

REVISIONS
1 -
2 -
3 -
4 -
5 -

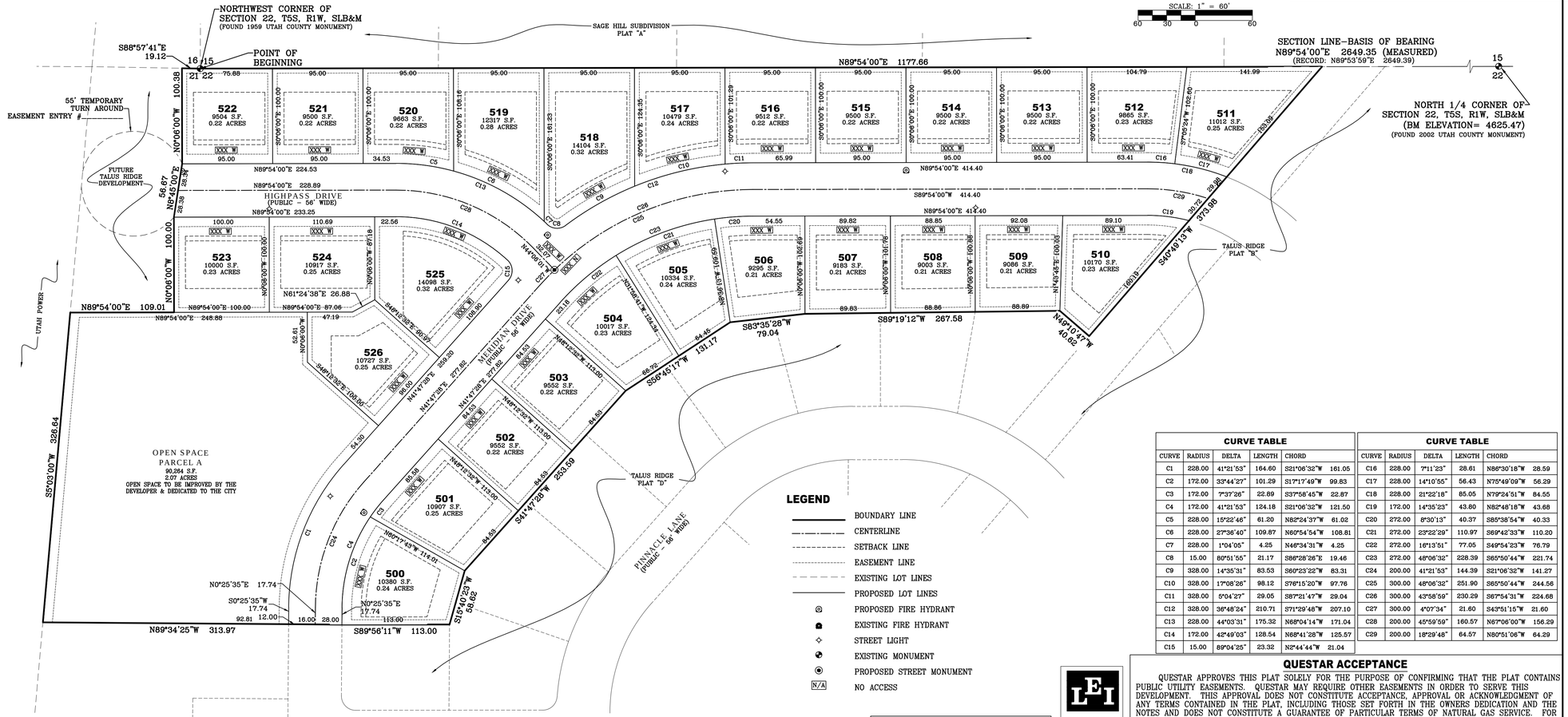
LEI PROJECT #: 2013-1795
DRAWN BY: BLS
CHECKED BY: NKW
SCALE: 1" = 150'
DATE: 7/10/2015
SHEET
COVER

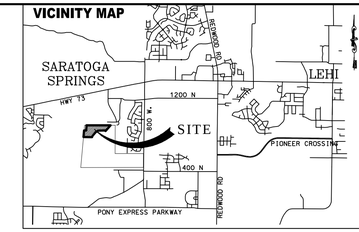
TALUS RIDGE PLAT "E"

SARATOGA SPRINGS, UTAH

A PORTION OF SECTION 22 & SECTION 21, T5S, R1W SLB&M

NOTICE: FUTURE RESIDENTS AND LOT OWNERS ARE HEREBY PLACED ON NOTICE OF THE ONGOING AND ACTIVE AGRICULTURAL USES AND OPERATIONS ADJACENT TO OR NEAR THE TALUS RIDGE PLAT & LOTS. THIS AREA IS SUBJECT TO THE NORMAL AND EVERYDAY SOUNDS OF ODORS, SIGHTS, NUISANCES, EQUIPMENT, FACILITIES, AND ALL OTHER ASPECTS ASSOCIATED WITH AGRICULTURAL OPERATIONS, USES, AND PROPERTY RIGHTS. THESE SOUNDS, ODORS, SIGHTS, AND NUISANCES MAY OCCUR AT ALL TIMES OF THE DAY AND NIGHT INCLUDING DURING WEEKENDS AND HOLIDAYS. THE CITY IS NOT RESPONSIBLE OR LIABLE FOR THESE USES AND IMPACTS AND WILL NOT RESTRICT ANY GRANDFATHERED AGRICULTURAL USE FROM CONTINUING TO OCCUR LAWFULLY.





SURVEYOR'S CERTIFICATE

I, CHAD A. POULSEN, DO HEREBY CERTIFY THAT I AM A REGISTERED LAND SURVEYOR, AND THAT I HOLD A LICENSE, CERTIFICATE NO. 501182, IN ACCORDANCE WITH THE PROFESSIONAL ENGINEERS AND LAND SURVEYORS LICENSING ACT FOUND IN TITLE 58, CHAPTER 22 OF THE UTAH CODE. 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, HAVE SUBDIVIDED SAID TRACT OF LAND INTO LOTS, STREETS, AND EASEMENTS, HAVE COMPLETED A SURVEY OF THE PROPERTY DESCRIBED ON THIS PLAT IN ACCORDANCE WITH UTAH CODE SECTION 17-23-17, HAVE VERIFIED ALL MEASUREMENTS, AND HAVE PLACED MONUMENTS REPRESENTED ON THE PLAT. I FURTHER CERTIFY THAT EVERY EXISTING RIGHT-OF-WAY AND EASEMENT GRANT OF RECORD FOR UNDERGROUND FACILITIES, AS DEFINED IN UTAH CODE SECTION 54-8A-2, AND FOR OTHER UTILITY FACILITIES, IS ACCURATELY DESCRIBED ON THIS PLAT, AND THAT THIS PLAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ALSO CERTIFY THAT I HAVE FILED, OR WILL FILE WITHIN 90 DAYS THE RECORDATION OF THIS PLAT, A MAP OF THE SURVEY I HAVE COMPLETED WITH THE UTAH COUNTY SURVEYOR.

BOUNDARY DESCRIPTION

A PORTION OF THE NORTHWEST QUARTER OF SECTION 22 & THE NORTHEAST QUARTER OF SECTION 21, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE & MERIDIAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWEST CORNER OF SECTION 22, TOWNSHIP 5 SOUTH, RANGE 1 WEST, SALT LAKE BASE & MERIDIAN; THENCE ALONG THE NORTH SECTION LINE OF SAID SECTION 22 N89°54'00"E 1177.66 FEET; THENCE ALONG THE BOUNDARY OF TALUS RIDGE PLAT "B" S40°49'13"W 373.98 FEET; THENCE ALONG THE BOUNDARY OF TALUS RIDGE PLAT "D" THE FOLLOWING NINE (9) COURSES: N49°10'47"W 40.62 FEET; S89°19'12"W 267.58 FEET; S83°35'28"W 79.04 FEET; S36°45'17"W 131.17 FEET; S41°47'28"W 253.59 FEET; S15°40'23"W 58.62 FEET; S89°56'11"W 113.00 FEET; N89°34'25"W 313.97 FEET; THENCE N5°03'00"E 326.64 FEET; THENCE N89°54'00"E 109.01 FEET; N0°06'00"W 100.00 FEET; THENCE N8°45'00"E 56.67 FEET; THENCE N0°06'00"W 100.38 FEET; THENCE S88°57'41"E 19.12 FEET TO THE POINT OF BEGINNING.

CONTAINS: ±10.46 ACRES
OF LOTS: 27

DATE

SURVEYOR'S NAME (See Seal Below)
LICENSE NO. 501182

OWNERS DEDICATION

KNOW ALL MEN BY THESE PRESENTS THAT _____, THE _____ UNDERSIGNED OWNER(S) OF THE ABOVE DESCRIBED TRACT OF LAND HAVING CAUSED SAME TO BE SUBDIVIDED INTO LOTS AND STREETS TO BE HEREAFTER KNOWN AS

TALUS RIDGE SUBDIVISION

DO HEREBY DEDICATE FOR THE PERPETUAL USE OF THE PUBLIC AND/OR CITY ALL PARCELS OF LAND, EASEMENTS, RIGHT-OF-WAY, AND PUBLIC AMENITIES SHOWN ON THIS PLAT AS INTENDED FOR PUBLIC AND/OR CITY USE. THE OWNER(S) VOLUNTARILY DEFEND, INDEMNIFY, AND SAVE HARMLESS THE CITY AGAINST ANY EASEMENTS OR OTHER ENCUMBRANCE ON A DEDICATED STREET WHICH WILL INTERFERE WITH CITY'S USE, MAINTENANCE, AND OPERATION OF THE STREET. THE OWNER(S) VOLUNTARILY DEFEND, INDEMNIFY, AND HOLD HARMLESS THE CITY FROM ANY DAMAGE CLAIMED BY PERSONS WITHIN OR WITHOUT THIS SUBDIVISION TO HAVE BEEN CAUSED BY ALTERATIONS OF THE GROUND SURFACE, VEGETATION, DRAINAGE, OR SURFACE OR SUB-SURFACE WATER FLOWS WITHIN THIS SUBDIVISION OR BY ESTABLISHMENT OR CONSTRUCTION OF THE ROADS WITHIN THIS SUBDIVISION.
IN WITNESS WHEREOF _____ HAVE HEREUNTO SET _____ THIS _____ DAY OF _____, A.D. 20_____.

WASATCH LAND COMPANY
BY: GORDON P. JONES, PRESIDENT

OWNER'S ACKNOWLEDGMENT

STATE OF UTAH
S.S.
COUNTY OF UTAH

ON THE _____ DAY OF _____, A.D. 20_____ PERSONALLY APPEARED BEFORE ME, THE UNDERSIGNED NOTARY PUBLIC, IN AND FOR THE COUNTY OF UTAH 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

A NOTARY PUBLIC COMMISSIONED IN UTAH

NOTARY ADDRESS

PRINTED FULL NAME OF NOTARY

APPROVAL BY LEGISLATIVE BODY

THE CITY COUNCIL OF THE CITY OF SARATOGA SPRINGS, COUNTY OF UTAH, APPROVES THIS SUBDIVISION SUJECT TO THE CONDITIONS AND RESTRICTIONS STATED HEREON, AND HEREBY ACCEPTS THE DEDICATION OF ALL STREETS, EASEMENTS, AND OTHER PARCELS OF LAND INTENDED FOR THE PUBLIC PURPOSE OF THE PERPETUAL USE OF THE PUBLIC.
THIS_____DAY OF_____, A.D. 20_____.

CITY MAYOR

ATTEST_____
CLERK-RECORDER (See Seal Below)

CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	CHORD
C1	228.00	41°21'53"	164.60	S21°06'32"W 161.05
C2	172.00	33°44'27"	101.29	S17°17'49"W 99.83
C3	172.00	7°37'26"	22.89	S37°58'45"W 22.87
C4	172.00	41°21'53"	124.18	S21°06'32"W 121.50
C5	228.00	15°22'46"	61.20	N82°24'37"W 61.02
C6	228.00	27°36'40"	109.87	N60°54'54"W 108.81
C7	228.00	1°04'05"	4.25	N46°34'31"W 4.25
C8	15.00	80°51'55"	21.17	S86°28'26"E 19.46
C9	328.00	14°35'31"	83.53	S60°23'22"W 83.31
C10	328.00	17°08'26"	98.12	S76°15'20"W 97.76
C11	328.00	5°04'27"	29.05	S87°21'47"W 29.04
C12	328.00	36°48'24"	210.71	S71°29'48"W 207.10
C13	228.00	44°03'31"	175.32	N68°04'14"W 171.04
C14	172.00	42°49'03"	128.54	N68°41'28"W 125.57
C15	15.00	89°04'25"	23.32	N2°44'44"W 21.04

CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	CHORD
C16	228.00	7°11'23"	28.61	N86°30'18"W 28.59
C17	228.00	14°10'55"	56.43	N75°49'09"W 56.29
C18	228.00	21°22'18"	85.05	N79°24'51"W 84.55
C19	172.00	14°35'23"	43.80	N82°48'18"W 43.68
C20	272.00	8°30'13"	40.37	S85°38'54"W 40.33
C21	272.00	23°22'29"	110.97	S69°42'33"W 110.20
C22	272.00	16°13'51"	77.05	S49°54'23"W 76.79
C23	272.00	48°06'32"	228.39	S65°50'44"W 221.74
C24	200.00	41°21'53"	144.39	S21°06'32"W 141.27
C25	300.00	48°06'32"	251.90	S65°50'44"W 244.56
C26	300.00	43°58'59"	230.29	S67°54'31"W 224.68
C27	300.00	4°07'34"	21.60	S43°51'15"W 21.60
C28	200.00	45°59'59"	160.57	N67°06'00"W 156.29
C29	200.00	18°29'48"	64.57	N80°51'06"W 64.29

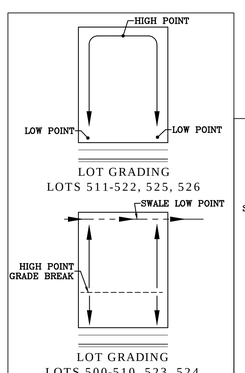
LEGEND

- BOUNDARY LINE
- CENTERLINE
- SETBACK LINE
- EASEMENT LINE
- EXISTING LOT LINES
- PROPOSED LOT LINES
- PROPOSED FIRE HYDRANT
- EXISTING FIRE HYDRANT
- STREET LIGHT
- EXISTING MONUMENT
- PROPOSED STREET MONUMENT
- N/A NO ACCESS

NOTES:

1. PLAT MUST BE RECORDED WITHIN 24 MONTHS OF FINAL PLAT APPROVAL BY CITY COUNCIL. FINAL PLAT APPROVAL WAS GRANTED ON THE _____ DAY OF _____20_____.
2. THE INSTALLATION OF IMPROVEMENTS SHALL CONFORM TO ALL CITY RULES, ORDINANCES, REQUIREMENTS, STANDARDS, AND POLICIES REGARDING THE DEVELOPMENT OF THIS PROPERTY.
3. PRIOR TO BUILDING PERMITS BEING ISSUED, SOIL TESTING STUDIES MAY BE REQUIRED ON EACH LOT AS DETERMINED BY THE CITY BUILDING OFFICIAL.
4. PLAT MAY BE SUBJECT TO A MASTER DEVELOPMENT AGREEMENT, DEVELOPMENT AGREEMENT, SUBDIVISION AGREEMENT, OR SITE PLAN AGREEMENT. SEE CITY RECORDER FOR MORE INFORMATION.
5. BUILDING PERMITS WILL NOT BE ISSUED UNTIL ALL IMPROVEMENTS HAVE BEEN INSTALLED AND ACCEPTED BY THE CITY IN WRITING; ALL IMPROVEMENTS CURRENTLY MEET CITY STANDARDS; AND BONDS ARE POSTED BY THE CURRENT OWNER OF THE PROJECT PURSUANT TO CITY CODE.
6. ALL BONDS AND BOND AGREEMENTS ARE BETWEEN THE CITY, DEVELOPER/OWNER AND FINANCIAL INSTITUTION. NO OTHER PARTY, INCLUDING UNIT OR LOT OWNERS, SHALL BE DEEMED A THIRD-PARTY BENEFICIARY OR HAVE ANY RIGHTS INCLUDING THE RIGHT TO BRING ANY ACTION UNDER ANY BOND OR BOND AGREEMENT.
7. THE OWNER OF THIS SUBDIVISION AND ANY SUCCESSORS AND ASSIGNS ARE RESPONSIBLE FOR ENSURING THAT IMPACT AND CONNECTION FEES ARE PAID AND WATER RIGHTS ARE SECURED FOR EACH INDIVIDUAL LOT. NO BUILDING PERMITS SHALL BE ISSUED FOR ANY LOT IN THIS SUBDIVISION UNTIL ALL IMPACT AND CONNECTION FEES, AT THE RATES IN EFFECT WHEN APPLYING FOR BUILDING PERMIT, ARE PAID IN FULL AND WATER RIGHTS SECURED AS SPECIFIED BY CURRENT CITY ORDINANCES AND FEE SCHEDULES.
8. ANY REFERENCE HEREIN TO OWNERS, DEVELOPERS, OR CONTRACTORS SHALL APPLY TO SUCCESSORS, AGENTS, AND ASSIGNS.
9. THE BENCHMARK FOR THE TOPOGRAPHIC INFORMATION PROVIDED HEREON IS THE FOUND 2002 UTAH COUNTY MONUMENT AT THE NORTH 1/4 CORNER OF SAID SECTION 22, WITH A PUBLISHED UTAH COUNTY (NGVD29) ELEVATION OF 4,625.47 FEET.
10. ALL OPEN SPACE TO BE IMPROVED BY THE DEVELOPER, DEDICATED TO THE CITY, & MAINTAINED BY THE CITY OF SARATOGA SPRINGS.
11. ALL LOTS BORDERING OPEN SPACE TO HAVE 6' SEMI PRIVATE VINYL FENCE.
12. NO ACCESS PERMITTED ON LOTS ADJACENT TO COLLECTOR ROADS, ALL LOTS TO ACCESS FROM INTERIOR RESIDENTIAL ROADS.
13. AREA SHOWN HEREON FALLS WITHIN FLOOD ZONE "X" (AREA DETERMINED TO BE OUTSIDE OF 500 YEAR FLOOD PLAIN) AS PER FIRM MAP NO. 49557170115B WITH AN EFFECTIVE DATE OF OCTOBER 15, 1982.
14. DRAINAGE EASEMENT AREAS ARE PERPETUAL, NON-EXCLUSIVE, MUTUAL CROSS DRAINAGE EASEMENTS FOR PURPOSES OF STORM WATER CAPTURE AND CONVEYANCE ON, OVER, UPON AND ACROSS THE AREAS DELINEATED AS DRAINAGE EASEMENTS. EACH LOT ENCUMBERED BY A DRAINAGE EASEMENTS SHALL, AT IT'S SOLE COST AND EXPENSE, MAINTAIN AND KEEP ALL ABOVE AND BELOW GRADE INFRASTRUCTURE AND APPURTENANCES IN REASONABLE CONDITION AND STATE OF REPAIR. NO OBSTRUCTIONS OR CHANGES IN GRADE SHALL BE LOCATED WITHIN THE EASEMENT AREA THAT WILL IMPEDE, DIVERT OR CAUSE THE RUNOFF TO HAVE AN ADVERSE EFFECT ON ADJOINING PROPERTY.
15. NO FOLIAGE, STRUCTURES, OR OTHER UNAUTHORIZED IMPROVEMENTS ARE ALLOWED IN WELBY JACOB WATER USERS COMPANY CORRIDORS.
16. LOTS 511-522, 525, 526 TO GRADE SUCH THAT STORM WATER RUNOFF DISCHARGES TO THE FRONT OF PROPERTY (OR STREET) AND NOT ON ADJACENT LOTS. SEE LOT GRADING DETAIL.
17. LOTS 500-510, 523, 524 TO DRAIN ROOF AND GRADE FRONT YARD SUCH THAT STORM WATER RUNOFF DISCHARGES TO THE FRONT OF PROPERTY (OR STREET) AND NOT ON ADJACENT LOTS. THE REAR YARDS WILL NEED TO MAINTAIN A DRAINAGE SWALE TO REAR OF PROPERTY LINE FOR ANY STORM WATER RUNOFF UNABLE TO REACH THE STREET. SEE LOT GRADING DETAIL.

BY SIGNING THIS PLAT THE FOLLOWING UTILITY COMPANIES ARE APPROVING THE: (A) BOUNDARY, COURSE, DIMENSIONS, AND INTENDED USE OF THE RIGHT-OF-WAY AND EASEMENT GRANTS OF RECORD; (B) LOCATION OF EXISTING UNDERGROUND AND UTILITY FACILITIES; (C) CONDITIONS OR RESTRICTIONS GOVERNING THE LOCATION OF THE FACILITIES WITHIN THE RIGHT-OF-WAY, AND EASEMENT GRANTS OF RECORD, AND UTILITY FACILITIES WITHIN THE SUBDIVISION. "APPROVING" SHALL HAVE THE MEANING IN THE UTAH CODE SECTION 10-9A-603(4)(C)(ii).



LEI ENGINEERS SURVEYORS PLANNERS
3302 N. Main Street
Spanish Fork, UT 84660
Phone: 801.798.0555
Fax: 801.798.9393
office@lei-eng.com
www.lei-eng.com

QUESTAR ACCEPTANCE

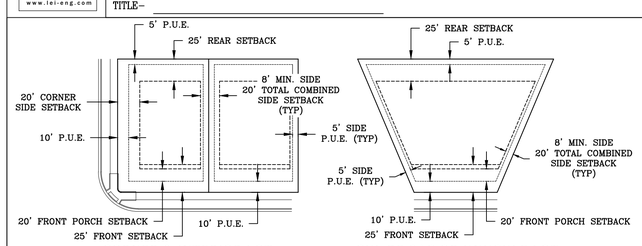
QUESTAR APPROVES THIS PLAT SOLELY FOR THE PURPOSE OF CONFIRMING THAT THE PLAT CONTAINS PUBLIC UTILITY EASEMENTS. QUESTAR MAY REQUIRE OTHER EASEMENTS IN ORDER TO SERVE THIS DEVELOPMENT. THIS APPROVAL DOES NOT CONSTITUTE ACCEPTANCE, APPROVAL OR ACKNOWLEDGMENT OF ANY TERMS CONTAINED IN THE PLAT, INCLUDING THOSE SET FORTH 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.

APPROVED THIS_____ DAY OF_____, 20_____

QUESTAR GAS COMPANY

BY_____

TITLE_____



PLAT "E"

TALUS RIDGE

SUBDIVISION

SARATOGA SPRINGS UTAH COUNTY, UTAH

QUESTAR GAS COMPANY
APPROVED THIS _____ DAY OF _____, A.D. 20____.
QUESTAR GAS COMPANY

ROCKY MOUNTAIN POWER
APPROVED THIS _____ DAY OF _____, A.D. 20____.
ROCKY MOUNTAIN POWER

COMCAST CABLE TELEVISION
APPROVED THIS _____ DAY OF _____, A.D. 20____.
COMCAST CABLE TELEVISION

CENTURYLINK
APPROVED THIS _____ DAY OF _____, A.D. 20____.
QWEST

FIRE CHIEF APPROVAL
APPROVED BY THE FIRE CHIEF ON THIS DAY OF _____, A.D. 20____.
CITY FIRE CHIEF

PLANNING COMMISSION REVIEW
REVIEWED BY THE PLANNING COMMISSION ON THIS DAY OF _____, A.D. 20____.
CHAIRMAN, PLANNING COMMISSION

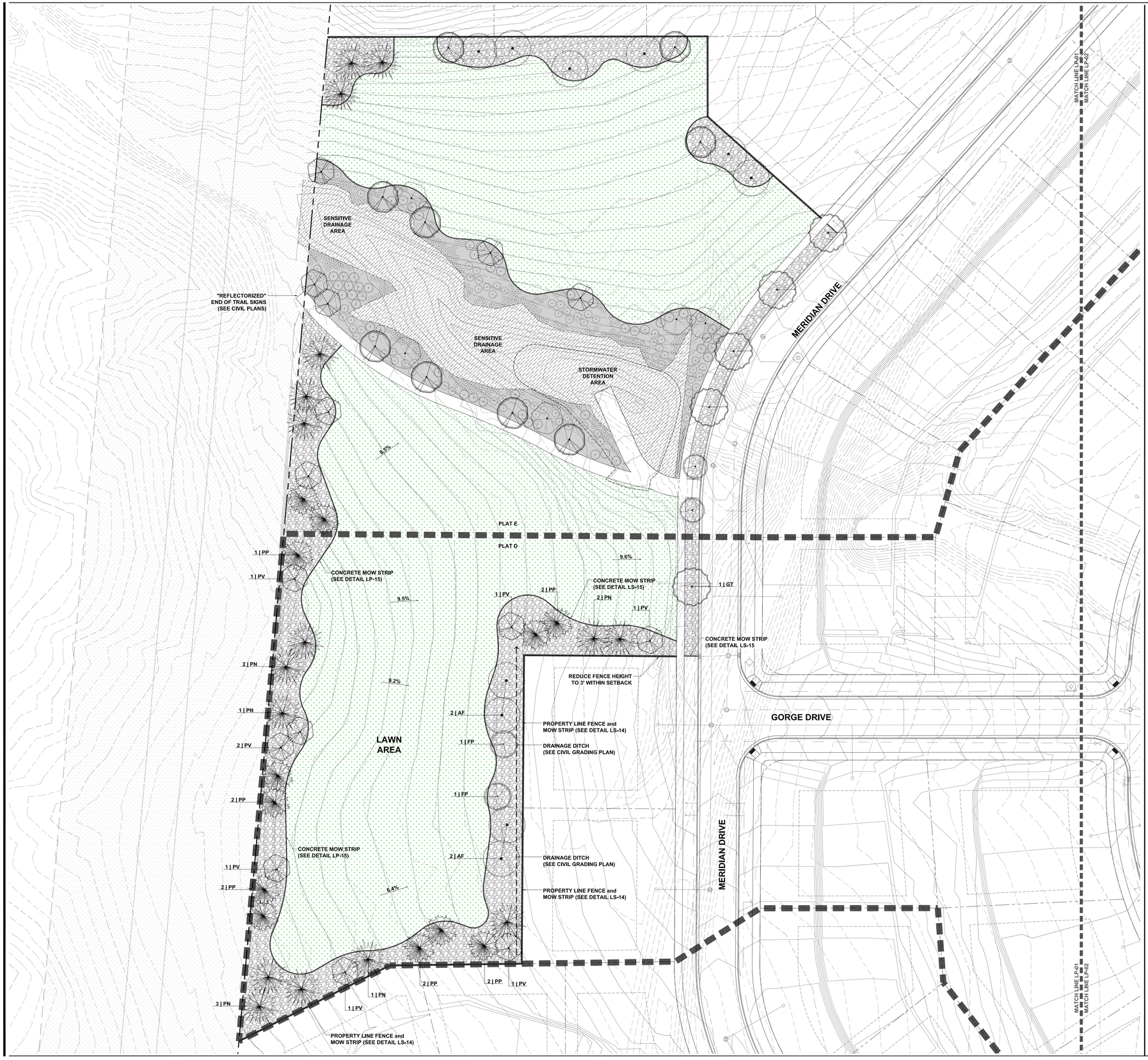
SARATOGA SPRINGS ENGINEER APPROVAL
APPROVED BY THE CITY ENGINEER ON THIS DAY OF _____, A.D. 20____.
CITY ENGINEER

SARATOGA SPRINGS ATTORNEY
APPROVED BY SARATOGA SPRINGS ATTORNEY ON THIS _____ DAY OF _____, A.D. 20____.
SARATOGA SPRINGS ATTORNEY

LEHI CITY POST OFFICE
APPROVED BY POST OFFICE REPRESENTATIVE ON THIS _____ DAY OF _____, A.D. 20____.
LEHI CITY POST OFFICE REPRESENTATIVE

SURVEYOR'S SEAL	NOTARY PUBLIC SEAL	CITY-COUNTY ENGINEER SEAL	COUNTY-RECORDER SEAL

This form approved by Utah County and the municipalities therein.



PROPOSED PLANT MATERIALS

SCIENTIFIC NAME		COMMON NAME	SIZE	QTY.
TREES				
AF	*Acer x freemanii* 'Autumn Blaze'	Maple	2.5" cal.	4
FP	*Fraxinus pennsylvanica* 'Summit'	Green Ash	2.5" cal.	2
GT	*Gleditsia triacanthos* 'Skyline'	Honeylocust	2.5" cal.	20
SS	*Malus* 'Spring Snow'	Flowering Crabapple	2.5" cal.	2
PP	*Picea pungens*	Colorado Spruce	6' - 7'	10
PN	*Pinus nigra*	Austrian Pine	6' - 7'	10
PV	*Prunus virginiana* 'Canada Red Select'	Chokecherry	2.5" cal.	8
			Total:	**56**

LANDSCAPE MATERIALS LEGEND

Lawn Areas (40,370.0 sq. ft.)
Lawn areas shall be a hydroseed mix or cut sod. Hydroseed mix shall match City standard and shall be applied to a prepared base of six inches (6") of screened top soil. Cut sod shall be applied to a prepared base of four inches (4") of screened top soil. Apply hydroseed or sod once irrigation and finish grading has been completed. All lawn areas shall be 100% irrigated with pop-up spray heads and rotors.

Decorative Rock Areas (27,215.0 sq. ft.)
Decorative rock areas shall include planter beds within the open space and landscaped parkstrips. Planter beds should be constructed with twelve inches (12") of screened top soil for planting and shall be finished with two inch (2") and four inch (4") Southtown rock blend. Apply decorative rock to a depth of four inches (4"). Prior to installation of decorative rock, it is recommended that DeWitt Pro5 weed barrier be applied to the planter beds. All trees within decorative rock areas shall be watered by point-source drip irrigation.

Sensitive Drainage Area (14,310.0 sq. ft.)
Sensitive drainage area to remain undisturbed in natural condition. No landscape improvements are proposed within this area. Any disturbance created by civil improvements should be repaired back to natural conditions.

Concrete Mow Curb (785.0 lin. ft.)
Concrete mow strip shall be six inch by six inch (6" x 6") flat concrete curbing, stained light brown to complement decorative rock mulch. Concrete mow strip shall be installed once finish grading has been completed, but prior to installation of plant materials and sod.

LANDSCAPE and IRRIGATION DETAILS:

Refer to the following Saratoga Springs' Landscape and Irrigation details on sheets LP-03 and IP-03 for additional information:

LS-1	Main Line Isolation Valve 4"+	PI-1	Trench Detail
LS-2	Quick Coupler	PI-2	Concrete Thrust Blocks
LS-3	Remote Control Valve	PI-3	1" Single and Dual Service Laterals
LS-4	Stainless Steel Enclosure in Strong Box	PI-4	Parks and Open Space Connection
LS-5	Stainless Steel Enclosure	PI-5A	1" Single Service Lateral Box
LS-6	Large Rotary Head Pop-Up Sprinkler	PI-5B	1 1/2" Dual Service Lateral Box
LS-7	Medium/Small Area Sprinkler Head	PI-5C	Parts List For Single/Dual Service Lateral Boxes
LS-8	Manual Drain Valve		
LS-9	Sleeving Detail	PI-6	2" Service Lateral
LS-10	Pipe Trench Detail	PI-7	4" Meter Vault
LS-11	Pipe and Wire Trench	PI-8	Air Vacuum Relief Valve
LS-12	Automatic Drain	PI-9	4" Drain Valve
LS-13	Tree Staking and Planting	PI-10	RPZ Backflow Preventer For Service Laterals
LS-14	Vinyl Fence With Mow Strip	PI-11	RPZ Backflow Preventer For Main Lines
LS-15	Concrete Mow Curb	PI-12	2" Blow Off Valve
		PI-13	Collar for Water Valves

TREE PLANTING NOTES:

1. All deciduous trees shown on this Landscape Plan shall be two and one half inch caliper (2.5" cal.) balled and burlapped nursery stock. Balled and burlapped trees showing obvious signs of damage to the root ball and/or trunk shall not be acceptable.
2. All conifer trees shown on this Landscape Plan shall be six to seven feet (6' - 7') in height, balled and burlapped nursery stock. Balled and burlapped trees showing obvious signs of damage to the root ball and/or trunk shall not be acceptable.
3. Tree holes shall be dug two times (2x) the diameter of the root ball and only as deep as the root ball.
4. Tree root ball shall be at least twelve (12") inches in diameter per each one (1") inch of tree caliper and at least eighteen (18") inches deep. Root ball shall be wrapped tightly with no loose parts.
5. Tree should be set in the center of the hole and stood upright. The root flare should be visible and located at, or slightly above, finished ground level. The root flare should never be below finished ground level.
6. Trees shall only be lifted by the wire basket. Never lift trees by grasping trunk or limbs, or by attaching any type of sling or choker.
7. Do not remove the wire basket from balled and burlapped trees during planting. Bend the top wire loops down into hole after cutting twine or rope from around the tree trunk.
8. Once the hole has been backfilled two thirds (2/3) the depth, cut and remove the top third of burlap.
9. Remove all strings, rope, stakes, taping, tags, flagging, and any other such items.
10. Backfill hole with excavated material and compact only enough to hold tree in place. Never use mechanical compaction. Top soil, mulch, or peat moss may be added to excavated material if high quantities of clay soils are present, but should not completely replace excavated material. Backfill material should cover root flare slightly, but should not be piled against trunk.
11. Water generously to soak entire root ball and backfill material. Additional backfill material may need to be added as soil settles below root flare.
12. Form a mulch ring around the base of the tree. Mulch ring shall be five feet (5') in diameter and three (3") to (4") inches deep. Do not pile excessive mulch or decorative rock around tree trunks.

SHRUB PLANTING NOTES:

1. All shrubs shown on this Landscape Plan shall be five gallon (#5) containerized nursery stock.
2. Hole should be dug at least twice the diameter of the root ball and only as deep as the root ball.
3. Gently remove plant from the container, lightly rub all sides of the root ball to expose ends of roots, and place in the center of the hole. The top of the root ball should be at finished ground level.
4. Backfill the hole with parent material. Top soil or soil pep may be added to parent material, but should not replace parent material.
5. Compact soil enough to hold plant in place. Never use mechanical compaction.
6. Generously water to soak entire root ball and backfill. A soil water ring should be formed around the outside of the root ball. Backfill material may need to be added after material has settled.
7. Mulch shall be added to a depth of three (3") to four (4") inches and at least twice the width of the root ball.
8. For weed barrier cut a hole for the plant at least one and a half (1½) times the diameter of the root ball to allow room for the plant to expand and grow naturally.

CUT / FILL CALCULATIONS:

1. PHASE D (FINISHED GRADE)
   CUT = 23,259 CU.YD.
   FILL = 19,166 CU.YD.
   EXCESS (FILL) = 4,093 CU.YD.

0 7.5 15 30 60

SCALE: 1"=30'

No.	Revision/Issue	Date

Designed By: AKC
Drawn By: AKC
Reviewed By: AKC

State of Utah
ADAM K. CASTON
No. 7703962
8/3/15
Licensed Landscape Architect

TALUS RIDGE
SARATOGA SPRINGS, UT
PLAT D
OPEN SPACE LANDSCAPE

EDGE HOMES

Date: 8/3/15
Drawing: LANDSCAPE PLAN
Issue: FINAL
Sheet: LP-01
Project: 14-7002

RESOLUTION NO. R15-37 (8-18-15)

ADDENDUM TO RESOLUTION OF THE CITY OF SARATOGA SPRINGS PERTAINING TO THE CITY STREET LIGHTING SPECIAL IMPROVEMENT DISTRICT TO INCLUDE ADDITIONAL SUBDIVISION LOTS. (Talus Ridge Plat E)

WHEREAS, on May 10, 2001, the City Council adopted Resolution No. 01-0510-01 creating a street lighting special improvement district (the "Lighting SID") consisting of all lots and parcels included within the Subdivisions set out in said Resolution for the maintenance of street lighting within the Lighting SID.

WHEREAS, *Utah Code Ann.* § 17A-3-307 provides that additional properties may be added to the special improvement district and assessed upon the conditions set out therein.

WHEREAS, the City Council has given final plat approval to Talus Ridge Plat E (the "Subdivision") conditioned upon all lots in the Subdivision being included in the Lighting SID.

WHEREAS, the City Council finds that the inclusion of all of the lots covered by the Subdivision in the Lighting SID will benefit the Subdivision by maintaining street lighting improvements, after installation of such by the developer of the Subdivision, which is necessary for public safety, and will not adversely affect the owners of the lots already included within the Lighting SID.

WHEREAS, the owners of the property covered by the Subdivision have given written consent: (i) to have all lots and parcels covered by that Subdivision included within the Lighting SID, (ii) to the improvements to that property (maintenance of the street lighting), (iii) to payment of the assessments for the maintenance of street lighting within the Lighting SID, and (iv) waiving any right to protest the Lighting SID and/or assessments currently being assessed for all lots in the Lighting SID (which consent is or shall be attached as Exhibit 1 to this Resolution).

NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF SARATOGA SPRINGS THAT:

1. All lots and parcels in the Subdivision be added to and included in the Lighting SID based upon the above findings and the written consent attached as Exhibit 1 to this Resolution.

2. City staff is directed to file a copy of this Resolution, as an Addendum to Resolution No. 01-0510-01 creating the Lighting SID, as required by *Utah Code Ann.* § 17A-3-307.

3. Assessments will be hereafter levied against owners of all lots within the Subdivision on the same basis as assessments are being levied against other lots included in the Lighting SID.

4. The provisions of this Resolution shall take effect upon the passage and publication of this Resolution as required by law.

Passed this 18th day of August, 2015 on motion by

Councilor _____, seconded by Councilor _____.

CITY OF SARATOGA SPRINGS
A UTAH MUNICIPAL CORPORATION

Signed: _____
Mayor Date

Attest: _____
Recorder Date

CONSENT OF OWNER OF PROPERTY
TO BE INCLUDED IN STREET LIGHTING SPECIAL IMPROVEMENT DISTRICT

WHEREAS the City of Saratoga Springs (the "City"), by and through its City Council, has created a Street Lighting Special Improvement District (the "Lighting SID") to pay for maintenance of street lighting within the subdivisions covered by the Lighting SID.

WHEREAS the undersigned ("Developer") is the developer of Talus Ridge Plat E (the "Subdivision") located within the City for which the City Council has given or is expected to give final plat approval.

WHEREAS, *Utah Code Ann.* § 17A-3-307 provides that before the completion of the improvements covered by a special improvement district, additional properties may be added to the special improvement district and assessed upon the conditions set out therein. Since the improvements covered by the Lighting SID are the maintenance of street lighting in the Lighting SID, said improvements are not completed so additional properties may be added to the Lighting SID pursuant to said § 17A-3-307.

WHEREAS, the City is requiring that the Subdivision be included within the Lighting SID in order to provide for the maintenance of street lighting within the Subdivision as a condition of final approval of the Subdivision.

WHEREAS, Developer, as the owner of the property covered by the Subdivision, is required by *Utah Code Ann.* § 17A-3-307 to give written consent to having the property covered by that Subdivision included within the Lighting SID and to consent to the proposed improvements to the property covered by the Subdivision and to waive any right to protest the Lighting SID.

NOW THEREFORE, Developer hereby consents to including the lots and parcels within the Subdivision in the Lighting SID. On behalf of itself and all lot purchasers and/or successors in interests, Developer consents and agrees as follows:

1. Consents to have all property covered by the Subdivision and all lots and parcels created by the Subdivision included within the Lighting SID. The legal description and the tax identification number(s) of the property covered by the Subdivision are set out in Exhibit A attached to this Consent.

2. Consents to the improvements with respect to the property covered by the Subdivision -- that is the maintenance of street lighting within the Subdivision. The street lighting within the Subdivision will be installed by Developer as part of the "Subdivision Improvements."

3. Agrees to the assessments by the Lighting SID for the maintenance of street lighting within the Lighting SID.

4. Waives any right to protest against the Lighting SID and/or the assessments currently being assessed for all lots in the Lighting SID.

Dated this ____ day of _____, 2015.

DEVELOPER:

Name:
Authorized
Signature:
Its:

CITY OF SARATOGA SPRINGS

City Council
Staff Report

Site Plan, Conditional Use Permit, Preliminary Plat, Final Plat
Harbor Bay Church
August 18, 2015
Public Hearing

Report Date:	August 11, 2015
Applicant/Owner:	Evans and Associates Architecture
Location:	168 East Harbor Bay Drive
Major Street Access:	Redwood Road
Parcel Number(s) and size:	45:228:0144, 45:228:0162, ~4.677 acres
General Plan Designation:	Low Density Residential
Zone:	R-3
Adjacent Zoning:	R-3
Current Use:	vacant
Adjacent Uses:	nearby single family residential
Previous Meetings:	N/A, Concept reviewed by staff
Type of Action:	Administrative
Land Use Authority:	City Council
Future Routing:	None
Planner:	Sarah Carroll

A. Executive Summary:

This is a request for review of a Site Plan, Conditional Use Permit, Preliminary Plat, and Final Plat for the Harbor Bay Church, to be located at 168 East Harbor Bay Drive. The site plan includes a church building, a pavilion, a storage building, and associated parking and landscaping. The preliminary and final plat includes a one lot subdivision to formally create the lot for the church and dedicate a portion of Harbor Bay Drive.

Recommendation:
Staff recommends that the City Council conduct a public meeting, take public comment at their discretion and discuss the proposed Site Plan, Conditional Use Permit, Preliminary Plat, and Final Plat and choose from the options in Section "H" of this report. Options include approval with conditions, continuing the application, or denial.

B. Background:

The LDS church has owned this property for some time now and demand in the area has created the need for a new meetinghouse. The Development Review Committee (DRC) reviewed the concept plan prior to receiving the proposed applications. Comments provided by the DRC have been incorporated into the plans.

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C. Specific Request:

This is a request for site plan approval, a conditional use permit, preliminary plat, and final plat approval for a proposed LDS church to be located at 168 East Harbor Bay Drive.

D. Process:

Section 19.13.04 of the City Code states that Site Plans and Conditional Uses require City Council approval after the Planning Commission holds a public hearing and forwards a recommendation. Section 19.13.04 of the City Code states that Preliminary Plats require a public hearing with the Planning Commission and that the City Council is the approval authority. The City Code also requires that an applicant hold a neighborhood meeting for any non-residential development proposal adjacent to developed property in a residential zone. *The applicant held a neighborhood meeting on Wednesday July 29, 2015 and answered questions regarding timing of development and placement of fences. The applicant has provided minutes and a list of attendees, see attached.* Section 19.13.04 also indicates that the Final Plats only go before the City Council and that a public hearing is not required for a final plat.

E. Community Review:

Per 19.13.04 of the City Code, this item has been noticed in *The Daily Herald*, and each property owner within 300 feet of the subject property was sent a letter at least ten calendar days prior to this meeting. As of the completion of this report, no public comment has been received.

F. General Plan:

The General Plan designates this area for Low Density Residential development and states "The Low Density Residential designation is designed to provide areas for residential subdivisions with an overall density of 1 to 4 units per acre. This area is characterized by neighborhoods with streets designed to the City's urban standards, single-family detached dwellings and open spaces."

Finding: consistent. The proposed use is a church which is listed as a conditional use in the Low Density Residential Zone; thus, the use is anticipated in this land use designation and will offer a location for nearby residents to participate in religious services.

G. Code Criteria:

Pertinent sections of the Land Development Code are reviewed below.

- 19.04, Land Use Zones: Section 19.04.13 regulates development in the R-3 zone. **Complies**.
  - Zone: R-3
  - Use: Church – *Conditional Use (see review later in this report)*
  - Density: N/A
  - Setbacks: R-3 zone requires 25' front and rear, 8'/12' sides – *Complies.*
  - Accessory Building Setbacks:
    - Front/Corner Side: same as primary structure - *Complies*
    - Sides/rear: 5' – *Complies.*
  - Lot width, depth, size, coverage
    - 70' wide min, 1 acre min for non-residential, 50% max coverage – *Complies.*
  - Dwelling/Building size
    - *N/A for nonresidential*
  - Height: 35' maximum – *Complies.*
  - Open Space: Complies.
    - 15% required – *N/A, Open space is not required for a church site.*
    - *This church will be serving nearby residents and park space has or will be provided within the nearby developments. The proposed plans*

indicate 31.02% of the site will be landscaped. Landscaping is reviewed later in this report.

- Sensitive Lands: *N/A*
- Trash: A dumpster enclosure is proposed and shall comply with 19.14.04(4). *Complies.*

- 19.05, Supplemental Regulations
  - Flood Plain: No building, structure, fence, or other obstruction may be constructed within any portion of Zone A as defined on the FEMA Flood Insurance Map. *Complies.*
  - Transportation Master Plan: Not building or lot shall be created or erected within a location of a proposed road, street, highway, or right-of-way shown on the approved Transportation Master Plan. *Complies.*
  - Property access: lots must have access onto a public or private street, prior to issuance of a building permit. *Complies.*

- 19.06, Landscaping and Fencing: **Can Comply** – *needs one more tree, see condition #3.*
  - General Provisions: *Complies.*
    - Park strips shall be landscaped and maintained by the property owner that abuts the park strip. *The landscape plans indicate that the park strips will be landscaped.*
    - Automated water-conserving irrigation systems, including low flow sprinkler heads and rain sensors are required. ***Can Comply*** – *see condition #4.*
  - Landscaping Plan: see attached. *Complies.*
  - Planting Standards & Design. *Complies.*
    - Deciduous Trees. All deciduous trees shall have a minimum trunk of two inches in caliper. *The plans indicate 2.5″ caliper. Complies.*
    - Evergreen Trees. All evergreen trees shall have a minimum size of six feet in height. *The plans indicate 7′-8′. Complies.*
    - Shrubs. At least 25% of the required shrubs shall be a minimum of 5 gallons in size at the time of installation; all other required shrubs shall be a minimum of 1 gallon in size. *The plans indicate 333 5-gallon shrubs. The Code requires 37 shrubs. Complies.*
  - Amount: Table 19.06.07 specifies the amount of required trees, shrubs and turf. ***Can Comply.***
    - The plans indicate a total landscape area of 58,016 square feet (32% of the total site). For this amount of landscaping the following is required:

For landscape areas greater than 15,000 sq. ft.	**Required**	**Provided**
Deciduous Trees: 7+1 per additional 3,000 sq.ft.	22	*117*
Evergreen Trees: 5 + 1 per additional 3,000 sq. ft.	20	***19****
Shrubs: 25 + 1 per additional 3,000 sq. ft.	40	*333*

Minimum Percentage of Turf	25%	*35%*

**One more evergreen tree is required. Refer to Condition #3.*

- Fencing & Screening: 19.06.09 outlines fencing requirements. *Complies.*
    - Fencing may be required adjacent to undeveloped property and is to be approved by the City Council through the Site Plan review process for nonresidential development. *The applicant is proposing a 6' tall vinyl privacy fence along the north and east property lines which will provide a buffer between the church site and future neighboring development.*
- Clear Sight Triangle: fencing shall be no taller than three feet in the clear sight triangle. *Complies.*
    - *Sheet C4.1 provides a note that indicates compliance.*

- 19.09, Off Street Parking: ***Can Comply.***
    - Dimensions: *Complies.*
        - For 90 degree parking, the stalls shall be 9' wide by 18' deep. The drive aisle shall be 24' wide.
    - Accessible Parking: ***Can Comply.*** *– needs one more accessible stall (condition #5).*
        - Every application shall comply with ANSI 117.1 and IBC regulations with regard to location, number, size, dimension, type, marking, surface, clearance, identification, and all other particulars.
            - *One additional accessible stall is required, see condition #5.*
    - Parking Lot Landscaping: *Complies.*
        - Parking adjacent to public streets: All parking areas for non-residential uses adjacent to a public street shall have a landscape berm of not less than 10 feet between the sidewalk and the parking area. *Complies.*
            - *The parking lot that is closest to McGregor Lane has more than 10 feet of separation and the parking lot is approximately 7 feet lower than the sidewalk, addressing this requirement.*
        - Curbs: Landscaped areas abutting a paved surface shall be curbed. *Complies.*
        - Clear Sight: At intersections, landscaping shall be not taller than 3' in the clear sight triangle and shall not be bermed. *Complies.*
        - Components of Landscaped Areas: *Complies.*
            - Landscaped parking areas shall consist of trees, shrubs, and groundcover.
        - Required Parking Islands: *Complies.*
            - There shall be a landscape island every 10 stalls that is either 9'x36' for double rows of parking or 9'x18' for single rows of parking.
                - For 9'x36' planters there shall be a minimum of two trees per planter. For 9'x18' planters there shall be a minimum of one tree per planter.
            - Landscape islands shall be placed and shaped to direct traffic through the parking area.
            - There shall be a break at a minimum of forty parking stalls for each double row.

        - Landscape Boundary Strip: *Complies.*
            - All landscape boundary strips shall be a minimum of eight feet in width.
    - Pedestrian Walkways & Accesses: *Complies.*
        - Parking lots larger than 75,000 square feet shall provide raised or delineated pedestrian walkways. *The proposed site has two parking lots and they do not exceed 75,000 square feet.*
    - 19.09.11, Required parking stalls: *Complies.*
        - Churches require 1 stall per 3 seats. *The proposed chapel will have 242 seats; requiring 81 stalls. The plans indicate 233 stalls are provided.*

- 19.11, Lighting: **Complies.**
    - General Standards: *Complies.*
        - Material: all assemblies shall be metal.
        - Base: a 16" tall decorative base is required.
        - Type: All fixtures shall be full cut-off
        - Angle: All fixtures shall be directed downward.
        - Lamp: The color shall be soft white or amber.
        - Drawings: Fixtures shall be specified in the development drawings.
        - Flags: The US flag may be illuminated from dusk to dawn *(no flag proposed)*
    - Nonresidential Lighting: *Complies.*
        - Trespass light shall not exceed 0.1 foot-candles measured at the property line.
        - All free standing lighting fixtures and assemblies shall be black.
        - Pole design shall be an arm and bell shade.
        - Parking lot poles shall be limited to a height of 16' when within 200' of a residential zone.
        - Fixtures shall be full cut-off.
        - At least 50% of the lights shall be turned off one hour after closing or by 11:00 p.m., whichever is earlier. *They intend to turn off all the parking lot lights at night.*

- 19.12, Subdivisions: **Complies.**
    - Preliminary and Final Plat requirements apply, 19.12.03(2-4): *Complies.*
    - General Subdivision Improvements, 19.12.06: *Complies.*
        - Maximum block length is 1,000 feet. *Complies.*
        - If a block is more than 800 feet in length a pedestrian walkway is required through the block. *N/A*
        - Connecting streets are required: *A portion of McGregor Lane will be reconstructed with this development. Harbor Bay Drive will be completed. Complies.*
        - Pedestrian walkways, trials, and other logical linkages are required. *The site plan includes pedestrian walkways around the building. Public sidewalks will create additional linkage*. Complies.
        - Driveway location for lots next to an arterial: *N/A – no lots are proposed next to an arterial.*

- Access: Two separate means of access are required whenever the total number of dwelling units exceeds 50. *N/A – one lot is proposed.*
- Lot design: The design shall not create lots that are not buildable due to size, shape, topography, terrain, etc. *Complies.*
- Lot frontage: all lots shall have frontage on a road that meets City standards. *Complies.*
- Flag lots: *None proposed.*
- Public roads may not be included in lots. *Complies.*
- Property lines: Side property lines shall be at approximate right angles to the street line or radial to the street line. *Complies.*
- Corner lots: Corner lots shall be platted ten percent larger than the minimum for the zone. The minimum lot size for nonresidential development in this zone is 1 acre. *The proposed lot is a corner lot and is ~3.88 acres.*
- Boundary: No lot shall be divided by a municipal boundary line. *Complies.*
- Remnants: Remnants of property that do not meet the code requirements shall not be left in a subdivision. *Complies.*
- Double access lots are not permitted with the exception of corner lots. *Complies.*
- Arterials: Subdivisions along arterials shall comply with the adopted arterial cross section. *N/A – this is not along an arterial.*

- Section 19.13, Process: **Complies.**
  - General Considerations:
    - General Plan: See Section G of the staff report.
    - Natural Features: Wetlands shall be preserved with the future plats that are adjacent to the lake.
    - Community & Public Facilities: N/A
  - 19.13.04 requires a neighborhood meeting for nonresidential development adjacent to developed property in a residential zone.
    - *The applicant will held a neighborhood meeting on July 29, 2015.*
  - Notice / Land Use Authority: The City Council is the land use authority for Site Plans, Conditional Use Permits, Preliminary and Final Plats.
    - *Mailed notices were sent prior to the public hearing with the Planning Commission for the Site Plan, Conditional Use Permit, and Preliminary Plat. The Final Plat will only go the Council. Mailed notices are not required for final plats.*
  - Development Agreement / MDA: *N/A for this project.*
  - Payment in Lieu of Open Space: *N/A for this project.*
  - 19.13.09(9) requires a phasing plan for phased developments. *N/A – no phasing is proposed.*

- 19.14, Site Plans: **Complies.**
  - Urban Design Committee: *Complies.*
    - Mechanical Equipment – screened
    - Windows – may be used as accents. Untreated metal or aluminum is prohibited.

- Building Lighting – shall be shielded and directed downward and shall not project above or beyond the property line.
- Trash Enclosures, Storage Areas, and External Structures: *Complies.*
    - Shall be comparable to the proposed building and oriented away from public view.
    - Solid gates are required.
    - When adjacent to parking areas, a 3' landscape buffer shall be provided.
- Exterior Materials – *shall be reviewed by the Urban Design Committee*
- Comments: *Reviewed by the Urban Design Committee on July 22, 2015; the Committee recommended approval as proposed.*

- 19.15, Conditional Use Permit: **Complies.**
    - Determination.
        1. The Planning Commission may only permit a Conditional Use to be located within a zone where the particular Conditional Use is listed as a Conditional Use by the use regulations of this Title.
        2. A conditional use shall be approved if reasonable conditions are proposed, or can be imposed, to mitigate the reasonably anticipated detrimental effects of the proposed use in accordance with the standards contained in this Chapter.
        3. If the reasonably anticipated detrimental effects of a proposed conditional use cannot be substantially mitigated by the proposal or the imposition of reasonable conditions to achieve compliance with the standards contained in this Chapter, the conditional use may be denied.

    - General standards: *Complies.*
        - The siting of the structure or use, and in particular:
            - the adequacy of the site to accommodate the proposed use or building and all related activities;
                - *The site is located in an R-3 zone where churches are anticipated as conditional uses. The site is designed to accommodate the proposed use.*
            - the location and possible screening of all outdoor activities;
                - *The site will have a 6' tall privacy fence on the north and east property lines.*
            - the relation of the proposed building or use to any adjoining building with particular attention to protection of views, light, air, and peace and quiet;
                - *The proposed building will not significantly impact the views, light, air, and peace and quiet in this area.*
            - the location and character of any display of goods and services; and
                - *There will not be any displays.*
            - the size, nature, and lighting of any signs.
                - *The signs include a small sign on the front of the building that is built into the face, with the name of the religion; the sign is not lit.*

    - Traffic circulation and parking: *Complies.*
        - the type of street serving the proposed use in relation to the amount of traffic expected to be generated;
            - *The City Engineer has reviewed the site and the circulation. McGregor Lane will be reconstructed along the frontage of the property and to the south until it meets with existing improvements. Harbor Bay Drive will be constructed from the existing stub along the property frontage.*

- the adequacy, convenience, and safety of provisions for vehicular access and parking, including the location of driveway entrance and exits; and
    - *The access locations have been reviewed by the City Engineer, and the access points meet spacing requirements.*
- the amount, timing, and nature of traffic generated by the proposed conditional use.
    - *The amount of traffic generated by the site varies throughout the week and is at its peak on Sundays, when the neighboring uses have minimal traffic. The proposed site is laid out in a configuration that will accommodate the anticipated traffic.*

- The compatibility of the proposed conditional use with its environment, and in particular:
    - the number of customers or users and the suitability of the resulting activity level to the surrounding uses;
        - *The proposed church is a compatible use in the R-3 zone and will serve the nearby residents. The proposed church will have a membership of approximately 300-600 people per ward, but attendance at Sunday meetings will vary and will not include all members.*
    - hours of operation;
        - *The hours of operation will vary depending on the activities being held. For the most part the peak hours will be on Sunday between 9:00 a.m.-4:00 p.m.*
    - adequacy of provisions for the control of any off-site effects such as noise, dust, odors, light, or glare, etc.;
        - *The operations will not create off-site noise, dust, odors, light, or glare.*
    - adequacy of provisions for protection of the public against any special hazards arising from the intended use;
        - *No special hazards are proposed.*
    - the expected duration of the proposed building, whether temporary or permanent, and the setting of time limits when appropriate; and the degree to which the location of the particular use in the particular location can be considered a matter of public convenience and necessity.
        - *The proposed location offers an additional church building for nearby residents. The building is expected to be permanent.*

- The Conditional Use shall meet the following standards:
    - the use will not, under the circumstances of the particular case, be detrimental to the health, safety, or general welfare of persons residing or working in the vicinity, or injurious to property or improvements in the vicinity;
        - *The proposed church will not be detrimental to the health, safety, or general welfare of persons in the area but will offer a new church building for religious services.*
    - the use will be consistent with the intent of the land use ordinance and comply with the regulations and conditions specified in the land use ordinance for such use;
        - *The intent of the land use ordinance is to prohibit incompatible uses in residential areas. The proposed church will provide a location for religious services for nearby residents and is compatible with residential development.*
    - the use will be consistent with the character and purposes stated for the land use zone involved and with the adopted Land Use Element of the General Plan;
        - *See Section "F" of this report. The proposed site can comply with the land use ordinance requirements and regulations as reviewed earlier in this report.*
    - the use will not result in a situation which is cost ineffective, administratively infeasible, or unduly difficult to provide essential services by the City, including

roads and access for emergency vehicles and residents, fire protection, police protection, schools and busing, water, sewer, storm drainage, and garbage removal; and

- *The proposed use will not result in a situation that is cost ineffective to the City.*

- the proposed use will conform to the intent of the City of Saratoga Springs General Plan.
  - *The proposed use conforms to the intent of the General plan as outlined in Section "F" of this report.*

- When necessary, the City Council may attach conditions to ensure compatibility with the surrounding area and to mitigate harmful effects. Such conditions may include the following:
  - additional parking;
  - water, sewer, and garbage facilities;
  - landscape screening to protect neighboring properties;
  - requirements for the management and maintenance of the facilities;
  - changes in layout or location of uses on the lot; and
  - any other condition the City Council finds necessary to reasonably ensure that the proposed Conditional Use will comply with the standards noted above.

  Additional mitigation is not necessary. *The site plan indicates adequate parking for the proposed use, site landscaping, and perimeter fencing, which will buffer the activities from abutting residents. The parking lot lights will be no taller than 16′ and will be full cut-off directed downward.*

- 19.18, Signs: **Complies.**
  - A small identification/wall sign is proposed on the front of the building.
    - This falls under the criteria for signs for Institutional uses which allows:
      - Size: one square foot for every lineal foot of width of the building face to which the sign is attached. *The building width 115′ wide. The proposed sign is approximately 9 square feet.*
      - Height: the height shall not exceed three feet. *Complies.*

H. Recommendation and Alternatives:

After evaluating the required standards for developments in the R-3 zone, staff recommends that the City Council conduct a public meeting, take public comment at their discretion, and select from the motions below:

Recommended Motion:

"Based upon the evidence and explanations received today, I move that the City Council approve the Harbor Bay Church Site Plan, Conditional Use Permit, Preliminary Plat, and Final Plat, located at 168 East Harbor Bay Drive, with the findings and conditions below:

Findings:

1. The proposed site plan, conditional use, and preliminary plat are consistent with the General Plan as explained in the findings in Section "F" of this report, which findings are incorporated herein by this reference.
2. The proposed site plan, conditional use, preliminary plat, and final plat meets or can conditionally meet all the requirements in the Land Development Code as explained in the findings in Section "G" of this report, which findings are incorporated herein by this reference.

Conditions:

1. That all requirements of the City Engineer be met, including those listed in the attached staff report.
2. That all requirements of the Fire Chief be met.
3. One evergreen tree shall be added to the landscape plans to comply with the landscape requirements.
4. The sprinkler system for the landscaping shall include automated water-conserving irrigation systems, including low flow sprinkler heads and rain sensors.
5. One additional accessible stall is required.
6. Any other conditions as articulated by the City Council:
   _____

Alternative Motions:

Alternative Motion A

"I move to **continue** the item to another meeting, with direction to the applicant and Staff on information and/or changes needed to render a decision, as follows:

_____
_____
_____
_____

Alternative Motion B

"Based upon the evidence and explanations received today and the following findings, I move that the City Council deny the Harbor Bay Church site plan, conditional use permit, preliminary plat, and final plat, for property located at 168 East Harbor Bay Drive. Specifically I find that the following standards and/or code requirements have not been met:"

1. The applications are not consistent with the General Plan, as articulated by the City Council: _____, and/or,

2. The applications are not consistent with Section(s) [19.04,19.05,19.06, 19.09, 19.11, 19.12, 19.13, 19.14, 19.15, 19.18] of the Code, as articulated by the City Council:
   _____

I. Exhibits:

1.	Engineering Report	(pages 11-14)
2.	Location map	(page 15)
3.	Preliminary/Final Plat	(page 16)
4.	Architectural Site Plan and Details	(page 17-20)
5.	Landscape Plan	(pages 21-22)
6.	Elevations	(pages 23-24)
7.	Photo of colors/materials board	(page 25)
8.	PC Minutes, 7/30/15	(pages 26-27)
9.	Neighborhood meeting minutes/roll	(pages 28-29)

City Council
Staff Report

Author: Jeremy D. Lapin, City Engineer
Subject: Harbor Bay Church
Date: July 30, 2015
Type of Item: Site Plan and Preliminary Plat Approval

Description:

A. Topic: The Applicant has submitted a Site Plan application. Staff has reviewed the submittal and provides the following recommendations.

B. Background:

Applicant:	*Evans and Associates Architecture – Chad Spencer*
Request:	*Site Plan and Preliminary Plat Approval*
Location:	*Approx. 168 East Harbor Bay Drive*
Acreage:	*4.677 acres*

C. Recommendation: Staff recommends the approval of Site Plan and Preliminary Plat subject to the following conditions:

D. Conditions for Site Plan:

A. Meet all engineering conditions and requirements in the construction of the project. Review and inspection fees must be paid and a bond posted as per the City's Development Code prior to any construction being performed on the project. Impact and water fees are due when pulling the building permit.

B. All review comments and redlines provided by the City Engineer are to be complied with and implemented with the approved construction drawings.

C. Developer must secure water rights as required by the City Engineer, City Attorney, and development code.

D. Submit easements for all public utilities not located in the public right-of-way.

E. Developer is required to ensure that there are no adverse effects to adjacent properties due to the grading practices employed during construction of these plats.

F. Project must meet the City Ordinance for Storm Water release (0.2 cfs/acre for all developed property) and all UPDES and NPDES project construction requirements.

G. Final plans shall include an Erosion Control Plan that complies with all City, UPDES and NPDES storm water pollution prevention requirements.

H. All work to conform to the City of Saratoga Springs Standard Technical Specifications, most recent edition.

I. Developer may be required by the Saratoga Springs Fire Chief to perform fire flow tests prior to final plat approval and prior to the commencement of the warranty period.

J. Submittal of a Mylar and electronic version of the as-built drawings in AutoCAD format to the City Engineer is required prior acceptance of site improvements and the commencement of the warranty period.

K. Harbor Bay and McGregor Drive shall be improved to City Standards for a 56-ft ROW local road and dedicated to the City before occupancy can be granted.

L. The geotechnical report for Harbor Bay Church shall have a lab tested CBR value as this value cannot be assumed.

M. Vertical curves shall be provided on roadways with a change in grade of 1% or more.

N. Structural calculations and designs stamped by a licensed engineer shall be provided for all retaining walls four feet or greater. A building permit shall be obtained prior to commencing construction on these walls.

O. Parking lot lights shall not exceed 16’ in height when within 200’ of a residential zone.

P. Maximum light spillover onto adjacent residential properties shall not exceed 0.1 ft-candles.

Q. Project shall comply with all ADA standards and requirements.

E. Conditions for Preliminary Plat:

A. The developer shall prepare final construction drawings as outlined in the City’s standards and specifications and receive approval from the City Engineer on those drawings prior to commencing construction.

B. Developer shall bury and/or relocate any overhead utilities that are within or adjacent to this plat.

C. All roads shall be designed and constructed to City standards and shall incorporate all geotechnical recommendations as per the applicable soils report.

D. Developer shall provide end of road and end of sidewalk signs per MUTCD at all applicable locations.

E. Developer shall provide a finished grading plan for all roads and lots and shall stabilize and reseed all disturbed areas.

F. Developer shall provide plans for and complete all improvements within pedestrian corridors.

G. Meet all engineering conditions and requirements as well as all Land Development Code requirements in the preparation of the final plat and construction drawings. All application fees are to be paid according to current fee schedules.

H. All review comments and redlines provided by the City Engineer during the preliminary process are to be complied with and implemented into the final plat and construction plans.

I. Developer shall prepare and submit easements for all public facilities not located in the public right-of-way

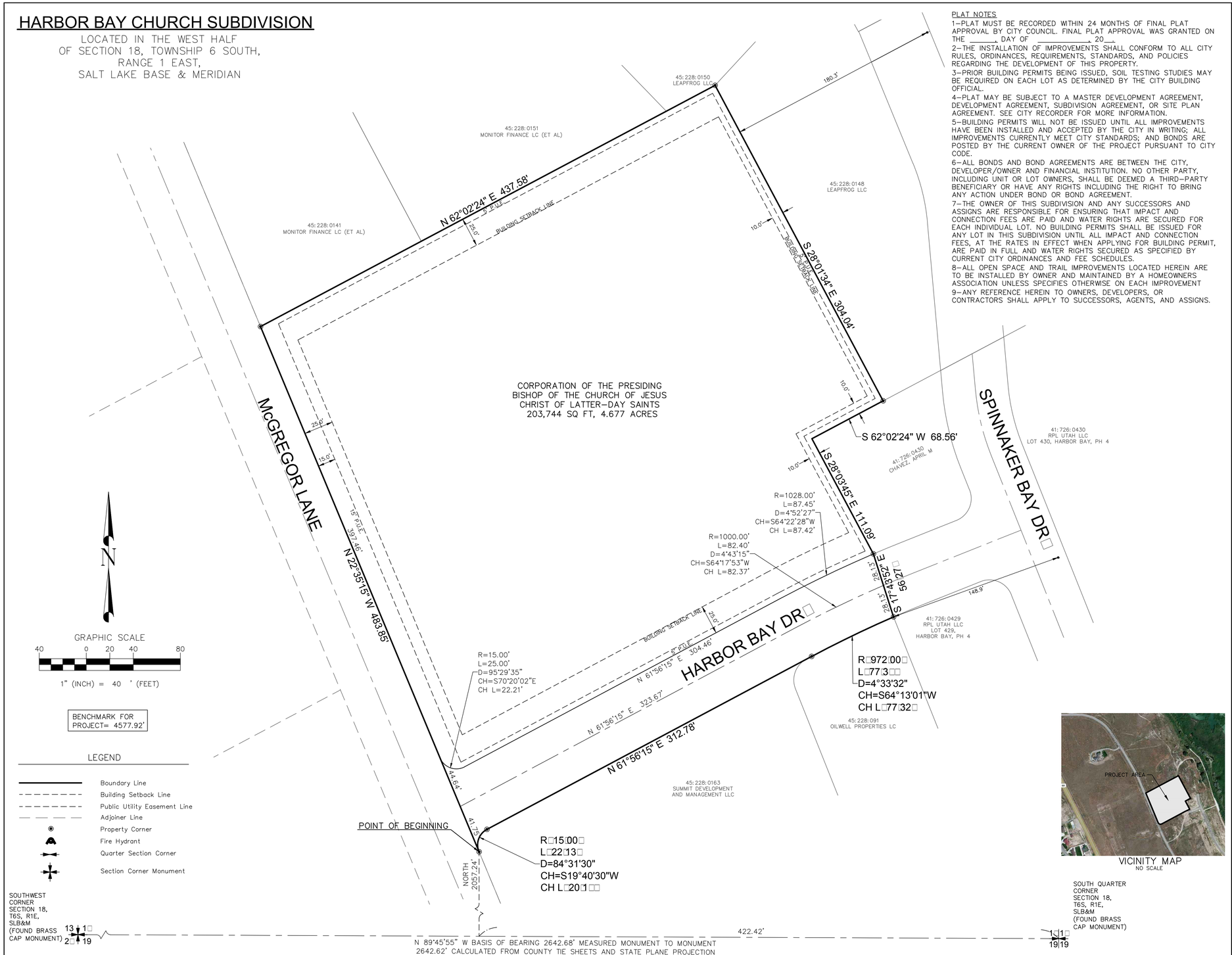
J. Final plats and plans shall include an Erosion Control Plan that complies with all City, UPDES and NPDES storm water pollution prevention requirements. Project must meet the City Ordinance for Storm Water release (0.2 cfs/acre for all developed property) and shall identify an acceptable location for storm water detention. All storm water must be cleaned as per City standards to remove 80% of Total Suspended Solids and all hydrocarbons and floatables.

K. McGregor Drive shall be improved as per City standards for a 56-ft from Harbor Bay Plat 5 (Catamaran Way) to the north boundary of the church property. These improvements shall include a complete reconstruction of the existing roadway as necessary to bring it into compliance with all adopted City standards for structural and horizontal designs.

LOCATION MAP

HARBOR BAY CHURCH SUBDIVISION

LOCATED IN THE WEST HALF
OF SECTION 18, TOWNSHIP 6 SOUTH,
RANGE 1 EAST,
SALT LAKE BASE & MERIDIAN



PLAT NOTES

1–PLAT MUST BE RECORDED WITHIN 24 MONTHS OF FINAL PLAT APPROVAL BY CITY COUNCIL. FINAL PLAT APPROVAL WAS GRANTED ON THE _____, DAY OF _____, 20__.

2–THE INSTALLATION OF IMPROVEMENTS SHALL CONFORM TO ALL CITY RULES, ORDINANCES, REQUIREMENTS, STANDARDS, AND POLICIES REGARDING THE DEVELOPMENT OF THIS PROPERTY.

3–PRIOR BUILDING PERMITS BEING ISSUED, SOIL TESTING STUDIES MAY BE REQUIRED ON EACH LOT AS DETERMINED BY THE CITY BUILDING OFFICIAL.

4–PLAT MAY BE SUBJECT TO A MASTER DEVELOPMENT AGREEMENT, DEVELOPMENT AGREEMENT, SUBDIVISION AGREEMENT, OR SITE PLAN AGREEMENT. SEE CITY RECORDER FOR MORE INFORMATION.

5–BUILDING PERMITS WILL NOT BE ISSUED UNTIL ALL IMPROVEMENTS HAVE BEEN INSTALLED AND ACCEPTED BY THE CITY IN WRITING; ALL IMPROVEMENTS CURRENTLY MEET CITY STANDARDS; AND BONDS ARE POSTED BY THE CURRENT OWNER OF THE PROJECT PURSUANT TO CITY CODE.

6–ALL BONDS AND BOND AGREEMENTS ARE BETWEEN THE CITY, DEVELOPER/OWNER AND FINANCIAL INSTITUTION. NO OTHER PARTY, INCLUDING UNIT OR LOT OWNERS, SHALL BE DEEMED A THIRD–PARTY BENEFICIARY OR HAVE ANY RIGHTS INCLUDING THE RIGHT TO BRING ANY ACTION UNDER BOND OR BOND AGREEMENT.

7–THE OWNER OF THIS SUBDIVISION AND ANY SUCCESSORS AND ASSIGNS ARE RESPONSIBLE FOR ENSURING THAT IMPACT AND CONNECTION FEES ARE PAID AND WATER RIGHTS ARE SECURED FOR EACH INDIVIDUAL LOT. NO BUILDING PERMITS SHALL BE ISSUED FOR ANY LOT IN THIS SUBDIVISION UNTIL ALL IMPACT AND CONNECTION FEES, AT THE RATES IN EFFECT WHEN APPLYING FOR BUILDING PERMIT, ARE PAID IN FULL AND WATER RIGHTS SECURED AS SPECIFIED BY CURRENT CITY ORDINANCES AND FEE SCHEDULES.

8–ALL OPEN SPACE AND TRAIL IMPROVEMENTS LOCATED HEREIN ARE TO BE INSTALLED BY OWNER AND MAINTAINED BY A HOMEOWNERS ASSOCIATION UNLESS SPECIFIES OTHERWISE ON EACH IMPROVEMENT

9–ANY REFERENCE HEREIN TO OWNERS, DEVELOPERS, OR CONTRACTORS SHALL APPLY TO SUCCESSORS, AGENTS, AND ASSIGNS.

VICINITY MAP
NO SCALE

SURVEYOR'S CERTIFICATE

I, Nathan B. Weber, do hereby certify that I am a registered Land Surveyor and that I hold a license, Certificate No. 5152762, in accordance with the Professional Engineers and Land Surveyors Licensing Act found in Title 58, Chapter 22 of the Utah Code. I further certify that by the authority of the owners, I have made a survey of the tract of land shown on this plat and described below, have subdivided said tract of land into lots, streets, and easements, have completed a survey of the property described on this plat in accordance with Utah Code Section 17–23–17, have verified all measurements, and have placed monuments as represented on the plat. I further certify that every existing right–of–way and easement grant of record for underground facilities, as defined in Utah Code Section 54–8a–2, and for other utility facilities, is accurately described on the plat, and that this plat is true and correct. I also certify that I have filed, or will file within 90 days of recordation of this plat, a map of the survey I have completed with the Utah County Surveyor.

BOUNDARY DESCRIPTION

A parcel of land located in the Section 18, Township 6 South, Range 1 East, Salt Lake Base and Meridian, located in the City of Saratoga Springs, County of Utah, State of Utah, being more particularly described as follows:

Beginning at a point on the Easterly Right–of–Way line of Lake View Drive, as shown on Lake Mountain Estates Plat B, located in the office of the Utah County Recorder in Book 45 at Page 228, said point is North 89°45'55" West 422.42 feet along the Section line and North 2057.24 feet from the South 1/4 Corner of Section 18, Township 6 South, Range 1 East, Salt Lake Base and Meridian;

thence North 22°35'15" West 483.85 feet along the Easterly Right–of–Way line of said subdivision to the Southerly line of Parcels 45:228:0141, 45:228:0151, and 45:228:0150;

thence North 62°02'24" East 437.59 feet along the Southerly line of said parcels to the Westerly line of parcel 45:228:0148;

thence South 28°01'34" East 304.04 feet along the Westerly line of said parcel to the Northerly line of parcel 41:726:0430;

thence South 62°02'24" West 68.56 feet along the Northerly line of said parcel to the Westerly line of said parcel;

thence South 28°03'45 " East 111.01 feet along the said Westerly line of said parcel to Westerly line of Harbor Bay Phase 4 Subdivision, as recorded in the Office of the Utah County Recorder as Entry #62044:2009;

thence South 17°43'52" East 56.27 feet along the Westerly line of said subdivision to a point of curvature and the Southerly Right–of–Way line of Harbor Bay Drive;

thence Southwesterly 77.34 feet along the arc of a 972.00 foot radius curve to the left through a central angle of 04°33'32" (chord bears South 64°13'01" West 77.32 feet) along the Southerly Right–of–Way line of said road;

thence South 61°56'15" West 312.78 feet along the Southerly line of said road to a point of curvature along the Southerly Right–of–Way line of said road;

thence Northwesterly 22.13 feet along the arc of a 15.00 foot radius curve to the left through a central angle of 84°31'30" (Long Chord Bears South 19°40'30" West 20.18 feet) to the point of beginning.

Parcel Contains 203,744 sq. ft. or 4.677 acres.

OWNER'S DEDICATION

Know all men by these presents that _____, the _____undersigned owners of the above described tract of land having caused same to be subdivided into lots and streets to be known as

HARBOR BAY CHURCH SUBDIVISION

do hereby dedicate for the perpetual use of the public and/or City all parcels of land, easements, right–of–way, and public amenities shown on this plat is intended for public and/or City use. The owner(s) voluntarily defend, indemnify, and save harmless the City against any easements or other encumbrance on a dedicated street which will interfere with the City's use. maintenance, and operation of the street. The owner(s) voluntarily defend, indemnify, and hold harmless the City from any damage claimed by persons within or without this subdivision to have been caused by alterations of the ground surface, vegetation, drainage, or surface or sub–surace water flows within this subdivision or by establishment or construction of the roads within this subdivision.
In witness whereof___ have hereunto set___ this____ day of ____, A.D. 20__.

ACKNOWLEDGMENT

STATE OF UTAH
COUNTY OF SALT LAKE) S.S.

On the _____day of _____a.d. 2015, personally appeared before me, the undersigned Notary Public, in and for the County of Utah in said State of Utah, the signer(s) of the above Owner's Dedication, _____ in number, who duly acknowledged to me that _____ signed it freely and voluntarily and for the uses and purposes therein mentioned.

My commission expires: Notary Public residing at

APPROVAL BY LEGISLATIVE BODY

The City Council of the City of Saratoga Springs, County of Utah, approves this subdivision subject to the conditions and restrictions stated hereon, and hereby accepts the Dedication of all streets, easements, and other parcels of land intended for the public of the perpetual use of the public.
This _____, day of _____, A.D. 2015.

City Mayor — Attest — City Recorder (See Seal Below)

BY SIGNING THIS PLAT, THE FOLLOWING UTILITY COMPANIES ARE APPROVING THE: (A) BOUNDARY, COURSE, DIMENSIONS AND INTENDED USE OF THE RIGHT–OF–WAY AND EASEMENT GRANTS OF RECORD; (B) LOCATION OF EXISTING UNDERGROUND AND UTILITY FACILITIES; (C) CONDITIONS OR RESTRICTIONS GOVERNING THE LOCATION OF THE FACILITIES WITHIN THE RIGHT–OF–WAY, AND EASEMENT GRANTS OF RECORD, AND UTILITY FACILITIES WITHIN THE SUBDIVISION. "APPROVING" SHALL HAVE THE MEANING IN UTAH CODE SECTION 10–9A–603(4)(c)(ii).

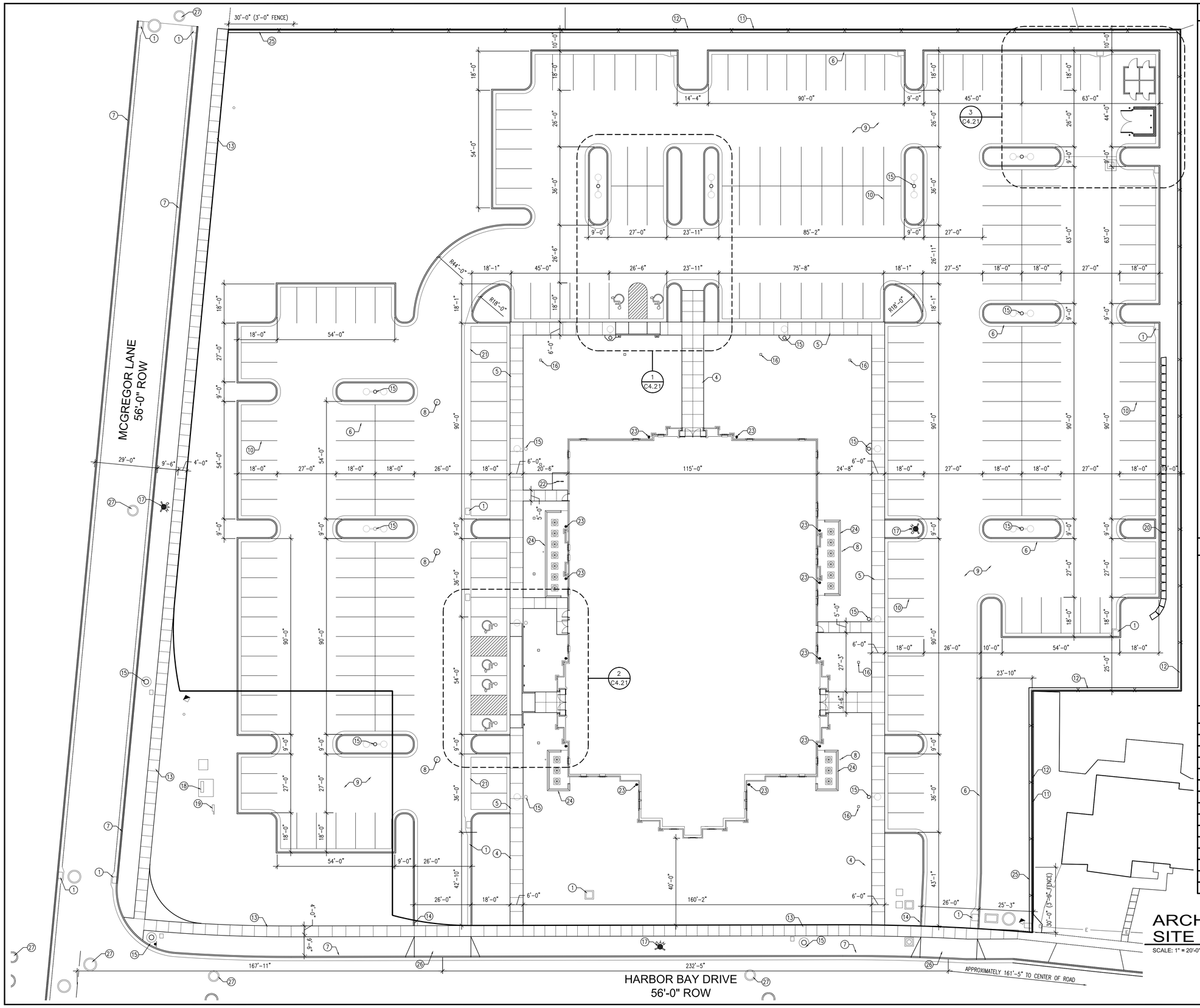
QUESTAR GAS	CENTURYLINK	ROCKY MOUNTAIN POWER	COMCAST	PLANNING COMMISSION REVIEW
APPROVED THIS _____ DAY OF _____ A.D., 20__.	APPROVED THIS _____ DAY OF _____ A.D., 20__.	APPROVAL AS TO FORM THIS_____ DAY OF _____ A.D., 20__.	APPROVAL AS TO FORM THIS_____ DAY OF _____ A.D., 20__.	APPROVED BY THE PLANNING COMMISSION ON THIS _____ DAY OF _____ A.D., 20__.
QUESTAR GAS	CENTURYLINK	ROCKY MOUNTAIN POWER	COMCAST	CHAIRMAN, PLANNING COMMISSION

DIAMOND LAND SURVEYING, LLC	FIRE CHIEF APPROVAL	SARATOGA SPRING ENGINEER APPROVAL	SARATOGA SPRINGS ATTORNEY	LEHI POST OFFICE
52□3 South Green Pine Drive Murray, Utah □□123 office□ diamondlandsurveying□com Phone (□01) 266-5099 Fa□266-5032	APPROVED BY THE FIRE CHIEF ON THIS _____ DAY OF _____ A.D., 20__.	APPROVED BY THE CITY ENGINEER ON THIS _____ DAY OF _____ A.D., 20__.	APPROVED BY SARATOGA SPRINGS ATTORNEY ON THIS _____ DAY OF _____ A.D., 20__.	APPROVED BY POST OFFICE REPRESENTATIVE ON THIS _____ DAY OF _____ A.D., 20__.
	CITY FIRE CHIEF	CITY ENGINEER	SARATOGA SPRINGS ATTORNEY	LEHI POST OFFICE REPRESENTATIVE

HARBOR BAY CHURCH SUBDIVISION

LOCATED IN THE WEST HALF
OF SECTION 18, TOWNSHIP 6 SOUTH, RANGE 1 EAST,
SALT LAKE BASE & MERIDIAN

SURVEYORS SEAL	NOTARY PUBLIC SEAL	CIVIL ENGINEERS SEAL	CLERK–RECORDER SEAL
LICENSED PROFESSIONAL LAND SURVEYOR 7/1/15 No. 5152762 NATHAN B. WEBER STATE OF UTAH			



ARCHITECTURAL SITE PLAN

SCALE: 1" = 20'-0"

NORTH

KEYED NOTES

1. CATCH BASIN – SEE SITE GRADING AND DRAINAGE PLAN AND C5.13
2. CLEANOUT BOX – SEE SITE GRADING AND DRAINAGE PLAN AND A/C5.13 SIMILIAR
3. VORTSENTRY HYDRAULIC TREATMENT SYSTEM – SEE SITE GRADING AND DRAINAGE PLAN
4. CONCRETE WALK – SEE D/C5.12
5. COMBINATION CONCRETE SIDEWALK–CURB AND GUTTER – SEE B/C5.11 AND C/C5.11
6. CONCRETE CURB AND GUTTER – SEE E/C5.11 AND F/C5.11
7. CONCRETE CURB AND GUTTER PER SARATOGA SPRINGS CITY STANDARDS
8. CLEAN OUT TO GRADE – SEE E/C5.12 AND UTILITY PLAN – PROVIDE A 1'–0" WIDE CONCRETE COLLAR AROUND CLEAN OUTS LOCATED IN ASPHALT PARKING LOT
9. ASPHALT PAVEMENT – SEE C/C5.12
10. 4" WIDE PAINTED PARKING STRIPS – TYPICAL
11. PROPERTY LINE
12. 6'–0" TALL VINYL PRIVACY FENCE WITH CONCRETE MOW STRIP – SEE J/C5.12
13. CONCRETE SIDEWALK PER SARATOGA SPRINGS CITY STANDARDS
14. TAPER CONCRETE CURB TO ASPHALT LEVEL AT DRIVE ENTRANCES – SEE F/C5.13
15. LIGHT POLE – SEE ELECTRICAL
16. YARD DRAIN – SEE D/C5.13 AND GRADING AND DRAINAGE PLAN
17. FIRE HYDRANT – SEE UTILITY PLAN
18. TRANSFORMER – SEE ELECTRICAL
19. CT CABINET – SEE ELECTRICAL
20. REDI–ROCK RETAINING WALL – SEE GRADING AND DRAINAGE PLAN AND H/C5.21
21. CONCRETE WATERWAY – SEE H/C5.11 AND GRADING AND DRAINAGE PLAN
22. BICYCLE RACK WITH AN 8'–0" x 8'–0" CONCRETE PAD – SEE K/C5.12
23. DOWNSPOUT CATCH BASIN – SEE K/C5.13 AND GRADING AND DRAINAGE PLAN
24. MECHANICAL ENCLOSURE – SEE B/C5.21
25. 3'–0" TALL VINYL PRIVACY FENCE WITH CONCRETE MOW STRIP EXTEND FROM SIDEWALK TO 30'–0" FROM THE RIGHT OF WAY
26. CONCRETE DRIVE APPROACH – SEE ST–4/C5.11
27. SANITARY SEWER MANHOLE – SEE UTILITY PLAN

GENERAL NOTES

1. CONCRETE RADII ARE 4'–0" UNLESS NOTED OTHERWISE
2. COORDINATE ALL SITE WORK WITH ALL OTHER CONTRACT DOCUMENTS
3. ALL APPLICABLE ELEMENTS OF THE AMERICAN'S WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES WILL BE ADHERED TO
4. PARKING STALLS ARE 9'–0" X 18'–0" UNLESS NOTED OTHERWISE.
5. ALL NOTED ITEMS ARE NEW UNLESS NOTED OTHERWISE.

SITE INFORMATION

ON SITE IMPROVMENTS	SQ. FT.	ACRES	
TOTAL PARCEL AREA	169,064	3.881	100%
BUILDING AREAS			
CHAPEL	19,422		
STORAGE BUILDING	190		
IMPERVIOUS AREAS			
CONCRETE – WALKS, PADS, APRONS	8,185		
CONCRETE CURB & GUTTER (LF)	3,767		
ASPHALT	80,500	1.848	47.61%
TOTAL LANDSCAPE AREA	52,441	1.204	31.02%
TOTAL PARKING SPACES PROVIDED			
REGULAR	227 STALLS		
ACCESSIBLE	1 STALLS		
VAN ACCESSIBLE	5 STALLS		
TOTAL SPACES PROVIDED	233 STALLS		

evans + associates architecture
11576 south state street, suite 103b, draper, utah 84020
phone 801-553-9272 fax 801-553-9273

Stamp

LICENSED ARCHITECT
PAUL ANTHONY EVANS
273770
STATE OF UTAH

A New Meetinghouse for:
Harbor Bay
Saratoga Springs UT South Stake
168 East Harbor Bay Drive
Saratoga Springs, Utah

Project for:
THE CHURCH OF
JESUS CHRIST
OF LATTER-DAY SAINTS

Revisions

Mark	Date	Description
	3/1/2015	Concept Plan Submittal
	4/30/2015	Conditional Use Submittal
	5/12/2015	Engineering Redlines
	6/3/2015	Revised Site Layout

Project Number
15-17

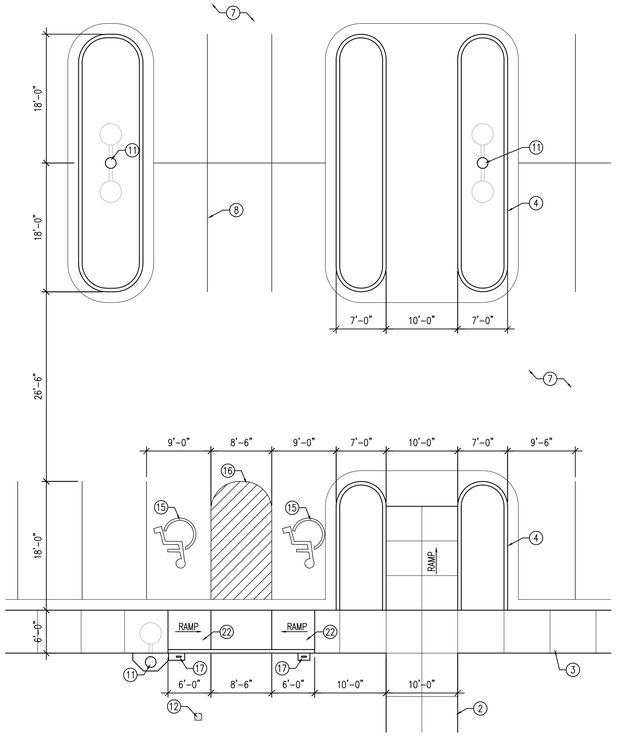
Plan Series
HET-MAS-09-05 (Style A)

Property Number
500-0617

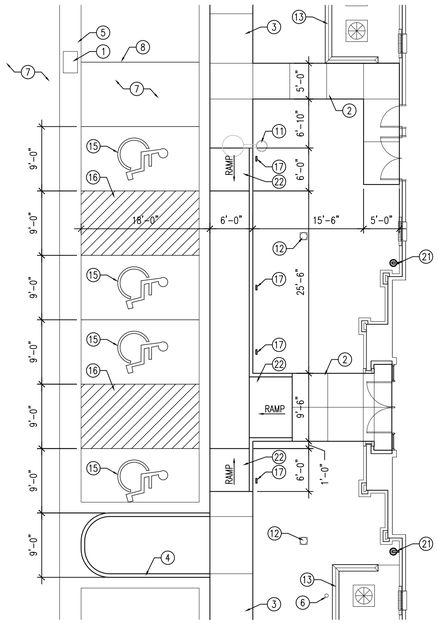
Date
March 1, 2015

Sheet Title
ARCHITECTURAL SITE PLAN

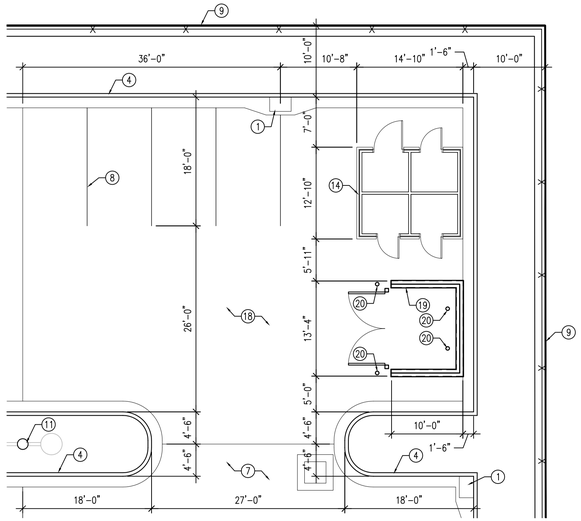
Sheet
C4.11



1 ENLARGED SITE PLAN
SCALE: 1" = 10'-0"



2 ENLARGED SITE PLAN
SCALE: 1" = 10'-0"



3 ENLARGED SITE PLAN
SCALE: 1" = 10'-0"

NORTH

NORTH

NORTH

KEYED NOTES

1. CATCH BASIN – SEE SITE GRADING AND DRAINAGE PLAN AND C/C5.13
2. CONCRETE WALK – SEE D/C5.12
3. COMBINATION CONCRETE SIDEWALK–CURB AND GUTTER – SEE B/C5.11 AND C/C5.11
4. CONCRETE CURB AND GUTTER – SEE E/C5.11 AND F/C5.11
5. CONCRETE WATERWAY – SEE H/C5.11 AND GRADING AND DRAINAGE PLAN
6. CLEAN OUT TO GRADE – SEE E/C5.12 AND GRADING AND DRAINAGE PLAN – PROVIDE A 1'–0" WIDE CONCRETE COLLAR AROUND CLEAN OUTS LOCATED IN ASPHALT PARKING LOT
7. ASPHALT PAVEMENT – SEE C/C5.12
8. 4" WIDE PAINTED PARKING STRIPES – TYPICAL
9. PROPERTY LINE
10.
11. LIGHT POLE – SEE ELECTRICAL
12. YARD DRAIN – SEE D/C5.13 AND GRADING AND DRAINAGE PLAN
13. MECHANICAL PAD AND ENCLOSURE – SEE B/C5.21
14. STORAGE BUILDING
15. PAINTED ACCESSIBLE PARKING SYMBOL
16. PAINTED ACCESSIBLE AISLE
17. ADA PARKING SIGNAGE WITH CONCRETE APRON – SEE A/C5.12
18. CONCRETE PAVEMENT – SEE L/C5.12
19. DUMPSTER ENCLOSURE – SEE A/C5.21 AND C/C5.21
20. BOLLARD – SEE G/C5.12
21. DOWNSPOUT CATCH BASIN – SEE K/C5.13 AND GRADING AND DRAINAGE PLAN
22. CURB RAMP – SEE E/C5.13

GENERAL NOTES

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2. COORDINATE ALL SITE WORK WITH ALL OTHER CONTRACT DOCUMENTS
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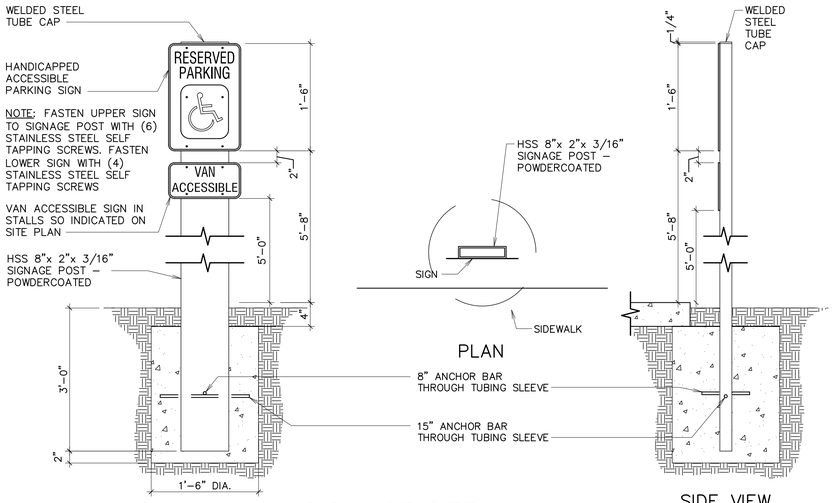
HET-MAS-09-05 (Style A)

Property Number
500-0617

Date
March 1, 2015

Sheet Title
ENLARGED ARCHITECTURAL SITE PLANS

Sheet
C4.21



A SIGNAGE DETAIL
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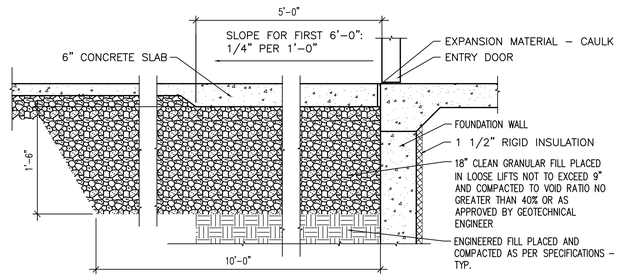
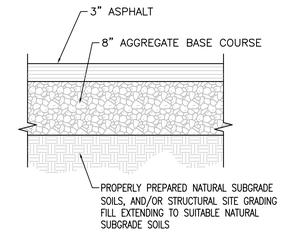


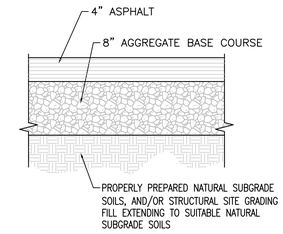
TYPICAL OF ALL ENTRIES

B ENTRY DETAIL
1" = 1'-0"



ON-SITE PARKING LOT

C ASPHALT SECTION
1" = 1'-0"



HARBOR BAY AND MCGREGOR

C1 ASPHALT SECTION
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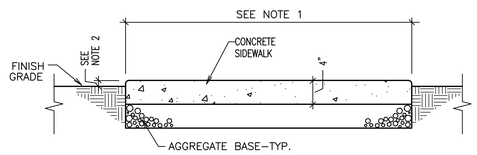
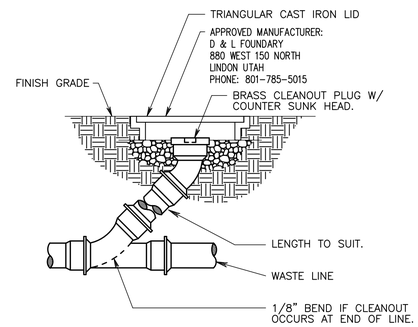
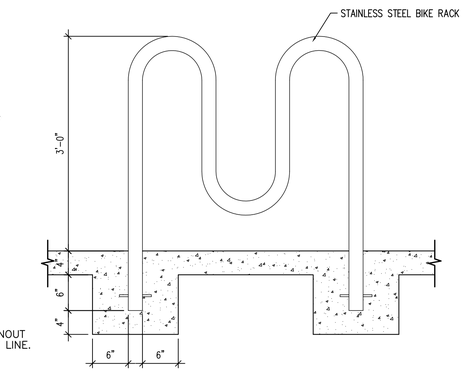


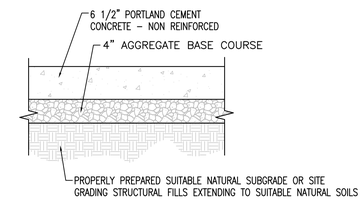
D CONCRETE WALK
1" = 1'-0"



E CLEANOUT TO GRADE
NONE



K BICYCLE RACK
1" = 1'-0"



L CONCRETE SECTION
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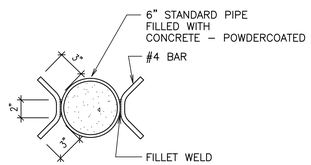
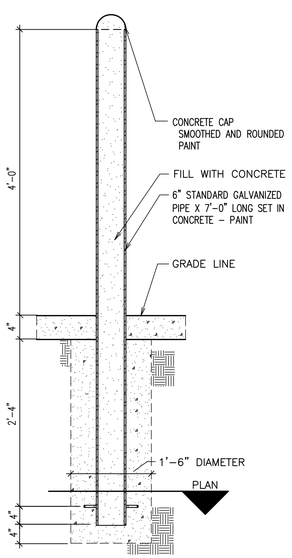


F BOLLARD PLAN
1" = 1'-0"



G BOLLARD SECTION
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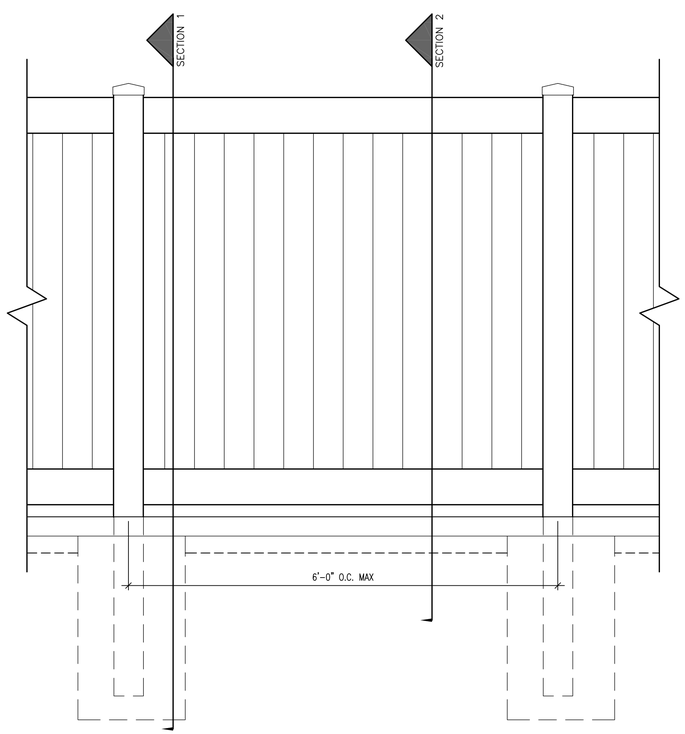
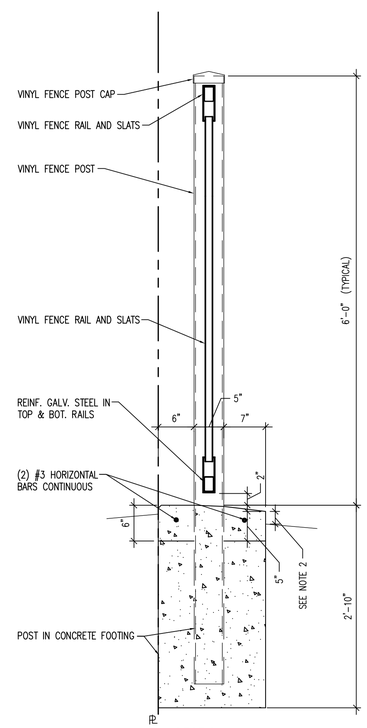
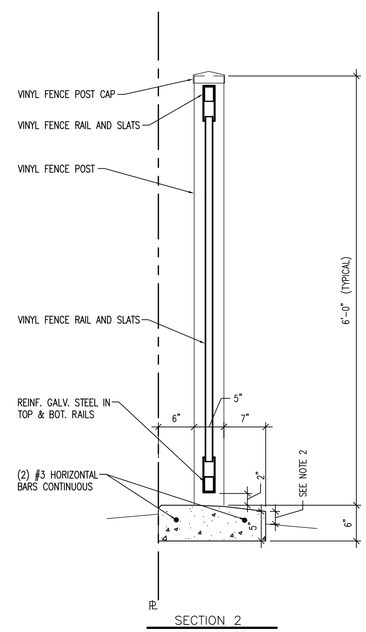


J FENCE
1" = 1'-0"



SECTION 1



SECTION 2

GENERAL NOTES

1. SEE SITE PLAN FOR APRON, MOW STRIP AND SIDEWALK LOCATIONS AND WIDTHS.
2. 2" PRIOR TO SODDING AND 4" IN PLANTING AREAS.
3. EXPANSION JOINT MATERIAL SHALL BE RECESSED 1/4" WHERE SEALANT IS NOT APPLIED, AND 1/2" WHERE SEALANT IS APPLIED.
4. EXTERIOR CONCRETE – USE 4,500 PSI. MIN. TYPE D IF EXPOSED TO FREEZING AND/OR DE-ICERS, 4,000 PSI. MIN. TYPE C OTHERWISE.
5. CONTRACTOR TO INSTALL EXPANSION AND CONTRACTION JOINTS AS REQUIRED PER THE SPECIFICATIONS.
6. ALL AGGREGATES SHALL SATISFY ASTM AND DEPARTMENT OF TRANSPORTATION STRENGTH AND DURABILITY REQUIREMENTS. GRANITE AGGREGATES ARE PREFERRED BUT HIGH QUALITY LIMESTONE AGGREGATES ARE ACCEPTABLE. SEE SPECIFICATION

evans + associates architecture
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phone 801-553-8272 fax 801-553-8273

Stamp

LICENSED ARCHITECT
PAUL ANTHONY EVANS
273770
STATE OF UTAH

A New Meetinghouse for:
Harbor Bay
Saratoga Springs UT South Stake
168 East Harbor Bay Drive
Saratoga Springs, Utah

Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

Revisions

Mark	Date	Description
	3/1/2015	Concept Plan Submittal
	4/30/2015	Conditional Use Submittal
	5/12/2015	Engineering Redlines
	6/5/2015	Revised Site Layout

Project Number
15-17

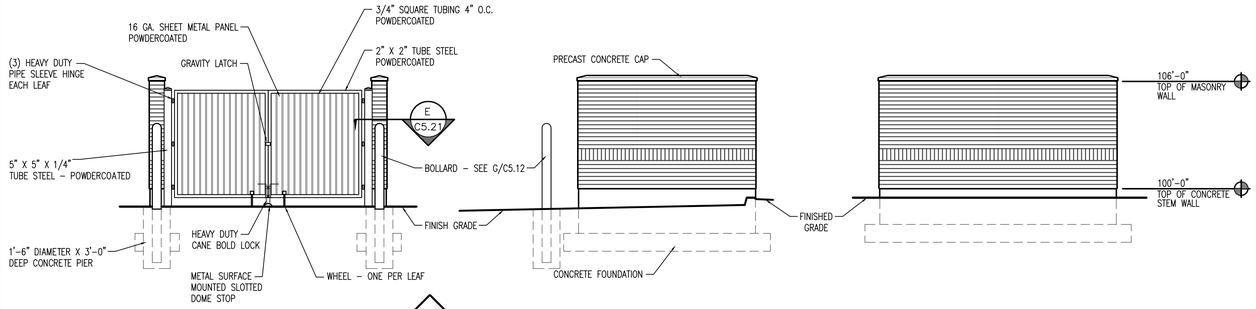
Plan Series
HET-MAS-09-05 (Style A)

Property Number
500-0617

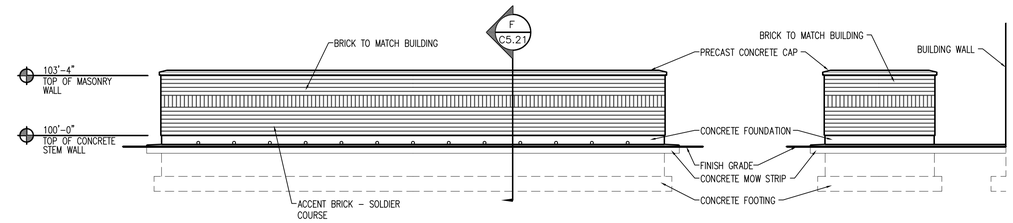
Date
March 1, 2015

Sheet Title
SITE DETAILS

Sheet
C5.12



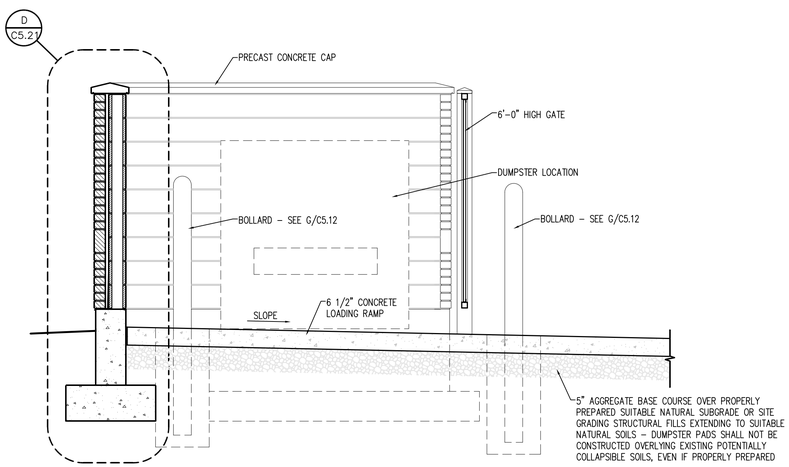
A DUMPSTER ENCLOSURE
SCALE: 1/4" = 1'-0"



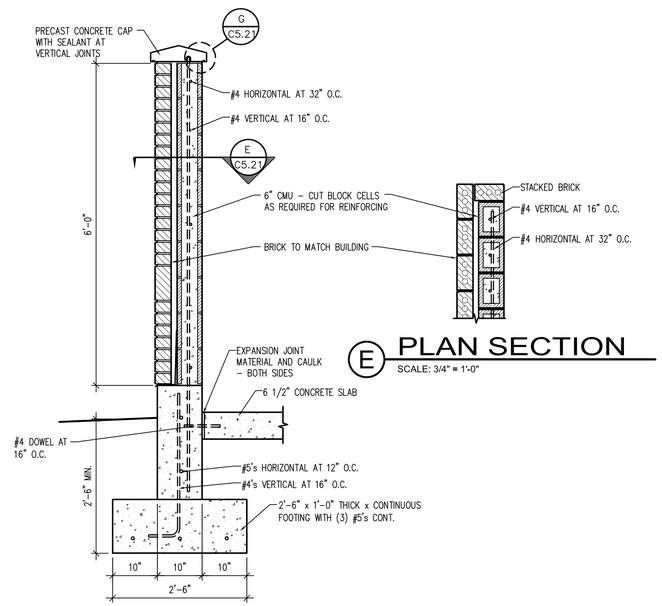
B MECHANICAL ENCLOSURE
SCALE: 1/4" = 1'-0"

GENERAL NOTES

1. SEE SITE PLAN FOR WALK LOCATIONS AND WIDTH
2. 2" PRIOR TO SODDING

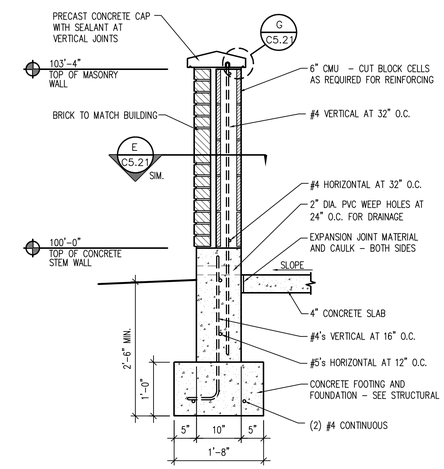


C DUMPSTER ENCLOSURE
SCALE: 1/2" = 1'-0"

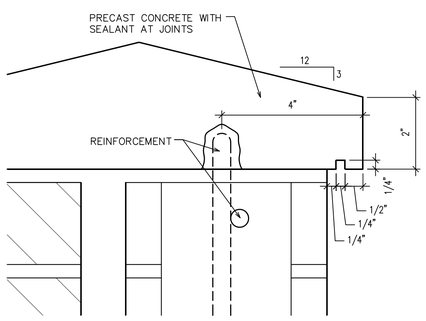


E PLAN SECTION
SCALE: 3/4" = 1'-0"

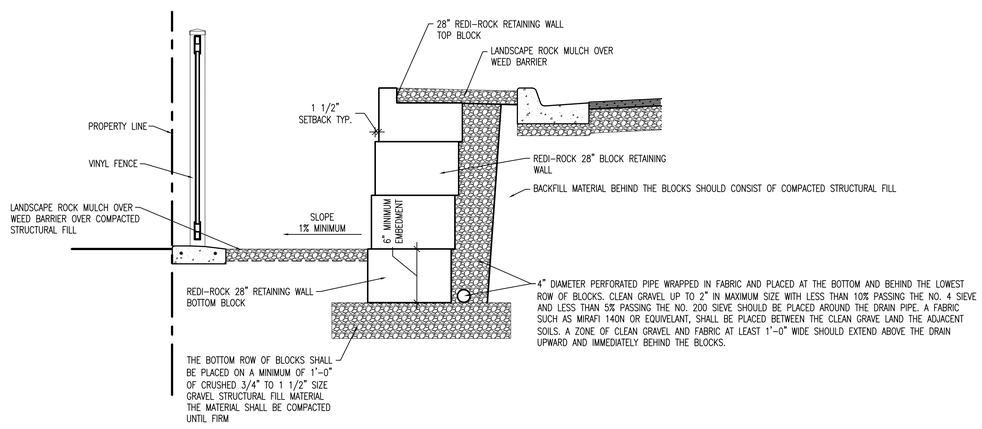
D DUMPSTER ENCLOSURE
SCALE: 3/4" = 1'-0"



F MECHANICAL ENCLOSURE
SCALE: 3/4" = 1'-0"



G SECTION
SCALE: 6" = 1'-0"



H RETAINING WALL
SCALE: 1/2" = 1'-0"

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LICENSED ARCHITECT PAUL ANTHONY EVANS 273770 STATE OF UTAH

A New Meetinghouse for:
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Mark	Date	Description
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	6/3/2015	Revised Site Layout

Project Number
15-17

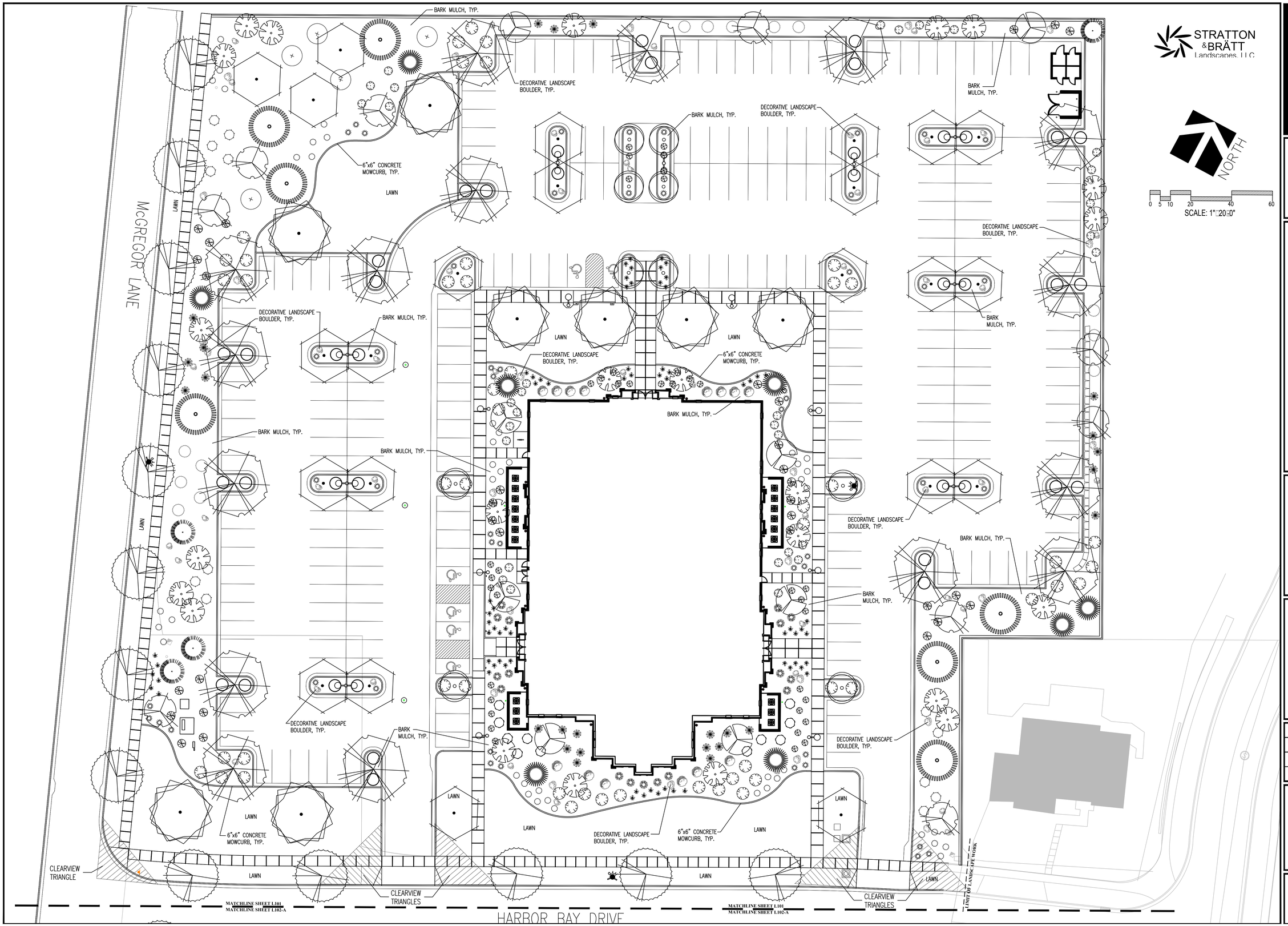
Plan Series
HET-MAS-09-05 (Style A)

Property Number
500-0617

Date
March 1, 2015

Sheet Title
MECHANICAL AND DUMPSTER ENCLOSURE DETAILS

Sheet
C5.21



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Stamp

STATE OF UTAH
DARREN G. WILSON
NO. 356187
LICENSED LANDSCAPE ARCHITECT

A New Meetinghouse for:
Harbor Bay
Saratoga Springs UT South Stake
Mcgregor Lane
Saratoga Springs, Utah

Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

Revisions

Mark	Date	Description

Project Number
15-17

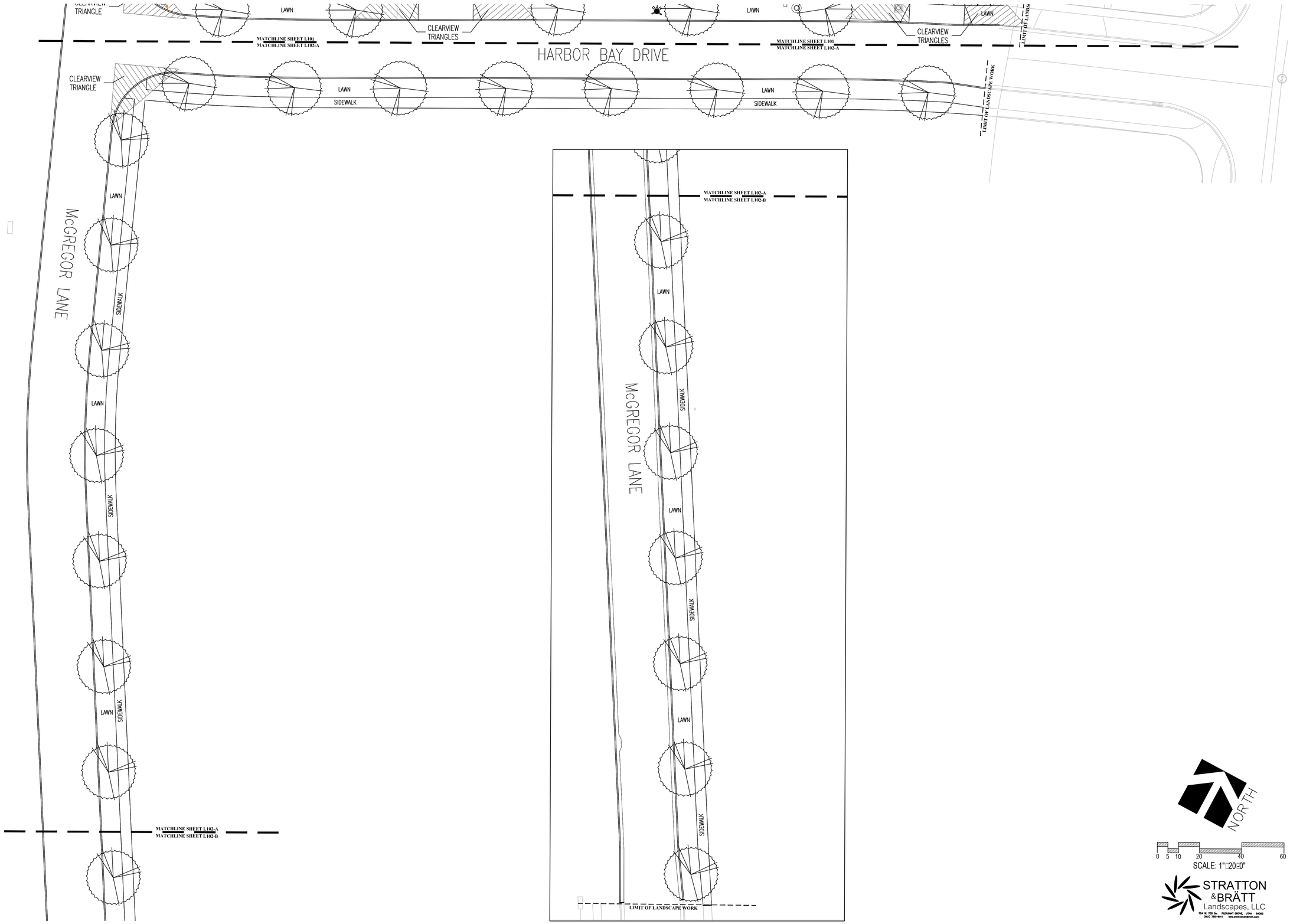
Plan Series
HET-MAS-09-05 (Style A)

Property Number
500-0617

Date
June 22, 2015

Sheet Title
LANDSCAPE PLAN

Sheet
L101



NORTH

0 5 10 20 40 60

SCALE: 1"=20'-0"

STRATTON &BRÄTT Landscapes, LLC

754 N. 700 So. PLEASANT GROVE, UTAH 84062
(801) 785-0051 www.strattonandbratt.com

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Revisions

Mark	Date	Description

Project Number
15-17

Plan Series
HET-MAS-09-05 (Style A)

Property Number
500-0617

Date
June 22, 2015

Sheet Title
LANDSCAPE PLAN

Sheet
L102

PLANTING SCHEDULE

Broadleaf Deciduous

Symbol	Code Name	Scientific Name	Common Name	Planting Size	Quantity
	AmAB	Amalanchier grandiflora 'Autumn Brilliance' clump	Autumn Brilliance Serviceberry	2.5"–Cal	23
	AcKe	Acer truncatum x 'Keithsform'	Norwegian Sunset Maple	2.5"–Cal	23
	Crcr	Crataegus crus–galli 'Crusader'	Thornless Cockspur Hawthorn	2.5"–Cal	9
	Ceoc	Celtis occidentalis	Common Hackberry	2.5"–Cal	8
	Frma	Fraxinus mandshurica 'Mancana'	Manchurian Ash	2.5"–Cal	21
	Gllm	Gleditsia triancanthos 'Imperial'	Imperial Honeylocust	2.5"–Cal	16
	PrsaC	Prunus sargentii 'Columnaris'	Columnar Sargent Cherry	2.5"–Cal	7
	SoaB	Sorbus aucuparia 'Blackhawk'	Blackhawk Mountain Ash	2.5"–Cal	10

Conifer Evergreen

Symbol	Code Name	Scientific Name	Common Name	Planting Size	Quantity
	Pigd	Picea glauca densata	Black Hills Spruce	7'–8' Ht.	8
	Pihe	Pinus heldrichii leucodermis	Bosnian Redcone Pine	7'–8' Ht.	4
	Pini	Pinus nigra	Austrian Pine	7'–8' Ht.	7

Perennial

Symbol	Code Name	Scientific Name	Common Name	Planting Size	Quantity
	HePM	Hemerocallis 'Pardon Me'	Pardon Me Daylily	1–Gal	72

Grass

Symbol	Code Name	Scientific Name	Common Name	Planting Size	Quantity
	Hese	Helictrotrichon sempervirens	Blue Oat Grass	1–Gal	50

Shrub

Symbol	Code Name	Scientific Name	Common Name	Planting Size	Quantity
	BuPE	Buddleia davidii 'Purple Emperor'	Purple Emperor Butterfly Bush	5–Gal	25
	JusaS	Juniperus sabina 'Scandia'	Scandia Juniper	5–Gal	13
	PhopN	Physocarpus opulifolius 'Nanus'	Dwarf Ninebark	5–Gal	11
	PhLD	Physocarpus opulifolius 'Little Devil'	Little Devil Ninebark	5–Gal	31
	PimuP	Pinus mugo 'Pumilio'	Dwarf Mugo Pine	5–Gal	17
	PoGD	Potentilla fruticosa 'Gold Drop'	Gold Drop Potentilla	5–Gal	45
	PrPB	Prunus besseyi 'Pawnee Buttes'	Pawnee Buttes Sand Cherry	5–Gal	50
	Rial	Ribes alpinum	Alpine Currant	5–Gal	31
	RoMR	Rosa 'Meidiland Red'	Meidiland Red Rose	5–Gal	13
	RoMW	Rosa 'Meidiland White'	Meidiland White Rose	5–Gal	14
	SychH	Symphoricarpos x chenaultii 'Hancock'	Hancock Coralberry	5–Gal	40
	Viopn	Viburnum opulus nanum	Dwf. European Cranberry	5–Gal	38
	Virhy	Viburnum rhytidophyllum	Leatherleaf Viburnum	5–Gal	5

NOTES:

1) Screened Top Soil to be implemented in all new planting areas at the following depths: 12" in all shrub beds, 5" in all lawn areas.
2) Lawn to be a Kentucky Bluegrass Blend (min. 3 varieties) and be implemented as sod.
3) 6"x6" flat concrete curbing to be implemented between all shrub bed and lawn areas as shown on plan.
4) Shredded Bark Mulch to be natural (non–dyed) bark in a 2–3" average size. Implement Bark Mulch in planter beds at a 3" depth over weed barrier fabric.
5) Rock Mulch to be 1–1/2" size "Southtown Cobble" from Nephi Sandstone, Nephi, Utah. Implement Rock Mulch in areas indicated at a 3" depth over weed barrier fabric. Rock Mulch to be clean and free of debris, placed at uniform depth, and raked smooth.
6) DeWitt #5 Landscape Fabric to be implemented in all shrub beds and other indicated areas prior to bark mulch or rock mulch implementation. Follow manufacturers installation instructions.
7) Trees in lawn areas to have a 36" diameter grass free ring around the trunk and have a 2" depth of shredded bark mulch implemented.
8) Landscape Boulders to be 3'–4' size 'McGuire Boulders' from Staker Parsons in Willard, Utah. Bury boulders a minimum of 6" in ground. (74 Total)
9) No landscaping or other obstruction in excess of 3 feet above finished grade shall be implemented in clear view triangles.

DESIGN CRITERIA

Climate	U.S. Hardiness Zone 5
Zoning Ordinance	Saratoga Springs City
Water Availability	NA
Soil Type	See Soils Report
Solar Orientation	See North Arrow
Utilities	See Utility Plan
Slopes	See Grading Plan
Site Layout	Road bordered
Wind	South Prevailing
Setbacks/Easements	NA
Microclimates	NA
Soil ph	See Soils Report
Lawn Area	35% of Total Landscape (20,865 sq. ft.)*

* Park Strip (church side) landscape of 6,728 sq. ft. NOT included in this total
* Park Strip (south side of Harbor Bay Dr) landscape of 9,675 sq. ft. NOT included in this total

CNA INFORMATION

Total Site Area	4.15 acres*
Shrubs/Groundcover	37,151 sq. ft.
Total Landscape Area	58,016 sq. ft. (32%)*
Trees On Site	125

* Park Strip landscape of 4,592 sq. ft. NOT included in this total
* Park Strip (south side of Harbor Bay Dr) landscape of 9,675 sq. ft. NOT included in this total

PLANT COVERAGE TABLE

	Shrub–Mature Coverage	Tree–Coverage Intent
Street Frontage	22%	Frame Building
Primary Entries	23%	Frame Entry
Building Perimeter	19%	Accent Building
Perimeter Sides	13%	Screen Lot
Perimeter Rear	12%	Screen Lot

CITY REQUIREMENTS

Landscape Element	Required	Per Plan
Deciduous Trees	19	117
Evergreen Trees	17	19
Shrubs (incl. Grasses & Perennials)	37	526
Drought Tolerant	50%	463 (82%)

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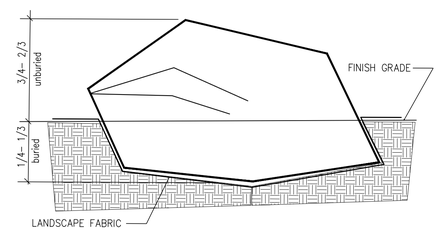
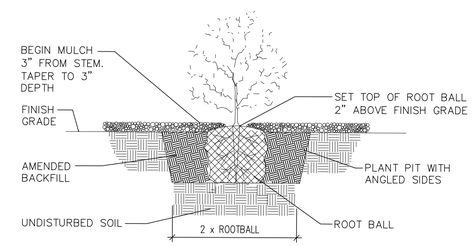


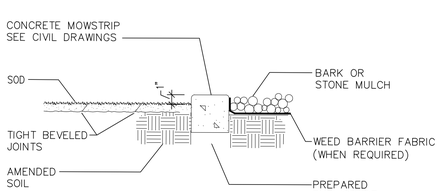
NOTE:
1) FOR BOULDERS WITH A FLAT EDGE, BURY FLAT EDGE 3–6" MIN. IN GROUND.
2) PLACE ONE LAYER OF FABRIC BENEATH EACH BOULDER. OVERLAP SHRUB BED FABRIC OVER BOULDER FABRIC A MINIMUM OF 12".

A BOULDER PLACEMENT DETAIL

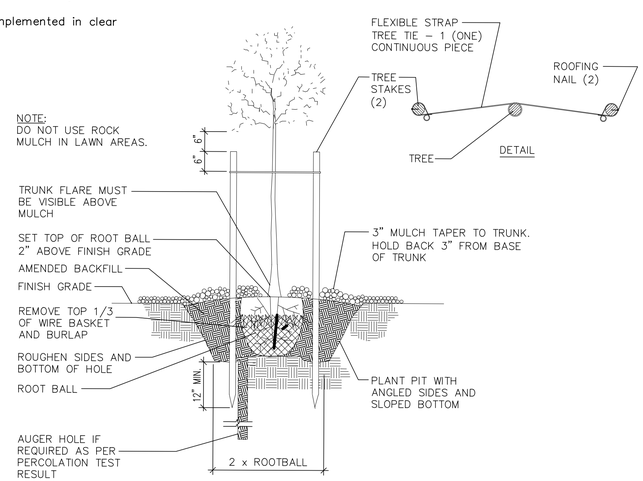


B SHRUB PLANTING DETAIL

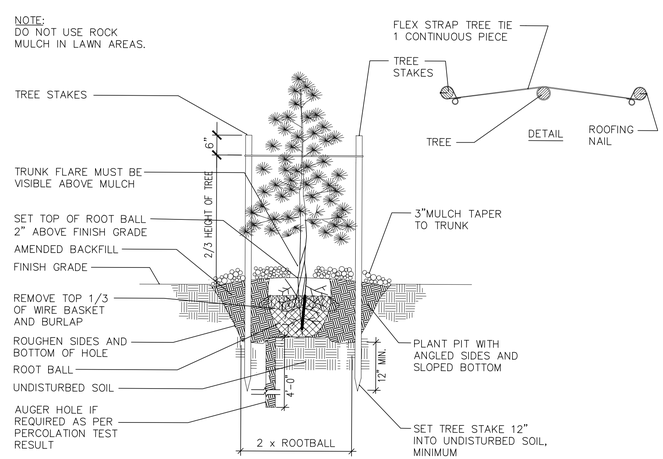
NOTES:
1. MOWSTRIP TO BE CAST–IN–PLACE AND POURED USING TYPICAL WEIGHT STRUCTURAL CONCRETE.
2. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AROUND MOWSTRIPS–DO NOT CREATE A DAM EFFECT WITH PLACEMENT OF MOWSTRIP.
3. MAXIMUM 1/2" WIDTH VARIATION.
4. PRECISELY FOLLOW LAYOUT AS SHOWN ON MOWSTRIP/EDGING DIMENSION PLAN.
5. RAISE THE LAWN GRADE 1" WHEN SEEDING.



C CONCRETE MOWSTRIP



D TREE PLANTING AND STAKING



E CONIFER PLANTING AND STAKING

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Stamp
STATE OF UTAH
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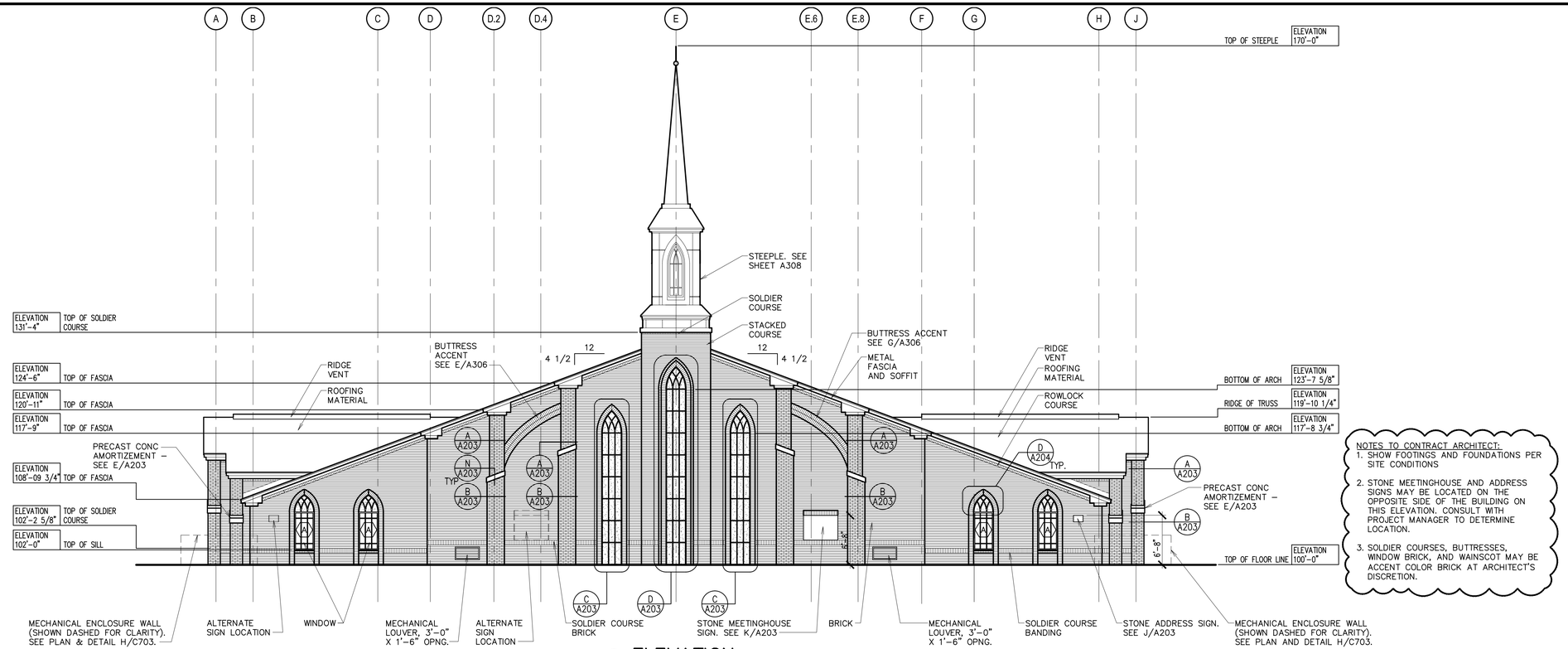
Revisions		
Mark	Date	Description

Project Number 15-17
Plan Series HET-MAS-09-05 (Style A)
Property Number 500-0617
Date June 22, 2015

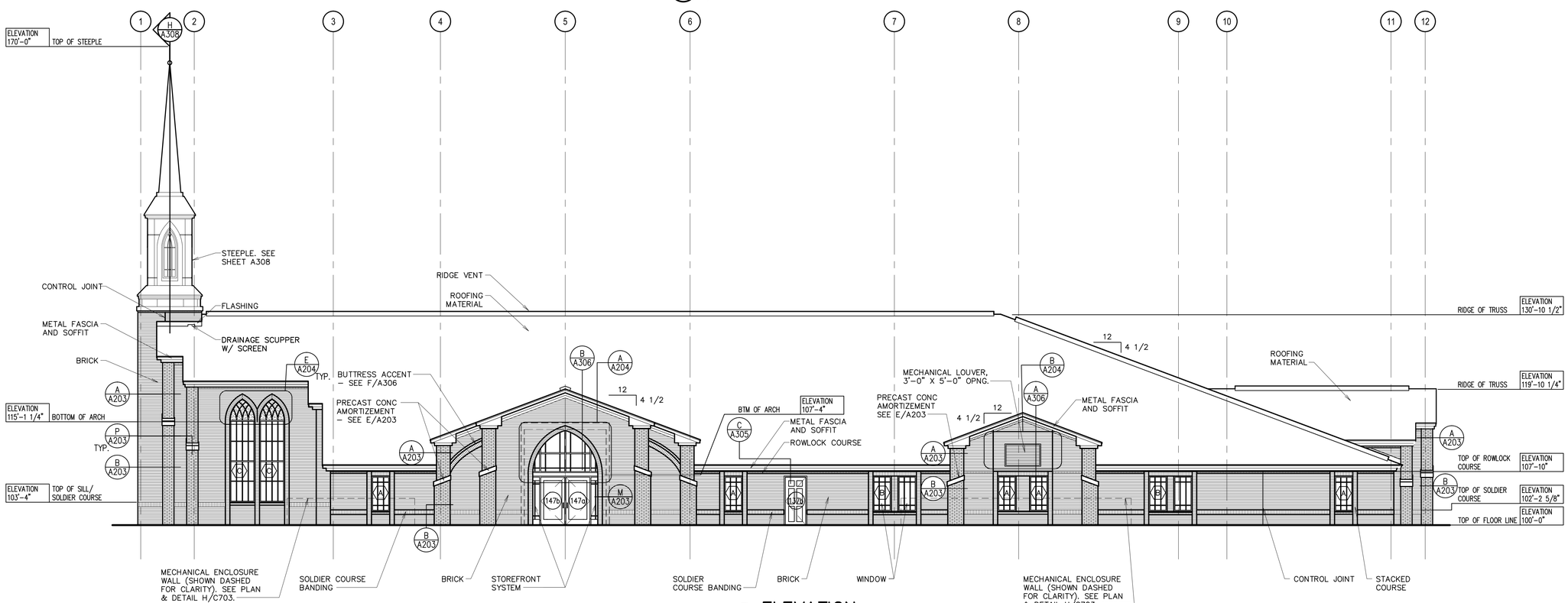
Sheet Title
LANDSCAPE PLAN

Sheet
L103



1 ELEVATION
1/8" = 1'-0"

NOTES TO CONTRACT ARCHITECT:
1. SHOW FOOTINGS AND FOUNDATIONS PER SITE CONDITIONS
2. STONE MEETINGHOUSE AND ADDRESS SIGNS MAY BE LOCATED ON THE OPPOSITE SIDE OF THE BUILDING ON THIS ELEVATION. CONSULT WITH PROJECT MANAGER TO DETERMINE LOCATION.
3. SOLDIER COURSES, BUTTRESSES, WINDOW BRICK, AND WAINSCOT MAY BE ACCENT COLOR BRICK AT ARCHITECT'S DISCRETION.



2 ELEVATION
1/8" = 1'-0"

Architect :Engineer:

Stamp:

Project Name

Project Address

Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

Mark	Date (D-M-Y)	Description

Project Number:

Plan Series:
HET-MAS-09-05

Property Number:

Sheet Title:
BUILDING ELEVATIONS

Sheet:
A201

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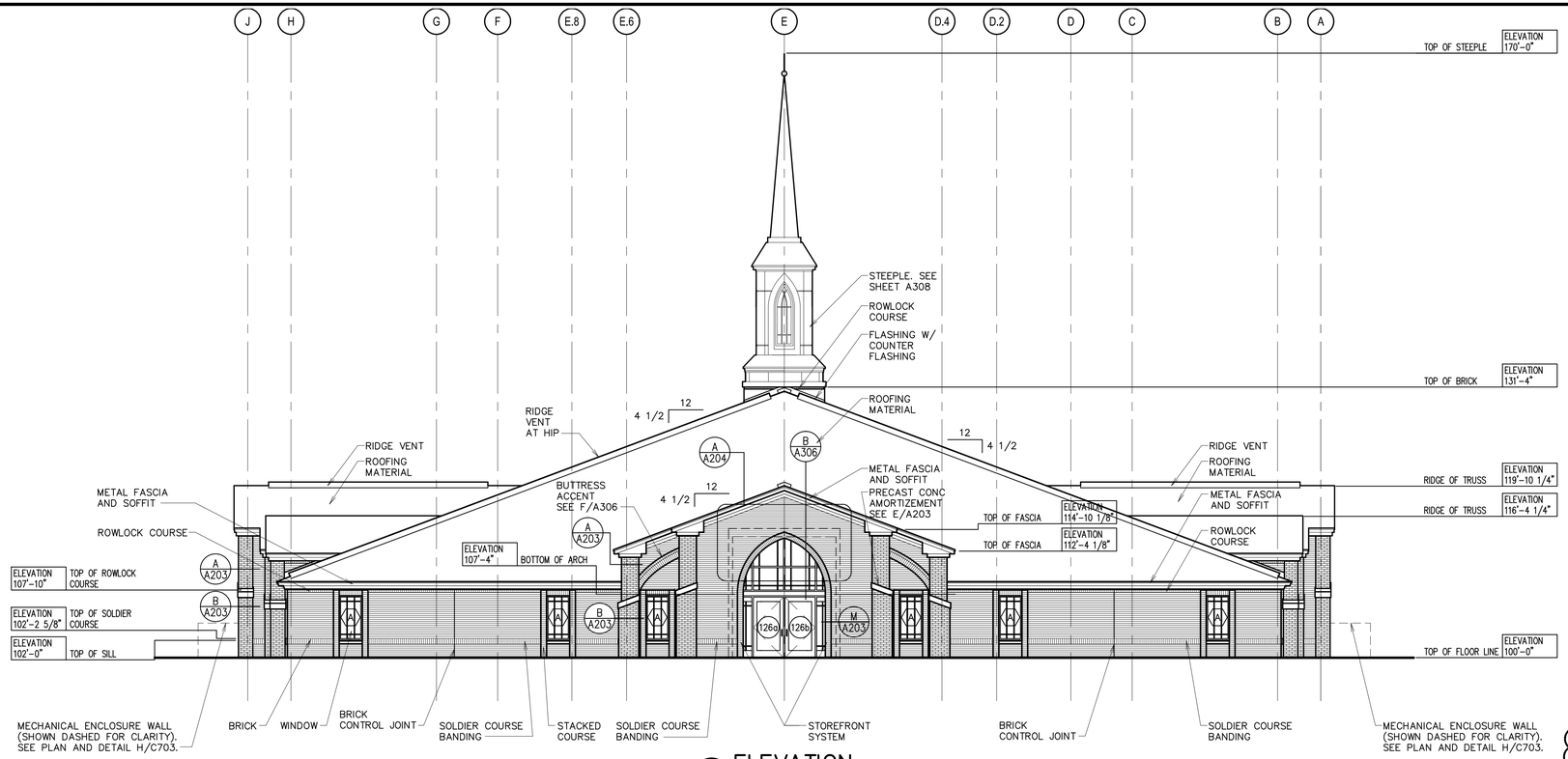

NOTE TO CONTRACT ARCHITECT:
1. SHOW FOOTINGS AND FOUNDATIONS PER SITE CONDITIONS.

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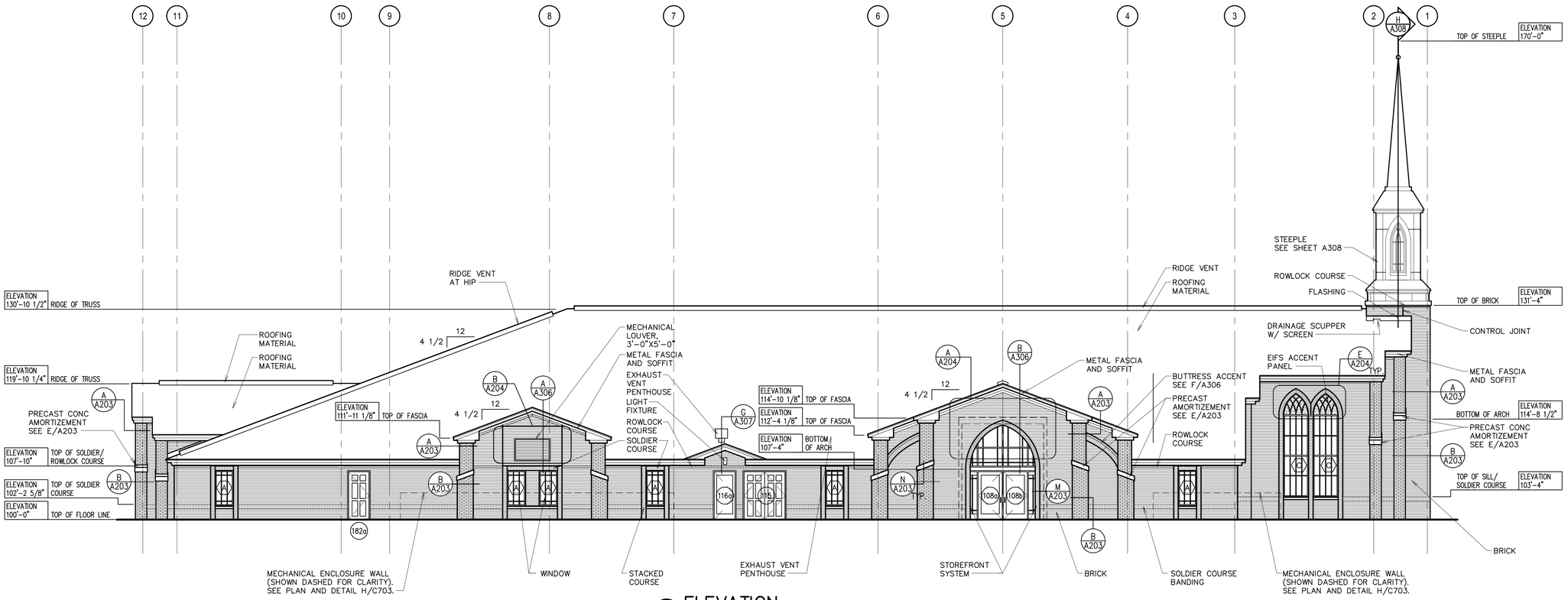
1/8" = 1'-0"



2 ELEVATION
1/8" = 1'-0"

Architect :Engineer:

Stamp:

Project Name

Project Address

Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

Mark	Date (D.M.Y)	Description

Project Number:

Plan Series:
HET-MAS-09-05

Property Number:

Sheet Title:
BUILDING ELEVATIONS

Sheet:
A202

HMAS-A202.dwg - 03.29.2011 - 11:57 AM

Harbor Bay

Saratoga Springs UT South Stake

Brick Veneer: Interstate Brick Dartmouth
EIFS: Dryvit #310 China White
Soffit + Fascia: Bone White
Asphalt Shingles: Moire Black

City of Saratoga Springs
Planning Commission Meeting
July 30, 2015
Regular Session held at the City of Saratoga Springs City Offices
1307 North Commerce Drive, Suite 200, Saratoga Springs, Utah 84045

Planning Commission DRAFT Minutes

Present:
Commission Members: Jeff Cochran, Kirk Wilkins, Sandra Steele, Hayden Williamson, Ken Kilgore
Staff: Kimber Gabryszak, Mark Christensen, Sarah Carroll, Scott Langford, Kevin Thurman, Nicolette Fike
Others: Wade Williams, Scott Verhaaren, Wes Baker, Randy Rindlisbacher, Ian Bucker, Chad Spencer, Jeff Durfey
Excused: Jarred Henline, David Funk

Call to Order - 6:33 p.m. by Chairman Jeff Cochran
Pledge of Allegiance – led by Ken Kilgore
Roll Call – A quorum was present

Public Input Open by Chairman Jeff Cochran
No input at this time.
Public Input Closed by Chairman Jeff Cochran

4. Public Hearing and Possible Action: Site Plan, Conditional Use and Preliminary Plat for Harbor Bay Church located at 163 East Harbor Bay Drive, EA Architecture, applicant.

Sarah Carroll presented. The site plan includes a church building, a pavilion, a storage building, and associated parking and landscaping. The preliminary plat is a one lot subdivision to formally create the lot for the church and dedicate a portion of Harbor Bay Drive.
Chad Spencer noted that there was a change in the landscaping.

Public Hearing Open by Chairman Jeff Cochran
Gerald Cammerman had a question about water problems in the area and if the developer got a reduction in their landscaping.
Sarah Carroll responded that their plan is water wise.
Public Hearing Closed by Chairman Jeff Cochran

Hayden Williamson was happy to see that it complied with code. He noticed on the northern end there is handicap parking and if one could be adjusted to have one on each side of the sidewalk.
Sarah Carroll noted if they move one it would require an additional stall to do that.
Kirk Wilkins commented it looked like it was in progress for compliance and completion.
Ken Kilgore noted that there was an additional parking stall required in the conditions.
Chad Spencer replied to how they were making that adjustment.
Jeff Cochran commented that the sprinklers they would put in were Smart Sprinklers and some other things to help conserve water. He asked if the neighborhood meeting still needed to take place.
Sarah Carroll replied that it was held.
Jeff Cochran thought that the lots to the east looked unbuildable and if there were plans there.
Sarah Carroll said it is the Lake Cove subdivision that has been approved and are buildable.

Motion made by Kirk Wilkins that Based upon the evidence and explanations received today, I move that the Planning Commission forward a positive recommendation to the City Council for approval of the Harbor Bay Church Site Plan, Conditional Use Permit, and Preliminary Plat, located at 168 East Harbor Bay Drive, with the findings and conditions in the staff report. Seconded by Hayden Williamson. Aye: Sandra Steele, Hayden Williamson, Jeffrey Cochran, Kirk Wilkins, Ken Kilgore. Motion passed 5 - 0.

ea architecture

HARBOR BAY NEIGHBORHOOD MEETING

DATE: July 29, 2015
LOCATION: Saratoga Springs Utah South Stake Center
2947 Swainson Avenue
Saratoga Springs, Utah 84045
TIME: 6:00 pm

HOUSEHOLD NAME	SIGNATURE
Casey Development, LLC	
Chavez, April	
Equity Building Solutions Inc	
James Littler	
Monitor Finance LC	
Oilwell Properties LC	
RPL Utah LLC	
Sterling Founder LLC	
Other: Frank MORGAN	Frank T. Morgan
Other: Brent Bigelow	Brent Bigelow
Other: Tim Brumley	Tim Brumley
Other: Steven Cox	Steven Cox
Other:	

11576 south state street suite 103b • draper, utah 84020 • ph 801.553.8272 • fax 801.553.8273

ea architecture

DATE:	July 29, 2015
PROJECT NAME:	Harbor Bay Saratoga Springs UT South Stake
PROJECT ADDRESS:	168 East Harbor Bay Drive Saratoga Springs, UT
SUBJECT:	Neighborhood Meeting Minutes

1. The timing of the project was discussed. When would McGregor be under construction? It was discussed that this would not be known until we receive a schedule from the contractor.
2. Mr. Sterling asked where the storm drain water was going because he did not have any extra capacity. It was discussed that the storm drain water was collected and then discharged to Harbor Bay Drive and across the street. This was satisfactory.
3. The color of the vinyl fence will be tan.

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CITY OF SARATOGA SPRINGS

City Council
Staff Report

Site Plan and Conditional Use Permit
Jacobs Ranch 1 and Israel Canyon Stake
August 18, 2015
Public Hearing

Report Date:	August 11, 2015
Applicant/Owner:	Evans and Associates Architecture
Location:	163 West Ring Road
Major Street Access:	Redwood Road
Parcel Number(s) and size:	a portion of 59:002:0135, ~5.17 acres
General Plan Designation:	Neighborhood Commercial (approved 6/16/15)
Zone:	NC
Adjacent Zoning:	R-3, RC
Current Use:	vacant
Adjacent Uses:	single family residential, undeveloped land
Previous Meetings:	Rezone, GPA, Concept reviewed by PC on 5/28/15
Previous Approvals:	Rezone, GPA approved by CC on 6/16/15 and concept reviewed
Type of Action:	Administrative
Land Use Authority:	City Council
Future Routing:	None
Planner:	Sarah Carroll

A. Executive Summary:

This is a request for approval of a Site Plan and Conditional Use Permit for the Jacobs Ranch 1 and Israel Canyon Stake Church, to be located at 163 West Ring Road. The site plan includes a church building, a pavilion, a storage building, and associated parking and landscaping.

Recommendation:

Staff recommends that the City Council conduct a public meeting, take public comment at their discretion, and discuss the proposed Site Plan and Conditional Use Permit and choose from the options in Section "H" of this report. Options include forwarding approval with conditions, continuing the application, or denial.

B. Background:

The applicant recently requested a rezone and general plan amendment from Regional Commercial (RC) to Neighborhood Commercial (NC) for the subject property. This request was approved by the City Council on June 16, 2015. The concept plan was also reviewed at that time. Minutes from that meeting are attached.

Sarah Carroll, Senior Planner
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C. Specific Request:

This is a request for site plan approval and a conditional use permit for a proposed LDS church to be located at 163 West Ring Road.

D. Process:

Section 19.13.04 of the City Code states that Site Plans and Conditional Uses require City Council approval after the Planning Commission holds a public hearing and forwards a recommendation. The City Code also requires that an applicant hold a neighborhood meeting for any non-residential development proposal adjacent to developed property in a residential zone. *The applicant held a neighborhood meeting on Tuesday July 28, 2015 and took minutes and a roll, see attached.*

E. Community Review:

Per 19.13.04 of the City Code, this item has been noticed in *The Daily Herald*, and each property owner within 300 feet of the subject property was sent a letter at least ten calendar days prior to this meeting. As of the completion of this report, no public comment has been received.

F. General Plan:

The General Plan designates this area for Neighborhood Commercial development and states:

> The Neighborhood Commercial designation is intended to identify locations where small-scale neighborhood oriented commercial developments are to be located. These commercial developments are to provide goods and services that are used on a daily basis by the surrounding residents.
>
> Commercial structures in these areas shall be limited to 15,000 square feet. Neighborhood Commercial developments should be large enough to accommodate functioning traffic patterns but should not exceed 10 acres in size.
>
> Parcels considered for this designation should be located in close proximity to residential areas where pedestrian activity between residents and the development is likely to occur. Improvements such as trails, seating and lighting that would help create gathering spaces and promote pedestrian activity are expected and shall be considered and essential part of developments in the Neighborhood Commercial areas.
>
> Developments in these areas shall contain landscaping and recreational features as per the City's Parks, Recreation, Trails, and Open Space Element of the General Plan. In this land use designation, it is estimated that a typical acre of land may contain 4 equivalent residential units (ERU's)."

Finding: consistent. The proposed use is a church which is listed as a conditional use in the Neighborhood Commercial Zone; thus, the use is anticipated in this land use designation and will offer a location for nearby residents to participate in religious services.

G. Code Criteria:

Pertinent sections of the Land Development Code are reviewed below.

- 19.04, Land Use Zones: Section 19.04.20 regulates development in the NC zone. **Complies**.
  - Zone: NC
  - Use: Church – *Conditional Use*
    - Drive through windows are not permitted.
    - Hours of operation are 7:00 a.m. to 10:00 p.m.
  - Setbacks: Setbacks – front/rear/sides: 25 feet each – *Complies.*
  - Lot width, frontage:
    - 100' wide minimum, 100' of width minimum – *Complies.*

- Height: 35' maximum – *Complies.*
- Building Size: Commercial structures in this zone shall have a max size of 15,000 square feet. *N/A – this is not a commercial structure.*
- Landscape requirements: *Complies.*
    - 25% of the site shall be landscaped. *40% of the site is landscaped.*
    - All sensitive lands shall be protected. *N/A – none on site.*
- Trash: A dumpster enclosure is proposed and shall comply with 19.14.04(4). *Complies.*
- Sensitive Lands: shall not be included in base acreage when determining ERU's permitted in a development. *N/A for Institutional.*

- 19.05, Supplemental Regulations: **Complies.**
    - Flood Plain: No building, structure, fence, or other obstruction may be constructed within any portion of Zone A as defined on the FEMA Flood Insurance Map. *Complies.*
    - Transportation Master Plan: Not building or lot shall be created or erected within a location of a proposed road, street, highway, or right-of-way shown on the approved Transportation Master Plan. *Complies.*
    - Property access: lots must have access onto a public or private street, prior to issuance of a building permit. *Complies.*

- 19.06, Landscaping and Fencing: **Can Comply**
    - General Provisions: *Complies.*
        - Park strips shall be landscaped and maintained by the property owner that abuts the park strip. *The landscape plans indicate that the park strips will be landscaped.*
        - Automated water-conserving irrigation systems, including low flow sprinkler heads and rain sensors are required. ***Can Comply*** *– refer to* condition #4.
    - Landscaping Plan: see attached. *Complies.*
    - Planting Standards & Design. *Complies.*
        - Deciduous Trees. All deciduous trees shall have a minimum trunk of two inches in caliper. *The plans indicate 2.5" caliper. Complies.*
        - Evergreen Trees. All evergreen trees shall have a minimum size of six feet in height. *The plans indicate 7'-8'. Complies.*
        - Shrubs. At least 25% of the required shrubs shall be a minimum of 5 gallons in size at the time of installation; all other required shrubs shall be a minimum of 1 gallon in size. *The plans indicate 294 5-gallon shrubs. The Code requires 45 shrubs. Complies.*
    - Amount:
      Table 19.06.07 specifies the amount of required trees, shrubs and turf. **Complies.**
        - The plans indicate a total landscape area of 89,231 square feet (40% of the total site). For this amount of landscaping the following is required:

For landscape areas greater than 15,000 sq. ft.	**Required**	**Provided**
Deciduous Trees: 7+1 per additional 3,000 sq.ft.	32	*82*

Evergreen Trees: 5 + 1 per additional 3,000 sq. ft.	30	*30*
Shrubs: 25 + 1 per additional 3,000 sq. ft.	45	*294*
Minimum Percentage of Turf	25%	*25%*

- Fencing & Screening: 19.06.09 outlines fencing requirements. *Complies.*
    - Fencing may be required adjacent to undeveloped property and is to be approved by the City Council through the Site Plan review process for nonresidential development. *The applicant is proposing a 6' tall vinyl privacy fence along the south and west property lines which will provide a buffer between the church site and existing residential development.*
- Clear Sight Triangle: fencing shall be no taller than three feet in the clear sight triangle. Complies.
    - *The clear site triangles do not include fencing.*

- 19.09, Off Street Parking: **Complies.**
    - Dimensions: *Complies.*
        - For 90 degree parking, the stalls shall be 9' wide by 18' deep. The drive aisle shall be 24' wide.
    - Accessible Parking: *Complies.*
        - Every application shall comply with ANSI 117.1 and IBC regulations with regard to location, number, size, dimension, type, marking, surface, clearance, identification, and all other particulars.
    - Parking Lot Landscaping: *Complies.*
        - Parking adjacent to public streets: All parking areas for non-residential uses adjacent to a public street shall have a landscape berm of not less than 10 feet between the sidewalk and the parking area. *N/A – no parking is adjacent to the public street.*
        - Curbs: Landscaped areas abutting a paved surface shall be curbed.
        - Clear Sight: At intersections, landscaping shall be not taller than 3' in the clear sight triangle and shall not be bermed.
        - Components of Landscaped Areas: *Complies.*
            - Landscaped parking areas shall consist of trees, shrubs, and groundcover.
        - Required Parking Islands: *Complies.*
            - There shall be a landscape island every 10 stalls that is either 9'x36' for double rows of parking or 9'x18' for single rows of parking.
                - For 9'x36' planters there shall be a minimum of two trees per planter. For 9'x18' planters there shall be a minimum of one tree per planter.
            - Landscape islands shall be placed and shaped to direct traffic through the parking area.
            - There shall be a break at a minimum of forty parking stalls for each double row.

        - Landscape Boundary Strip: *Complies.*
            - All landscape boundary strips shall be a minimum of eight feet in width.
    - Pedestrian Walkways & Accesses: *Complies.*
        - Parking lots larger than 75,000 square feet shall provide raised or delineated pedestrian walkways.
        - Walkways shall be a minimum of 10 feet wide and shall be placed through the center of the parking area and extend to the entrance of the building.
        - *This criteria is intended for large "big box" parking lots; in this case the parking lot surrounds three sides of the building and there is an entrance on three sides. However, a 12' wide walkway is provided from the pavilion to the building.*
    - 19.09.11, Required parking stalls: *Complies.*
        - Churches require 1 stall per 3 seats. *The proposed chapel will have 242 seats; requiring 81 stalls. The plans indicate 271 stalls are provided.*

- 19.11, Lighting: **Complies.**
    - General Standards: *Complies.*
        - Material: all assemblies shall be metal.
        - Base: a 16" tall decorative base is required.
        - Type: All fixtures shall be full cut-off
        - Angle: All fixtures shall be directed downward.
        - Lamp: The color shall be soft white or amber.
        - Drawings: Fixtures shall be specified in the development drawings.
        - Flags: The US flag may be illuminated from dusk to dawn *(no flag proposed)*
    - Nonresidential Lighting: *Complies.*
        - Trespass light shall not exceed 0.1 foot-candles measured at the property line.
        - All free standing lighting fixtures and assemblies shall be black.
        - Pole design shall be an arm and bell shade.
        - Parking lot poles shall be limited to a height of 16' when within 200' of a residential zone.
        - Fixtures shall be full cut-off.
        - At least 50% of the lights shall be turned off one hour after closing or by 11:00 p.m., whichever is earlier. *They plan to turn all the parking lot lights off at night.*

- Section 19.13, Process: **Complies**
    - General Considerations:
        - General Plan: *See Section G of the staff report.*
        - Natural Features: Wetlands shall be preserved with the future plats that are adjacent to the lake. *N/A*
        - Community & Public Facilities: *N/A*
    - 19.13.04 requires a neighborhood meeting for nonresidential development adjacent to developed property in a residential zone.
        - *The applicant held a neighborhood meeting on July 28, 2015 and has provided minutes and a roll.*

- Notice / Land Use Authority: The City Council is the land use authority for Site Plans and Conditional Use Permits. *Mailed notices were sent prior to the public hearing with the Planning Commission.*
- Development Agreement / MDA: *N/A for this project.*
- Payment in Lieu of Open Space: *N/A for this project.*
- 19.13.09(9) requires a phasing plan for phased developments. *N/A – no phasing is proposed.*

- 19.14, Site Plans: **Complies.**
  - Urban Design Committee: *Complies.*
    - Mechanical Equipment – screened
    - Windows – may be used as accents. Untreated metal or aluminum is prohibited.
    - Building Lighting – shall be shielded and directed downward and shall not project above or beyond the property line.
    - Trash Enclosures, Storage Areas, and External Structures: *Complies.*
      - Shall be comparable to the proposed building and oriented away from public view.
      - Solid gates are required.
      - When adjacent to parking areas, a 3' landscape buffer shall be provided.
    - Exterior Materials – shall be reviewed by the Urban Design Committee
    - Comments: *Reviewed by the Urban Design Committee on July 22, 2015; the Committee recommended approval as proposed.*

- 19.15, Conditional Use Permit: **Complies.**
  - Determination.
    1. The Planning Commission may only permit a Conditional Use to be located within a zone where the particular Conditional Use is listed as a Conditional Use by the use regulations of this Title.
    2. A conditional use shall be approved if reasonable conditions are proposed, or can be imposed, to mitigate the reasonably anticipated detrimental effects of the proposed use in accordance with the standards contained in this Chapter.
    3. If the reasonably anticipated detrimental effects of a proposed conditional use cannot be substantially mitigated by the proposal or the imposition of reasonable conditions to achieve compliance with the standards contained in this Chapter, the conditional use may be denied.

  - General standards: Complies.
    - The siting of the structure or use, and in particular:
      - the adequacy of the site to accommodate the proposed use or building and all related activities;
        - *The site is located in an NC zone where churches are anticipated as conditional uses. The site is designed to accommodate the proposed use.*
      - the location and possible screening of all outdoor activities;
        - *The site will have a 6' tall privacy fence on the south and west property lines which will screen activities from abutting residential development.*
      - the relation of the proposed building or use to any adjoining building with particular attention to protection of views, light, air, and peace and quiet;

        - *The proposed building will not significantly impact the views, light, air, and peace and quiet in this area.*
    - the location and character of any display of goods and services; and
        - *There will not be any displays.*
    - the size, nature, and lighting of any signs.
        - *The signs include a small sign on the front of the building that is built into the face, with the name of the religion; the sign is not lit.*

- Traffic circulation and parking: Complies.
    - the type of street serving the proposed use in relation to the amount of traffic expected to be generated;
        - *The City Engineer has reviewed the site and the circulation. Ring Road is adequate for the proposed amount of traffic.*
    - the adequacy, convenience, and safety of provisions for vehicular access and parking, including the location of driveway entrance and exits; and
        - *The access locations have been reviewed by the City Engineer, and the access points meet spacing requirements.*
    - the amount, timing, and nature of traffic generated by the proposed conditional use.
        - *The amount of traffic generated by the site varies throughout the week and is at its peak on Sundays, when the neighboring uses have minimal traffic. The proposed site is laid out in a configuration that will accommodate the anticipated traffic.*

- The compatibility of the proposed conditional use with its environment, and in particular:
    - the number of customers or users and the suitability of the resulting activity level to the surrounding uses;
        - *The proposed church is a compatible use in the NC zone and will serve the nearby residents, and will provide a transition between R-3 and RC zoning. The proposed church will have a membership of approximately 300-600 people per ward, but attendance at Sunday meetings will vary and will not include all members.*
    - hours of operation;
        - *The hours of operation will vary depending on the activities being held. For the most part the peak hours will be on Sunday between 9:00 a.m.-4:00 p.m.*
    - adequacy of provisions for the control of any off-site effects such as noise, dust, odors, light, or glare, etc.;
        - *The operations will not create off-site noise, dust, odors, light, or glare.*
    - adequacy of provisions for protection of the public against any special hazards arising from the intended use;
        - *No special hazards are proposed.*
    - the expected duration of the proposed building, whether temporary or permanent, and the setting of time limits when appropriate; and the degree to which the location of the particular use in the particular location can be considered a matter of public convenience and necessity.
        - *The proposed location offers an additional church building for nearby residents. The building is expected to be permanent.*

- The Conditional Use shall meet the following standards:
    - the use will not, under the circumstances of the particular case, be detrimental to the health, safety, or general welfare of persons residing or working in the vicinity, or injurious to property or improvements in the vicinity;

        - *The proposed church will not be detrimental to the health, safety, or general welfare of persons in the area but will offer a new church building for religious services.*
    - the use will be consistent with the intent of the land use ordinance and comply with the regulations and conditions specified in the land use ordinance for such use;
        - *The intent of the land use ordinance is to prohibit incompatible uses in residential and commercial areas. The proposed church will provide a location for religious services for nearby residents and will act as a transition buffer between R-3 and NC zoning.*
    - the use will be consistent with the character and purposes stated for the land use zone involved and with the adopted Land Use Element of the General Plan;
        - *See Section "F" of this report. The proposed site can comply with the land use ordinance requirements and regulations as reviewed earlier in this report.*
    - the use will not result in a situation which is cost ineffective, administratively infeasible, or unduly difficult to provide essential services by the City, including roads and access for emergency vehicles and residents, fire protection, police protection, schools and busing, water, sewer, storm drainage, and garbage removal; and
        - *The proposed use will not result in a situation that is cost ineffective to the City.*
    - the proposed use will conform to the intent of the City of Saratoga Springs General Plan.
        - *The proposed use conforms to the intent of the General plan as outlined in Section "F" of this report.*

  - When necessary, the City Council may attach conditions to ensure compatibility with the surrounding area and to mitigate harmful effects. Such conditions may include the following:
    - additional parking;
    - water, sewer, and garbage facilities;
    - landscape screening to protect neighboring properties;
    - requirements for the management and maintenance of the facilities;
    - changes in layout or location of uses on the lot; and
    - any other condition the City Council finds necessary to reasonably ensure that the proposed Conditional Use will comply with the standards noted above.

    Additional mitigation is not necessary. *The site plan indicates adequate parking for the proposed use, site landscaping, and perimeter fencing, which will buffer the activities from abutting residents. The parking lot lights will be no taller than 16' and will be full cut-off directed downward.*

- 19.18, Signs: **Complies.**
  - A small identification/wall sign is proposed on the front of the building.
    - This falls under the criteria for signs for Institutional uses which allows:
        - Size: one square foot for every lineal foot of width of the building face to which the sign is attached. *The building width 115' wide. The proposed sign is approximately 9 square feet.*
        - Height: the height shall not exceed three feet. *Complies.*

H. Recommendation and Alternatives:

After evaluating the required standards for developments in the NC zone, staff recommends that the City Council conduct a public meeting and select from the possible motions outline below.

Recommended Motion:
"Based upon the evidence and explanations received today, I move that the City Council approve the Jacobs Ranch 1 and Israel Canyon Stake Church Site Plan and Conditional Use Permit, located at 163 West Ring Road, with the findings and conditions below:

Findings:
1. The proposed site plan and conditional use are consistent with the General Plan as explained in the findings in Section "F" of this report, which findings are incorporated herein by this reference.
2. The proposed site plan and conditional use meets or can conditionally meet all the requirements in the Land Development Code as explained in the findings in Section "G" of this report, which findings are incorporated herein by this reference.

Conditions:
1. That all requirements of the City Engineer be met, including those listed in the attached staff report.
2. That all requirements of the Fire Chief be met.
3. The sprinkler system for the landscaping shall include automated water-conserving irrigation systems, including low flow sprinkler heads and rain sensors.
4. Any other conditions as articulated by the City Council:
   _____

Alternative Motions:

Alternative Motion A
"I move to **continue** the item to another meeting, with direction to the applicant and Staff on information and/or changes needed to render a decision, as follows:

_____
_____
_____
_____

Alternative Motion B
"Based upon the evidence and explanations received today and the following findings, I move that the City Council deny the Jacobs Ranch 1 and Israel Canyon Stake Church Site Plan and Conditional Use Permit, located at 163 West Ring Road. Specifically I find that the following standards and/or code requirements have not been met:"

1. The applications are not consistent with the General Plan, as articulated by the City Council: _____, and/or,

2. The applications are not consistent with Section(s) [19.04,19.05,19.06, 19.09, 19.11, 19.13, 19.14, 19.15, 19.18] of the Code, as articulated by the City Council:
   _____

I. Exhibits:

1. Engineering Report
2. Zoning / Location map
3. CC minutes, 6/16/15 – concept review
4. Architectural Site Plan
5. Landscape Plans
6. Elevations
7. Photo of colors/materials board
8. PC Draft Minutes, 8/30/15
9. Neighborhood Meeting, Minutes/Roll

City Council
Staff Report

Author: Jeremy D. Lapin, City Engineer
Subject: Jacobs Ranch I & Israel Canyon Stake
Date: July 30, 2015
Type of Item: Site Plan Approval

CITY OF
SARATOGA SPRINGS

Description:

A. Topic: The Applicant has submitted a Site Plan application. Staff has reviewed the submittal and provides the following recommendations.

B. Background:

Applicant:	Evans and Associates Architecture - Chad Spencer
Request:	*Site Plan Approval*
Location:	*Approx. 163 West Ring Road*
Acreage:	*5.17 Acres*

C. Recommendation: Staff recommends the approval of Site Plan subject to the following conditions:

D. Conditions:

A. Meet all engineering conditions and requirements in the construction of the project. Review and inspection fees must be paid and a bond posted as per the City's Development Code prior to any construction being performed on the project. Impact and water fees are due when pulling at building permit.

B. All review comments and redlines provided by the City Engineer are to be complied with and implemented with the approved construction drawings.

C. Developer must secure water rights as required by the City Engineer, City Attorney, and development code.

D. Submit easements for all public utilities not located in the public right-of-way.

E. Developer is required to ensure that there are no adverse effects to adjacent properties due to the grading practices employed during construction of these plats.

F. Project must meet the City Ordinance for Storm Water release (0.2 cfs/acre for all developed property) and all UPDES and NPDES project construction requirements.

G. Final plans shall include an Erosion Control Plan that complies with all City, UPDES and NPDES storm water pollution prevention requirements.

H. All work to conform to the City of Saratoga Springs Standard Technical Specifications, most recent edition.

I. Developer may be required by the Saratoga Springs Fire Chief to perform fire flow tests prior to final plat approval and prior to the commencement of the warranty period.

J. Submittal of a Mylar and electronic version of the as-built drawings in AutoCAD format to the City Engineer is required prior acceptance of site improvements and the commencement of the warranty period.

K. Structural calculations and design details stamped by a licensed engineer shall be submitted for all retaining walls that are four feet or taller. A building permit will also be required prior to commencing construction.

L. Parking lot poles shall be limited to a height of 16’ when within 200’ of a residential zone.

LOCATION MAP

City of Saratoga Springs
City Council Meeting
June 16, 2015

Regular Session held at the City of Saratoga Springs City Offices
1307 North Commerce Drive, Suite 200, Saratoga Springs, Utah 84045

Work Session Minutes

Present:

Mayor: Jim Miller
Council Members: Michael McOmber, Shellie Baertsch, Rebecca Call, Stephen Willden, Bud Poduska
Staff: Mark Christensen, Kimber Gabryszak, Kyle Spencer, Owen Jackson, Kevin Thurman, Jeremy Lapin, Nicolette Fike
Others:

Call to Order - 6:30 p.m.

~~Item 2 was pulled forward.~~

~~**2. Departmental Update from the Planning Department.**~~

~~Kimber Gabryszak gave an update and highlighted some of the department's goals and projects. In the last few years the number of applications per week has gone up to an average of 2.36.~~

~~Councilwoman Baertsch asked if they couldn't change the name of the Cahill Chapel to reflect where it was located and that it would probably be referred to as the Israeli Canyon Stake Center. She doesn't want there to be confusion as to where this church is located.~~

~~Kimber Gabryszak noted that The Springs Annexation has been recorded today. She introduced a project they have been working on with overlays on Google Earth.~~

~~Councilman McOmber noted that the Wiltshire fence issue has been resolved.~~

~~Kimber Gabryszak noted how it has been a great tool so far in catching potential problems.~~

~~Councilwoman Call asked Jeremy Lapin to update them on the south well.~~

~~Councilwoman Baertsch asked if the overlays were available to the residents.~~

~~Kimber Gabryszak said it is internal only for now. A lot of it is public information but some of it is not yet. They can work towards that goal with a map that has a pending layer and a map with a recently approved layer. Then they can put links on the City website.~~

~~Mark Christensen commented that they have included neighborhoods that are not shown on google earth yet and this helps to find issues ahead of time.~~

~~Councilman McOmber hoped it could be available on the front computer to help the public.~~

~~Jeremy Lapin replied about the well. He said the drill rig was down but should be up in the next day or so. They are at about 1000 feet now. They have been taking samples, the water is warm but in the realm of useable. He noted the findings so far. They believe they need to go a little deeper to see if the fractured zones continue. If they are still at 1200 ft. they may explore deeper. They will meet soon to talk about the findings. They are making pretty good progress. At this point it's good to do more exploratory work. He said most of their wells produce about 1000 gpm. They hope this will produce between 1000-2000 gpm. After the test pumping it will give them direction on how large to make the hole and pump.~~

~~Councilwoman Baertsch asked if there was an estimate to how long to finish the well.~~

~~Jeremy Lapin said they are near the end of phase one. They would estimate the end of august to finish the hole, and then they need to design and build the pump.~~

~~Mark Christensen noted it would be next spring before the well would be online.~~

~~**1. Discussion of the Resolution supporting HB 362 regarding additional 0.25% Sales and Use Tax for Transportation.**~~

~~Kevin Thurman noted the League of Cities and Towns has asked the cities to pass a resolution to encourage County commission to submit this for voter approval. The draft resolution also encourages voters to~~

Policy Session Minutes

Present:

Mayor: Jim Miller

Council Members: Michael McOmber, Shellie Baertsch, Rebecca Call, Stephen Willden, Bud Poduska

Staff: Mark Christensen, Kimber Gabryszak, Kyle Spencer, Owen Jackson, Kevin Thurman, Jeremy Lapin, Sarah Carroll, Chelese Rawlings, Jess Campbell, Andrew Burton, Nicolette Fike, Melissa Grygla

Others: Stephen Hilton, Kevin McMillan, Darrell and LeAnn Marth, E .Kaipo Rokobuludrau, Margaret Weddle, Paul Weddle, Tim and Danai Willden, Janae Wahnschaffe, Jeremy Vick, K. Becraft.

Call to Order 7:02 p.m.

Roll Call - Quorum was present

Invocation / Reverence - Given by Councilman McOmber

Pledge of Allegiance - led by Councilman Willden

~~**Public Input - Opened** by Mayor Miller~~

~~Ahtu Rokobuludrau is doing his Eagle project through the City. He is doing storm drain awareness, with markers and fliers. He came by to thank them and make them aware of his project.~~

~~**Public Input - Closed** by Mayor Miller~~

~~**Awards, Recognitions and Introductions**~~

- ~~Library Board Recognitions – postponed to another meeting.~~

~~Item 4 was moved forward.~~

~~**4. REPORTS:**~~

~~**a. Mayor**~~

~~Mayor Miller commented that baseball complex was a great announcement. It brings community together and helps build character in the kids. He has met with the landowner and others involved making sure it gets done right the first time.~~

~~**b. City Council**~~

~~Councilwoman Baertsch said we had a successful Splash and thanked all who came and all who helped. They had a great concert and fireworks and they had more entries in the parade than usual. There was great attendance from patrons and vendors. She felt the best part of the whole thing was that they announced the new City Sports Complex that they have acquired land for, and they shared the Plans for Shay Park. They also had a small carnival at Splash. She announced that they got the Fence issue with Wiltshire resolved. They had a minor code issue come up that they would like to take care of with the number of animals listed as per person; it needs to be changed to per household.~~

~~Councilman McOmber wanted to also thank everyone for their support with Splash days. They have some fun plans coming up with their 20th anniversary in a couple years. They were only able to acquire a few minutes of fireworks but got some more for free and he thanked those who were able to step up. He also expressed thanks that the new road resurfacing for Pioneer crossing was much better. He also thanked staff for getting the light at the North Commerce Drive on Redwood Road going with UDOT. He also wanted to thank Kimber Gabryszak and the planning department for helping to mitigate the problems with the Wiltshire subdivision fence. It will be a great asset to the community.~~

~~Councilwoman Call also echoed the others appreciation of Civic Events for Splash Days. She wanted to officially welcome Rocky Mt. Chocolate factory and Cold Stone into the City. She updated on the Phragmite on the lake and everything that has been treated so far will be smashed down this year. She announced the new Sports Complex to the Jordan River Commission because it will be next to that area. They would like to help get some non-motorized boat put-in's near there on the river. She shared kudos to Mayor Miller and the Parks committee for their work on this.~~

~~Kimber Gabryszak noted it could be the difference between the sq. footage in the floor plan and the finished product measured outside the walls. They will still be reviewing when they submit for building permits as well.~~

~~Councilwoman Baertsch noted to public that when they get the packets they don't see every detail and so she wants to make sure it all matches. She noted she emailed changes to the minutes.~~

~~Councilman McOmber had a change to the minutes. Row 169 about amenities for Shay Park. He means the additional trees.~~

~~Councilwoman Call wanted to clarify on the parking, she had a noted about a space adjacent to lot 108 and it has on the plat one parking stall. She also noted she had sent in changes to the minutes.~~

~~Councilwoman Baertsch noted that was the note she talked about that Jeremy Lapin would take care of.~~

~~Kimber Gabryszak recommended adding a condition that there should be semi- private fencing along 400 E.~~

~~Council agreed to add that.~~

~~Councilman Poduska noted they have improved the layout from the original design and they have improved the use of the buildings and open space.~~

~~Councilman Willden is excited to approve the no tax rate increase.~~

~~**Motion made by Councilwoman Baertsch to approve Consent Items a. b. c. adding to item a. condition 4. A railing compliant with building code shall be installed along the sidewalk by all retaining walls. And 5. Fencing along 400 east shall be semi-private. Including all minutes changes previously emailed in and Councilman McOmber's change to minutes stated at this meeting. Seconded by Councilman Poduska. Aye: Councilman Willden, Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 5 – 0.**~~

~~**3. PUBLIC HEARING ITEMS:**~~

~~**a. Public Hearing: Budget Amendments for Fiscal Year 2014-2015.**~~

~~**i. Resolution R15-28 (6-16-15): A resolution amending the City of Saratoga Springs Budget for Fiscal Year 2014-2015 and establishing an effective date.**~~

~~Chelese Rawlings presented the Budget amendment for approval. The majority is for book entries for depreciation of capital assets. For Shay Park estimated costs and budgeting for Sports complex design, also in roads fund for a light at 800 west.~~

~~Councilman McOmber gave a heads up for the 20th anniversary for Saratoga Springs, he thought that instead of funding all the extra in one year, he would suggest funding that over two years.~~

~~**Public Hearing – Opened** by Mayor Miller~~

~~No comments at this time.~~

~~**Public Hearing - Closed** by Mayor Miller~~

~~**Motion made by Councilman Willden to approve Resolution R15-28 (6-16-15): A resolution amending the City of Saratoga Springs Budget for Fiscal Year 2014-2015 and establishing an effective date. Seconded by Councilman McOmber. Aye: Councilman Willden, Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 5 – 0.**~~

b. Public Hearing: Rezone, General Plan Amendment and Concept Plan for Cahill Chapel located at 163 West Ring Road, LDS Church, applicant.

i. Ordinance 15-20 (6-16-15): An Ordinance of the City of Saratoga Springs, Utah, adopting amendments to the City of Saratoga Springs' Official Zoning Map and Land Use Map of the General Plan for certain real property totaling 5.17 acres located at approximately 163 West Ring Road; instructing the City staff to amend the City Zoning Map and Land Use Map of the General Plan; and establishing an effective date.

Sarah Carroll presented the plans for the project. The applicant is requesting a General Plan (GP) amendment and Rezone for 5.17 acres in order to submit applications for a new church in this location. The request is to change the land use designation and zone from Regional Commercial

(RC) to Neighborhood Commercial (NC). Churches are Conditional uses in the NC zone, but are not allowed in the RC zone. NC zoning would help preserve the original commercial intent of the area. Staff recommends approval. The Concept plan does not require a public hearing.

Public Hearing – Opened by Mayor Miller

Stephen Hilton would really appreciate this plan moving ahead. He thinks the church will add to property values and will not obstruct a view as much as other homes and businesses would. He is in favor of this.

Public Hearing - Closed by Mayor Miller

Councilman Poduska appreciates the modifications they have made and going to a NC zone would take care of the concerns they had previously.

Councilwoman Call has no concerns but would point out that Regional Commercial in the remaining area here is a good place for businesses. They think the church makes a good buffer area here between the homes and RC and has no concerns with the application for the church parcel rezone.

Councilman McOmber echoes Councilwoman Call's comments. This location is good but he doesn't want to set precedence that they will be changing Regional Commercial to NC as a regular practice. He does not want the church coming back with a landscape plan that is all rocks, the grass looks nice and inviting and is cooler. He asked staff to please encourage them to not ask for variance on that again. Other than that it looks good.

Councilwoman Baertsch has no problem with the rezone and also thinks it will be a great buffer. She asked if they could please change the name because it is not on the actual Cahill Road. This is a highly sloped area and should not block much if any of the view for homeowners. She echoes Councilman McOmber's comments on landscaping. Her one concern on the concept plan is that they need to address the garbage surround and storage. It is in the middle of the parking and affects several stalls.

Councilman Willden thinks the downzone is the best solution, it provides a good buffer and it's a great place to put it.

Motion made by Councilman McOmber to approve Ordinance 15-20 (6-16-15): An Ordinance of the City of Saratoga Springs, Utah, adopting amendments to the City of Saratoga Springs Official Zoning Map and Land Use Map of the General Plan for certain real property totaling 5.17 acres located at approximately 163 West Ring Road; instructing the City staff to amend the City Zoning Map and Land Use Map of the General Plan; and establishing an effective date. Seconded by Councilwoman Call.

Councilwoman Baertsch asked if they had findings with this.

Councilman McOmber **amended the motion to include "with the appropriate findings."**

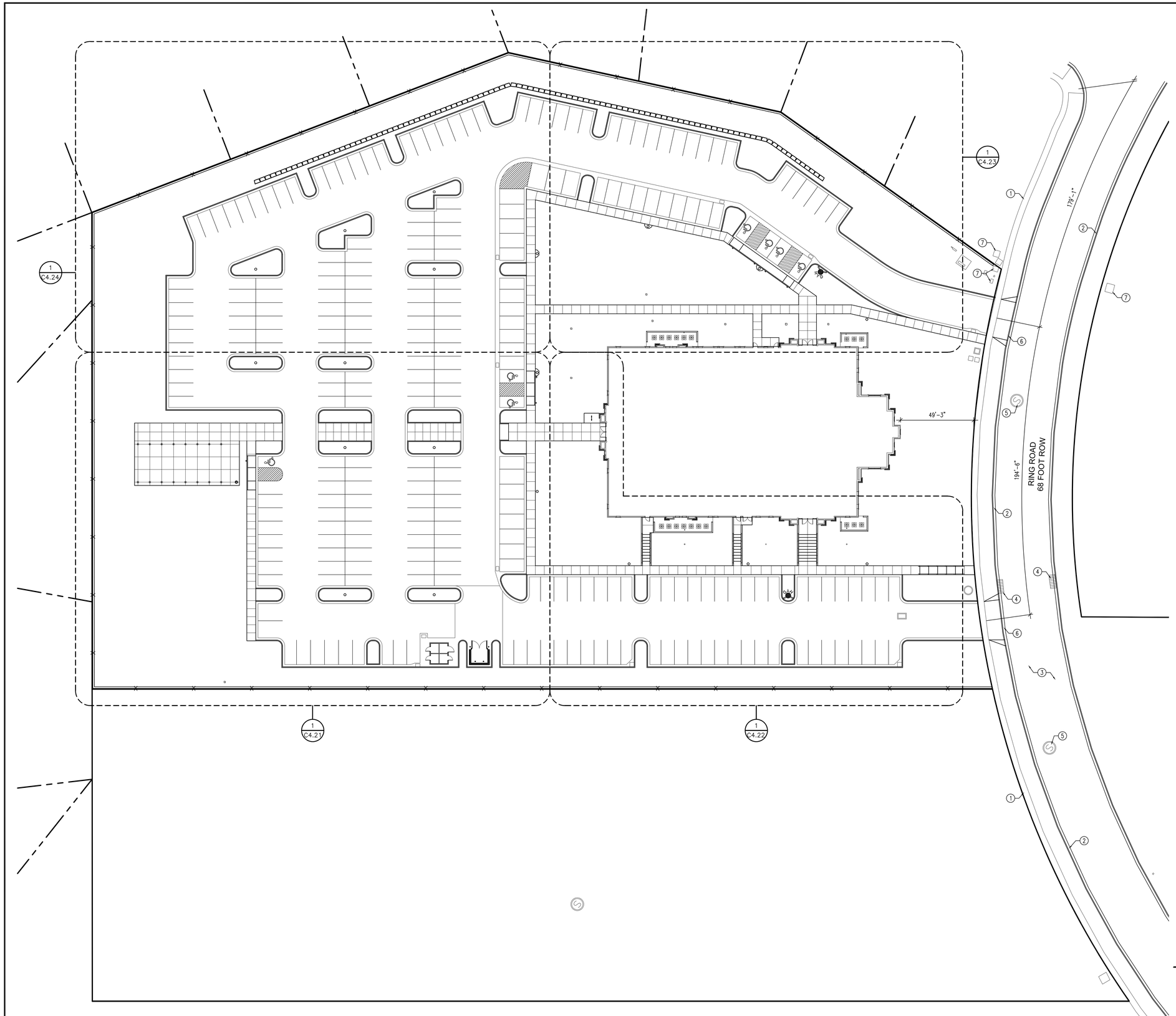
Councilwoman Call **seconded the amendment.**

Aye: Councilman Willden, Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 5 - 0.

c. ~~**Public Hearing: Amendments to Legacy Farms Community Plan located at 400 South Redwood Road, DR Horton, applicant.**~~

~~Kimber Gabryszak presented the amendment. The applicants are requesting approval of an amendment to the Legacy Farms Community Plan (CP) to modify the permitted material for the shared lanes from concrete to asphalt. The applicant expressed that it was always their intent to have this be asphalt. Kimber noted that to be fair staff and the applicant never discussed the material for this lane, so there were two thought processes going on. They are not looking to be a plain asphalt drive, it will have stamped features and a raised entrance.~~

~~**Public Hearing - Opened** by Mayor Miller~~



KEYED NOTES

1. EXISTING CONCRETE WALK TO REMAIN – PROTECT DURING CONSTRUCTION
2. EXISTING CONCRETE CURB AND GUTTER TO REMAIN – PROTECT DURING CONSTRUCTION
3. EXISTING ASPHALT PAVING TO REMAIN – PROTECT DURING CONSTRUCTION
4. EXISTING STORM DRAIN CATCH BASIN TO REMAIN – PROTECT DURING CONSTRUCTION
5. EXISTING SANITARY SEWER MANHOLE TO REMAIN – PROTECT DURING CONSTRUCTION
6. NEW CONCRETE DRIVE APPROACH PER SARATOGA SPRINGS CITY STANDARDS – SEE ST-4/C6.11 – SAWCUT AND REMOVE EXISTING CURB AND SIDEWALK AS NECESSARY
7. EXISTING ELECTRICAL BOXES TO REMAIN – PROTECT DURING CONSTRUCTION

GENERAL NOTES

1. CONCRETE RADII ARE 4'-0" UNLESS NOTED OTHERWISE
2. COORDINATE ALL SITE WORK WITH ALL OTHER CONTRACT DOCUMENTS
3. ALL APPLICABLE ELEMENTS OF THE AMERICAN'S WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES WILL BE ADHERED TO
4. PARKING STALLS ARE 9'-0" X 18'-0" UNLESS NOTED OTHERWISE.
5. ALL NOTED ITEMS ARE NEW UNLESS NOTED OTHERWISE.

SITE INFORMATION

	SQ. FT.	ACRES	
TOTAL PARCEL AREA – TOTAL	360,243	8.27	100%
TOTAL PARCEL AREA – LOT A	225,195	5.17	100%
TOTAL PARCEL AREA – LOT B	135,048	3.10	100%
ON SITE IMPROVEMENTS – LOT A			
BUILDING AREAS			
CHAPEL	21,043		
STORAGE BUILDING	190		
PAVILION	1,800		
IMPERVIOUS AREAS			
CONCRETE – WALKS, PADS, APRONS	17,670		
CONCRETE CURB & GUTTER (LF)	4,020		
ASPHALT	88,404		
TOTAL LANDSCAPE AREA	90,038	2.06	39.84%
TOTAL PARKING SPACES PROVIDED			
REGULAR	264 STALLS		
ACCESSIBLE	5 STALLS		
VAN ACCESSIBLE	2 STALLS		
TOTAL SPACES PROVIDED	271 STALLS		

ARCHITECTURAL SITE PLAN

SCALE: 1" = 30'-0"

NORTH

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Stamp

LICENSED ARCHITECT
PAUL ANTHONY EVANS
273770
STATE OF UTAH

A New Meetinghouse for:
Cahill
Saratoga Springs UT Israel Canyon Stake
163 West Ring Road
Saratoga Springs, Utah

Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

Revisions		
Mark	Date	Description
	5/1/2015	Concept Plan Submittal
	5/14/2015	Conditional Use/Site Plan

Project Number
14-68

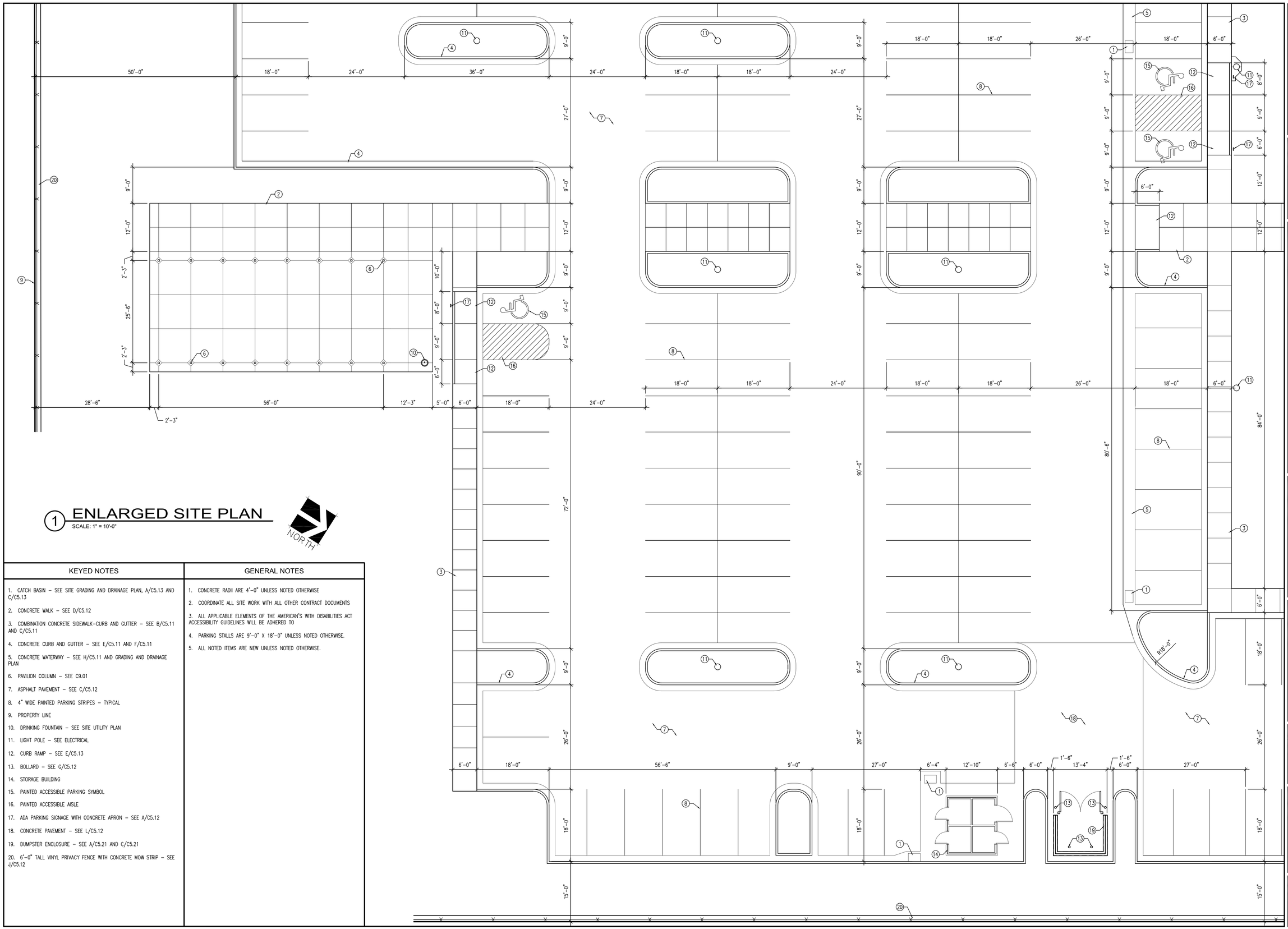
Plan Series
HET-SDS-09-05 (Style D)

Property Number
501-0932

Date
April 15, 2015

Sheet Title
ARCHITECTURAL SITE PLAN

Sheet
C4.11



1 ENLARGED SITE PLAN

SCALE: 1" = 10'-0"

NORTH

KEYED NOTES

1. CATCH BASIN – SEE SITE GRADING AND DRAINAGE PLAN, A/C5.13 AND C/C5.13
2. CONCRETE WALK – SEE D/C5.12
3. COMBINATION CONCRETE SIDEWALK-CURB AND GUTTER – SEE B/C5.11 AND C/C5.11
4. CONCRETE CURB AND GUTTER – SEE E/C5.11 AND F/C5.11
5. CONCRETE WATERWAY – SEE H/C5.11 AND GRADING AND DRAINAGE PLAN
6. PAVILION COLUMN – SEE C9.01
7. ASPHALT PAVEMENT – SEE C/C5.12
8. 4" WIDE PAINTED PARKING STRIPES – TYPICAL
9. PROPERTY LINE
10. DRINKING FOUNTAIN – SEE SITE UTILITY PLAN
11. LIGHT POLE – SEE ELECTRICAL
12. CURB RAMP – SEE E/C5.13
13. BOLLARD – SEE G/C5.12
14. STORAGE BUILDING
15. PAINTED ACCESSIBLE PARKING SYMBOL
16. PAINTED ACCESSIBLE AISLE
17. ADA PARKING SIGNAGE WITH CONCRETE APRON – SEE A/C5.12
18. CONCRETE PAVEMENT – SEE L/C5.12
19. DUMPSTER ENCLOSURE – SEE A/C5.21 AND C/C5.21
20. 6'-0" TALL VINYL PRIVACY FENCE WITH CONCRETE MOW STRIP – SEE J/C5.12

GENERAL NOTES

1. CONCRETE RADII ARE 4'-0" UNLESS NOTED OTHERWISE
2. COORDINATE ALL SITE WORK WITH ALL OTHER CONTRACT DOCUMENTS
3. ALL APPLICABLE ELEMENTS OF THE AMERICAN'S WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES WILL BE ADHERED TO
4. PARKING STALLS ARE 9'-0" X 18'-0" UNLESS NOTED OTHERWISE.
5. ALL NOTED ITEMS ARE NEW UNLESS NOTED OTHERWISE.

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Sheet Title
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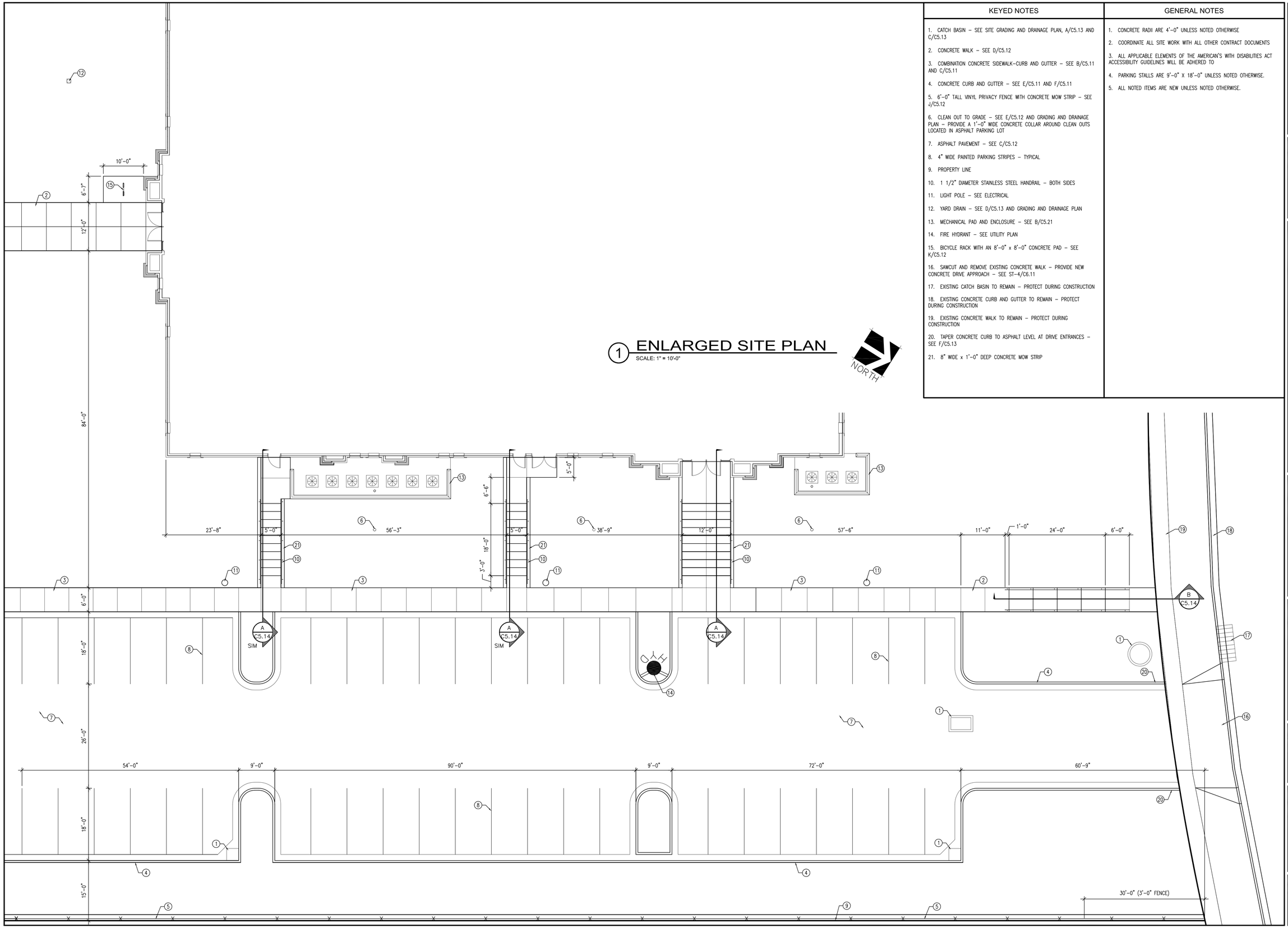
Sheet
C4.21



1 ENLARGED SITE PLAN
SCALE: 1" = 10'-0"

KEYED NOTES

1. CATCH BASIN – SEE SITE GRADING AND DRAINAGE PLAN, A/C5.13 AND C/C5.13
2. CONCRETE WALK – SEE D/C5.12
3. COMBINATION CONCRETE SIDEWALK-CURB AND GUTTER – SEE B/C5.11 AND C/C5.11
4. CONCRETE CURB AND GUTTER – SEE E/C5.11 AND F/C5.11
5. 6'-0" TALL VINYL PRIVACY FENCE WITH CONCRETE MOW STRIP – SEE J/C5.12
6. CLEAN OUT TO GRADE – SEE E/C5.12 AND GRADING AND DRAINAGE PLAN – PROVIDE A 1'-0" WIDE CONCRETE COLLAR AROUND CLEAN OUTS LOCATED IN ASPHALT PARKING LOT
7. ASPHALT PAVEMENT – SEE C/C5.12
8. 4" WIDE PAINTED PARKING STRIPES – TYPICAL
9. PROPERTY LINE
10. 1 1/2" DIAMETER STAINLESS STEEL HANDRAIL – BOTH SIDES
11. LIGHT POLE – SEE ELECTRICAL
12. YARD DRAIN – SEE D/C5.13 AND GRADING AND DRAINAGE PLAN
13. MECHANICAL PAD AND ENCLOSURE – SEE B/C5.21
14. FIRE HYDRANT – SEE UTILITY PLAN
15. BICYCLE RACK WITH AN 8'-0" x 8'-0" CONCRETE PAD – SEE K/C5.12
16. SAWCUT AND REMOVE EXISTING CONCRETE WALK – PROVIDE NEW CONCRETE DRIVE APPROACH – SEE ST-4/C6.11
17. EXISTING CATCH BASIN TO REMAIN – PROTECT DURING CONSTRUCTION
18. EXISTING CONCRETE CURB AND GUTTER TO REMAIN – PROTECT DURING CONSTRUCTION
19. EXISTING CONCRETE WALK TO REMAIN – PROTECT DURING CONSTRUCTION
20. TAPER CONCRETE CURB TO ASPHALT LEVEL AT DRIVE ENTRANCES – SEE F/C5.13
21. 8" WIDE x 1'-0" DEEP CONCRETE MOW STRIP

GENERAL NOTES

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2. COORDINATE ALL SITE WORK WITH ALL OTHER CONTRACT DOCUMENTS
3. ALL APPLICABLE ELEMENTS OF THE AMERICAN'S WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES WILL BE ADHERED TO
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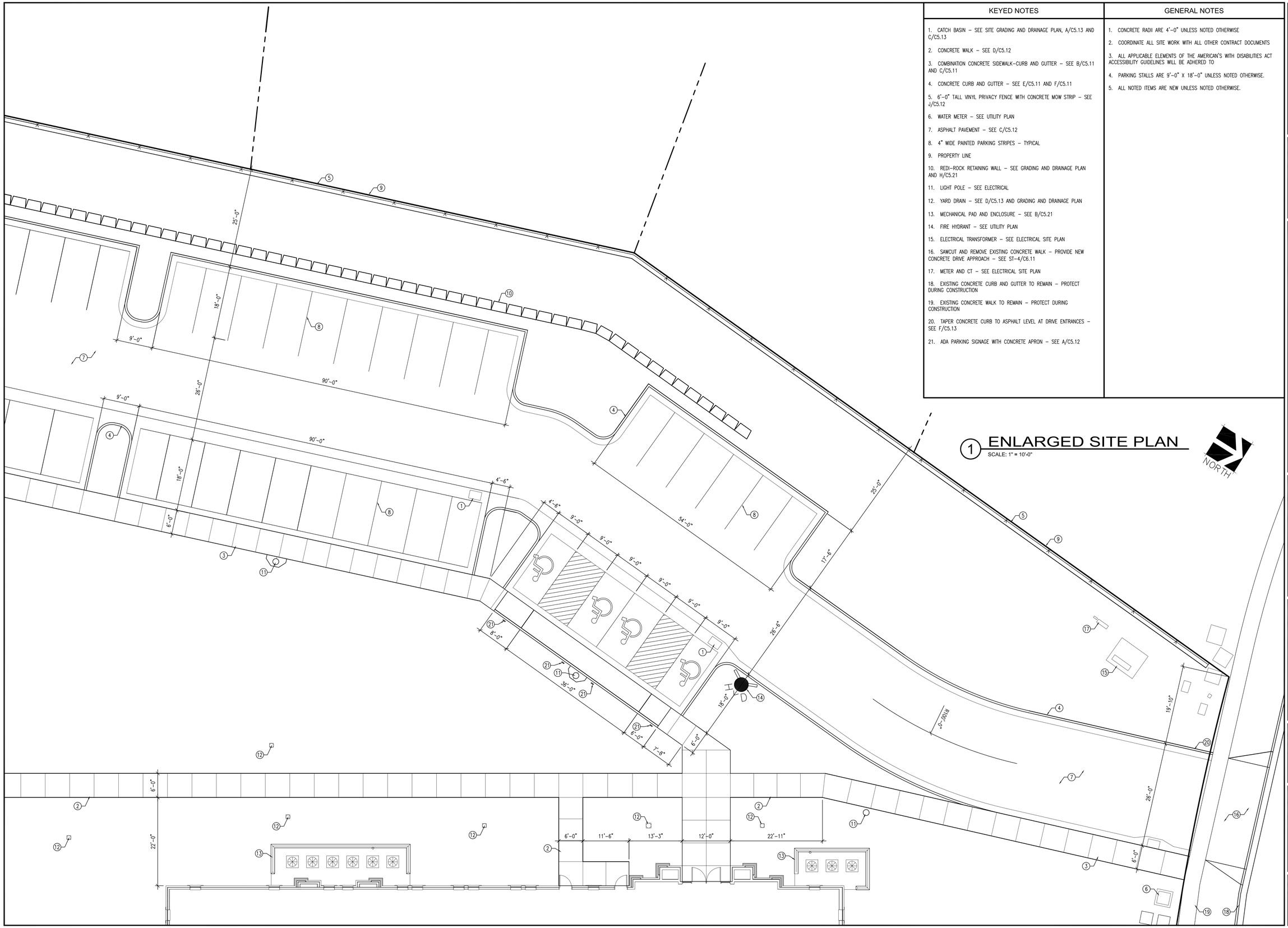
Sheet Title
ENLARGED ARCHITECTURAL SITE PLANS

Sheet
C4.22



1 ENLARGED SITE PLAN

SCALE: 1" = 10'-0"

KEYED NOTES

1. CATCH BASIN – SEE SITE GRADING AND DRAINAGE PLAN, A/C5.13 AND C/C5.13
2. CONCRETE WALK – SEE D/C5.12
3. COMBINATION CONCRETE SIDEWALK-CURB AND GUTTER – SEE B/C5.11 AND C/C5.11
4. CONCRETE CURB AND GUTTER – SEE E/C5.11 AND F/C5.11
5. 6'-0" TALL VINYL PRIVACY FENCE WITH CONCRETE MOW STRIP – SEE J/C5.12
6. WATER METER – SEE UTILITY PLAN
7. ASPHALT PAVEMENT – SEE C/C5.12
8. 4" WIDE PAINTED PARKING STRIPES – TYPICAL
9. PROPERTY LINE
10. REDI-ROCK RETAINING WALL – SEE GRADING AND DRAINAGE PLAN AND H/C5.21
11. LIGHT POLE – SEE ELECTRICAL
12. YARD DRAIN – SEE D/C5.13 AND GRADING AND DRAINAGE PLAN
13. MECHANICAL PAD AND ENCLOSURE – SEE B/C5.21
14. FIRE HYDRANT – SEE UTILITY PLAN
15. ELECTRICAL TRANSFORMER – SEE ELECTRICAL SITE PLAN
16. SAWCUT AND REMOVE EXISTING CONCRETE WALK – PROVIDE NEW CONCRETE DRIVE APPROACH – SEE ST-4/C6.11
17. METER AND CT – SEE ELECTRICAL SITE PLAN
18. EXISTING CONCRETE CURB AND GUTTER TO REMAIN – PROTECT DURING CONSTRUCTION
19. EXISTING CONCRETE WALK TO REMAIN – PROTECT DURING CONSTRUCTION
20. TAPER CONCRETE CURB TO ASPHALT LEVEL AT DRIVE ENTRANCES – SEE F/C5.13
21. ADA PARKING SIGNAGE WITH CONCRETE APRON – SEE A/C5.12

GENERAL NOTES

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Plan Series
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Property Number
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Date
April 15, 2015

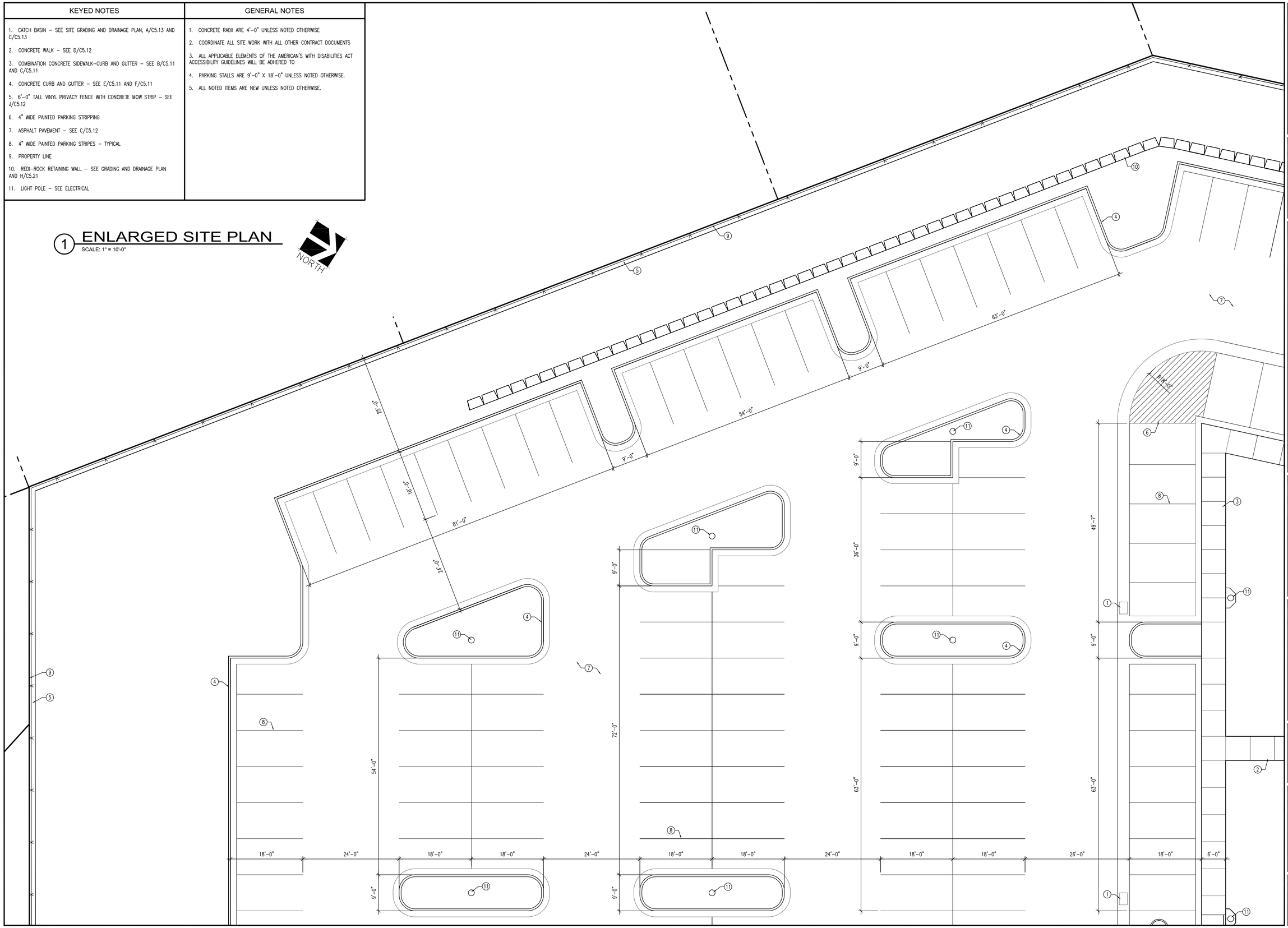
Sheet Title
ENLARGED ARCHITECTURAL SITE PLANS

Sheet
C4.23

KEYED NOTES	GENERAL NOTES
1. CATCH BASIN – SEE SITE GRADING AND DRAINAGE PLAN, A/C5.13 AND C/C5.13	1. CONCRETE RADII ARE 4'–0" UNLESS NOTED OTHERWISE
2. CONCRETE WALK – SEE D/C5.12	2. COORDINATE ALL SITE WORK WITH ALL OTHER CONTRACT DOCUMENTS
3. COMBINATION CONCRETE SIDEWALK–CURB AND GUTTER – SEE B/C5.11 AND C/C5.11	3. ALL APPLICABLE ELEMENTS OF THE AMERICAN'S WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES WILL BE ADHERED TO
4. CONCRETE CURB AND GUTTER – SEE E/C5.11 AND F/C5.11	4. PARKING STALLS ARE 9'–0" X 18'–0" UNLESS NOTED OTHERWISE.
5. 6'–0" TALL VINYL PRIVACY FENCE WITH CONCRETE MOW STRIP – SEE J/C5.12	5. ALL NOTED ITEMS ARE NEW UNLESS NOTED OTHERWISE.
6. 4" WIDE PAINTED PARKING STRIPPING	
7. ASPHALT PAVEMENT – SEE C/C5.12	
8. 4" WIDE PAINTED PARKING STRIPES – TYPICAL	
9. PROPERTY LINE	
10. REDI–ROCK RETAINING WALL – SEE GRADING AND DRAINAGE PLAN AND H/C5.21	
11. LIGHT POLE – SEE ELECTRICAL	

1 ENLARGED SITE PLAN

SCALE: 1" = 10'-0"



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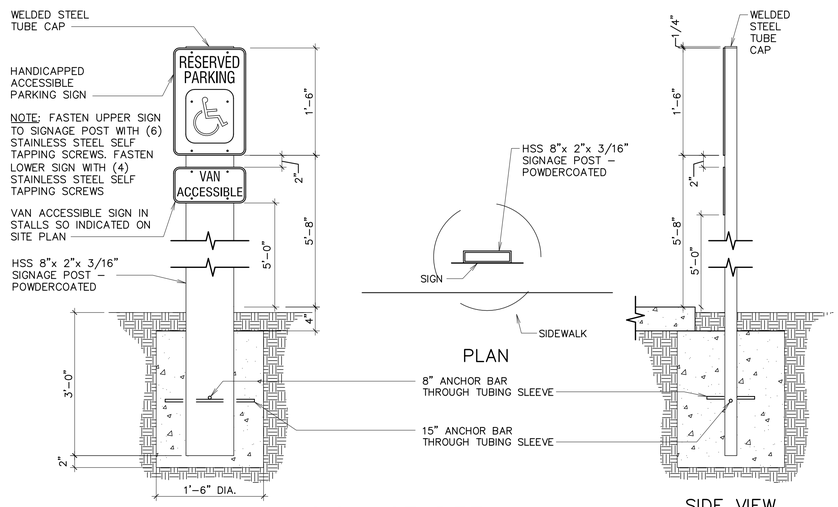
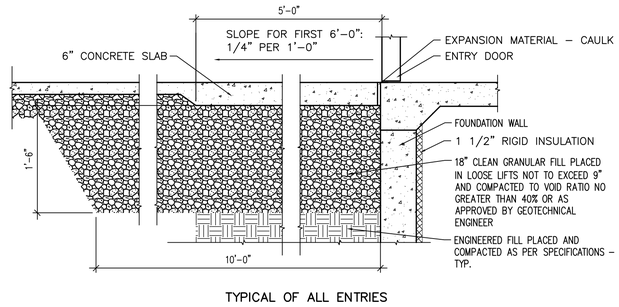
Sheet Title
ENLARGED ARCHITECTURAL SITE PLANS

Sheet
C4.24

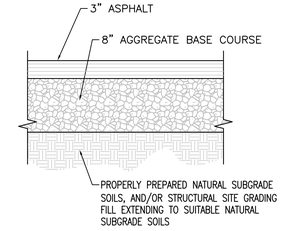


A SIGNAGE DETAIL
1" = 1'-0"

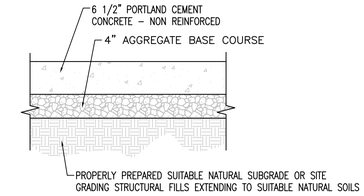


TYPICAL OF ALL ENTRIES

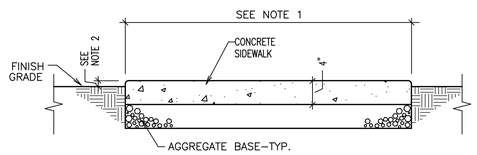
B ENTRY DETAIL
1" = 1'-0"



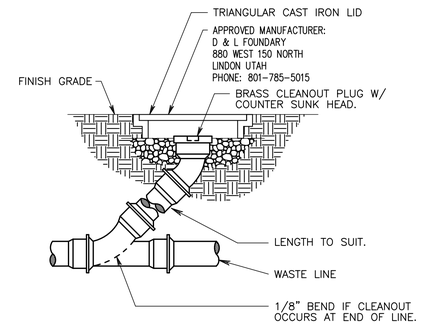
C ASPHALT SECTION
1" = 1'-0"



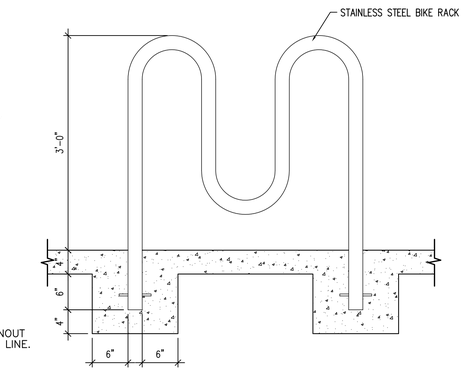
L CONCRETE SECTION
1" = 1'-0"



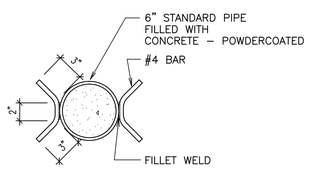
D CONCRETE WALK
1" = 1'-0"



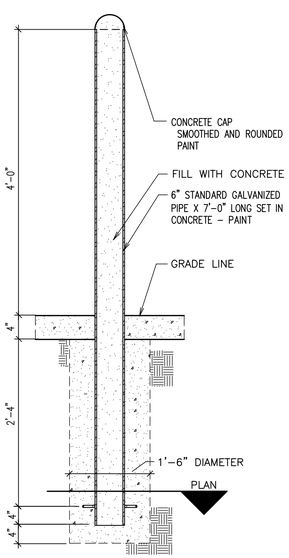
E CLEANOUT TO GRADE
NONE



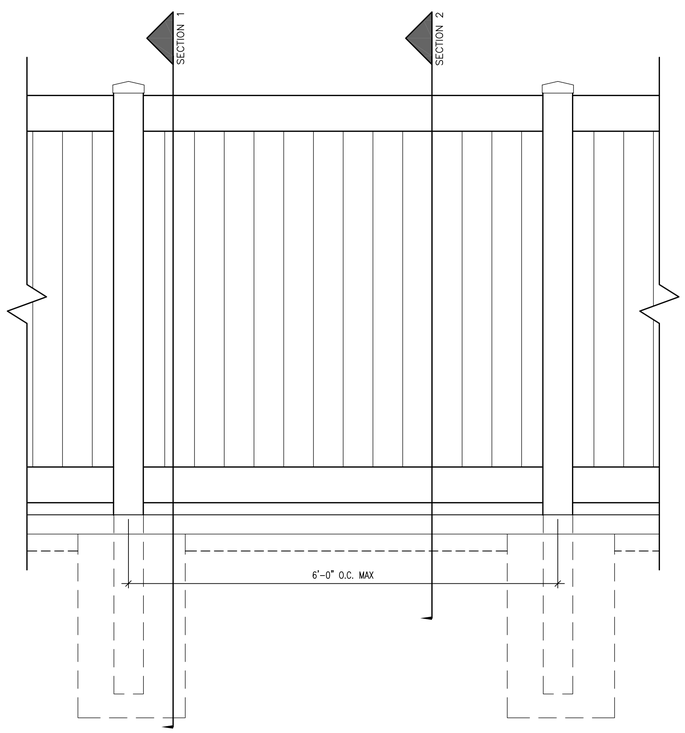
K BICYCLE RACK
1" = 1'-0"



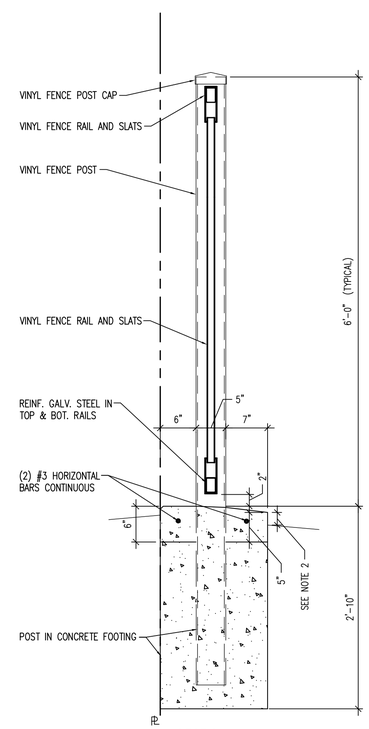
F BOLLARD PLAN
1" = 1'-0"



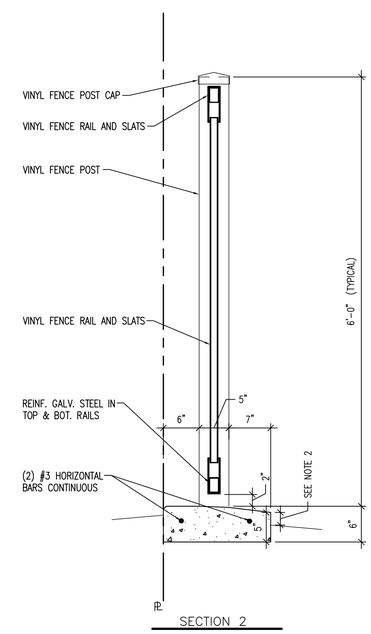
G BOLLARD SECTION
1" = 1'-0"



J FENCE
1" = 1'-0"



SECTION 1



SECTION 2

GENERAL NOTES

1. SEE SITE PLAN FOR APRON, MOW STRIP AND SIDEWALK LOCATIONS AND WIDTHS.
2. 2" PRIOR TO SODDING AND 4" IN PLANTING AREAS.
3. EXPANSION JOINT MATERIAL SHALL BE RECESSED 1/4" WHERE SEALANT IS NOT APPLIED, AND 1/2" WHERE SEALANT IS APPLIED.
4. EXTERIOR CONCRETE – USE 4,500 PSI. MIN. TYPE D IF EXPOSED TO FREEZING AND/OR DE–ICERS, 4,000 PSI. MIN. TYPE C OTHERWISE.
5. CONTRACTOR TO INSTALL EXPANSION AND CONTRACTION JOINTS AS REQUIRED PER THE SPECIFICATIONS.
6. ALL AGGREGATES SHALL SATISFY ASTM AND DEPARTMENT OF TRANSPORTATION STRENGTH AND DURABILITY REQUIREMENTS. GRANITE AGGREGATES ARE PREFERRED BUT HIGH QUALITY LIMESTONE AGGREGATES ARE ACCEPTABLE. SEE SPECIFICATION

evans + associates architecture
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Stamp
LICENSED ARCHITECT
PAUL ANTHONY EVANS
273770
STATE OF UTAH

A New Meetinghouse for:
Cahill
Saratoga Springs UT Israel Canyon Stake
163 West Ring Road
Saratoga Springs, Utah

Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

Revisions

Mark	Date	Description
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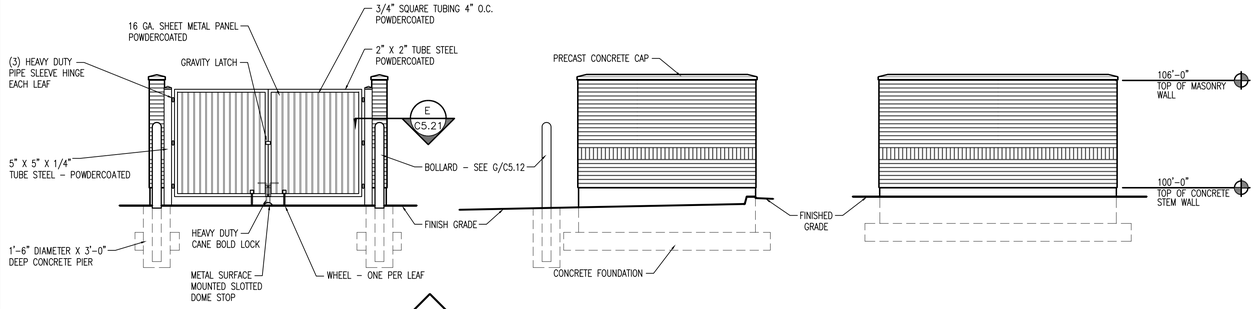
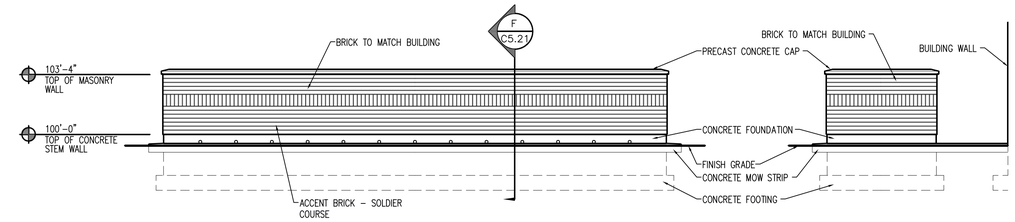
Project Number
14-68
Plan Series
HET-SDS-09-05 (Style D)
Property Number
501-0932
Date
April 15, 2015

Sheet Title
SITE DETAILS

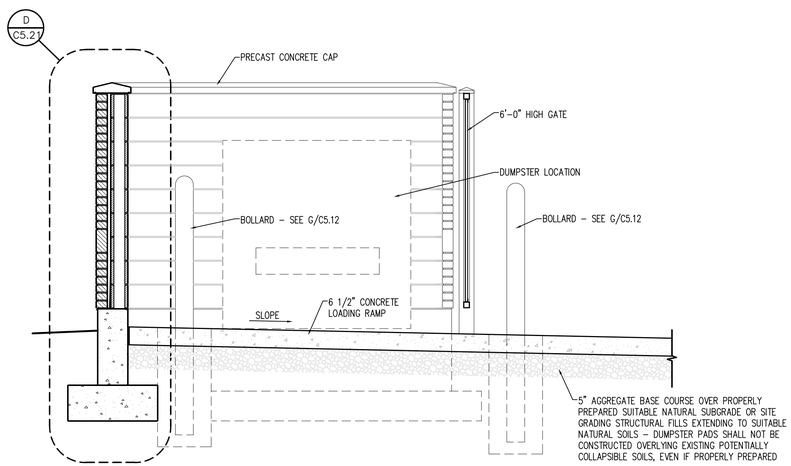
Sheet
C5.12



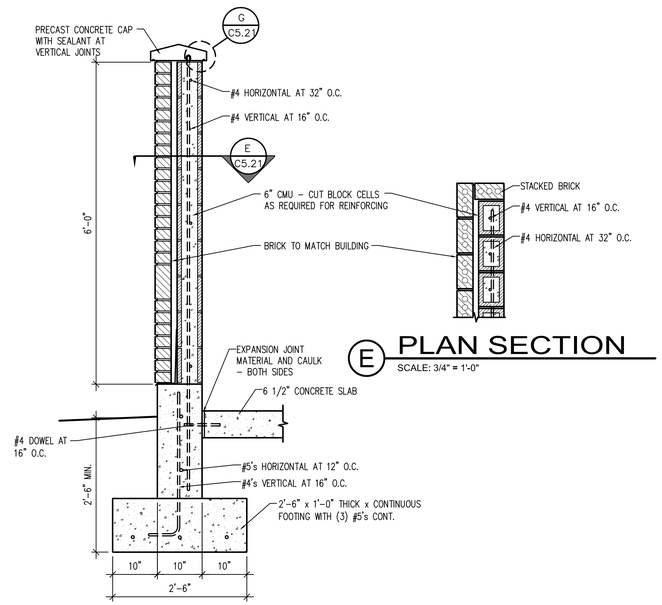
A DUMPSTER ENCLOSURE
SCALE: 1/4" = 1'-0"



B MECHANICAL ENCLOSURE
SCALE: 1/4" = 1'-0"

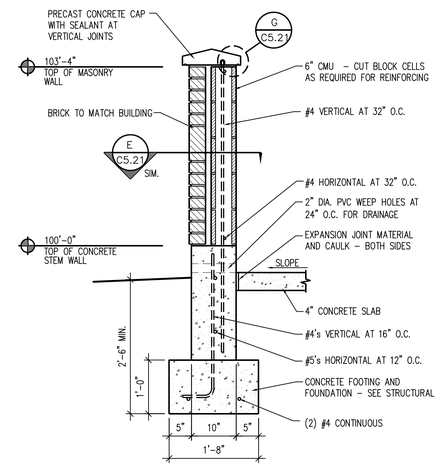


C DUMPSTER ENCLOSURE
SCALE: 1/2" = 1'-0"



E PLAN SECTION
SCALE: 3/4" = 1'-0"

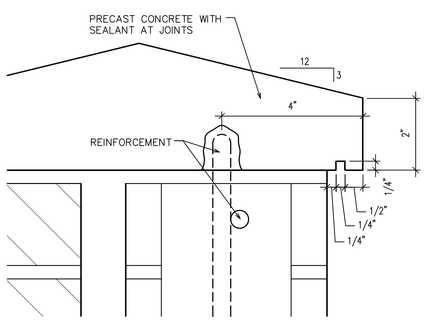
D DUMPSTER ENCLOSURE
SCALE: 3/4" = 1'-0"



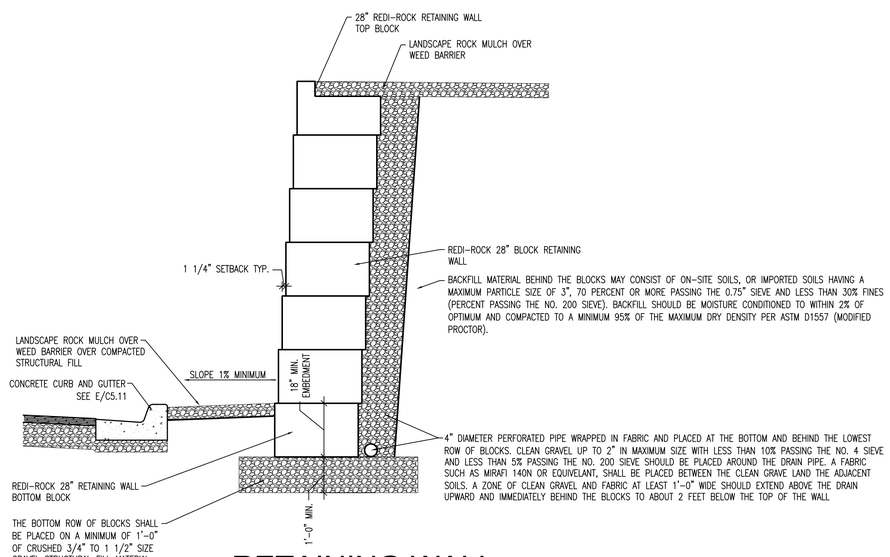
F MECHANICAL ENCLOSURE
SCALE: 3/4" = 1'-0"

GENERAL NOTES

1. SEE SITE PLAN FOR WALK LOCATIONS AND WIDTH
2. 2" PRIOR TO SODDING



G SECTION
SCALE: 6" = 1'-0"



H RETAINING WALL
SCALE: 1/2" = 1'-0"

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LICENSED ARCHITECT PAUL ANTHONY EVANS 273770 STATE OF UTAH

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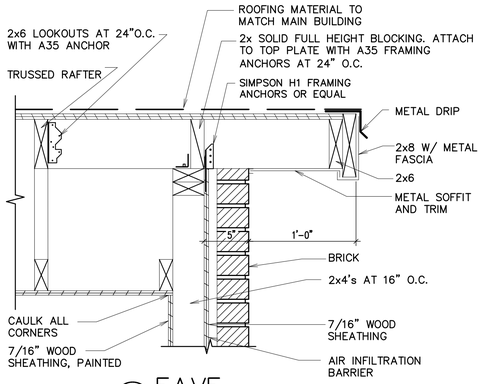
Sheet Title
MECHANICAL AND DUMPSTER ENCLOSURE DETAILS

Sheet
C5.21



A EAVE
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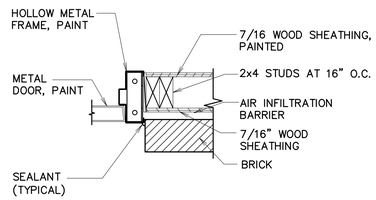

B JAMB
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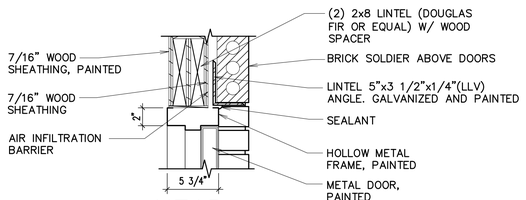

C HEAD
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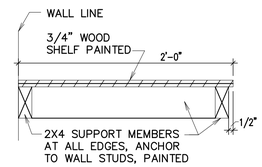

D SHELF SECTION
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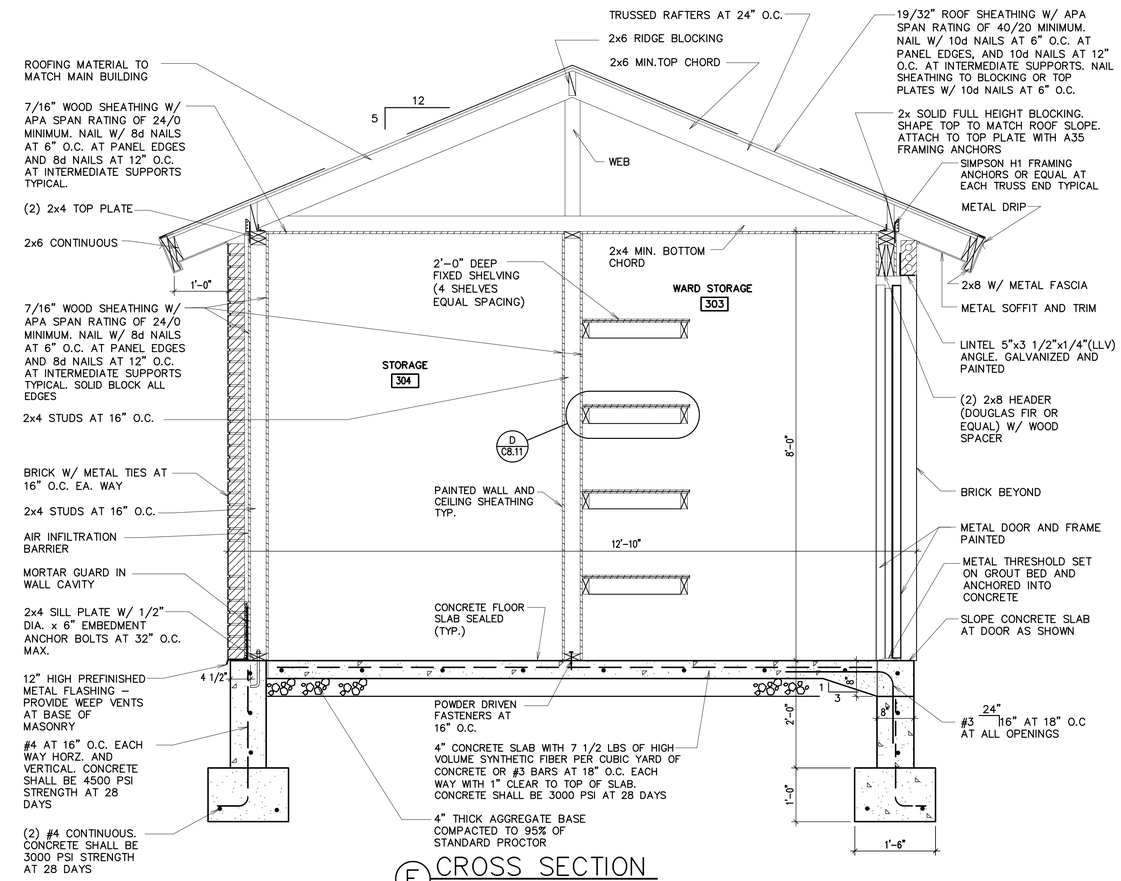

E CROSS SECTION
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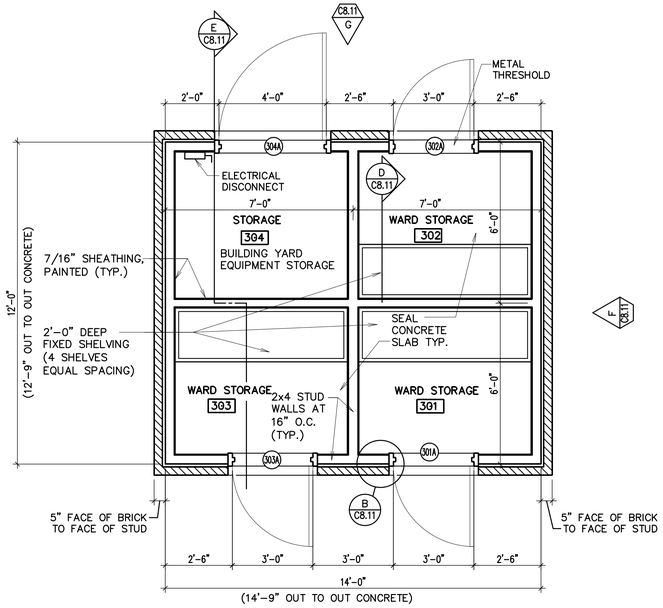
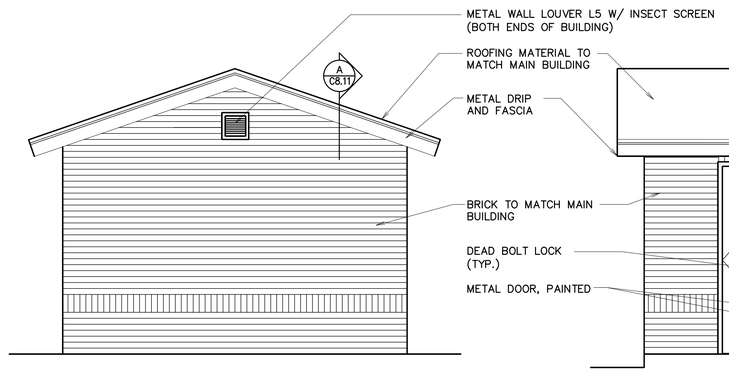
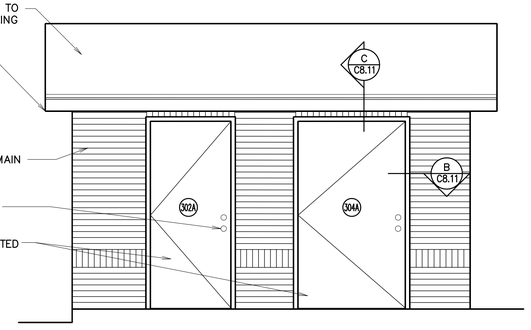


1 FLOOR PLAN
3/8" = 1'-0"



F ELEVATION
3/8" = 1'-0"
(OPPOSITE END SIMILAR)



G ELEVATION
3/8" = 1'-0"
(OPPOSITE SIDE SIMILAR)

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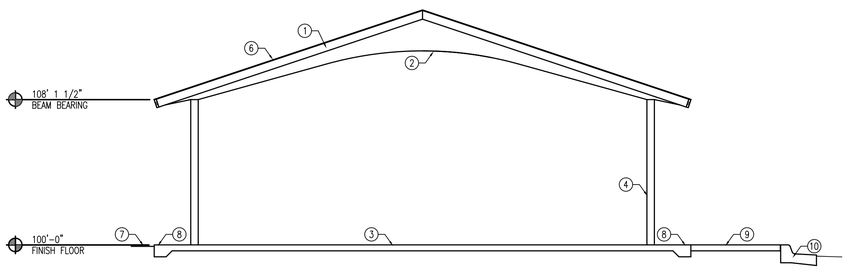
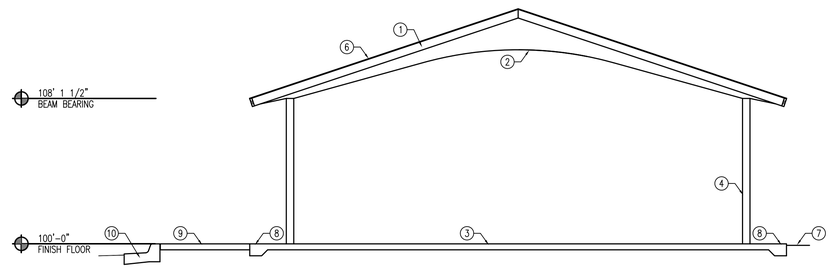
Sheet Title
STORAGE BUILDING

Sheet
C8.11



A ELEVATION
SCALE: 1/4" = 1'-0"



C ELEVATION
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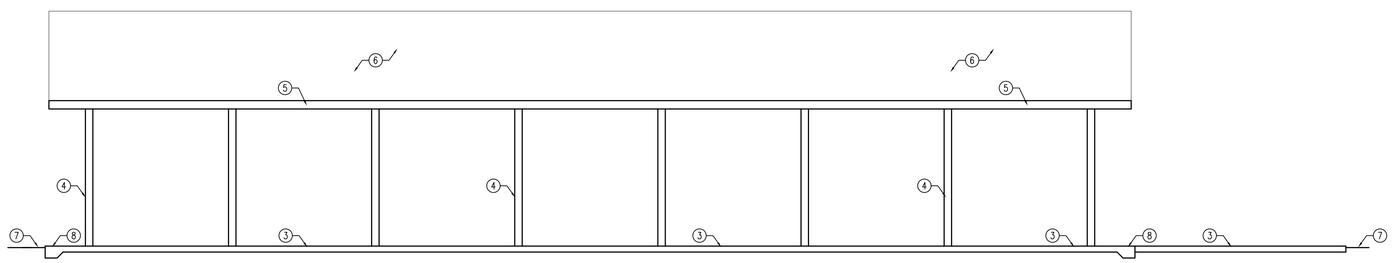
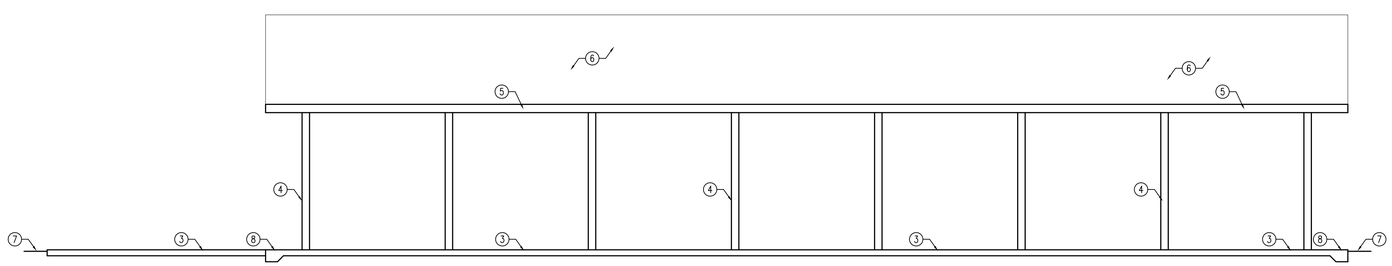


B ELEVATION
SCALE: 1/4" = 1'-0"



D ELEVATION
SCALE: 1/4" = 1'-0"

KEYED NOTES

1. PREFINISHED METAL FASCIA OVER WOOD FASCIA – SEE B/C903
2. GLU-LAM BEAM – SEE RCP SHEETS
3. CONCRETE SLAB – SEE A/C903 AND RCP SHEETS
4. STEEL COLUMN – SEE RCP SHEETS – TOUCH UP PAINT AS NECESSARY AFTER CONSTRUCTION
5. PREFINISHED METAL FASCIA OVER WOOD FASCIA – SEE C/C903
6. FIBERGLASS SHINGLE ROOFING – SEE RCP SHEETS
7. FINISH GRADE
8. THICKENED EDGE OF CONCRETE SLAB – SEE RCP SHEETS
9. CONCRETE WALK – SEE C4.11 FOR CONTINUATION
10. CONCRETE CURB AND GUTTER – SEE C5.11

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LICENSED ARCHITECT
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273770
STATE OF UTAH

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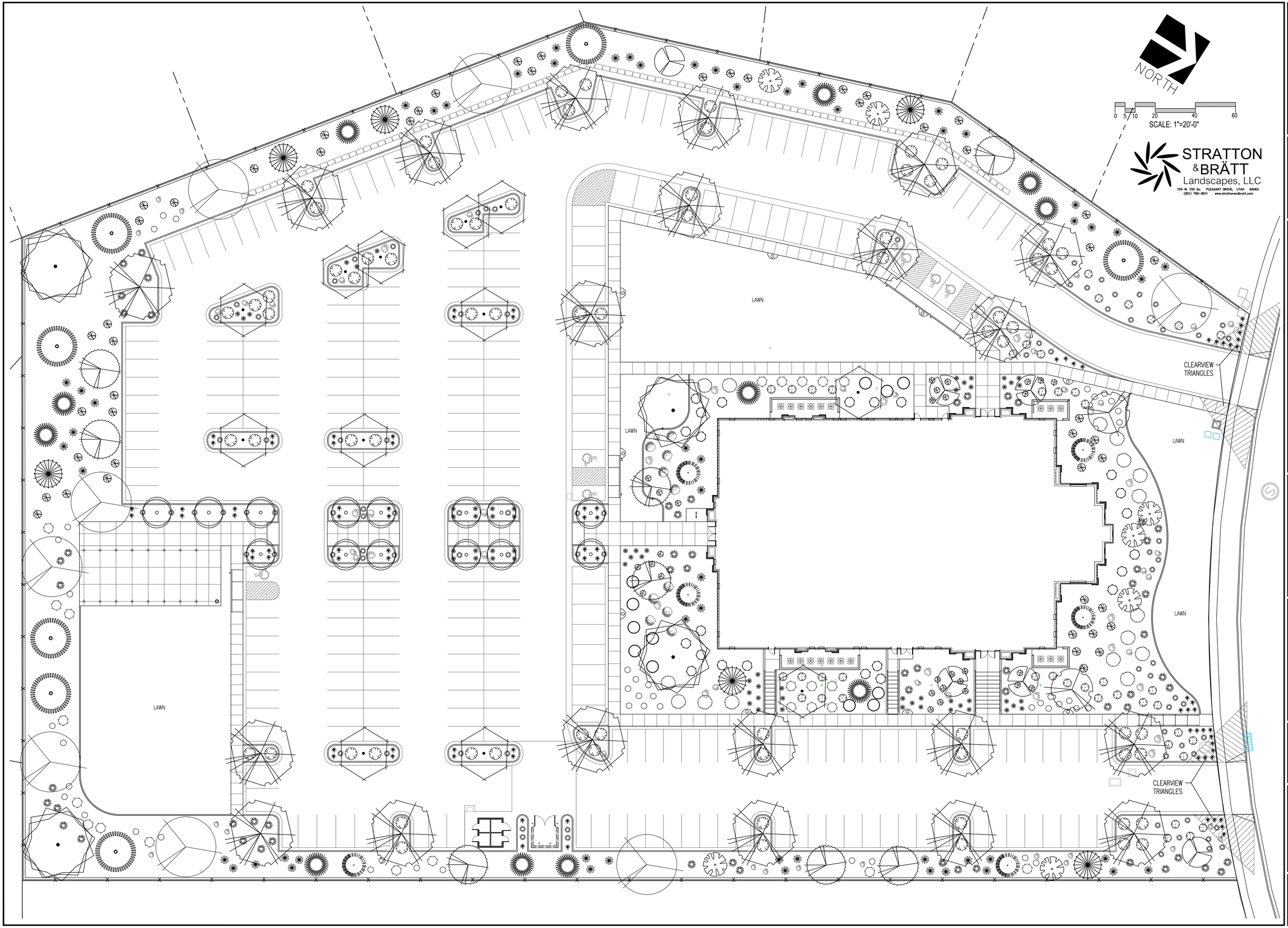
Sheet Title
PAVILION EXTERIOR ELEVATIONS

Sheet
C9.02



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STATE OF UTAH
DARREN G. WILSON
NO. 356187
LICENSED LANDSCAPE ARCHITECT

A New Meetinghouse for:

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Saratoga Springs UT Israel Canyon Stake

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1:=6::

Plan Series
HET-SDS-09-05 (Style D)

Property Number
501-0932

Date
April 15, 2015

Sheet Title

LANDSCAPE PLAN

Sheet

L101

PLANTING SCHEDULE

Broadleaf Deciduous

Symbol	Code Name	Scientific Name	Common Name	Planting Size	Quantity
	AcgiF	Acer ginnala 'Flame' (multi-stem)	Flame Amur Maple (clump)	6'-8' Ht.	23
	AcKe	Acer truncatum x 'Keithsform'	Norwegian Sunset Maple	2.5"-Cal	20
	AmAB	Amalanchier grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	2.5"-Cal	8
	Ceoc	Celtis occidentalis	Common Hackberry	2.5"-Cal	4
	Frma	Fraxinus mandshurica 'Mancana'	Manchurian Ash	2.5"-Cal	8
	Gllm	Gleditsia triancanthos 'Imperial'	Imperial Honeylocust	2.5"-Cal	15
	PrsaC	Prunus sargentii 'Columnaris'	Columnar Sargent Cherry	2.5"-Cal	8
	SoaB	Sorbus aucuparia 'Blackhawk'	Blackhawk Mountain Ash	2.5"-Cal	10

Conifer Evergreen

Symbol	Code Name	Scientific Name	Common Name	Planting Size	Quantity
	Pigd	Picea glauca densata	Black Hills Spruce	7'-8' Ht.	8
	Pihe	Pinus heldrichii leucodermis	Bosnian Redcone Pine	7'-8' Ht.	4
	Pini	Pinus nigra	Austrian Pine	7'-8' Ht.	5

Perennial

Symbol	Code Name	Scientific Name	Common Name	Planting Size	Quantity
	HePM	Hemerocallis 'Pardon Me'	Pardon Me Daylily	1-Gal	72

Grass

Symbol	Code Name	Scientific Name	Common Name	Planting Size	Quantity
	Hese	Helictrotrichon sempervirens	Blue Oat Grass	1-Gal	47

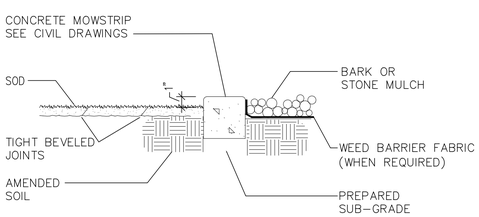
Shrub

Symbol	Code Name	Scientific Name	Common Name	Planting Size	Quantity
	BuPE	Buddleia davidii 'Purple Emperor'	Purple Emperor Butterfly Bush	5-Gal	17
	JusaS	Juniperus sabina 'Scandia'	Scandia Juniper	5-Gal	8
	PhopN	Physocarpus opulifolius 'Nanus'	Dwarf Ninebark	5-Gal	11
	PhLD	Physocarpus opulifolius 'Little Devil'	Little Devil Ninebark	5-Gal	21
	PimuP	Pinus mugo 'Pumilio'	Dwarf Mugo Pine	5-Gal	17
	PoGD	Potentilla fruticosa 'Gold Drop'	Gold Drop Potentilla	5-Gal	45
	PrPB	Prunus besseyi 'Pawnee Buttes'	Pawnee Buttes Sand Cherry	5-Gal	49
	Rial	Ribes alpinum	Alpine Currant	5-Gal	28
	RoMR	Rosa 'Meidiland Red'	Meidiland Red Rose	5-Gal	10
	RoMW	Rosa 'Meidiland White'	Meidiland White Rose	5-Gal	12
	SychH	Symphoricarpos x chenaultii 'Hancock'	Hancock Coralberry	5-Gal	38
	Viopn	Viburnum opulus nanum	Dwf. European Cranberry	5-Gal	38

NOTES:

1) Screened Top Soil to be implemented in all new planting areas at the following depths: 12" in all shrub beds, 5" in all lawn areas.
2) Lawn to be a Kentucky Bluegrass Blend (min. 3 varieties) and be implemented as sod.
3) 6"x6" flat concrete curbing to be implemented between all shrub bed and lawn areas as shown on plan.
4) Shredded Bark Mulch to be natural (non-dyed) bark in a 2-3" average size. Implement Bark Mulch in planter beds at a 3" depth over weed barrier fabric.
5) Rock Mulch to be 1-1/2" size "Southtown Cobble" from Nephi Sandstone, Nephi, Utah. Implement Rock Mulch in areas indicated at a 3" depth over weed barrier fabric. Rock Mulch to be clean and free of debris, placed at uniform depth, and raked smooth.
6) DeWitt #5 Landscape Fabric to be implemented in all shrub beds and other indicated areas prior to bark mulch or rock mulch implementation. Follow manufacturers installation instructions.
7) Trees in lawn areas to have a 36" diameter grass free ring around the trunk and have a 2" depth of shredded bark mulch implemented.
8) Landscape Boulders to be 3'-4' size 'McGuire Boulders' from Staker Parsons in Willard, Utah. Bury boulders a minimum of 6" in ground. (74 Total)
9) No landscaping or other obstruction in excess of 3 feet above finished grade shall be implemented in clear view triangles.

NOTES:
1. MOWSTRIP TO BE CAST-IN-PLACE AND POURED USING TYPICAL WEIGHT STRUCTURAL CONCRETE.
2. CONTRACTOR TO ENSURE POSITIVE DRAINAGE AROUND MOWSTRIPS-DO NOT CREATE A DAM EFFECT WITH PLACEMENT OF MOWSTRIP.
3. MAXIMUM 1/2" WIDTH VARIATION.
4. PRECISELY FOLLOW LAYOUT AS SHOWN ON MOWSTRIP/EDGING DIMENSION PLAN.
5. RAISE THE LAWN GRADE 1" WHEN SEEDING.



C CONCRETE MOWSTRIP

DESIGN CRITERIA

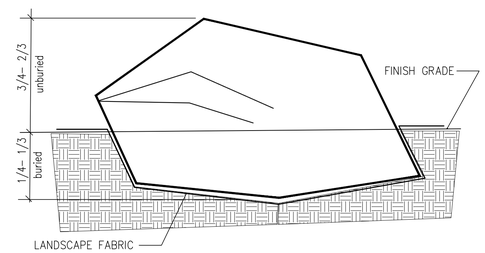
Climate	U.S. Hardiness Zone 5
Zoning Ordinance	Saratoga Springs City
Water Availability	NA
Soil Type	See Soils Report
Solar Orientation	See North Arrow
Utilities	See Utility Plan
Slopes	See Grading Plan
Site Layout	Road bordered
Wind	South Prevailing
Setbacks/Easements	NA
Microclimates	NA
Soil ph	See Soils Report
Lawn Area	25% of Total Landscape (22,473 sq. ft.)*

* Park Strip landscape of 2,183 sq. ft. NOT included in this total

CNA INFORMATION

Total Site Area	5.17 acres*
Shrubs/Groundcover	66,868 sq. ft.
Total Landscape Area	89,231 sq. ft. (40%)*
Trees On Site	113

* Park Strip landscape of 2,183 sq. ft. NOT included in this total



NOTE:
1) FOR BOULDERS WITH A FLAT EDGE, BURY FLAT EDGE 3-6" MIN. IN GROUND.
2) PLACE ONE LAYER OF FABRIC BENEATH EACH BOULDER. OVERLAP SHRUB BED FABRIC OVER BOULDER FABRIC A MINIMUM OF 12".

A BOULDER PLACEMENT DETAIL

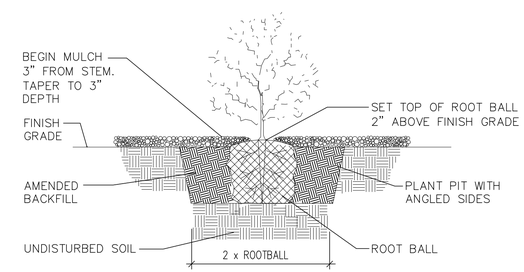
PLANT COVERAGE TABLE

	Shrub-Mature Coverage	Tree-Coverage Intent
Street Frontage	22%	Frame Building
Primary Entries	23%	Frame Entry
Building Perimeter	19%	Accent Building
Perimeter Sides	13%	Screen Lot
Perimeter Rear	12%	Screen Lot

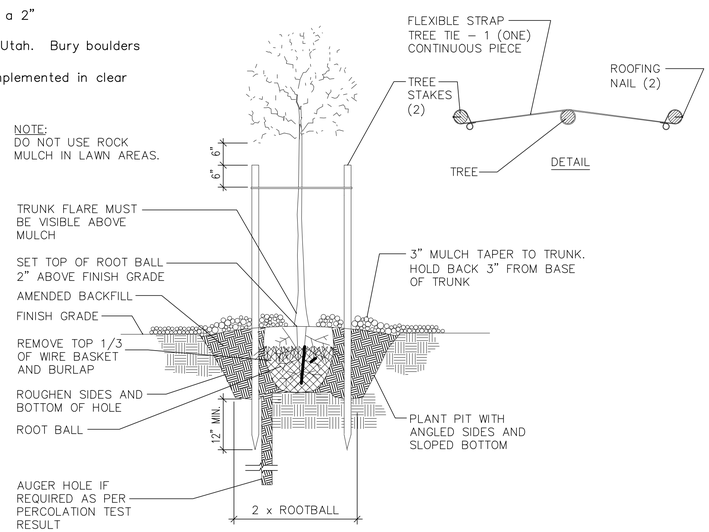
CITY REQUIREMENTS

Landscape Element	Required	Per Plan
Deciduous Trees	32	82
Evergreen Trees	30	30
Shrubs (incl. Grasses & Perennials)	50	413
Drought Tolerant	50%	431 (82%)

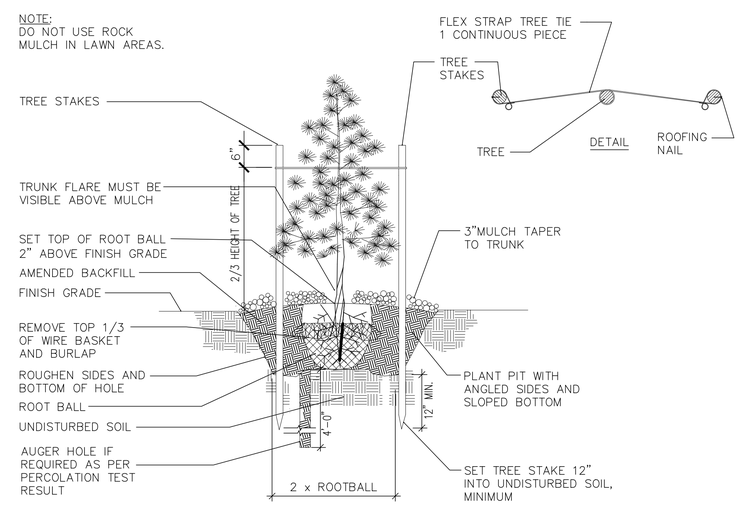
STRATTON & BRÄTT Landscapes, LLC
754 W. 700 So. PLEASANT GROVE, UTAH 84062
(801) 785-8011 www.strattonandbratt.com



B SHRUB PLANTING DETAIL



D TREE PLANTING AND STAKING



E CONIFER PLANTING AND STAKING

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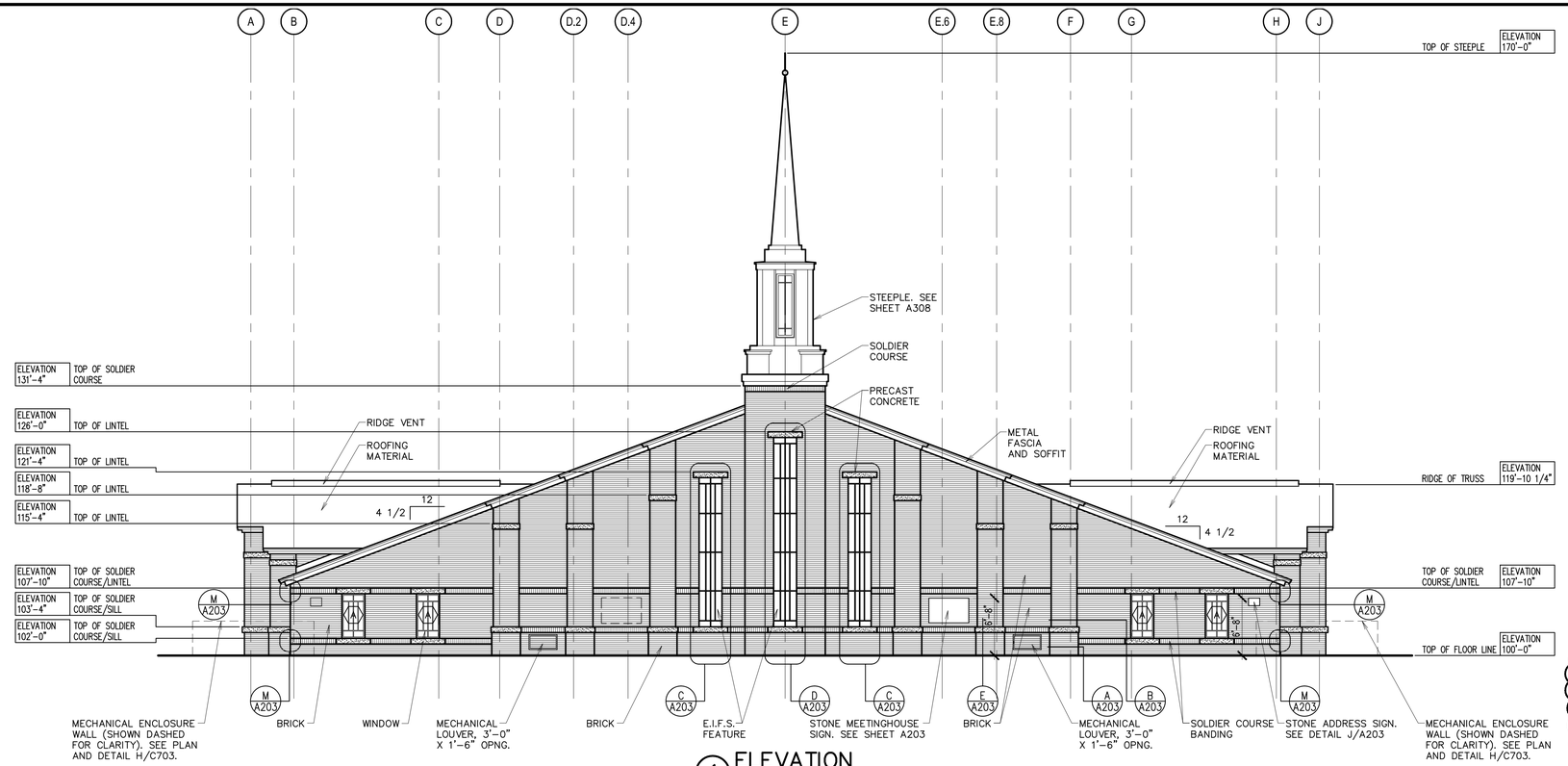
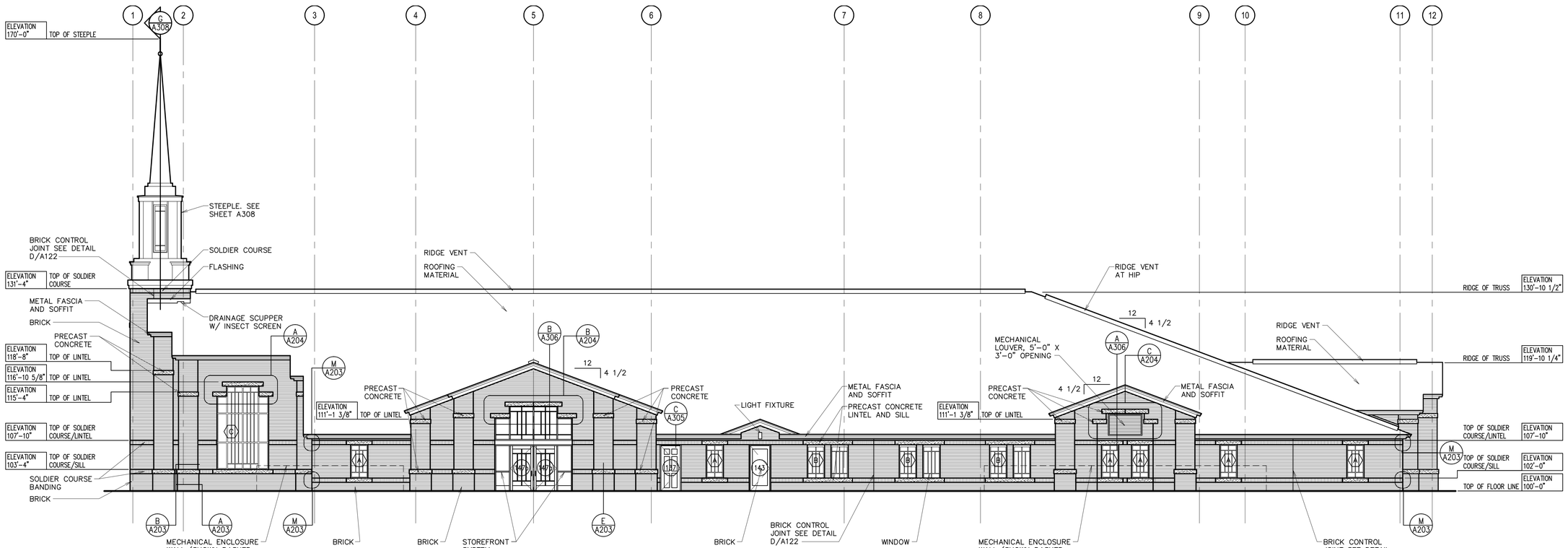
LANDSCAPE PLAN

Sheet
L102



NOTES TO CONTRACT ARCHITECT:
1. SHOW FOOTINGS AND FOUNDATIONS PER SITE CONDITIONS
2. STONE MEETINGHOUSE AND ADDRESS SIGNS MAY BE LOCATED ON THE OPPOSITE SIDE OF THE BUILDING ON THIS ELEVATION. CONSULT WITH PROJECT MANAGER TO DETERMINE LOCATION.

1 ELEVATION
1/8" = 1'-0"



2 ELEVATION
1/8" = 1'-0"

Architect □Engineer:

Stamp:

Project Name

Project Address

Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

Mark	Date	Description

Project Number:

Plan Series:
HET-SDS-09-05

Property Number:

Sheet Title:
BUILDING ELEVATIONS

Sheet:
A201

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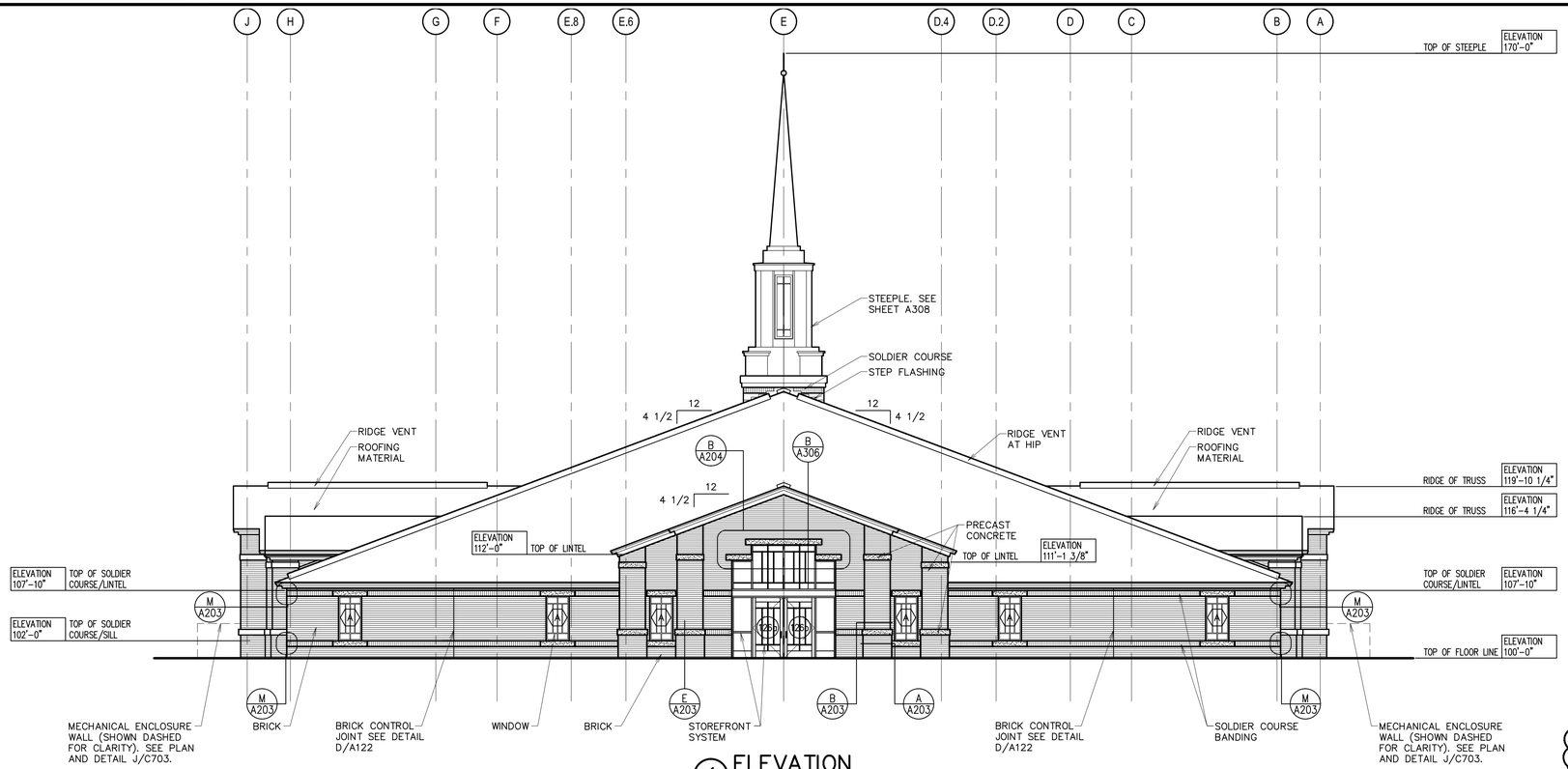
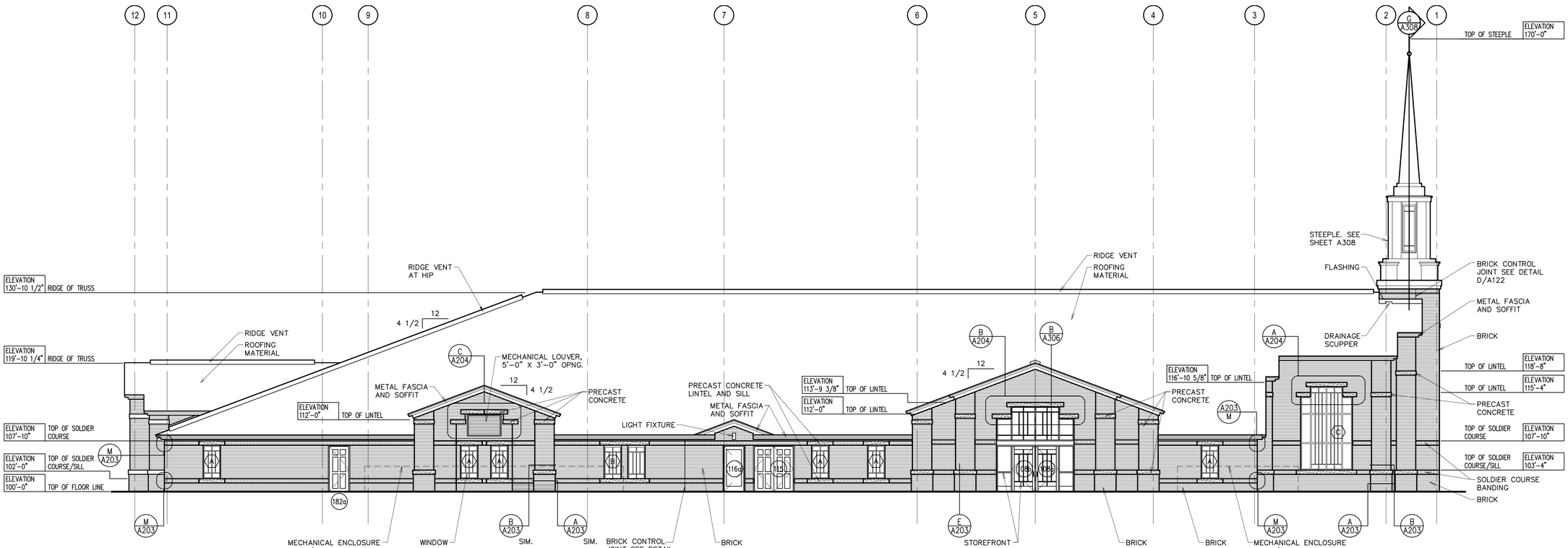


1 ELEVATION
1/8" = 1'-0"

NOTE TO CONTRACT ARCHITECT:
1. SHOW FOOTINGS AND FOUNDATIONS PER SITE CONDITIONS.



2 ELEVATION
1/8" = 1'-0"

Architect □Engineer:

Stamp:

Project Name

Project Address

Project for:
THE CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS

Mark	Date (D-M-Y)	Description

Project Number:

Plan Series:
HET-SDS-09-05

Property Number:

Sheet Title:
BUILDING ELEVATIONS

Sheet:
A202

HSDS-A202.dwg - 03.2. 2011 - 2:5. PM

Cahill
Saratoga Springs UT
Israel Canyon Stake
Brick Veneer: Interstate Brick Hampton
EIFS: Dryvit #108 Manor White
Soffit + Fascia: Bone White
Asphalt Shingles: Moire Black

City of Saratoga Springs
Planning Commission Meeting
July 30, 2015
Regular Session held at the City of Saratoga Springs City Offices
1307 North Commerce Drive, Suite 200, Saratoga Springs, Utah 84045

Planning Commission *DRAFT* Minutes

Present:
Commission Members: Jeff Cochran, Kirk Wilkins, Sandra Steele, Hayden Williamson, Ken Kilgore
Staff: Kimber Gabryszak, Mark Christensen, Sarah Carroll, Scott Langford, Kevin Thurman, Nicolette Fike
Others: Wade Williams, Scott Verhaaren, Wes Baker, Randy Rindlisbacher, Ian Bucker, Chad Spencer, Jeff Durfey
Excused: Jarred Henline, David Funk

Call to Order - 6:33 p.m. by Chairman Jeff Cochran
Pledge of Allegiance – led by Ken Kilgore
Roll Call – A quorum was present

Public Input Open by Chairman Jeff Cochran
No input at this time.
Public Input Closed by Chairman Jeff Cochran

5. Public Hearing and Possible Action: Site Plan and Conditional Use for Jacobs Ranch 1 & Israel Canyon Stake located 163 West Ring Road, EA Architecture, applicant.

Sarah Carroll presented. The applicant recently was granted a rezone and general plan from Regional Commercial to Neighborhood Commercial (NC) zoning for the subject property. The site plan includes a church building, a pavilion, a storage building, and associated parking and landscaping. She showed examples of elevation and materials.
Chad Spencer was present to answer questions.

Public Hearing Open by Chairman Jeff Cochran
No input at this time.
Public Hearing Closed by Chairman Jeff Cochran

Sandra Steele had no comments.
Ken Kilgore asked about a condition to secure water rights, and had that been done.
Sarah Carroll noted that phrasing was a standard practice and when they get their building permit they will determine how much they need to purchase
Jeremy Lapin commented that they use the term secure because there are so many ways they can choose to fulfill that obligation.
Kirk Wilkins asked if there was a parkstrip and who put it in.
Sarah Carroll stated there was a parkstrip they needed to put in. It was missing from the plat. She asked if they could put that as a condition that they will be required to put the parkstrip on the plat. They may be indicating lawn but they require trees as well.
Hayden Williamson had no additional comments.
Jeff Cochran had no additional comments.

Motion made by Hayden Williamson that Based upon the evidence and explanations received today, I move that the Planning Commission forward a positive recommendation to the City Council for approval of the Jacobs Ranch 1 and Israel Canyon Stake Church Site Plan and Conditional Use Permit, located at 163 West Ring Road, with the findings and conditions included in the staff report.

With the addition that the landscaping of the parkstrip be added to the Site plan. Seconded by Ken Kilgore. Aye: Sandra Steele, Hayden Williamson, Jeffrey Cochran, Kirk Wilkins, Ken Kilgore. Motion passed 5 – 0.

ea architecture

JACOB RANCH I NEIGHBORHOOD MEETING

DATE: July 28, 2015
LOCATION: 267 West Weatherby Drive
Saratoga Springs, Utah 84045
TIME: 6:00 pm

HOUSEHOLD NAME	SIGNATURE
Allred, Paul and Calette	
Astorga, Polly	
Barclay, Robert and Stacy	
Burkhardt, Kent and Karie	
Calvin, Jacob	
Clark, Branden and Shanna	
Clark, Cameron and Breann	
Cranford, Garland	
Davidson, Kevin and Kathryn	
Dulce Domum Holdings	
Evans, Keith and Caroline	
Farnsworth, Michael and Amoree	
Farr, Kevin and Tamara	

11576 south state street suite 103b • draper, utah 84020 • ph 801.553.8272 • fax 801.553.8273

Gajda, Michael and Katherine	
Geddes, Jonathan	
Gibbs, Greg and Nancy	
Hester, Clifford	
Karimi, Reza	
Lungren, Benjamin and Alicia	
Mathews, Mark and Stephanie	
Murray, Norma	
Nielson, Matthew	
Petersen, Hans and Brooke	
Peterson, Danny and Linda	
Rappleye, Zachary and Stacey	
Santoro, Pamela and Carl	
Schuldt, Nathan and Ashleigh	
Snell, Jason and Kristin	
Suggs, Sabina and Scott	
Waitkevich, Steve and Wendy	
Warren, Sean and Michelle	Michelle Warren
Webster, Necole	

Wheeler, Douglas and Kelly

OTHER: Tim Willden

OTHER: JAMES DZINEKU

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ea architecture

DATE:	July 17, 2015
PROJECT NAME:	Jacobs Ranch 1 Saratoga Springs UT Israel Canyon Stake
PROJECT ADDRESS:	163 West Ring Road Saratoga Springs, UT
SUBJECT:	Neighborhood Meeting Minutes

1. The height of the retaining wall along the west property line was discussed and the type of wall.
2. A neighbor asked what type of views would still be available from the back yard. The height of the wall was discussed and the finish floor of the building. The building floor is approximately 25 feet below their backyard so the views would still be great.
3. One of the homes has a rock retaining wall near the rear property line. The coordination between this wall and the fence was discussed and reviewed. The neighbor was notified that if any rocks were over the property line we would meet and review this with them before proceeding with anything.
4. One of the neighbors just installed a white privacy fence, one fence is wrought iron and one is concrete. It was discussed what type of fence would be required and if a double fence would be installed. It was stated that the city does not want a double fence so we would just install fence in the missing sections. What color would this fence be?

11576 south state street suite 103b • draper, utah 84020 • ph 801.553.8272 • fax 801.553.8273

City Council
Staff Report

Author: Jeremy D. Lapin, P.E., City Engineer
Subject: 400 West Agreement with Ken Evans and IHC
Date: August 18, 2015
Type of Item: Infrastructure Agreement

Description:

A. Topic:

This item is for the approval of an Improvement Agreement with Ken Evans (Representing Starhaven Partnership Ltd) and Intermountain Health Care (IHC) for the completion of 400 West from the round-a-bout at Aspen Hills Blvd south to Crossroads Blvd.

B. Background:

Ken Evans has been discussing a proposed 8 lot subdivision with City Staff that would be located near the Round-a-bout on Aspen Hills Boulevard on a new segment of 400 West that would be built by the developer. 400 West is identified as a Collector Road on the City's Transportation Master Plan. This extension of 400 West would require the developer to acquire property from IHC due to the existing road alignment that is centered on the property line between the Evans property and the IHC property.

During negotiations with IHC on dedicating the ROW for the Evans subdivision project, the City inquired about the possibility of IHC dedicating all of the ROW for 400 West so that this critical connection in the City could be completed either by a developer or by the City. IHC indicated that first of all they had no plans at the moment to do any further development or improvements on their property, however they understood the benefits to the completion of the roadway and would be willing to dedicate the ROW at no cost if there was some sort of timeline on the completion of the roadway.

Subsequently Ken Evans indicated it was unlikely he would be able to secure the financing to complete his 8 lot subdivision due to the cost of the improvements including the 400 West Collector Road and off-site storm drainage. However he is still willing to dedicate the ROW for 400 West if the City desires to construct the roadway.

C. Analysis:

The proposed agreement would involve a commitment from the City to place the completion of 400 West on the City's Transportation Capital Facilities Plan and to complete its construction within 5 years if both Ken Evans and IHC will dedicate to the City the 77-ft collector right-of-way. The agreement stipulates that in the event the City does not build the roadway within the allocated time frame, it will return the property to IHC and Starhaven Partnership Ltd (Ken Evans et al).

Recommendation: Staff recommends that the City Council discuss the proposed agreement and road project. No action is needed at this time.

400 WEST ROADWAY DEDICATION AND IMPROVEMENT AGREEMENT

THIS AGREEMENT is made and entered into as of the ____ day of _____, 2015, by and between the City of Saratoga Springs, a Utah municipal corporation, hereinafter referred to as the "City," and Intermountain Health Care, Inc and Starhaven Partnership Ltd., hereinafter referred to collectively as "Owners" The City and Owners are collectively referred to herein as the "Parties."

RECITALS:

A. Owners are the owners of property located in the City of Saratoga Springs, Utah County, State of Utah (the "Property"), which is more particularly described in **Exhibit A** attached hereto and incorporated herein by reference.

B. Owners desire the City to construct a Roadway from Crossroads Boulevard to Aspen Hills Boulevard and the associated appurtenances (the "Improvements") more particularly described in **Exhibit B** attached hereto and incorporated herein by reference.

C. The Improvements are located on Property owned by the Owners and Owners agree to convey to City real property (the "Property") for the Improvements more particularly described in **Exhibit C** attached hereto and incorporated herein by reference subject to the terms and conditions of this Agreement ("Agreement").

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

1. **Property Dedication.**

   a. Terms

      i. City shall agree to include the Improvements in its Transportation Capital Facilities Plan, for completion within the next 5 years.

      ii. Owners shall convey to City, through warranty deed, the Property.

      iii. Owners agree to sign the Warranty Deeds provided in Exhibit C, have them notarized, and deliver them to the City within 30 days of the execution of this agreement.

      iv. City agrees that if the Improvements are not substantially completed within 5 years from the execution of this agreement, it shall reconvey the Property to the Owners. Owners shall not be entitled to any other remedies at law or in equity. Also, no personal liability for any violation

of this Agreement shall attach for any of City's employees, elected officials, and appointed officials.

b. <u>The Improvements</u>

i. The City shall design and substantially complete the Improvements to a Collector Road standard consistent with the Transportation Master Plan and Engineering Standards and Specifications with the following clarifications:

1. The Improvements shall not be required to include any landscaping or irrigation components.

2. The Improvements shall include pavement, curb and gutter and sidewalks.

ii. The City shall incorporate the improvements into its Transportation Capital Facilities Plan within 6 months of the execution of this Agreement.

iii. City shall begin design of the Improvement within 36 months and begin construction of the Improvements within 48 months of the execution of this agreement.

2. **<u>Notices</u>.** Any notices required or permitted to be given pursuant to this Agreement shall be deemed to have been sufficiently given or served for all purposes when presented personally or, if mailed, upon (i) actual receipt if sent by registered or certified mail, or (ii) four days after sending if sent via regular U.S. Mail. Said notice shall be sent or delivered to the following (unless specifically changed by the either party in writing):

City: City of Saratoga Springs
Attn: Mark Christensen, City Manager
1307 North Commerce Dr. #200
Saratoga Springs, UT 84043

Owner: Starhaven Partnership, Ltd.
Attn: Kenneth D. Evans, General Partner
1450 N. Starhaven Lane
Saratoga Springs, UT 84045

Owner: Intermountain Health Care, Inc.
Attn: Tom Uriona, Corporate Real Estate Director
36 South State Street
23rd Floor
Salt Lake City, UT 84111

3. **No New Liens.** Owners shall not, after full execution of this Agreement, cause or permit any new liens, covenants, conditions, restrictions, easements, or any other matters to encumber title to the Easement.

4. **Title.** Owners represent that Owners has fee title to the Property and can legally convey the Easement to the City.

5. **Changes During Transaction.** Owners agree that from the date this Agreement is signed by the Parties until the date the warranty deeds are recorded by the City none of the following shall occur without the prior written consent of City: (a) no substantial alterations or improvements to the Property shall be made or undertaken; (b) no further financial encumbrances to the Property shall be made, and (c) no changes in the legal title to the Property shall be made

6. **Default.** If either party fails to comply with the terms of this Agreement, the non-defaulting party shall send written notice and provide a reasonable opportunity to cure. If the default is not cured within a reasonable time, the defaulting party agrees to pay all reasonable attorneys' fees and costs incurred by the non-defaulting party in enforcing its rights hereunder.

7. **Time of the Essence.** It is agreed that time is of the essence of this Agreement.

8. **Successors and Assigns.** This Agreement shall bind each of the parties hereto and their respective heirs, personal representatives, successors, and assigns.

9. **Entire Agreement/Modifications.** This Agreement, with any exhibits incorporated by reference, constitutes the final expression of the parties' agreement and is a complete and exclusive statement of the terms of that agreement. This Agreement supersedes all prior or contemporaneous negotiations, discussions, and understandings, whether oral or written or otherwise, all of which are of no further effect. This Agreement may not be changed, modified, or supplemented except in writing signed by the parties hereto.

10. **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of Utah.

11. **Counterparts.** This Agreement may be executed in multiple counterparts, each of which shall constitute an original, but all of which taken together shall constitute one single agreement.

12. **Incorporation of Recitals.** The Recitals contained in this Agreement, and the introductory paragraph preceding the Recitals, are hereby incorporated into this Agreement as if fully set forth herein.

13. **Confidentiality.** The content and the fact of execution of this Agreement shall be kept strictly confidential. Owner shall strictly maintain the confidentiality of this Agreement and shall not disclose to any third party the content or the fact of execution of this Agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement by and through their respective, duly authorized representatives as of the day and year first above written.

"CITY"

THE CITY OF SARATOGA SPRINGS

ATTEST: By:_____
Mark Christensen, City Manager

_____
Lori Yates
City of Saratoga Springs, City Recorder

"OWNERS"

Starhaven Partnership, Ltd

_____
Kenneth D. Evans, General Partner

STATE OF UTAH)
: ss
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this _____ day of _____, 2014, by _____ as General Partner of Starhaven Partnership Ltd.

_____
Notary Public
My Commission Expires: Residing at: _____
_____

Intermountain Health Care

_____

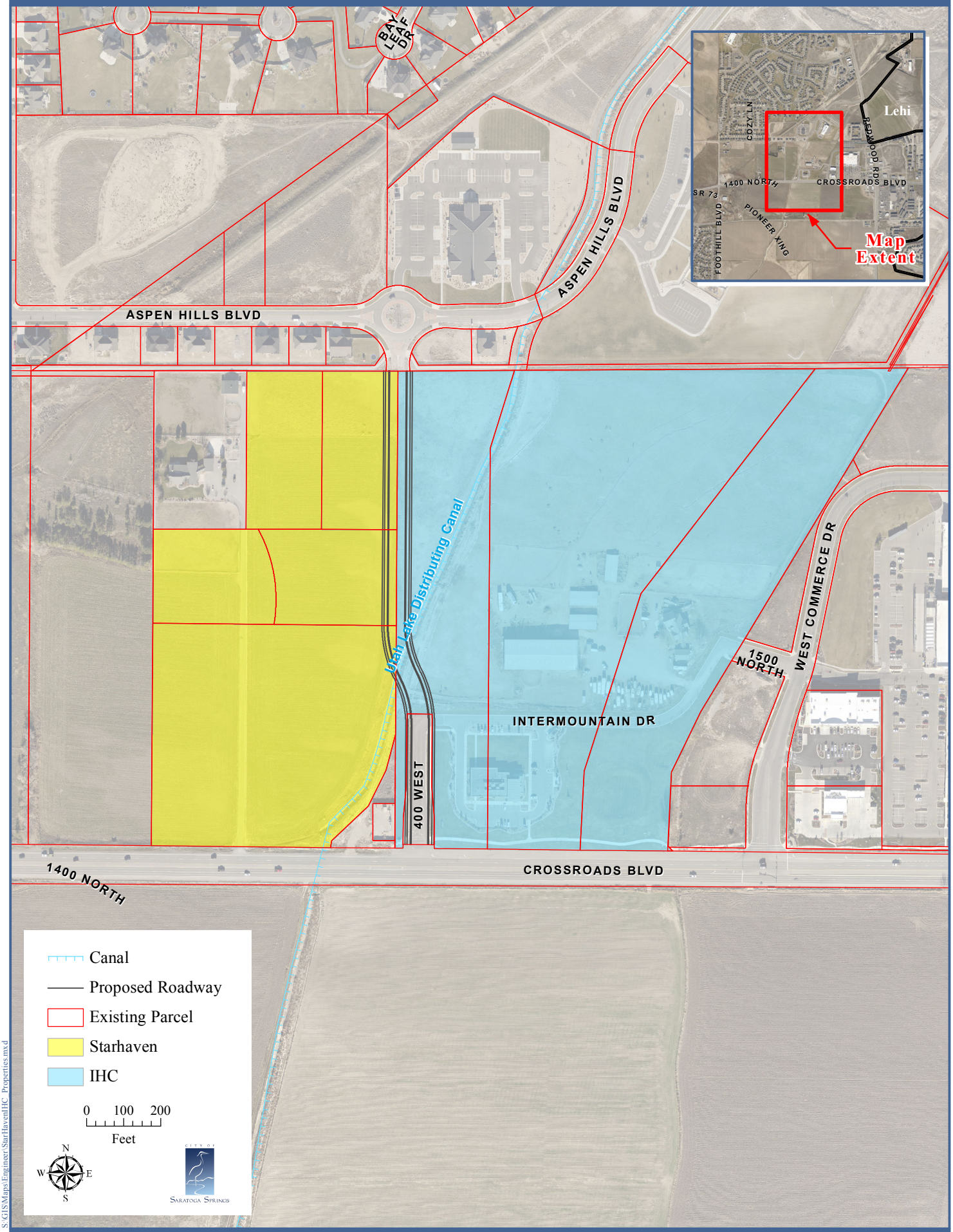
STATE OF UTAH)
: ss
COUNTY OF UTAH)

The foregoing instrument was acknowledged before me this _____ day of _____, 2014, by _____ as General Partner of Starhaven Partnership Ltd.

_____
Notary Public
My Commission Expires: Residing at: _____
_____

EXHIBIT “A”

Exhibit A



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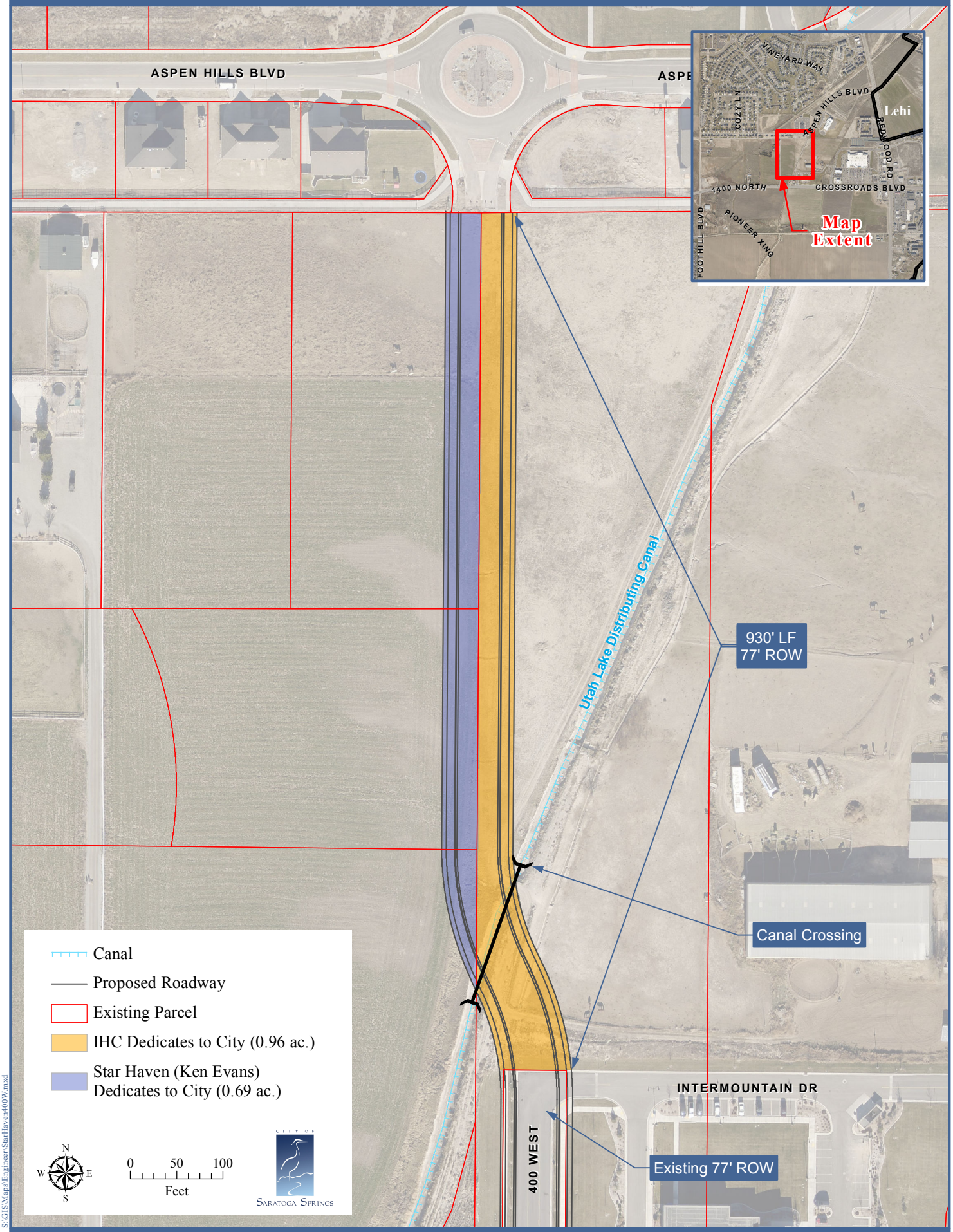
12 August 2015

EXHIBIT “B”

Exhibit B



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12 August 2015

EXHIBIT "C"

City Council
Staff Report

Author: Jeremy D. Lapin, P.E., City Engineer
Subject: Jurisdictional Transfer of SR-73
Date: August 18, 2015
Type of Item: Transfer Agreement

Description:

A. Topic:

This item is for the approval of a cooperative agreement with UDOT for the transfer of a portion of SR-73 west of Redwood Road (SR-68) and of a new road segment that was constructed with the Pioneer Crossing Extension Project from Pioneer Crossing to SR-73 to Saratoga Springs. These roadways will be known as Crossroads Blvd. (extending from Redwood Road to Pioneer Crossing) and 1400 North (extending from Crossroads Blvd to almost 800 West and ending in a cul-de-sac).

B. Background:

The Pioneer Crossing Extension project involved the relocation of SR-73 to provide a continuous connection between Pioneer Crossing and that portion of SR-73 west of the City Boundary to provide a more efficient movement of east-west traffic through the City.

With the Completion of this project the remnant portion of SR-73 (east of Pioneer Crossing Ext to Redwood Road) is no longer a regional corridor and UDOT is proposing to transfer the property and Right-of-Way to the City. There is also a new road segment that was constructed to connect the Pioneer Crossing Extension to the remaining portion of SR-73 that is also being proposed for transfer to the City so that the City will own and operate a continuous roadway (Crossroads Boulevard) from the Jordan River to Pioneer Crossing.

Staff has negotiated with UDOT for sufficient pavement preservation funds to bring these portions of roadways up to an acceptable standard as a condition of acceptance.

Analysis:

This transfer is consistent with previous transfers in which those portions of SR-73 east of the Jordan River were transferred to Lehi and Saratoga Springs with the completion of the first phase of Pioneer Crossing. With the completion of the Pioneer Crossing Extension project, this transfer will complete the process as was anticipated when UDOT begin the Pioneer Crossing Extension Project.

C. Recommendation:

I recommend that the City Council approve the Cooperative Agreement with UDOT for the transfer of ownership and full jurisdiction of that portion of Crossroads Boulevard west of Redwood Road (SR-68) and 1400 North.

COOPERATIVE AGREEMENT

THIS COOPERATIVE AGREEMENT, made and entered into this _____ day of _____, 2015 by and between the **UTAH DEPARTMENT OF TRANSPORTATION,** hereinafter referred to as **"UDOT,"** and **SARATOGA SPRINGS CITY**, a municipal corporation of the State of Utah created, hereinafter referred to as the **"CITY"**,

RECITALS

WHEREAS, UDOT desires to transfer ownership and full jurisdiction of a portion of SR-73 and a new road segment constructed with the Pioneer Crossing Extension Project PIN11349 in Saratoga Springs to the **CITY**; and

WHEREAS, the portion of SR-73 to be transferred begins at the western terminus (end of cul-de sac) of the amended roadway (approximate engineers station 200+31.21 on Sheet RD-14) and extends easterly to the intersection of SR-73 and SR-68, the current western limit of the **CITY's** jurisdiction of Crossroad Blvd, (as more specifically identified in the jurisdictional transfer that was executed November 30th, 2011, agreement number 128514)**;** as shown in **"Exhibit A"**, attached hereto and thereby made a part hereof; and

WHEREAS, UDOT desires to transfer ownership and full jurisdiction of the new segment of Crossroads Blvd. that extends from Pioneer Crossing (SR-145 approximate engineers station 401+00 on Sheet RD-12) northeasterly to SR-73 (approximate engineers station 419+30 on Sheet RD-13); and

WHEREAS, that portion of SR-73 west of SR-68 and the new road segment from station 401+00 to 419+30 as shown on sheets RD-12 and RD-13 will be renamed Crossroads Boulevard and will extend from Redwood Road (SR-68) westerly to Pioneer Crossing; and

WHEREAS, the portion of SR-73 west of the new Crossroads Boulevard (beginning at engineer's approximate engineer's station 219+00 on Sheet RD-13 and extending westerly to the terminus (end of cul-de sac) of the amended roadway (approximate engineers station 200+31.21 on Sheet RD-14) will be renamed 1400 North; and

WHEREAS, the new Crossroads Boulevard and 1400 North roadways are collectively known as the "Roadways" for the purposes of this agreement and are more clearly defined in "Exhibit B", attached hereto and thereby made a part hereof; and

WHEREAS, CITY desires to accept ownership and full jurisdiction from UDOT the "Roadways" with certain terms and conditions; and

THIS COOPERATIVE AGREEMENT is written to set out the terms and conditions under which the jurisdictional transfer shall be performed.

NOW, THEREFORE, it is agreed by and between the parties hereto as follows:

1. **UDOT** agrees to provide fee title, free from encumbrances, liens, or assessments to the **CITY** of the Roadways through a warranty deed or other instrument acceptable to the **CITY**. Such deed(s) shall be

recorded within 30 days of the date of this agreement with a copy of the recorded documents provided to the **CITY**.

2. The **CITY** agrees to assume full responsibility regarding the operation and maintenance of the roadways immediately upon transfer of title as recorded at the Utah County Recorder's office.

3. The **CITY** hereby agrees to own and become solely responsible for all operation and maintenance responsibilities inclusive of all needs and costs of the Roadways at no additional cost to **UDO**T including all snow removal services.

4. **UDOT** further agrees to continue to maintain the traffic signal located at the intersection of Crossroads Blvd (formerly SR-73) and SR-68 and to accept and assume all maintenance and liability obligations. All street lighting along the Roadways are to be owned and maintained by the **CITY** as those responsibilities are currently defined.

5. **UDOT** will perform the following tasks and maintenance items within 90 days of the execution of this agreement.

    a. Install the reflective tape on the backs of the signal heads at the signal at Crossroads Boulevard and the west segment of Commerce Drive before the transfer.

    b. Deliver to the **CITY** as-built plans for the Roadways as well as for the signal at Crossroads Boulevard and the west segment of Commerce Drive.

    c. Replace all street signs at applicable locations on or adjacent to the Roadways from SR-73 to Crossroads Blvd.

6. **UDOT** further agrees to release payment to the **CITY**, contingent on the approval of this Jurisdictional Transfer by the Utah Transportation Commission, in the form of a ONE TIME LUMP SUM PAYMENT in the amount of ONE HUNDRED SEVENTY FIVE THOUSAND DOLLARS ($175,000.00**)** to be used for pavement preservation on that portion of SR-73 covered by this Jurisdictional Transfer Cooperative Agreement. This payment shall be delivered to the City by check or wire transfer upon the approval of this Jurisdictional Transfer by the Utah Transportation Commission. In the event the Utah Transportation Commission does not approve the Lump Sum Payment, this Agreement becomes null and void unless otherwise agreed to in writing by the parties.

TOTAL COST TO UDOT = $175,000.00

7. The recitals above are incorporated herein by this reference and make a part of this Agreement.

8. This Agreement constitutes the entire agreement between the parties with respect to the subject matter and supersedes all prior verbal and written communication, agreements, and promises between the parties not specifically incorporated herein.

IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first above written.

SARATOGA SPRINGS CITY,
STATE OF UTAH

_____
Saratoga Spring

Date:_____

_____
Attest Saratoga Spring City Recorder

Date:_____

UTAH DEPARTMENT OF TRANSPORTATION

_____
Executive Director
Utah Department of Transportation

Date: _____

_____
UDOT Secretary

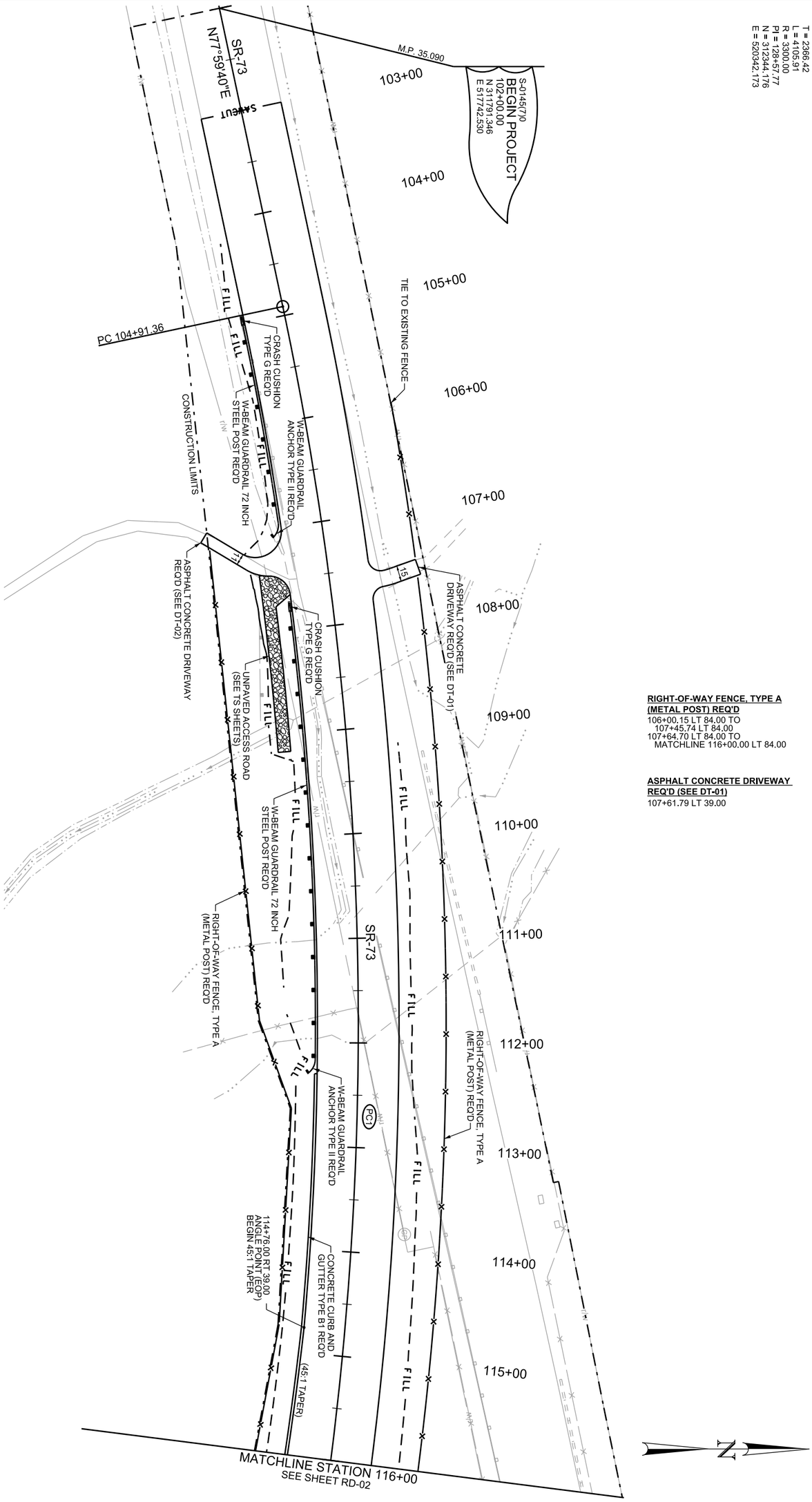
Date: _____

COMPTROLLER OFFICE

_____
Contract Administrator

Date:_____

EXHIBIT A



CRASH CUSHION TYPE G REQ'D
105+41.36 RT 41.00
108+22.01 RT 41.00

W-BEAM GUARDRAIL 72 INCH STEEL POST REQ'D
105+41.36 RT 41.00 TO
106+60.78 RT 41.00
108+22.01 RT 41.00 TO
111+81.91 RT 41.00

W-BEAM GUARDRAIL ANCHOR TYPE II REQ'D
106+60.78 RT 41.00
111+81.91 RT 41.00

ASPHALT CONCRETE DRIVEWAY REQ'D (SEE DT-02)
107+39.80 RT 39.00

RIGHT-OF-WAY FENCE, TYPE A (METAL POST) REQ'D
107+12.26 RT 109.68 TO
111+78.40 RT 94.45 TO
112+63.97 RT 62.95 TO
114+74.82 RT 62.98 TO
MATCHLINE 116+00.00 RT 72.45

CONCRETE CURB AND GUTTER TYPE B1 REQ'D
112+30.00 RT 41.50 TO
114+76.00 RT 41.50 TO
MATCHLINE 116+00.00 RT 44.26

RIGHT-OF-WAY FENCE, TYPE A (METAL POST) REQ'D
106+00.15 LT 84.00 TO
107+45.74 LT 84.00
107+64.70 LT 84.00 TO
MATCHLINE 116+00.00 LT 84.00

ASPHALT CONCRETE DRIVEWAY REQ'D (SEE DT-01)
107+61.79 LT 39.00

SHEET NO. RD-01	PROJECT	SR-145; PIONEER CROSSING		UTAH DEPARTMENT OF TRANSPORTATION			REVISIONS		
		EXTENSION TO SR-73							
	PROJECT NUMBER	S-0145(7)0	PIN 11349	APPROVED	DRAWN BY	NAB			
	ROADWAY PLAN			PROFESSIONAL ENGINEER / 3/17/2014 DATE	QC CHECKED BY	JDC	NO.	DATE	APPROVED BY / REMARKS

CURVE No. PC1
Δ = 71°17'18" RT
T = 2366.42
L = 4105.91
R = 3300.00
PI = 128+57.77
N = 312344.176
E = 520342.173

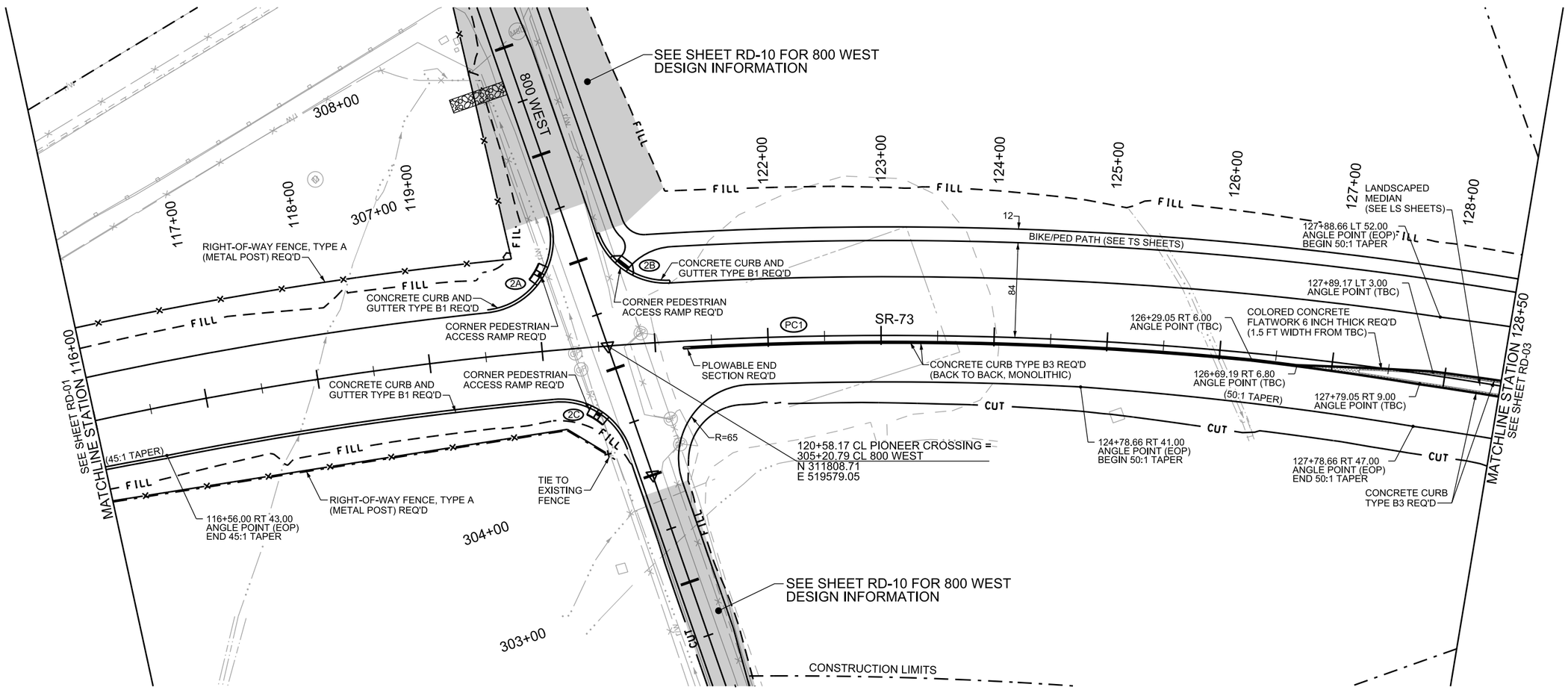
RIGHT-OF-WAY FENCE, TYPE A (METAL POST) REQ'D
MATCHLINE 116+00.00 LT 84.00 TO
119+80.92 LT 84.00 TO
119+77.74 LT 109.39

CONCRETE CURB AND GUTTER TYPE B1 REQ'D
119+55.61 LT 41.50 TO
120+14.37 LT 118.68
120+57.92 LT 100.44 TO
121+16.26 LT 54.50

CORNER PEDESTRIAN ACCESS RAMP REQ'D
120+04.84 LT 67.20
120+75.89 LT 70.28

CONCRETE CURB TYPE B3 REQ'D
126+69.19 RT 6.80 TO
127+89.17 LT 3.00 TO
MATCHLINE 128+50.00 LT 4.22

COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D (SEE LS SHEETS)
126+69.19 RT 6.80 TO
127+89.17 LT 1.50 TO
MATCHLINE 128+50.00 LT 2.72



RIGHT-OF-WAY FENCE, TYPE A (METAL POST) REQ'D
MATCHLINE 116+00.00 RT 72.45 TO
120+16.11 RT 70.45 TO
120+53.04 RT 96.46

CONCRETE CURB AND GUTTER TYPE B1 REQ'D
MATCHLINE 116+00.00 RT 44.26 TO
116+55.94 RT 45.50 TO
120+06.61 RT 45.50 TO
120+69.02 RT 92.35

CORNER PEDESTRIAN ACCESS RAMP REQ'D
120+45.80 RT 58.53

CONCRETE CURB TYPE B3 REQ'D
121+31.72 RT 6.00 TO
126+29.05 RT 6.00 TO
126+69.19 RT 6.80
(2 CURBS BACK TO BACK, MONOLITHIC)
126+69.19 RT 6.80 TO
127+79.05 RT 9.00 TO
MATCHLINE 128+50.00 RT 9.00

PLOWABLE END SECTION REQ'D
121+31.72 RT 6.00

COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D (SEE LS SHEETS)
126+69.19 RT 6.80 TO
127+79.05 RT 7.50 TO
MATCHLINE 128+50.00 RT 7.50

LEGEND
COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D
SEE SHEET RD-10 FOR 800 WEST DESIGN INFORMATION

CURB AND GUTTER CURVE DATA (TBC)										
CURVE ID #	ALIGNMENT	CENTER OF CURVE					PC		PT	
		R (TBC)	STATION	OFFSET	NORTHING	EASTING	STATION	OFFSET	STATION	OFFSET
2A	PIONEER CROSSING	62.5	119+55.61	104.00 LT	311935.218	519503.803	119+55.61	41.50 LT	120+14.37	118.68 LT
2B	PIONEER CROSSING	62.5	121+16.26	117.00 LT	311905.339	519667.628	120+57.92	100.44 LT	121+16.26	54.50 LT
2C	PIONEER CROSSING	62.5	120+06.61	108.00 RT	311717.185	519502.511	120+06.61	45.50 RT	120+69.02	92.35 RT

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

DRAWN BY NAB
QC CHECKED BY JDC
3/17/2014 DATE
APPROVED
PROFESSIONAL ENGINEER

SR-145; PIONEER CROSSING
EXTENSION TO SR-73

PROJECT
PROJECT NUMBER S-0145(7)0 PIN 11349

ROADWAY PLAN

SHEET NO. RD-02

17-MAR-2014 DGN: F:\Ec\Gx_PioneerCrossing\Pw_Export\11349_RD02.dgn

CURVE No. PC1
Δ = 71°17'18" RT
T = 2366.42
L = 4105.91
R = 3300.00
PI = 128+57.77
N = 312344.176
E = 520342.173

CONCRETE CURB TYPE B3 REQ'D
MATCHLINE 128+50.00 LT 4.22 TO
130+50.99 LT 8.25
130+50.99 LT 8.25 TO
130+88.62 LT 12.00 TO
135+71.18 LT 12.00
(2 CURBS BACK TO BACK, MONOLITHIC)

COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D (SEE LS SHEETS)
MATCHLINE 128+50.00 LT 2.72 TO
130+50.99 LT 8.25
135+65.35 LT 48.32 TO
136+15.60 LT 100.10

PLOWABLE END SECTION REQ'D
135+71.18 LT 12.00
136+15.52 LT 100.10 (SEE DT-01)

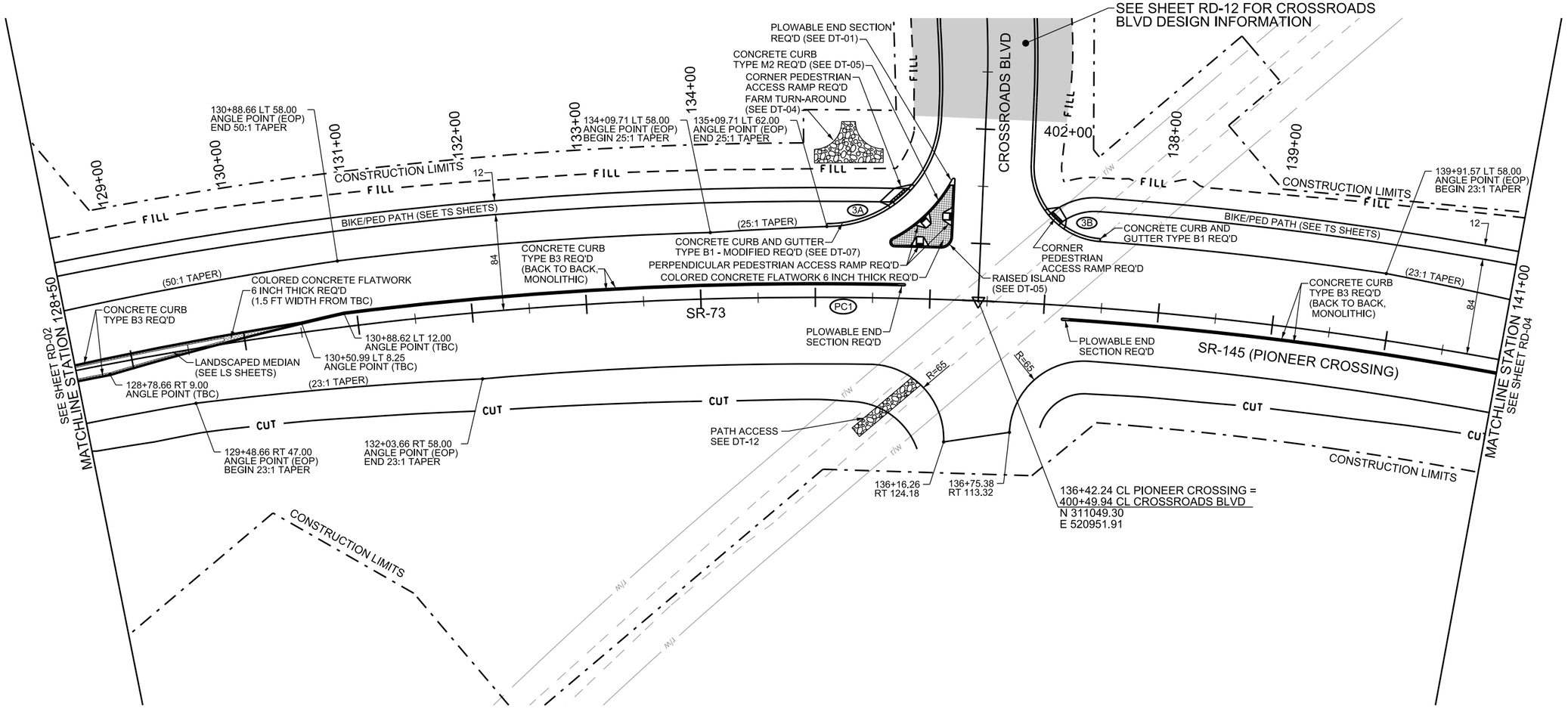
CONCRETE CURB TYPE M2 REQ'D (SEE DT-05)
135+65.35 LT 46.32
135+65.35 LT 48.32 TO
136+14.45 LT 100.11
135+65.35 LT 48.32 TO
135+67.98 LT 46.25 TO
136+07.81 LT 46.25 TO
136+13.88 LT 43.79 TO
136+14.45 LT 100.09 TO
136+16.76 LT 100.09

CONCRETE CURB AND GUTTER TYPE B1 - MODIFIED REQ'D (SEE DT-07)
135+09.71 LT 64.50 TO
136+02.65 LT 159.46

CORNER PEDESTRIAN ACCESS RAMP REQ'D
135+72.73 LT 89.70
137+05.07 LT 75.45

PERPENDICULAR PEDESTRIAN ACCESS RAMP REQ'D
135+89.82 LT 46.25
135+91.55 LT 46.14
136+16.55 LT 72.65

CONCRETE CURB AND GUTTER TYPE B1 REQ'D
136+83.73 LT 159.48 TO
136+84.19 LT 121.63 TO
137+44.44 LT 60.50



CURB AND GUTTER CURVE DATA (TBC)										
CURVE ID #	ALIGNMENT	CENTER OF CURVE					PC		PT	
		R (TBC)	STATION	OFFSET	NORTHING	EASTING	STATION	OFFSET	STATION	OFFSET
3A	PIONEER CROSSING	97.5	135+09.71	162.00 LT	311260.565	520957.730	135+09.71	64.50 LT	136+02.65	159.46 LT
3B	PIONEER CROSSING	62.5	137+44.44	123.00 LT	311066.596	521112.112	136+84.19	121.63 LT	137+44.44	60.50 LT

COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D (SEE LS SHEETS)
MATCHLINE 128+50.00 RT 7.50 TO
128+78.66 RT 7.50
130+50.99 LT 8.25

PLOWABLE END SECTION REQ'D
137+22.68 RT 12.00

CONCRETE CURB TYPE B3 REQ'D
MATCHLINE 128+50.00 RT 9.00 TO
128+78.66 RT 9.00 TO
130+50.99 LT 8.25
137+22.68 RT 12.00 TO
MATCHLINE 141+00.00 RT 12.00
(2 CURBS BACK TO BACK, MONOLITHIC)

LEGEND
COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D
SEE SHEET RD-12 FOR CROSSROADS BLVD DESIGN INFORMATION

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

DRAWN BY NAB
QC CHECKED BY JDC
3/17/2014 DATE
APPROVED
PROFESSIONAL ENGINEER

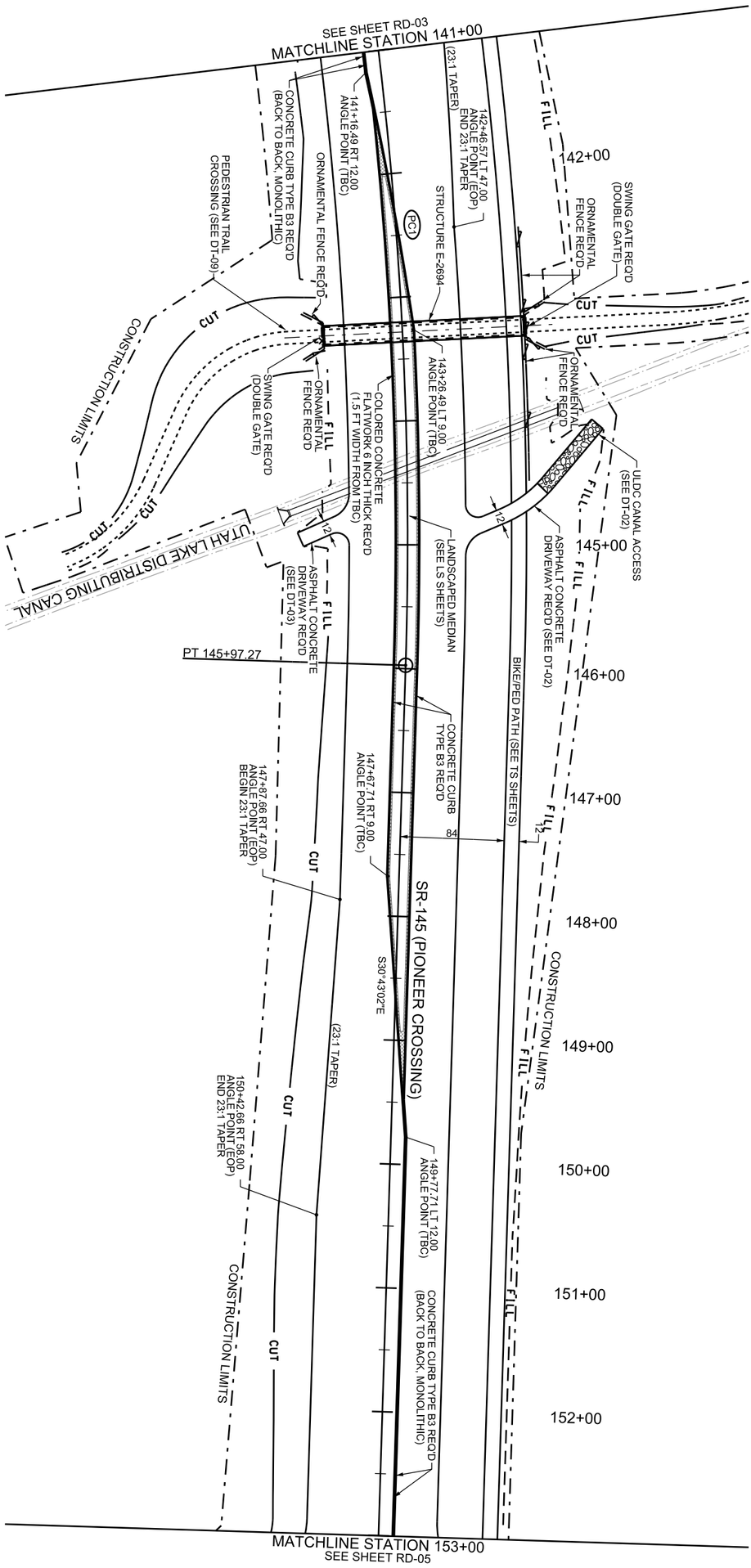
PROJECT: SR-145; PIONEER CROSSING EXTENSION TO SR-73
PROJECT NUMBER: S-0145(7)0 PIN 11349
ROADWAY PLAN
SHEET NO. RD-03

DGN File: IP_PWP-d01R6721\11349_RD03.dgn
17-MAR-2014

CURVE No. PC1
Δ = 71°17'18" RT
T = 2366.42
L = 4105.91
R = 3300.00
PI = 128+57.77
N = 312344.176
E = 520342.173

LEGEND

COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D



CONCRETE CURB TYPE B3 REQ'D
MATCHLINE 141+00.00 RT 12.00 TO
141+16.49 RT 12.00 TO
141+46.50 RT 9.00
(2 CURBS BACK TO BACK, MONOLITHIC)
141+46.50 RT 9.00 TO
147+67.71 RT 9.00 TO
149+47.71 LT 9.00

ORNAMENTAL FENCE REQ'D (6 FT)
143+07.85 RT 79.03 TO
143+17.12 RT 63.48 TO
143+19.59 RT 63.49
143+36.41 RT 63.49 TO
143+38.88 RT 63.48 TO
143+48.15 RT 79.03

SWING GATE REQ'D (DOUBLE GATE)
143+28.00 RT 65.00

ASPHALT CONCRETE DRIVEWAY REQ'D (SEE DT-03)
144+79.00 RT 47.00

COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D (SEE LS SHEETS)
141+46.50 RT 9.00 TO
147+67.71 RT 7.50 TO
149+47.71 LT 9.00

ORNAMENTAL FENCE REQ'D (6 FT)
142+50.00 LT 98.52 TO
143+17.64 LT 98.52
143+08.99 LT 114.14 TO
143+17.64 LT 98.52 TO
143+19.95 LT 98.51
143+36.05 LT 98.51 TO
143+38.36 LT 98.52 TO
143+47.01 LT 114.14
143+38.36 LT 98.52 TO
144+49.51 LT 98.52

SWING GATE REQ'D (DOUBLE GATE)
143+28.00 LT 100.00

CONCRETE CURB TYPE B3 REQ'D
141+46.50 RT 9.00 TO
143+26.49 LT 9.00 TO
149+47.71 LT 9.00
149+47.71 LT 9.00 TO
149+77.71 LT 12.00 TO
MATCHLINE 153+00.00 LT 12.00
(2 CURBS BACK TO BACK, MONOLITHIC)

COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D (SEE LS SHEETS)
141+46.50 RT 9.00 TO
143+26.49 LT 7.50 TO
149+47.71 LT 9.00

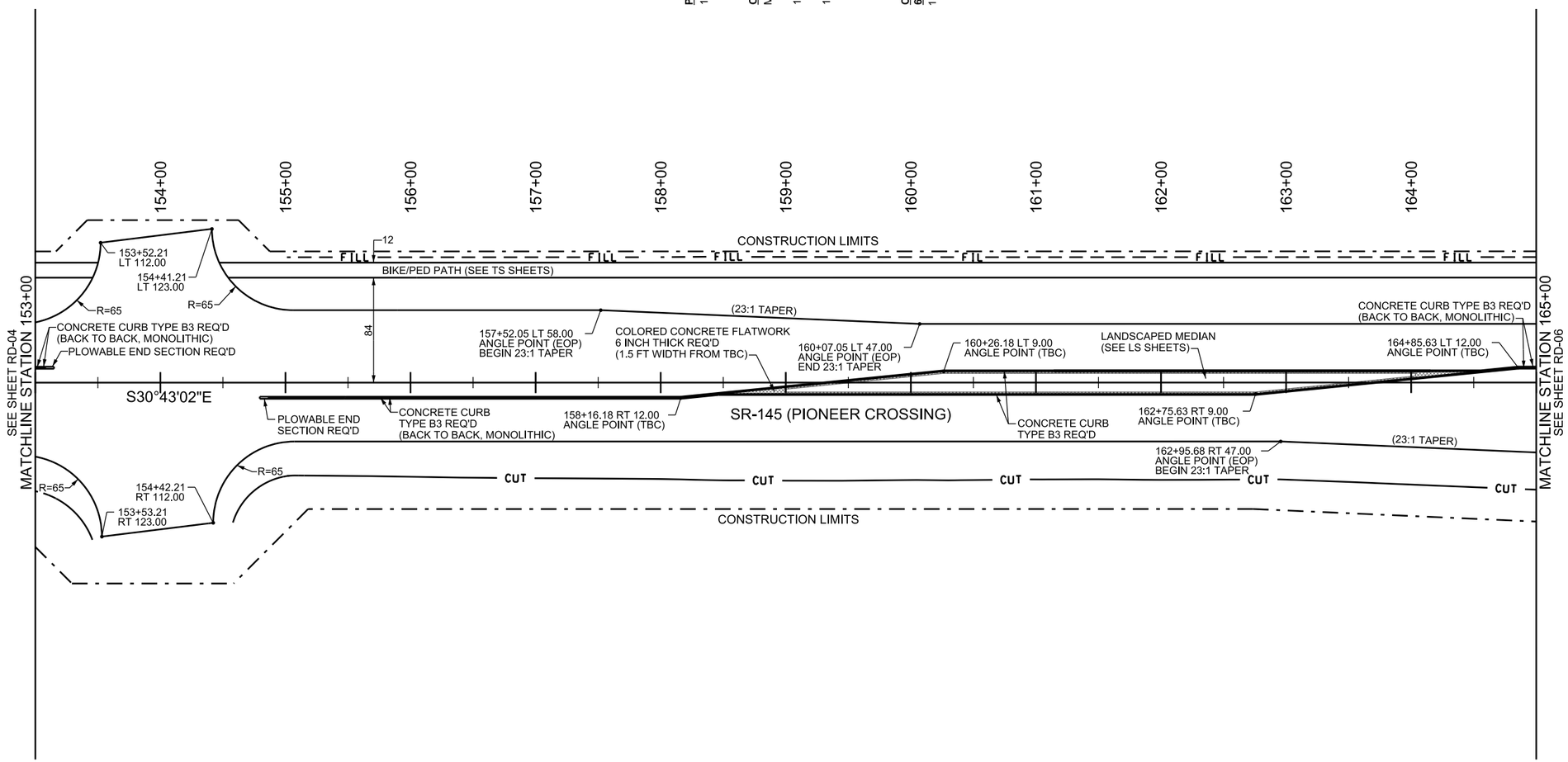
ASPHALT CONCRETE DRIVEWAY REQ'D (SEE DT-02)
144+89.27 LT 47.00

SHEET NO. RD-04	PROJECT	SR-145; PIONEER CROSSING			UTAH DEPARTMENT OF TRANSPORTATION			REVISIONS			
		EXTENSION TO SR-73									
	PROJECT NUMBER	S-0145(7)0	PIN	11349	APPROVED	DRAWN BY	NAB				
	ROADWAY PLAN				PROFESSIONAL ENGINEER / DATE 3/17/2014	QC CHECKED BY	JDC	NO.	DATE	APPROVED BY	REMARKS

PLOWABLE END SECTION REQ'D
153+07.95 LT 12.00

CONCRETE CURB TYPE B3 REQ'D
MATCHLINE 153+00.00 LT 12.00
153+07.95 LT 12.00
(2 CURBS BACK TO BACK, MONOLITHIC)
158+46.18 RT 9.00 TO
160+26.18 LT 9.00 TO
164+55.63 LT 9.00
164+55.63 LT 9.00 TO
164+85.63 LT 12.00 TO
MATCHLINE 165+00.00 LT 12.00
(2 CURBS BACK TO BACK, MONOLITHIC)

COLORED CONCRETE FLATWORK
6 INCH THICK REQ'D (SEE LS SHEETS)
158+46.18 RT 9.00 TO
160+26.25 LT 7.50 TO
164+55.63 LT 9.00



PLOWABLE END SECTION REQ'D
154+86.48 RT 12.00

CONCRETE CURB TYPE B3 REQ'D
154+86.48 RT 12.00 TO
158+16.18 RT 12.00 TO
158+46.18 RT 9.00
(2 CURBS BACK TO BACK, MONOLITHIC)
158+46.18 RT 9.00 TO
162+75.63 RT 9.00 TO
164+55.63 LT 9.00

COLORED CONCRETE FLATWORK
6 INCH THICK REQ'D (SEE LS SHEETS)
158+46.18 RT 9.00 TO
162+75.56 RT 7.50 TO
164+55.63 LT 9.00

LEGEND

COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

DRAWN BY NAB
QC CHECKED BY JDC
3/17/2014
DATE
APPROVED
PROFESSIONAL ENGINEER

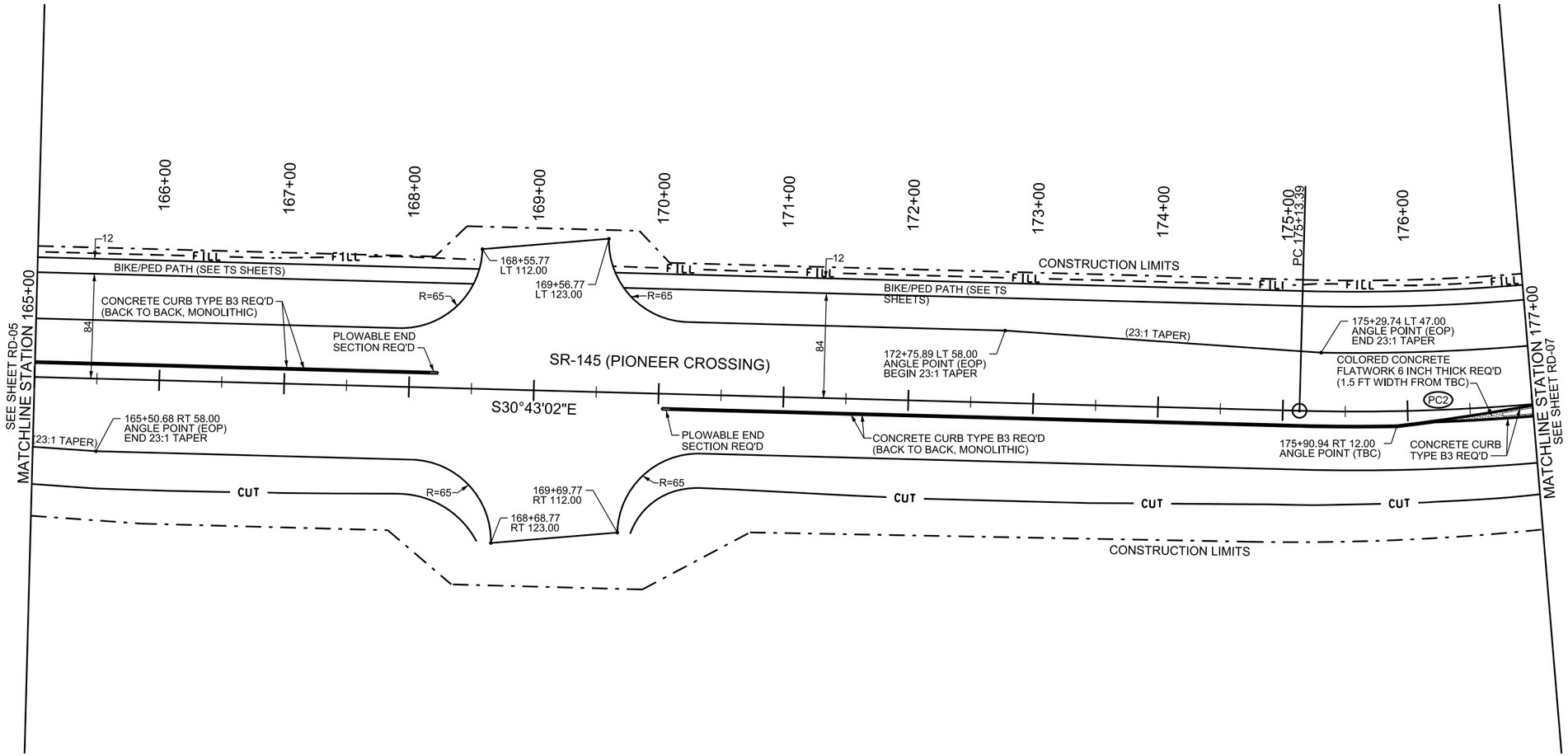
PROJECT: SR-145; PIONEER CROSSING
EXTENSION TO SR-73
PROJECT NUMBER: S-0145(7)0 PIN 11349
ROADWAY PLAN
SHEET NO. RD-05

DGN File: E:\Z-PioneerCrossing\PW_Export\11349-RD05.dgn
17-MAR-2014

CURVE No. PC2
Δ = 59°16'46" LT
T = 967.29
L = 1758.86
R = 1700.00
PI = 184+80.69
N = 306971.195
E = 523534.587

CONCRETE CURB TYPE B3 REQ'D
MATCHLINE 165+00.00 LT 12.00 TO
168+15.77 LT 12.00
(2 CURBS BACK TO BACK, MONOLITHIC)

PLOWABLE END SECTION REQ'D
168+15.77 LT 12.00



PLOWABLE END SECTION REQ'D
170+09.67 RT 12.00

CONCRETE CURB TYPE B3 REQ'D
170+09.67 RT 12.00 TO
175+90.94 RT 12.00 TO
176+21.20 RT 9.00
176+21.20 RT 9.00 TO
176+21.20 RT 9.00 TO
(2 CURBS BACK TO BACK, MONOLITHIC)
MATCHLINE 177+00.00 RT 9.00
176+21.20 RT 9.00 TO
MATCHLINE 177+00.00 RT 1.20

COLORED CONCRETE FLATWORK
6 INCH THICK REQ'D (SEE LS SHEETS)
176+21.20 RT 9.00 TO
MATCHLINE 177+00.00 RT 2.69
176+21.20 RT 9.00 TO
MATCHLINE 177+00.00 RT 7.50

LEGEND
COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

DRAWN BY NAB
QC CHECKED BY JDC
3/17/2014
DATE
APPROVED
PROFESSIONAL ENGINEER

PROJECT: SR-145; PIONEER CROSSING
EXTENSION TO SR-73
PROJECT NUMBER: S-0145(7)0 PIN 11349
ROADWAY PLAN

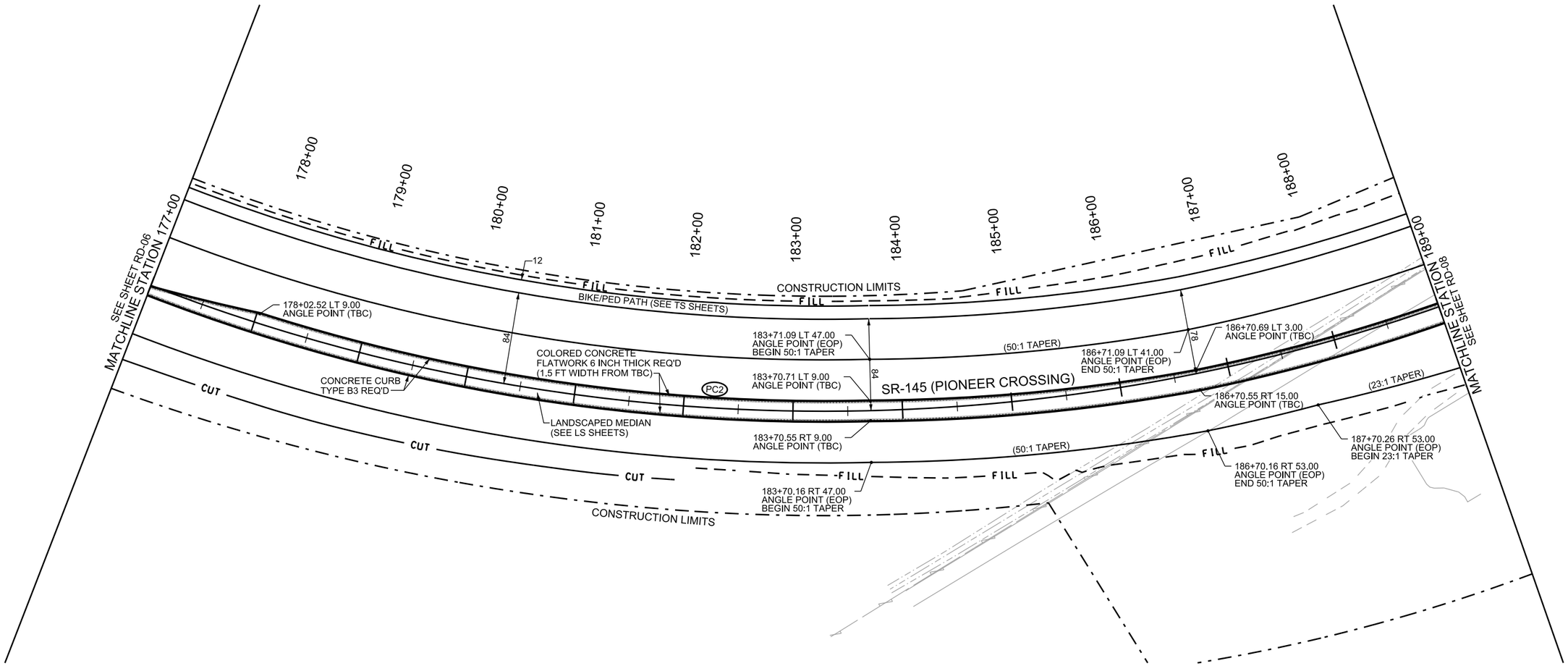
SHEET NO. RD-06

17-MAR-2014 DGN Files:G:\Z.Pioneer Crossing\PW Export\11349-RD06.dgn

CURVE No. PC2
Δ = 59°16'46" LT
T = 967.29
L = 1758.86
R = 1700.00
PI = 184+80.69
N = 306971.195
E = 523534.587

CONCRETE CURB TYPE B3 REQ'D
MATCHLINE 177+00.00 RT 1.20 TO
178+02.52 LT 9.00 TO
183+70.71 LT 9.00 TO
186+70.69 LT 3.00 TO
MATCHLINE 189+00.00 LT 3.00

COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D (SEE LS SHEETS)
MATCHLINE 177+00.00 RT 2.69 TO
178+02.89 LT 7.50 TO
186+70.87 LT 7.50 TO
MATCHLINE 189+00.00 LT 1.50



CONCRETE CURB TYPE B3 REQ'D
MATCHLINE 177+00.00 RT 9.00 TO
183+70.71 RT 9.00 TO
183+70.55 RT 15.00 TO
MATCHLINE 189+00.00 RT 15.00

COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D (SEE LS SHEETS)
MATCHLINE 177+00.00 RT 7.50 TO
186+70.56 RT 13.50 TO
MATCHLINE 189+00.00 RT 13.50

LEGEND
COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

DRAWN BY NAB
QC CHECKED BY JDC
3/17/2014
DATE

UTAH DEPARTMENT OF TRANSPORTATION

APPROVED

PROFESSIONAL ENGINEER

PROJECT: SR-145; PIONEER CROSSING
EXTENSION TO SR-73

PROJECT NUMBER: S-0145(7)0 PIN 11349

ROADWAY PLAN

SHEET NO. RD-07

DGN File: E:\Z-PioneerCrossing\PW_Export\11349-RD07.dgn
17-MAR-2014

CURVE No. PC2
Δ = 59°16'46" LT
T = 967.29
L = 1758.86
R = 1700.00
PI = 184+80.69
N = 306971.195
E = 523534.587

CONCRETE VALLEY GUTTER REQ'D
MATCHLINE 189+00.00 LT 76.00 TO
195+00.00 LT 76.00

CONCRETE CURB TYPE B3 REQ'D
MATCHLINE 189+00.00 LT 3.00 TO
191+30.17 LT 3.00
191+30.17 LT 3.00 TO
191+60.21 LT 6.00 TO
195+31.56 LT 6.00
(2 CURBS BACK TO BACK, MONOLITHIC)

COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D (SEE LS SHEETS)
MATCHLINE 189+00.00 LT 1.50 TO
191+30.17 LT 3.00

CONCRETE CURB AND GUTTER TYPE M1 REQ'D
MATCHLINE 189+00.00 LT 43.50 TO
195+09.25 LT 43.50 TO
195+71.75 LT 105.79

CUWCD CONCRETE DRIVEWAY REQ'D (16FEET WIDE)
194+92.00 LT 43.50

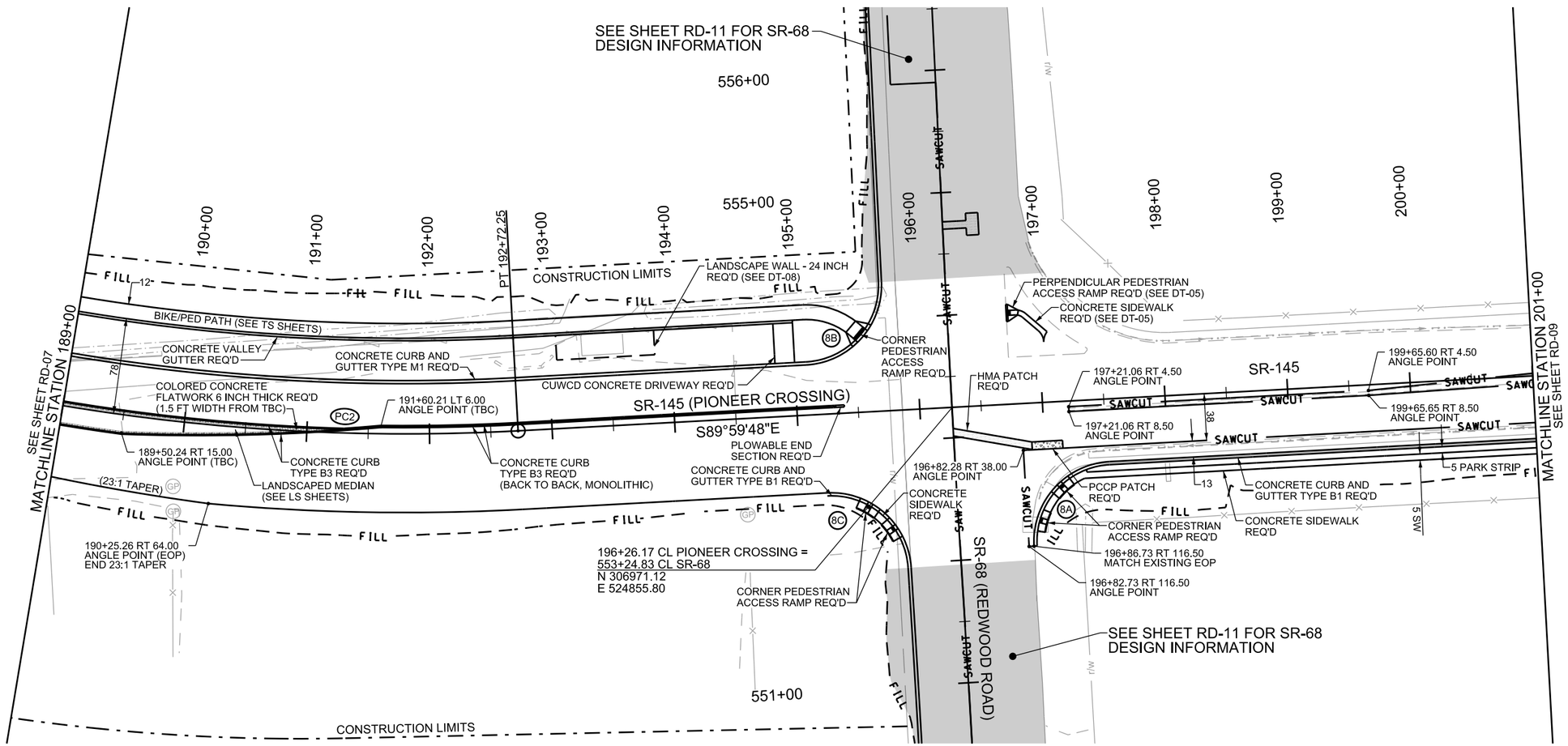
LANDSCAPE WALL - 24 INCH REQ'D (SEE DT-08)
193+06.66 LT 76.00 TO
193+86.66 LT 56.00 TO
193+86.66 LT 56.00 TO
193+86.66 LT 76.00

PLOWABLE END SECTION REQ'D
195+31.56 LT 6.00

CORNER PEDESTRIAN ACCESS RAMP REQ'D
195+54.82 LT 63.22

PERPENDICULAR PEDESTRIAN ACCESS RAMP REQ'D (SEE DT-05)
196+75.51 LT 74.51

CONCRETE SIDEWALK REQ'D (4 FT WIDTH) (SEE DT-05)
196+84.28 LT 76.24 TO
196+90.11 LT 73.21 TO
197+06.77 LT 57.45



CURB AND GUTTER CURVE DATA (TBC)										
CURVE ID #	ALIGNMENT	CENTER OF CURVE					PC		PT	
		R (TBC)	STATION	OFFSET	NORTHING	EASTING	STATION	OFFSET	STATION	OFFSET
8A	PIONEER CROSSING	62.5	197+51.72	116.00 RT	306855.109	524981.35	196+89.23	116.45 RT	197+51.72	53.50 RT
8B	PIONEER CROSSING	62.5	195+09.25	106.00 LT	307077.123	524738.891	195+09.25	43.50 LT	195+71.75	105.79 LT
8C	PIONEER CROSSING	62.5	195+20.82	129.00 RT	306842.122	524750.448	195+20.82	66.50 RT	195+83.32	128.48 RT

COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D (SEE LS SHEETS)
MATCHLINE 189+00.00 RT 13.50 TO
189+50.17 RT 13.50 TO
191+30.17 LT 3.00

CONCRETE CURB TYPE B3 REQ'D
MATCHLINE 189+00.00 RT 15.00 TO
189+50.24 RT 15.00 TO
191+30.17 LT 3.00

CONCRETE CURB AND GUTTER TYPE B1 REQ'D
195+20.82 RT 66.50 TO
195+83.32 RT 128.48
195+71.75 RT 105.79 TO
195+71.75 RT 53.50 TO
MATCHLINE 201+00.00 RT 53.50

CORNER PEDESTRIAN ACCESS RAMP REQ'D
195+54.47 RT 76.33
195+73.75 RT 95.75
196+92.68 RT 95.51
197+11.43 RT 68.22

CONCRETE SIDEWALK REQ'D
195+57.95 RT 86.41 TO
195+63.70 RT 92.20
197+11.43 RT 78.67 TO
197+09.31 RT 78.67
197+22.04 RT 67.92 TO
197+30.84 RT 63.50 TO
MATCHLINE 201+00.00 RT 63.50

HMA PATCH REQ'D
196+26.22 RT 20.24 TO
196+89.54 RT 34.79

PCCP PATCH REQ'D
196+89.54 RT 34.79 TO
197+14.54 RT 34.79

LEGEND
- COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D
- SEE SHEET RD-11 FOR SR-68 DESIGN INFORMATION
- HMA PATCH REQ'D (FOR STORM DRAIN PIPE)
- PCCP PATCH REQ'D (FOR STORM DRAIN PIPE)

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

DRAWN BY NAB
QC CHECKED BY JDC
DATE 3/17/2014
APPROVED
PROFESSIONAL ENGINEER

PROJECT: SR-145; PIONEER CROSSING EXTENSION TO SR-73
PROJECT NUMBER: S-0145(7)0 PIN 11349
ROADWAY PLAN
SHEET NO. RD-08

DGN File: IP_PWP-p8196721\11349_RD08.dgn
17-Mar-2014

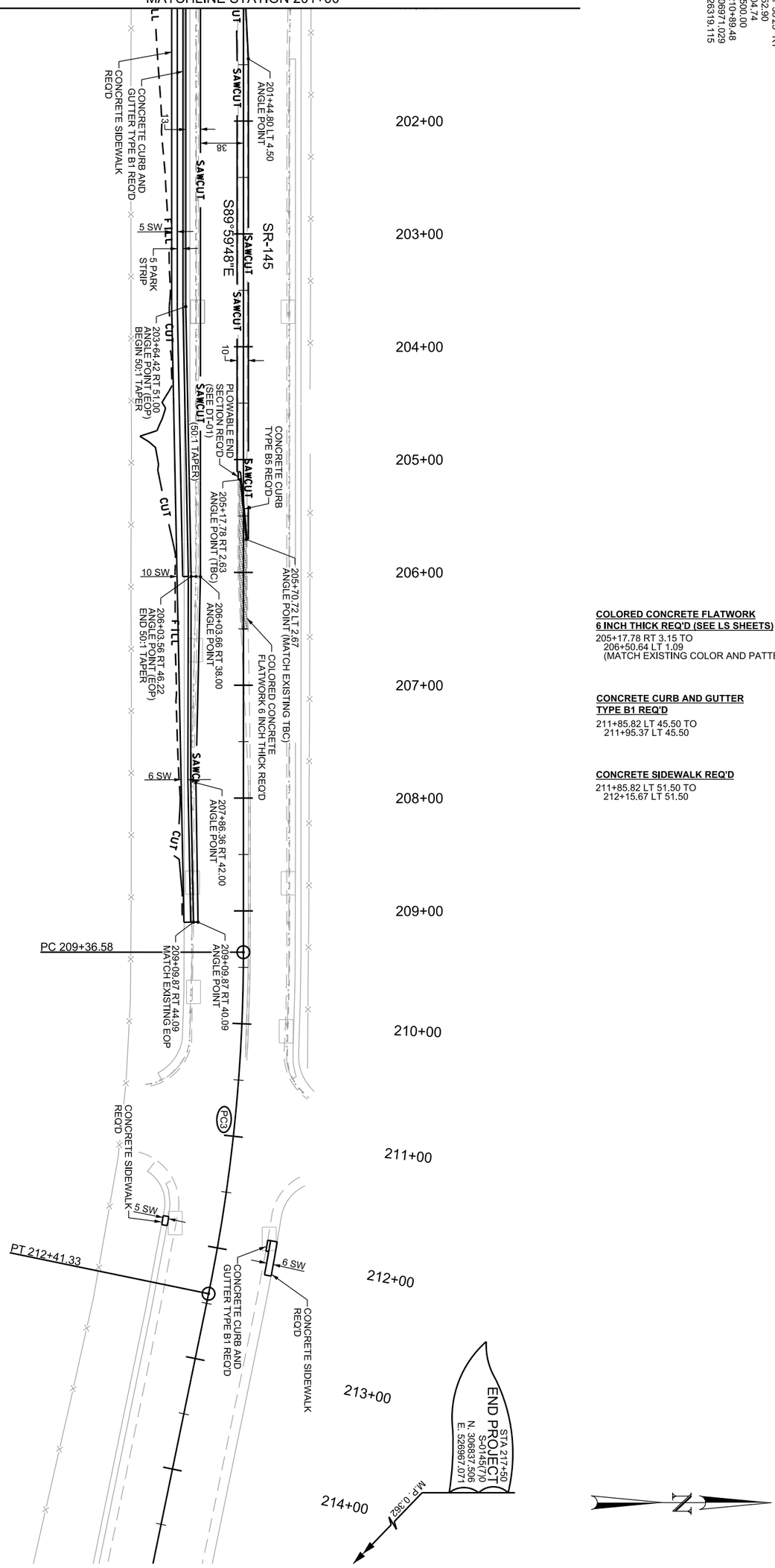
LEGEND

COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D

SEE SHEET RD-08

MATCHLINE STATION 201+00

CURVE No. PC3
Δ = 11°38'25" RT
T = 152.90
L = 304.74
R = 1500.00
PI = 210+89.48
N = 306971.029
E = 526319.115



CONCRETE CURB AND GUTTER TYPE B1 REQ'D

MATCHLINE 201+00.00 RT 53.50 TO
203+64.44 RT 53.50 TO
206+03.56 RT 48.72 TO
207+83.63 RT 49.12 TO
209+09.87 RT 46.59

CONCRETE SIDEWALK REQ'D

MATCHLINE 201+00.00 RT 63.50 TO
203+64.54 RT 63.50 TO
209+09.87 RT 52.59
211+79.46 RT 52.00 TO
211+87.81 RT 52.00

PLOWABLE END SECTION REQ'D

205+17.78 RT 3.15 (SEE DT-01)

CONCRETE CURB TYPE B5 REQ'D

205+17.78 RT 2.63 TO
205+70.72 LT 2.67

COLORED CONCRETE FLATWORK 6 INCH THICK REQ'D (SEE LS SHEETS)

205+17.78 RT 3.15 TO
206+50.64 LT 1.09
(MATCH EXISTING COLOR AND PATTERN)

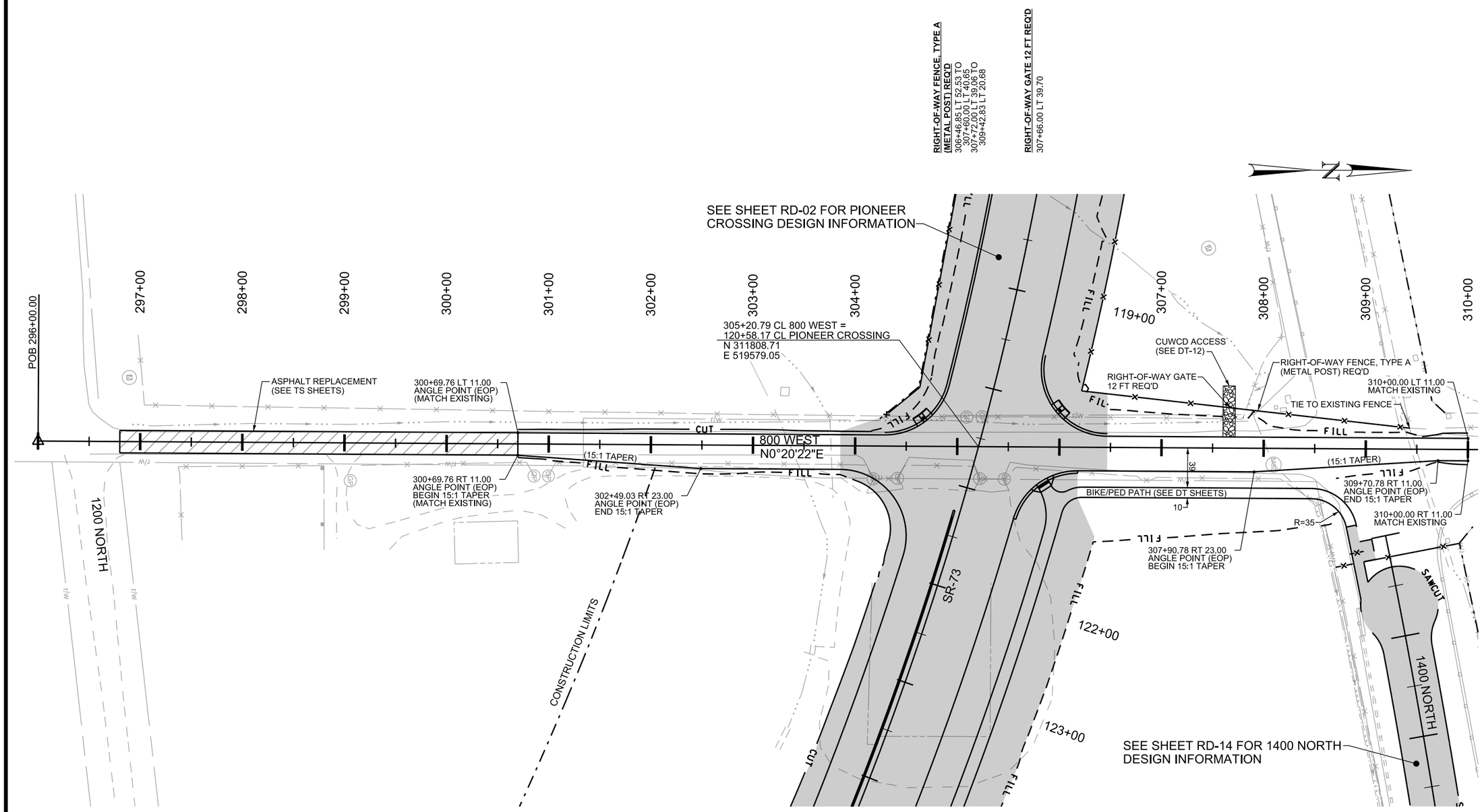
CONCRETE CURB AND GUTTER TYPE B1 REQ'D

211+85.82 LT 45.50 TO
211+95.37 LT 45.50

CONCRETE SIDEWALK REQ'D

211+85.82 LT 51.50 TO
212+15.67 LT 51.50

SHEET NO. RD-09	PROJECT	SR-145; PIONEER CROSSING	UTAH DEPARTMENT OF TRANSPORTATION		REVISIONS
		EXTENSION TO SR-73			
	PROJECT NUMBER	S-0145(7)0 PIN 11349	APPROVED	DRAWN BY NAB	
		ROADWAY PLAN	PROFESSIONAL ENGINEER / DATE 3/17/2014	QC CHECKED BY JDC	NO. / DATE / APPROVED BY / REMARKS



LEGEND

SEE SHEET RD-02 FOR PIONEER CROSSING DESIGN INFORMATION
SEE SHEET RD-14 FOR 1400 NORTH DESIGN INFORMATION

ASPHALT REPLACEMENT (SEE TS SHEETS)

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

DRAWN BY NAB
QC CHECKED BY JDC
DATE 3/17/2014
APPROVED
PROFESSIONAL ENGINEER

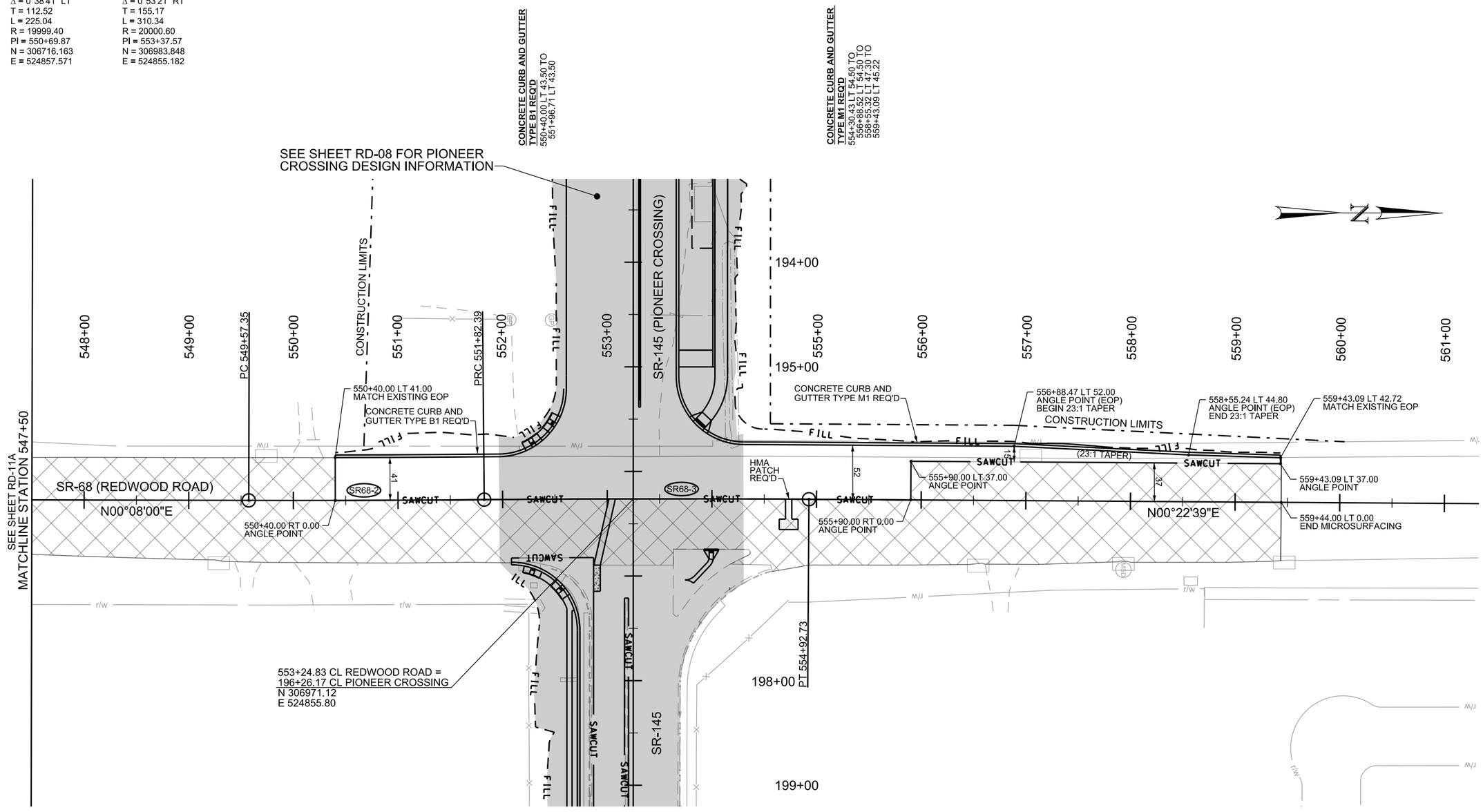
PROJECT SR-145; PIONEER CROSSING EXTENSION TO SR-73
PROJECT NUMBER S-0145(7)0 PIN 11349
ROADWAY PLAN

SHEET NO. RD-10

DGN File: IP-PWPadB\96721\11349-RD10.dgn
17-MAR-2014

CURVE No. SR68-2
Δ = 0°38'41" LT
T = 112.52
L = 225.04
R = 19999.40
PI = 550+69.87
N = 306716.163
E = 524857.571

CURVE No. SR68-3
Δ = 0°53'21" RT
T = 155.17
L = 310.34
R = 20000.60
PI = 553+37.57
N = 306983.848
E = 524855.182



LEGEND

- MICROSURFACING REQ'D
- HMA PATCH REQ'D (FOR WATER LINE)
- SEE SHEET RD-08 FOR PIONEER CROSSING DESIGN INFORMATION

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

DRAWN BY NAB
QC CHECKED BY JDC
DATE 3/17/2014
APPROVED
PROFESSIONAL ENGINEER

SR-145; PIONEER CROSSING
EXTENSION TO SR-73

PROJECT
PROJECT NUMBER S-0145(7)0 PIN 11349

ROADWAY PLAN

SHEET NO. RD-11

DGN File: IP-PWP-s0196721\11349_RD11.dgn
17-MAR-2014

CURVE No. SR68-1
Δ = 1°52'44" RT
T = 182.02
L = 364.01
R = 11100.60
PI = 533+52.12
N = 304998.377
E = 524853.578

LEGEND

MICROSURFACING REQ'D

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

DRAWN BY NAB
QC CHECKED BY JDC
3/17/2014 DATE
APPROVED
PROFESSIONAL ENGINEER

SR-145; PIONEER CROSSING
EXTENSION TO SR-73

PROJECT
PROJECT NUMBER S-0145(7)0
PIN 11349

ROADWAY PLAN

SHEET NO. RD-11A

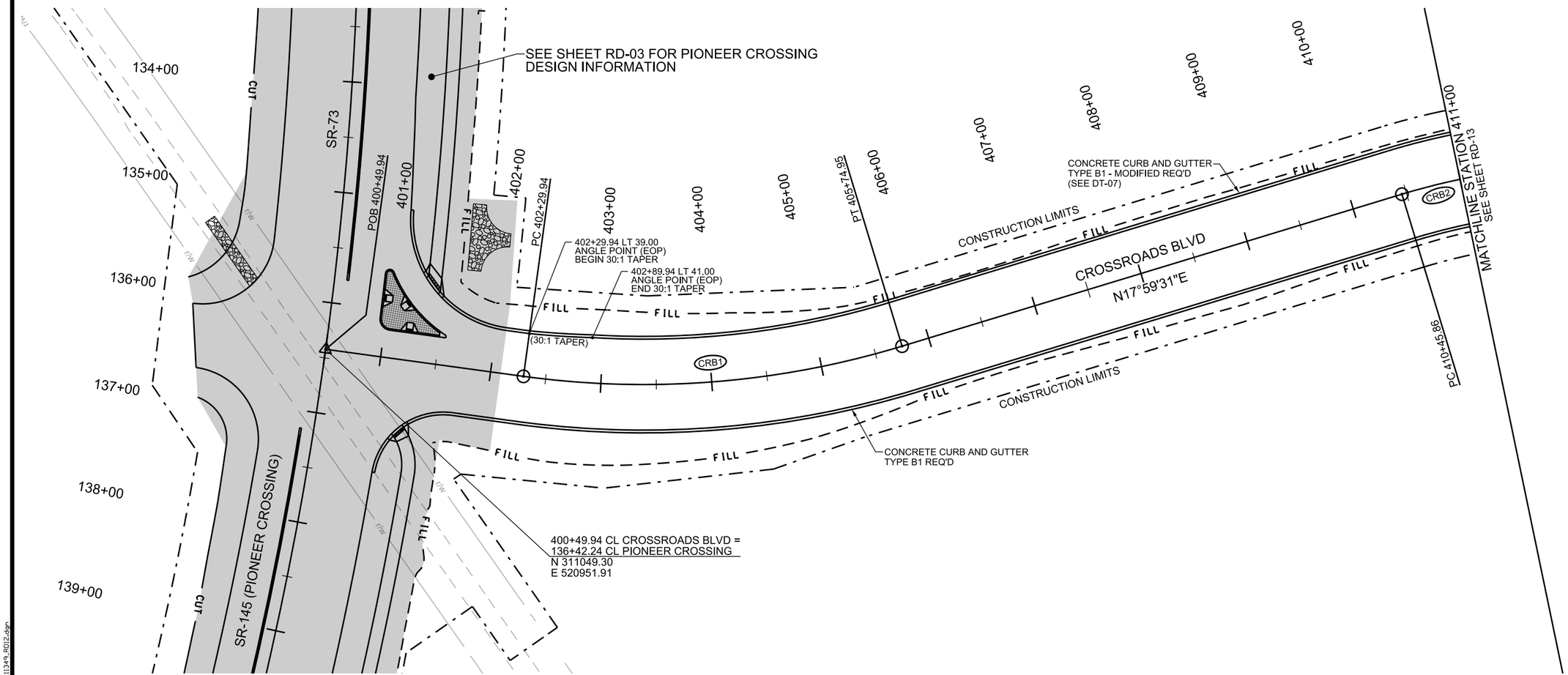
DGN: File:G:\2.Pioneer-Crossing\PW_Export\11349_RD11A.dgn

17-MAR-2014

CURVE No. CRB1
Δ = 24°42'34" LT
T = 175.23
L = 345.01
R = 800.00
PI = 404+05.17
N = 311310.354
E = 521192.818

CURVE No. CRB2
Δ = 72°40'03" RT
T = 441.29
L = 760.97
R = 600.00
PI = 414+87.15
N = 312344.612
E = 521528.705

CONCRETE CURB AND GUTTER
TYPE B1 - MODIFIED REQ'D (SEE DT-07)
402+09.15 LT 41.50 TO
402+29.85 LT 41.50 TO
402+89.89 LT 43.50 TO
MATCHLINE 411+00.00 LT 43.50



CONCRETE CURB AND GUTTER
TYPE B1 REQ'D
402+09.15 RT 43.50 TO
MATCHLINE 411+00.00 RT 43.50

LEGEND

SEE SHEET RD-03 FOR PIONEER CROSSING DESIGN INFORMATION

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

DRAWN BY NAB
QC CHECKED BY JDC
DATE 3/17/2014
APPROVED
PROFESSIONAL ENGINEER

PROJECT: SR-145; PIONEER CROSSING
EXTENSION TO SR-73
PROJECT NUMBER: S-0145(7)0 PIN 11349
ROADWAY PLAN
SHEET NO. RD-12

DGN: F:\Ed.Gk\2_Pioneer-Crossing\PW_Export\11349_RD12.dgn
17-MAR-2014

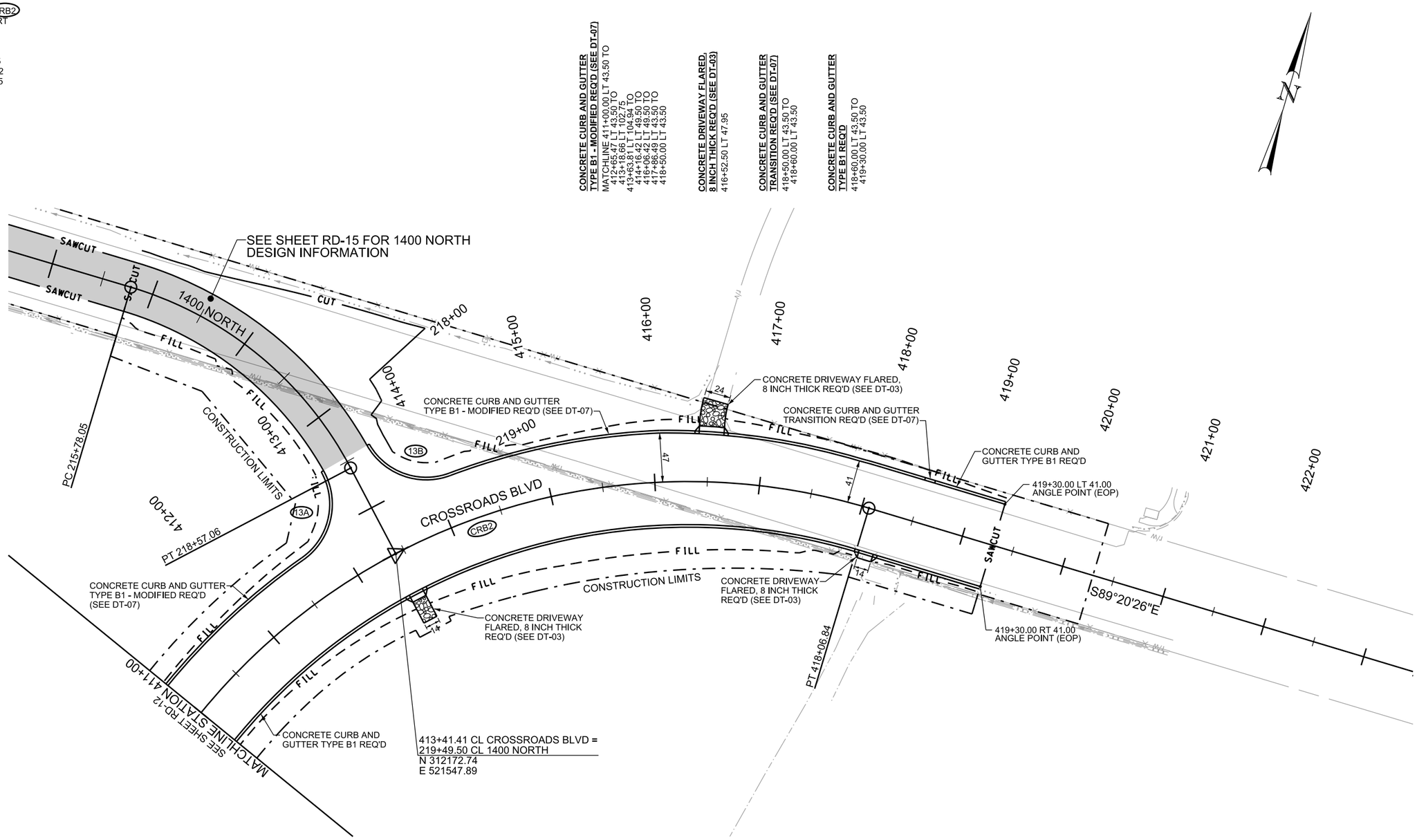
CURVE No. CRB2
Δ = 72°40'03" RT
T = 441.29
L = 760.97
R = 600.00
PI = 414+87.15
N = 312344.612
E = 521528.705

CONCRETE CURB AND GUTTER TYPE B1 - MODIFIED REQ'D (SEE DT-07)
MATCHLINE 411+00.00 LT 43.50 TO
412+63.47 LT 43.50 TO
414+16.85 LT 102.75
413+63.81 LT 104.94 TO
414+16.42 LT 49.50 TO
416+06.42 LT 49.50 TO
417+86.49 LT 43.50 TO
418+50.00 LT 43.50

CONCRETE DRIVEWAY FLARED, 8 INCH THICK REQ'D (SEE DT-03)
416+52.50 LT 47.95

CONCRETE CURB AND GUTTER TRANSITION REQ'D (SEE DT-07)
418+50.00 LT 43.50 TO
418+60.00 LT 43.50

CONCRETE CURB AND GUTTER TYPE B1 REQ'D
418+60.00 LT 43.50 TO
419+30.00 LT 43.50



CONCRETE CURB AND GUTTER TYPE B1 REQ'D
MATCHLINE 411+00.00 RT 43.50 TO
419+30.00 RT 43.50

CONCRETE DRIVEWAY FLARED, 8 INCH THICK REQ'D (SEE DT-03)
413+41.41 RT 43.50
418+16.31 RT 43.50 (5 FT X 14 FT)

CURB AND GUTTER CURVE DATA (TBC)										
CURVE ID #	ALIGNMENT	CENTER OF CURVE					PC		PT	
		R (TBC)	STATION	OFFSET	NORTHING	EASTING	STATION	OFFSET	STATION	OFFSET
13A	CROSSROADS BLVD	62.5	412+65.47	106.00 LT	312183.517	521414.107	412+65.47	43.50 LT	413+18.66	102.75 LT
13B	CROSSROADS BLVD	62.5	414+16.42	112.00 LT	312311.012	521538.322	413+63.81	104.94 LT	414+16.42	49.50 LT

LEGEND
SEE SHEET RD-15 FOR 1400 NORTH DESIGN INFORMATION
UNTREATED BASE COURSE (6 INCH THICK)

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

DRAWN BY NAB
QC CHECKED BY JDC
3/17/2014 DATE
APPROVED
PROFESSIONAL ENGINEER

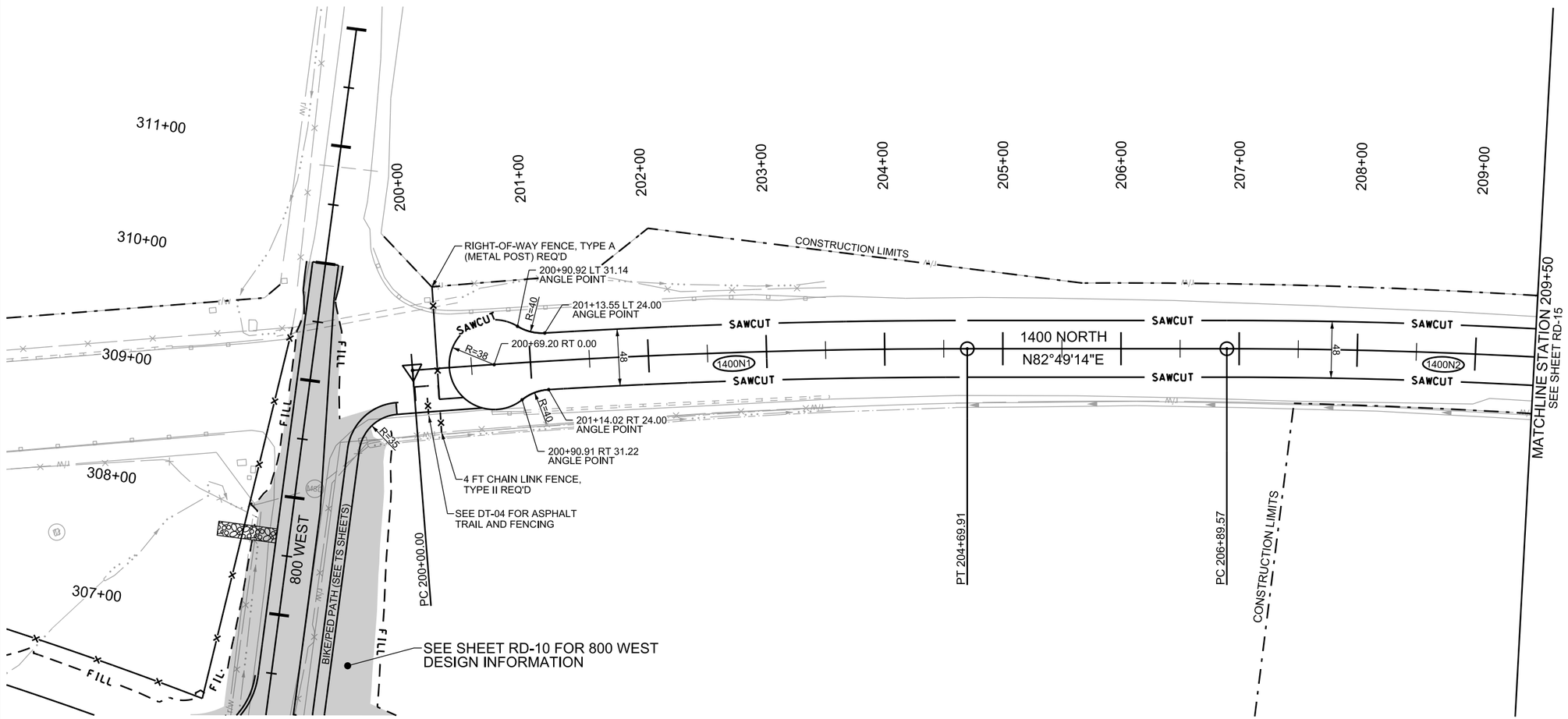
PROJECT: SR-145; PIONEER CROSSING EXTENSION TO SR-73
PROJECT NUMBER: S-0145(7)0 PIN 11349
ROADWAY PLAN
SHEET NO. RD-13

DGN File: E:\CZ-PioneerCrossing\PW_Export\11349-RD13.dgn
17-MAR-2014

CURVE No. 1400N1
Δ = 4°28'23" RT
T = 235.07
L = 469.91
R = 6019.00
PI = 202+35.07
N = 312254.747
E = 519896.491

CURVE No. 1400N2
Δ = 7°43'08" RT
T = 327.93
L = 654.87
R = 4861.00
PI = 210+17.50
N = 312352.561
E = 520673.021

RIGHT-OF-WAY FENCE, TYPE A (METAL POST) REQ'D
200+20.82 RT 25.00 TO
200+21.66 LT 69.30



4 FT CHAIN LINK FENCE, TYPE II REQ'D
200+10.65 RT 38.00 TO
200+10.68 RT 24.00
200+20.56 RT 54.08 TO
200+20.71 RT 37.00

LEGEND

SEE SHEET RD-10 FOR 800 WEST DESIGN INFORMATION

REVISIONS

NO.	DATE	APPROVED BY	REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

DRAWN BY NAB
QC CHECKED BY JDC
3/17/2014 DATE
APPROVED
PROFESSIONAL ENGINEER

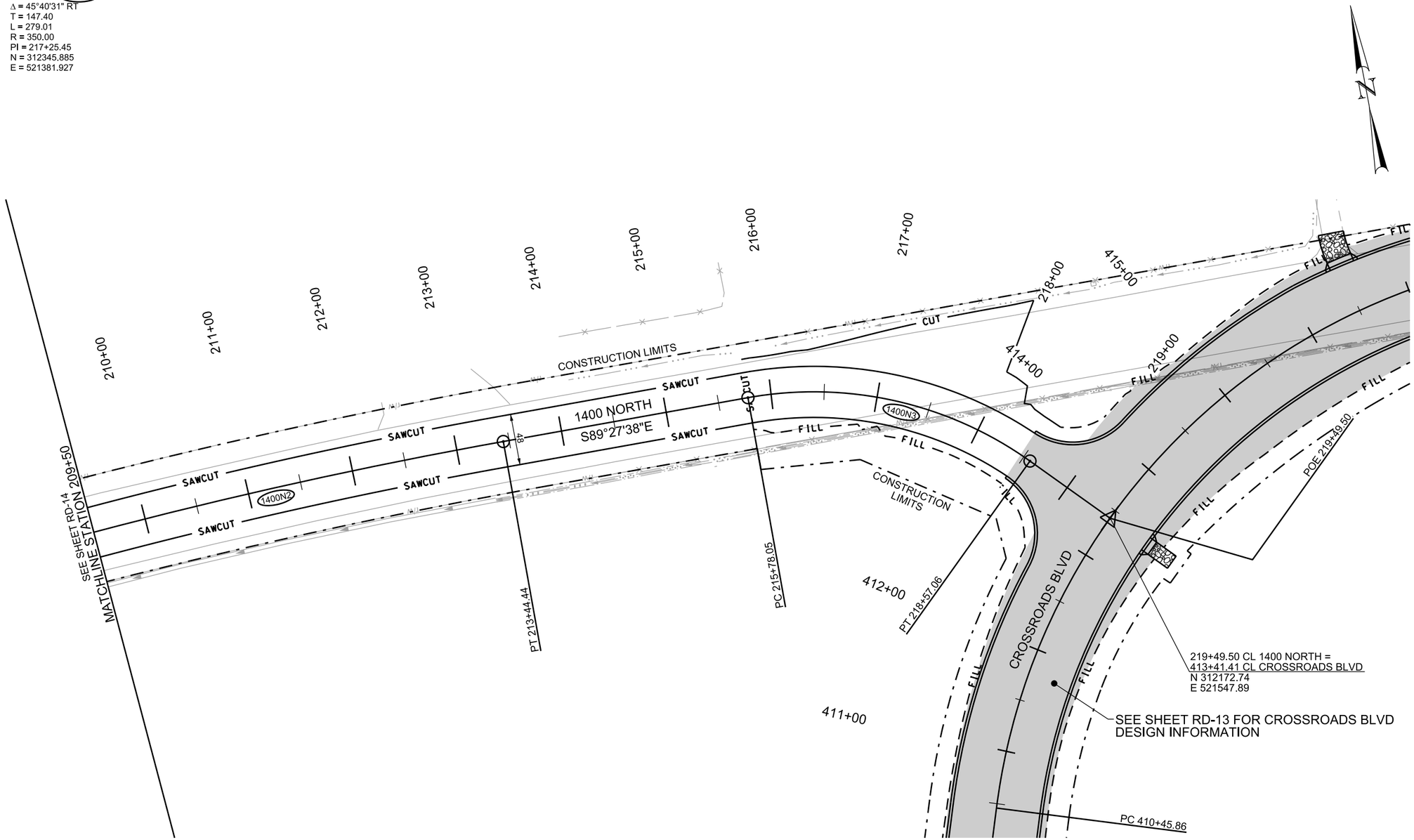
PROJECT: SR-145; PIONEER CROSSING EXTENSION TO SR-73
PROJECT NUMBER: S-0145(7)0 PIN 11349
ROADWAY PLAN

SHEET NO. RD-14

DGN Files:GIVZ-PioneerCrossing\PW_Export\11349_RD14.dgn
17-MAR-2014

CURVE No. 1400N2
Δ = 7°43'08" RT
T = 327.93
L = 654.87
R = 4861.00
PI = 210+17.50
N = 312352.561
E = 520673.021

CURVE No. 1400N3
Δ = 45°40'31" RT
T = 147.40
L = 279.01
R = 350.00
PI = 217+25.45
N = 312345.885
E = 521381.927



LEGEND

SEE SHEET RD-13 FOR CROSSROADS BLVD DESIGN INFORMATION

REVISIONS				
NO.	DATE	APPROVED BY		REMARKS

UTAH DEPARTMENT OF TRANSPORTATION

DRAWN BY NAB
QC CHECKED BY JDC
3/17/2014 DATE
APPROVED
PROFESSIONAL ENGINEER

SR-145; PIONEER CROSSING
EXTENSION TO SR-73

PROJECT
PROJECT NUMBER S-0145(7)0 PIN 11349

ROADWAY PLAN

SHEET NO. RD-15

DGN: Files G\X2_PioneerCrossing\PW_Export\11349_RD15.dgn

17-MAR-2014

City of Saratoga Springs City Council Meeting

July 21, 2015

Regular Session held at the City of Saratoga Springs City Offices
1307 North Commerce Drive, Suite 200, Saratoga Springs, Utah 84045

Policy Session Minutes

Present:
Mayor: Jim Miller
Council Members: Michael McOmber, Shellie Baertsch, Rebecca Call, Bud Poduska
Staff: Mark Christensen, Kimber Gabryszak, Kyle Spencer, Owen Jackson, Jeremy Lapin, Sarah Carroll, Jess Campbell, Andrew Burton, Nicolette Fike
Others: Chris Porter, Cathy and Art Flinton, Cheyenne Taylor, Carl Ballard, Ron Edwards, Barbara Poduska
Excused Stephen Willden

Call to Order 7:04 p.m.
Roll Call – A quorum was present
Invocation / Reverence - Given by Councilman McOmber
Pledge of Allegiance - led by Allen Ivey

Public Input - **Opened** by Mayor Miller
No input at this time.
Public Input - Closed by Mayor Miller

Awards, Recognitions and Introductions

- Life Saving awards presented to Officers of the Saratoga Springs Police Department. Chief Burton presented certificates and ribbon bars to Detective Kevin Flinton and Officer Derek Dalton.

POLICY ITEMS

1. PUBLIC HEARING ITEMS:

a. Public Hearing: Rezone, General Plan Amendment and Concept Plan for the Saratoga Springs 4 church located at the NW corner of Redwood Road and Old Farm Road, North of Hillside Ridge, Evans and Associates Architecture, applicant.

i. Ordinance 15-22 (7-21-15): Amending the Zone and General Plan from Planned Community (PC) to Low Density Residential (R-3), for Real Property 77.1135 acres, Located at the NW corner of Redwood Road and Old Farm Road and North of Hillside Ridge.

Kimber Gabryszak presented the plans. The applicant is requesting approval of a Rezone and General Plan amendment to facilitate future subdivision and site plan approvals for an LDS meetinghouse. The current zone is Planned Community; they are proposing an R-3. The application will remain subject to the City Center District Area Plan. An updated Legal Description shows it is 6.465 acres. The applicants need to provide an updated traffic study.

Public Hearing - **Opened** by Mayor Miller
No input at this time.
Public Hearing - Closed by Mayor Miller

Councilwoman Baertsch got clarification on where the nearest collector would be. (It would line up with Parkway Blvd.) She is concerned with the 56' road size. She knew some residents were hoping for a light at that intersection on Redwood Road or perhaps a right-in right-out turn only.

Jeremy Lapin said they needed to look back at the last study from UDOT. It's technically too close to Grandview but if the warrant is there they may choose to put one in. It is also why they need to have an updated study.

Councilwoman Baertsch thought the concept looked great. It is a different layout of a stake center. It appears they are complying with all the code so she has no problems.

Councilman McOmber also had concerns with transportation. He thinks the light option is better at Parkside. He would not like a temporary light because they tend to not go away. He is hoping that because it's a church the busy time will be different than the school and commuter traffic. He thinks you need to know where the wards are coming for this church and where people will be driving from to help with the traffic study. He believes they are really looking at east side west side stakes. He likes the new design and would like to pass that along to the developer.

Councilwoman Call shares some of the concerns with the traffic patterns. She would like to see the asphalt width go back to 13' for traffic lanes. The narrower width does slow people down but she would like to see the older cross sections here and this type of area in the future. She does appreciate the 9' park strips and wider walkways. She is not as concerned with the design of the building, all the buildings are nice. She would appreciate the new traffic study. She is concerned that this is part of the Planned Community with a vested right to a certain number of units and she doesn't want to see them come back with less than 44-51 units reduced.

Kimber Gabryszak noted she didn't put in the density calculation. The non-residential bucket is based off of the size of the church.

Councilwoman Call would prefer the commercial base and reduce the density of the number of houses. She is not concerned with the rezone but what they may get stuck with because of the rezone.

Councilman Poduska was also concerned with the traffic pattern. He will wait to see what the new study shows. He likes the design; it's innovative to bring it in before the surrounding area is developed. He has no concern with design or placement.

Mayor Miller is happy to see the new design as well.

Motion made by Councilwoman Baertsch to approve the General Plan Amendment and Rezone of 6.465 acres of parcel 58:041:0183 from Planned Community to Low Density Residential and R-3 as identified in Exhibit 1, with the Findings and Conditions in the Staff Report. Seconded by Councilman McOmber. Aye: Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 4 - 0.

2. ACTION ITEMS:

a. Inter-local Agreement with Utah County for Substance Abuse Prevention Services and Communities That Care Prevention Model.

i. Resolution R15-29 (dated 7-21-15): Approving the Inter-local Cooperation Agreement Between Utah County and the City of Saratoga Springs.

b. Inter-local Agreement with Utah County for Community Prevention Services (Guiding Good Choices Program Grant).

i. Resolution R15-30 (dated 7-21-15): Approving the Inter-local Cooperation Agreement Between Utah County and the City of Saratoga Springs.

Owen Jackson spoke on these items briefly. The first is the same agreement but the County gave more money this year for the coordinator position. Last year they had 3 sessions for guiding good choices, they added a mental health/first aid option.

Councilwoman Baertsch asked if our portion was the same, $5000.

Owen Jackson stated yes.

Councilwoman Call asked if Guiding Good Choices was in conjunction with Communities that Care, or is it separate.

Owen Jackson said it is in conjunction, Karen is one of the trainers and they have contracted with another as well so it doesn't take all her hours.

Councilwoman Call asked how many prescription take backs we were planned for this year.

Owen Jackson said they did not have any planned because it was determined they were not effective. We could have kept the collection but we would have had no way to take care of the substances

Motion made by Councilwoman Call to approve Resolution R15-29 (dated 7-21-15): Approving the Inter-local Cooperation Agreement Between Utah County and the City of Saratoga Springs. And also Resolution R15-30 (dated 7-21-15): Approving the Inter-local Cooperation Agreement Between Utah County and the City of Saratoga Springs. Second Councilman Poduska.

Councilwoman Call clarified 15-29 was for Communities That Care and 15-30 was for Guiding Good Choices.

Aye: Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 4 - 0.

c. Storm Drain Agreement between the City of Saratoga Springs and Richard Chui.

Jeremy Lapin presented the agreement. It is for a storm drain easement for the Market Street outfall.
Councilman Poduska asked if they had gotten permits earlier because they were already digging.
Jeremy Lapin replied they gave them the easement a month ago knowing they were working on the terms. He has been great to work with.
Councilwoman Call appreciates the work and liked the Riverside Drive on the exhibits.
Councilman McOmber thanked Richard Chui for the easement and we wanted to continue this positive relationship. He wanted to forward his appreciation.
Councilwoman Baertsch would like to echo the thanks to Mr. Chui. She has looked at the requirements and thinks they are great and appropriate to get ahead and not require more of him out of the ordinary.

Motion made by Councilman Poduska to approve the Market Street Storm Drain Easement Agreement with Richard Chui. Seconded by Councilwoman Call. Aye: Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 4 - 0.

d. Final Plat for Heron Hills Plat B located at approximately 3250 South Redwood Road, Steve Larson, applicant.

i. Resolution R15-31 (7-21-15): Adding Lots to the City Street Lighting Special Improvement District for Heron Hills Plat B.

Mark Christensen noted this was adding more subdivisions to the lighting SID.

Motion made by Councilwoman Call to approve the Final Plat for Heron Hills B, and Resolution R15-31 (7-21-15): Adding Lots to the City Street Lighting Special Improvement District for Heron Hills Plat B. Seconded by Councilwoman Baertsch.

Kimber Gabryszak wanted to clarify they were two separate items the Final Plat and the SID.

Aye: Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 4 - 0.

e. Resolution R15-32 (7-21-15): Adding Lots to the City Street Lighting Special Improvement District for Fox Hollow Neighborhood 6 Phase 2, 4A, 4B, 5 and 7.

Motion made by Councilman McOmber to approve Resolution R15-32 (dated 7-21-15): Adding Lots to the City Street Lighting Special Improvement District for Fox Hollow Neighborhood 6 Phase 2, 4A, 4B, 5 and 7. Seconded by Councilwoman Baertsch. Aye: Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 4 - 0.

f. Updates to Engineering Standards.

i. Ordinance 15-23 (7-21-15): Amending the Engineering Standard Technical Specifications and Drawings Manual for the City of Saratoga Springs.

Jeremy Lapin noted that there have been no substantial changes, mainly cleaning and fixing errors. It is a fluid type document that changes from time to time.

Councilwoman Baertsch noted that in one place it said stockpiling materials location needed to be approved by the City Engineer. There are other places where it doesn't say it needs to be approved. She wondered if that could be added to those places where it is not. Especially so it's as far away from homes as possible.

Jeremy Lapin said that the Legal department had them strip several of those because without clear standards they could not require that they comply with direction not based on clear criteria. They removed or left things in as suggested by the Legal dept. They perhaps should define some standards that could be enforced.

Councilman McOmber noticed those points as well. We should have standards on what should be acceptable, it should be consistent.

Jeremy Lapin noted it will be something to further look at. They would also need clear parameters on where stock piles were unacceptable.

Mark Christensen said they would look at it to make sure it was more on big projects and not just small lots. In a small lot there is no way they could have piles 20 feet away from the project.

Councilwoman Baertsch asked about the 4' to 5' sidewalks, while it may help with traffic calming, she is concerned that they have done some harm where they have a park in place or a church in place, things with higher uses, like a school.

Jeremy Lapin noted one reason they had done that reduction was that it was also a cost saving in asphalt maintenance. Perhaps we could come back with a new road cross section and see where it is best applied.

Councilwoman Baertsch had concerns with the roundabouts and that we are not allowing actual lanes in the roundabouts, we need to make sure the cross sections for multiple lanes are correct.

Jeremy Lapin there are probably 30 details in the road section and a lot of them he has never seen, they could probably trim those and when they are applicable they would fit better with custom designs.

Councilwoman Baertsch wants to make sure it is handled in the new Riverside Drive roundabouts.

Councilman McOmber thinks it would be nice when given these packets to communicate better what the changes were so they wouldn't have to go through all of it. He asked if there was a way to put in if you are going to do a large roundabout that you need to work with the City Engineer with Custom standards. This needs to be an opportunity to be more developer friendly.

Jeremy Lapin asked if they would be comfortable with passing this tonight and coming back with a new road section as soon as they can.

Mark Christensen wanted to point out that when a unique situation comes we have the ability to have a developer's engineer make recommendations to us and we can work with them and incorporate those changes into this document.

Councilwoman Call commented that she is concerned with a new road cross section. We don't always know if a park is going in on an adjacent plat and what the connecting road would need. If we do a 56' r/w and a new road qualifies for a 58' that may be a concern.

Jeremy Lapin thought if they had clear criteria and standards it would be unlikely.

Councilman Poduska wondered if the Engineering dept. had national standards, like the fire department and building inspectors.

Jeremy Lapin noted that the Utah chapter of the APWA has a published set of standards. Some cities have strictly adopted that and added supplementary things. They may have a few references but a lot of our standards are unique to our city and the land here and may exceed those standards.

Mark Christensen commented that it gives us some flexibility.

Motion made by Councilwoman Baertsch to approve Ordinance 15-23 (dated 7-21-15): Amending the Engineering Standard Technical Specifications and Drawings Manual for the City of Saratoga Springs. And directing staff to work on road cross section discussed earlier. Seconded

by Councilwoman Call. Aye: Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 4 - 0.

g. Resolution R15-33 (7-21-15): Appointing Election Poll Workers to serve for the August 11, 2015 Primary Election.

Councilwoman Call commented that the governing body shall have 4 per polling location and this was not enough people.

Mark Christensen replied we have these people now and he will check on that and they can make an amendment if necessary.

Motion made by Councilwoman Baertsch to approve Resolution R15-33 (7-21-15): Appointing Election Poll Workers to serve for the August 11, 2015 Primary Election. Directing staff that if we need 3 additional poll works that it be taken care of at our next meeting. Seconded by Councilman McOmber.

Councilwoman Call would like to have Lori forward the Council's thanks to the poll workers for their work.

Aye: Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 4 - 0.

h. Ordinance 15-24 (7-21-15): Repealing 13.03 of the City Code Pertaining to the Regulation of Street Legal ATV's.

Mark Christensen commented that was an example of state passing regulation and so we do not need our ordinance, we just refer to State Code.

Councilman McOmber wanted to say this is an example of Saratoga Springs working with the residents and working through the concerns to find a solution. We were one of the first Cities to do this and other cities followed and when the State sees multiple communities doing it then they should put the legislation forward. He appreciates all the effort the City put into getting their own ordinance passed.

Councilwoman Call asked Chief Burton, now that ATV's are allowed on the larger roads, how does that impact our officers?

Chief Burton noted the officers were aware and they wouldn't be treating them different than any other street legal vehicle. They have to comply with all the laws. There is not a minimum speed limit placed by the state on Redwood Road. There is a vaguely written law about impeding traffic.

Mark Christensen reiterated that if it is not street legal you will be cited.

Mayor Miller asked with 8 year olds that are licensed if they are on the street on the way to the canyon is that illegal.

Chief Burton said they have to have a regular Utah State Drivers License to be legal.

Councilwoman Call noted that a license is required to operate on a street. She would like to direct Owen Jackson to inform the residents that the new law says they have to be licensed.

Motion made by Councilwoman Baertsch to approve Ordinance 15-24 (dated 7-21-15): Repealing 13.03 of the City Code Pertaining to the Regulation of Street Legal ATV's. Seconded by Councilwoman Call. Aye: Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 4 - 0.

i. City Council Minutes:

i. July 7, 2015.

Motion made by Councilwoman Baertsch to approve the Minutes of July 7, 2015 including previously emailed changes by Councilwoman Baertsch and Councilwoman Call. Seconded by Councilman Poduska. Aye: Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 4 - 0.

3. REPORTS:

a. Mayor

Mayor Miller noted last week he went to Camp Williams and toured the new PEQ quarters that are very nice. It was great for the Camp to involve the community.

b. City Council.

Councilwoman Baertsch announced that there will be an open house on a potential shooting range on Soldier Pass Aug 4th here at Talons Cove, and Aug. 5th in Sandy at the Hilton Ballroom. It will talk about the closure of Lake Mountain and the potential for a new range. She asked about the secondary water rights, if it was divided by 6 or 12 months. [6]

Councilman McOmber said in Saratoga Springs Development there is a lot of talk about not turning over the road maintenance to the City because they feel the standards aren't as high. He thinks the majority of the neighbors are open to opening it up more to police patrolling. He asked the City Engineer where to find the Master sewer and storm drain plans and if in Saratoga Springs Development it was public or privately owned.

Jeremy Lapin wasn't sure of the history of the system but the storm drain system is owned by the City.

Councilman McOmber said there are some major problems with the drain that cause hazards particularly in the winter. One in particular, the homeowner is willing to take care of it but want to make sure they don't get in trouble. He would like to work with Jeremy on that.

Jeremy Lapin said someone needs to determine if it's a storm drain issue or a private road issue.

Mark Christensen said they would be happy to work with them on it but its not real clear cut.

Councilwoman Call noted that Aug. 4th is also the Night-Out Against Crime. Lakeview Terrace wants to have a discussion with staff about roads. Code enforcement is a topic that needs to be discussed. She thanked staff for getting the video out on how to check the water meters. Aug. 6th is their annual growth meeting with all the schools. There had been a suggestion that it might be good direction to talk with the LDS stk. Presidents for similar growth concerns like they do with the schools.

Councilman Poduska noted the Urban Design Committee meets tomorrow to discuss The Crossing.

Councilwoman Baertsch wanted people to notice they are laying the first pipe for the Tickville wash.

Mayor Miller noted that since they have gotten the two parks there on Saratoga Road, Inlet and the RC Park, that the signs need to be looked at for replacing and branding them as part of the City.

Councilwoman Call noted they had talked to the RC people about the signs and they are amenable to changing them. She would be happy to put something together to work with the sign company.

c. Administration communication with Council.

d. Staff updates: inquires, applications and approvals.

Kimber Gabryszak noted there are several items added to UDC; Harbor Bay Church, Jacobs Ranch Church Tractor Supply Site Plan Sargent Court Townhome Amendment. The next meeting here is just a work session on The Crossing and following will be Talus Ridge D and other projects coming through the pipeline.

4. REPORTS OF ACTION: No reports tonight.

5. Motion to enter into Closed Session for the purchase, exchange, or lease of property, pending or reasonably imminent litigation, the character, professional competence, or physical or mental health of an individual.

No Closed Session.

Policy Meeting Adjourned at 8:30 p.m.

_____ _____

Date of Approval Mayor Jim Miller

_____

Lori Yates, City Recorder

City of Saratoga Springs
City Council Meeting
August 4, 2015

Regular Session held at the City of Saratoga Springs City Offices
1307 North Commerce Drive, Suite 200, Saratoga Springs, Utah 84045

Work Session Minutes

Present:
Mayor: Jim Miller
Council Members: Michael McOmber, Shellie Baertsch, Rebecca Call, Stephen Willden, Bud Poduska
Staff: Mark Christensen, Kimber Gabryszak, Kyle Spencer, Owen Jackson, Kevin Thurman, Jeremy Lapin, Nicolette Fike, Daniel Widenhouse, Chelese Rawlings, Lori Yates
Others: Wade Williams, Chris Porter, Steve Sorensen, Barbara Poduska
Excused:

Call to Order – 5:04 p.m.

1. Work Session: Discussion of the Village Plan and Community Plan for The Crossing located NW corner of Pioneer Crossing and Redwood Road, Boyer, applicant.

Wade Williams introduced the community plan and that it was the larger picture and more details will come forward with Village Plans and site plans. He mentioned the theme of the entrance signs that they hope to carry throughout the project. He highlighted where they have differed from the Title 19 City Code on the arterial road setbacks, and building heights that would exceed with buildings like a movie theater and office buildings. They are still doing reviews and will be using the studies on further plans. They are proposing a change to the lighting to a 30' tall standard with a champagne color that blends better with the buildings and would be fewer poles. He showed landscaping plans similar to the new West Jordan Smiths store. They have submitted a planting list that is more durable in this area. They would like to have a process in place that will facilitate moving through the process smoother.

Wade Williams then moved on to the Village Plan. The first phase is approximately 21 acres.

Steve Sorensen highlighted what the Smiths Marketplace would be bringing.

Councilwoman Call asked if they had an idea about a 4800 sq. ft. building going in next to Smiths.

Wade Williams replied it was a multi shop space anywhere from two to four tenants. He noted the newer elevations for Smiths and had material examples. Both Boyer and Smiths really like this plan.

Steve Sorensen pointed out a few of the features.

Wade Williams pointed out lot 2 which was a small lot that would rely on Smiths parking. He highlighted the Thematic Design Elements that they would be pulling into the larger Community Plan.

Councilman Willden is excited to see this project and liked seeing the note for the number of prospective employees this will bring to the city. He is fine with the extended building heights.

Councilwoman Baertsch said they did look at the district lighting. She liked the champagne color. She is concerned about light pollution spilling out; she likes the way The District works. She would agree to the taller light fixtures. She would like to see them consistent throughout the project. She likes the general artistic theme and would like to see some of that carried more throughout the buildings and materials. She is not concerned with the extra height and is even concerned that it may not be high enough for the office buildings. She would like architectural features on all sides of the buildings. She wonders if lot 2 may be better to include the parking spaces behind it into that lot. She cannot stand perpetuating the heat islands with all stone mulch. She is excited to have them come in.

Councilman McOmber is happy to see this project coming after working on it for almost 6 years. He thinks it is the right time for Smiths Marketplace, the current Smiths has been an anchor to our community. He has no problem on the height for the business buildings and a movie theater. He appreciates going to the 30 feet lights. He also doesn't like rocks under the bushes, he prefers the rubber mulch. He would like a combination with rock and mulch designs. He mentioned that while The District is over-parked overall it

is under-parked in certain areas, so they may want to keep that in mind. He noted that they like the four sided architecture to not hinder near businesses.

Councilwoman Call is happy to see this project. She likes the suggested theme and would like to see it pulled throughout. She loves the potential of a movie theater. She asked what would happen to the current Smiths building.

Steve Sorensen said they typically try to close the existing store one evening and open the new store the next day. There have been feelers put out for new tenants for the current building. They have an obligation for several more years and they will work to lease it out.

Councilwoman Call noted they are excited to see development that will bring so many good things to the city.

Councilman Poduska commented that it was an outstanding plan and agrees with what has already been said. He noted the loyalty that people have for Smiths in the city and to see it as the cornerstone of the Crossings is excellent. He has no problem with the height changes. He agrees with the champagne lights and noted the need for less light pollution with Camp Williams close by. He mentioned parking would be good.

Mayor Miller said he did like the rock contrary to previous comments.

Adjourn to Policy Session 5:56

Policy Session Minutes

Present:
Mayor: Jim Miller
Council Members: Michael McOmber, Shellie Baertsch, Rebecca Call, Stephen Willden, Bud Poduska
Staff: Mark Christensen, Kimber Gabryszak, Kyle Spencer, Owen Jackson, Kevin Thurman, Jeremy Lapin, Sarah Carroll, Chelese Rawlings, Jess Campbell, Andrew Burton, Nicolette Fike
Others: Chris Porter, Barbara Poduska, Carl Ballard, Jesyca Hauer, Tate Hauer, Troy Herod

Call to Order 5:56p.m.
Roll Call – A quorum was present
Invocation / Reverence - Given by Councilwoman Call
Pledge of Allegiance - led by Jimmy Miller

Public Input - **Opened** by Mayor Miller
Chris Porter brought up the issue on Lake Mountain drive a property where the landscaping has not been taken care of and the residents have been told that Code Enforcement isn't prioritizing going after renters.
Councilwoman Call responded that Code Enforcement has noticed the property that they have until August 12th.
Public Input - Closed by Mayor Miller

POLICY ITEMS

1. PUBLIC HEARING ITEMS:

a. Public Hearing: Amendment to the City of Saratoga Springs Budget.

i. Resolution R15-34 (8-4-15): Amending the City of Saratoga Springs 2015-2016 Budget.

Chelese Rawlings noted the items on the amendment, removing the Senior Planner and replacing that with two new Planner I. The Library received donations and Civic Events signed an agreement for Communities that care and Guiding Good Choices and items that will be reimbursed through the County.

Public Hearing opened by Mayor Miller
No comment at this time
Public Hearing closed by Mayor Miller

Councilman McOmber thinks going to two planners is a great move for the amount of volume we have .
Councilman Willden also liked that even though they need the positions they have enough in application fees to cover it.

Motion made by Councilwoman Baertsch to approve Resolution R15-34 (8-4-15): Amending the City of Saratoga Springs 2015-2016 Budget. Seconded by Councilman McOmber. Aye: Councilman Willden, Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 5 - 0.

2. ACTION ITEMS:

b. Resolution R15-35 (8-4-15): Appointing Election Poll Workers to serve for the August 11, 2015 Primary Election.

Mark Christensen noted that this was filling the rest of the positions.

Motion made by Councilman McOmber to approve Resolution R15-35 (8-4-15): Appointing Election Poll Workers to serve for the August 11, 2015 Primary Election. Seconded by

Councilwoman Call. Aye: Councilman Willden, Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 5 - 0.

a. Budget Policy Document for Fiscal Year 2015-2016.

Mark Christensen said they needed to submit this before August 14th. They didn't change any of the policy section but incorporated changes in the introductory language and departmental descriptions.

Councilman Willden commented that he would be willing to approve it tonight pending those changes.
Councilwoman Baertsch agreed.
Councilwoman Call had a couple changes the she would suggest.

Motion made by Councilwoman Call to approve Budget Policy Document for Fiscal Year 2015-2016, Pending changes that will be sent to staff and City Council. Second Councilman Poduska. Aye: Councilman Willden, Councilwoman Baertsch, Councilman McOmber, Councilwoman Call, Councilman Poduska. Motion passed 5 - 0.

Policy Meeting Adjourned at 9:51p.m

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Date of Approval Mayor Jim Miller

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Lori Yates, City Recorder