2012

Powder Mountain Resort Water Master Plan

NV5
BEYOND ENGINEERING

12/21/2012

TABLE OF CONTENTS

1.0 PURPOSE & SCOPE

The Powder Mountain Water Distribution System Master Plan is intended to be a working document that will serve as a guide for the continued development of the Powder Mountain Resort. The purpose of this document is to provide information that can be utilized to design key aspects of the Powder Mountain water distribution system to ensure that this system will have adequate capacity to meet peak instantaneous demands as well as peak day demands with fire flow requirements during existing and build out conditions.

Since this is a working document all infrastructure sizing presented in this document is preliminary based on the best information available at the time. Each new/proposed development should review their own infrastructure based on their product type to ensure demands for peak day, peak instantaneous and fire flows are satisfied. Concurrently, this Master Plan should be kept updated with the latest information.

2.0 METHODOLOGY

The parameters used to evaluate the present and future capacity requirements of the water distribution system are based on R309-510 of the State of Utah Administrative Code for Public Drinking Water Systems. Parameters are as follows:

a. A minimum pipe diameter of 8" is required for all water mains serving fire hydrants. A minimum residual pressure of 20psi must be maintained at all points in the system during the peak day plus fire flow demands.
b. *Source sizing per R309-510-7 is defined as 800 gallons per day per connection (gpd/c) for homes and 800 gallons per day per equivalent residential connection (ERC) and multi-family/lodging are 150 gpd/ERC.
c. The requirement for the peak day demand for outdoor use is defined as 3.39 gallons per minute per irrigated acre (gpm/acre). This demand is based on Powder Mountain being in Map Area 3 (Map designation used by the Utah Department of Environmental Quality, Division of Drinking Water).
d. The distribution system must be capable of meeting the peak instantaneous indoor and outdoor demands. The peak instantaneous outdoor demand as outlined in R309-510-9 is 6.78 gpm/acre. The peak instantaneous outdoor demand is double the peak day outdoor demand and therefore the peaking factor is 2. R309-510 does not define a peaking factor for indoor demand. Rather, it recommends that it be the equation outlined in R309-510-9 (1)(a) where N is the number of ERC's as follows:

$$Q=10.8 \times N^{0.64}$$

e. Storage facilities must have a capacity of 400gal/ERC for indoor single family residential and 75 gal/ERC for multi-residential/ lodging per average day demand outlined in R309-510-8.
f. 2,000 gpm for both multi residential and residential units and 250,000 gallons have been provided for fire suppression as required by the local fire authority.
g. The maximum velocity allowable in a pipeline is 10 feet per second.

3.0 DESIGN ASSUMPTIONS

The Powder Mountain Resort has three types of demands; indoor, outdoor, and fire flow. The existing indoor demands and storage requirements were calculated by applying the Utah State Division of Drinking Water (DDW) demand and storage standards to the existing development. This was achieved by determining an equivalent residential connection (ERC) per square foot for each building type, such as hotel, single family, commercial, etc. The ERCs were developed by using through DDW standards. Table 1 shows the different building types with the calculated GPD/ERC. The Units/ERC as well as Irrigated SF/Unit was then multiplied by the number of rooms per building as defined under Avg. Room Size, or multiplied by the maximum allowable gross building area per parcel to determine the number of ERC's per building or number of ERC's per area respectively. To determine the peak day indoor demand the number of ERCs was multiplied by the DDW indoor peak day demand of 400gpd/ERC. The indoor peak instantaneous demand was calculated by using the equation outlined in *"2.0 Methodology"*. Required storage was determined by multiplying the number of ERCs by 400gal/unit and 75gal/unit for residential and multi-residential /lodging respectively.

TABLE 1

Landuse	ERC/Unit	GPD/Unit	GPD/ERC	Fireflow (GPM)	Irrigated SF/ Unit	Avg Room Size (SF)
residential	1.00	800	800	2000	5000.00	N/A
Residential/Multi Family/Hotel Lodging	0.19	150	800	2000	1000.00	1000.00
Amenity	0.19	150	800	2000	2000.00	5000.00
Hotel	0.19	150	800	2000	1000.00	1000.00
Condo Hotel	0.19	150	800	2000	1000.00	1000.00
Condo	0.19	150	800	2000	1000.00	1000.00
Townhouse	0.19	150	800	2000	1000.00	1000.00
Nest	0.19	150	800	2000	2000.00	N/A
Bungalow/Cabin	0.19	150	800	2000	2000.00	N/A
1/3-1 Ac	1.00	800	800	2000	5000.00	N/A
1-2 Ac	1.00	800	800	2000	5000.00	N/A
3-6 Ac	1.00	800	800	2000	5000.00	N/A
7-10 Ac	1.00	800	800	2000	5000.00	N/A
10+ Ac	1.00	800	800	2000	5000.00	N/A

TABLE 2

Area	ERC
Existing	123
Phase 1	145.22
Cobabe	56.25
DMI & Sundown	36.61
Hidden Lake	43.88
Lefty's Program	75.63
Mary's	35.00
Mid-Mountain	31.78
Paradise Ridge	17.00
Paradise Ridge & the Sliver	43.19
Ranch Land Program	20.00
Rock Outcropping	10.75
Stonehouse (Valhalla)	35.63
the Meadow	30.00
The Saddle	89.35

Existing outdoor irrigation demands and storage requirements are 3.39 gpm/ irr. ac. and 6.78 gpm/ irr. ac. for peak day and peak instantaneous demands respectively. As seen in Table 1, Irrigated SF is quite small. This is a result of Powder Mountain's efforts to generally preserve the existing mountain landscape within the resort area without adding any supplemental irrigation.

Fire flows and storage requirements for each building type were provided by from the local fire authority requiring a maximum fire flow 2,000 gpm and maximum storage of 250,000 gallons as required by the local fire authority.

4.0 ANALYSIS

4.1 EXISTING CONDITIONS

Cobabe (Pump House #1)

The Powder Mountain Resort receives its water supply through existing wells located at the Cobabe Pump House (PH) and the Panter PH located along State Road 158. Cobabe PH's source is a 45' well with a 1.5 hp motor at 55-60 gpm. There is a 1,500 gallon wet well buffer located in this pump house. This pump house has an active pump and a backup. Both pumps are 22-25 gpm at 3-5 hp respectively. There are 2 out of commission pumps that are 150 gpm each that have the potential to be reinstated. The discharge pipe is 4". This waterline does not serve any connections and discharges into Panter PH.

Panter (Pump House #2)
Panter has a 5 gpm source spring that contributes to the Cobabe discharge and is currently the only other authorized contributing source to the Powder Mountain Resort. There is a 1,500 gallon wet well buffer located in this pump house. This pump house has an active pump and a backup pump. Both pumps are 22-25 gpm at 3-5 hp respectively. There are 2 out of commission pumps that are 150 gpm each that have the potential to be reinstated. The discharge pipe is 4". This waterline acts as a fill/ feed line for the Timberline Storage Tank which supplies the Mid-mountain area.

Sundown (Pump House #3)
Sundown is the first pump house in the series that provides service in conjunction with Timberline and Hidden Lake to the adjacent existing development. This pump house does not have a source and is fed only by Panter PH. There is a 1,500 gallon wet well buffer located in this pump house. This pump house has an active pump and a backup. Both pumps are 22-25 gpm at 3-5 hp respectively. There are 2 out of commission pumps that are 150 gpm each that have the potential to be reinstated. The discharge pipe is 4". This waterline does not serve any connections and discharges into Timberline Storage (PH#4).

Timberline Storage (Pump House #4)
Timberline Storage is the first large storage tank in the system consisting of a 60,000 gallon concrete and 20,000 gallon fiberglass water tank. These tanks provide the Mid-Mountain area. This pump house has an active pump and a backup. Both pumps are 22-25 gpm at 3-5 hp respectively. The discharge pipe is 4". This storage in conjunction with Hidden Lake Storage serves all of the existing Powder Mountain connections and discharges into Hidden Lake Storage. Hidden Lake does not currently have an the ability to back feed down to Timberline Storage.

Hidden Lake Storage
Hidden Lake Storage is the highest and largest single storage tank in Powder Mountain Resort at an elevation of 8,900 feet and 80,000 gallons of storage. This tank feeds a smaller 7,500 gallon buffer tank and a 1.5 hp 25-46 gpm pump that supplies the Ski Patrol, Ticket Office and Lodge at Hidden Lake.

Existing Connections and Pipe Network

Paul Southwick and Angie Illum with Powder Mountain have indicated based off billing information that there are 123 culinary water connections. The existing demands on the water distribution system were calculated by using the Utah Automated Geographic Reference Center (AGRC) parcel data to get an understanding of how many existing properties are located in the Powder Mountain Resort. 93 connections were calculated (roughly 75% fewer connections than provided by Powder Mountain). It should be noted though that 800 gpd/ERC at noted in *"2.0 Methodology"* is a conservative estimate as these homes are recreational. The total peak day and peak instantaneous indoor demands required for currently platted lots are 88.50 gpm and 1,208.20 gpm respectively. Per DDW standards fire flow is added to peak day giving a peak day demand with fire flow of 2088.50 gpm. Therefore the controlling flow is the peak day demand with fire flow.

The total required storage for the existing infrastructure is 313,722 gallons including 250,000 gallons for fire storage.

Existing Conclusions
The existing culinary water system composed primarily of 4" infrastructure is inadequate providing the required peak day, peak instantaneous and peak day with fire flow demands as well as providing storage for average peak day demand and fire suppression as required under the section *"2.0 Methodology".*

Improvements Needed
Pipe networks would need to be upsized to a minimum of 8" for fire suppression.

4.2 PHASE 1 CONDITIONS

This section addresses the developments that are predicted to begin construction in 2013. The existing major water infrastructure, such as transmission lines, tanks and sources are inadequate to serve Phase 1. The existing distribution system is supplied almost entirely by 4" waterline where R309-510 requires a minimum of 8" waterline as outlined in section *"2.0 Methodology".*

Phase 1 demands have been calculated based on the Site Plan provided by Langvardt Design Group. There will be a 16" waterline that will connect a 227 gpm minimum producing well (source based on groundwater analysis provided by Laughlin Study) to a minimum 413,749 gallon tank (storage). This 10" pipe will connect the new storage tank to the existing Hidden Lake 80,000 gallon tank. These tanks are located at the same elevation and will work together to maintain pressure and flow for peak day, peak instantaneous and peak day demand with fire flow. The indoor and outdoor demands have been adjusted to match the increase in building infrastructure and were calculated in the same manner as described in the *"3.0 Design Assumptions"* section.

Also, fire flows and storage requirements will remain the same for the Existing, Phase 1 and Master Plan scenarios as described in *"2.0 Methodology".*

The Phase 1 total domestic peak day and peak instantaneous demands are 316 gpm and 2,579 gpm respectively with 145 ERCs as shown in *"Table 2"*. The indoor peak instantaneous was calculated using the equation outlined in *"2.0 Methodology"*. Per DDW standards fire flow is added to peak day giving a peak day demand with fire flow of 2,316 gpm. Therefore the controlling flow is the peak instantaneous demand. The total required storage for the Phase 1 infrastructure is 413,749 gallons which includes 250,000 gallons of fire storage.

The distribution system with the proposed infrastructure has no deficiencies under peak day, peak instantaneous, and peak day with fire. The existing system will not benefit from Phase 1 improvements. It is recommended that as the resort is developed, the water model is updated accordingly.

4.3 MASTER PLAN CONDITIONS

This section addresses the future Master Plan of the Powder Mountain Resort. The ERC calculations of the Master Plan are based on the High Density Alternative Program outlined in the "*Powder Mountain Planning Studies Summary Book"* conducted by Hart/ Howerton in July 18, 2012. Waterlines have been modeled with demands for each region located in the Master Plan. Since some of the master planned regions are located in the existing developed areas, existing 4" waterlines will need to be upsized to 10" waterlines. Existing junctions adjacent to the waterline upgrades will now meet the requirements outlined in *"2.0 Methodology"*. The source and storage described in *"4.2 Phase 1 Conditions"* was sized for Master Plan scenario, therefore, no other infrastructure other than distribution piping will be necessary for the built out development. The attached exhibits in the Appendix and WaterCAD Tables show distribution sizes and flows. The demands for indoor and outdoor were calculated for the increase in building infrastructure in the same manner as described in the *"4.2 Phase 1 Conditions"* section. The fire flow of 2,000 gpm and storage of 250,000 gal remains the same as described in the *"2.0 Methodology"* section.

The Master Plan total culinary peak day and peak instantaneous demands are 756 gpm and 4,720 gpm respectively with ERCs as shown in *"Table 2"*. The indoor peak instantaneous was calculated using the equation outlined in *"2.0 Methodology"*. Per DDW standards fire flow is added to peak day giving a peak day demand with fire flow of 2,756 gpm. Therefore the controlling flow is the peak instantaneous demand. The total required storage for the Master Plan infrastructure is 794,002 gallons which includes 250,000 gallons of fire storage.

The distribution system with the proposed infrastructure has no deficiencies under peak day, peak instantaneous, and peak day with fire. As the existing 4" waterline is upgraded to a 10" waterline. It is recommended that as the resort is developed, the water model is updated accordingly.

5.0 RECOMMENDATIONS

Listed below in order of importance are the recommendations based on the results from this Master Plan.

1. Construct new minimum 413,749 gallon water tank and minimum 227 gpm source at The Saddle in Phase 1 as well as supporting infrastructure (pipeline, pumps, etc) to provide additional storage capacity for future developments. Ultimate storage and source development of 794,002 gallons and 756 gpm respectively will be required to meet Master Plan demands.
2. Update demands and Master Plan as more information becomes available.
3. Update Master Plan with each proposed development.
4. Upgrade connections from Hidden Lake to timberline to allow fill of Timberline from Hidden Lake with appropriate line size.
5. Upgrade pipeline from timberline to Mid-Mountain to provide adequate fire suppression.

APPENDIX A

AutoCAD Exhibits
Existing PD + FF
Phase 1 PD + FF
Master Plan (High Density) PD + FF
Pressure Zones Exhibit

WaterCAD Tables

Existing
Junction Report
Pipe Report
Fire Flow Report

Phase 1
Junction Report
Pipe Report
Fire Flow Report

Master Plan
Junction Report
Pipe Report
Fire Flow Report

	EXISTING	PHASE 1	MASTER PLAN
*AVERAGE PEAK DAY STORAGE SIZING (GAL)	63,722	163,749	544,002
**AVG. PEAK DAY WITH FIRE FLOW STORAGE SIZING (GAL)	313,722	413,749	794,002
*SOURCE SIZING (GPM)	89	227	756

*WATER SOURCE/ STORAGE SIZING IN ACCORDANCE WITH UTAH ADMINISTRATIVE CODE R309-510.

**250,000 GAL FIRE FLOW STORAGE REQUIRED BY LOCAL FIRE AUTHORITY

SCALE
HORIZONTAL: 1" = 250'
0 62.5' 125' 250' 375'

WATERLINE DIAMETER
INACTIVE IN THIS PHASE
4"
6"
8"
10"
16"
JUNCTION
TANK
PUMP
RESERVOIR

PRELIMINARY
NOT FOR CONSTRUCTION

POWDER MOUNTAIN RESORT

EXISTING CULINARY WATER SYSTEM

PREPARED FOR: POWDER MOUNTAIN
DATE SUBMITTED: OCT. 2012

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NO.	BY	DATE	REVISIONS:

CAUTION: The engineer preparing these plans will not be responsible for, or liable for, unauthorized changes to or uses of these plans. All changes to the plans must be in writing and must be approved by the preparer of these plans.

SHEET NUMBER 1 OF 3 SHEETS

SCALE
VERTICAL: 1" = N/A
HORIZONTAL: 1" = 250'

JOB NUMBER
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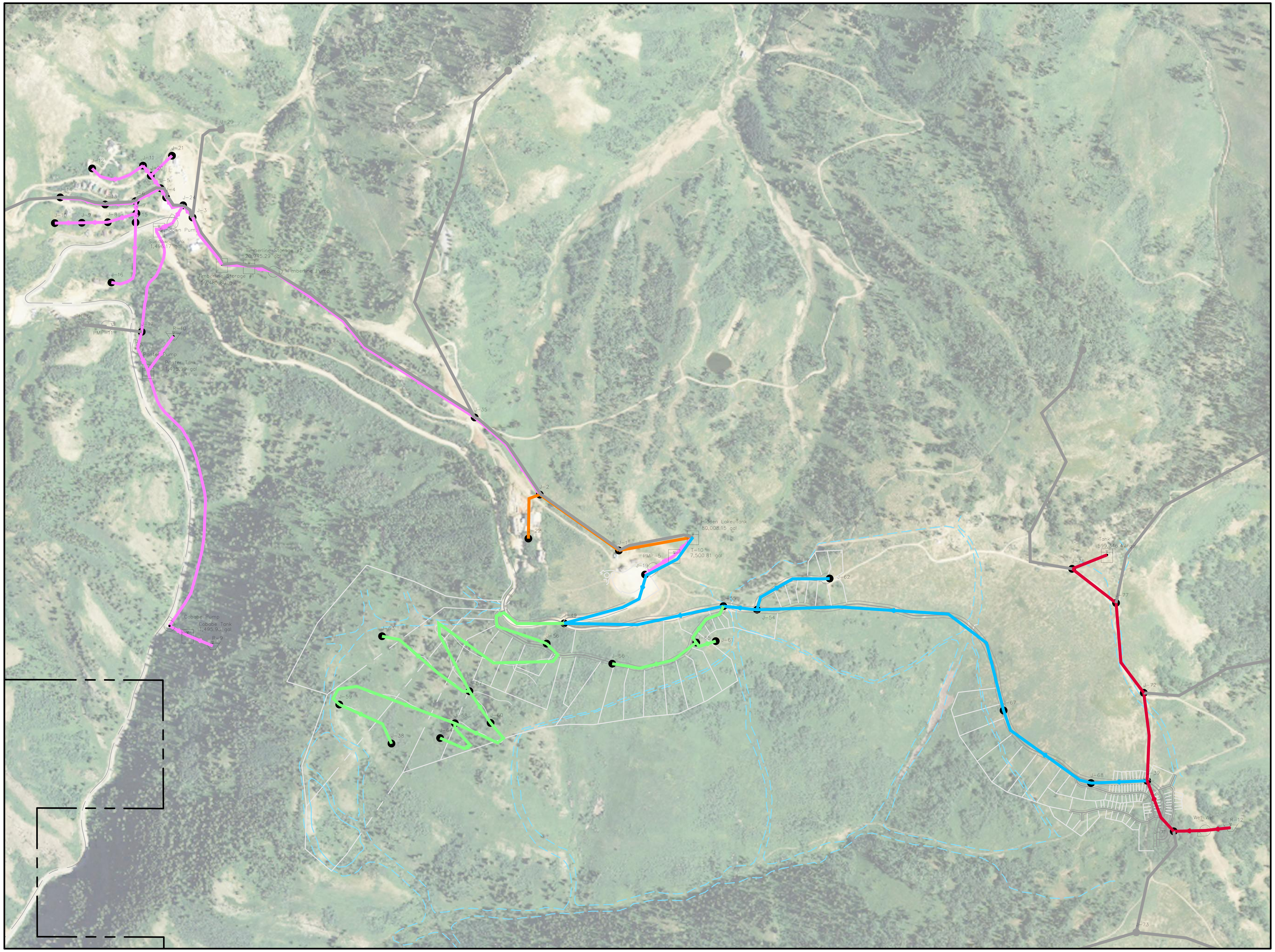

PRELIMINARY
NOT FOR CONSTRUCTION

SCALE
HORIZONTAL: 1" = 500'
0 125' 250' 500' 750'

WATERLINE DIAMETER
- INACTIVE IN THIS PHASE
- 4"
- 6"
- 8"
- 10"
- 16"
- JUNCTION
- TANK
- PUMP
- RESERVOIR

	EXISTING	PHASE 1	MASTER PLAN
*AVERAGE PEAK DAY STORAGE SIZING (GAL)	63,722	163,749	544,002
**AVG. PEAK DAY WITH FIRE FLOW STORAGE SIZING (GAL)	313,722	413,749	794,002
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**250,000 GAL FIRE FLOW STORAGE REQUIRED BY LOCAL FIRE AUTHORITY

POWDER MOUNTAIN RESORT
PHASE 1
CULINARY WATER SYSTEM

PREPARED FOR: POWDER MOUNTAIN

DATE SUBMITTED: OCT. 2012

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SHEET NUMBER 2 OF 3 SHEETS

SCALE
VERTICAL: 1"= N/A
HORIZONTAL: 1"= 500'

JOB NUMBER
SLB0793

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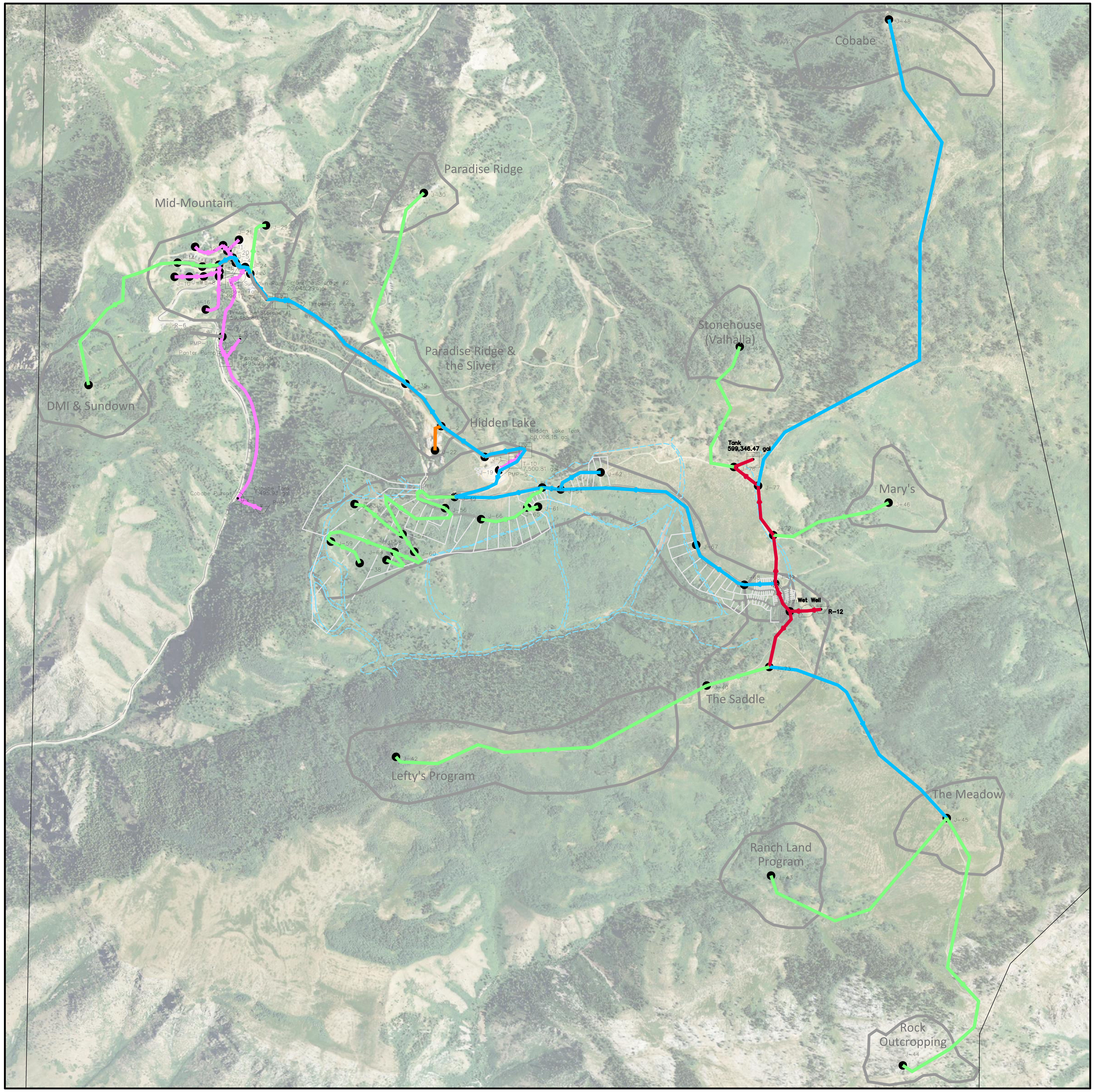

PRELIMINARY
NOT FOR CONSTRUCTION

	EXISTING	PHASE 1	MASTER PLAN
*AVERAGE PEAK DAY STORAGE SIZING (GAL)	63,722	163,749	544,002
**AVG. PEAK DAY WITH FIRE FLOW STORAGE SIZING (GAL)	313,722	413,749	794,002
*SOURCE SIZING (GPM)	89	227	756

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**250,000 GAL FIRE FLOW STORAGE REQUIRED BY LOCAL FIRE AUTHORITY

SCALE
HORIZONTAL: 1" =1000'
0 250' 500' 1000' 1500'

WATERLINE DIAMETER
- INACTIVE IN THIS PHASE
- 4"
- 6"
- 8"
- 10"
- 16"
- JUNCTION
- TANK
- PUMP
- RESERVOIR

NO.	BY	DATE	REVISIONS:

CAUTION
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POWDER MOUNTAIN RESORT
MASTER PLAN
CULINARY WATER SYSTEM

PREPARED FOR: POWDER MOUNTAIN
DATE SUBMITTED: OCT. 2012

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SHEET NUMBER
3
OF 3 SHEETS

SCALE
VERTICAL: 1"= N/A
HORIZONTAL: 1"= 1000'

JOB NUMBER
SLB0793

Existing Peak Day

FlexTable: Junction Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	8,893.06	0.00	9,048.59	67.3
J-2	8,742.82	0.00	9,048.59	132.3
J-3	8,246.10	4.25	8,467.28	95.7
J-4	8,259.54	2.73	8,466.75	89.7
J-5	8,275.07	0.00	8,466.57	82.9
J-6	8,275.87	2.00	8,466.44	82.5
J-7	8,247.53	2.67	8,466.41	94.7
J-8	8,236.03	2.67	8,466.38	99.7
J-9	8,237.23	3.33	8,466.37	99.1
J-10	8,216.61	4.00	8,466.37	108.1
J-11	8,320.86	5.34	8,466.44	63.0
J-12	8,367.78	18.01	8,466.27	42.6
J-13	8,296.86	2.00	8,466.43	73.4
J-14	8,313.28	3.33	8,466.43	66.3
J-15	8,218.24	0.67	8,466.41	107.4
J-16	8,054.24	2.73	8,466.41	178.3
J-17	7,935.93	0.00	8,263.66	141.8
J-19	8,902.54	0.64	9,028.08	54.3
J-20	8,298.99	0.00	8,466.50	72.5
J-21	8,242.71	0.00	8,466.50	96.8
J-22	8,765.78	8.31	9,048.59	122.4
J-24	8,240.79	0.00	8,467.20	98.0
J-27	8,613.10	(N/A)	(N/A)	(N/A)
J-29	8,122.92	(N/A)	(N/A)	(N/A)
J-30	8,500.50	(N/A)	(N/A)	(N/A)
J-35	8,640.00	0.00	9,048.66	176.8
J-38	8,215.46	(N/A)	(N/A)	(N/A)
J-39	8,635.88	(N/A)	(N/A)	(N/A)
J-40	8,550.00	(N/A)	(N/A)	(N/A)
J-42	8,123.00	(N/A)	(N/A)	(N/A)
J-43	8,077.85	(N/A)	(N/A)	(N/A)
J-44	8,730.00	(N/A)	(N/A)	(N/A)
J-45	8,430.00	(N/A)	(N/A)	(N/A)
J-46	8,245.00	(N/A)	(N/A)	(N/A)
J-47	8,612.00	(N/A)	(N/A)	(N/A)
J-48	8,510.00	(N/A)	(N/A)	(N/A)
J-49	8,808.45	(N/A)	(N/A)	(N/A)
J-54	8,760.40	(N/A)	(N/A)	(N/A)
J-55	8,792.66	(N/A)	(N/A)	(N/A)
J-56	8,745.56	(N/A)	(N/A)	(N/A)
J-57	8,518.05	(N/A)	(N/A)	(N/A)
J-58	8,401.73	(N/A)	(N/A)	(N/A)
J-59	8,265.18	(N/A)	(N/A)	(N/A)
J-60	8,479.02	(N/A)	(N/A)	(N/A)
J-61	8,724.73	(N/A)	(N/A)	(N/A)
J-62	8,803.62	(N/A)	(N/A)	(N/A)
J-63	8,487.29	(N/A)	(N/A)	(N/A)

FlexTable: Junction Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-64	8,339.73	(N/A)	(N/A)	(N/A)
J-65	8,737.65	(N/A)	(N/A)	(N/A)
J-66	8,709.07	(N/A)	(N/A)	(N/A)
J-67	8,636.99	(N/A)	(N/A)	(N/A)
J-68	8,626.08	(N/A)	(N/A)	(N/A)
J-71	8,614.98	(N/A)	(N/A)	(N/A)
J-72	8,784.00	(N/A)	(N/A)	(N/A)
J-73	8,579.29	(N/A)	(N/A)	(N/A)
J-76	8,690.84	(N/A)	(N/A)	(N/A)
J-77	8,869.00	(N/A)	(N/A)	(N/A)

Existing Peak Day

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-1	786	Hidden Lake Tank	J-1	6.0	Ductile Iron	140.0	0.00	0.00
P-2	1,011	J-1	J-2	6.0	Ductile Iron	140.0	0.00	0.00
P-8	113	J-4	J-5	4.0	Ductile Iron	140.0	46.74	1.19
P-9	293	J-5	J-6	4.0	Ductile Iron	140.0	23.40	0.60
P-10	127	J-6	J-7	4.0	Ductile Iron	140.0	16.07	0.41
P-11	312	J-7	J-8	4.0	Ductile Iron	140.0	10.00	0.26
P-12	272	J-8	J-9	4.0	Ductile Iron	140.0	7.34	0.19
P-13	282	J-9	J-10	4.0	Ductile Iron	140.0	4.00	0.10
P-15	608	J-11	J-12	4.0	Ductile Iron	140.0	18.01	0.46
P-16	324	J-6	J-13	4.0	Ductile Iron	140.0	5.34	0.14
P-17	478	J-13	J-14	4.0	Ductile Iron	140.0	3.33	0.09
P-18	97	J-7	J-15	4.0	Ductile Iron	140.0	3.39	0.09
P-19	825	J-15	J-16	4.0	Ductile Iron	140.0	2.73	0.07
P-26	256	T-10	PMP-5	1.5	Ductile Iron	140.0	0.64	0.12
P-27	214	T-10	Hidden Lake Tank	4.0	Ductile Iron	140.0	0.00	0.00
P-28	108	J-19	PMP-5	1.5	Ductile Iron	140.0	-0.64	0.12
P-30	263	Timberline Storage #2	Timberline Pump	4.0	Ductile Iron	140.0	8.31	0.21
P-33	166	J-5	J-20	4.0	Ductile Iron	140.0	23.34	0.60
P-34	133	J-20	J-11	4.0	Ductile Iron	140.0	23.34	0.60
P-35	304	J-21	J-20	4.0	Ductile Iron	140.0	0.00	0.00
P-36	537	J-2	J-22	6.0	Ductile Iron	140.0	8.31	0.09
P-37	418	J-17	R-6	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-38	168	R-6	PMP-11	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-41	2,907	Panter Tank	Cobabe Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-42	214	Cobabe Tank	Cobabe Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-48	176	J-17	Panter Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-49	263	Panter Tank	Panter Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-50	239	J-24	J-4	4.0	Ductile Iron	140.0	49.47	1.26

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-51	155	Sundown Tank	Sundown Pump	4.0	Ductile Iron	140.0	27.68	0.71
P-52	1,173	Sundown Tank	J-17	4.0	Ductile Iron	140.0	0.00	0.00
P-53	449	R-10	Panter Tank	0.5	Ductile Iron	140.0	3.74	6.11
P-56	284	R-9	Cobabe Tank	0.9	Ductile Iron	140.0	59.16	29.84
P-57	161	J-3	J-24	4.0	Ductile Iron	140.0	21.79	0.56
P-58	218	J-24	Sundown Pump	4.0	Ductile Iron	140.0	-27.68	0.71
P-62	586	Timberline Storage #1	J-3	4.0	Ductile Iron	140.0	26.04	0.66
P-63	284	Timberline Storage #1	Timberline Storage #2	4.0	Ductile Iron	140.0	0.17	0.00
P-66	1,070	J-29	J-3	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-70	1,064	J-2	J-35	4.0	Ductile Iron	140.0	-8.31	0.21
P-71	2,607	J-35	Timberline Pump	4.0	Ductile Iron	140.0	-8.31	0.21
P-72	4,022	J-30	J-35	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-80	6,339	J-40	J-42	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-89	3,489	J-27	J-14	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-100	353	J-54	J-55	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-101	1,684	J-55	J-49	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-103	1,418	J-56	J-49	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-105	2,364	J-57	J-56	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-108	721	J-38	J-59	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-109	1,490	J-59	J-58	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-110	777	J-58	J-60	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-111	398	J-60	J-57	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-114	909	J-62	J-54	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-115	1,110	J-63	J-57	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-116	643	J-64	J-58	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-117	544	J-55	J-65	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-118	232	J-65	J-61	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-119	953	J-66	J-65	8.0	Ductile Iron	140.0	(N/A)	(N/A)

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-121	3,229	J-67	J-54	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-122	588	J-39	J-68	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-123	1,231	J-68	J-67	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-129	6,036	J-44	J-45	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-133	606	J-71	J-39	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-134	329	Wet Well	J-71	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-135	922	J-39	J-72	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-137	2,323	J-72	J-46	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-138	4,673	J-45	J-73	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-139	1,182	J-73	J-71	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-140	1,239	J-40	J-73	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-142	393	Tank	J-76	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-145	1,022	J-72	J-77	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-146	581	J-77	J-76	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-147	10,843	J-48	J-77	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-148	4,535	J-43	J-45	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-149	2,955	J-47	J-76	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-152	479	J-14	J-13	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-153	326	J-13	J-6	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-154	307	J-6	J-5	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-155	143	J-5	J-4	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-156	218	J-4	J-24	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-157	174	J-24	J-3	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-158	590	J-3	Timberline Storage #1	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-159	289	Timberline Storage #1	Timberline Storage #2	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-160	272	Timberline Storage #2	Timberline Pump	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-161	2,612	Timberline Pump	J-35	10.0	Ductile Iron	140.0	(N/A)	(N/A)

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-162	1,075	J-35	J-2	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-163	1,018	J-2	J-1	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-164	799	J-1	Hidden Lake Tank	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-168	267	R-12	Wet Well	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-173	1,732	J-49	Hidden Lake Tank	10.0	Ductile Iron	140.0	(N/A)	(N/A)

Existing Peak Day W/ Fire Flow

Fire Flow Node FlexTable: Fire Flow Report (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)
J-1	True	0.00	0.50	66.6
J-2	True	0.00	1.00	130.8
J-3	True	0.00	5.25	95.7
J-4	True	0.00	3.73	89.6
J-5	True	0.00	1.00	82.8
J-6	True	0.00	3.00	82.4
J-7	True	0.00	3.67	94.7
J-8	True	0.00	3.67	99.6
J-9	True	0.00	4.33	99.1
J-10	True	0.00	5.00	108.0
J-11	True	0.00	6.34	62.9
J-12	True	0.00	19.01	42.6
J-13	True	0.00	3.00	73.3
J-14	True	0.00	4.33	66.2
J-15	True	0.00	1.67	107.3
J-16	True	0.00	3.73	178.3
J-17	True	0.00	1.00	141.8
J-19	True	0.00	1.64	54.0
J-20	True	0.00	1.00	72.4
J-21	True	0.00	1.00	96.8
J-22	True	0.00	9.31	120.9
J-24	True	0.00	1.00	97.9
J-27	(N/A)	2,000.00	(N/A)	(N/A)
J-29	(N/A)	2,000.00	(N/A)	(N/A)
J-30	(N/A)	2,000.00	(N/A)	(N/A)
J-35	True	0.00	1.00	175.4
J-38	(N/A)	2,000.00	(N/A)	(N/A)
J-39	(N/A)	0.00	(N/A)	(N/A)
J-40	(N/A)	2,000.00	(N/A)	(N/A)
J-42	(N/A)	2,000.00	(N/A)	(N/A)
J-43	(N/A)	2,000.00	(N/A)	(N/A)
J-44	(N/A)	2,000.00	(N/A)	(N/A)
J-45	(N/A)	2,000.00	(N/A)	(N/A)
J-46	(N/A)	2,000.00	(N/A)	(N/A)
J-47	(N/A)	2,000.00	(N/A)	(N/A)
J-48	(N/A)	2,000.00	(N/A)	(N/A)
J-49	(N/A)	0.00	(N/A)	(N/A)
J-54	(N/A)	2,000.00	(N/A)	(N/A)
J-55	(N/A)	2,000.00	(N/A)	(N/A)
J-56	(N/A)	2,000.00	(N/A)	(N/A)
J-57	(N/A)	0.00	(N/A)	(N/A)
J-58	(N/A)	0.00	(N/A)	(N/A)
J-59	(N/A)	2,000.00	(N/A)	(N/A)
J-60	(N/A)	2,000.00	(N/A)	(N/A)
J-61	(N/A)	2,000.00	(N/A)	(N/A)
J-62	(N/A)	2,000.00	(N/A)	(N/A)
J-63	(N/A)	2,000.00	(N/A)	(N/A)
J-64	(N/A)	2,000.00	(N/A)	(N/A)
J-65	(N/A)	2,000.00	(N/A)	(N/A)
J-66	(N/A)	2,000.00	(N/A)	(N/A)

Fire Flow Node FlexTable: Fire Flow Report (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)
J-67	(N/A)	2,000.00	(N/A)	(N/A)
J-68	(N/A)	2,000.00	(N/A)	(N/A)
J-71	(N/A)	0.00	(N/A)	(N/A)
J-72	(N/A)	0.00	(N/A)	(N/A)
J-73	(N/A)	0.00	(N/A)	(N/A)
J-76	(N/A)	0.00	(N/A)	(N/A)
J-77	(N/A)	0.00	(N/A)	(N/A)

Existing Peak Instantaneous

FlexTable: Junction Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	8,893.06	0.00	8,888.83	-1.8
J-2	8,742.82	0.00	8,885.32	61.7
J-3	8,246.10	73.18	8,091.83	-66.7
J-4	8,259.54	29.23	7,940.74	-137.9
J-5	8,275.07	0.00	7,902.35	-161.3
J-6	8,275.87	34.73	7,872.51	-174.5
J-7	8,247.53	46.31	7,865.62	-165.2
J-8	8,236.03	46.31	7,859.93	-162.7
J-9	8,237.23	57.89	7,857.14	-164.4
J-10	8,216.61	69.47	7,856.20	-155.9
J-11	8,320.86	92.63	7,876.23	-192.4
J-12	8,367.78	312.61	7,843.33	-226.9
J-13	8,296.86	34.73	7,870.66	-184.4
J-14	8,313.28	57.89	7,869.52	-192.0
J-15	8,218.24	11.58	7,865.07	-152.8
J-16	8,054.24	80.96	7,861.41	-83.4
J-17	7,935.93	0.00	8,263.66	141.8
J-19	8,902.54	13.93	9,007.46	45.4
J-20	8,298.99	0.00	7,887.84	-177.9
J-21	8,242.71	0.00	7,887.84	-153.5
J-22	8,765.78	246.73	8,882.72	50.6
J-24	8,240.79	0.00	8,032.75	-90.0
J-27	8,613.10	(N/A)	(N/A)	(N/A)
J-29	8,122.92	(N/A)	(N/A)	(N/A)
J-30	8,500.50	(N/A)	(N/A)	(N/A)
J-35	8,640.00	0.00	8,886.63	106.7
J-38	8,215.46	(N/A)	(N/A)	(N/A)
J-39	8,635.88	(N/A)	(N/A)	(N/A)
J-40	8,550.00	(N/A)	(N/A)	(N/A)
J-42	8,123.00	(N/A)	(N/A)	(N/A)
J-43	8,077.85	(N/A)	(N/A)	(N/A)
J-44	8,730.00	(N/A)	(N/A)	(N/A)
J-45	8,430.00	(N/A)	(N/A)	(N/A)
J-46	8,245.00	(N/A)	(N/A)	(N/A)
J-47	8,612.00	(N/A)	(N/A)	(N/A)
J-48	8,510.00	(N/A)	(N/A)	(N/A)
J-49	8,808.45	(N/A)	(N/A)	(N/A)
J-54	8,760.40	(N/A)	(N/A)	(N/A)
J-55	8,792.66	(N/A)	(N/A)	(N/A)
J-56	8,745.56	(N/A)	(N/A)	(N/A)
J-57	8,518.05	(N/A)	(N/A)	(N/A)
J-58	8,401.73	(N/A)	(N/A)	(N/A)
J-59	8,265.18	(N/A)	(N/A)	(N/A)
J-60	8,479.02	(N/A)	(N/A)	(N/A)
J-61	8,724.73	(N/A)	(N/A)	(N/A)
J-62	8,803.62	(N/A)	(N/A)	(N/A)
J-63	8,487.29	(N/A)	(N/A)	(N/A)
J-64	8,339.73	(N/A)	(N/A)	(N/A)
J-65	8,737.65	(N/A)	(N/A)	(N/A)
J-66	8,709.07	(N/A)	(N/A)	(N/A)
J-67	8,636.99	(N/A)	(N/A)	(N/A)
J-68	8,626.08	(N/A)	(N/A)	(N/A)
J-71	8,614.98	(N/A)	(N/A)	(N/A)

FlexTable: Junction Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-72	8,784.00	(N/A)	(N/A)	(N/A)
J-73	8,579.29	(N/A)	(N/A)	(N/A)
J-76	8,690.84	(N/A)	(N/A)	(N/A)
J-77	8,869.00	(N/A)	(N/A)	(N/A)

Existing Peak Instantaneous

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-1	786	Hidden Lake Tank	J-1	6.0	Ductile Iron	140.0	206.21	2.34
P-2	1,011	J-1	J-2	6.0	Ductile Iron	140.0	206.21	2.34
P-8	113	J-4	J-5	4.0	Ductile Iron	140.0	845.13	21.58
P-9	293	J-5	J-6	4.0	Ductile Iron	140.0	439.88	11.23
P-10	127	J-6	J-7	4.0	Ductile Iron	140.0	312.52	7.98
P-11	312	J-7	J-8	4.0	Ductile Iron	140.0	173.67	4.43
P-12	272	J-8	J-9	4.0	Ductile Iron	140.0	127.36	3.25
P-13	282	J-9	J-10	4.0	Ductile Iron	140.0	69.47	1.77
P-15	608	J-11	J-12	4.0	Ductile Iron	140.0	312.61	7.98
P-16	324	J-6	J-13	4.0	Ductile Iron	140.0	92.63	2.36
P-17	478	J-13	J-14	4.0	Ductile Iron	140.0	57.89	1.48
P-18	97	J-7	J-15	4.0	Ductile Iron	140.0	92.54	2.36
P-19	825	J-15	J-16	4.0	Ductile Iron	140.0	80.96	2.07
P-26	256	T-10	PMP-5	1.5	Ductile Iron	140.0	13.93	2.53
P-27	214	T-10	Hidden Lake Tank	4.0	Ductile Iron	140.0	0.00	0.00
P-28	108	J-19	PMP-5	1.5	Ductile Iron	140.0	-13.93	2.53
P-30	263	Timberline Storage #2	Timberline Pump	4.0	Ductile Iron	140.0	40.52	1.03
P-33	166	J-5	J-20	4.0	Ductile Iron	140.0	405.24	10.35
P-34	133	J-20	J-11	4.0	Ductile Iron	140.0	405.24	10.35
P-35	304	J-21	J-20	4.0	Ductile Iron	140.0	0.00	0.00
P-36	537	J-2	J-22	6.0	Ductile Iron	140.0	246.73	2.80
P-37	418	J-17	R-6	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-38	168	R-6	PMP-11	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-41	2,907	Panter Tank	Cobabe Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-42	214	Cobabe Tank	Cobabe Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-48	176	J-17	Panter Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-49	263	Panter Tank	Panter Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-50	239	J-24	J-4	4.0	Ductile Iron	140.0	874.36	22.32

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-51	155	Sundown Tank	Sundown Pump	4.0	Ductile Iron	140.0	74.66	1.91
P-52	1,173	Sundown Tank	J-17	4.0	Ductile Iron	140.0	0.00	0.00
P-53	449	R-10	Panter Tank	0.5	Ductile Iron	140.0	3.74	6.11
P-56	284	R-9	Cobabe Tank	0.9	Ductile Iron	140.0	59.18	29.85
P-57	161	J-3	J-24	4.0	Ductile Iron	140.0	799.70	20.42
P-58	218	J-24	Sundown Pump	4.0	Ductile Iron	140.0	-74.66	1.91
P-62	586	Timberline Storage #1	J-3	4.0	Ductile Iron	140.0	872.88	22.29
P-63	284	Timberline Storage #1	Timberline Storage #2	4.0	Ductile Iron	140.0	0.37	0.01
P-66	1,070	J-29	J-3	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-70	1,064	J-2	J-35	4.0	Ductile Iron	140.0	-40.52	1.03
P-71	2,607	J-35	Timberline Pump	4.0	Ductile Iron	140.0	-40.52	1.03
P-72	4,022	J-30	J-35	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-80	6,339	J-40	J-42	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-89	3,489	J-27	J-14	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-100	353	J-54	J-55	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-101	1,684	J-55	J-49	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-103	1,418	J-56	J-49	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-105	2,364	J-57	J-56	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-108	721	J-38	J-59	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-109	1,490	J-59	J-58	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-110	777	J-58	J-60	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-111	398	J-60	J-57	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-114	909	J-62	J-54	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-115	1,110	J-63	J-57	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-116	643	J-64	J-58	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-117	544	J-55	J-65	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-118	232	J-65	J-61	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-119	953	J-66	J-65	8.0	Ductile Iron	140.0	(N/A)	(N/A)

Existing Peak Instantaneous

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-121	3,229	J-67	J-54	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-122	588	J-39	J-68	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-123	1,231	J-68	J-67	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-129	6,036	J-44	J-45	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-133	606	J-71	J-39	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-134	329	Wet Well	J-71	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-135	922	J-39	J-72	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-137	2,323	J-72	J-46	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-138	4,673	J-45	J-73	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-139	1,182	J-73	J-71	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-140	1,239	J-40	J-73	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-142	393	Tank	J-76	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-145	1,022	J-72	J-77	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-146	581	J-77	J-76	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-147	10,843	J-48	J-77	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-148	4,535	J-43	J-45	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-149	2,955	J-47	J-76	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-152	479	J-14	J-13	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-153	326	J-13	J-6	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-154	307	J-6	J-5	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-155	143	J-5	J-4	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-156	218	J-4	J-24	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-157	174	J-24	J-3	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-158	590	J-3	Timberline Storage #1	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-159	289	Timberline Storage #1	Timberline Storage #2	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-160	272	Timberline Storage #2	Timberline Pump	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-161	2,612	Timberline Pump	J-35	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-162	1,075	J-35	J-2	10.0	Ductile Iron	140.0	(N/A)	(N/A)

Existing Peak Instantaneous

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-163	1,018	J-2	J-1	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-164	799	J-1	Hidden Lake Tank	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-168	267	R-12	Wet Well	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-173	1,732	J-49	Hidden Lake Tank	10.0	Ductile Iron	140.0	(N/A)	(N/A)

Phase 1 Peak Day

FlexTable: Junction Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	8,893.06	0.00	8,890.32	-1.2
J-2	8,742.82	0.00	8,890.32	63.8
J-3	8,246.10	4.25	8,467.79	95.9
J-4	8,259.54	2.73	8,467.78	90.1
J-5	8,275.07	0.00	8,467.77	83.4
J-6	8,275.87	2.00	8,467.77	83.0
J-7	8,247.53	2.67	8,467.74	95.3
J-8	8,236.03	2.67	8,467.71	100.2
J-9	8,237.23	3.33	8,467.70	99.7
J-10	8,216.61	4.00	8,467.69	108.6
J-11	8,320.86	5.34	8,467.64	63.5
J-12	8,367.78	18.01	8,467.48	43.1
J-13	8,296.86	2.00	8,467.76	73.9
J-14	8,313.28	3.33	8,467.75	66.8
J-15	8,218.24	0.67	8,467.74	107.9
J-16	8,054.24	2.73	8,467.73	178.9
J-17	7,935.93	0.00	8,263.66	141.8
J-19	8,902.54	31.04	8,960.08	24.9
J-20	8,298.99	0.00	8,467.70	73.0
J-21	8,242.71	0.00	8,467.70	97.3
J-22	8,765.78	8.31	8,890.31	53.9
J-24	8,240.79	0.00	8,467.79	98.2
J-27	8,613.10	25.46	8,467.69	-62.9
J-29	8,122.92	22.37	8,467.78	149.2
J-30	8,500.50	11.34	8,890.30	168.6
J-35	8,640.00	33.59	8,890.32	108.3
J-38	8,215.46	0.67	9,000.00	339.4
J-39	8,635.88	0.00	9,000.08	157.6
J-40	8,550.00	74.09	8,999.64	194.5
J-42	8,123.00	52.91	8,999.21	379.1
J-43	8,077.85	13.34	8,999.98	399.0
J-44	8,730.00	7.27	9,000.00	116.8
J-45	8,430.00	20.01	9,000.01	246.6
J-46	8,245.00	23.34	9,000.04	326.7
J-47	8,612.00	27.02	9,000.01	167.9
J-48	8,510.00	41.15	8,999.91	212.0
J-49	8,808.45	0.00	9,000.00	82.9
J-54	8,760.40	6.66	9,000.00	103.7
J-55	8,792.66	2.67	9,000.00	89.7
J-56	8,745.56	2.67	9,000.00	110.1
J-57	8,518.05	0.00	9,000.00	208.5
J-58	8,401.73	0.00	9,000.00	258.8
J-59	8,265.18	0.67	9,000.00	317.9
J-60	8,479.02	0.67	9,000.00	225.4
J-61	8,724.73	2.00	9,000.00	119.1
J-62	8,803.62	6.00	9,000.00	85.0
J-63	8,487.29	0.67	9,000.00	221.8
J-64	8,339.73	0.67	9,000.00	285.7
J-65	8,737.65	2.00	9,000.00	113.5
J-66	8,709.07	2.67	9,000.00	125.9
J-67	8,636.99	5.34	9,000.03	157.1
J-68	8,626.08	65.25	9,000.04	161.8
J-71	8,614.98	0.00	9,000.10	166.6

FlexTable: Junction Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-72	8,784.00	0.00	9,000.08	93.5
J-73	8,579.29	0.00	9,000.07	182.1
J-76	8,690.84	0.00	9,000.07	133.8
J-77	8,869.00	0.00	9,000.07	56.7

Phase 1 Peak Day

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-1	786	Hidden Lake Tank	J-1	6.0	Ductile Iron	140.0	(N/A)	(N/A)
P-2	1,011	J-1	J-2	6.0	Ductile Iron	140.0	(N/A)	(N/A)
P-8	113	J-4	J-5	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-9	293	J-5	J-6	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-10	127	J-6	J-7	4.0	Ductile Iron	140.0	16.07	0.41
P-11	312	J-7	J-8	4.0	Ductile Iron	140.0	10.00	0.26
P-12	272	J-8	J-9	4.0	Ductile Iron	140.0	7.34	0.19
P-13	282	J-9	J-10	4.0	Ductile Iron	140.0	4.00	0.10
P-15	608	J-11	J-12	4.0	Ductile Iron	140.0	18.01	0.46
P-16	324	J-6	J-13	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-17	478	J-13	J-14	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-18	97	J-7	J-15	4.0	Ductile Iron	140.0	3.39	0.09
P-19	825	J-15	J-16	4.0	Ductile Iron	140.0	2.73	0.07
P-26	256	T-10	PMP-5	1.5	Ductile Iron	140.0	31.04	5.64
P-27	214	T-10	Hidden Lake Tank	4.0	Ductile Iron	140.0	0.00	0.00
P-28	108	J-19	PMP-5	1.5	Ductile Iron	140.0	-31.04	5.64
P-30	263	Timberline Storage #2	Timberline Pump	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-33	166	J-5	J-20	4.0	Ductile Iron	140.0	23.35	0.60
P-34	133	J-20	J-11	4.0	Ductile Iron	140.0	23.34	0.60
P-35	304	J-21	J-20	4.0	Ductile Iron	140.0	-0.01	0.00
P-36	537	J-2	J-22	6.0	Ductile Iron	140.0	8.31	0.09
P-37	418	J-17	R-6	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-38	168	R-6	PMP-11	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-41	2,907	Panter Tank	Cobabe Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-42	214	Cobabe Tank	Cobabe Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-48	176	J-17	Panter Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-49	263	Panter Tank	Panter Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-50	239	J-24	J-4	4.0	Ductile Iron	140.0	(N/A)	(N/A)

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-51	155	Sundown Tank	Sundown Pump	4.0	Ductile Iron	140.0	27.50	0.70
P-52	1,173	Sundown Tank	J-17	4.0	Ductile Iron	140.0	0.00	0.00
P-53	449	R-10	Panter Tank	0.5	Ductile Iron	140.0	3.74	6.11
P-56	284	R-9	Cobabe Tank	0.9	Ductile Iron	140.0	59.16	29.84
P-57	161	J-3	J-24	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-58	218	J-24	Sundown Pump	4.0	Ductile Iron	140.0	-27.50	0.70
P-62	586	Timberline Storage #1	J-3	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-63	284	Timberline Storage #1	Timberline Storage #2	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-66	1,070	J-29	J-3	8.0	Ductile Iron	140.0	-22.37	0.14
P-70	1,064	J-2	J-35	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-71	2,607	J-35	Timberline Pump	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-72	4,022	J-30	J-35	8.0	Ductile Iron	140.0	-11.34	0.07
P-80	6,339	J-40	J-42	8.0	Ductile Iron	140.0	52.91	0.34
P-89	3,489	J-27	J-14	8.0	Ductile Iron	140.0	-25.46	0.16
P-100	353	J-54	J-55	10.0	Ductile Iron	140.0	15.34	0.06
P-101	1,684	J-55	J-49	10.0	Ductile Iron	140.0	6.00	0.02
P-103	1,418	J-56	J-49	8.0	Ductile Iron	140.0	-6.00	0.04
P-105	2,364	J-57	J-56	8.0	Ductile Iron	140.0	-3.33	0.02
P-108	721	J-38	J-59	8.0	Ductile Iron	140.0	-0.67	0.00
P-109	1,490	J-59	J-58	8.0	Ductile Iron	140.0	-1.33	0.01
P-110	777	J-58	J-60	8.0	Ductile Iron	140.0	-2.00	0.01
P-111	398	J-60	J-57	8.0	Ductile Iron	140.0	-2.67	0.02
P-114	909	J-62	J-54	10.0	Ductile Iron	140.0	-6.00	0.02
P-115	1,110	J-63	J-57	8.0	Ductile Iron	140.0	-0.67	0.00
P-116	643	J-64	J-58	8.0	Ductile Iron	140.0	-0.67	0.00
P-117	544	J-55	J-65	8.0	Ductile Iron	140.0	6.67	0.04
P-118	232	J-65	J-61	8.0	Ductile Iron	140.0	2.00	0.01
P-119	953	J-66	J-65	8.0	Ductile Iron	140.0	-2.67	0.02

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-121	3,229	J-67	J-54	10.0	Ductile Iron	140.0	28.00	0.11
P-122	588	J-39	J-68	10.0	Ductile Iron	140.0	98.58	0.40
P-123	1,231	J-68	J-67	10.0	Ductile Iron	140.0	33.33	0.14
P-129	6,036	J-44	J-45	8.0	Ductile Iron	140.0	-7.27	0.05
P-133	606	J-71	J-39	16.0	Ductile Iron	140.0	190.09	0.30
P-134	329	Wet Well	J-71	16.0	Ductile Iron	140.0	357.71	0.57
P-135	922	J-39	J-72	16.0	Ductile Iron	140.0	91.51	0.15
P-137	2,323	J-72	J-46	8.0	Ductile Iron	140.0	23.34	0.15
P-138	4,673	J-45	J-73	10.0	Ductile Iron	140.0	-40.61	0.17
P-139	1,182	J-73	J-71	16.0	Ductile Iron	140.0	-167.61	0.27
P-140	1,239	J-40	J-73	8.0	Ductile Iron	140.0	-127.00	0.81
P-142	393	Tank	J-76	16.0	Ductile Iron	140.0	0.00	0.00
P-145	1,022	J-72	J-77	16.0	Ductile Iron	140.0	68.17	0.11
P-146	581	J-77	J-76	16.0	Ductile Iron	140.0	27.02	0.04
P-147	10,843	J-48	J-77	10.0	Ductile Iron	140.0	-41.15	0.17
P-148	4,535	J-43	J-45	8.0	Ductile Iron	140.0	-13.34	0.09
P-149	2,955	J-47	J-76	8.0	Ductile Iron	140.0	-27.02	0.17
P-152	479	J-14	J-13	8.0	Ductile Iron	140.0	-28.79	0.18
P-153	326	J-13	J-6	8.0	Ductile Iron	140.0	-30.79	0.20
P-154	307	J-6	J-5	10.0	Ductile Iron	140.0	-48.86	0.20
P-155	143	J-5	J-4	10.0	Ductile Iron	140.0	-72.21	0.29
P-156	218	J-4	J-24	10.0	Ductile Iron	140.0	-74.94	0.31
P-157	174	J-24	J-3	10.0	Ductile Iron	140.0	-47.44	0.19
P-158	590	J-3	Timberline Storage #1	10.0	Ductile Iron	140.0	-74.06	0.30
P-159	289	Timberline Storage #1	Timberline Storage #2	10.0	Ductile Iron	140.0	1.07	0.00
P-160	272	Timberline Storage #2	Timberline Pump	10.0	Ductile Iron	140.0	40.43	0.17
P-161	2,612	Timberline Pump	J-35	10.0	Ductile Iron	140.0	40.43	0.17
P-162	1,075	J-35	J-2	10.0	Ductile Iron	140.0	-4.49	0.02

Phase 1 Peak Day

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-163	1,018	J-2	J-1	10.0	Ductile Iron	140.0	-12.81	0.05
P-164	799	J-1	Hidden Lake Tank	10.0	Ductile Iron	140.0	-12.81	0.05
P-168	267	R-12	Wet Well	16.0	Ductile Iron	140.0	357.71	0.57
P-173	1,732	J-49	Hidden Lake Tank	10.0	Ductile Iron	140.0	0.00	0.00

Phase 1 Peak Day W/ Fire Flow

Fire Flow Node FlexTable: Fire Flow Report (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)
J-1	False	0.00	0.00	-1.2
J-2	False	0.00	0.00	63.8
J-3	False	0.00	4.25	95.9
J-4	False	0.00	2.73	90.1
J-5	False	0.00	0.00	83.4
J-6	False	0.00	2.00	83.0
J-7	False	0.00	2.67	95.3
J-8	False	0.00	2.67	100.2
J-9	False	0.00	3.33	99.7
J-10	False	0.00	4.00	108.6
J-11	False	0.00	5.34	63.5
J-12	False	0.00	18.01	43.1
J-13	False	0.00	2.00	73.9
J-14	False	0.00	3.33	66.8
J-15	False	0.00	0.67	107.9
J-16	False	0.00	2.73	178.9
J-17	False	0.00	0.00	141.8
J-19	False	0.00	31.04	24.9
J-20	False	0.00	0.00	73.0
J-21	False	0.00	0.00	97.3
J-22	False	0.00	8.31	53.9
J-24	False	0.00	0.00	98.2
J-27	False	2,000.00	25.46	-62.9
J-29	False	2,000.00	22.37	149.2
J-30	False	2,000.00	11.34	168.6
J-35	False	0.00	33.59	108.3
J-38	False	2,000.00	0.67	339.4
J-39	False	0.00	0.00	157.6
J-40	False	2,000.00	74.09	194.5
J-42	False	2,000.00	52.91	379.1
J-43	False	2,000.00	13.34	399.0
J-44	False	2,000.00	7.27	116.8
J-45	False	2,000.00	20.01	246.6
J-46	False	2,000.00	23.34	326.7
J-47	False	2,000.00	27.02	167.9
J-48	False	2,000.00	41.15	212.0
J-49	False	0.00	0.00	82.9
J-54	False	2,000.00	6.66	103.7
J-55	False	2,000.00	2.67	89.7
J-56	False	2,000.00	2.67	110.1
J-57	False	0.00	0.00	208.5
J-58	False	0.00	0.00	258.8
J-59	False	2,000.00	0.67	317.9
J-60	False	2,000.00	0.67	225.4
J-61	False	2,000.00	2.00	119.1
J-62	False	2,000.00	6.00	85.0
J-63	False	2,000.00	0.67	221.8
J-64	False	2,000.00	0.67	285.7
J-65	False	2,000.00	2.00	113.5
J-66	False	2,000.00	2.67	125.9

Fire Flow Node FlexTable: Fire Flow Report (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)
J-67	False	2,000.00	5.34	157.1
J-68	False	2,000.00	65.25	161.8
J-71	False	0.00	0.00	166.6
J-72	False	0.00	0.00	93.5
J-73	False	0.00	0.00	182.1
J-76	False	0.00	0.00	133.8
J-77	False	0.00	0.00	56.7

Phase 1 Peak Intsantaneous

FlexTable: Junction Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	8,893.06	0.00	8,890.32	-1.2
J-2	8,742.82	0.00	8,890.32	63.8
J-3	8,246.10	4.25	8,467.79	95.9
J-4	8,259.54	2.73	8,467.78	90.1
J-5	8,275.07	0.00	8,467.77	83.4
J-6	8,275.87	2.00	8,467.77	83.0
J-7	8,247.53	2.67	8,467.74	95.3
J-8	8,236.03	2.67	8,467.71	100.2
J-9	8,237.23	3.33	8,467.70	99.7
J-10	8,216.61	4.00	8,467.69	108.6
J-11	8,320.86	5.34	8,467.64	63.5
J-12	8,367.78	18.01	8,467.48	43.1
J-13	8,296.86	2.00	8,467.76	73.9
J-14	8,313.28	3.33	8,467.75	66.8
J-15	8,218.24	0.67	8,467.74	107.9
J-16	8,054.24	2.73	8,467.73	178.9
J-17	7,935.93	0.00	8,263.66	141.8
J-19	8,902.54	31.04	8,960.08	24.9
J-20	8,298.99	0.00	8,467.70	73.0
J-21	8,242.71	0.00	8,467.70	97.3
J-22	8,765.78	8.31	8,890.31	53.9
J-24	8,240.79	0.00	8,467.79	98.2
J-27	8,613.10	25.46	8,467.69	-62.9
J-29	8,122.92	22.37	8,467.78	149.2
J-30	8,500.50	11.34	8,890.30	168.6
J-35	8,640.00	33.59	8,890.32	108.3
J-38	8,215.46	0.67	9,000.00	339.4
J-39	8,635.88	0.00	9,000.08	157.6
J-40	8,550.00	74.09	8,999.64	194.5
J-42	8,123.00	52.91	8,999.21	379.1
J-43	8,077.85	13.34	8,999.98	399.0
J-44	8,730.00	7.27	9,000.00	116.8
J-45	8,430.00	20.01	9,000.01	246.6
J-46	8,245.00	23.34	9,000.04	326.7
J-47	8,612.00	27.02	9,000.01	167.9
J-48	8,510.00	41.15	8,999.91	212.0
J-49	8,808.45	0.00	9,000.00	82.9
J-54	8,760.40	6.66	9,000.00	103.7
J-55	8,792.66	2.67	9,000.00	89.7
J-56	8,745.56	2.67	9,000.00	110.1
J-57	8,518.05	0.00	9,000.00	208.5
J-58	8,401.73	0.00	9,000.00	258.8
J-59	8,265.18	0.67	9,000.00	317.9
J-60	8,479.02	0.67	9,000.00	225.4
J-61	8,724.73	2.00	9,000.00	119.1
J-62	8,803.62	6.00	9,000.00	85.0
J-63	8,487.29	0.67	9,000.00	221.8
J-64	8,339.73	0.67	9,000.00	285.7
J-65	8,737.65	2.00	9,000.00	113.5
J-66	8,709.07	2.67	9,000.00	125.9
J-67	8,636.99	5.34	9,000.03	157.1
J-68	8,626.08	65.25	9,000.04	161.8
J-71	8,614.98	0.00	9,000.10	166.6

Phase 1 Peak Intsantaneous

FlexTable: Junction Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-72	8,784.00	0.00	9,000.08	93.5
J-73	8,579.29	0.00	9,000.07	182.1
J-76	8,690.84	0.00	9,000.07	133.8
J-77	8,869.00	0.00	9,000.07	56.7

Phase 1 Peak Intsantaneous

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-1	786	Hidden Lake Tank	J-1	6.0	Ductile Iron	140.0	(N/A)	(N/A)
P-2	1,011	J-1	J-2	6.0	Ductile Iron	140.0	(N/A)	(N/A)
P-8	113	J-4	J-5	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-9	293	J-5	J-6	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-10	127	J-6	J-7	4.0	Ductile Iron	140.0	312.52	7.98
P-11	312	J-7	J-8	4.0	Ductile Iron	140.0	173.67	4.43
P-12	272	J-8	J-9	4.0	Ductile Iron	140.0	127.36	3.25
P-13	282	J-9	J-10	4.0	Ductile Iron	140.0	69.47	1.77
P-15	608	J-11	J-12	4.0	Ductile Iron	140.0	312.61	7.98
P-16	324	J-6	J-13	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-17	478	J-13	J-14	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-18	97	J-7	J-15	4.0	Ductile Iron	140.0	92.54	2.36
P-19	825	J-15	J-16	4.0	Ductile Iron	140.0	80.96	2.07
P-26	256	T-10	PMP-5	1.5	Ductile Iron	140.0	201.84	36.65
P-27	214	T-10	Hidden Lake Tank	4.0	Ductile Iron	140.0	0.00	0.00
P-28	108	J-19	PMP-5	1.5	Ductile Iron	140.0	-201.84	36.65
P-30	263	Timberline Storage #2	Timberline Pump	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-33	166	J-5	J-20	4.0	Ductile Iron	140.0	405.24	10.35
P-34	133	J-20	J-11	4.0	Ductile Iron	140.0	405.24	10.35
P-35	304	J-21	J-20	4.0	Ductile Iron	140.0	0.00	0.00
P-36	537	J-2	J-22	6.0	Ductile Iron	140.0	246.73	2.80
P-37	418	J-17	R-6	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-38	168	R-6	PMP-11	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-41	2,907	Panter Tank	Cobabe Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-42	214	Cobabe Tank	Cobabe Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-48	176	J-17	Panter Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-49	263	Panter Tank	Panter Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-50	239	J-24	J-4	4.0	Ductile Iron	140.0	(N/A)	(N/A)

Phase 1 Peak Intsantaneous

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-51	155	Sundown Tank	Sundown Pump	4.0	Ductile Iron	140.0	30.34	0.77
P-52	1,173	Sundown Tank	J-17	4.0	Ductile Iron	140.0	0.00	0.00
P-53	449	R-10	Panter Tank	0.5	Ductile Iron	140.0	3.74	6.11
P-56	284	R-9	Cobabe Tank	0.9	Ductile Iron	140.0	60.98	30.76
P-57	161	J-3	J-24	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-58	218	J-24	Sundown Pump	4.0	Ductile Iron	140.0	-30.34	0.77
P-62	586	Timberline Storage #1	J-3	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-63	284	Timberline Storage #1	Timberline Storage #2	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-66	1,070	J-29	J-3	8.0	Ductile Iron	140.0	-161.94	1.03
P-70	1,064	J-2	J-35	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-71	2,607	J-35	Timberline Pump	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-72	4,022	J-30	J-35	8.0	Ductile Iron	140.0	-79.44	0.51
P-80	6,339	J-40	J-42	8.0	Ductile Iron	140.0	293.64	1.87
P-89	3,489	J-27	J-14	8.0	Ductile Iron	140.0	-184.70	1.18
P-100	353	J-54	J-55	10.0	Ductile Iron	140.0	227.64	0.93
P-101	1,684	J-55	J-49	10.0	Ductile Iron	140.0	65.54	0.27
P-103	1,418	J-56	J-49	8.0	Ductile Iron	140.0	-104.20	0.67
P-105	2,364	J-57	J-56	8.0	Ductile Iron	140.0	-57.89	0.37
P-108	721	J-38	J-59	8.0	Ductile Iron	140.0	-11.58	0.07
P-109	1,490	J-59	J-58	8.0	Ductile Iron	140.0	-23.16	0.15
P-110	777	J-58	J-60	8.0	Ductile Iron	140.0	-34.73	0.22
P-111	398	J-60	J-57	8.0	Ductile Iron	140.0	-46.31	0.30
P-114	909	J-62	J-54	10.0	Ductile Iron	140.0	-104.20	0.43
P-115	1,110	J-63	J-57	8.0	Ductile Iron	140.0	-11.58	0.07
P-116	643	J-64	J-58	8.0	Ductile Iron	140.0	-11.58	0.07
P-117	544	J-55	J-65	8.0	Ductile Iron	140.0	115.78	0.74
P-118	232	J-65	J-61	8.0	Ductile Iron	140.0	34.73	0.22
P-119	953	J-66	J-65	8.0	Ductile Iron	140.0	-46.31	0.30

Phase 1 Peak Intsantaneous

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-121	3,229	J-67	J-54	10.0	Ductile Iron	140.0	416.72	1.70
P-122	588	J-39	J-68	10.0	Ductile Iron	140.0	922.70	3.77
P-123	1,231	J-68	J-67	10.0	Ductile Iron	140.0	509.34	2.08
P-129	6,036	J-44	J-45	8.0	Ductile Iron	140.0	-71.46	0.46
P-133	606	J-71	J-39	16.0	Ductile Iron	140.0	221.39	0.35
P-134	329	Wet Well	J-71	16.0	Ductile Iron	140.0	1,294.66	2.07
P-135	922	J-39	J-72	16.0	Ductile Iron	140.0	-701.32	1.12
P-137	2,323	J-72	J-46	8.0	Ductile Iron	140.0	162.02	1.03
P-138	4,673	J-45	J-73	10.0	Ductile Iron	140.0	-325.16	1.33
P-139	1,182	J-73	J-71	16.0	Ductile Iron	140.0	-1,073.27	1.71
P-140	1,239	J-40	J-73	8.0	Ductile Iron	140.0	-748.11	4.78
P-142	393	Tank	J-76	16.0	Ductile Iron	140.0	1,350.90	2.16
P-145	1,022	J-72	J-77	16.0	Ductile Iron	140.0	-863.34	1.38
P-146	581	J-77	J-76	16.0	Ductile Iron	140.0	-1,161.40	1.85
P-147	10,843	J-48	J-77	10.0	Ductile Iron	140.0	-298.06	1.22
P-148	4,535	J-43	J-45	8.0	Ductile Iron	140.0	-109.74	0.70
P-149	2,955	J-47	J-76	8.0	Ductile Iron	140.0	-189.50	1.21
P-152	479	J-14	J-13	8.0	Ductile Iron	140.0	-242.59	1.55
P-153	326	J-13	J-6	8.0	Ductile Iron	140.0	-277.32	1.77
P-154	307	J-6	J-5	10.0	Ductile Iron	140.0	-624.58	2.55
P-155	143	J-5	J-4	10.0	Ductile Iron	140.0	-1,029.82	4.21
P-156	218	J-4	J-24	10.0	Ductile Iron	140.0	-1,059.05	4.33
P-157	174	J-24	J-3	10.0	Ductile Iron	140.0	-1,028.71	4.20
P-158	590	J-3	Timberline Storage #1	10.0	Ductile Iron	140.0	-1,263.83	5.16
P-159	289	Timberline Storage #1	Timberline Storage #2	10.0	Ductile Iron	140.0	5.04	0.02
P-160	272	Timberline Storage #2	Timberline Pump	10.0	Ductile Iron	140.0	40.87	0.17
P-161	2,612	Timberline Pump	J-35	10.0	Ductile Iron	140.0	40.87	0.17
P-162	1,075	J-35	J-2	10.0	Ductile Iron	140.0	-262.12	1.07

Phase 1 Peak Intsantaneous

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-163	1,018	J-2	J-1	10.0	Ductile Iron	140.0	-508.85	2.08
P-164	799	J-1	Hidden Lake Tank	10.0	Ductile Iron	140.0	-508.85	2.08
P-168	267	R-12	Wet Well	16.0	Ductile Iron	140.0	1,294.66	2.07
P-173	1,732	J-49	Hidden Lake Tank	10.0	Ductile Iron	140.0	-38.66	0.16

Master Plan Peak Day

FlexTable: Junction Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	8,893.06	0.00	9,048.59	67.3
J-2	8,742.82	0.00	9,048.59	132.3
J-3	8,246.10	4.25	8,467.28	95.7
J-4	8,259.54	2.73	8,466.75	89.7
J-5	8,275.07	0.00	8,466.57	82.9
J-6	8,275.87	2.00	8,466.44	82.5
J-7	8,247.53	2.67	8,466.41	94.7
J-8	8,236.03	2.67	8,466.38	99.7
J-9	8,237.23	3.33	8,466.37	99.1
J-10	8,216.61	4.00	8,466.37	108.1
J-11	8,320.86	5.34	8,466.44	63.0
J-12	8,367.78	18.01	8,466.27	42.6
J-13	8,296.86	2.00	8,466.43	73.4
J-14	8,313.28	3.33	8,466.43	66.3
J-15	8,218.24	0.67	8,466.41	107.4
J-16	8,054.24	2.73	8,466.40	178.3
J-17	7,935.93	0.00	8,263.66	141.8
J-19	8,902.54	0.64	9,028.08	54.3
J-20	8,298.99	0.00	8,466.50	72.5
J-21	8,242.71	0.00	8,466.50	96.8
J-22	8,765.78	8.31	9,048.59	122.4
J-24	8,240.79	0.00	8,467.20	98.0
J-27	8,613.10	(N/A)	(N/A)	(N/A)
J-29	8,122.92	(N/A)	(N/A)	(N/A)
J-30	8,500.50	(N/A)	(N/A)	(N/A)
J-35	8,640.00	0.00	9,048.66	176.8
J-38	8,215.46	0.67	9,009.04	343.3
J-39	8,635.88	0.00	9,009.12	161.5
J-40	8,550.00	(N/A)	(N/A)	(N/A)
J-42	8,123.00	(N/A)	(N/A)	(N/A)
J-43	8,077.85	(N/A)	(N/A)	(N/A)
J-44	8,730.00	(N/A)	(N/A)	(N/A)
J-45	8,430.00	(N/A)	(N/A)	(N/A)
J-46	8,245.00	(N/A)	(N/A)	(N/A)
J-47	8,612.00	(N/A)	(N/A)	(N/A)
J-48	8,510.00	(N/A)	(N/A)	(N/A)
J-49	8,808.45	0.00	9,009.04	86.8
J-54	8,760.40	6.66	9,009.04	107.6
J-55	8,792.66	2.67	9,009.04	93.6
J-56	8,745.56	2.67	9,009.04	114.0
J-57	8,518.05	0.00	9,009.04	212.4
J-58	8,401.73	0.00	9,009.04	262.8
J-59	8,265.18	0.67	9,009.04	321.8
J-60	8,479.02	0.67	9,009.04	229.3
J-61	8,724.73	2.00	9,009.04	123.0
J-62	8,803.62	6.00	9,009.04	88.9
J-63	8,487.29	0.67	9,009.04	225.7
J-64	8,339.73	0.67	9,009.04	289.6
J-65	8,737.65	2.00	9,009.04	117.4
J-66	8,709.07	2.67	9,009.04	129.8
J-67	8,636.99	5.34	9,009.06	161.0
J-68	8,626.08	65.25	9,009.08	165.7
J-71	8,614.98	0.00	9,009.12	170.5

FlexTable: Junction Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-72	8,784.00	0.00	9,009.12	97.4
J-73	8,579.29	(N/A)	(N/A)	(N/A)
J-76	8,690.84	0.00	9,009.12	137.7
J-77	8,869.00	0.00	9,009.12	60.6

Master Plan Peak Day

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-1	786	Hidden Lake Tank	J-1	6.0	Ductile Iron	140.0	0.00	0.00
P-2	1,011	J-1	J-2	6.0	Ductile Iron	140.0	0.00	0.00
P-8	113	J-4	J-5	4.0	Ductile Iron	140.0	46.75	1.19
P-9	293	J-5	J-6	4.0	Ductile Iron	140.0	23.40	0.60
P-10	127	J-6	J-7	4.0	Ductile Iron	140.0	16.07	0.41
P-11	312	J-7	J-8	4.0	Ductile Iron	140.0	10.00	0.26
P-12	272	J-8	J-9	4.0	Ductile Iron	140.0	7.34	0.19
P-13	282	J-9	J-10	4.0	Ductile Iron	140.0	4.00	0.10
P-15	608	J-11	J-12	4.0	Ductile Iron	140.0	18.01	0.46
P-16	324	J-6	J-13	4.0	Ductile Iron	140.0	5.34	0.14
P-17	478	J-13	J-14	4.0	Ductile Iron	140.0	3.33	0.09
P-18	97	J-7	J-15	4.0	Ductile Iron	140.0	3.39	0.09
P-19	825	J-15	J-16	4.0	Ductile Iron	140.0	2.73	0.07
P-26	256	T-10	PMP-5	1.5	Ductile Iron	140.0	0.64	0.12
P-27	214	T-10	Hidden Lake Tank	4.0	Ductile Iron	140.0	0.00	0.00
P-28	108	J-19	PMP-5	1.5	Ductile Iron	140.0	-0.64	0.12
P-30	263	Timberline Storage #2	Timberline Pump	4.0	Ductile Iron	140.0	8.31	0.21
P-33	166	J-5	J-20	4.0	Ductile Iron	140.0	23.35	0.60
P-34	133	J-20	J-11	4.0	Ductile Iron	140.0	23.34	0.60
P-35	304	J-21	J-20	4.0	Ductile Iron	140.0	-0.01	0.00
P-36	537	J-2	J-22	6.0	Ductile Iron	140.0	8.31	0.09
P-37	418	J-17	R-6	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-38	168	R-6	PMP-11	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-41	2,907	Panter Tank	Cobabe Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-42	214	Cobabe Tank	Cobabe Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-48	176	J-17	Panter Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-49	263	Panter Tank	Panter Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-50	239	J-24	J-4	4.0	Ductile Iron	140.0	49.48	1.26

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-51	155	Sundown Tank	Sundown Pump	4.0	Ductile Iron	140.0	27.68	0.71
P-52	1,173	Sundown Tank	J-17	4.0	Ductile Iron	140.0	0.00	0.00
P-53	449	R-10	Panter Tank	0.5	Ductile Iron	140.0	3.74	6.11
P-56	284	R-9	Cobabe Tank	0.9	Ductile Iron	140.0	59.16	29.84
P-57	161	J-3	J-24	4.0	Ductile Iron	140.0	21.79	0.56
P-58	218	J-24	Sundown Pump	4.0	Ductile Iron	140.0	-27.68	0.71
P-62	586	Timberline Storage #1	J-3	4.0	Ductile Iron	140.0	26.04	0.66
P-63	284	Timberline Storage #1	Timberline Storage #2	4.0	Ductile Iron	140.0	0.17	0.00
P-66	1,070	J-29	J-3	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-70	1,064	J-2	J-35	4.0	Ductile Iron	140.0	-8.31	0.21
P-71	2,607	J-35	Timberline Pump	4.0	Ductile Iron	140.0	-8.31	0.21
P-72	4,022	J-30	J-35	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-80	6,339	J-40	J-42	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-89	3,489	J-27	J-14	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-100	353	J-54	J-55	10.0	Ductile Iron	140.0	15.34	0.06
P-101	1,684	J-55	J-49	10.0	Ductile Iron	140.0	6.00	0.02
P-103	1,418	J-56	J-49	8.0	Ductile Iron	140.0	-6.00	0.04
P-105	2,364	J-57	J-56	8.0	Ductile Iron	140.0	-3.33	0.02
P-108	721	J-38	J-59	8.0	Ductile Iron	140.0	-0.67	0.00
P-109	1,490	J-59	J-58	8.0	Ductile Iron	140.0	-1.33	0.01
P-110	777	J-58	J-60	8.0	Ductile Iron	140.0	-2.00	0.01
P-111	398	J-60	J-57	8.0	Ductile Iron	140.0	-2.67	0.02
P-114	909	J-62	J-54	10.0	Ductile Iron	140.0	-6.00	0.02
P-115	1,110	J-63	J-57	8.0	Ductile Iron	140.0	-0.67	0.00
P-116	643	J-64	J-58	8.0	Ductile Iron	140.0	-0.67	0.00
P-117	544	J-55	J-65	8.0	Ductile Iron	140.0	6.67	0.04
P-118	232	J-65	J-61	8.0	Ductile Iron	140.0	2.00	0.01
P-119	953	J-66	J-65	8.0	Ductile Iron	140.0	-2.67	0.02

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-121	3,229	J-67	J-54	10.0	Ductile Iron	140.0	28.00	0.11
P-122	588	J-39	J-68	10.0	Ductile Iron	140.0	98.58	0.40
P-123	1,231	J-68	J-67	10.0	Ductile Iron	140.0	33.33	0.14
P-129	6,036	J-44	J-45	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-133	606	J-71	J-39	16.0	Ductile Iron	140.0	98.59	0.16
P-134	329	Wet Well	J-71	16.0	Ductile Iron	140.0	98.59	0.16
P-135	922	J-39	J-72	16.0	Ductile Iron	140.0	0.01	0.00
P-137	2,323	J-72	J-46	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-138	4,673	J-45	J-73	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-139	1,182	J-73	J-71	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-140	1,239	J-40	J-73	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-142	393	Tank	J-76	16.0	Ductile Iron	140.0	0.00	0.00
P-145	1,022	J-72	J-77	16.0	Ductile Iron	140.0	0.01	0.00
P-146	581	J-77	J-76	16.0	Ductile Iron	140.0	0.00	0.00
P-147	10,843	J-48	J-77	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-148	4,535	J-43	J-45	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-149	2,955	J-47	J-76	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-152	479	J-14	J-13	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-153	326	J-13	J-6	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-154	307	J-6	J-5	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-155	143	J-5	J-4	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-156	218	J-4	J-24	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-157	174	J-24	J-3	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-158	590	J-3	Timberline Storage #1	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-159	289	Timberline Storage #1	Timberline Storage #2	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-160	272	Timberline Storage #2	Timberline Pump	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-161	2,612	Timberline Pump	J-35	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-162	1,075	J-35	J-2	10.0	Ductile Iron	140.0	(N/A)	(N/A)

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-163	1,018	J-2	J-1	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-164	799	J-1	Hidden Lake Tank	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-168	267	R-12	Wet Well	16.0	Ductile Iron	140.0	98.59	0.16
P-173	1,732	J-49	Hidden Lake Tank	10.0	Ductile Iron	140.0	0.00	0.00

Master Plan Peak Day W/ Fire Flow

Fire Flow Node FlexTable: Fire Flow Report (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)
J-1	True	0.00	0.50	66.6
J-2	True	0.00	1.00	130.8
J-3	True	0.00	5.25	95.7
J-4	True	0.00	3.73	89.6
J-5	True	0.00	1.00	82.8
J-6	True	0.00	3.00	82.4
J-7	True	0.00	3.67	94.7
J-8	True	0.00	3.67	99.6
J-9	True	0.00	4.33	99.1
J-10	True	0.00	5.00	108.0
J-11	True	0.00	6.34	62.9
J-12	True	0.00	19.01	42.6
J-13	True	0.00	3.00	73.3
J-14	True	0.00	4.33	66.2
J-15	True	0.00	1.67	107.3
J-16	True	0.00	3.73	178.3
J-17	True	0.00	1.00	141.8
J-19	True	0.00	1.64	54.0
J-20	True	0.00	1.00	72.4
J-21	True	0.00	1.00	96.8
J-22	True	0.00	9.31	120.9
J-24	True	0.00	1.00	97.9
J-27	(N/A)	2,000.00	(N/A)	(N/A)
J-29	(N/A)	2,000.00	(N/A)	(N/A)
J-30	(N/A)	2,000.00	(N/A)	(N/A)
J-35	True	0.00	1.00	175.4
J-38	True	2,000.00	2,100.67	93.0
J-39	True	0.00	1.00	161.5
J-40	(N/A)	2,000.00	(N/A)	(N/A)
J-42	(N/A)	2,000.00	(N/A)	(N/A)
J-43	(N/A)	2,000.00	(N/A)	(N/A)
J-44	(N/A)	2,000.00	(N/A)	(N/A)
J-45	(N/A)	2,000.00	(N/A)	(N/A)
J-46	(N/A)	2,000.00	(N/A)	(N/A)
J-47	(N/A)	2,000.00	(N/A)	(N/A)
J-48	(N/A)	2,000.00	(N/A)	(N/A)
J-49	True	0.00	1.00	86.8
J-54	False	2,000.00	1,782.07	52.4
J-55	False	2,000.00	1,916.49	37.5
J-56	True	2,000.00	2,102.67	20.5
J-57	True	0.00	1.00	212.4
J-58	True	0.00	1.00	262.7
J-59	True	2,000.00	2,100.67	91.2

Master Plan Peak Day W/ Fire Flow

Fire Flow Node FlexTable: Fire Flow Report (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Satisfies Fire Flow Constraints?	Fire Flow (Needed) (gpm)	Flow (Total Available) (gpm)	Pressure (Calculated Residual) (psi)
J-60	True	2,000.00	2,100.67	60.4
J-61	False	2,000.00	1,915.82	49.0
J-62	False	2,000.00	1,781.45	27.6
J-63	True	2,000.00	2,100.67	37.5
J-64	True	2,000.00	2,100.67	82.0
J-65	False	2,000.00	1,915.82	48.7
J-66	False	2,000.00	1,916.02	39.2
J-67	False	2,000.00	1,091.10	115.0
J-68	False	2,000.00	1,151.20	123.2
J-71	True	0.00	1.00	170.5
J-72	True	0.00	0.00	97.4
J-73	(N/A)	0.00	(N/A)	(N/A)
J-76	True	0.00	1.00	137.7
J-77	True	0.00	1.00	60.6

Master Plan Peak Instantaneous

FlexTable: Junction Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-1	8,893.06	0.00	8,888.83	-1.8
J-2	8,742.82	0.00	8,885.32	61.7
J-3	8,246.10	73.18	8,091.83	-66.7
J-4	8,259.54	29.23	7,940.74	-137.9
J-5	8,275.07	0.00	7,902.35	-161.3
J-6	8,275.87	34.73	7,872.51	-174.5
J-7	8,247.53	46.31	7,865.62	-165.2
J-8	8,236.03	46.31	7,859.93	-162.7
J-9	8,237.23	57.89	7,857.14	-164.4
J-10	8,216.61	69.47	7,856.20	-155.9
J-11	8,320.86	92.63	7,876.23	-192.4
J-12	8,367.78	312.61	7,843.33	-226.9
J-13	8,296.86	34.73	7,870.66	-184.4
J-14	8,313.28	57.89	7,869.52	-192.0
J-15	8,218.24	11.58	7,865.07	-152.8
J-16	8,054.24	80.96	7,861.41	-83.4
J-17	7,935.93	0.00	8,263.66	141.8
J-19	8,902.54	13.93	9,007.46	45.4
J-20	8,298.99	0.00	7,887.84	-177.9
J-21	8,242.71	0.00	7,887.84	-153.5
J-22	8,765.78	246.73	8,882.72	50.6
J-24	8,240.79	0.00	8,032.75	-90.0
J-27	8,613.10	(N/A)	(N/A)	(N/A)
J-29	8,122.92	(N/A)	(N/A)	(N/A)
J-30	8,500.50	(N/A)	(N/A)	(N/A)
J-35	8,640.00	0.00	8,886.63	106.7
J-38	8,215.46	11.58	8,935.99	311.7
J-39	8,635.88	0.00	8,946.04	134.2
J-40	8,550.00	(N/A)	(N/A)	(N/A)
J-42	8,123.00	(N/A)	(N/A)	(N/A)
J-43	8,077.85	(N/A)	(N/A)	(N/A)
J-44	8,730.00	(N/A)	(N/A)	(N/A)
J-45	8,430.00	(N/A)	(N/A)	(N/A)
J-46	8,245.00	(N/A)	(N/A)	(N/A)
J-47	8,612.00	(N/A)	(N/A)	(N/A)
J-48	8,510.00	(N/A)	(N/A)	(N/A)
J-49	8,808.45	0.00	8,936.60	55.4
J-54	8,760.40	84.87	8,936.90	76.4
J-55	8,792.66	46.31	8,936.74	62.3
J-56	8,745.56	46.31	8,936.26	82.5
J-57	8,518.05	0.00	8,936.06	180.9
J-58	8,401.73	0.00	8,936.02	231.2
J-59	8,265.18	11.58	8,936.00	290.2
J-60	8,479.02	11.58	8,936.04	197.7
J-61	8,724.73	34.73	8,936.57	91.7
J-62	8,803.62	104.20	8,936.82	57.6
J-63	8,487.29	11.58	8,936.06	194.2
J-64	8,339.73	11.58	8,936.01	258.0
J-65	8,737.65	34.73	8,936.58	86.1
J-66	8,709.07	46.31	8,936.52	98.4
J-67	8,636.99	92.63	8,940.94	131.5
J-68	8,626.08	413.36	8,943.11	137.2
J-71	8,614.98	0.00	8,946.35	143.4

FlexTable: Junction Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
J-72	8,784.00	0.00	8,946.04	70.1
J-73	8,579.29	(N/A)	(N/A)	(N/A)
J-76	8,690.84	0.00	8,946.04	110.4
J-77	8,869.00	0.00	8,946.04	33.3

Master Plan Peak Instantaneous

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-1	786	Hidden Lake Tank	J-1	6.0	Ductile Iron	140.0	0.00	0.00
P-2	1,011	J-1	J-2	6.0	Ductile Iron	140.0	0.00	0.00
P-8	113	J-4	J-5	4.0	Ductile Iron	140.0	46.75	1.19
P-9	293	J-5	J-6	4.0	Ductile Iron	140.0	23.40	0.60
P-10	127	J-6	J-7	4.0	Ductile Iron	140.0	16.07	0.41
P-11	312	J-7	J-8	4.0	Ductile Iron	140.0	10.00	0.26
P-12	272	J-8	J-9	4.0	Ductile Iron	140.0	7.34	0.19
P-13	282	J-9	J-10	4.0	Ductile Iron	140.0	4.00	0.10
P-15	608	J-11	J-12	4.0	Ductile Iron	140.0	18.01	0.46
P-16	324	J-6	J-13	4.0	Ductile Iron	140.0	5.34	0.14
P-17	478	J-13	J-14	4.0	Ductile Iron	140.0	3.33	0.09
P-18	97	J-7	J-15	4.0	Ductile Iron	140.0	3.39	0.09
P-19	825	J-15	J-16	4.0	Ductile Iron	140.0	2.73	0.07
P-26	256	T-10	PMP-5	1.5	Ductile Iron	140.0	0.64	0.12
P-27	214	T-10	Hidden Lake Tank	4.0	Ductile Iron	140.0	0.00	0.00
P-28	108	J-19	PMP-5	1.5	Ductile Iron	140.0	-0.64	0.12
P-30	263	Timberline Storage #2	Timberline Pump	4.0	Ductile Iron	140.0	8.31	0.21
P-33	166	J-5	J-20	4.0	Ductile Iron	140.0	23.35	0.60
P-34	133	J-20	J-11	4.0	Ductile Iron	140.0	23.34	0.60
P-35	304	J-21	J-20	4.0	Ductile Iron	140.0	-0.01	0.00
P-36	537	J-2	J-22	6.0	Ductile Iron	140.0	8.31	0.09
P-37	418	J-17	R-6	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-38	168	R-6	PMP-11	4.0	Ductile Iron	140.0	(N/A)	(N/A)
P-41	2,907	Panter Tank	Cobabe Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-42	214	Cobabe Tank	Cobabe Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-48	176	J-17	Panter Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-49	263	Panter Tank	Panter Pump	4.0	Ductile Iron	140.0	0.00	0.00
P-50	239	J-24	J-4	4.0	Ductile Iron	140.0	49.48	1.26

Master Plan Peak Instantaneous

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-51	155	Sundown Tank	Sundown Pump	4.0	Ductile Iron	140.0	27.68	0.71
P-52	1,173	Sundown Tank	J-17	4.0	Ductile Iron	140.0	0.00	0.00
P-53	449	R-10	Panter Tank	0.5	Ductile Iron	140.0	3.74	6.11
P-56	284	R-9	Cobabe Tank	0.9	Ductile Iron	140.0	59.16	29.84
P-57	161	J-3	J-24	4.0	Ductile Iron	140.0	21.79	0.56
P-58	218	J-24	Sundown Pump	4.0	Ductile Iron	140.0	-27.68	0.71
P-62	586	Timberline Storage #1	J-3	4.0	Ductile Iron	140.0	26.04	0.66
P-63	284	Timberline Storage #1	Timberline Storage #2	4.0	Ductile Iron	140.0	0.17	0.00
P-66	1,070	J-29	J-3	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-70	1,064	J-2	J-35	4.0	Ductile Iron	140.0	-8.31	0.21
P-71	2,607	J-35	Timberline Pump	4.0	Ductile Iron	140.0	-8.31	0.21
P-72	4,022	J-30	J-35	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-80	6,339	J-40	J-42	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-89	3,489	J-27	J-14	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-100	353	J-54	J-55	10.0	Ductile Iron	140.0	15.34	0.06
P-101	1,684	J-55	J-49	10.0	Ductile Iron	140.0	6.00	0.02
P-103	1,418	J-56	J-49	8.0	Ductile Iron	140.0	-6.00	0.04
P-105	2,364	J-57	J-56	8.0	Ductile Iron	140.0	-3.33	0.02
P-108	721	J-38	J-59	8.0	Ductile Iron	140.0	-0.67	0.00
P-109	1,490	J-59	J-58	8.0	Ductile Iron	140.0	-1.33	0.01
P-110	777	J-58	J-60	8.0	Ductile Iron	140.0	-2.00	0.01
P-111	398	J-60	J-57	8.0	Ductile Iron	140.0	-2.67	0.02
P-114	909	J-62	J-54	10.0	Ductile Iron	140.0	-6.00	0.02
P-115	1,110	J-63	J-57	8.0	Ductile Iron	140.0	-0.67	0.00
P-116	643	J-64	J-58	8.0	Ductile Iron	140.0	-0.67	0.00
P-117	544	J-55	J-65	8.0	Ductile Iron	140.0	6.67	0.04
P-118	232	J-65	J-61	8.0	Ductile Iron	140.0	2.00	0.01
P-119	953	J-66	J-65	8.0	Ductile Iron	140.0	-2.67	0.02

Master Plan Peak Instantaneous

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-121	3,229	J-67	J-54	10.0	Ductile Iron	140.0	28.00	0.11
P-122	588	J-39	J-68	10.0	Ductile Iron	140.0	98.58	0.40
P-123	1,231	J-68	J-67	10.0	Ductile Iron	140.0	33.33	0.14
P-129	6,036	J-44	J-45	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-133	606	J-71	J-39	16.0	Ductile Iron	140.0	98.59	0.16
P-134	329	Wet Well	J-71	16.0	Ductile Iron	140.0	98.59	0.16
P-135	922	J-39	J-72	16.0	Ductile Iron	140.0	0.01	0.00
P-137	2,323	J-72	J-46	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-138	4,673	J-45	J-73	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-139	1,182	J-73	J-71	16.0	Ductile Iron	140.0	(N/A)	(N/A)
P-140	1,239	J-40	J-73	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-142	393	Tank	J-76	16.0	Ductile Iron	140.0	0.00	0.00
P-145	1,022	J-72	J-77	16.0	Ductile Iron	140.0	0.01	0.00
P-146	581	J-77	J-76	16.0	Ductile Iron	140.0	0.00	0.00
P-147	10,843	J-48	J-77	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-148	4,535	J-43	J-45	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-149	2,955	J-47	J-76	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-152	479	J-14	J-13	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-153	326	J-13	J-6	8.0	Ductile Iron	140.0	(N/A)	(N/A)
P-154	307	J-6	J-5	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-155	143	J-5	J-4	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-156	218	J-4	J-24	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-157	174	J-24	J-3	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-158	590	J-3	Timberline Storage #1	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-159	289	Timberline Storage #1	Timberline Storage #2	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-160	272	Timberline Storage #2	Timberline Pump	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-161	2,612	Timberline Pump	J-35	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-162	1,075	J-35	J-2	10.0	Ductile Iron	140.0	(N/A)	(N/A)

Master Plan Peak Instantaneous

FlexTable: Pipe Table (EXUT Water and Sewer.wtg)

Current Time: 0.000 hours

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)
P-163	1,018	J-2	J-1	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-164	799	J-1	Hidden Lake Tank	10.0	Ductile Iron	140.0	(N/A)	(N/A)
P-168	267	R-12	Wet Well	16.0	Ductile Iron	140.0	98.59	0.16
P-173	1,732	J-49	Hidden Lake Tank	10.0	Ductile Iron	140.0	0.00	0.00