

Master Utility Report Overlook at Kings Point

Prepared for:

Prusse Development, LLLP
7902 Eagle Feather Way
Lone Tree, CO 80124
(303) 898-1465 voice
Contact: Roger Prusse

Prepared by:

Redland
1500 W Canal Court
Littleton, Colorado 80120
(720) 283-6783 voice

Approved For One Year From This Date

City Engineer

Date

Water Department

Date

March 22, 2023
Project No. 21014.001

ENGINEER'S CERTIFICATION

"This Master Utility Report for Overlook at Kings Point was prepared by me (or under my direct supervision) in accordance with the provisions of the Aurora Water, Sanitary and Storm Drainage Infrastructure Standards and Specifications and was designed to comply with the provisions thereof.

Michael Pietschmann, P.E.
Registered Professional Engineer
State of Colorado No. 39832

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INTRODUCTION

This Master Utility Report presents an analysis and recommendations for the proposed sanitary and water systems for the Overlook at King Point development, hereafter referred to as the “Site”. This Report will identify the projected future demands and analyze the required future sanitary and water infrastructure to support the demands of the Site. This Report will provide a conceptual layout and sizing of proposed water and sanitary sewer infrastructure.

Site Location

The Overlook at Kings Point development is located in the Northwest Quarter of Section 2, Township 6 South, Range 66 West of the 6th Principal Meridian, City of Aurora, within Douglas County, Colorado. The Site consists of approximately 123 acres of undeveloped land in the southeast corner of Aurora city limits. The boundary of Arapahoe County is located at the northern edge of the Site. The development is bounded by the future continuation of Aurora Parkway to the north, existing residential developments to the east (Travois Filings One and Two) and Smith’s Subdivision to the south, and a future residential development (Kings Point South) to the west. A vicinity map is included in Appendix A.

Parcel information is provided in Table 1 below for the Site.

Table 1 – Parcel Information

State Parcel Number (PIN)	Acreage (Acres)
2233-022-00-001	103.21
2233-020-00-001	20.00

See Figure 1 – Vicinity Map for further information on the location of the Site.



Figure 1 - Vicinity Map of Overlook at Kings Point

Description of Property

The existing Site encompasses approximately 123 acres and is currently undeveloped. Existing vegetation on the Site includes native grasses, shrubs and trees. The Site is divided by Antelope Creek, which runs south to north through the eastern half of the Site. There is a high point located in the southern quarter of the Site. To the west of the high point, the Site slopes to the west at approximately 10-14% toward Cottonwood Middle Tributary. To the east of the high point, the Site slopes toward Antelope Creek at grades of approximately 5% to 10%.

Proposed Development

The Overlook at Kings Point includes approximately 123 acres and is zoned R-1. The Placetype Plan included within the Aurora Places (Comprehensive Plan) shows the Site as an “Established Neighborhood”.

The Overlook at Kings Point development is proposed to be a master planned residential development which will include a maximum 289 single family homes, trails and open space areas. The Site will be developed as low to medium density residential development with densities between 2-5 DU/AC.

The Site will be developed in 3 phases. Phase 1 will include the northern portion of the site consisting of single family lots and associated road, utility and drainage improvements as well as regional detention improvements on Antelope Creek. Phase 2 will include the southern portion of the Site consisting of single family lots and associated road, utility and drainage improvements. Phase 3 will include the southwest parcel of the Site consisting of single family lots and associated road, utility and drainage improvements.

SANITARY SEWER SYSTEM

Existing/Adjacent Off-Site Sewer System

The Site is located in two separate sewer basins. The eastern portion of the Site is tributary to and will be collected by an 8” sewer system to be constructed with the Kings Point North development near the future crossing of Antelope Creek by Aurora Parkway. Refer to the *Master Utility Report for Kings Point North* prepared by Core with an approval date of June 15, 2022. This sewer system continues to the north and flows to East Cherry Creek Water and Sanitary District (ECCV). The western portion of the Site flows to the west and will be collected in an 8” sewer system to be constructed with Kings Point South Filing No. 1. Refer to the *Master Utility Report for Kings Point South Subdivision – Filing No. 1*, prepared by HR Green. The sewer system continues to the south and west and flows to a lift station to be constructed as part of the Kings Point South Filing 1 improvements. The 8” force main pumps the flows north and discharges to a 10” main, to be constructed with Kings Point North and continues west to Parker Road.

See Figure 2 – Regional Sanitary Sewer System for further information on the existing and adjacent off-site sewer system.



Figure 2 – Regional Sanitary Sewer System

Proposed Sanitary Design Criteria

This Master Utility Report was prepared to meet the *Water, Sanitary Sewer, & Storm Drainage Infrastructure Standards & Specifications* (Aurora Water Standards) dated January 2022, prepared by Aurora Water.

The proposed sanitary sewer was designed to meet the Aurora Water Standards listed below:

- Peaking Factor based on $5/P^{0.167}$ where p =population in thousands.
- Maximum peaking factor of 4 and a minimum of 1.7.
- Inflow and infiltration added as 10% of the average flow for all zonings.
- Maximum flow velocity of 10 ft/s

- Minimum slope of 0.4% with a minimum velocity of 2 ft/s.
- Manning's n Value of 0.11 for PVC.
- Depth of flow in pipes 12" and smaller shall not exceed 75% of capacity.
- Depth of flow in pipes larger than 12" shall not exceed 80% of capacity.

Proposed Sanitary Demands

Proposed sanitary demands are based on the Aurora Water Standards. Per the Aurora Water Standards, the average day demand for residential uses is 68 gallons per capita per day and an average of 2.77 people per unit.

The proposed Site is divided into 3 sewer basins. Basins A and B comprise the eastern portion of the Site and drain to the north. Basin C makes up the western portion of the Site and drains to the west. Basin A is proposed to have a maximum of 204 single family homes with an average daily flow of 26.7 gallons per minute (gpm) and a peak daily flow of 109.4 gpm. Basin B is proposed to have approximately 55 single family homes with an average daily flow of 7.2 gpm and a peak daily flow of 29.5 gpm. Basin C is proposed to have approximately 30 single family homes with an average daily flow of 3.9 gpm and a peak daily flow of 16.1 gpm.

Sanitary Basin information is shown on the Sanitary Sewer Exhibit provided in Appendix E. Sanitary Demand calculations are included in Appendix C.

Basins A and B will ultimately flow to the East Cherry Creek Valley Water and Sanitation District ("ECCV") line near Long Avenue and Creekside Elementary School, at the northern boundary of the Kings Point North subdivision. In 2019 ECCV and the City of Aurora entered an Intergovernmental Agreement to allow Kings Point North to connect to the existing ECCV sanitary main. The existing 8" main has an excess capacity of 229 additional single family equivalent connections. However, additional improvements will be required prior to full build-out of Kings Point North and any other future developments connecting thereto. This includes upgrading the existing 8" main and other possible infrastructure upgrades. Additional detail is provided within the IGA. The IGA enabled the removal of an anticipated lift station and force main identified in the original master utility report for Kings Point North prepared by PBS&J.

Proposed Sanitary Sewer Layout and Pipe Sizes

All proposed sanitary sewer on the Site will be 8" PVC.

The sewer system within Basin A will collect from the central and eastern portion of the Site, west of Antelope Creek. The sewer will follow proposed road right-of-way and will flow to the north to Design Point A where it will discharge to the sewer system to be constructed with the Kings Point North Development. The *Master Utility Report for Kings Point North* accounted for 400 units contributing from the Site. Basins A and B combined have a maximum of 259 units which is in conformance with the *Master Utility Report for Kings Point North*.

The sewer system within Basin B will collect from the eastern portion of the Site, east of Antelope Creek. The sewer will follow proposed road right-of-way and will flow to the north to Design Point B where it will discharge to the sewer system to be constructed with the Kings Point North Development. The *Master Utility Report for Kings Point North* accounted for 400 units contributing from the Site. Basin A and B combined have a maximum of 259 units which is in conformance with the *Master Utility Report for Kings Point North*.

The sewer system within Basin C will collect from the western portion of the Site. The sewer will follow proposed road right-of-way and will flow to the west to Design Point C where it will discharge to the sewer system to be constructed with the Kings Point South Filing No. 1. The *Master Utility Report for Kings Point South Subdivision – Filing No. 1*, accounted for 292 units contributing from the Site as well as the future development to the west, currently known as the Sanford property. Basin C of the Site is proposing to utilize the capacity for 30 units of the 292 units shown for the Sanford and Overlook at Kings Point developments. Further coordination between the three properties (Kings Point South-Filing 1, Sanford and Overlook at Kings Point) will be required to ensure that adequate capacity is being provided for both developments and in conformance with the *Master Utility Report for Kings Point South Subdivision – Filing No. 1*.

Sanitary sewer layout information is included on the Sanitary Sewer Exhibit provided in Appendix E. Sanitary sewer sizing calculations are provided in Appendix C.

The Site is to be developed in 3 phases, as discussed earlier in this Report. The first phase includes the norther portion of the site. The second phase includes the southern portion of the Site. The third phase includes the western parcel of the site. Adequate stubs will be constructed with earlier phases to allow connection of the proposed sanitary facilities in later phases.

WATER SUPPLY SYSTEM

Existing/Adjacent Off-Site Water System

The proposed Site has significant variations in elevation, ranging between 6010 and 6120 feet. There are two pressure zones that will serve the Site. These zones relate to Aurora Water Zones 7 and 8A. Three connections will serve the Site. The first two will connect to the future Kings Point North 8" water main within Zone 8A, located to the north of the Site. The third connection will be to the west and connect in to the future 12" water main to be constructed with Kings Point South Filing No. 1 and will be within Zone 7.

See Figure 3 – Regional Potable Water System for further information on the existing and adjacent off-site water system.

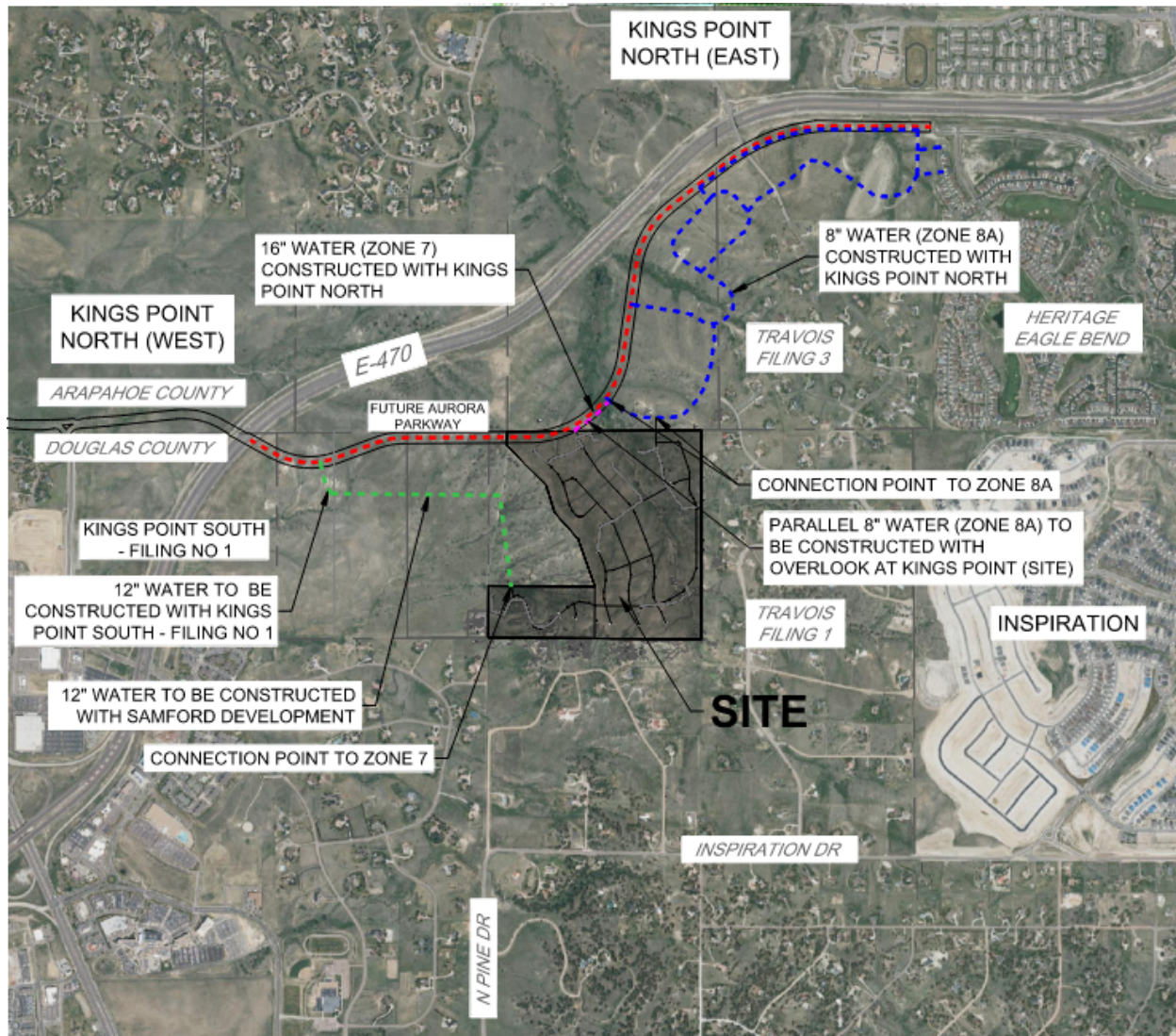


Figure 3 – Regional Potable Water System

Proposed Water Distribution System Design Criteria

The water distribution system was designed to meet the specifications provided by the City of Aurora. Water shall be distributed throughout the Site using ductile iron pipe and polyvinyl chloride pipe. The proposed water system was designed based on the peaking factor and demand requirements provided by the City of Aurora and analyzed for the average day, max hour, and max day plus fire flow to ensure the max velocity and head loss throughout the system are not exceeded in each scenario. The water demands were calculated using an estimate of 2.77 people per unit and an average day per capita flow of 101 gpcd. The water distribution system was designed to meet the following ratios.

Ratio	Peaking Factor
Max Hour: Average Day	4.5:1
Max Day: Average Day	2.8:1

The system is serving a single-family residential development and therefore was designed to meet a fire flow demand of 1,500 gpm for two hours without the residual pressure dropping below 20 psi. The water system was designed to meet the maximum velocity and head loss based on the size of the pipe, as shown below, for all flow scenarios except for Fire Flow. A maximum velocity of 10 feet per second was used for all Fire Flow scenarios.

Pipe Diameter (in)	Max Velocity (fps)	Head Loss Not to Exceed (ft/1,000 ft)
6	2.5	5
8 to 12	3	5
16 to 24	4.5	5

Pressure zone information was provided by Aurora Water and can be found in the table below.

Pressure Zone	HGL	Top Elevation	Minimum Static Pressure (psi)	Bottom Elevation	Maximum Static Pressure (psi)
7	6190	6090	43	5910	120
8A	6300	6185	50	6023	120

Proposed Water Demands

The proposed Site is divided into 3 water basins. Basins A and B comprise the eastern portion of the Site. Basin C makes up the western portion of the Site and drains to the west. Basin A is proposed to have a maximum of 204 single family homes with an Average Daily Flow of 39.6 gallons per minute (gpm), a Max Day Flow of 111.0 gpm, and a Max Hour Flow of 178.4 gpm. A fire flow was applied in the central portion of the Basin at Junction 224. Basin B is proposed to have approximately 55 single family homes with an Average Daily Flow of 10.7 (gpm), a Max Day Flow of 29.9 gpm, and a Max Hour Flow of 48.1 gpm. A fire flow was applied in the central portion of the Basin at Junction 228. Basin C is proposed to have approximately 30 single family homes with an Average Daily Flow of 5.8 (gpm), a Max Day Flow of 16.3 gpm, and a Max Hour Flow of 26.2 gpm. A fire flow was applied in the western portion of the Basin at Junction 243.

Water system layout information is shown on the Potable Water Exhibit provided in Appendix E. Water Demand calculations are included in Appendix B.

Proposed On-Site Water System Layout and Analysis

There are three connection points to the adjacent water system. Two connection points will occur to the north and connect into pressure zone 8A of the Kings Point North development. A 16" Zone 7 water line is proposed north of the Site within Aurora Parkway. A parallel 8" Zone 8A water line will be constructed parallel to this line to ensure that adequate water pressures serve the Site. The third connection point will be to the west and connect in to the 12" Zone 7 water line to be constructed with Kings Point South Filing No. 1 and the future Sanford development. At least one pressure reducing valve will be required in the western portion of the Site to separate the two pressure zones. Additional check valves have also been modeled to keep system pressures within allowable ranges.

The water system layout information is included on the Potable Water Exhibit provided in Appendix E.

WaterCAD was used to analyze the proposed water system for the average day demand, maximum day demand, maximum hour demand, and maximum day demand plus fire flow scenarios for all three basins. Pressure zones boundaries were determined using existing contours as well as some conceptual grading. The water model used for the Kings Point North Master Utility Report was utilized as a starting point for the on-site analysis.

Results from the WaterCAD models for the various daily and fire flows are provided in Appendix B. The models have been run assuming that the connection to the west is not available at time of construction. An Ultimate Fire Flow model is provided showing the connection to the Zone 7 water line and assumes a fire flow in the western portion of the Site.

CONCLUSION

Compliance with Standards

The proposed water layout for Overlook at Kings Point discussed in this Report meets the Aurora Water Standards and will not have a negative impact on the City of Aurora's water infrastructure. The proposed sanitary layout for Overlook at Kings Point discussed in this Report meets the Aurora Water Standards and will not have a negative impact on the City of Aurora's infrastructure. The proposed infrastructure has been sized to accommodate the anticipated demands as part of the Overlook at Kings Point development.

REFERENCES

1. *Aurora Water, Sanitary Sewer & Storm Drainage Infrastructure Standards and Specifications, Updated January, 2022.*
2. *Kings Point North – Master Utility Report, prepared by Core with an approval date of June 15, 2022.*
3. *Kings Point South Subdivision – Filing No. 1 Master Utility Report, prepared by HR Green, dated September 12, 2022.*



720.283.6783 Office
1500 West Canal Court
Littleton, Colorado 80120
REDLAND.COM

Appendix A - Vicinity Map

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0 1000 2000
SCALE : 1" = 2000'

OVERLOOK AT KINGS POINT

VICINITY MAP



Redland
WHERE GREAT PLACES BEGIN

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▪ Land Planning ▪ Landscape Architecture
▪ Civil Engineering ▪ Construction Management

PROJECT NO: 21014

DATE: 12/6/2022

DRAWING NO:

VIC



720.283.6783 Office
1500 West Canal Court
Littleton, Colorado 80120
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Appendix B - Water Demand Calculations and WaterCAD Reports



Water Demand Worksheet

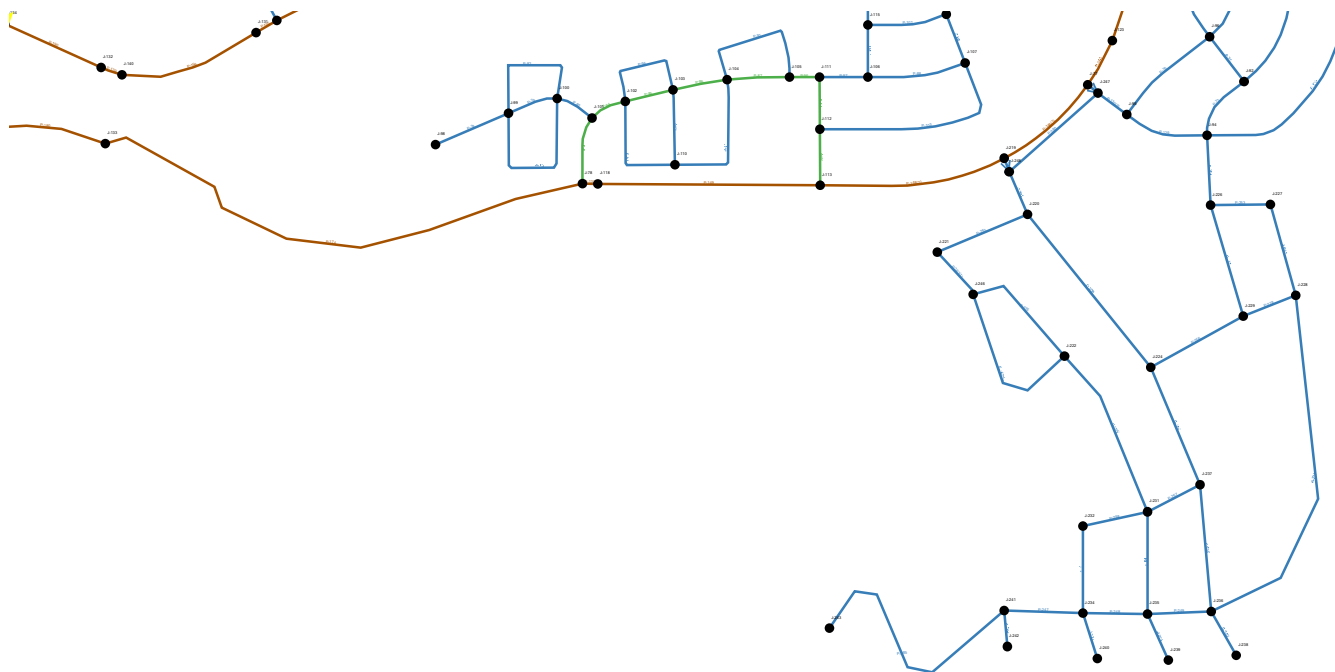
PROJECT NAME: Overlook at Kings Point
 PROJECT NUMBER: 21014
 CALCULATED BY: BRB
 CHECKED BY: MP

Residential (Gallons per Capita per Day)* = 101
 People per d.u.* = 2.77
 Max Day/Average Day* = 2.8 :1
 Max Hour/Average Day* = 4.5 :1
 Fire Flow* = 1500 GPM for 2 hours

* Per Aurora Water's Water, Sanitary Sewer & Storm Drainage Infrastructure Standards and Specifications, Section 5.02

Demand Node	Area (Acres)	Land Use		Average Day (gpd)	Tributary Flow Per Node			
		Attached DU	Detached DU		Average Day Flow (gpm)	Max Day Flow (gpm)	Max Hour Flow (gpm)	Max Day + Fire Flow (gpm)
Basin A	61.93		204	57,073	39.63	110.98	178.35	1,610.98
Basin A Total		0	204	57,073	39.63	110.98	178.35	1,610.98
Basin B	41.27		55	15,387	10.69	29.92	48.09	1,529.92
Basin B Total		0	55	15,387	10.69	29.92	48.09	1,529.92
Basin C	19.94		30	8,393	5.83	16.32	26.23	1,516.32
Basin C Total		0	30	8,393	5.83	16.32	26.23	1,516.32
Site Totals	Area (Acres)	Attached DU	Detached DU	Average Day (gpd)	Average Day Flow (gpm)	Max Day Flow (gpm)	Max Hour Flow (gpm)	
	123.14	0	289	80,854	56.15	157.22	252.67	

Scenario: Base
Active Scenario: Base



FlexTable: Junction Table

Active Scenario: Static

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
31	J-1	5,978.23	0	6,190.00	92
33	J-2	6,006.09	0	6,190.00	80
35	J-3	6,023.78	0	6,190.00	72
37	J-4	6,010.30	0	6,190.00	78
39	J-5	6,013.28	0	6,190.00	76
41	J-6	5,981.77	0	6,190.00	90
43	J-7	5,970.28	0	6,190.00	95
45	J-8	6,025.06	0	6,190.00	71
47	J-9	6,007.93	0	6,190.00	79
49	J-10	5,956.88	0	6,190.00	101
51	J-11	5,932.68	0	6,190.00	111
53	J-12	5,931.77	0	6,190.00	112
55	J-13	5,913.31	0	6,190.00	120
57	J-14	5,888.18	0	6,050.06	70
62	J-15	5,885.74	0	6,050.06	71
64	J-16	5,874.81	0	6,050.06	76
68	J-17	5,866.61	0	5,950.00	36
70	J-19	5,875.49	0	6,050.06	76
72	J-20	5,869.44	0	6,050.06	78
74	J-21	5,820.98	0	6,050.06	99
76	J-22	5,831.47	0	6,050.06	95
79	J-23	5,803.69	0	6,050.06	107
81	J-24	5,780.11	0	5,950.00	74
83	J-25	5,817.47	0	6,050.06	101
86	J-26	5,831.52	0	6,050.06	95
88	J-27	5,867.97	0	6,050.06	79
90	J-28	5,871.53	0	6,050.06	77
95	J-29	5,857.26	0	6,050.06	83
97	J-30	5,848.05	0	6,050.06	87
99	J-31	5,854.37	0	6,050.06	85
101	J-32	5,839.89	0	6,050.06	91
103	J-33	5,824.41	0	6,050.06	98
105	J-34	5,824.55	0	6,050.06	98
112	J-35	5,821.63	0	5,950.00	56
119	J-36	5,914.24	0	6,190.00	119
120	J-37	5,932.80	0	6,190.00	111
121	J-38	5,930.78	0	6,190.00	112
122	J-39	5,928.29	0	6,190.00	113
123	J-40	5,962.18	0	6,190.00	99
124	J-41	5,952.27	0	6,190.00	103
125	J-42	5,964.00	0	6,190.00	98
135	J-43	5,913.32	0	6,190.00	120
140	J-44	5,956.79	0	6,190.00	101
143	J-45	6,022.80	0	6,190.00	72
144	J-46	6,025.86	0	6,190.00	71
145	J-47	6,044.45	0	6,190.00	63
146	J-48	6,055.27	0	6,190.00	58

FlexTable: Junction Table

Active Scenario: Static

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
147	J-49	6,024.43	0	6,190.00	72
148	J-50	5,939.47	0	6,190.00	108
153	J-51	5,891.17	0	6,050.06	69
154	J-52	5,891.27	0	6,050.06	69
162	J-53	6,037.37	0	6,190.00	66
167	J-54	5,975.95	0	6,190.00	93
169	J-55	5,952.28	0	6,190.00	103
171	J-56	5,937.76	0	6,190.00	109
173	J-57	5,984.73	0	6,190.00	89
174	J-58	5,963.34	0	6,190.00	98
175	J-59	5,976.00	0	6,190.00	93
181	J-60	5,908.48	0	6,190.00	122
182	J-61	5,932.21	0	6,190.00	112
183	J-62	5,928.58	0	6,190.00	113
184	J-63	5,920.12	0	6,190.00	117
185	J-64	5,953.36	0	6,190.00	102
186	J-65	5,957.93	0	6,190.00	100
187	J-66	5,975.23	0	6,190.00	93
188	J-67	5,971.34	0	6,190.00	95
193	J-68	5,937.93	0	6,190.00	109
201	J-69	6,036.60	0	6,190.00	66
203	J-70	5,985.58	0	6,190.00	88
207	J-71	5,980.25	0	6,190.00	91
209	J-72	5,995.55	0	6,190.00	84
212	J-73	6,036.06	0	6,190.00	67
214	J-74	6,073.00	0	6,190.01	51
216	J-75	6,010.49	0	6,190.02	78
218	J-76	6,017.70	0	6,190.03	75
220	J-77	6,008.08	0	6,190.02	79
222	J-78	6,027.78	0	6,190.02	70
225	J-79	6,029.55	0	6,299.83	117
227	J-80	6,059.83	0	6,299.70	104
229	J-81	6,063.62	0	6,299.68	102
231	J-82	6,075.66	0	6,299.61	97
233	J-83	6,071.81	0	6,299.59	99
235	J-84	6,024.14	0	6,299.55	119
237	J-85	6,036.12	0	6,299.59	114
239	J-86	6,015.63	0	6,299.55	123
241	J-87	6,018.11	0	6,299.55	122
245	J-88	6,048.71	0	6,299.58	109
289	J-89	6,036.38	0	6,299.47	114
299	J-90	6,023.33	0	6,299.45	119
301	J-91	6,033.97	0	6,299.44	115
304	J-92	6,056.06	0	6,299.45	105
306	J-93	6,036.38	0	6,299.46	114
308	J-94	6,047.03	0	6,299.45	109
310	J-95	6,022.02	0	6,299.45	120

FlexTable: Junction Table

Active Scenario: Static

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
317	J-96	6,048.33	0	6,299.45	109
329	J-97	6,038.87	0	6,299.52	113
334	J-98	5,984.70	0	6,190.02	89
339	J-99	6,004.92	0	6,190.02	80
341	J-100	6,029.97	0	6,190.02	69
343	J-101	6,039.25	0	6,190.02	65
348	J-102	6,054.38	0	6,190.02	59
350	J-103	6,048.91	0	6,190.02	61
352	J-104	6,060.33	0	6,190.02	56
354	J-105	6,065.52	0	6,190.02	54
356	J-106	6,063.79	0	6,190.02	55
358	J-107	6,027.47	0	6,190.02	70
360	J-108	6,034.80	0	6,190.02	67
362	J-109	6,040.06	0	6,190.02	65
365	J-110	6,057.25	0	6,190.02	57
370	J-111	6,063.79	0	6,190.02	55
373	J-112	6,082.08	0	6,190.02	47
375	J-113	6,087.92	0	6,190.02	44
379	J-114	6,057.76	0	6,190.02	57
381	J-115	6,052.05	0	6,190.02	60
389	J-116	6,021.76	0	6,299.96	120
393	J-117	6,025.12	0	6,299.96	119
399	J-118	6,035.49	0	6,190.02	67
403	J-119	5,929.67	0	6,190.00	113
410	J-120	5,794.62	0	5,950.00	67
425	J-121	5,872.00	0	6,050.06	77
463	J-123	6,010.00	0	6,190.02	78
471	J-125 - KP SOUTH	5,874.00	0	6,050.06	76
473	J-124	5,906.11	0	6,050.06	62
476	J-126 - KP SOUTH	5,910.00	0	6,050.06	61
499	J-127	6,031.32	0	6,299.93	116
510	J-18	6,073.00	0	6,299.71	98
512	J-128	6,010.49	0	6,299.61	125
515	J-129	6,070.08	0	6,299.64	99
519	J-130	6,020.38	0	6,299.54	121
524	J-131	5,911.87	0	6,190.00	120
546	J-132	5,913.45	0	6,190.00	120
547	J-133	5,918.27	0	6,190.01	118
550	J-134	5,994.35	0	6,190.01	85
562	J-135	5,871.85	0	6,050.06	77
572	J-136	5,912.46	0	6,050.06	60
576	J-137	5,920.62	0	6,190.01	117
584	J-138	5,868.00	0	6,050.06	79
590	J-139	5,914.00	0	6,050.06	59
605	J-140	5,915.89	0	6,190.00	119
648	J-216	5,904.28	0	6,050.06	63

FlexTable: Junction Table

Active Scenario: Static

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
656	J-218	5,885.39	0	6,050.06	71
660	J-219	6,037.90	0	6,190.02	66
663	J-220	6,046.52	0	6,299.45	109
664	J-221	6,065.81	0	6,299.45	101
665	J-222	6,070.41	0	6,299.45	99
667	J-224	6,047.32	0	6,299.45	109
669	J-226	6,047.81	0	6,299.45	109
670	J-227	6,059.40	0	6,299.45	104
671	J-228	6,057.28	0	6,299.45	105
672	J-229	6,050.87	0	6,299.45	108
674	J-231	6,081.89	0	6,299.45	94
675	J-232	6,096.52	0	6,299.45	88
677	J-234	6,102.20	0	6,299.45	85
678	J-235	6,090.14	0	6,299.45	91
679	J-236	6,077.42	0	6,299.45	96
680	J-237	6,070.63	0	6,299.45	99
681	J-238	6,079.14	0	6,299.45	95
682	J-239	6,097.15	0	6,299.45	88
683	J-240	6,110.93	0	6,299.45	82
684	J-241	6,090.68	0	6,299.45	90
685	J-242	6,095.80	0	6,299.45	88
686	J-243	6,020.27	0	6,299.45	121
721	J-246	6,078.62	0	6,299.45	96
746	J-247	6,011.79	0	6,299.45	124
749	J-248	6,041.46	0	6,299.45	112

FlexTable: Pipe Table
Active Scenario: Static

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-1	272	J-15	J-16	8.0	PVC	130.0	0	0.00	0.00
P-2	1,327	J-21	J-22	8.0	PVC	130.0	0	0.00	0.00
P-3	277	J-22	J-21	8.0	PVC	130.0	0	0.00	0.00
P-4	373	J-23	J-25	8.0	PVC	130.0	0	0.00	0.00
P-5	280	J-25	J-26	8.0	PVC	130.0	0	0.00	0.00
P-6	803	J-26	J-27	8.0	PVC	130.0	0	0.00	0.00
P-7	178	J-27	J-28	8.0	PVC	130.0	0	0.00	0.00
P-8	268	J-28	J-19	8.0	PVC	130.0	0	0.00	0.00
P-9	315	J-29	J-30	8.0	PVC	130.0	0	0.00	0.00
P-10	482	J-20	J-31	8.0	PVC	130.0	0	0.00	0.00
P-11	300	J-30	J-32	8.0	PVC	130.0	0	0.00	0.00
P-12	641	J-32	J-33	8.0	PVC	130.0	0	0.00	0.00
P-13	295	J-33	J-34	8.0	PVC	130.0	0	0.00	0.00
P-14	290	J-34	J-22	8.0	PVC	130.0	0	0.00	0.00
P-15	220	J-30	J-31	8.0	PVC	130.0	0	0.00	0.00
P-16	720	J-31	J-33	8.0	PVC	130.0	0	0.00	0.00
P-17	211	J-36	J-37	8.0	PVC	130.0	0	0.00	0.00
P-18	284	J-37	J-38	8.0	PVC	130.0	5	0.03	0.00
P-19	167	J-38	J-39	8.0	PVC	130.0	2	0.02	0.00
P-20	284	J-39	J-41	8.0	PVC	130.0	2	0.02	0.00
P-21	278	J-41	J-40	8.0	PVC	130.0	0	0.00	0.00
P-22	545	J-37	J-43	8.0	PVC	130.0	-5	0.03	0.00
P-23	238	J-43	J-13	8.0	PVC	130.0	-5	0.03	0.00
P-24	885	J-38	J-42	8.0	PVC	130.0	3	0.02	0.00
P-25	548	J-41	J-42	8.0	PVC	130.0	2	0.02	0.00
P-26	383	J-42	J-44	8.0	PVC	130.0	5	0.03	0.00
P-27	209	J-44	J-10	8.0	PVC	130.0	5	0.03	0.00
P-28	326	J-45	J-46	8.0	PVC	130.0	0	0.00	0.00
P-29	704	J-46	J-47	8.0	PVC	130.0	0	0.00	0.00
P-30	385	J-47	J-8	8.0	PVC	130.0	0	0.00	0.00
P-31	1,060	J-46	J-9	8.0	PVC	130.0	0	0.00	0.00
P-32	931	J-51	J-52	8.0	PVC	130.0	0	0.00	0.00
P-33	201	J-51	J-15	8.0	PVC	130.0	0	0.00	0.00
P-34	471	J-47	J-48	8.0	PVC	130.0	0	0.00	0.00
P-35	488	J-48	J-49	8.0	PVC	130.0	0	0.00	0.00
P-36	1,059	J-49	J-7	8.0	PVC	130.0	0	0.00	0.00
P-37	165	J-49	J-53	8.0	PVC	130.0	0	0.00	0.00
P-38	2,012	J-53	J-50	8.0	PVC	130.0	0	0.00	0.00
P-39	190	J-6	J-54	8.0	PVC	130.0	0	0.00	0.00
P-40	992	J-54	J-55	8.0	PVC	130.0	0	0.00	0.00
P-41	315	J-54	J-57	8.0	PVC	130.0	0	0.00	0.00
P-42	844	J-57	J-59	8.0	PVC	130.0	0	0.00	0.00
P-43	293	J-59	J-58	8.0	PVC	130.0	0	0.00	0.00
P-44	314	J-58	J-55	8.0	PVC	130.0	0	0.00	0.00
P-45	772	J-58	J-57	8.0	PVC	130.0	0	0.00	0.00
P-46	476	J-60	J-61	8.0	PVC	130.0	0	0.00	0.00
P-47	445	J-61	J-65	8.0	PVC	130.0	0	0.00	0.00

FlexTable: Pipe Table

Active Scenario: Static

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-48	367	J-65	J-66	8.0	PVC	130.0	0	0.00	0.00
P-49	251	J-62	J-56	8.0	PVC	130.0	0	0.00	0.00
P-50	10	J-56	J-68	8.0	PVC	130.0	0	0.00	0.00
P-51	841	J-68	J-66	8.0	PVC	130.0	0	0.00	0.00
P-52	1,132	J-66	J-3	8.0	PVC	130.0	0	0.00	0.00
P-53	276	J-61	J-68	8.0	PVC	130.0	0	0.00	0.00
P-54	433	J-63	J-64	8.0	PVC	130.0	0	0.00	0.00
P-55	344	J-64	J-67	8.0	PVC	130.0	0	0.00	0.00
P-56	215	J-64	J-65	8.0	PVC	130.0	0	0.00	0.00
P-57	561	J-3	J-69	8.0	PVC	130.0	0	0.00	0.00
P-58	1,085	J-69	J-70	8.0	PVC	130.0	0	0.00	0.00
P-59	1,518	J-69	J-70	8.0	PVC	130.0	0	0.00	0.00
P-60	270	J-70	J-1	8.0	PVC	130.0	0	0.00	0.00
P-61	153	J-1	J-71	8.0	PVC	130.0	0	0.00	0.00
P-62	280	J-2	J-72	8.0	PVC	130.0	0	0.00	0.00
P-63	222	R-1 - ZONE 7	J-73	16.0	PVC	130.0	-79	0.13	0.00
P-64	1,037	J-82	J-85	8.0	PVC	130.0	22	0.14	0.02
P-65	740	J-85	J-130	8.0	PVC	130.0	49	0.31	0.05
P-66	223	J-130	J-86	8.0	PVC	130.0	-30	0.19	0.01
P-67	48	J-86	J-87	8.0	PVC	130.0	17	0.11	0.00
P-68	218	J-87	J-84	8.0	PVC	130.0	17	0.11	0.00
P-69	280	J-85	J-88	8.0	PVC	130.0	32	0.21	0.01
P-70	608	J-88	J-83	8.0	PVC	130.0	-15	0.10	0.00
P-71	552	J-88	J-86	8.0	PVC	130.0	48	0.30	0.04
P-72	951	J-92	J-93	8.0	PVC	130.0	-13	0.09	0.01
P-73	343	J-92	J-94	8.0	PVC	130.0	-2	0.01	0.00
P-74	932	J-91	J-96	8.0	PVC	130.0	-20	0.13	0.01
P-75	281	J-96	J-92	8.0	PVC	130.0	-16	0.10	0.00
P-76	570	J-95	J-96	8.0	PVC	130.0	9	0.06	0.00
P-77	898	J-96	J-90	8.0	PVC	130.0	5	0.03	0.00
P-78	397	J-98	J-99	8.0	PVC	130.0	0	0.00	0.00
P-79	257	J-99	J-100	8.0	PVC	130.0	0	0.00	0.00
P-80	202	J-100	J-101	8.0	PVC	130.0	0	0.00	0.00
P-81	338	J-101	J-78	12.0	PVC	130.0	16	0.04	0.00
P-82	669	J-99	J-100	8.0	PVC	130.0	0	0.00	0.00
P-83	840	J-100	J-99	8.0	PVC	130.0	0	0.00	0.00
P-84	188	J-101	J-102	12.0	PVC	130.0	-16	0.04	0.00
P-85	246	J-102	J-103	12.0	PVC	130.0	-11	0.03	0.00
P-86	274	J-103	J-104	12.0	PVC	130.0	-13	0.04	0.00
P-87	312	J-104	J-105	12.0	PVC	130.0	-13	0.04	0.00
P-88	495	J-106	J-107	8.0	PVC	130.0	-1	0.01	0.00
P-89	260	J-107	J-108	8.0	PVC	130.0	1	0.01	0.00
P-90	442	J-108	J-109	8.0	PVC	130.0	0	0.00	0.00
P-91	714	J-105	J-104	8.0	PVC	130.0	3	0.02	0.00
P-92	682	J-104	J-110	8.0	PVC	130.0	3	0.02	0.00
P-93	559	J-110	J-102	8.0	PVC	130.0	2	0.02	0.00
P-94	538	J-102	J-103	8.0	PVC	130.0	-2	0.02	0.00

FlexTable: Pipe Table
Active Scenario: Static

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-95	374	J-103	J-110	8.0	PVC	130.0	0	0.00	0.00
P-96	149	J-105	J-111	12.0	PVC	130.0	-16	0.04	0.00
P-97	242	J-111	J-106	8.0	PVC	130.0	-2	0.01	0.00
P-98	260	J-111	J-112	12.0	PVC	130.0	-14	0.04	0.00
P-99	280	J-112	J-113	12.0	PVC	130.0	-16	0.04	0.00
P-100	280	J-114	J-115	8.0	PVC	130.0	0	0.00	0.00
P-101	260	J-115	J-106	8.0	PVC	130.0	1	0.01	0.00
P-102	400	J-115	J-108	8.0	PVC	130.0	-1	0.00	0.00
P-103	1,072	J-112	J-107	8.0	PVC	130.0	2	0.01	0.00
P-104	378	J-117	R-4 - ZONE 8A	8.0	PVC	130.0	-64	0.41	0.04
P-105	558	J-55	J-119	8.0	PVC	130.0	0	0.00	0.00
P-106	179	J-119	J-56	8.0	PVC	130.0	0	0.00	0.00
P-107	780	J-50	J-119	8.0	PVC	130.0	0	0.00	0.00
P-108	305	J-116	R-3 - ZONE 8A	8.0	PVC	130.0	-71	0.45	0.04
P-109	808	J-24	J-120	12.0	PVC	130.0	0	0.00	0.00
P-110	970	J-120	J-35	12.0	PVC	130.0	0	0.00	0.00
P-111	361	J-52	J-124	8.0	PVC	130.0	0	0.00	0.00
P-112	852	J-124	J-51	8.0	PVC	130.0	0	0.00	0.00
P-113	242	J-16	J-19	8.0	PVC	130.0	0	0.00	0.00
P-114	248	J-19	J-20	12.0	PVC	130.0	0	0.00	0.00
P-115	1,154	J-20	J-21	12.0	PVC	130.0	0	0.00	0.00
P-116	255	J-21	J-23	12.0	PVC	130.0	0	0.00	0.00
P-117	679	J-24	J-23	12.0	PVC	130.0	0	0.00	0.00
P-118	674	J-19	J-29	12.0	PVC	130.0	0	0.00	0.00
P-119	161	J-14	J-52	8.0	PVC	130.0	0	0.00	0.00
P-120	898	J-79	J-80	8.0	PVC	130.0	75	0.48	0.14
P-121	118	J-80	J-81	8.0	PVC	130.0	75	0.48	0.02
P-122	246	J-81	J-129	8.0	PVC	130.0	75	0.48	0.04
P-123	212	J-129	J-82	8.0	PVC	130.0	75	0.48	0.03
P-124	251	J-82	J-83	8.0	PVC	130.0	53	0.34	0.02
P-125	1,014	J-83	J-84	8.0	PVC	130.0	38	0.24	0.04
P-126	531	J-89	J-90	8.0	PVC	130.0	31	0.20	0.02
P-127	282	J-90	J-91	8.0	PVC	130.0	36	0.23	0.01
P-128	1,281	J-93	J-94	8.0	PVC	130.0	11	0.07	0.01
P-129	428	J-94	J-95	8.0	PVC	130.0	6	0.04	0.00
P-130 (1)	65	J-77	J-247	8.0	PVC	130.0	0	0.00	0.00
P-130 (2)	180	J-247	J-95	8.0	PVC	130.0	3	0.02	0.00
P-131	328	J-89	J-93	8.0	PVC	130.0	25	0.16	0.01
P-132	281	J-84	J-97	8.0	PVC	130.0	55	0.35	0.02
P-133	663	J-97	J-89	8.0	PVC	130.0	55	0.35	0.06
P-134	301	J-127	J-116	8.0	PVC	130.0	-60	0.38	0.03
P-135	367	J-116	J-117	8.0	PVC	130.0	11	0.07	0.00

FlexTable: Pipe Table
Active Scenario: Static

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-136	812	J-117	J-79	8.0	PVC	130.0	75	0.48	0.12
P-137	76	J-118	J-78	16.0	PVC	130.0	40	0.06	0.00
P-139	111	J-140	J-132	16.0	PVC	130.0	-56	0.09	0.00
P-140	406	J-121	J-29	12.0	PVC	130.0	0	0.00	0.00
P-141	373	J-16	J-135	8.0	PVC	130.0	0	0.00	0.00
P-142	184	J-135	J-125 - KP SOUTH	8.0	PVC	130.0	0	0.00	0.00
P-144	131	J-136	J-126 - KP SOUTH	12.0	PVC	130.0	0	0.00	0.00
P-145	2,217	J-73	J-74	16.0	PVC	130.0	-79	0.13	0.01
P-146	997	J-74	J-75	16.0	PVC	130.0	-79	0.13	0.01
P-147	1,496	J-75	J-76	16.0	PVC	130.0	-79	0.13	0.01
P-148 (1)	561	J-77	J-219	16.0	PVC	130.0	56	0.09	0.00
P-148 (2)	941	J-219	J-113	16.0	PVC	130.0	56	0.09	0.00
P-149	1,109	J-113	J-118	16.0	PVC	130.0	40	0.06	0.00
P-150	53	J-134	PRV-1	16.0	PVC	130.0	0	0.00	0.00
P-153	964	J-76	J-123	16.0	PVC	130.0	56	0.09	0.00
P-154	253	J-123	J-77	16.0	PVC	130.0	56	0.09	0.00
P-155	120	J-13	J-131	16.0	PVC	130.0	-56	0.09	0.00
P-156	722	J-131	J-140	16.0	PVC	130.0	-56	0.09	0.00
P-157	376	R-2 - ZONE 7	J-1	24.0	PVC	130.0	-2	0.00	0.00
P-158	552	J-1	J-2	24.0	PVC	130.0	-2	0.00	0.00
P-159	784	J-2	J-3	24.0	PVC	130.0	-2	0.00	0.00
P-160	833	J-3	J-4	24.0	PVC	130.0	-2	0.00	0.00
P-161	309	J-4	J-5	24.0	PVC	130.0	-2	0.00	0.00
P-162	1,387	J-5	J-6	24.0	PVC	130.0	-2	0.00	0.00
P-163	855	J-6	J-7	24.0	PVC	130.0	-2	0.00	0.00
P-164	1,804	J-7	J-8	24.0	PVC	130.0	-2	0.00	0.00
P-165	281	J-8	J-9	24.0	PVC	130.0	-2	0.00	0.00
P-166	914	J-9	J-10	24.0	PVC	130.0	-2	0.00	0.00
P-167	123	J-10	J-11	24.0	PVC	130.0	3	0.00	0.00
P-168	500	J-11	J-12	16.0	PVC	130.0	-51	0.08	0.00
P-169	286	J-12	J-13	16.0	PVC	130.0	-51	0.08	0.00
P-170	1,412	R-5 - ZONE 5	J-24	24.0	PVC	130.0	0	0.00	0.00
P-171	1,152	J-24	J-35	24.0	PVC	130.0	0	0.00	0.00
P-172	1,070	J-35	J-17	24.0	PVC	130.0	0	0.00	0.00
P-173	70	R-7 - ZONE 7	J-11	30.0	PVC	130.0	-54	0.02	0.00
P-174	2,608	J-78	J-133	16.0	PVC	130.0	56	0.09	0.01
P-175	2,184	J-127	J-18	8.0	PVC	130.0	60	0.38	0.22
P-176	1,001	J-18	J-128	8.0	PVC	130.0	60	0.38	0.10
P-177	209	J-128	J-85	8.0	PVC	130.0	60	0.38	0.02
P-178	615	J-91	J-130	8.0	PVC	130.0	-80	0.51	0.10

FlexTable: Pipe Table
Active Scenario: Static

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-179	641	J-59	J-4	8.0	PVC	130.0	0	0.00	0.00
P-180	624	J-133	J-137	16.0	PVC	130.0	56	0.09	0.00
P-181	533	J-137	J-134	16.0	PVC	130.0	56	0.09	0.00
P-182	380	J-114	J-109	8.0	PVC	130.0	0	0.00	0.00
P-183	199	J-17	J-135	8.0	PVC	130.0	0	0.00	0.00
P-184	1,017	J-135	J-136	8.0	PVC	130.0	0	0.00	0.00
P-185	109	PRV-2	J-136	12.0	PVC	130.0	0	0.00	0.00
P-186	93	J-137	PRV-2	12.0	PVC	130.0	0	0.00	0.00
P-187	73	J-76	PRV-3	8.0	PVC	130.0	-135	0.86	0.03
P-188	174	PRV-3	J-91	8.0	PVC	130.0	-135	0.86	0.08
P-189	924	J-139	J-138	12.0	PVC	130.0	0	0.00	0.00
P-190	527	J-132	J-134	16.0	PVC	130.0	-56	0.09	0.00
P-192	254	J-216	J-139	12.0	PVC	130.0	0	0.00	0.00
P-193	84	PRV-1	J-14	16.0	PVC	130.0	0	0.00	0.00
P-194	1,365	J-14	J-216	8.0	PVC	130.0	0	0.00	0.00
P-195	768	J-218	J-216	12.0	PVC	130.0	0	0.00	0.00
P-196	110	J-14	J-218	16.0	PVC	130.0	0	0.00	0.00
P-197	527	J-218	J-121	12.0	PVC	130.0	0	0.00	0.00
P-246	180	J-241	J-242	8.0	PVC	130.0	0	0.00	0.00
P-247	393	J-241	J-234	8.0	PVC	130.0	0	0.00	0.00
P-248	322	J-234	J-235	8.0	PVC	130.0	0	0.00	0.00
P-249	319	J-235	J-236	8.0	PVC	130.0	-1	0.00	0.00
P-252	471	J-228	J-227	8.0	PVC	130.0	-1	0.01	0.00
P-253	299	J-227	J-226	8.0	PVC	130.0	-1	0.01	0.00
P-254	349	J-226	J-94	8.0	PVC	130.0	-3	0.02	0.00
P-255	577	J-226	J-229	8.0	PVC	130.0	1	0.01	0.00
P-256	527	J-229	J-224	8.0	PVC	130.0	2	0.01	0.00
P-261	489	J-220	J-221	8.0	PVC	130.0	-1	0.01	0.00
P-262 (1)	279	J-221	J-246	8.0	PVC	130.0	-1	0.01	0.00
P-262 (2)	846	J-246	J-222	8.0	PVC	130.0	0	0.00	0.00
P-264	510	J-231	J-235	8.0	PVC	130.0	0	0.00	0.00
P-265	635	J-224	J-237	8.0	PVC	130.0	0	0.00	0.00
P-266	635	J-237	J-236	8.0	PVC	130.0	0	0.00	0.00
P-267	296	J-237	J-231	8.0	PVC	130.0	1	0.00	0.00
P-268	330	J-231	J-232	8.0	PVC	130.0	0	0.00	0.00
P-270	434	J-232	J-234	8.0	PVC	130.0	0	0.00	0.00
P-271	237	J-234	J-240	8.0	PVC	130.0	0	0.00	0.00
P-272	252	J-235	J-239	8.0	PVC	130.0	0	0.00	0.00
P-273	251	J-236	J-238	8.0	PVC	130.0	0	0.00	0.00
P-274	979	J-220	J-224	8.0	PVC	130.0	-2	0.01	0.00
P-275	891	J-222	J-231	8.0	PVC	130.0	-1	0.01	0.00
P-276	621	J-246	J-222	8.0	PVC	130.0	-1	0.00	0.00
P-277	1,841	J-228	J-236	8.0	PVC	130.0	1	0.01	0.00
P-278	282	J-229	J-228	8.0	PVC	130.0	0	0.00	0.00
P-280	598	J-247	J-248	8.0	PVC	130.0	-3	0.02	0.00
P-281	231	J-248	J-220	8.0	PVC	130.0	-3	0.02	0.00

FlexTable: Pipe Table
Active Scenario: Static

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-282	72	J-219	J-248	8.0	PVC	130.0	0	0.00	0.00
P-285	1,328	J-241	J-243	8.0	PVC	130.0	0	0.00	0.00

FlexTable: Junction Table
Active Scenario: Average Day

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
660	J-219	6,037.90	0	6,190.01	66
663	J-220	6,046.52	0	6,297.88	109
664	J-221	6,065.81	0	6,297.88	100
665	J-222	6,070.41	0	6,297.87	98
667	J-224	6,047.32	0	6,297.88	108
669	J-226	6,047.81	0	6,297.88	108
670	J-227	6,059.40	0	6,297.88	103
671	J-228	6,057.28	11	6,297.88	104
672	J-229	6,050.87	0	6,297.88	107
674	J-231	6,081.89	0	6,297.87	93
675	J-232	6,096.52	40	6,297.86	87
677	J-234	6,102.20	0	6,297.86	85
678	J-235	6,090.14	0	6,297.87	90
679	J-236	6,077.42	0	6,297.87	95
680	J-237	6,070.63	0	6,297.87	98
681	J-238	6,079.14	0	6,297.87	95
682	J-239	6,097.15	0	6,297.87	87
683	J-240	6,110.93	0	6,297.86	81
684	J-241	6,090.68	0	6,297.86	90
685	J-242	6,095.80	0	6,297.86	87
686	J-243	6,020.27	6	6,297.86	120
721	J-246	6,078.62	0	6,297.87	95
746	J-247	6,011.79	0	6,297.89	124
749	J-248	6,041.46	0	6,297.88	111

FlexTable: Pipe Table
Active Scenario: Average Day

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-246	180	J-241	J-242	8.0	PVC	130.0	0	0.00	0.00
P-247	393	J-241	J-234	8.0	PVC	130.0	-6	0.04	0.00
P-248	322	J-234	J-235	8.0	PVC	130.0	-19	0.12	0.00
P-249	319	J-235	J-236	8.0	PVC	130.0	-15	0.10	0.00
P-252	471	J-228	J-227	8.0	PVC	130.0	-16	0.10	0.00
P-253	299	J-227	J-226	8.0	PVC	130.0	-16	0.10	0.00
P-254	349	J-226	J-94	8.0	PVC	130.0	-33	0.21	0.01
P-255	577	J-226	J-229	8.0	PVC	130.0	18	0.11	0.01
P-256	527	J-229	J-224	8.0	PVC	130.0	10	0.07	0.00
P-261	489	J-220	J-221	8.0	PVC	130.0	14	0.09	0.00
P-262 (1)	279	J-221	J-246	8.0	PVC	130.0	14	0.09	0.00
P-262 (2)	846	J-246	J-222	8.0	PVC	130.0	7	0.04	0.00
P-264	510	J-231	J-235	8.0	PVC	130.0	4	0.03	0.00
P-265	635	J-224	J-237	8.0	PVC	130.0	19	0.12	0.01
P-266	635	J-237	J-236	8.0	PVC	130.0	3	0.02	0.00
P-267	296	J-237	J-231	8.0	PVC	130.0	16	0.10	0.00
P-268	330	J-231	J-232	8.0	PVC	130.0	26	0.17	0.01
P-270	434	J-232	J-234	8.0	PVC	130.0	-14	0.09	0.00
P-271	237	J-234	J-240	8.0	PVC	130.0	0	0.00	0.00
P-272	252	J-235	J-239	8.0	PVC	130.0	0	0.00	0.00
P-273	251	J-236	J-238	8.0	PVC	130.0	0	0.00	0.00
P-274	979	J-220	J-224	8.0	PVC	130.0	9	0.06	0.00
P-275	891	J-222	J-231	8.0	PVC	130.0	14	0.09	0.01
P-276	621	J-246	J-222	8.0	PVC	130.0	8	0.05	0.00
P-277	1,841	J-228	J-236	8.0	PVC	130.0	12	0.08	0.01
P-278	282	J-229	J-228	8.0	PVC	130.0	7	0.05	0.00
P-280	598	J-247	J-248	8.0	PVC	130.0	23	0.15	0.01
P-281	231	J-248	J-220	8.0	PVC	130.0	23	0.15	0.00
P-282	72	J-219	J-248	8.0	PVC	130.0	0	0.00	0.00
P-285	1,328	J-241	J-243	8.0	PVC	130.0	6	0.04	0.00

FlexTable: Junction Table
Active Scenario: Max Day

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
660	J-219	6,037.90	0	6,190.01	66
663	J-220	6,046.52	0	6,296.06	108
664	J-221	6,065.81	0	6,296.04	100
665	J-222	6,070.41	0	6,296.01	98
667	J-224	6,047.32	0	6,296.04	108
669	J-226	6,047.81	0	6,296.09	107
670	J-227	6,059.40	0	6,296.08	102
671	J-228	6,057.28	30	6,296.05	103
672	J-229	6,050.87	0	6,296.05	106
674	J-231	6,081.89	0	6,295.97	93
675	J-232	6,096.52	111	6,295.92	86
677	J-234	6,102.20	0	6,295.94	84
678	J-235	6,090.14	0	6,295.97	89
679	J-236	6,077.42	0	6,295.99	95
680	J-237	6,070.63	0	6,295.99	98
681	J-238	6,079.14	0	6,295.99	94
682	J-239	6,097.15	0	6,295.97	86
683	J-240	6,110.93	0	6,295.94	80
684	J-241	6,090.68	0	6,295.94	89
685	J-242	6,095.80	0	6,295.94	87
686	J-243	6,020.27	16	6,295.93	119
721	J-246	6,078.62	0	6,296.02	94
746	J-247	6,011.79	0	6,296.15	123
749	J-248	6,041.46	0	6,296.08	110

FlexTable: Pipe Table
Active Scenario: Max Day

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-246	180	J-241	J-242	8.0	PVC	130.0	0	0.00	0.00
P-247	393	J-241	J-234	8.0	PVC	130.0	-16	0.10	0.00
P-248	322	J-234	J-235	8.0	PVC	130.0	-54	0.35	0.03
P-249	319	J-235	J-236	8.0	PVC	130.0	-43	0.27	0.02
P-252	471	J-228	J-227	8.0	PVC	130.0	-44	0.28	0.03
P-253	299	J-227	J-226	8.0	PVC	130.0	-44	0.28	0.02
P-254	349	J-226	J-94	8.0	PVC	130.0	-93	0.60	0.08
P-255	577	J-226	J-229	8.0	PVC	130.0	49	0.31	0.04
P-256	527	J-229	J-224	8.0	PVC	130.0	29	0.19	0.01
P-261	489	J-220	J-221	8.0	PVC	130.0	40	0.25	0.02
P-262 (1)	279	J-221	J-246	8.0	PVC	130.0	40	0.25	0.01
P-262 (2)	846	J-246	J-222	8.0	PVC	130.0	18	0.12	0.01
P-264	510	J-231	J-235	8.0	PVC	130.0	11	0.07	0.00
P-265	635	J-224	J-237	8.0	PVC	130.0	54	0.34	0.05
P-266	635	J-237	J-236	8.0	PVC	130.0	9	0.06	0.00
P-267	296	J-237	J-231	8.0	PVC	130.0	44	0.28	0.02
P-268	330	J-231	J-232	8.0	PVC	130.0	73	0.47	0.05
P-270	434	J-232	J-234	8.0	PVC	130.0	-38	0.24	0.02
P-271	237	J-234	J-240	8.0	PVC	130.0	0	0.00	0.00
P-272	252	J-235	J-239	8.0	PVC	130.0	0	0.00	0.00
P-273	251	J-236	J-238	8.0	PVC	130.0	0	0.00	0.00
P-274	979	J-220	J-224	8.0	PVC	130.0	24	0.15	0.02
P-275	891	J-222	J-231	8.0	PVC	130.0	40	0.25	0.04
P-276	621	J-246	J-222	8.0	PVC	130.0	22	0.14	0.01
P-277	1,841	J-228	J-236	8.0	PVC	130.0	34	0.22	0.06
P-278	282	J-229	J-228	8.0	PVC	130.0	20	0.13	0.00
P-280	598	J-247	J-248	8.0	PVC	130.0	64	0.41	0.07
P-281	231	J-248	J-220	8.0	PVC	130.0	64	0.41	0.03
P-282	72	J-219	J-248	8.0	PVC	130.0	0	0.00	0.00
P-285	1,328	J-241	J-243	8.0	PVC	130.0	16	0.10	0.01

FlexTable: Junction Table
Active Scenario: Max Hour

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
660	J-219	6,037.90	0	6,190.01	66
663	J-220	6,046.52	0	6,293.83	107
664	J-221	6,065.81	0	6,293.77	99
665	J-222	6,070.41	0	6,293.72	97
667	J-224	6,047.32	0	6,293.78	107
669	J-226	6,047.81	0	6,293.91	106
670	J-227	6,059.40	0	6,293.87	101
671	J-228	6,057.28	48	6,293.81	102
672	J-229	6,050.87	0	6,293.82	105
674	J-231	6,081.89	0	6,293.62	92
675	J-232	6,096.52	178	6,293.51	85
677	J-234	6,102.20	0	6,293.55	83
678	J-235	6,090.14	0	6,293.61	88
679	J-236	6,077.42	0	6,293.66	94
680	J-237	6,070.63	0	6,293.66	96
681	J-238	6,079.14	0	6,293.66	93
682	J-239	6,097.15	0	6,293.61	85
683	J-240	6,110.93	0	6,293.55	79
684	J-241	6,090.68	0	6,293.54	88
685	J-242	6,095.80	0	6,293.54	86
686	J-243	6,020.27	26	6,293.51	118
721	J-246	6,078.62	0	6,293.74	93
746	J-247	6,011.79	0	6,294.05	122
749	J-248	6,041.46	0	6,293.89	109

FlexTable: Pipe Table
Active Scenario: Max Hour

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-246	180	J-241	J-242	8.0	PVC	130.0	0	0.00	0.00
P-247	393	J-241	J-234	8.0	PVC	130.0	-26	0.17	0.01
P-248	322	J-234	J-235	8.0	PVC	130.0	-87	0.56	0.06
P-249	319	J-235	J-236	8.0	PVC	130.0	-69	0.44	0.04
P-252	471	J-228	J-227	8.0	PVC	130.0	-71	0.45	0.06
P-253	299	J-227	J-226	8.0	PVC	130.0	-71	0.45	0.04
P-254	349	J-226	J-94	8.0	PVC	130.0	-150	0.96	0.19
P-255	577	J-226	J-229	8.0	PVC	130.0	79	0.50	0.10
P-256	527	J-229	J-224	8.0	PVC	130.0	47	0.30	0.03
P-261	489	J-220	J-221	8.0	PVC	130.0	64	0.41	0.05
P-262 (1)	279	J-221	J-246	8.0	PVC	130.0	64	0.41	0.03
P-262 (2)	846	J-246	J-222	8.0	PVC	130.0	29	0.19	0.02
P-264	510	J-231	J-235	8.0	PVC	130.0	18	0.11	0.01
P-265	635	J-224	J-237	8.0	PVC	130.0	86	0.55	0.12
P-266	635	J-237	J-236	8.0	PVC	130.0	15	0.09	0.00
P-267	296	J-237	J-231	8.0	PVC	130.0	71	0.46	0.04
P-268	330	J-231	J-232	8.0	PVC	130.0	117	0.75	0.11
P-270	434	J-232	J-234	8.0	PVC	130.0	-61	0.39	0.04
P-271	237	J-234	J-240	8.0	PVC	130.0	0	0.00	0.00
P-272	252	J-235	J-239	8.0	PVC	130.0	0	0.00	0.00
P-273	251	J-236	J-238	8.0	PVC	130.0	0	0.00	0.00
P-274	979	J-220	J-224	8.0	PVC	130.0	39	0.25	0.04
P-275	891	J-222	J-231	8.0	PVC	130.0	64	0.41	0.10
P-276	621	J-246	J-222	8.0	PVC	130.0	35	0.22	0.02
P-277	1,841	J-228	J-236	8.0	PVC	130.0	54	0.35	0.15
P-278	282	J-229	J-228	8.0	PVC	130.0	32	0.20	0.01
P-280	598	J-247	J-248	8.0	PVC	130.0	103	0.66	0.16
P-281	231	J-248	J-220	8.0	PVC	130.0	103	0.66	0.06
P-282	72	J-219	J-248	8.0	PVC	130.0	0	0.00	0.00
P-285	1,328	J-241	J-243	8.0	PVC	130.0	26	0.17	0.03

FlexTable: Junction Table
Active Scenario: Max Day + FF A

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
660	J-219	6,037.90	0	6,190.01	66
663	J-220	6,046.52	0	6,209.83	71
664	J-221	6,065.81	0	6,207.50	61
665	J-222	6,070.41	0	6,205.22	58
667	J-224	6,047.32	0	6,208.69	70
669	J-226	6,047.81	0	6,213.96	72
670	J-227	6,059.40	0	6,212.78	66
671	J-228	6,057.28	30	6,210.92	66
672	J-229	6,050.87	0	6,210.94	69
674	J-231	6,081.89	0	6,200.98	52
675	J-232	6,096.52	1,611	6,195.06	43
677	J-234	6,102.20	0	6,198.34	42
678	J-235	6,090.14	0	6,200.89	48
679	J-236	6,077.42	0	6,202.85	54
680	J-237	6,070.63	0	6,203.00	57
681	J-238	6,079.14	0	6,202.85	54
682	J-239	6,097.15	0	6,200.89	45
683	J-240	6,110.93	0	6,198.34	38
684	J-241	6,090.68	0	6,198.33	47
685	J-242	6,095.80	0	6,198.33	44
686	J-243	6,020.27	16	6,198.32	77
721	J-246	6,078.62	0	6,206.17	55
746	J-247	6,011.79	0	6,217.85	89
749	J-248	6,041.46	0	6,212.07	74

FlexTable: Pipe Table
Active Scenario: Max Day + FF A

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-246	180	J-241	J-242	8.0	PVC	130.0	0	0.00	0.00
P-247	393	J-241	J-234	8.0	PVC	130.0	-16	0.10	0.00
P-248	322	J-234	J-235	8.0	PVC	130.0	-637	4.07	2.56
P-249	319	J-235	J-236	8.0	PVC	130.0	-556	3.55	1.96
P-252	471	J-228	J-227	8.0	PVC	130.0	-438	2.80	1.87
P-253	299	J-227	J-226	8.0	PVC	130.0	-438	2.80	1.18
P-254	349	J-226	J-94	8.0	PVC	130.0	-948	6.05	5.78
P-255	577	J-226	J-229	8.0	PVC	130.0	510	3.25	3.03
P-256	527	J-229	J-224	8.0	PVC	130.0	455	2.91	2.25
P-261	489	J-220	J-221	8.0	PVC	130.0	484	3.09	2.33
P-262 (1)	279	J-221	J-246	8.0	PVC	130.0	484	3.09	1.33
P-262 (2)	846	J-246	J-222	8.0	PVC	130.0	222	1.42	0.95
P-264	510	J-231	J-235	8.0	PVC	130.0	81	0.52	0.09
P-265	635	J-224	J-237	8.0	PVC	130.0	681	4.35	5.70
P-266	635	J-237	J-236	8.0	PVC	130.0	93	0.60	0.14
P-267	296	J-237	J-231	8.0	PVC	130.0	588	3.75	2.02
P-268	330	J-231	J-232	8.0	PVC	130.0	990	6.32	5.92
P-270	434	J-232	J-234	8.0	PVC	130.0	-621	3.96	3.28
P-271	237	J-234	J-240	8.0	PVC	130.0	0	0.00	0.00
P-272	252	J-235	J-239	8.0	PVC	130.0	0	0.00	0.00
P-273	251	J-236	J-238	8.0	PVC	130.0	0	0.00	0.00
P-274	979	J-220	J-224	8.0	PVC	130.0	226	1.44	1.13
P-275	891	J-222	J-231	8.0	PVC	130.0	484	3.09	4.24
P-276	621	J-246	J-222	8.0	PVC	130.0	262	1.67	0.95
P-277	1,841	J-228	J-236	8.0	PVC	130.0	462	2.95	8.06
P-278	282	J-229	J-228	8.0	PVC	130.0	54	0.35	0.02
P-280	598	J-247	J-248	8.0	PVC	130.0	709	4.53	5.78
P-281	231	J-248	J-220	8.0	PVC	130.0	709	4.53	2.24
P-282	72	J-219	J-248	8.0	PVC	130.0	0	0.00	0.00
P-285	1,328	J-241	J-243	8.0	PVC	130.0	16	0.10	0.01

FlexTable: Junction Table
Active Scenario: Max Day + FF B

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
660	J-219	6,037.90	0	6,190.01	66
663	J-220	6,046.52	0	6,212.75	72
664	J-221	6,065.81	0	6,212.05	63
665	J-222	6,070.41	0	6,211.37	61
667	J-224	6,047.32	0	6,210.35	71
669	J-226	6,047.81	0	6,212.49	71
670	J-227	6,059.40	0	6,210.45	65
671	J-228	6,057.28	1,530	6,207.22	65
672	J-229	6,050.87	0	6,209.81	69
674	J-231	6,081.89	0	6,210.10	55
675	J-232	6,096.52	111	6,209.95	49
677	J-234	6,102.20	0	6,209.94	47
678	J-235	6,090.14	0	6,209.94	52
679	J-236	6,077.42	0	6,209.82	57
680	J-237	6,070.63	0	6,210.10	60
681	J-238	6,079.14	0	6,209.82	57
682	J-239	6,097.15	0	6,209.94	49
683	J-240	6,110.93	0	6,209.94	43
684	J-241	6,090.68	0	6,209.94	52
685	J-242	6,095.80	0	6,209.94	49
686	J-243	6,020.27	16	6,209.92	82
721	J-246	6,078.62	0	6,211.65	58
746	J-247	6,011.79	0	6,218.45	89
749	J-248	6,041.46	0	6,214.34	75

FlexTable: Pipe Table
Active Scenario: Max Day + FF B

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-246	180	J-241	J-242	8.0	PVC	130.0	0	0.00	0.00
P-247	393	J-241	J-234	8.0	PVC	130.0	-16	0.10	0.00
P-248	322	J-234	J-235	8.0	PVC	130.0	9	0.05	0.00
P-249	319	J-235	J-236	8.0	PVC	130.0	120	0.76	0.11
P-252	471	J-228	J-227	8.0	PVC	130.0	-589	3.76	3.23
P-253	299	J-227	J-226	8.0	PVC	130.0	-589	3.76	2.05
P-254	349	J-226	J-94	8.0	PVC	130.0	-1,067	6.81	7.20
P-255	577	J-226	J-229	8.0	PVC	130.0	478	3.05	2.69
P-256	527	J-229	J-224	8.0	PVC	130.0	-211	1.35	0.54
P-261	489	J-220	J-221	8.0	PVC	130.0	252	1.61	0.70
P-262 (1)	279	J-221	J-246	8.0	PVC	130.0	252	1.61	0.40
P-262 (2)	846	J-246	J-222	8.0	PVC	130.0	116	0.74	0.28
P-264	510	J-231	J-235	8.0	PVC	130.0	111	0.71	0.16
P-265	635	J-224	J-237	8.0	PVC	130.0	126	0.81	0.25
P-266	635	J-237	J-236	8.0	PVC	130.0	132	0.84	0.27
P-267	296	J-237	J-231	8.0	PVC	130.0	-5	0.03	0.00
P-268	330	J-231	J-232	8.0	PVC	130.0	136	0.87	0.15
P-270	434	J-232	J-234	8.0	PVC	130.0	25	0.16	0.01
P-271	237	J-234	J-240	8.0	PVC	130.0	0	0.00	0.00
P-272	252	J-235	J-239	8.0	PVC	130.0	0	0.00	0.00
P-273	251	J-236	J-238	8.0	PVC	130.0	0	0.00	0.00
P-274	979	J-220	J-224	8.0	PVC	130.0	338	2.16	2.40
P-275	891	J-222	J-231	8.0	PVC	130.0	252	1.61	1.27
P-276	621	J-246	J-222	8.0	PVC	130.0	137	0.87	0.28
P-277	1,841	J-228	J-236	8.0	PVC	130.0	-251	1.60	2.61
P-278	282	J-229	J-228	8.0	PVC	130.0	689	4.40	2.59
P-280	598	J-247	J-248	8.0	PVC	130.0	590	3.77	4.11
P-281	231	J-248	J-220	8.0	PVC	130.0	590	3.77	1.59
P-282	72	J-219	J-248	8.0	PVC	130.0	0	0.00	0.00
P-285	1,328	J-241	J-243	8.0	PVC	130.0	16	0.10	0.01

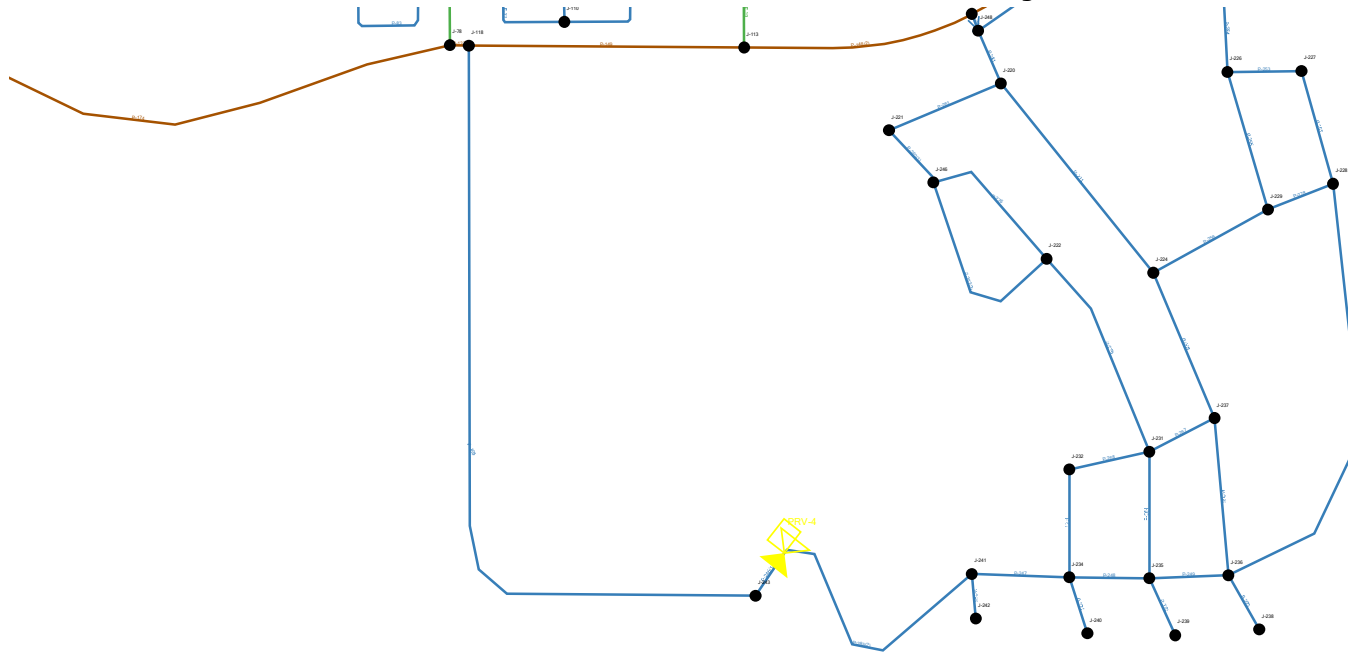
FlexTable: Junction Table
Active Scenario: Max Day + FF C

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
660	J-219	6,037.90	0	6,190.01	66
663	J-220	6,046.52	0	6,209.88	71
664	J-221	6,065.81	0	6,207.62	61
665	J-222	6,070.41	0	6,205.41	58
667	J-224	6,047.32	0	6,208.69	70
669	J-226	6,047.81	0	6,213.94	72
670	J-227	6,059.40	0	6,212.75	66
671	J-228	6,057.28	30	6,210.88	66
672	J-229	6,050.87	0	6,210.91	69
674	J-231	6,081.89	0	6,201.29	52
675	J-232	6,096.52	111	6,198.15	44
677	J-234	6,102.20	0	6,195.15	40
678	J-235	6,090.14	0	6,200.24	48
679	J-236	6,077.42	0	6,202.63	54
680	J-237	6,070.63	0	6,202.97	57
681	J-238	6,079.14	0	6,202.63	53
682	J-239	6,097.15	0	6,200.24	45
683	J-240	6,110.93	0	6,195.15	36
684	J-241	6,090.68	0	6,179.61	38
685	J-242	6,095.80	0	6,179.61	36
686	J-243	6,020.27	1,516	6,127.19	46
721	J-246	6,078.62	0	6,206.33	55
746	J-247	6,011.79	0	6,217.86	89
749	J-248	6,041.46	0	6,212.11	74

FlexTable: Pipe Table
Active Scenario: Max Day + FF C

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-246	180	J-241	J-242	8.0	PVC	130.0	0	0.00	0.00
P-247	393	J-241	J-234	8.0	PVC	130.0	-1,516	9.68	15.54
P-248	322	J-234	J-235	8.0	PVC	130.0	-925	5.90	5.09
P-249	319	J-235	J-236	8.0	PVC	130.0	-618	3.94	2.39
P-252	471	J-228	J-227	8.0	PVC	130.0	-439	2.80	1.88
P-253	299	J-227	J-226	8.0	PVC	130.0	-439	2.80	1.19
P-254	349	J-226	J-94	8.0	PVC	130.0	-950	6.06	5.80
P-255	577	J-226	J-229	8.0	PVC	130.0	511	3.26	3.04
P-256	527	J-229	J-224	8.0	PVC	130.0	452	2.88	2.21
P-261	489	J-220	J-221	8.0	PVC	130.0	476	3.04	2.26
P-262 (1)	279	J-221	J-246	8.0	PVC	130.0	476	3.04	1.29
P-262 (2)	846	J-246	J-222	8.0	PVC	130.0	218	1.39	0.92
P-264	510	J-231	J-235	8.0	PVC	130.0	307	1.96	1.04
P-265	635	J-224	J-237	8.0	PVC	130.0	683	4.36	5.72
P-266	635	J-237	J-236	8.0	PVC	130.0	149	0.95	0.34
P-267	296	J-237	J-231	8.0	PVC	130.0	533	3.40	1.69
P-268	330	J-231	J-232	8.0	PVC	130.0	703	4.49	3.14
P-270	434	J-232	J-234	8.0	PVC	130.0	592	3.78	3.00
P-271	237	J-234	J-240	8.0	PVC	130.0	0	0.00	0.00
P-272	252	J-235	J-239	8.0	PVC	130.0	0	0.00	0.00
P-273	251	J-236	J-238	8.0	PVC	130.0	0	0.00	0.00
P-274	979	J-220	J-224	8.0	PVC	130.0	231	1.47	1.19
P-275	891	J-222	J-231	8.0	PVC	130.0	476	3.04	4.12
P-276	621	J-246	J-222	8.0	PVC	130.0	258	1.65	0.92
P-277	1,841	J-228	J-236	8.0	PVC	130.0	468	2.99	8.25
P-278	282	J-229	J-228	8.0	PVC	130.0	59	0.38	0.03
P-280	598	J-247	J-248	8.0	PVC	130.0	707	4.52	5.75
P-281	231	J-248	J-220	8.0	PVC	130.0	707	4.52	2.23
P-282	72	J-219	J-248	8.0	PVC	130.0	0	0.00	0.00
P-285	1,328	J-241	J-243	8.0	PVC	130.0	1,516	9.68	52.43

Scenario: Max Day + FF C
Active Scenario: Max Day + FF C



FlexTable: Junction Table
Active Scenario: Max Day + FF C

ID	Label	Elevation (ft)	Demand (gpm)	Hydraulic Grade (ft)	Pressure (psi)
660	J-219	6,037.90	0	6,188.74	65
663	J-220	6,046.52	0	6,286.15	104
664	J-221	6,065.81	0	6,286.14	95
665	J-222	6,070.41	0	6,286.12	93
667	J-224	6,047.32	0	6,286.14	103
669	J-226	6,047.81	0	6,286.18	103
670	J-227	6,059.40	0	6,286.17	98
671	J-228	6,057.28	30	6,286.15	99
672	J-229	6,050.87	0	6,286.15	102
674	J-231	6,081.89	0	6,286.09	88
675	J-232	6,096.52	111	6,286.05	82
677	J-234	6,102.20	0	6,286.07	80
678	J-235	6,090.14	0	6,286.09	85
679	J-236	6,077.42	0	6,286.10	90
680	J-237	6,070.63	0	6,286.10	93
681	J-238	6,079.14	0	6,286.10	90
682	J-239	6,097.15	0	6,286.09	82
683	J-240	6,110.93	0	6,286.07	76
684	J-241	6,090.68	0	6,286.07	85
685	J-242	6,095.80	0	6,286.07	82
686	J-243	6,020.27	1,516	6,059.02	17
721	J-246	6,078.62	0	6,286.13	90
746	J-247	6,011.79	0	6,286.23	119
749	J-248	6,041.46	0	6,286.17	106

FlexTable: Pipe Table
Active Scenario: Max Day + FF C

Label	Length (Scaled) (ft)	Start Node	Stop Node	Diameter (in)	Material	Hazen- Williams C	Flow (gpm)	Velocity (ft/s)	Headloss (ft)
P-246	180	J-241	J-242	8.0	PVC	130.0	0	0.00	0.00
P-247	393	J-241	J-234	8.0	PVC	130.0	0	0.00	0.00
P-248	322	J-234	J-235	8.0	PVC	130.0	-43	0.27	0.02
P-249	319	J-235	J-236	8.0	PVC	130.0	-37	0.24	0.01
P-252	471	J-228	J-227	8.0	PVC	130.0	-40	0.26	0.02
P-253	299	J-227	J-226	8.0	PVC	130.0	-40	0.26	0.01
P-254	349	J-226	J-94	8.0	PVC	130.0	-85	0.54	0.07
P-255	577	J-226	J-229	8.0	PVC	130.0	45	0.28	0.03
P-256	527	J-229	J-224	8.0	PVC	130.0	26	0.16	0.01
P-261	489	J-220	J-221	8.0	PVC	130.0	35	0.22	0.02
P-262 (1)	279	J-221	J-246	8.0	PVC	130.0	35	0.22	0.01
P-262 (2)	846	J-246	J-222	8.0	PVC	130.0	16	0.10	0.01
P-264	510	J-231	J-235	8.0	PVC	130.0	6	0.04	0.00
P-265	635	J-224	J-237	8.0	PVC	130.0	47	0.30	0.04
P-266	635	J-237	J-236	8.0	PVC	130.0	7	0.05	0.00
P-267	296	J-237	J-231	8.0	PVC	130.0	39	0.25	0.01
P-268	330	J-231	J-232	8.0	PVC	130.0	68	0.43	0.04
P-270	434	J-232	J-234	8.0	PVC	130.0	-43	0.27	0.02
P-271	237	J-234	J-240	8.0	PVC	130.0	0	0.00	0.00
P-272	252	J-235	J-239	8.0	PVC	130.0	0	0.00	0.00
P-273	251	J-236	J-238	8.0	PVC	130.0	0	0.00	0.00
P-274	979	J-220	J-224	8.0	PVC	130.0	21	0.14	0.01
P-275	891	J-222	J-231	8.0	PVC	130.0	35	0.22	0.03
P-276	621	J-246	J-222	8.0	PVC	130.0	19	0.12	0.01
P-277	1,841	J-228	J-236	8.0	PVC	130.0	29	0.19	0.05
P-278	282	J-229	J-228	8.0	PVC	130.0	19	0.12	0.00
P-280	598	J-247	J-248	8.0	PVC	130.0	56	0.36	0.05
P-281	231	J-248	J-220	8.0	PVC	130.0	56	0.36	0.02
P-282	72	J-219	J-248	8.0	PVC	130.0	0	0.00	0.00



Redland
WHERE GREAT PLACES BEGIN

720.283.6783 Office
1500 West Canal Court
Littleton, Colorado 80120
REDLAND.COM

Appendix C - Sanitary Demand Calculations



Sanitary Loading Worksheet

PROJECT NAME: Overlook at Kings Point
 PROJECT NUMBER: 21014
 CALCULATED BY: BRB
 CHECKED BY: MP

Residential (Gallons per Capita per Day)* 68
 People per d.u.* 2.8
 Infiltration and Inflow (I/I)* 10% of Average Day
 Peak Factor* 4
 Peak Flow* = (Average Day x Peak Factor) + I/I

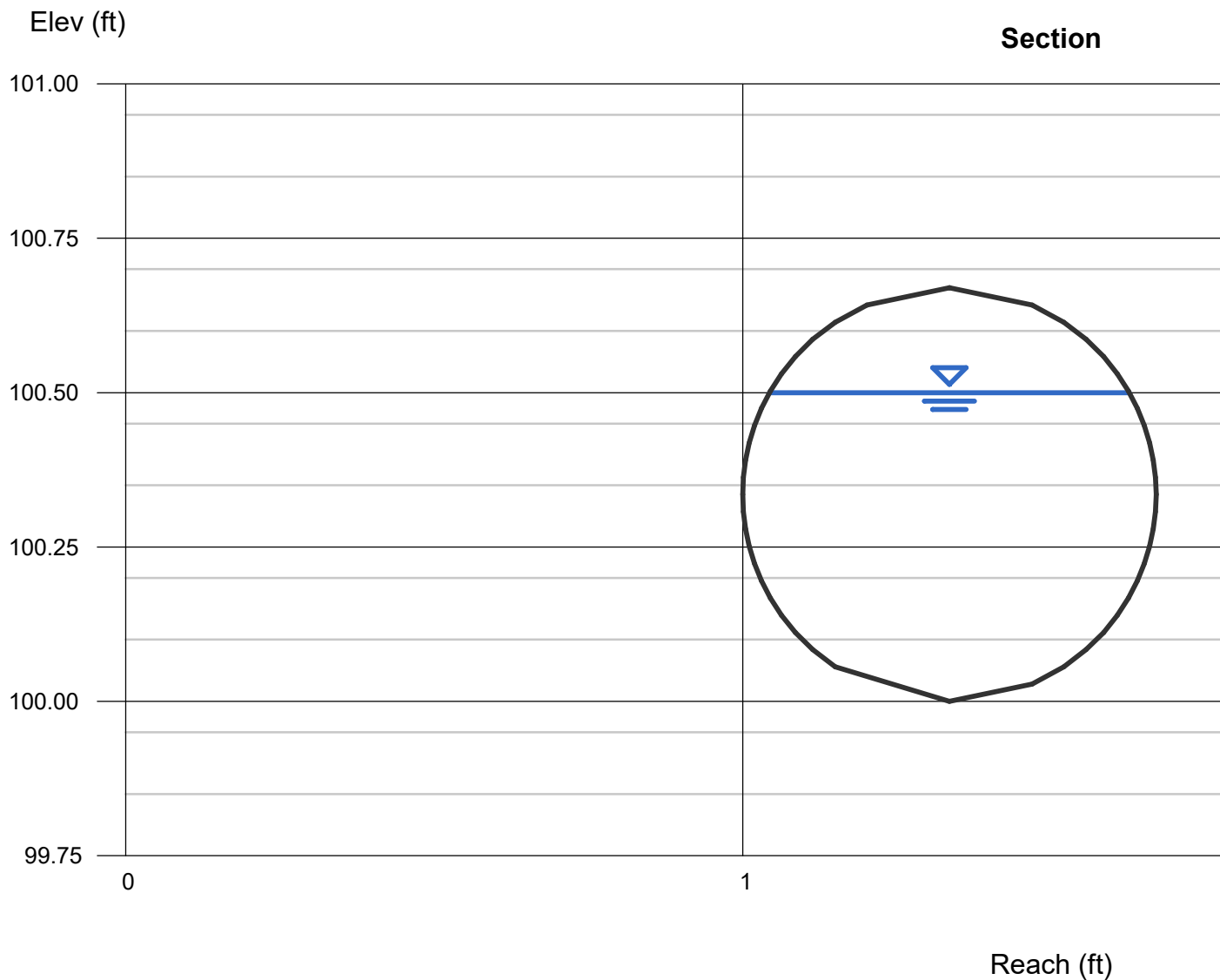
* Per Aurora Water's *Water, Sanitary Sewer & Storm Drainage Infrastructure Standards and Specifications*, Section 5.03

		Land Use		Tributary Flow Per Node		
Demand Node	Area (Acres)	Attached DU	Detached DU	Average Day (gpd)	Average Day (gpm)	Peak Daily Flow (gpm)
Basin A	61.93		204	38,425	26.68	109.41
Basin A Total		0	204	38,425	26.68	109.41
Basin B	41.27		55	10,360	7.19	29.50
Basin B Total		0	55	10,360	7.19	29.50
Basin C	19.94		30	5,651	3.92	16.09
Basin C Total		0	30	5,651	3.92	16.09
Site Totals	Area (Acres)	Attached DU	Detached DU	Average Day (gpd)	Average Day (gpm)	Peak Daily Flow (gpm)
	123.14	0	289	54,436	37.80	154.99

Channel Report

8" PVC @ 0.4% Slope - 75% Full

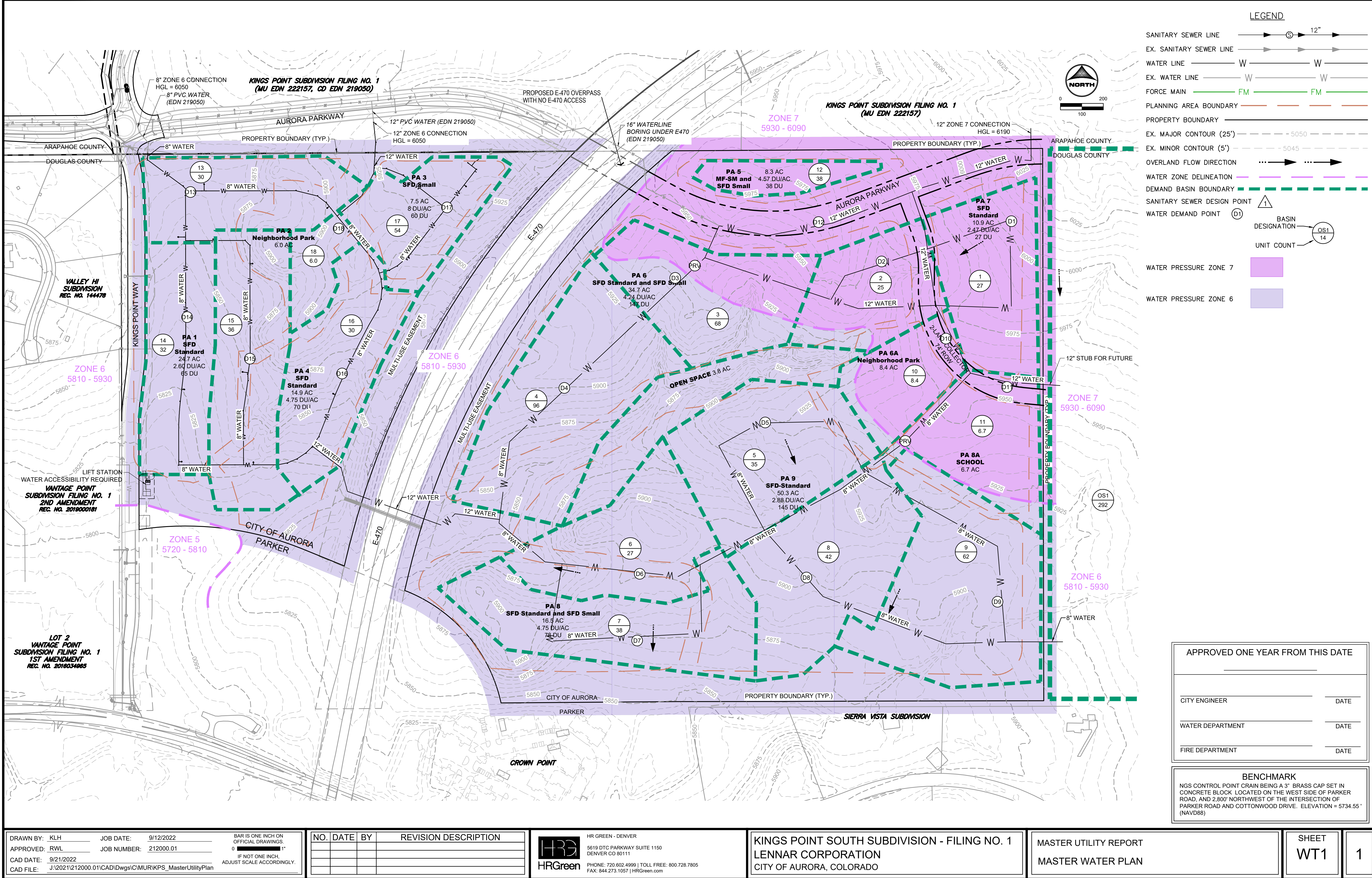
Circular		Highlighted	
Diameter (ft)	= 0.67	Depth (ft)	= 0.50
		Q (cfs)	= 0.832 = 370 GPM
		Area (sqft)	= 0.28
Invert Elev (ft)	= 100.00	Velocity (ft/s)	= 2.94
Slope (%)	= 0.40	Wetted Perim (ft)	= 1.40
N-Value	= 0.011	Crit Depth, Yc (ft)	= 0.44
		Top Width (ft)	= 0.58
		EGL (ft)	= 0.63
Calculations			
Compute by:	Known Depth		
Known Depth (ft)	= 0.50		





720.283.6783 Office
1500 West Canal Court
Littleton, Colorado 80120
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Appendix D - Reference Documents



LEGEND

SANITARY SEWER LINE

EX. SANITARY SEWER LINE

WATER LINE

EX. WATER LINE

FORCE MAIN

PLANNING AREA BOUNDARY

PROPERTY BOUNDARY

EX. MAJOR CONTOUR (25')

EX. MINOR CONTOUR (5')

OVERLAND FLOW DIRECTION

WATER ZONE DELINEATION

DEMAND BASIN BOUNDARY

SANITARY SEWER DESIGN POINT

WATER DEMAND POINT

BASIN DESIGNATION

UNIT COUNT

WATER PRESSURE ZONE 7

WATER PRESSURE ZONE 6

APPROVED ONE YEAR FROM THIS DATE

CITY ENGINEER

DATE

WATER DEPARTMENT

DATE

FIRE DEPARTMENT

DATE

BENCHMARK

NGS CONTROL POINT CRAIN BEING A 3" BRASS CAP SET IN CONCRETE BLOCK LOCATED ON THE WEST SIDE OF PARKER ROAD, AND 2,800' NORTHWEST OF THE INTERSECTION OF PARKER ROAD AND COTTONWOOD DRIVE. ELEVATION = 5734.55' (NAVD88)

DRAWN BY: KLH

JOB DATE: 9/12/2022

APPROVED: RWL

JOB NUMBER: 212000.01

CAD DATE: 9/21/2022

CAD FILE: J:\2021\1212000.01\CAD\dwgs\CIMUR\KPS_MasterUtilityPlan

BAR IS ONE INCH ON OFFICIAL DRAWINGS.
0 1"
IF NOT ONE INCH, ADJUST SCALE ACCORDINGLY.

NO.	DATE	BY	REVISION DESCRIPTION

HR GREEN - DENVER

5619 DTC PARKWAY SUITE 1150

DENVER CO 80111

PHONE: 720.602.4999 | TOLL FREE: 800.728.7805

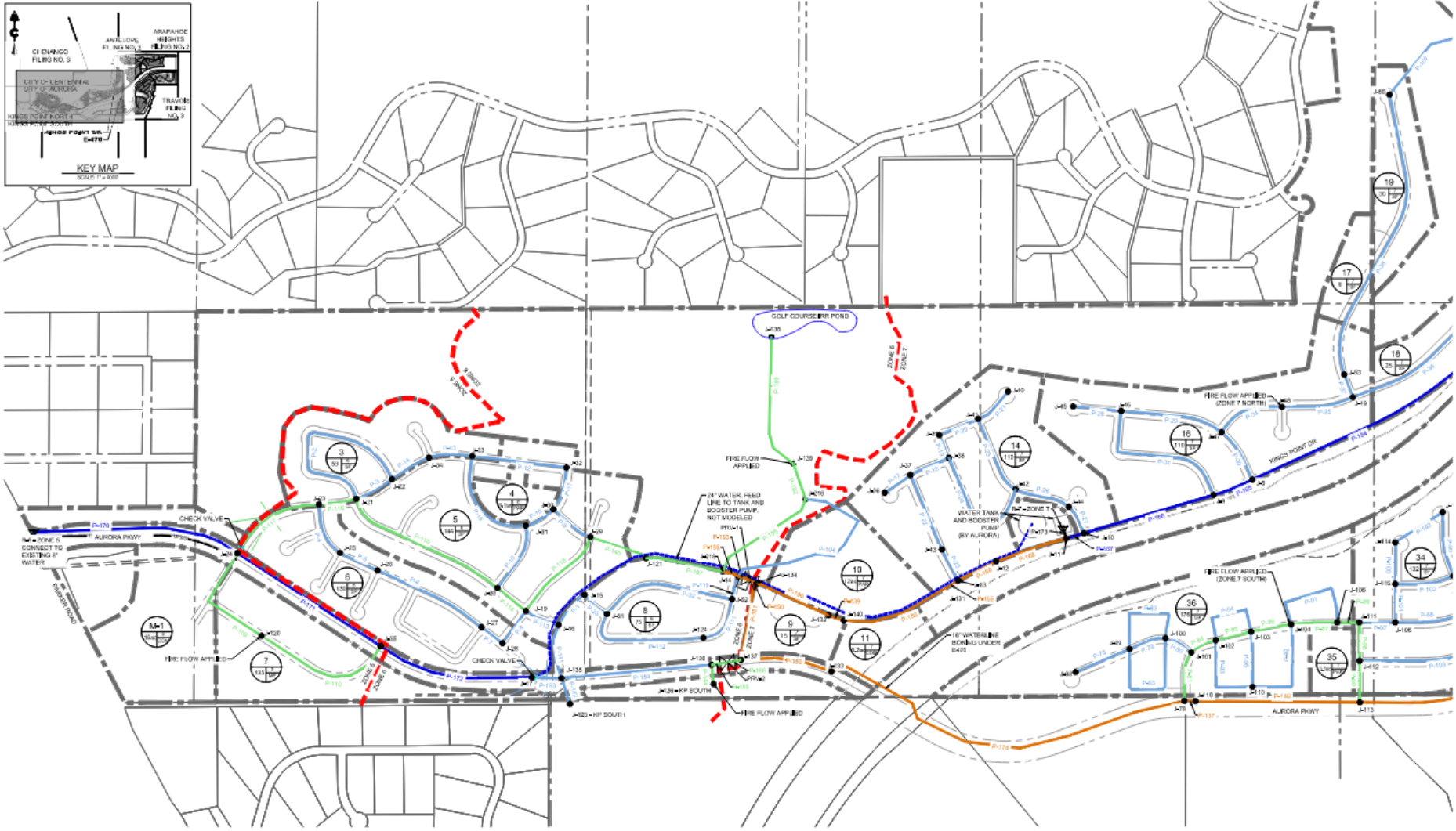
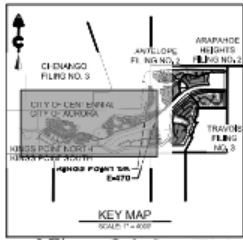
FAX: 844.273.1057 | HRGreen.com

HRGreen

KINGS POINT SOUTH SUBDIVISION - FILING NO. 1

LENNAR CORPORATION

CITY OF AURORA, COLORADO



NOTES:

1. WATER NODE MAP DOES NOT DETAIL ALL REPAIRS.
2. WATER REPAIRS ONLY SHOW THE LOCATION OF THE REPAIR.

LEGEND

- 12\"/>

APPROVED FOR ONE YEAR FROM THE DATE

CITY ENGINEER	DATE
WATER DEPARTMENT	DATE
FIRE DEPARTMENT	DATE

KINGS POINT NORTH

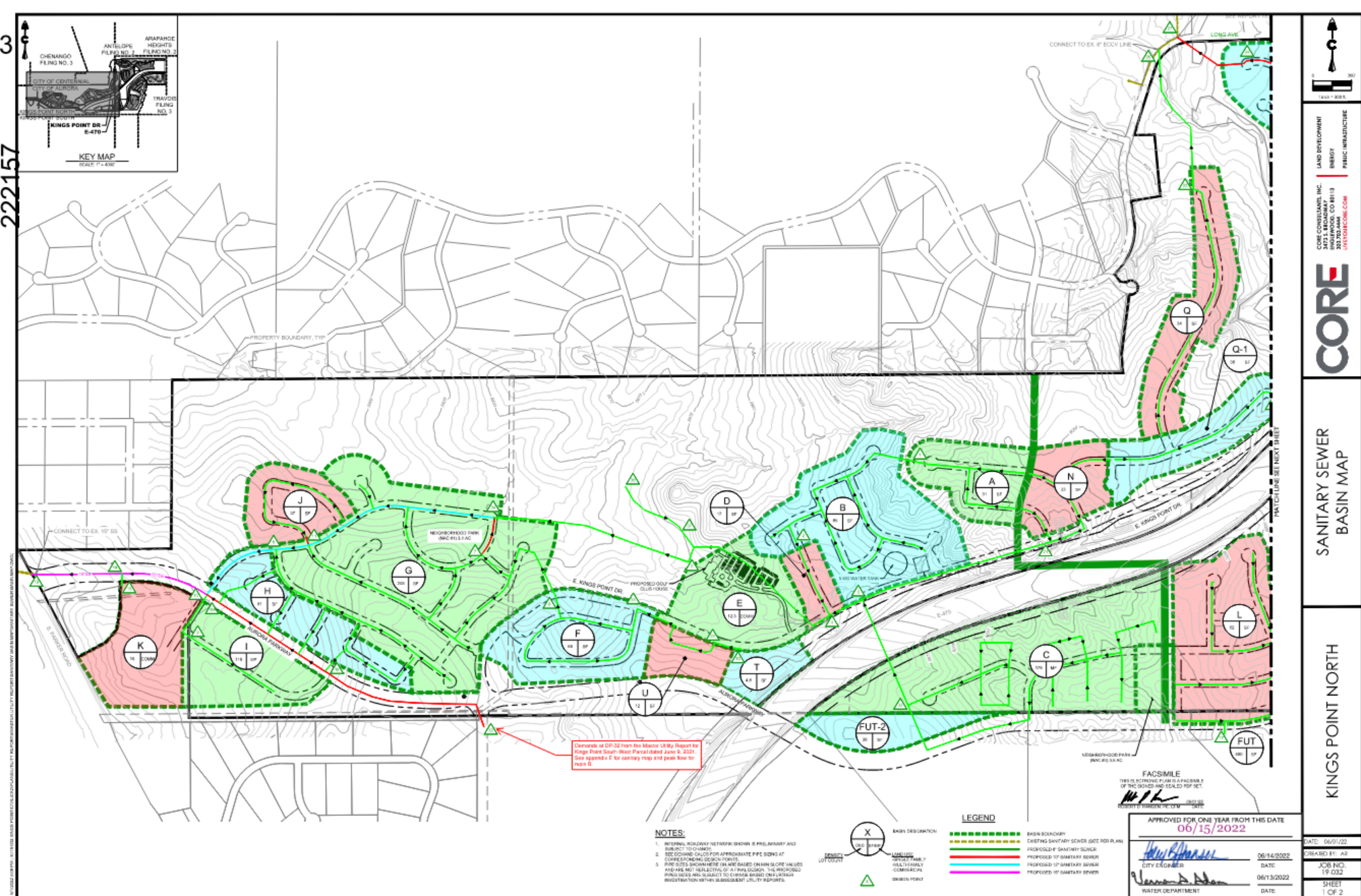
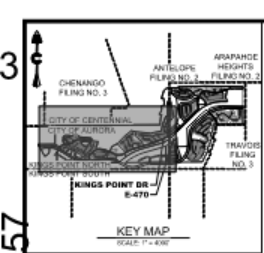
MASTER UTILITY WATER
NODE MAP

CORE

CORE CONSULTING, INC.
LAND DEVELOPMENT
ENGINEER
303 S. BROADWAY
SUITE 200
AURORA, IL 60009
TEL: 630.584.1000
WWW.CORECONS.COM

DATE: 06/20/20
CREATED BY: AR
JOB NO.: 16-032
SHEET 1

222157



APPROVED ON 06/15/2022

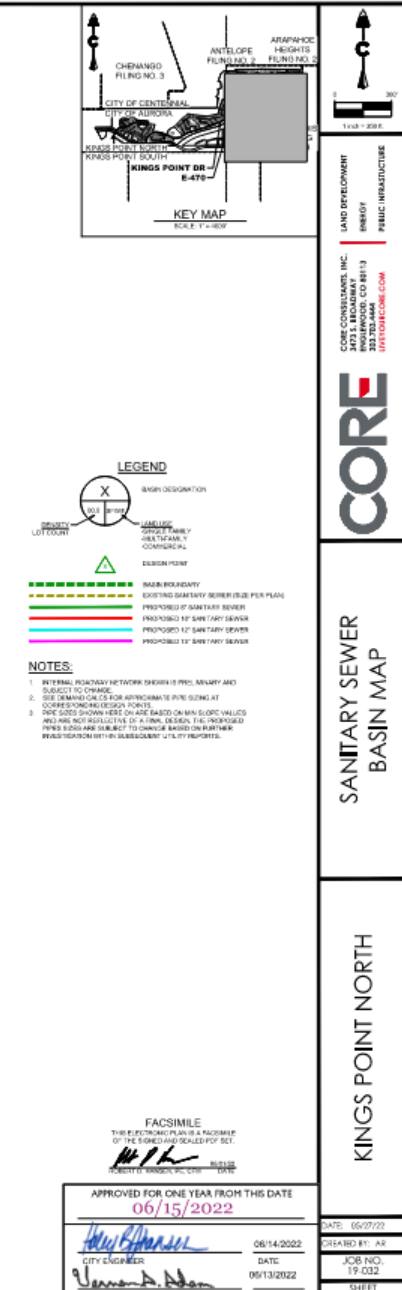

1" = 400'

CORE
CORE CONSULTANTS, INC.
333 7th Avenue
Boulder, CO 80501
303.440.1113
info@coreinc.com

**SANITARY SEWER
BASIN MAP**

KINGS POINT NORTH

DATE: 06/01/22	CHECKED BY: AP
DATE: 06/14/2022	JOB NO: 19-032
DATE: 06/13/2022	SHEET 1 OF 2

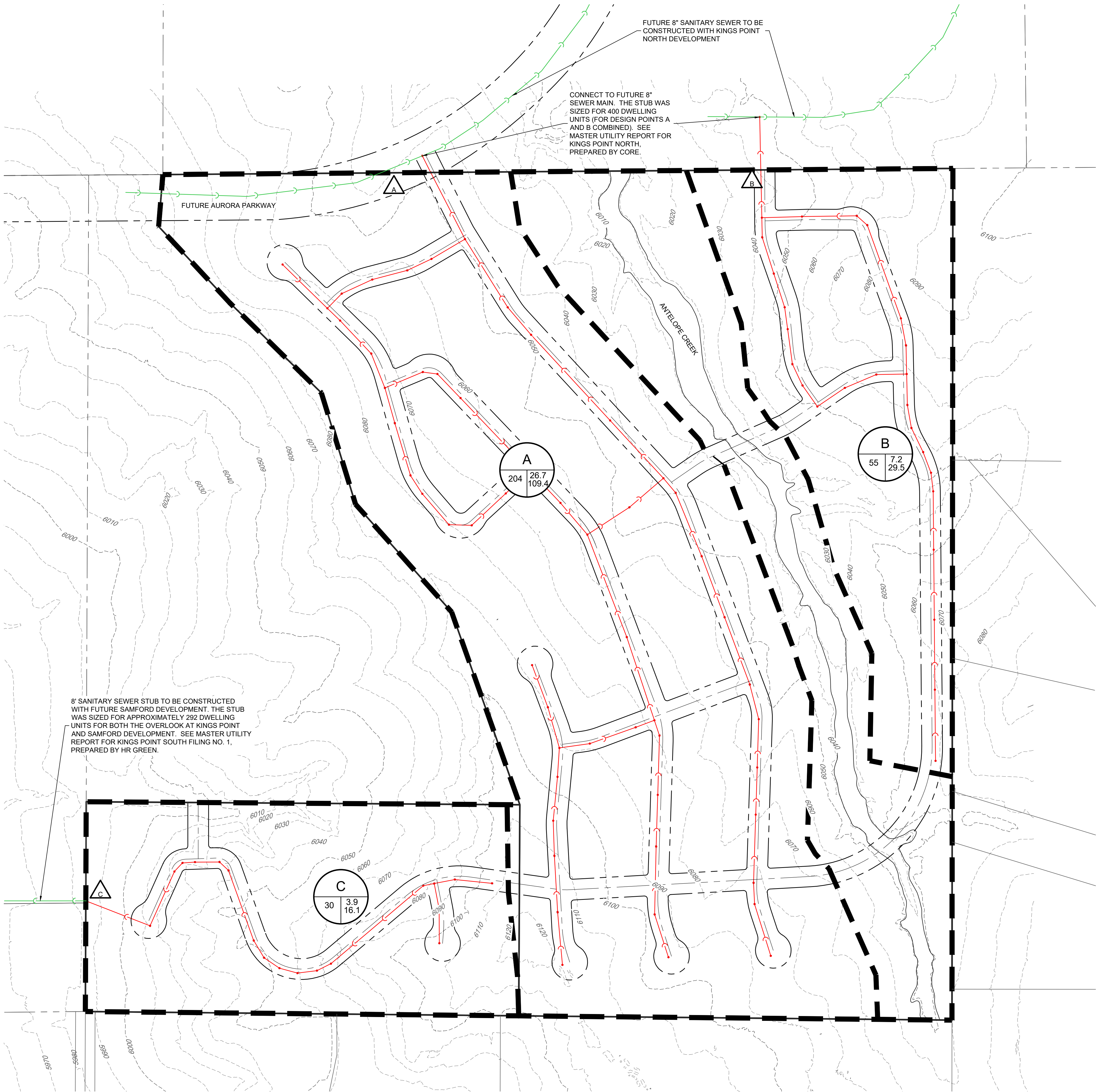




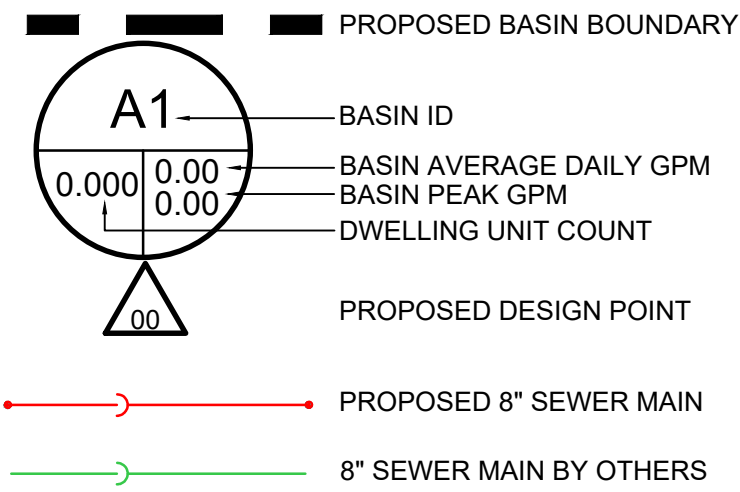
720.283.6783 Office
1500 West Canal Court
Littleton, Colorado 80120
REDLAND.COM

Appendix E - Water and Sanitary Sewer Basin Maps

I:\2021\21014 - Overlook at Kings Point\CA00\Exhibits\21014 - Master Sanitary Map.dwg Tab: Layout1 Mar 21, 2023 - 4:15pm bboaltzer



LEGEND

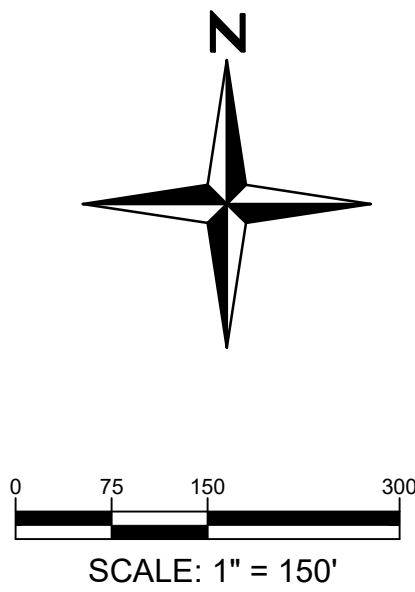


NOTES:

1. ROADWAY NETWORK SHOWN IS PRELIMINARY AND SUBJECT TO CHANGE.
2. REFER TO DEMAND CALCULATIONS FOR APPROXIMATE PIPE SIZING AT DESIGN POINTS.
3. PIPE SIZES SHOWN ARE BASED ON MINIMUM SLOPE VALUES AND ARE NOT REFLECTIVE OF FINAL DESIGN. THE PROPOSED PIPE SIZES ARE SUBJECT TO CHANGE BASED ON FUTURE UTILITY REPORTS

APPROVED ONE YEAR FROM THIS DATE

_____	_____
AURORA WATER	DATE
_____	_____
CITY ENGINEER	DATE
_____	_____
FIRE DEPARTMENT	DATE



OVERLOOK AT KINGS POINT
SANITARY SEWER EXHIBIT

SHEET

1 OF 1

NOT FOR
CONSTRUCTION

PROJECT NO. 21.014		DATE		NO.		NOTES	
DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.
3/22/23	1						