Growth over Avista Calculation

Existing Avista	Bed Count	108	
	MOB SF	41000	SF

Utility Bills

	Hospital	MOB	KGALS	GALS	
May-21	677	-	677	677,000	
Jun-21	1,807	-	1,807	1,807,000	
Jul-21	1,632	-	1,632	1,632,000	
Aug-21	2,092	-	2,092	2,092,000	
Sep-21	1,980	-	1,980	1,980,000	
Oct-21	1,645	-	1,645	1,645,000	
Nov-21	1,645	-	1,645	1,645,000	
Dec-21	704	-	704	704,000	
Jan-22	466	-	466	466,000	
Feb-22	480	-	480	480,000	
Mar-22	445	-	445	445,000	
Apr-22	598	-	598	598,000	
May-22	1,080	-	1,080	1,080,000	
Jun-22	1,698	-	1,698	1,698,000	
			14,465	14,465,000	*does not include May and June 2021
					**includes irrigation

Average Day	1,205,417	per month
	40,181	per day
	27.90	per minute
Peak Day	4,821,667	per month
4.00 FS	160,722	per day
	111.61	per minute
	1.03	gal/min/bed

	Hospital	MOB	KGALS	GALS	
May-21	-	106	106	106,000	
Jun-21	-	66	66	66,000	
Jul-21	-	45	45	45,000	
Aug-21	-	51	51	51,000	
Sep-21	-	49	49	49,000	
Oct-21	-	46	46	46,000	
Nov-21	-	46	46	46,000	
Dec-21	-	117	117	117,000	
Jan-22	-	150	150	150,000	
Feb-22	-	171	171	171,000	
Mar-22	-	144	144	144,000	
Apr-22	-	150	150	150,000	
May-22	-	125	125	125,000	
Jun-22	-	65	65	65,000	
			1,159	1,159,000	*does not include May and June 2021
					**includes irrigation

Average Day	96,583	per month
	3,219	per day
	2.24	per minute
Peak Day	386,333	per month
4.00 FS	12,878	per day
	8.94	per minute
	0.00022	

AH Louisville

Hospital

Bed Count	264	
Growth over Ex. Avista	2.44	
Average Day	2,946,574	per month
	98,219	per day
	68.21	per minute

MOB

MOB	145000	SF
Growth over Ex. Avista	3.54	
Average Day	341,575	per month
	11,386	per day
	7.91	per minute

Water Assumptions		
Average Day	3,288,149	per month
	109,605	per day
	76.11	per minute

Sewer Assumptions (~85% of Water Usage)		
Average Day	2,794,927	per month
	93,164	per day
	64.70	per minute

ADD (GPM)	64.70
Peak Based on 4.5*	291.14

*4.5 is from HKS Calculation

Table 1: Full Build-Out Sanitary Demand by PUD

PUD	Use	Area	Annual Average Daily Demand (GPD)	Average Daily Demand (GPM)	Average Daily Demand (CFS)	Peak Factor	Peak Flow (GPM)	Peak Flow (CFS)
PUD - 1	Industrial	654,500 sq. ft	90,521	62.9	0.140	3.56	223.8	0.499
PUD - 2	Industrial	453,700 sq. ft	62,749	43.6	0.097	3.78	164.5	0.367
PUD - 3	Medical	300,000 sq. ft	41,492	28.8	0.064	4.03	116.2	0.259
PUD - 4	Medical	118,800 sq. ft	16,431	11.4	0.025	4.68	53.4	0.119
PUD - 5	Office/Retail	113,000 sq. ft	19,012	13.2	0.029	4.57	60.3	0.134
PUD - 6	Hospital	435,000 sq. ft	94,800	65.8	0.147	4.50	296.3	0.660
PUD - 7	Medical	165,000 sq. ft	22,820	15.8	0.035	4.44	70.4	0.157
PUD - 8	Office	360,000 sq. ft	28,800	20.0	0.045	4.28	85.5	0.191
SUM		**2,600,000 sq. ft**	376,626	261.5	0.583		1070.5	2.385
TOTAL			376,626	261.5	0.583	2.83	741.4	1.652

Note: GPM = Gallons Per Minute, CFS = Cubic Feet per Second, GPD = gallons per day

ADD (GPM)	76
Peak Based on 2.68	203.99

*2.68 is from HKS Calculation

Table 4: Full Build-out Water Demands by PUD

	Use	Average Daily Demand (GPD)	Average Daily Demand (GPM)	Peak Day Demand (ADD*2.68) (GPD)	Peak Day Demand (ADD*2.68) (GPM)
PUD - 1	Industrial	108625	75.4	291116	202.2
PUD - 2	Industrial	75299	52.3	201802	140.1
PUD - 3	Medical	49790	34.6	133437	92.7
PUD - 4	Medical	19717	13.7	52841	36.7
PUD - 5	Office/Retail	22871	15.9	61294	42.6
PUD - 6	Hospital	111200	77.2	298016	207.0
PUD - 7	Medical	27385	19.0	73391	51.0
PUD - 8	Office	34560	24.0	92621	64.3
	Total:	449447	312.1	1204517	836.5

Note: Max day demand is 1.204 MGD

Dewberry Memo and Development Agreement

ADD (GPD)	93,164
ADD (MGD)	0.0932

	Wastewater Flow and Load	
	AAD Flow, MGD	AAD BOD5, PPD
	Designed Flow Capacity	Designed Load Capacity
Hospital Allocated Capacity (435,600 SF)	0.09	*
Remaining Project Allocated Capacity (2,106,787 SF)	0.29	*
Total Redtail Ridge Capacity (2,542,387 SF)	0.38	*

Hospital Parcel

	Wastewater Flow and Load	
	MM Flow, MGD	MM BOD5, PPD
	Designed Flow Capacity	Designed Load Capacity
Hospital Allocated Capacity (435,600 SF)	0.11	*
Remaining Project Allocated Capacity (2,106,787 SF)	0.34	*
Total Redtail Ridge Capacity (2,542,387 SF)	0.45	*

Hospital Parcel

Definitions:

AAD = Annual Average Daily

MM = Maximum Average Daily flow over a 30-day Period

BOD5 = Biochemical Option Demand

MGD = Million Gallons per Day

PPD = Pounds Per Day

* The Load Capacity calculations are to be reasoanbly agreed upon between Seller and Buyer on or before 11/15/24

0.1 GPD / GSF Calculation

Hospital			
GSF		655000	SF
	Average Day	1,965,000	per month
		65,500	per day
		45.49	per minute

MOB			
GSF		145000	SF
	Average Day	435,000	per month
		14,500	per day
		10.07	per minute

Water Assumptions		
Average Day	2,400,000	per month
	80,000	per day
	55.56	per minute

Sewer Assumptions (~85% of Water Usage)		
Average Day	2,040,000	per month
	68,000	per day
	47.22	per minute

HKS Engineering Calculations

ADD (GPM)	47.22
Peak Based on 4.5*	212.50

*4.5 is from HKS Calculation

Table 1: Full Build-Out Sanitary Demand by PUD

PUD	Use	Area	Annual Average Daily Demand (GPD)	Average Daily Demand (GPM)	Average Daily Demand (CFS)	Peak Factor	Peak Flow (GPM)	Peak Flow (CFS)
PUD - 1	Industrial	654,500 sq. ft	90,521	62.9	0.140	3.56	223.8	0.499
PUD - 2	Industrial	453,700 sq. ft	62,749	43.6	0.097	3.78	164.5	0.367
PUD - 3	Medical	300,000 sq. ft	41,492	28.8	0.064	4.03	116.2	0.259
PUD - 4	Medical	118,800 sq. ft	16,431	11.4	0.025	4.68	53.4	0.119
PUD - 5	Office/Retail	113,000 sq. ft	19,012	13.2	0.029	4.57	60.3	0.134
PUD - 6	Hospital	435,000 sq. ft	94,800	65.8	0.147	4.50	296.3	0.660
PUD - 7	Medical	165,000 sq. ft	22,820	15.8	0.035	4.44	70.4	0.157
PUD - 8	Office	360,000 sq. ft	28,800	20.0	0.045	4.28	85.5	0.191
SUM		2,600,000 sq. ft	376,626	261.5	0.583		1070.5	2.385
TOTAL			376,626	261.5	0.583	2.83	741.4	1.652

Note: GPM = Gallons Per Minute, CFS = Cubic Feet per Second, GPD = gallons per day

ADD (GPM)	56
Peak Based on 2.68	148.89

*2.68 is from HKS Calculation

Table 4: Full Build-out Water Demands by PUD

	Use	Average Daily Demand (GPD)	Average Daily Demand (GPM)	Peak Day Demand (ADD*2.68) (GPD)	Peak Day Demand (ADD*2.68) (GPM)
PUD - 1	Industrial	108625	75.4	291116	202.2
PUD - 2	Industrial	75299	52.3	201802	140.1
PUD - 3	Medical	49790	34.6	133437	92.7
PUD - 4	Medical	19717	13.7	52841	36.7
PUD - 5	Office/Retail	22871	15.9	61294	42.6
PUD - 6	Hospital	111200	77.2	298016	207.0
PUD - 7	Medical	27385	19.0	73391	51.0
PUD - 8	Office	34560	24.0	92621	64.3
	Total:	449447	312.1	1204517	836.5

Note: Max day demand is 1.204 MGD

Dewberry Memo and Development Agreement

ADD (GPD)	68,000
ADD (MGD)	0.068

	Wastewater Flow and Load	
	AAD Flow, MGD	AAD BOD5, PPD
	Designed Flow Capacity	Designed Load Capacity
Hospital Allocated Capacity (435,600 SF)	0.09	*
Remaining Project Allocated Capacity (2,106,787 SF)	0.29	*
Total Redtail Ridge Capacity (2,542,387 SF)	0.38	*

Hospital Parcel

	Wastewater Flow and Load	
	MM Flow, MGD	MM BOD5, PPD
	Designed Flow Capacity	Designed Load Capacity
Hospital Allocated Capacity (435,600 SF)	0.11	*
Remaining Project Allocated Capacity (2,106,787 SF)	0.34	*
Total Redtail Ridge Capacity (2,542,387 SF)	0.45	*

Hospital Parcel

Definitions:

AAD = Annual Average Daily

MM = Maximum Average Daily flow over a 30-day Period

BOD5 = Biochemical Option Demand

MGD = Million Gallons per Day

PPD = Pounds Per Day

* The Load Capacity calculations are to be reasoanbly agreed upon between Seller and Buyer on or before 11/15/24

Bed Count Calculation (Wastewater Flows Assumed as 300 GPD / Bed + 0.085 GPD / GSF for MOB)

Bed Count

Bed Count		264	beds
	Average Day	2,732,400	per month
		91,080	per day
		63.25	per minute

MOB

GSF		145000	SF
	Average Day	435,000	per month
		14,500	per day
		10.07	per minute

*300 GPD/bed for wastewater flows (or 402.5 GPD/bed for water, 115%of wastewater) is based on ASPE Plumbing Engineering Design Handbook, Volume 2. Chapter 8 references 132-251 GPD/bed (172 GPD/bed average) plus 5.3-15.9 GPD/employee (10.6 GPD/employee) for typical wastewater flows. This chapter also references 250 GPD/bed for quantities of hospital sewage flows. 300 gal/bed was assumed based on the above.

Water Assumptions		
Average Day	3,167,400	per month
	105,580	per day
	73.32	per minute

Sewer Assumptions (~85% of Water Usage)		
Average Day	2,692,290	per month
	89,743	per day
	62.32	per minute

HKS Engineering Calculations

ADD (GPM)	62.32
Peak Based on 4.5*	280.45

*4.5 is from HKS Calculation

Table 1: Full Build-Out Sanitary Demand by PUD

PUD	Use	Area	Annual Average Daily Demand (GPD)	Average Daily Demand (GPM)	Average Daily Demand (CFS)	Peak Factor	Peak Flow (GPM)	Peak Flow (CFS)
PUD - 1	Industrial	654,500 sq. ft	90,521	62.9	0.140	3.56	223.8	0.499
PUD - 2	Industrial	453,700 sq. ft	62,749	43.6	0.097	3.78	164.5	0.367
PUD - 3	Medical	300,000 sq. ft	41,492	28.8	0.064	4.03	116.2	0.259
PUD - 4	Medical	118,800 sq. ft	16,431	11.4	0.025	4.68	53.4	0.119
PUD - 5	Office/Retail	113,000 sq. ft	19,012	13.2	0.029	4.57	60.3	0.134
PUD - 6	Hospital	435,000 sq. ft	94,800	65.8	0.147	4.50	296.3	0.660
PUD - 7	Medical	165,000 sq. ft	22,820	15.8	0.035	4.44	70.4	0.157
PUD - 8	Office	360,000 sq. ft	28,800	20.0	0.045	4.28	85.5	0.191
SUM		**2,600,000 sq. ft**	376,626	261.5	0.583		1070.5	2.385
TOTAL			376,626	261.5	0.583	2.83	741.4	1.652

Note: GPM = Gallons Per Minute, CFS = Cubic Feet per Second, GPD = gallons per day

ADD (GPM)	73
Peak Based on 2.68	196.50

*2.68 is from HKS Calculation

Table 4: Full Build-out Water Demands by PUD

	Use	Average Daily Demand (GPD)	Average Daily Demand (GPM)	Peak Day Demand (ADD*2.68) (GPD)	Peak Day Demand (ADD*2.68) (GPM)
PUD - 1	Industrial	108625	75.4	291116	202.2
PUD - 2	Industrial	75299	52.3	201802	140.1
PUD - 3	Medical	49790	34.6	133437	92.7
PUD - 4	Medical	19717	13.7	52841	36.7
PUD - 5	Office/Retail	22871	15.9	61294	42.6
PUD - 6	Hospital	111200	77.2	298016	207.0
PUD - 7	Medical	27385	19.0	73391	51.0
PUD - 8	Office	34560	24.0	92621	64.3
	Total:	449447	312.1	1204517	836.5

Note: Max day demand is 1.204 MGD

ASPE Plumbing Engineering Design Handbook, Volume 2, Chapter 8 Tables

Table 8-8 Typical Wastewater Flows from Institutional Sources

Source	Unit	Wastewater Flow, gal (L)/unit/day Range	Wastewater Flow, gal (L)/unit/day Typical
Hospital, medical	Bed	132.0–251.0 (500–950)	172.0 (650)
	Employee	5.3–15.9 (20–60)	10.6 (40)
Hospital, mental	Bed	79.3–172.0 (300–650)	106.0 (400)
	Employee	5.3–15.9 (20–60)	10.6 (40)
Prison	Inmate	79.3–159.0 (300–600)	119.0 (450)
	Employee	5.3–15.9 (20–60)	10.6 (40)
Rest home	Resident	52.8–119.0 (200–450)	92.5 (350)
	Employee	5.3–15.9 (20–60)	10.6 (40)
School, day			
With cafeteria, gym, showers	Student	15.9–30.4 (60–115)	21.1 (80)
With cafeteria only	Student	10.6–21.1 (40–80)	15.9 (60)
Without cafeteria, gym, showers	Student	5.3–17.2 (20–65)	10.6 (40)
School, boarding	Student	52.8–106.0 (200–400)	74.0 (280)

Table 8-10 Quantities of Sewage Flows

Type of Establishment	gpd/Person (L/D/Person)[a]
Airports (per passenger)	5 (20)
Apartments—multifamily (per resident)	60 (225)
Bathhouses and swimming pools	10 (40)
Camps	
Campground with central comfort stations	35 (130)
With flush toilets, no showers	25 (95)
Construction camps (semipermanent)	50 (190)
Day camps (no meals served)	15 (60)
Resort camps (night and day) with limited plumbing	50 (190)
Luxury camps	100 (380)
Cottages and small dwellings with seasonal occupancy	50 (190)
Country clubs (per resident member)	100 (380)
Country clubs (per nonresident member present)	25 (95)
Dwellings	
Boarding houses	50 (190)
additional for nonresident boarders	10 (40)
Luxury residences and estates	150 (570)
Multifamily dwellings (apartments)	60 (225)
Rooming houses	40 (150)
Single-family dwellings	75 (285)
Factories (gal [L] per person, per shift, exclusive of industrial wastes)	35 (130)
Hospitals (per bed space)	250 (945)[b]
Hotels with private baths (2 persons per room)	60 (225)
Hotels without private baths	50 (190)
Institutions other than hospitals (per bed space)	125 (475)
Laundries, self-service (gal [L] per wash, i.e., per customer)	50 (190)
Mobile home parks (per space)	250 (945)
Motels with bath, toilet, and kitchen wastes (per bed space)	50 (190)
Motels (per bed space)	40 (150)
Picnic parks (toilet wastes only) (per picnicker)	5 (20)
Picnic parks with bathhouses, showers, and flush toilets	10 (40)
Restaurants (toilet and kitchen wastes per patron)	10 (40)
Restaurants (kitchen wastes per meal served)	3 (10)
Restaurants, additional for bars and cocktail lounges	2 (8)
Schools	
Boarding	100 (380)
Day, without gyms, cafeterias, or showers	15 (60)
Day, with gyms, cafeteria, and showers	25 (95)
Day, with cafeteria, but without gyms or showers	20 (80)
Service stations (per vehicle served)	10 (40)
Swimming pools and bathhouses	10 (40)
Theaters	
Movie (per auditorium seat)	5 (20)
Drive-in (per car space)	5 (20)
Travel trailer parks without individual water and sewer hookups (per space)	50 (190)
Travel trailer parks with individual water and sewer hookups (per space)	100 (380)
Workers	
Construction (at semipermanent camps)	50 (190)
Day, at schools and offices (per shift)	15 (60)

[a] Unless otherwise noted.
[b] Includes cafeteria.

Dewberry Memo and Development Agreement

ADD (GPD)	89,743
ADD (MGD)	0.090

	Wastewater Flow and Load	
	AAD Flow, MGD	AAD BOD5, PPD
	Designed Flow Capacity	Designed Load Capacity
Hospital Allocated Capacity (435,600 SF)	0.09	*
Remaining Project Allocated Capacity (2,106,787 SF)	0.29	*
Total Redtail Ridge Capacity (2,542,387 SF)	0.38	*

Hospital Parcel

	Wastewater Flow and Load	
	MM Flow, MGD	MM BOD5, PPD
	Designed Flow Capacity	Designed Load Capacity
Hospital Allocated Capacity (435,600 SF)	0.11	*
Remaining Project Allocated Capacity (2,106,787 SF)	0.34	*
Total Redtail Ridge Capacity (2,542,387 SF)	0.45	*

Hospital Parcel

Definitions:

AAD = Annual Average Daily

MM = Maximum Average Daily flow over a 30-day Period

BOD5 = Biochemical Option Demand

MGD = Million Gallons per Day

PPD = Pounds Per Day

* The Load Capacity calculations are to be reasoanbly agreed upon between Seller and Buyer on or before 11/15/24