C						
Sui	mmit Valley and	Bellatona Add	itions			
To Fredricate Box 1 11 11 11 11 11		and the first	t0. e e:			
he Engineering Report provided by the developer wil						
pproximate cost to operate, maintain and replace cap	pitai equipment	for the life of th	ie proposea iitt	station. I his if	ntormation sna	ii include
ne following at a minimum: Proposed Lift Station Sewer Service Area including ex	rnacted number	r and type of re-	eidantial unite s	e wall as tha r	number of acre	s of other
oning classifications such as commercial, institutiona	•					
opulation equivalent to be served by the lift station (ii						
aily wastewater flow (ADF) in gallons per day (GPD)						
DF or other data acceptable to the City of Norman.	'	•	0.0			
·						
	Summit		Sumitt Valley	Belatona		
	Valley	Belatona	Commercial	Commercial	Commercial	
	<u>Lots</u>	<u>Lots</u>	<u>Acres</u>	<u>Acres</u>	<u>Acres</u>	<u>Total</u>
	389	692	2.21	12.38	0	
Population Equivalent Per Category	2.55	2.55	5	5	5	
Estimated Population	992	1,765	11	62	-	2,830
Estimated average daily wastewater flow (ADF) in						
gallons per day	·	220,625	1,375	7,750	-	353,750
Estimated peak hourly flow in GPD		882,500	5,500	31,000	-	1,415,000
Peaking Factor	4.0					
Prawings showing the location of the proposed lift state	tion, force main	and access roa	adways. Includ	e sufficient dat	a to allow the	pump static
ead to be determined).				,		
pproximate cost to operate, maintain and replace cap	pital equipment	for the life of th	e proposed lift	station. This in	nformation sha	II include
ne following at a minimum:						
HP = ((GPM) x (TDH)) / ((3960) x (0.50)) where pump	efficiency is as	ssumed to be 5	0% (unless oth	erwise approv	ed). Check if p	oump of
stimated GPM and TDH is available; adjust HP as re	quired.		•			•
	<u>GPM</u>	<u>TDH</u>	Efficiency	<u>HP</u>		
	775	70	60%	22.83		
stimate average annual electrical cost						
. Pump time (hours per day) = ((ADF in GPD) x 24)	/ (1440 x (Pump	Capacity in G				
		Pumping	Pumping			
	<u>ADF</u>	<u>Capacity</u>	Hours/day			
	353,750	775	7.61			
kilowatt-hours (kWh) = (HP) x 0.746 x (pump time i	n hours per day	y) x 365				
		Pumping	Kwh Per	Kwh Per		
	ш п	Hours/Day	<u>Day</u>	<u>Year</u>		
	HP					
	22.83	7.61	129.58	47,296		
. Annual Electrical Cost = kWh per year x \$0.08 kWh	22.83 h	7.61		47,296		
. Annual Electrical Cost = kWh per year x \$0.08 kWh	22.83 n Kwh Per	7.61 Cost per	Cost per	47,296		
. Annual Electrical Cost = kWh per year x \$0.08 kWh	22.83 h Kwh Per <u>Year</u>	7.61 Cost per <u>Kwh</u>	Cost per <u>Year</u>	47,296		
. Annual Electrical Cost = kWh per year x \$0.08 kWh	22.83 n Kwh Per	7.61 Cost per	Cost per	47,296		
. Annual Electrical Cost = kWh per year x \$0.08 kWh	22.83 h Kwh Per Year 47,296	7.61 Cost per <u>Kwh</u> 0.08	Cost per <u>Year</u> \$3,783.72		s. Include wet	well, pumps,
estimate annual lift station and force main OM&R cos ischarge piping and valves, electrical controls, flow n	22.83 h Kwh Per Year 47,296 t. Provide appronetering, force r	7.61 Cost per Kwh 0.08 oximate cost for main quick-conr	Cost per Year \$3,783.72 Iff station and	appurtenance	ngs and valves	s, fencing,
estimate annual lift station and force main OM&R cos ischarge piping and valves, electrical controls, flow n Il weather access road, force main, air release valves	22.83 h Kwh Per Year 47,296 t. Provide appronetering, force r	7.61 Cost per Kwh 0.08 oximate cost for main quick-conr	Cost per Year \$3,783.72 Iff station and	appurtenance	ngs and valves	s, fencing,
estimate annual lift station and force main OM&R cos ischarge piping and valves, electrical controls, flow n Il weather access road, force main, air release valves	22.83 h Kwh Per Year 47,296 t. Provide appronetering, force rs and vaults, etc.	7.61 Cost per Kwh 0.08 eximate cost for main quick-conrect. Assume annual	Cost per Year \$3,783.72 Ifft station and nect coupling, valued replacement	appurtenance ralve vault, fitti t cost is 5% of	ngs and valves original const	s, fencing, ruction cost.
estimate annual lift station and force main OM&R cos ischarge piping and valves, electrical controls, flow n Il weather access road, force main, air release valves	22.83 Kwh Per Year 47,296 t. Provide appronetering, force rs and vaults, etc	7.61 Cost per Kwh 0.08 eximate cost for main quick-conr c. Assume annu 12" Force Mair	Cost per Year \$3,783.72 Ifft station and nect coupling, val replacemen	appurtenance ralve vault, fitti t cost is 5% of Force Main	ngs and valves original const	s, fencing, ruction cost.
estimate annual lift station and force main OM&R cos ischarge piping and valves, electrical controls, flow n	22.83 Kwh Per Year 47,296 t. Provide appronetering, force rs and vaults, etc Lift Station Cost	7.61 Cost per Kwh 0.08 eximate cost for main quick-conr c. Assume annu 12" Force Main Length	Cost per Year \$3,783.72 Ifft station and nect coupling, value replacement	appurtenance valve vault, fitti tt cost is 5% of Force Main Cost	ngs and valves original const Total <u>Cost</u>	s, fencing, ruction cost. Annual Cost
Estimate annual lift station and force main OM&R cossischarge piping and valves, electrical controls, flow null weather access road, force main, air release valves unnual OM&R Cost = 0.05 x Capital Cost	22.83 Kwh Per Year 47,296 t. Provide appronetering, force rs and vaults, etc	7.61 Cost per Kwh 0.08 eximate cost for main quick-conr c. Assume annu 12" Force Mair	Cost per Year \$3,783.72 Ifft station and nect coupling, val replacemen	appurtenance ralve vault, fitti t cost is 5% of Force Main	ngs and valves original const	s, fencing, ruction cost.
Estimate annual lift station and force main OM&R cossischarge piping and valves, electrical controls, flow nell weather access road, force main, air release valves annual OM&R Cost = 0.05 x Capital Cost	22.83 N Kwh Per Year 47,296 t. Provide appronetering, force rs and vaults, etc Lift Station Cost \$238,909.00	7.61 Cost per Kwh 0.08 eximate cost for main quick-conr c. Assume annu 12" Force Main Length 2,363	Cost per Year \$3,783.72 Iff station and nect coupling, valued replacement Force Main Per Foot \$25.26	appurtenance valve vault, fitti tt cost is 5% of Force Main Cost \$59,683.50	ngs and valves original const Total <u>Cost</u>	s, fencing, ruction cost. Annual Cost
Estimate annual lift station and force main OM&R cossischarge piping and valves, electrical controls, flow null weather access road, force main, air release valves unnual OM&R Cost = 0.05 x Capital Cost	22.83 N Kwh Per Year 47,296 t. Provide appronetering, force rs and vaults, etc Lift Station Cost \$238,909.00	7.61 Cost per Kwh 0.08 eximate cost for main quick-conr c. Assume annu 12" Force Main Length 2,363	Cost per Year \$3,783.72 Iift station and nect coupling, val replacement Force Main Per Foot \$25.26	appurtenance valve vault, fitti tt cost is 5% of Force Main Cost \$59,683.50 R Cost) / 12	ngs and valves original const Total <u>Cost</u>	s, fencing, ruction cost. Annual Cost
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