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Water ▪ Sewer ▪ Parks ▪ Fire Protection  
18966 Ferretti Road P.O. Box 350 Groveland, CA 95321-0350

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January 19, 2022

Jaren Nuzman  
TK Consulting, Inc.  
2082 Michelson Dr., 4th Floor  
Irvine, CA 92612

RE: Services for Highway 120 Lodging Project

Mr. Nuzman,

We very much appreciate your effort and cooperation with GCS D in planning for your project. Attached you will find the technical memorandum from the GCS D Engineer providing verification of water and sewer capacity in the GCS D systems to serve the project as proposed. Prior to the design of any water or sewer infrastructure to serve the project, the Applicant will need to enter into a Plan Check and Construction Inspection Agreement with the District. This agreement will outline the Applicant's responsibilities to construct all infrastructure to District standards and fund the cost of inspection, testing, surveying and other work necessary for successful construction and dedication of completed public water and sewer systems to GCS D.

Also as a condition of GCS D providing services to the project, prior to District acceptance of the public water and sewer improvements, the applicant will be required to pay applicable fire and park service development impact fees, water and sewer connection/capacity fees. Services are also conditioned on the formation of a Community Facilities District or other acceptable funding mechanism to fund the project's proportional share of the annual future cost of expansion of GCS D fire and park department staffing and operations as identified in a fiscal impact analysis.

We look forward to working with you and hope for a successful project.

Sincerely,

A handwritten signature in blue ink that reads "Peter Kampa".

Peter J. Kampa, General Manager  
Cc: GCS D Board of Directors/Project file

Attachment

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## TECHNICAL MEMORANDUM

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**TO:** PETER KAMPA, GENERAL MANAGER  
**FROM:** ALFONSO MANRIQUE, PE, AM CONSULTING ENGINEERS, INC.  
**SUBJECT:** HWY 120 LODGING PROJECT  
**DATE:** 1/18/2022

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This Technical Memorandum (TM) has been prepared by AM Consulting Engineers, Inc.'s (AMCE) and contains an assessment of the Groveland Community Services District's water and sewer infrastructure with regards to the proposed Hwy 120 Lodging Project.

### BACKGROUND

Hwy 120 Lodging is a proposed commercial development (Development) on a 36-acre parcel adjacent to the east boundary of the Townsite of Big Oak Flat, California in the northwest  $\frac{1}{4}$  of Section 29, T1S, R16E, M.D. B&M. The Development includes one hundred seventy-five (175) cabins, a two (2) bedroom home designated as management residence, a library/lounge, a pool, an Autocourt, an event pavilion, offices for landscaping and maintenance staff and staff housing. Appendix A contains a summary of the estimated water demands and sewer flow production from the Development as proposed.

The proposed Development is located within the Groveland Community Services District (District) service area. The District provides water and sewer services to the town of Groveland and Big Oak Flat and it will also serve the Development once it is constructed. Water service to the site will be provided by connecting to a 6" water main along the north side of Highway 120. Sewer flows will discharge into the District's gravity collection system along Hwy 120 and into Lift Station 16.

### Water Supply

Water demands are estimated to be 52,547 gpd for the first 18 months and 36,150 gpd thereafter. The higher demand during the first 18 months is associated with the establishment of landscaping. Fire flows is estimated to be 1,500 gpm for a duration of 2 hours.

Water supply for domestic use and landscaping will come from connection to a water main along the north side of Highway 120. The existing water main along the north side of Highway 120 is 6" in diameter. The 6" main appears to have adequate a capacity to serve the Development's domestic and landscaping demand. The estimated pressure at the point of connection is estimated to be 60 psi. The water supply connection will require a reduced pressure backflow preventer and a rate of flow control valve to limit the flow to a maximum of 70-gpm. The Developer will be responsible for the construction of the water service which will cross under Hwy 120. The Development will require a storage tank and a fire suppression distribution system with fire hydrants spaced at no more than 300 ft.

The Developer must submit construction documents showing the onsite and offsite water supply improvements to GCSD for review and comment prior to the approval of a water connection.

### Sewer Collection

Sewer flows are estimated to be 24,451 gpd. Improvement plans for the sewer collection system have not been submitted to the District for review. The Developer will be responsible for constructing all the necessary sewer collection system infrastructure to convey the sewer flows to the District collection system. The developer must

submit infrastructure plans showing any gravity and pressure sewer mains as well as lift stations for review and approval by the District. The proposed Development will contribute an average of 17-gpm to the current flow. It appears that the sewer collection system has adequate capacity to handle the additional flow from the Development.

Waste Discharge Requirements Order 87-121 limits the discharge capacity of the wastewater treatment to 400,000 gpd. The wastewater treatment plan has adequate capacity to serve the development under normal operating conditions. The wastewater treatment plant is over 50 years old and the District is planning an upgrade. The District is preparing a Master Plan that will contain the cost of the wastewater treatment facility upgrade. The Master Plan will contain the development's impact fees for the sewer connection.

**Appendix A**  
**Estimated Water and Sewer Flows**

**Land & Structure**

Zachariah P Garman C.E. 69194  
 105 South Stewart Street, Sonora Ca 95370  
 (209 532-5173 e. zac@landstruc.com

**\*Data compiled using TUD Water Service User Classification Schedule\*  
 sfe - Single Family Equivalent - usage locally measured**

**Estimated Water Demand for Yonder Yosemite**

Project	User Classification	Unit	Usage Factor	Quantity	Demand per unit (gal/unit)	sfe (264 gpd)	Total Daily Flow TDF (gpd)	Average Daily Demand ADD (gpm)	Estimated Peak Demand *** (gpm)
Yonder Yosemite	Cabins	per room	0.303	175	80.0	53.0	14,000.0	9.7	24.3
	Site Amenities								
	Lodge: Staff	per occupant	0.100	4	26.4	0.4	105.6	0.1	0.2
	Restaurant	per occupant	0.090	74	23.8	6.7	1,758.2	1.2	3.1
	Library / Lounge	per occupant	0.005	216	1.3	1.1	285.1	0.2	0.5
	Management Residence - 2 Bedroom	per residence	0.700	2	184.8	1.4	369.6	0.3	0.6
	Pool / Poolhouse	by calculation	0.040	106	10.6	4.2	1,119.4	0.8	1.9
	Events Pavillion	per occupant	0.005	203	1.3	1.0	268.0	0.2	0.5
	Office For Landscaping & Maitennace Staff	per employee	0.100	4	26.4	0.4	105.6	0.1	0.2
	Staff housing	per occupant	0.500	96	132.0	48.0	12,672.0	8.8	22.0
	<b>Subtotal</b>						<b>30,683.5</b>	<b>21.3</b>	<b>53.3</b>
Landscape **	by calculation					7,925.0	5.5	13.8	
						<b>38,608.5</b>	<b>26.8</b>	<b>67.0</b>	
						<b>gpd</b>	<b>gpm</b>	<b>gpm</b>	

**Additional Water Volume Demands**

**Maximum Month Demand**  
 MMD = TDF x 1.5 (gpd)

57,912.7

**Maximum Day Demand**  
 MDD = MMD x 1.5 (gpd)

86,869.0

**Peak Hour Demand**  
 PHD = MDD x 3/(24 x 60) (gpm)

181.0

Landscape for first 18 months	by calculation					21,863.0	gpd
Landscape for after first 18 months	by calculation					5,465.8	gpd

Project	User Classification	Unit	Generation Factor	Quantity	Total Fire Flow Volume (gallons)
Yonder Yosemite	Entire Site	minutes	1500.000 / minute	120	180,000.0

**Estimated Sewer Demand for Yonder Yosemite**

Project	User Classification	Unit	Usage Factor	Quantity (occupancy)	Demand per unit (gal/unit)	sfe (160 gpd)	Total Daily Flow (gpd)	Average Daily Flow (gpm)	Estimated Peak Demand *** (gpm)
Yonder Yosemite	Cabins	per room	0.500	175	80	87.5	14,000.0	9.7	24.3
	Site Amenities								
	Lodge: Staff	per occupant	0.100	4	16	0.4	64.0	0.0	0.1
	Restaurant	per occupant	0.090	74	14.4	6.7	1,065.6	0.7	1.9
	Library / Lounge	per occupant	0.005	216	0.8	1.1	172.8	0.1	0.3
	Management Residence - 2 Bedroom	per room	0.700	2	112	1.4	224.0	0.2	0.4
	Pool / Poolhouse	per occupant	0.060	106	9.6	6.4	1,017.6	0.7	1.8
	Events Pavillion	per occupant	0.005	203	0.8	1.0	162.4	0.1	0.3
	Office For Landscaping & Maitennace Staff	per employee	0.100	4	16	0.4	64.0	0.0	0.1
	Staff housing	per occupant	0.500	96	80	48	7,680.0	5.3	13.3
							<b>24,450.4</b>	<b>17.0</b>	<b>42.4</b>
						<b>gpd</b>	<b>gpm</b>	<b>gpm</b>	

**Additional Wastewater Volume Demands**

**Maximum Month Demand**  
 MMD = TDF x 1.5 (gpd)

36,675.6

**Maximum Day Demand**  
 MDD = MMD x 1.5 (gpd)

55,013.4

**Peak Hour Demand**  
 PHD = MDD x 3/(24 x 60) (gpm)

114.6

\* Occupancy use is accessory to the structures being supported and therefore accounted for within the cabin occupancy.

\*\* Landscape : Consumption = 21,863 gal/day for the first 18 months then a 75% reduction thereafter to yeild 5,466 gal/day  
 Table value based on annualized 10-year Consumption = [21,863 gal/day\* 365 days \* 1.5 years] + [5,466 gal/day\*365 days \* 8.5 years] / [10 years \* 365 days] = 7,925 gal/day

\*\*\* Estimated Peak Demand = Average Daily Flow x 2.5