

Central Park Hotel - Water Demand Report



June 28, 2023

Mr. Frank Alfone
Mount Werner Water
3310 Clearwater Trail
PO Box 880339
Steamboat Springs, Colorado 80488

**Re: Water Demand Report
Central Park Hotel – Development Plan, Steamboat Springs, Colorado**

Dear Mr. Alfone:

Landmark Consultants, Inc. (Landmark) is providing this Water Demand Report to accompany the Development Plan application for the Central Park Hotel (the Project) on the subject property. The objective of our study was to quantify and present Mt. Werner Water with an estimated Equivalent Residential Unit (EQR) value.

That report was prepared using information from the City of Steamboat Springs 2020 Water Distribution and Wastewater Collection Infrastructure Master Plan, conceptual design information shared with Landmark, and serves to document the water and sewer impacts associated with the Project. Please note that modifications to the proposed project may require an update to that report.

If you have any questions during your review process, feel free to contact us.

Sincerely,

Landmark Consultants, Inc.

Erik Griepentrog, P.E.
Vice-President

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1.0 INTRODUCTION, LOCATION, AND METHODOLOGY

This letter is an analysis of water and sewer demands anticipated for the development proposed at Lot 3, Steamboat Village Commercial Center, Replat F (the Project). This letter includes all the base data, methods, assumptions, and calculations used by Landmark Consultants, Inc. (Landmark). It was prepared in conjunction with the concurrent Preliminary Plat application submitted for the project.

Landmark prepared this letter in accordance with Section 25-78 of the City of Steamboat Springs Municipal Code for the purpose of quantifying the water demanded and the sanitary sewerage produced per the proposal at the time of this letter. This letter may not be used by other parties without the express written consent of Landmark.

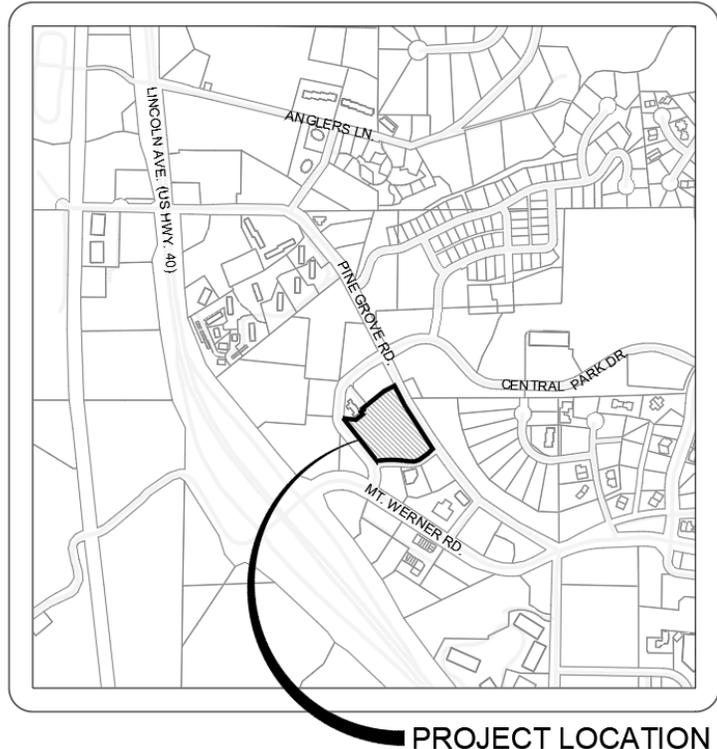


Figure 1- Vicinity Map

The facts and opinions expressed in this letter are based on Landmark's understanding of the project and data gathered from:

- Plans prepared by Landmark
- Plans provided by The Richardson Design Partnership (TRDP)
- The City of Steamboat Springs 2020 Water Distribution and Wastewater Collection Infrastructure Master Plan prepared by Baseline, April 2021 (referred herein as **Master Plan**)
- Mt. Werner Water/Water/Sewer System Maps

The subject property is located on Lot 3, Steamboat Village Commercial Center, Replat F (File No. 12894). This lot is approximately 4.20 acres and is in the Southwest $\frac{1}{4}$ of Section 21, Township 6 North, Range 84 West of the 6th Principal Meridian, City of Steamboat Springs, Routt County, Colorado. Specifically, the site is located south and east of Central Park Drive, west of Pine Grove Road, and north of Snapdragon Way. Please refer to Figure 1 – Vicinity Map for the subject property location.

EQUIVALENT RESIDENTIAL UNIT (EQR) METHODOLOGY

The Master Plan uses the Equivalent Residential Unit (EQR) method as a standard unit of measurement for equating water demands and wastewater flows for different user categories and describes an EQR for Steamboat Springs as a 'three-bedroom, 2-bathroom home up to 2,500 sf. (Master Plan, page 9)

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The Project is proposing a 181-room hotel with a 3,600 square foot attached restaurant. Based on this proposal, Landmark completed the City's Water Demand Worksheet which calculated a daily use of gallon per day (GPD). The Master Plan provides a conversion factor of 200 GPD/EQR, so the resulting EQR value for the Project is **108 EQRs**. The completed worksheet is attached for reference.

Irrigation Demands:

According to the Master Plan, "Typical irrigation users like residential and commercial customers account for irrigation demands within the 200 gpd allocation (EQR)" and therefore Landmark applied no additional considerations for the Project.

Conclusion:

For the purpose of evaluating impacts to the Mt. Werner Water system, we recommend using an EQR value of 108.

LIMITATIONS

This study is intended to estimate anticipated future water and sewer demands that could result from full buildout on the proposed subdivision in order for Mt. Werner Water and the City of Steamboat Springs to evaluate existing infrastructure capacities and review future capital improvements. It does not account for inflow and infiltration.

Landmark's assumptions, recommendations and opinions are based on the information described herein – discrepancies may exist. If any of the data is found to be inaccurate or the proposed site plan is changed, Landmark should be contacted to review this report and make any necessary revisions.

The data, opinions, and recommendations of this report are applicable to the specific design elements and location that is the subject of this report. This report is not applicable to any other design elements or to any other locations. Any and subsequent users accept all liability resulting from any use or reuse of the data, opinions, and recommendation without the prior written consent of Landmark Consultants, Inc.

Landmark Consultants, Inc. has no responsibility for construction means, methods, techniques, sequences, or procedures, or for safety precautions or programs in connection with the construction, for the acts or omissions of the contractor, or any other person performing any of the construction, or for the failure of any of them to carry out the construction in accordance with the Final Construction Drawings and Specifications.

The only warranty or guarantee made by Landmark Consultants, Inc. in connection with the services performed for this project is that such services are performed with the care and skill ordinarily exercised by members of the profession practicing under similar conditions, at the same time, and in the same or similar locality. No other warranty, expressed or implied, is made or intended by rendering such services or by furnishing written reports of the findings.



EXHIBIT A

WATER SYSTEM MAP

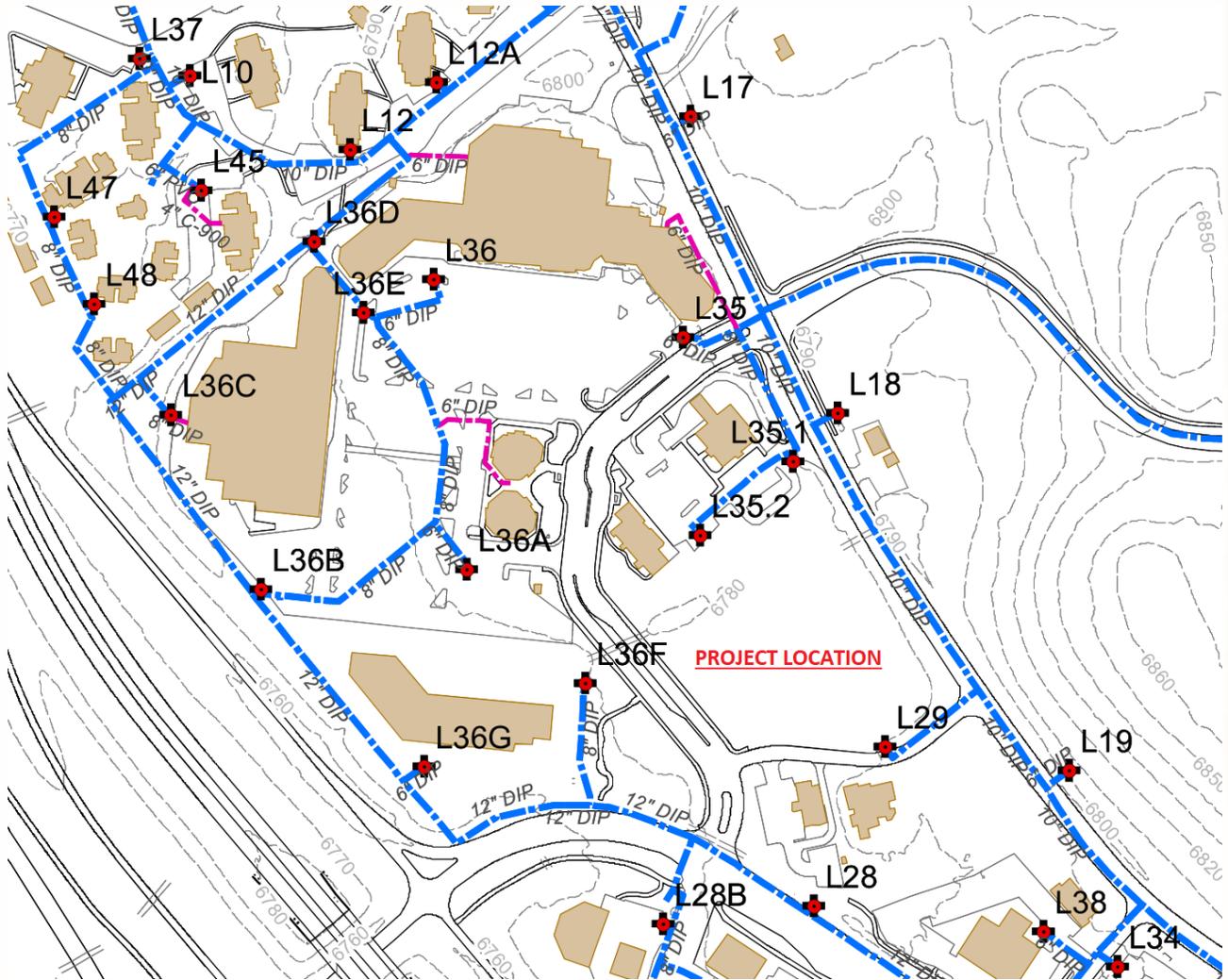




EXHIBIT B

CITY OF STEAMBOAT SPRINGS WATER DEMAND CALCUATION WORKSHEET

2. IRRIGATION WATER DEMAND

Describe irrigation methods: All landscaped areas will be irrigated with an automatic system. Shrubs will be drip irrigated.

A. Average irrigated area per detached single family lot:	<u>0</u> square feet
B. Irrigated area (1A x 2A/43,560):	<u>0</u> acres
C. Average irrigated area per multi-family unit:	<u>0</u> square feet
D. Irrigated area (1E x 2C/43,560)	<u>0</u> acres
E. Other irrigated areas:	
1. Irrigated parks	<u>0</u> acres
2. Irrigated entry features	<u>0</u> acres
3. Irrigated street ROW	<u>0</u> acres
4. Common space	<u>0.65</u> acres
5. Total other	<u>0.65</u> acres
F. Total irrigated area (2B + 2D + 2E5):	0.65 acres
G. Total irrigation demand (2F x 2.5)	1.625

3. OTHER OUTDOOR WATER USES

A. Pond water surface area:	<u>0</u> square feet
B. Fountain water surface area:	<u>0</u> square feet
C. Swimming pool:	
1. Surface area	<u>1,062</u> square feet
2. Volume	<u>35,750</u> gallons

4. OTHER INDOOR WATER USES

A. Retail (square feet x 0.000112)	<u>0</u> square feet	0 0.10 gpd/sqft
B. Office (square feet x 0.000179)	<u>0</u> square feet	0 0.16 gpd/sqft
C. Warehouse or Storage (square feet x 0.0000672)	<u>0</u> square feet	0 0.06 gpd/sqft
D. Motel/hotel without kitchens (room x 0.1120)	<u>181</u> guest rooms	18100 100 gpd/room
E. Motel/hotel with kitchens (room x 0.1680)	<u>0</u> guest rooms	0 150 gpd/room
F. Restaurant (seat x 0.0392)	<u>90</u> seats	3150 35 gpd/seat
G. Tavern	<u>18</u> seats	360 20 gpd/seat
H. Other (describe)		
I. Total other indoor water usage		21610 gpd

Describe below the expected number of employees/guests/daily hours and anything that impacts the number of people using the facilities or special features such as swimming pools, hot tubs, or other indoor water features. Use the Comments worksheet if more space is needed:
 The hotel should operate as a normal hotel with typical numbers of employees and guests for its size. Operating hours will also be typical of a hotel and restaurant. There is one pool and two spas in the outdoor amenity space.

5. AVERAGE ANNUAL CONSUMPTION USAGE (FOR CITY OF STEAMBOAT SPRINGS STAFF USE)

	Demand (acre-feet)	Consumptive Use (acre-feet)
A. Indoor usage	_____	_____
B. Outdoor usage	_____	_____
C. Total	_____	_____

6. APPLICANT

Project Name: Cer  < Hotel
By (print name): P  gle, P.E. (on behalf of Landmark Consultants, Inc.)
(Owner  orized Representative)
Title: Professional  r
Signature:
Date: 6/29/2023

7. CITY

Verified by (print name): _____
(City employee)
Title:
Signature:
Date:

8. ADDITIONAL COMMENTS