Shephard Wesnitzer, Inc.

75 Kallof Place
Sedona, AZ 86336

P.O. Box 3924
Sedona, AZ 86340

928.282.1061

www.swiaz.com

Engineering an environment of excellence.

Jordan Lofts

Sewer Collection System Design Report

APN 401-58-004A & 401-58-004A
Sedona, Arizona

Prepared for:
Miramonte Homes
102 S Mikes Pike
Flagstaff, 86001

Prepared by:
Shephard-Wesnitzer, Inc.
75 Kallof Place
Sedona, AZ 86336
(928) 282-1061

June 22, 2021
Job No. 20206

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INTRODUCTION

The project consists of development of 84 townhome units on two adjacent parcels that will share a common access and infrastructure. The 2.05 parcel was previously platted in 1972 as part of The Orchards subdivision and then reverted to acreage in 2019.

The proposed development is located on Jordan Road and bisected by Quail Tail Trail. The property is situated in Section 05, Township 17 North, Range 6 East, Gila and Salt River Meridian in Coconino County, more specifically defined as Jordan Lofts Assessor's Parcel Numbers 401-58-001A and 401-06-001. The westerly parcel is 2.05 acres and is zoned RM-2 and the easterly parcel is 4.46 acres and zoned RS-18.

Property abutting parcel number 401-58-001A to the north and west is currently zoned RM-2; Property to the south is zoned RM-3 and RS-10b and to the east is RS-18b. Uses in all directions is private residential, including a bed & breakfast located directly north. Property abutting parcel number 401-06-001 to the north, south and east is currently zoned RS-18B. To the west is zoned RM-2. Uses in all directions is private residential. Surrounding subdivisions include The Orchards to the west and Sierra Vista to the south.

Sewer treatment is being provided by the City of Sedona. Central water system is provided by Arizona Water Company.

DESIGN FLOW

The wastewater design flow is based on each unit having a daily flow of 220 gallons per day per unit per the City of Sedona Wastewater Master Plan. Total daily design flow generated by this project is 84 x 220 = 18,480 gpd. At the design slope of 0.005 feet per foot an 8" PVC pipe will carry 717,362 gpd.

COLLECTION SYSTEM

Based on the location of the point of connection, the development will extend an 8" sewer line that will gravity flow to the point of connection in Jordan Road. The proposed 8" gravity sewer in located in the parking drives aisle will serve each building with 6" service laterals.

The system will be gravity 8" SDR-35 PVC, manholes, 6" sewer laterals with cleanouts that will connect to the city sewer main in Jordan Road.

SUMMARY

The sewer system design for collection complies with the requirements of the City of Sedona, the Arizona Department of Environmental Quality and Yavapai County Environmental Services.

REFERENCES

Publications

Unified Water Quality Permit Rules, Arizona Department of Environmental Quality, 2005.

Engineering Bulletin No. 11: Minimum Requirements for Design, Submission of Plans and Specifications of Sewage Works, Arizona Department of Environmental Quality, 1978.

Uniform Plumbing Code, International Association of Plumbing and Mechanical Officials, 1994.

Software

FlowMaster, Bentley Version

APPENDIX

8” Gravity Sewer Calculations
City of Sedona Will Serve Letter
Grading and Utilities Concept Plan

Jordan Lofts 8" Sewer

Project Description

Friction Method	Manning Formula
Solve For	Full Flow Capacity

Input Data

Roughness Coefficient	0.010	
Channel Slope	0.00500	ft/ft
Normal Depth	0.67	ft
Diameter	0.67	ft
Discharge	718860.15	gal/day

Results

Discharge	718860.15	gal/day
Normal Depth	0.67	ft
Flow Area	0.35	ft²
Wetted Perimeter	2.10	ft
Hydraulic Radius	0.17	ft
Top Width	0.00	ft
Critical Depth	0.50	ft
Percent Full	100.0	%
Critical Slope	0.00601	ft/ft
Velocity	3.18	ft/s
Velocity Head	0.16	ft
Specific Energy	0.82	ft
Froude Number	0.00	
Maximum Discharge	1.20	ft³/s
Discharge Full	1.11	ft³/s
Slope Full	0.00500	ft/ft
Flow Type	SubCritical	

GVF Input Data

Downstream Depth	0.00	ft
Length	0.00	ft
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	ft
Profile Description		
Profile Headloss	0.00	ft
Average End Depth Over Rise	0.00	%

Jordan Lofts 8" Sewer

GVF Output Data

Normal Depth Over Rise	100.00	%
Downstream Velocity	Infinity	ft/s
Upstream Velocity	Infinity	ft/s
Normal Depth	0.67	ft
Critical Depth	0.50	ft
Channel Slope	0.00500	ft/ft
Critical Slope	0.00601	ft/ft

Mail:
102 Roadrunner Dr.
Sedona, AZ 86336
Site:
7500 W. SR 89A
Sedona, AZ 86336
(928) 204-2234
sedonaaz.gov
FAX (928) 204-7137

Wastewater Department

March 23, 2021

Arthur Beckwith, PE
Shephard-Wesnitzer, Inc.
PO Box 3924
Sedona, AZ 86340

SUBJECT: WILL SERVE SEWER – 630 JORDAN RD & 500 QUAIL TAIL TRAIL
APN 401-58-001A & 401-05-004A

This letter is in response to your request regarding sewer service availability for the properties referenced above.

These parcels have sewer availability, due to sewer being available adjacent to the point of access to the property, as defined in City Code section 13.15. Currently, both parcels are being billed the sewer standby fee.

However, depending on the scope and impact of the development proposal, adequate capacity may not be available. Available sewer capacity is on a first come-first served basis, and there are no guarantees of sewer capacity for this property until a development proposal is approved.

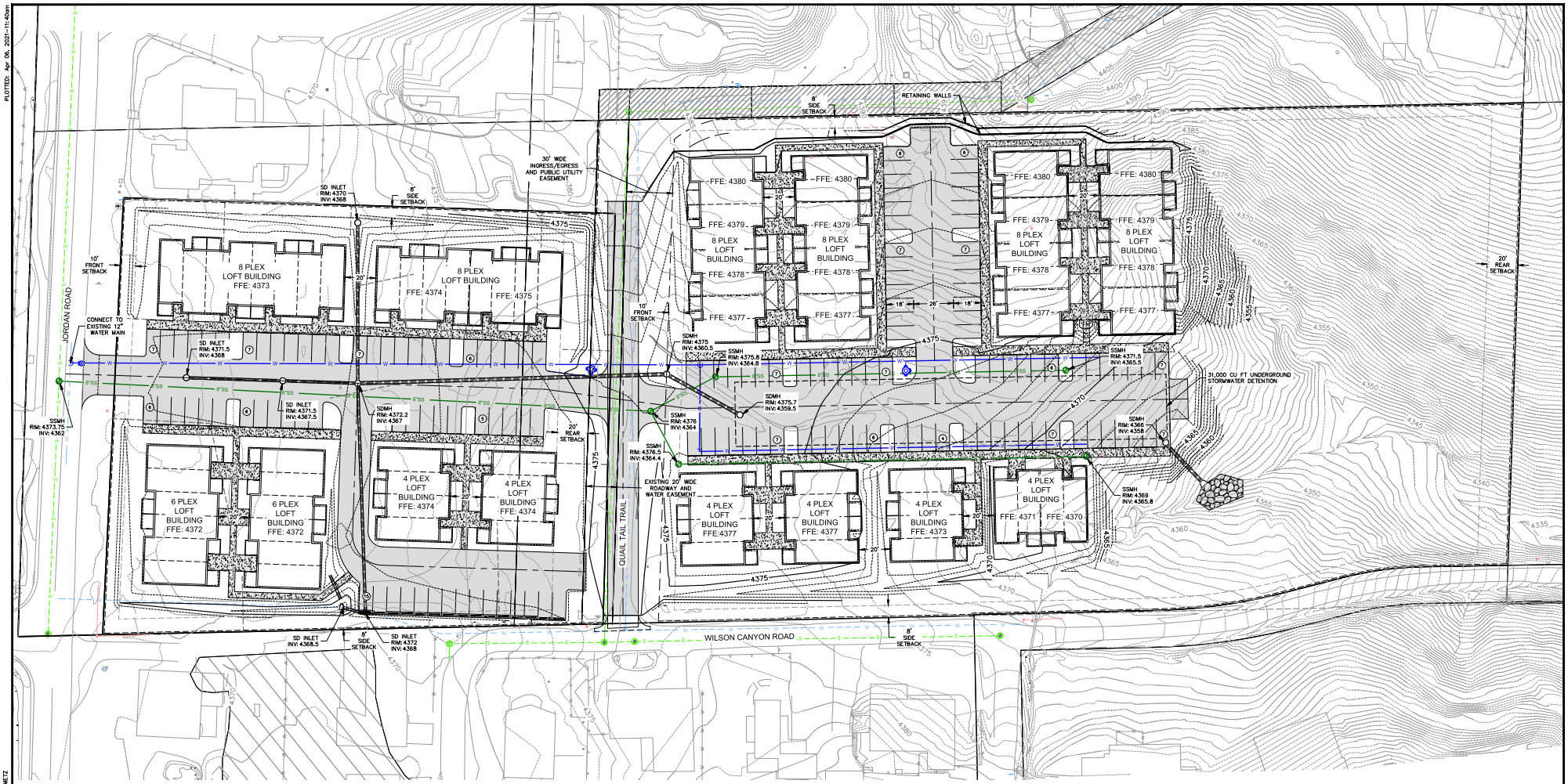
According to City records APN 401-58-001A (630 Jordan Rd) has services near the southwest corner of the parcel and approximately 18 linear feet east of the manhole located in the intersection of Sunset Lane and Wilson Canyon Road. APN 401-05-004A (500 Quail Tail Trail) has a service approximately 52 linear feet east of the manhole located in the intersection of Wilson Canyon Road and Quail Tail Trail, and 17 feet west of the last manhole in Quail Tail Trail. Field verification of these service lateral locations should be conducted.

In conclusion, sewer service is available on this property and, if adequate capacity is available at the time of development approval, sewer will be served by the city of Sedona. If you have any questions or concerns, please contact me at (928) 203-5069.

Sincerely,

Roxanne Holland, PE
Director of Wastewater

RH:ms
cc: J. Andy Dickey, Director of Public Works/City Engineer (e-copy)
Hanako Ueda, Assistant Engineer (e-copy)
Sal Valenzuela, Chief Public Works Inspector (e-copy)
Marsha Beckwith, Accounting Technician (e-copy)
Streets file: Jordan Rd, Quail Tail Trail



ASSESSOR'S PARCEL NUMBERS		AREA	EXISTING ZONING	PROPOSED ZONING
401-58-001A		2.056 AC.	RM-2	RM-3
401-05-004A		4.461 AC.	RS-18	RM-3
DENSITY	UNITS	UNITS/AC.		
401-58-001A	36	17.51		
401-05-004A	48	10.76		
OVERALL DENSITY	84	12.89		
BUILDING COVERAGE		21.8%		
PARKING COVERAGE		18.5%		
OPEN SPACE		60.0%		

PARKING
84 UNITS x 1.75 = 147 SPACES REQUIRED
SPACES WEST 64 SPACES
SPACES EAST 84 SPACES
TOTAL PROVIDED 148 SPACES

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811
Call 811 or click Arizona811.com

REVISIONS			
NO.	DESCRIPTION	DATE	BY

Shephard Wesnitzer, Inc.
75 Kallof Place
Sedona, AZ 86336
928.282.1061
928.282.2058 fax
www.swiaz.com

JOB NO:	20206
DATE:	APR 21
SCALE:	1"=30'
DRAWN:	MWJ/EGM
DESIGN:	JTL
CHECKED:	JTL

JORDAN LOFTS
SEDONA ARIZONA

GRADING AND UTILITIES CONCEPT PLAN

PRELIMINARY
NOT FOR CONSTRUCTION, BIDDING OR RECORDING

DRAWING NO. GC1
SHT NO. 1 OF 1

PLOTTED: Apr 06, 2021-11:40am
FILE: P:\2020\20206\DRAWINGS\CONSTRUCTION PLANS\GRADING CONCEPT - 20206.DWG DMETZ

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Sedona, AZ 86336

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Water Distribution System Design Report

APN 401-58-001A & 401-05-004A
Sedona, Arizona

Prepared for:
Miramonte Homes
102 S Mikes Pike
Flagstaff, 86001

Prepared by:
Shephard-Wesnitzer, Inc.
75 Kallof Place
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June 22, 2021
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INTRODUCTION

The project consists of development of 84 townhome units on two adjacent parcels that will share a common access and infrastructure. The 2.05 parcel was previously platted in 1972 as part of The Orchards subdivision and then reverted to acreage in 2019.

The proposed development is located on Jordan Road and bisected by Quail Tail Trail. The property is situated in Section 05, Township 17 North, Range 6 East, Gila and Salt River Meridian in Coconino County, more specifically defined as Jordan Lofts Assessor's Parcel Numbers 401-58-001A & 401-05-004A. The westerly parcel is 2.05 acres and is zoned RM-2 and the easterly parcel is 4.46 acres and zoned RS-18.

Property abutting parcel number 401-58-001A to the north and west is currently zoned RM-2; Property to the south is zoned RM-3 and RS-10b and to the east is RS-18b. Uses in all directions is private residential, including a bed & breakfast located directly north. Property abutting parcel number 401-05-004A to the north, south and east is currently zoned RS-18B. To the west is zoned RM-2. Uses in all directions is private residential. Surrounding subdivisions include The Orchards to the west and Sierra Vista to the south.

Sewer treatment is being provided by the City of Sedona. Central water system is provided by Arizona Water Company.

DESIGN CRITERIA

The following is a summary of the major design criteria utilized in this report:

- Average and peak daily demand calculations and system analysis will assume full buildout and occupancy.
- The average water demand is 100 gallons per capita per day and 2.5 persons per dwelling.
- The fire flow requirements per the Sedona Fire District are 1000 GPM for a minimum of 2 hours.
- A minimum residual pressure of 20 PSI must be maintained at all fire hydrant locations under max day demand with fire flow conditions.
- All residential units will have fire sprinklers.

DEMANDS

Average Daily Demand

The project water demands were estimated using Sedona's average number of residents per dwelling unit of 2.5 and the 100 GPD per person average water demand. Using this average value yields the following residential demand estimates for full build-out:

250 GPD/DU × 84 DU = 21,000 GPD = 14.6 GPM

Peak Daily Demand

Using typical water design criteria, peak daily demand was estimated as 2.5 times the average daily demand, which yielded the following values:

2.5 × 21,000 GPD = 52,500 GPD = 36.5 GPM

Peak Hour Demand

Using typical water design criteria, peak hour demand was estimated as 2.0 times the peak daily demand, which yielded the following values:

2.0 × 52,000 GPD = 104,000 GPD = 72.2 GPM

Fire Flow

Fire sprinklers are to be installed in all new single-family houses over 3,000 SF and the condominiums per city codes. In the hydraulic model of the proposed system, fire flow at a single hydrant is assumed to coincide with max day flow and two interior fire sprinkler heads in operation at the highest elevation in the proposed development. The fire sprinklers are assumed to demand 16 GPM per sprinkler head for a total of 32 GPM.

EXISTING FACILITIES & CONDITIONS

The connection to the Arizona Water Company's existing system will be made just north of the Jordan Road and Navahopi Road intersection. The connection will be to an existing 12" ductile iron pipe water line in Jordan Road.

There is an existing fire hydrant at the northwest corner of the of the 2.05 ac parcel on Jordan Road. The Sedona Oak Creek Fire District flow test results for this hydrant are as follows: static pressure of 55 PSI, fire flow of 1025 GPM with a residual pressure of 50 PSI.

PROPOSED IMPROVEMENTS

The proposed water distribution system improvements begin at the existing 12" water main in Jordan Road. The 12" mainline will be tapped with an 8" water main that will enter Jordan Lofts on parcel number 401-58-001A and be in constructed in the parking lot. The 8" main will continue to the east to the parking lot at Parcel Number 401-05-004A to the fire hydrant and also be located in the parking lot. 6" piping will serve the southern and eastern portion of parcel 401-05-004A.There is a proposed fire hydrant (FH-2) located in a parking island near the northeasterly building. Each townhome unit will have an individual water meter.

The proposed improvements include the following:

- 545 LF of 8" D.I.P.
- 545 LF of 6" D.I.P.
- 2 Fire Hydrants

SUMMARY

The hydraulic model results indicate that the proposed fire hydrants can deliver the required fire flow of 1,000 gpm during max day conditions with adequate residual pressure.

The water distribution system design complies with the requirements of Arizona Water Company, the Sedona Oak Creek Fire District and Coconino County. The results of the hydraulic model analysis of the proposed system indicate that the Arizona Water Company's water system is adequate to serve the domestic and fire protection demands of the proposed subdivision. See the appendix for hydraulic calculations of the proposed improvements.

REFERENCES

Publications

Engineering Bulletin No. 10: Guidelines for the Construction of Water Systems, Arizona Department of Environmental Quality, 1978.

Arizona Water Company Records, 2004

Uniform Fire Code, International Fire Code Institute, 1994.

Uniform Plumbing Code, International Association of Plumbing and Mechanical Officials, 1994.

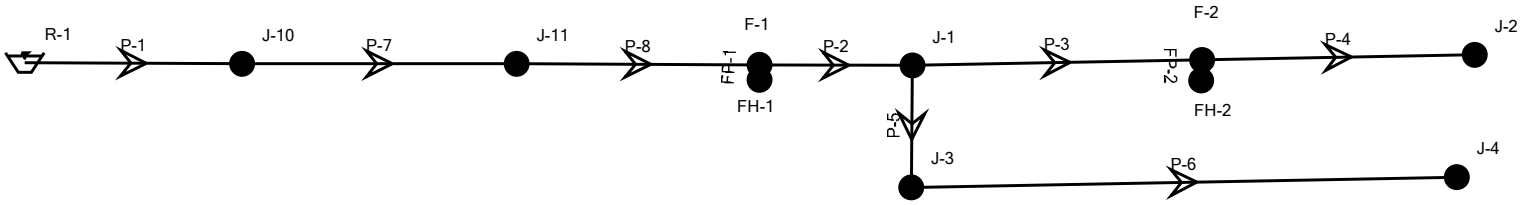
Software

WaterCAD, Bentley Version 10.03.03.74

APPENDIX

Network Schematic
Avg Day Junction Table
Avg Day Pipe Table
Max Day Junction Table
Max Day Pipe Table
Peak Hour Junction Table
Peak Hour Pipe Table
Max Day plus 1000 gpm at FH-2 Junction Table
Max Day plus 1000 gpm at FH-2 Pipe Table
Fire Flow Report
Will serve letter from Arizona Water Company
Grading and Utilities Concept Plan

Scenario: Avg Day



Jordan Lofts
FlexTable: Junction Table
Active Scenario: Avg Day

ID	Label	Elevation (ft)	Hydraulic Grade (ft)	Demand (gpm)	Pressure (psi)
31	F-1	4,376.00	4,500.00	0.00	53.6
34	F-2	4,374.50	4,500.00	0.00	54.3
32	FH-1	4,376.00	4,500.00	0.00	53.6
35	FH-2	4,374.50	4,500.00	0.00	54.3
37	J-1	4,375.50	4,500.00	2.78	53.9
41	J-2	4,371.00	4,500.00	2.78	55.8
38	J-3	4,376.00	4,500.00	1.39	53.6
44	J-4	4,368.50	4,500.00	1.39	56.9
50	J-10	4,371.50	4,500.00	3.47	55.6
53	J-11	4,373.00	4,500.00	2.78	54.9

Jordan Lofts

FlexTable: Pipe Table

Active Scenario: Avg Day

ID	Label	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Length (Scaled) (ft)
30	FP-1	F-1	FH-1	6.0	Ductile Iron	130.0	0.00	0.00	7
33	FP-2	F-2	FH-2	6.0	Ductile Iron	130.0	0.00	0.00	10
51	P-1	R-1	J-10	8.0	Ductile Iron	130.0	14.60	0.09	101
39	P-2	F-1	J-1	8.0	Ductile Iron	130.0	8.34	0.05	71
42	P-3	J-1	F-2	8.0	Ductile Iron	130.0	2.78	0.02	134
40	P-4	F-2	J-2	6.0	Ductile Iron	130.0	2.78	0.03	126
36	P-5	J-1	J-3	6.0	Ductile Iron	130.0	2.78	0.03	57
43	P-6	J-3	J-4	6.0	Ductile Iron	130.0	1.39	0.02	253
54	P-7	J-10	J-11	8.0	Ductile Iron	130.0	11.13	0.07	127
55	P-8	J-11	F-1	8.0	Ductile Iron	130.0	8.35	0.05	112

Jordan Lofts
FlexTable: Junction Table
Active Scenario: Max Day

ID	Label	Elevation (ft)	Hydraulic Grade (ft)	Demand (gpm)	Pressure (psi)
31	F-1	4,376.00	4,499.99	0.00	53.6
34	F-2	4,374.50	4,499.99	0.00	54.3
32	FH-1	4,376.00	4,499.99	0.00	53.6
35	FH-2	4,374.50	4,499.99	0.00	54.3
37	J-1	4,375.50	4,499.99	6.95	53.9
41	J-2	4,371.00	4,499.99	6.95	55.8
38	J-3	4,376.00	4,499.99	3.47	53.6
44	J-4	4,368.50	4,499.99	3.47	56.9
50	J-10	4,371.50	4,500.00	8.68	55.6
53	J-11	4,373.00	4,499.99	6.95	54.9

Jordan Lofts

FlexTable: Pipe Table

Active Scenario: Max Day

ID	Label	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Length (Scaled) (ft)
30	FP-1	F-1	FH-1	6.0	Ductile Iron	130.0	0.00	0.00	7
33	FP-2	F-2	FH-2	6.0	Ductile Iron	130.0	0.00	0.00	10
51	P-1	R-1	J-10	8.0	Ductile Iron	130.0	36.48	0.23	101
39	P-2	F-1	J-1	8.0	Ductile Iron	130.0	20.84	0.13	71
42	P-3	J-1	F-2	8.0	Ductile Iron	130.0	6.95	0.04	134
40	P-4	F-2	J-2	6.0	Ductile Iron	130.0	6.95	0.08	126
36	P-5	J-1	J-3	6.0	Ductile Iron	130.0	6.94	0.08	57
43	P-6	J-3	J-4	6.0	Ductile Iron	130.0	3.47	0.04	253
54	P-7	J-10	J-11	8.0	Ductile Iron	130.0	27.80	0.18	127
55	P-8	J-11	F-1	8.0	Ductile Iron	130.0	20.85	0.13	112

Jordan Lofts

FlexTable: Junction Table

Active Scenario: Max Day plus 1000 gpm at FH-2

ID	Label	Elevation (ft)	Hydraulic Grade (ft)	Demand (gpm)	Pressure (psi)
31	F-1	4,376.00	4,493.46	0.00	50.8
34	F-2	4,374.50	4,489.63	0.00	49.8
32	FH-1	4,376.00	4,493.46	0.00	50.8
35	FH-2	4,374.50	4,489.26	1,000.00	49.7
37	J-1	4,375.50	4,492.12	6.95	50.5
41	J-2	4,371.00	4,489.63	6.95	51.3
38	J-3	4,376.00	4,492.12	3.47	50.2
44	J-4	4,368.50	4,492.11	3.47	53.5
50	J-10	4,371.50	4,498.04	8.68	54.7
53	J-11	4,373.00	4,495.59	6.95	53.0

Jordan Lofts

FlexTable: Pipe Table

Active Scenario: Max Day plus 1000 gpm at FH-2

ID	Label	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Length (Scaled) (ft)
30	FP-1	F-1	FH-1	6.0	Ductile Iron	130.0	0.00	0.00	7
33	FP-2	F-2	FH-2	6.0	Ductile Iron	130.0	1,000.00	11.35	10
51	P-1	R-1	J-10	8.0	Ductile Iron	130.0	1,036.47	6.62	101
39	P-2	F-1	J-1	8.0	Ductile Iron	130.0	1,020.84	6.52	71
42	P-3	J-1	F-2	8.0	Ductile Iron	130.0	1,006.95	6.43	134
40	P-4	F-2	J-2	6.0	Ductile Iron	130.0	6.95	0.08	126
36	P-5	J-1	J-3	6.0	Ductile Iron	130.0	6.94	0.08	57
43	P-6	J-3	J-4	6.0	Ductile Iron	130.0	3.47	0.04	253
54	P-7	J-10	J-11	8.0	Ductile Iron	130.0	1,027.79	6.56	127
55	P-8	J-11	F-1	8.0	Ductile Iron	130.0	1,020.84	6.52	112

Jordan Lofts

FlexTable: Junction Table

Active Scenario: Peak Hour

ID	Label	Elevation (ft)	Hydraulic Grade (ft)	Demand (gpm)	Pressure (psi)
31	F-1	4,376.00	4,499.97	0.00	53.6
34	F-2	4,374.50	4,499.96	0.00	54.3
32	FH-1	4,376.00	4,499.97	0.00	53.6
35	FH-2	4,374.50	4,499.96	0.00	54.3
37	J-1	4,375.50	4,499.97	13.90	53.9
41	J-2	4,371.00	4,499.96	13.90	55.8
38	J-3	4,376.00	4,499.96	6.94	53.6
44	J-4	4,368.50	4,499.96	6.94	56.9
50	J-10	4,371.50	4,499.99	17.36	55.6
53	J-11	4,373.00	4,499.97	13.90	54.9

Jordan Lofts

FlexTable: Pipe Table

Active Scenario: Peak Hour

ID	Label	Start Node	Stop Node	Diameter (in)	Material	Hazen-Williams C	Flow (gpm)	Velocity (ft/s)	Length (Scaled) (ft)
30	FP-1	F-1	FH-1	6.0	Ductile Iron	130.0	0.00	0.00	7
33	FP-2	F-2	FH-2	6.0	Ductile Iron	130.0	0.00	0.00	10
51	P-1	R-1	J-10	8.0	Ductile Iron	130.0	72.95	0.47	101
39	P-2	F-1	J-1	8.0	Ductile Iron	130.0	41.68	0.27	71
42	P-3	J-1	F-2	8.0	Ductile Iron	130.0	13.90	0.09	134
40	P-4	F-2	J-2	6.0	Ductile Iron	130.0	13.90	0.16	126
36	P-5	J-1	J-3	6.0	Ductile Iron	130.0	13.88	0.16	57
43	P-6	J-3	J-4	6.0	Ductile Iron	130.0	6.94	0.08	253
54	P-7	J-10	J-11	8.0	Ductile Iron	130.0	55.59	0.35	127
55	P-8	J-11	F-1	8.0	Ductile Iron	130.0	41.69	0.27	112

Jordan Lofts

Fire Flow Node FlexTable: Fire Flow Report

Active Scenario: Fire Flows

Label	Fire Flow (Needed) (gpm)	Fire Flow (Available) (gpm)	Pressure (Calculated Residual) (psi)	Pressure (Calculated System Lower Limit) (psi)	Junction w/ Minimum Pressure (System)	Is Fire Flow Run Balanced?
FH-1	1,000.00	2,000.00	43.1	43.7	J-3	True
FH-2	1,000.00	2,000.00	37.8	38.4	F-2	True

ARIZONA WATER COMPANY

3805 N. BLACK CANYON HIGHWAY, PHOENIX, AZ 85015-5351 • P.O. BOX 29006, PHOENIX, AZ 85038-9006
PHONE: (602) 240-6860 • FAX: (602) 240-6874 • TOLL FREE: (800) 533-6023 • www.azwater.com

April 2, 2021

Arthur H. Beckwith, PE.
75 Kallof Place
Sedona, AZ 86336

Re: Domestic Water Service to Jordan Lofts - APN Nos. 401-58-001A and 401-05-004A

Dear Mr. Beckwith:

Arizona Water Company (the "Company") certifies that the above-described property is located within its Sedona Certificate of Convenience and Necessity in Sedona, Arizona, and that it will provide water service to the property in accordance with the Company's tariffs and the Arizona Corporation Commission's rules and regulations. It will be the responsibility of the developer to provide the funds to install the necessary water facilities, and the Company assumes no liability to install those facilities if the funds are not advanced by the developer.

The design of the water distribution system must comply with the Company's standard specifications that are on file at the Yavapai County Development Services. Both preliminary and final water system designs must be approved by the Company.

It will also be the responsibility of the developer to meet all the requirements of regulatory agencies having jurisdiction over Arizona subdivisions and of Arizona statutes applicable to subdivided or unsubdivided land, including, but not limited to, requirements relating to a Certificate of Assured Water Supply, as set forth in the Arizona Groundwater Management Act, A.R.S. §45-576.

Please notify the Company if you will be proceeding with development of the property so the Company can prepare the necessary Agreement.

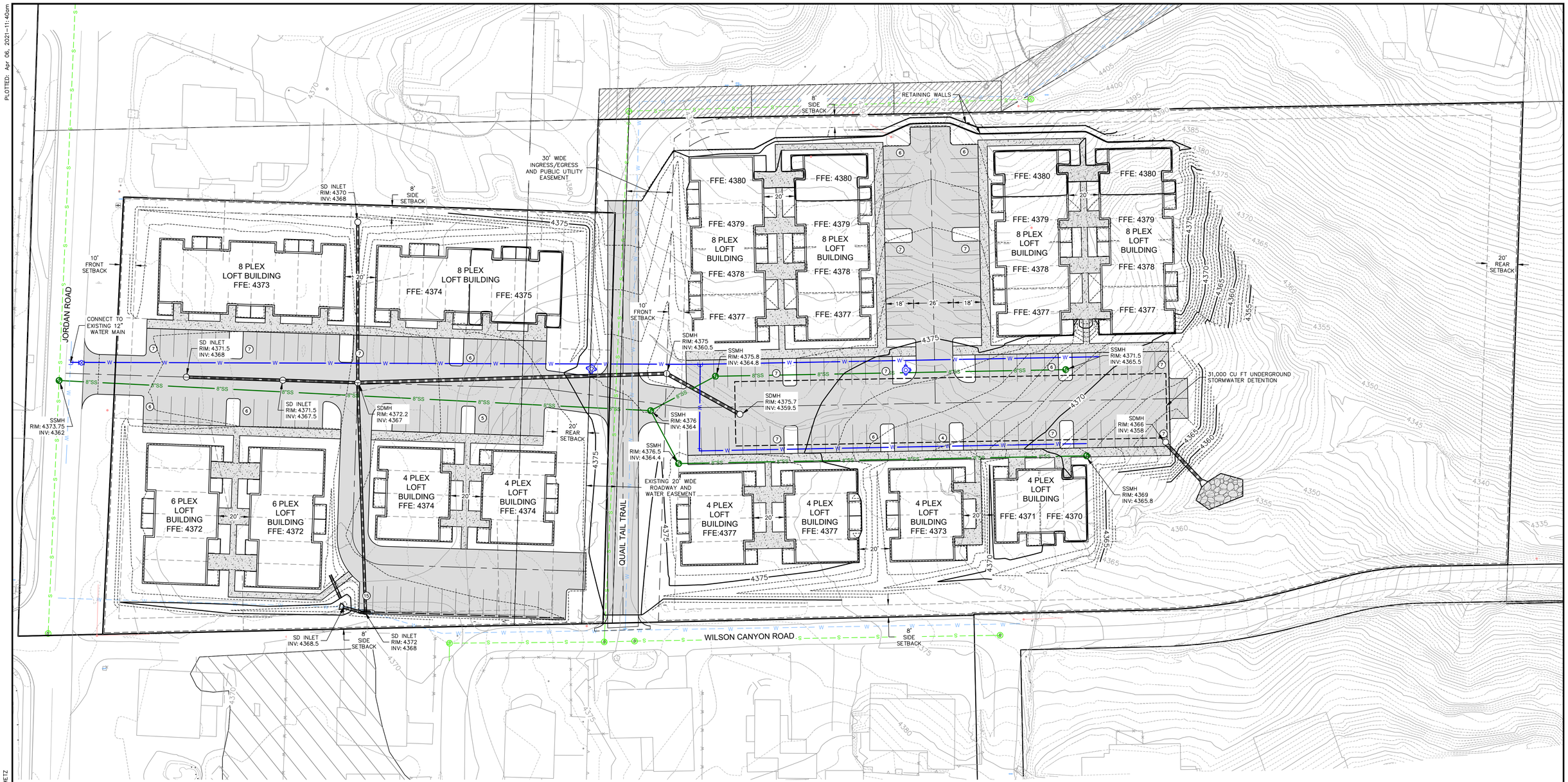
Very truly yours,

Andrew J. Haas

Andrew J. Haas, P.E.
Vice President - Engineering
developmentservices@azwater.com

gs

PLOTTED: Apr 06, 2021-11:40am



ASSESSOR'S PARCEL NUMBERS		AREA	EXISTING ZONING	PROPOSED ZONING
401-58-001A		2.056 AC.	RM-2	RM-3
401-05-004A		4.461 AC.	RS-18	RM-3
DENSITY	UNITS	UNITS/AC.		
401-58-001A	36	17.51		
401-05-004A	48	10.76		
OVERALL DENSITY	84	12.89		
BUILDING COVERAGE		21.8%		
PARKING COVERAGE		18.5%		
OPEN SPACE		60.0%		

PARKING
84 UNITS x 1.75 = 147 SPACES REQUIRED
SPACES WEST 64 SPACES
SPACES EAST 84 SPACES
TOTAL PROVIDED 148 SPACES

SCALE 1" : 30'
0 15 30

Contact Arizona 811 at least two full working days before you begin excavation
ARIZONA811 BLUE STAKE, INC.
Call 811 or click Arizona811.com

REVISIONS			
NO.	DESCRIPTION	DATE	BY

SWI
Shephard Wesnitzer, Inc.
75 Kallof Place
Sedona, AZ 86336
928.282.1061
928.282.2058 fax
www.swiaz.com

JOB NO:	20206
DATE:	APR 21
SCALE:	1"=30'
DRAWN:	MWJ/EGM
DESIGN:	JTL
CHECKED:	JTL

JORDAN LOFTS — SEDONA ARIZONA

GRADING AND UTILITIES CONCEPT PLAN

PRELIMINARY
NOT FOR CONSTRUCTION, BIDDING OR RECORDING

DRAWING NO. GC1
SHT NO. 1 OF 1

FILE: P:\2020\20206\DRAWINGS\CONSTRUCTION PLANS\GRADING CONCEPT - 20206.DWG EMETZ

Shephard Wesnitzer, Inc.

75 Kallof Place
Sedona, AZ 86336

P.O. Box 3924
Sedona, AZ 86340

928.282.1061

www.swiaz.com

Engineering an environment of excellence.

Andy Dickey, Director of Public Works, City Engineer
City of Sedona
102 Roadrunner Drive
Sedona, AZ 86336

June 22, 2021
SWI Job No. 20206

RE: Sedona Lofts
Trip Generation Letter

Dear Mr. Dickey:

The purpose of this letter is to present a trip generation for the proposed improvements to Assessor Parcel Number 401-05-004A in the City of Sedona, AZ. The project site is located east of Jordan Road and north of Wilson Canyon Road within Section 05 of Township 17 North, Range 06 East and consists of a gross 4.61 acres.

TRIP GENERATION

The project site is currently undeveloped and proposed to be rezoned from RS-18 to RM-2. Primary access to the site is provided by a full access driveway off Jordan Road through Parcel Number 401-58-001A and a full access driveway off Wilson Canyon Road. Proposed improvements to the site include 48 townhome units and associated parking. A preliminary site plan is included as an attachment.

The average daily traffic volumes, including AM & PM peak hour trips generated by the proposed conditions have been estimated using trip rates provided by the *Institute of Transportation Engineer's (ITE) Trip Generation Manual, 10th Edition.* ITE land use code 220: Multifamily Housing (Low-Rise) was used to estimate the trips generated by the proposed townhomes. Per ITE, the 48 townhome units generate a total of 322 daily trips including 24 AM and 31 PM peak hour trips. Refer to Table 1 – Site Generated Traffic for the trip generation calculations.

Please let us know if you have any questions, comments, or need any additional information.

Sincerely,
Shephard – Wesnitzer, Inc.

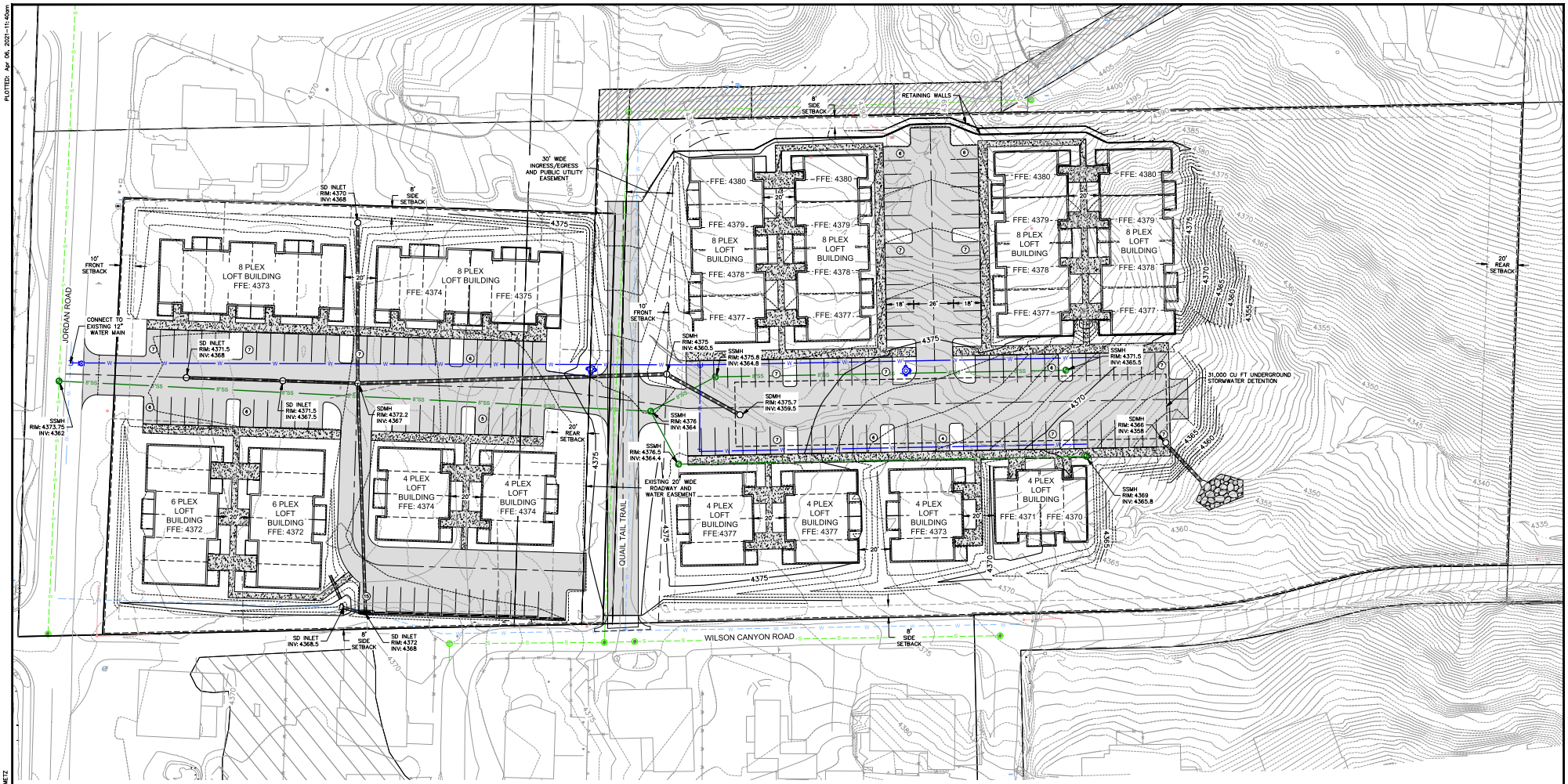
Art Beckwith, P.E.
Project Engineer

Enclosures
-Trip Generation Calculations
- Preliminary Site Plan

Sedona Lofts
SWI Project: # 20206
Date: 6/18/2021

TABLE 1 - SITE GENERATED TRAFFIC

LAND USE	ITE CODE	VARIABLE	TIME PERIOD	EQUATION	% ENTERING	WEEKDAY TOTAL	AM TOTAL	AM		PM TOTAL	PM	
								in	out		in	out
Multifamily Housing (Low-Rise)	220	48.0	*Weekday*	T=7.56(X)-40.86	50%	322						
Townhomes			*AM peak*	T=0.95*ln(X)-0.51	23%		24	5	18			
Variable=Dwelling Unit			*PM peak*	T=0.89*ln(X)-0.02	63%					31	19	11
					Total Trips Generated =	**322**	**24**	**5**	**18**	**31**	**19**	**11**



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401-05-004A		4.461 AC.	RS-18	RM-3
DENSITY	UNITS	UNITS/AC.		
401-58-001A	36	17.51		
401-05-004A	48	10.76		
OVERALL DENSITY	84	12.89		
BUILDING COVERAGE		21.8%		
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TOTAL PROVIDED 148 SPACES

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ARIZONA811
Call 811 or click Arizona811.com

REVISIONS			
NO.	DESCRIPTION	DATE	BY

Shephard Wesnitzer, Inc.
75 Kallof Place
Sedona, AZ 86336
928.282.1061
928.282.2058 fax
www.swiaz.com

JOB NO:	20206
DATE:	APR 21
SCALE:	1"=30'
DRAWN:	MWJ/EGM
DESIGN:	JTL
CHECKED:	JTL

JORDAN LOFTS
SEDONA ARIZONA

GRADING AND UTILITIES CONCEPT PLAN

PRELIMINARY
NOT FOR CONSTRUCTION, BIDDING OR RECORDING

DRAWING NO. GC1
SHT NO. 1 OF 1

PLOTTED: Apr 06, 2021-11:40am
FILE: P:\2020\20206\DRAWINGS\CONSTRUCTION PLANS\GRADING CONCEPT - 20206.DWG DMETZ

Shephard Wesnitzer, Inc.

110 West Dale Avenue
Flagstaff, AZ 86001

928.773.0354
928.774.8934 fax

www.swiaz.com

Engineering an environment of excellence.

Andy Dickey, Director of Public Works, City Engineer
City of Sedona
102 Roadrunner Drive
Sedona, AZ 86336

February 23, 2021
SWI Job No. 20206

RE: Sedona Lofts
Trip Generation Letter

Dear Mr. Dickey:

The purpose of this letter is to present a trip generation for the proposed improvements to Assessor Parcel Number 401-58-001A and 401-05-004A in the City of Sedona, AZ. The project site is located east of Jordan Road and north of Wilson Canyon Road within Section 05 of Township 17 North, Range 06 East and consists of a gross 6.59 acres.

TRIP GENERATION

The project site is currently undeveloped. Primary access to the site is provided by a full access driveway off Jordan Road and a full access driveway off Wilson Canyon Road. Proposed improvements to the site include 84 townhome units and associated parking. A preliminary site plan is included as an attachment.

The average daily traffic volumes, including AM & PM peak hour trips generated by the proposed conditions have been estimated using trip rates provided by the *Institute of Transportation Engineer's (ITE) Trip Generation Manual, 10th Edition.* ITE land use code 220: Multifamily Housing (Low-Rise) was used to estimate the trips generated by the proposed townhomes. Per ITE, the 84 townhome units generate a total of 594 daily trips including 40 AM and 51 PM peak hour trips. Refer to Table 1 – Site Generated Traffic for the trip generation calculations.

Please let us know if you have any questions, comments, or need any additional information.

Sincerely,
Shephard – Wesnitzer, Inc.

Art Beckwith, P.E.
Project Engineer

Enclosures
- Preliminary Site Plan
- Trip Generation Calculations

PLOTTED: Feb 23, 2021 - 2:42pm

JORDAN ROAD

QUAIL TAIL TRAIL

WILSON CANYON ROAD

8' SIDE SETBACK

10' FRONT SETBACK

20' REAR SETBACK

30' WIDE INGRESS/EGRESS AND PUBLIC UTILITY EASEMENT

EXISTING 20' WIDE ROADWAY AND WATER EASEMENT

8 PLEX LOFT BUILDING

6 PLEX LOFT BUILDING

4 PLEX LOFT BUILDING

ASSESSOR'S PARCEL NUMBERS		AREA	EXISTING ZONING	PROPOSED ZONING
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JOB NO:	20206
DATE:	FEB 21
SCALE:	1"=30'
DRAWN:	MWJ
DESIGN:	
CHECKED:	

SEDONA LOFTS
SEDONA ARIZONA

SITE PLAN

Registered Professional Engineer CERTIFICATE NO. 28658 ARTHUR H. BECKWITH Date Signed 02-22-21 ARIZONA, U.S.A.

DRAWING NO. EX1

SHT NO. 1 OF 1

FILE: P:\2020\20206\DRAWINGS\XREF\VB-20206 ALT 3.DWG ABECKWITH

Sedona Lofts
SWI Project: # 20206
Date: 2/23/2021

TABLE 1 - SITE GENERATED TRAFFIC

LAND USE	ITE CODE	VARIABLE	TIME PERIOD	EQUATION	% ENTERING	WEEKDAY TOTAL	AM TOTAL	AM		PM TOTAL	PM	
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Multifamily Housing (Low-Rise)	220	84.0	*Weekday*	T=7.56(X)-40.86	50%	594						
Townhomes			*AM peak*	T=0.95*ln(X)-0.51	23%		40	9	31			
Variable=Dwelling Unit			*PM peak*	T=0.89*ln(X)-0.02	63%					51	32	19
					Total Trips Generated =	**594**	**40**	**9**	**31**	**51**	**32**	**19**