



N E V A D A

AGENDA
Regular Meeting
City Council

Wednesday, March 15, 2023 • 5:00 PM

Mayor

Neal E. McIntyre

City Council

Ward 1 - Ryan Hanan

Ward 2 - Felicity Zoberski

Ward 3 - Stan Lau

Ward 4 - Albert Torres

Ward 5 - Fran McKay

City Manager

Fernley City Council Chambers, 595 Silver Lace Boulevard, Fernley, NV 89408

Zoom information:

Please click the following link to join the webinar: <https://us02web.zoom.us/j/82966343247>, or one tap/mobile: 12532158782, Dial: 669 900 9128, Webinar ID: 829 6634 3247

Public Notice: This agenda has been physically posted in compliance with 241.020 at Fernley City Hall, 595 Silver Lace Blvd. In addition, this agenda has been electronically posted in compliance with NRS 241.020(3) at www.cityoffernley.org and NRS 232.2175 at <https://notice.nv.gov/>. To obtain further documentation regarding posting, please contact the City Clerk's Office at (775) 784-9830 or cityclerk@cityoffernley.org

Public Comment: Those wishing to address the City Council may submit public comment through the online public comment form found at <https://www.cityoffernley.org/forms>, or by sending an email to cityclerk@cityoffernley.org. Comments received prior to 4:00 pm the day of the meeting will be provided to City Council and added to the record but will not be read during the live meeting. Public comments received after 4 pm the day of the meeting will be included in the record but may not reach council members before action is taken. Public comment, whether on action items or public comment, is limited to three (3) minutes per person. Unused time may not be reserved by the speaker, nor allocated to another speaker. The public may comment on any matter that is not specifically included on an agenda as an action item or comment on a specific agenda item. Items not included on the agenda cannot be acted upon other than to place them on a future agenda. Additionally, if you wish you can comment in person at the meeting or use the Raise your Hand feature in Zoom (*9 if you are participating via phone).

Accommodations: City Council and staff will make reasonable efforts to assist and accommodate individuals with disabilities desiring to attend the meeting. Please contact the City Clerk's Office at (775) 784-9830 in advance so that arrangements can be made.

Supporting Material: Staff reports and supporting material for the meeting are available at the City Clerk's Office, and on the City's website at www.cityoffernley.org. Pursuant to NRS 241.020(6), supporting material is made available to the general public at the same time it is provided to the City Council.

Order of Business: The presiding officer shall determine the order of the agenda. The Fernley City Council may combine two or more agenda items for consideration; remove an item from the agenda; or delay discussion relating to an item on the agenda at any time. All items are action items unless otherwise noted. Items scheduled to be heard at a specific time will be heard no earlier than the stated time but may be heard later.

1. INTRODUCTORY ITEMS

1.1. Roll Call

1.2. Public Forum

1.3. (For Possible Action) Approval of Agenda

2. CONSENT AGENDA

(PLEASE NOTE: ALL MATTERS LISTED UNDER THE CONSENT AGENDA ARE CONSIDERED ROUTINE, AND MAY BE ACTED UPON BY THE COUNCIL MEMBERS IN ONE MOTION, AND WITHOUT AN EXTENSIVE HEARING. ANY MEMBER OF THE COUNCIL MAY REQUEST THAT AN ITEM BE TAKEN FROM THE CONSENT AGENDA, DISCUSSED, AND ACTED UPON SEPARATELY DURING THIS MEETING.)

2.1. (Possible Action) Approval of the Voucher Report

2.2. (For Possible Action) Approval of Minutes

2.3. (Possible Action) Approval of Business Licenses

2.4. Possible action to accept new public water, sewer, streets and storm drain infrastructure constructed by new development projects within the City of Fernley.

3. REPORTS - THIS ITEM IS FOR VARIOUS PUBLIC ENTITY REPRESENTATIVES TO PROVIDE GENERAL INFORMATION TO THE COUNCIL AND PUBLIC. NO ACTION WILL BE TAKEN.

3.1. Reports by City Staff, City Council, and the Mayor, including but not limited to monthly statistical reports by city departments.

3.2. State of Nevada Legislative update.

4. PROCLAMATIONS BY THE MAYOR

5. ORDINANCES

5.1. First Reading, Introduction of Bill #325 .

Bill # 325 as an ordinance amending title 16 Chapter 1 of the Fernley Municipal Code, Parking and Storage of junk vehicles.

6. PUBLIC HEARINGS

6.1. (For Possible Action) ZMA22009 River Ranch Apartments

Consideration and possible action on Bill # 324, an ordinance associated with a zoning map amendment request by ERGS, Inc., to change the zoning designation of a ±20.80-acre project site located at approximately 501 River Ranch Road (APNs: 021-281-03, 021-281-10, and portions of 021-281-04 and 021-281-09) from Industrial (I), Employment Center (EC), and General Commercial (C2) to Mixed Use (MU) to facilitate the construction of a 320-unit multi-family project.

7. STAFF REPORTS

7.1. Discussion and Possible Action to approve the City Attorney, Brandi Jensen's past year's employment performance, and the City Council and Mayor's satisfaction with the City Attorney's employment performance including but not limited to:

- a. City Attorney Contract Compliance**
- b. General Performance as the City Attorney**
- c. Compensation**

7.2. Discussion and Possible Action to approve moving forward with local, state and federal grant funding requests and to commit \$4M in City funds for the construction of the Community Response & Resource Center project.

7.3. Discussion and Possible Action to approve a Memorandum of Understanding (MOU) between the City of Fernley and Mark IV concerning the RAISE Grant Administration.

7.4. Discussion and possible action regarding the design and construction of improvements for the surface water conveyance project and surface water treatment projects at the City's water treatment plant and the ratification of the current change orders for the surface water conveyance project.

8. ITEMS REQUESTED BY MAYOR OR CITY COUNCIL MEMBERS

8.1. Possible action to request a future agenda item to direct staff to find grants to help Fernley residents Zeroscape property. (Councilman Lau)

8.2. Possible action to request a future agenda item to continue the discussion on decreasing the water rates. (Councilman Hanan)

9. ADDRESS REQUEST(S) FOR FUTURE AGENDA ITEMS

10. PUBLIC FORUM

11. ADJOURNMENT

Next Meeting: March 17th @ 9am Special Meeting

April 5th @ 5pm Regular Meeting

Report Criteria:

Detail report.

Invoice detail records above \$0 included.

Paid and unpaid invoices included.

Vendor.Vendor Number = {<=> 2201

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
A & K EARTH MOVERS, INC.								
304	A & K EARTH MOVERS, INC.	Pay req 07	Green Valley park project Final payment for retention	02/24/2023	40,438.25		230-575-730 Improve other than Buildings	223
Total 304:					40,438.25			
ADAPCO, INC								
1751	ADAPCO, INC	133500	vectomax	02/24/2023	9,538.00	03/02/2023	100-528-617 Supplies-Chemical	223
Total 1751:					9,538.00			
AIR MED CARE NETWORK								
8863	AIR MED CARE NETWORK	17253-02202023	D. Guptill 4808225	02/20/2023	19.00		100-575-240 Group Insurance	223
8863	AIR MED CARE NETWORK	17253-02202023	A Pena 4578640	02/20/2023	.00		510-840-240 Group Insurance	223
Total 8863:					19.00			
AQUA BACKFLOW, INC								
8934	AQUA BACKFLOW, INC	2023-0041	Backflow Monitoring Service	02/07/2023	38.00	03/02/2023	510-810-320 Prof Serv-Engineering	223
Total 8934:					38.00			
ARAMARK								
1895	ARAMARK	5980074795	MATT SERVICE	02/23/2023	77.17	03/02/2023	520-810-614 Supplies-Plant/Shop/Maint	223
1895	ARAMARK	5980074824	PS rags and rugs	02/23/2023	105.16	03/02/2023	510-840-420 Contract Services	223
1895	ARAMARK	5980074848	mats	02/23/2023	175.52	03/02/2023	100-475-614 Supplies-Plant/Shop/Maint	223
1895	ARAMARK	5980075348	Pants service	02/27/2023	48.53		510-810-614 Supplies-Plant/Shop/Maint	223
1895	ARAMARK	5980075374	shirt contract	02/27/2023	43.80		100-480-600 GENERAL SUPPLIES/TOOLS	223
1895	ARAMARK	5980075376	uniforms	02/27/2023	48.30	03/02/2023	100-475-616 Supplies-Safety	223
1895	ARAMARK	5980077571	pants service	03/06/2023	48.53		510-810-614 Supplies-Plant/Shop/Maint	323
1895	ARAMARK	5980077578	shirt contract	03/06/2023	43.80		100-480-600 GENERAL SUPPLIES/TOOLS	323
1895	ARAMARK	5980077579	uniforms	03/06/2023	48.30		100-475-616 Supplies-Safety	323
Total 1895:					639.11			
AUTO & TRUCK ELECTRIC, INC								
8868	AUTO & TRUCK ELECTRIC, INC	43122	BATTERY CABLE AND FITTINGS	01/06/2023	340.00		100-475-430 Service-Repair and Maintenance	123

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
Total 8868:					340.00			
BATTLE BORN VENTURES, LLC								
7438	BATTLE BORN VENTURES, LLC	2023_08	Well 14 Parcel Map	03/01/2023	5,000.00	03/02/2023	510-810-698 Water Rights Protection	323
Total 7438:					5,000.00			
BIG R OF FERNLEY								
20	BIG R OF FERNLEY	016322/5	return and adapter	02/24/2023	.52-	03/02/2023	100-475-600 General Supplies	223
20	BIG R OF FERNLEY	16309/5	TOILET FLUSH HANDLE FOR SHOP	02/22/2023	6.97	03/02/2023	100-480-610 AUTOMOTIVE SUPPLIES	223
20	BIG R OF FERNLEY	16318/5	misc burner supplies	02/24/2023	27.74	03/02/2023	100-475-600 General Supplies	223
20	BIG R OF FERNLEY	16320/5	TRAILER PLUG	02/24/2023	12.98	03/02/2023	100-575-430 Service-Repair and Maintenance	223
20	BIG R OF FERNLEY	16324/5	propane	02/24/2023	163.70	03/02/2023	100-575-623 Propane	223
20	BIG R OF FERNLEY	16339/5	trash can loppers and hedge shears.	02/28/2023	94.97	03/02/2023	100-575-614 Supplies-Plant/Shop/Maint	223
20	BIG R OF FERNLEY	16340/5	respirators and locating nails	02/28/2023	201.92		510-810-616 Supplies-Safety	223
20	BIG R OF FERNLEY	16344/5	windshield washer fluid	03/01/2023	7.78		100-417-610 Automotive Supplies	323
20	BIG R OF FERNLEY	16353/5	fasteners	03/02/2023	10.45		100-417-614 Supplies-Plant/Shop/Maint	323
20	BIG R OF FERNLEY	16356/55	safety outerwear	03/02/2023	219.98		510-810-616 Supplies-Safety	323
20	BIG R OF FERNLEY	16357/5	fasteners	03/02/2023	18.59		100-417-614 Supplies-Plant/Shop/Maint	323
20	BIG R OF FERNLEY	16358/5	misc crnr i ron	03/02/2023	4.52		100-417-614 Supplies-Plant/Shop/Maint	323
20	BIG R OF FERNLEY	16378/5	mats for backstop ITP	03/07/2023	249.75		100-575-600 General Supplies	323
20	BIG R OF FERNLEY	16381/5	gloves	03/08/2023	76.61		100-475-616 Supplies-Safety	323
Total 20:					1,095.44			
BOB'S PRINTING AND SIGNAGE								
6970	BOB'S PRINTING AND SIGNAGE	12523-2	Printing Forms AC	02/16/2023	483.43	03/02/2023	100-525-550 Printing and Postage	223
6970	BOB'S PRINTING AND SIGNAGE	20123-3	Envelopes and Contracts	02/14/2023	449.25		100-425-550 Printing and Postage	223
Total 6970:					932.68			
BRADY INDUSTRIES OF NEVADA LLC								
8837	BRADY INDUSTRIES OF NEVADA LLC	7888997	liners	03/03/2023	211.01		100-575-600 General Supplies	323
8837	BRADY INDUSTRIES OF NEVADA LLC	7888998	misc cleaning supplys	03/03/2023	201.32		100-417-612 Building Maintenance Supplies	323
Total 8837:					412.33			
CALIFORNIA GENERATOR SERVICE								
5935	CALIFORNIA GENERATOR SERVICE	60972	semi annual service	11/17/2022	125.00		520-810-430 Service-Repair and Maintenance	1122
5935	CALIFORNIA GENERATOR SERVICE	61216	Well 13 Generator	10/28/2022	2,176.20		510-810-430 Repairs & Maintenance	1022
5935	CALIFORNIA GENERATOR SERVICE	61217	Eagle Meadows generator troubleshooting and repair	11/09/2022	1,380.00		520-810-430 Service-Repair and Maintenance	1122

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title		GL Period
Total 5935:					3,681.20				
CARSON PUMP									
310	CARSON PUMP	4821	Hwy 50 Emergency work	02/08/2023	1,500.00	03/02/2023	520-810-430	Service-Repair and Maintenance	223
Total 310:					1,500.00				
CC CLEANING SERVICE, LLC									
8913	CC CLEANING SERVICE, LLC	#006-FCH	cleaning service	01/02/2023	1,175.00	03/02/2023	100-417-420	Contract Services	123
8913	CC CLEANING SERVICE, LLC	#007-FCH	routine cleaning	02/04/2023	940.00	03/02/2023	100-417-420	Contract Services	223
8913	CC CLEANING SERVICE, LLC	#008-FCH	cleaning service	03/02/2023	940.00		100-417-420	Contract Services	323
Total 8913:					3,055.00				
CDW GOVERNMENT INC.									
27	CDW GOVERNMENT INC.	GV64060	HDMI cable	02/16/2023	30.52	03/02/2023	100-418-600	General Supplies	223
27	CDW GOVERNMENT INC.	GV79438	USB-C Hub for DCM	02/17/2023	42.39	03/02/2023	100-418-600	General Supplies	223
27	CDW GOVERNMENT INC.	HD34774	Laptop Chargers x2	03/02/2023	152.98		100-425-600	General Supplies	323
Total 27:					225.89				
CEMEX CONSTRUCTION MATERIALS PACIFIC									
154	CEMEX CONSTRUCTION MATERIALS PACIFIC	9447732339	sand	02/28/2023	787.66		100-475-600	General Supplies	223
Total 154:					787.66				
CITY OF FERNLEY									
32	CITY OF FERNLEY	30.78381.3	WATER CONVEYANCE; PN# 2019-002-1	03/03/2023	90.19		510-166100	Construction In Progress	323
32	CITY OF FERNLEY	BP23-143	WEST LIFT STATION REHAB, PERMIT #BP23-143	02/27/2023	11,642.60	03/02/2023	520-166100	Construction In Progress	223
Total 32:					11,732.79				
CMC TIRE, INC									
8903	CMC TIRE, INC	50064100	TIRES FOR W/T PLANT ESCAPE	02/24/2023	774.24	03/02/2023	510-840-610	Automotive Supplies	223
Total 8903:					774.24				
COLONIAL INSURANCE									
3520	COLONIAL INSURANCE	31039340301079	E3103934 SUPPLEMENTAL INSURANC	03/01/2023	55.16	03/02/2023	100-218000	COLONIAL INSURANCE PAYABL	323
Total 3520:					55.16				

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
CORE CONSTRUCTION SERVICES OF NEVADA,INC								
8916	CORE CONSTRUCTION SERVICES OF NEVADA,IN	221001006	Schematic Design Phase Reprogramming 10.31.22	10/31/2022	.00		220-480-810 ARPA	1022
Total 8916:					.00			
CUMMING MANAGEMENT GROUP, INC								
8889	CUMMING MANAGEMENT GROUP, INC	119934-1	Reimbursables	12/31/2022	153.76		220-480-810 ARPA	1222
Total 8889:					153.76			
DOWL, LLC								
8931	DOWL, LLC	R4102.2134-3	Depot Roof Design and Construction	03/03/2023	146.25		300-425-730 Improve other than Buildings	323
Total 8931:					146.25			
EMPLOYEES, CITY OF FERNLEY								
8639	EMPLOYEES, CITY OF FERNLEY	022823	REIMB PARKING/UBER FOR PERMIT TECH TRNG LV 2/26-	03/01/2023	115.32	03/02/2023	100-605-580 Training	323
8639	EMPLOYEES, CITY OF FERNLEY	030623	REIMB LUNCH FOR CM INTERVIEW PANEL 3/6/2023	03/06/2023	93.25		100-412-580 Training	323
8639	EMPLOYEES, CITY OF FERNLEY	2/26-2/28/23	PER DIEM FOR R ENDEL TO ATTEND PERMIT TECH TRN	02/23/2023	172.50	02/23/2023	100-605-580 Training	223
8639	EMPLOYEES, CITY OF FERNLEY	MAR 2023	REIMB T4 LICENSE RENEWAL/TRAINING	03/01/2023	550.00	03/02/2023	510-840-580 Training	323
Total 8639:					931.07			
Fast Glass								
798	Fast Glass	IFA061646	desk top glass	02/24/2023	332.00		100-417-420 Contract Services	223
Total 798:					332.00			
FLYERS ENERGY, LLC								
18	FLYERS ENERGY, LLC	CFS-3329572	GASOLINE - PARKS	02/15/2023	251.86	03/02/2023	100-575-626 Gasoline	223
18	FLYERS ENERGY, LLC	CFS-3329572	GASOLINE - STREETS	02/15/2023	1,140.03	03/02/2023	100-475-626 Gasoline	223
18	FLYERS ENERGY, LLC	CFS-3329572	GASOLINE - ENGINEERING	02/15/2023	21.79	03/02/2023	100-529-626 Gasoline	223
18	FLYERS ENERGY, LLC	CFS-3329572	GASOLINE - WATER DIST	02/15/2023	1,580.34	03/02/2023	510-810-626 Gasoline	223
18	FLYERS ENERGY, LLC	CFS-3329572	GASOLINE - CDD BUILDING	02/15/2023	129.52	03/02/2023	100-605-626 Gasoline	223
18	FLYERS ENERGY, LLC	CFS-3329572	GASOLINE - VECTOR	02/15/2023	36.91	03/02/2023	100-528-626 Gasoline	223
18	FLYERS ENERGY, LLC	CFS-3329572	GASOLINE - ANIMAL CONTROL	02/15/2023	95.93	03/02/2023	100-525-626 Gasoline	223
18	FLYERS ENERGY, LLC	CFS-3329572	GASOLINE - FLEET	02/15/2023	180.50	03/02/2023	100-480-626 GASOLINE	223
18	FLYERS ENERGY, LLC	CFS-3329572	GASOLINE - SEWER	02/15/2023	1,767.86	03/02/2023	520-810-626 Gasoline	223
18	FLYERS ENERGY, LLC	CFS-3329572	GASOLINE - FACILITIES	02/15/2023	138.08	03/02/2023	100-417-626 Gasoline	223
Total 18:					5,342.82			
HANNEMAN SERVICE								
70	HANNEMAN SERVICE	111363	Misc Service Labor	02/22/2023	145.00	03/02/2023	100-605-322 Prof Serv-Other	223

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
70	HANNEMAN SERVICE	111364	Misc. Service Labor	02/22/2023	145.00	03/02/2023	100-605-322 Prof Serv-Other	223
70	HANNEMAN SERVICE	111368	propane	02/27/2023	173.57	03/02/2023	100-475-623 Propane	223
70	HANNEMAN SERVICE	12887	'01 Gold Dodge Caravan No plates, end of Sunny Lane	02/22/2023	55.00	03/02/2023	100-605-322 Prof Serv-Other	223
70	HANNEMAN SERVICE	12888	Black Chevy Truck 519 River Ranch	02/22/2023	55.00	03/02/2023	100-605-322 Prof Serv-Other	223
Total 70:					573.57			
HANSFORD ECONOMIC CONSULTING								
6228	HANSFORD ECONOMIC CONSULTING	510	Water rights protection- contingency	03/01/2023	4,338.96		510-810-698 Water Rights Protection	323
Total 6228:					4,338.96			
Hennes Communications LLC								
8926	Hennes Communications LLC	4177	PR services	02/01/2023	2,400.00	03/02/2023	100-414-322 Prof Serv-Other	223
Total 8926:					2,400.00			
HINTON BURDICK, PLLC								
8486	HINTON BURDICK, PLLC	279286	FY22 Single audit services	01/31/2023	1,150.00	03/02/2023	100-415-328 Prof Serv-Auditing	123
Total 8486:					1,150.00			
HOMETOWN HEALTH								
4842	HOMETOWN HEALTH	24901-021	3721P GROUP HEALTH INSURANCE	03/01/2023	72,862.75		100-217000 HEALTH INSURANCE PAYABLE	323
Total 4842:					72,862.75			
IBEW Local 1245								
83	IBEW Local 1245	FEB 2023-2	UNION DUES, ONE HALF OF MONTH	02/24/2023	768.44	02/24/2023	100-219900 OTHER PAYROLL PAYABLES	223
Total 83:					768.44			
INTERNAL REVENUE SERVICE								
7879	INTERNAL REVENUE SERVICE	FEB 2023-2	W/HOLD TAX PAYABLE, PAYROLL	02/24/2023	16,637.74	02/24/2023	100-212000 FEDERAL WITHHOLDING PAYAB	223
7879	INTERNAL REVENUE SERVICE	FEB 2023-2	FICA TAX PAYABLE, PAYROLL	02/24/2023	266.44	02/24/2023	100-211000 FICA PAYABLE	223
7879	INTERNAL REVENUE SERVICE	FEB 2023-2	MED TAX PAYABLE, PAYROLL	02/24/2023	5,115.86	02/24/2023	100-211000 FICA PAYABLE	223
Total 7879:					22,020.04			
JOHNSON CONTROLS FIRE PROTECTION LP								
8667	JOHNSON CONTROLS FIRE PROTECTION LP	89544944	Repair Fm200 System	02/10/2023	2,079.93	03/02/2023	510-840-430 Service-Repair and Maintenance	223
Total 8667:					2,079.93			

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
JORDAN'S TRUCK & TRAILER EQUIP, INC								
318	JORDAN'S TRUCK & TRAILER EQUIP, INC	225577	KEYS FOR 4001 PARKS	02/27/2023	18.88		100-575-610 Automotive Supplies	223
Total 318:					18.88			
KOCH ELEVATOR CO.								
8751	KOCH ELEVATOR CO.	31099	elevator service	03/01/2023	190.00		100-417-420 Contract Services	323
Total 8751:					190.00			
LEMONS, GRUNDY & EISENBERG								
8835	LEMONS, GRUNDY & EISENBERG	9	HR defense attorney	02/08/2023	3,170.00	03/02/2023	100-414-310 Prof Serv-Legal	223
Total 8835:					3,170.00			
LEXIPOL, LLC								
8932	LEXIPOL, LLC	INVPR113871	Bailiff Training	02/01/2023	540.75		100-425-580 Training	223
Total 8932:					540.75			
LOWES CREDIT SERVICES								
7650	LOWES CREDIT SERVICES	0 2046	2x12 for backstop, ITP	03/03/2023	166.25		100-575-600 General Supplies	323
7650	LOWES CREDIT SERVICES	023624	Disposable gloves; AAA batteries	03/01/2023	30.82	03/02/2023	520-810-600 General Supplies	323
7650	LOWES CREDIT SERVICES	1955	drill bits	02/24/2023	20.86	03/02/2023	100-417-612 Building Maintenance Supplies	223
7650	LOWES CREDIT SERVICES	23618	misc supplies	03/01/2023	45.05		100-417-612 Building Maintenance Supplies	323
7650	LOWES CREDIT SERVICES	2468	paint for Fysl	02/28/2023	450.30	03/02/2023	100-575-600 General Supplies	223
7650	LOWES CREDIT SERVICES	2508	cold mix	02/28/2023	1,435.14		100-475-600 General Supplies	223
7650	LOWES CREDIT SERVICES	2610	TOILET PARTS	02/22/2023	42.04	03/02/2023	510-810-614 Supplies-Plant/Shop/Maint	223
7650	LOWES CREDIT SERVICES	2612	material for city hall	03/07/2023	73.84		100-417-614 Supplies-Plant/Shop/Maint	323
7650	LOWES CREDIT SERVICES	2634	Levels 2ft and 9in	02/22/2023	54.09	03/02/2023	520-810-600 General Supplies	223
7650	LOWES CREDIT SERVICES	2743	Paint for ITP league colors and backstop material.	02/23/2023	1,451.58	03/02/2023	100-575-600 General Supplies	223
7650	LOWES CREDIT SERVICES	2884	Plant supplies	03/02/2023	251.69		510-840-614 Plant/Shop/Maint. Supplies	323
7650	LOWES CREDIT SERVICES	974152	PS Chem Building UPS Battery	01/17/2023	208.80	03/02/2023	510-840-430 Service-Repair and Maintenance	123
Total 7650:					4,230.46			
LUMOS & ASSOCIATES INC								
370	LUMOS & ASSOCIATES INC	115814	NDEP Data Review	12/19/2022	588.50	03/02/2023	520-810-322 Prof Serv-Other	1222
370	LUMOS & ASSOCIATES INC	116457	US50/95A sewer rehab design services	02/09/2023	4,710.00		520-166100 Construction In Progress	223
370	LUMOS & ASSOCIATES INC	116461	FY22/23 Engineering services for annual pavement preservati	02/09/2023	3,227.00		100-475-430 Service-Repair and Maintenance	223
370	LUMOS & ASSOCIATES INC	116533	NDEP Data Review	02/15/2023	279.00	03/02/2023	520-810-322 Prof Serv-Other	223
Total 370:					8,804.50			

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
LYON COUNTY CLERK/TREASURER								
106	LYON COUNTY CLERK/TREASURER	TLT Feb 2023	Transient Lodging Tax	02/28/2023	2,456.20		225-227010 TLT Payable to County	223
Total 106:					2,456.20			
LYON COUNTY RECORDER								
108	LYON COUNTY RECORDER	#020-214-03	LIEN RELEASE 572 NADER WAY; THOMSON, APN#020-21	02/27/2023	40.00	03/02/2023	510-810-322 Prof Serv-Other	223
Total 108:					40.00			
MARSHALL'S SEPTIC CARE								
8509	MARSHALL'S SEPTIC CARE	I10590	Farm District Emergency Pumping	02/22/2023	1,350.00	03/02/2023	520-810-426 Contract-Sewer Cleaning & Insp	223
8509	MARSHALL'S SEPTIC CARE	I10591	Farm District Emergency Pumping dated 9/2022	02/27/2023	1,100.00	03/02/2023	100-575-420 Contract Services	223
8509	MARSHALL'S SEPTIC CARE	I10671	portable BMX track	03/01/2023	113.33		100-575-420 Contract Services	323
8509	MARSHALL'S SEPTIC CARE	I10672	portable restroom Autmn winds park	03/01/2023	113.33		100-575-420 Contract Services	323
8509	MARSHALL'S SEPTIC CARE	I10673	portables OTP	03/01/2023	514.65		100-575-420 Contract Services	323
8509	MARSHALL'S SEPTIC CARE	I10675	portable green valley park	03/01/2023	200.66		100-575-420 Contract Services	323
8509	MARSHALL'S SEPTIC CARE	I10676	portables ITP	03/01/2023	200.66		100-575-420 Contract Services	323
8509	MARSHALL'S SEPTIC CARE	I10677	portable ponderosa park	03/01/2023	113.33		100-575-420 Contract Services	323
8509	MARSHALL'S SEPTIC CARE	I10681	portable Depot	03/01/2023	113.33		100-575-420 Contract Services	323
8509	MARSHALL'S SEPTIC CARE	I10757	PS residual solids hauling	03/01/2023	19,306.17		510-840-426 Contract Svc-Residuals Dispose	323
Total 8509:					23,125.46			
MATCO TOOLS								
8529	MATCO TOOLS	126504	TOOL HOLDER FOR SHOP	02/23/2023	25.42	03/02/2023	100-480-600 GENERAL SUPPLIES/TOOLS	223
Total 8529:					25.42			
MCDONALD CARANO								
322	MCDONALD CARANO	12458858	Outside legal MIV land use and CRRG	01/31/2023	6,490.00	03/02/2023	100-414-310 Prof Serv-Legal	123
Total 322:					6,490.00			
MISCELLANEOUS ONE TIME VENDOR								
1111	MISCELLANEOUS ONE TIME VENDOR	80.000978	REFUND BP22-173 METER	02/27/2023	1,155.00		510-370-300 Material and Labor Charges	223
1111	MISCELLANEOUS ONE TIME VENDOR	80.000978	REFUND BP22-175 METER	02/27/2023	1,155.00		510-370-300 Material and Labor Charges	223
1111	MISCELLANEOUS ONE TIME VENDOR	80.000978	REFUND BP22-181 METER	02/27/2023	1,155.00		510-370-300 Material and Labor Charges	223
1111	MISCELLANEOUS ONE TIME VENDOR	BP21-564	REFUND BP21-564 PARK TAX	03/07/2023	1,000.00		230-310-300 Residential Construction Tax	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP21-564	REFUND BP21-564 METER FEE	03/07/2023	415.00		510-370-300 Material and Labor Charges	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP21-564	REFUND BP21-564 ROAD TAX	03/07/2023	1,000.00		100-227010 Road RCT Payable to County	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP21-564	REFUND BP21-564 WASTERWATER CONNECTION	03/07/2023	3,474.00		520-395-910 Cust. Contrib.-Hookups/Connect	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP21-564	REFUND BP21-564 SCHOOL TAX	03/07/2023	1,600.00		100-227015 School RCT Payble to County	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP21-564	REFUND BP21-564 WATER CONNECTION	03/07/2023	5,165.00		510-395-910 Cust. Contrib.-Hookups/Connect	323

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
1111	MISCELLANEOUS ONE TIME VENDOR	BP21-564	REFUND BP21-564 PERMIT FEE	03/07/2023	1,873.85		100-320-200 Building and Civil Permit Fees	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP21-565	REFUND BP21-565 SCHOOL TAX	03/07/2023	1,600.00		100-227015 School RCT Payble to County	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP21-565	REFUND BP21-565 PARK TAX	03/07/2023	1,000.00		230-310-300 Residential Construction Tax	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP21-565	REFUND BP21-565 METER FEE	03/07/2023	415.00		510-370-300 Material and Labor Charges	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP21-565	REFUND BP21-565 ROAD TAX	03/07/2023	1,000.00		100-227010 Road RCT Payable to County	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP21-565	REFUND BP21-565 WASTEWATER CONNECTION	03/07/2023	3,474.00		520-395-910 Cust. Contrib.-Hookups/Connect	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP21-565	REFUND BP21-565 PERMIT FEE	03/07/2023	1,644.25		100-320-200 Building and Civil Permit Fees	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP21-565	REFUND BP21-565 WATER CONNECTION	03/07/2023	5,165.00		510-395-910 Cust. Contrib.-Hookups/Connect	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP22-020	REFUND BP22-020 PARK TAX	03/02/2023	1,000.00		230-310-300 Residential Construction Tax	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP22-020	REFUND BP22-020 PLANNING PLAN REVIEW FEE	03/02/2023	100.00		100-320-210 Planning and Zoning Fees	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP22-020	REFUND BP22-020 ROAD TAX	03/02/2023	1,000.00		100-227010 Road RCT Payable to County	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP22-020	REFUND BP22-020 PERMIT PROCESSING FEE	03/02/2023	25.00		100-320-200 Building and Civil Permit Fees	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP22-020	REFUND BP22-020 METER SET FEE	03/02/2023	415.00		510-370-300 Material and Labor Charges	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP22-020	REFUND BP22-020 SCHOOL TAX	03/02/2023	1,600.00		100-227015 School RCT Payble to County	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP22-020	REFUND BP22-020 PERMIT FEE	03/02/2023	2,298.61		100-320-200 Building and Civil Permit Fees	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP22-720	REFUND BP22-720 WATER CONNECTION	03/06/2023	7,000.00		510-395-910 Cust. Contrib.-Hookups/Connect	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP22-720	REFUND BP22-720 METER SET	03/06/2023	415.00		510-370-300 Material and Labor Charges	323
1111	MISCELLANEOUS ONE TIME VENDOR	BP22-720	REFUND BP22-720 WASTEWATER CONNECTION	03/06/2023	5,000.00		520-395-910 Cust. Contrib.-Hookups/Connect	323
Total 1111:					51,144.71			
NAPA AUTO & TRUCK PARTS								
58	NAPA AUTO & TRUCK PARTS	386628	ADAPTOR FOR FLEET	02/16/2023	29.12	03/02/2023	100-480-610 AUTOMOTIVE SUPPLIES	223
58	NAPA AUTO & TRUCK PARTS	387027	FUEL FOR WASTE WATER	02/24/2023	13.98	03/02/2023	520-810-610 Supplies-Automotive	223
58	NAPA AUTO & TRUCK PARTS	387257	PARTS FOR 4001	03/01/2023	93.16		100-575-610 Automotive Supplies	323
58	NAPA AUTO & TRUCK PARTS	387331	PARTS FOR 4001	03/02/2023	67.69		100-575-610 Automotive Supplies	323
58	NAPA AUTO & TRUCK PARTS	387408	parts for street sander	03/03/2023	67.86		100-475-430 Service-Repair and Maintenance	323
58	NAPA AUTO & TRUCK PARTS	387522	parts for streets sander	03/06/2023	5.79		100-475-430 Service-Repair and Maintenance	323
Total 58:					277.60			
NCE								
7617	NCE	675222504	On call development inspection services	03/01/2023	6,799.25		100-529-320 Prof Serv-Engineering	323
Total 7617:					6,799.25			
NEVADA DEPARTMENT OF TAXATION								
6378	NEVADA DEPARTMENT OF TAXATION	TLT Feb 2023	Transient Lodging Tax	02/28/2023	1,473.72		225-227015 TLT Payable to State	223
Total 6378:					1,473.72			
NEVADA DIVISION OF WATER RESOURCES								
218	NEVADA DIVISION OF WATER RESOURCES	03/2023	EXTENSION OF TIME FOR 17 APPLICATIONS	03/01/2023	10,200.00		510-810-698 Water Rights Protection	323
218	NEVADA DIVISION OF WATER RESOURCES	2023-NV	10% PORTION OF TROA FEES PAID TO NDWR	02/22/2023	63,565.02	02/22/2023	510-810-698 Water Rights Protection	223

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
Total 218:					73,765.02			
NORTHWEST AUTOMOTIVE PRODUCT SALES								
8701	NORTHWEST AUTOMOTIVE PRODUCT SALES	15166	fleet supplies	03/07/2023	143.40		100-480-610 AUTOMOTIVE SUPPLIES	323
Total 8701:					143.40			
NSB - BANKCARD CENTER								
8649	NSB - BANKCARD CENTER	JAN 2023	ZOOM; ANN'L RENEWAL CAO	01/31/2023	149.90	02/10/2023	100-414-530 Communications (Internet,Cell)	123
8649	NSB - BANKCARD CENTER	JAN 2023	SMEAD; STICKERS FOR FILES	01/31/2023	11.81	02/10/2023	100-425-600 General Supplies	123
8649	NSB - BANKCARD CENTER	JAN 2023	ENGLAND ENTERPRISE; INSP B1 TESTING; M MOORE	01/31/2023	69.00	02/10/2023	100-605-580 Training	123
8649	NSB - BANKCARD CENTER	JAN 2023	LOCAL GOV EDUC; 2023 MASTER ACAD CIVIC AFFAIRS;	01/31/2023	289.00	02/10/2023	100-416-580 Training	123
8649	NSB - BANKCARD CENTER	JAN 2023	HAVEN TECH; FRONTLINE SPEAKERS	01/31/2023	2,131.12	02/10/2023	100-417-430 Service-Building Repair/Maint	123
8649	NSB - BANKCARD CENTER	JAN 2023	NNDA; REFUND FOR COUNCIL	01/31/2023	50.00	02/10/2023	100-412-580 Training	123
8649	NSB - BANKCARD CENTER	JAN 2023	AMAZON; ROCKER SWITCH FOR STREETS PLOW	01/31/2023	35.94	02/10/2023	100-475-610 Automotive Supplies	123
8649	NSB - BANKCARD CENTER	JAN 2023	CHARTER COMM; 304798122822; JAN 2023	01/31/2023	129.98	02/10/2023	100-417-530 Communications (Internet,Cell)	123
8649	NSB - BANKCARD CENTER	JAN 2023	DANDELION EXPRESS; SYMPATHY FLOWERS FOR T WO	01/31/2023	68.49	02/10/2023	100-412-586 Employee Recognition	123
8649	NSB - BANKCARD CENTER	JAN 2023	K&K SYSTEMS; SCHOOL ZONE BEACON TIMERS X4	01/31/2023	1,942.64	02/10/2023	100-475-422 Contract-Traffic Light Mainten	123
8649	NSB - BANKCARD CENTER	JAN 2023	ICC; B1 TEST CERT; M MOORE	01/31/2023	290.00	02/10/2023	100-605-580 Training	123
8649	NSB - BANKCARD CENTER	JAN 2023	ICMA; JOB POSTING FOR CITY MGR	01/31/2023	450.00	02/10/2023	100-413-550 Printing and Postage	123
8649	NSB - BANKCARD CENTER	JAN 2023	STAMPLI; DEC 2022	01/31/2023	1,034.00	02/10/2023	100-418-342 Tech Services-Other	123
8649	NSB - BANKCARD CENTER	JAN 2023	AMAZON; SCALE RULER SET	01/31/2023	19.98	02/10/2023	100-605-601 Office Supplies	123
8649	NSB - BANKCARD CENTER	JAN 2023	ZOOM; MONTHLY CMO	01/31/2023	140.00	02/10/2023	100-418-342 Tech Services-Other	123
8649	NSB - BANKCARD CENTER	JAN 2023	PORT OF SUBS/RALEYS; LCSO IN FORCE TRNG	01/31/2023	172.08	02/10/2023	100-412-650 Community Support	123
8649	NSB - BANKCARD CENTER	JAN 2023	SMART PRACTICE; PUBLIC LEASHES	01/31/2023	144.68	02/10/2023	100-525-600 General Supplies	123
8649	NSB - BANKCARD CENTER	JAN 2023	AMAZON; PAINTERS DROP CLOTH	01/31/2023	24.99	02/10/2023	100-417-600 General Supplies	123
8649	NSB - BANKCARD CENTER	JAN 2023	AMAZON; 2 BLANK MMF KEYS FOR CASH BAGS	01/31/2023	12.31	02/10/2023	100-425-600 General Supplies	123
8649	NSB - BANKCARD CENTER	JAN 2023	MICROSOFT; VISIO LICENSE	01/31/2023	40.44	02/10/2023	100-418-342 Tech Services-Other	123
8649	NSB - BANKCARD CENTER	JAN 2023	AMAZON; BATTERYGUY X15; EXIT SIGN BATTERY	01/31/2023	207.50	02/10/2023	510-840-616 Safety Supplies	123
8649	NSB - BANKCARD CENTER	JAN 2023	SPRINGHILL SUITES; C BIRKEL TRNG 3/26-3/30/23	01/31/2023	846.98	02/10/2023	100-605-580 Training	123
8649	NSB - BANKCARD CENTER	JAN 2023	WNDD; 2023 SUMMIT REG T CONNER; 1/29-1/30 RENO	01/31/2023	25.00	02/10/2023	100-413-580 Training	123
8649	NSB - BANKCARD CENTER	JAN 2023	ANIMAL CARE EQUIP; CATCH POLES; STRETCHER; BITE	01/31/2023	527.64	02/10/2023	100-525-605 Minor Equipment	123
8649	NSB - BANKCARD CENTER	JAN 2023	LOCAL GOV EDUC; 2023 MASTER ACAD CIVIC AFFAIRS;	01/31/2023	289.00	02/10/2023	100-416-580 Training	123
8649	NSB - BANKCARD CENTER	JAN 2023	AMAZON; GOOF OFF X24	01/31/2023	311.28	02/10/2023	100-575-600 General Supplies	123
8649	NSB - BANKCARD CENTER	JAN 2023	AMAZON; PHOTO FRAMES	01/31/2023	110.98	02/10/2023	100-417-605 Minor Equipment	123
8649	NSB - BANKCARD CENTER	JAN 2023	ZOOM; CLOUD STORAGE	01/31/2023	100.00	02/10/2023	100-425-322 Prof Serv-Other	123
8649	NSB - BANKCARD CENTER	JAN 2023	ICC SAFE; EDUCODE TRNG M MOORE; VIRTUAL	01/31/2023	300.00	02/10/2023	100-605-580 Training	123
8649	NSB - BANKCARD CENTER	JAN 2023	AMAZON; RUBBER FLOOR MATS; SEAT COVERS	01/31/2023	72.59	02/10/2023	100-605-616 Safety Supplies	123
8649	NSB - BANKCARD CENTER	JAN 2023	AMAZON; ADJUSTABLE DESK/MONITOR STAND; T LUKAS	01/31/2023	168.29	02/10/2023	100-415-605 Minor Equipment	123
8649	NSB - BANKCARD CENTER	JAN 2023	SP CONST EXAM; LEGAL & MGMNT MODULE; C BIRKEL	01/31/2023	950.00	02/10/2023	100-605-580 Training	123
Total 8649:					11,015.62			

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
NUTRIEN AG SOLUTIONS								
3033	NUTRIEN AG SOLUTIONS	50325427	weed spray	03/06/2023	1,195.00		100-475-617 Supplies-Chemical	323
Total 3033:					1,195.00			
OFFICE DEPOT								
133	OFFICE DEPOT	278715465001	pens	12/08/2022	12.89	03/02/2023	100-416-600 General Supplies	1222
133	OFFICE DEPOT	278715468001	bus cards	12/12/2022	23.09	03/02/2023	100-416-600 General Supplies	1222
133	OFFICE DEPOT	290166497001	Folders for Utilities	02/20/2023	21.09	03/02/2023	510-810-601 Office Supplies	223
133	OFFICE DEPOT	290166497001	Folders for Utilities	02/20/2023	21.09	03/02/2023	510-810-601 Office Supplies	223
133	OFFICE DEPOT	290182646001	CITY WIDE PAPER	02/20/2023	3.36	03/02/2023	100-418-600 General Supplies	223
133	OFFICE DEPOT	290182646001	CITY WIDE PAPER	02/20/2023	3.36	03/02/2023	100-414-600 General Supplies	223
133	OFFICE DEPOT	290182646001	CITY WIDE PAPER	02/20/2023	3.36	03/02/2023	510-840-601 Office Supplies	223
133	OFFICE DEPOT	290182646001	CITY WIDE PAPER	02/20/2023	3.36	03/02/2023	100-415-600 General Supplies	223
133	OFFICE DEPOT	290182646001	CITY WIDE PAPER	02/20/2023	3.36	03/02/2023	100-413-600 General Supplies	223
133	OFFICE DEPOT	290182646001	CITY WIDE PAPER	02/20/2023	3.36	03/02/2023	100-610-600 General Supplies	223
133	OFFICE DEPOT	290182646001	CITY WIDE PAPER	02/20/2023	3.36	03/02/2023	100-475-600 General Supplies	223
133	OFFICE DEPOT	290182646001	CITY WIDE PAPER	02/20/2023	3.31	03/02/2023	100-575-600 General Supplies	223
133	OFFICE DEPOT	290182646001	CITY WIDE PAPER	02/20/2023	3.36	03/02/2023	100-605-600 General Supplies	223
133	OFFICE DEPOT	290182646001	CITY WIDE PAPER	02/20/2023	3.36	03/02/2023	100-416-600 General Supplies	223
133	OFFICE DEPOT	290182646001	CITY WIDE PAPER	02/20/2023	3.36	03/02/2023	510-810-601 Office Supplies	223
133	OFFICE DEPOT	290182646001	CITY WIDE PAPER	02/20/2023	3.36	03/02/2023	100-529-600 General Supplies	223
133	OFFICE DEPOT	290182646001	CITY WIDE PAPER	02/20/2023	3.36	03/02/2023	100-525-600 General Supplies	223
133	OFFICE DEPOT	290182646001	CITY WIDE PAPER	02/20/2023	3.36	03/02/2023	520-810-601 Office Supplies	223
133	OFFICE DEPOT	292907791001	Highlighter; tape; paper; envelopes; files	02/10/2023	81.07	03/02/2023	100-415-600 General Supplies	223
133	OFFICE DEPOT	293122729001	Business cards M Gothan	02/16/2023	23.09	03/02/2023	510-810-601 Office Supplies	223
133	OFFICE DEPOT	293122729001	Business cards Mayor	02/16/2023	23.09	03/02/2023	100-412-600 General Supplies	223
133	OFFICE DEPOT	293124044001	Toner	02/14/2023	232.04	03/02/2023	510-810-601 Office Supplies	223
133	OFFICE DEPOT	293385606001	office supplies, paper, pencils	02/15/2023	54.41	03/02/2023	100-414-600 General Supplies	223
133	OFFICE DEPOT	293703444001	CITY WIDE PAPER	02/28/2023	30.20		100-414-600 General Supplies	223
133	OFFICE DEPOT	293703444001	CITY WIDE PAPER	02/28/2023	30.20		510-840-601 Office Supplies	223
133	OFFICE DEPOT	293703444001	CITY WIDE PAPER	02/28/2023	30.20		100-610-600 General Supplies	223
133	OFFICE DEPOT	293703444001	CITY WIDE PAPER	02/28/2023	30.20		100-475-600 General Supplies	223
133	OFFICE DEPOT	293703444001	CITY WIDE PAPER	02/28/2023	30.20		100-529-600 General Supplies	223
133	OFFICE DEPOT	293703444001	CITY WIDE PAPER	02/28/2023	30.22		100-415-600 General Supplies	223
133	OFFICE DEPOT	293703444001	CITY WIDE PAPER	02/28/2023	30.20		100-525-600 General Supplies	223
133	OFFICE DEPOT	293703444001	CITY WIDE PAPER	02/28/2023	30.20		520-810-601 Office Supplies	223
133	OFFICE DEPOT	293703444001	CITY WIDE PAPER	02/28/2023	30.22		100-418-600 General Supplies	223
133	OFFICE DEPOT	293703444001	CITY WIDE PAPER	02/28/2023	30.22		100-413-600 General Supplies	223
133	OFFICE DEPOT	293703444001	CITY WIDE PAPER	02/28/2023	30.20		100-605-600 General Supplies	223
133	OFFICE DEPOT	293703444001	CITY WIDE PAPER	02/28/2023	30.20		100-416-600 General Supplies	223
133	OFFICE DEPOT	293703444001	CITY WIDE PAPER	02/28/2023	30.20		510-810-601 Office Supplies	223
133	OFFICE DEPOT	293703444001	CITY WIDE PAPER	02/28/2023	30.25		100-575-600 General Supplies	223
133	OFFICE DEPOT	293707819001	Batteries for door clickers	02/25/2023	58.32		100-417-600 General Supplies	223

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
133	OFFICE DEPOT	295384503001	Binders and File Dividers	02/22/2023	74.36		100-425-600 General Supplies	223
Total 133:					1,094.44			
O'REILLY AUTO PARTS								
6230	O'REILLY AUTO PARTS	3599-231257	Micro V-belt	02/01/2023	27.61		100-475-610 Automotive Supplies	223
6230	O'REILLY AUTO PARTS	3599-231271	Return micro-v belt	02/01/2023	27.61-		100-475-610 Automotive Supplies	223
6230	O'REILLY AUTO PARTS	3599-233160	TUNE UP PARTS V-10 FORD	02/16/2023	872.65	03/02/2023	510-810-610 Automotive Supplies	223
6230	O'REILLY AUTO PARTS	3599-233907	WINDOW REGULATOR FOR W/T PLANT ESCAPE	02/22/2023	51.16	03/02/2023	510-840-610 Automotive Supplies	223
6230	O'REILLY AUTO PARTS	3599-233921	OIL FILTER	02/22/2023	8.64	03/02/2023	510-840-610 Automotive Supplies	223
6230	O'REILLY AUTO PARTS	3599-234025	BRAKE PADS FOR W/T	02/23/2023	57.73	03/02/2023	510-840-610 Automotive Supplies	223
6230	O'REILLY AUTO PARTS	3599-234028	SHOCKS FOR W/T	02/23/2023	140.26	03/02/2023	510-840-610 Automotive Supplies	223
6230	O'REILLY AUTO PARTS	3599-234131	AIR CONTROL VAVLE FOR W/T ESCAPE	02/24/2023	53.76	03/02/2023	510-840-610 Automotive Supplies	223
6230	O'REILLY AUTO PARTS	3599-234133	HEADLIGHT ASSEMBLY FOR W/T COLORADO 6005	02/24/2023	148.92	03/02/2023	510-840-610 Automotive Supplies	223
6230	O'REILLY AUTO PARTS	3599-234147	WIPER BLADE W/T	02/24/2023	7.99	03/02/2023	510-840-610 Automotive Supplies	223
6230	O'REILLY AUTO PARTS	3599-234249	WIPER MOTOR FOR STREETS SNOW PLOW 3005	02/25/2023	139.24	03/02/2023	100-475-610 Automotive Supplies	223
6230	O'REILLY AUTO PARTS	3599-234575	parts for 3009	02/28/2023	33.99		100-475-610 Automotive Supplies	223
6230	O'REILLY AUTO PARTS	3599-234767	parts for T-4002 PARKS TRAILER	03/01/2023	25.47		100-575-430 Service-Repair and Maintenance	323
Total 6230:					1,539.81			
OUTREACH SMARTPHONE MONITORING LLC								
8827	OUTREACH SMARTPHONE MONITORING LLC	#022023	Zachary Bartley Monitoring	02/16/2023	42.00		100-425-341 Pretrial Services Program	223
Total 8827:					42.00			
PACIFIC STORAGE COMPANY								
8876	PACIFIC STORAGE COMPANY	5145473	Shredding Services	02/08/2023	66.00	03/02/2023	100-416-420 Contract Services	223
8876	PACIFIC STORAGE COMPANY	5145474	Shredding	02/08/2023	16.50		100-425-322 Prof Serv-Other	223
Total 8876:					82.50			
PORTER GROUP LLC								
8933	PORTER GROUP LLC	23COF-1	Federal Legislative Services FEB 23 pro-rated	02/22/2023	1,500.00	03/02/2023	100-413-322 Prof Serv-Other	223
8933	PORTER GROUP LLC	23COF2	Federal Legislative Services March 23	03/01/2023	6,000.00	03/02/2023	100-413-322 Prof Serv-Other	323
Total 8933:					7,500.00			
REDWOOD TOXICOLOGY LABORATORY, INC.								
8886	REDWOOD TOXICOLOGY LABORATORY, INC.	790208	Drug Testing Court Services	01/25/2023	671.25		100-425-341 Pretrial Services Program	123
Total 8886:					671.25			

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
RESOURCE CONCEPTS								
8602	RESOURCE CONCEPTS	23-0148	RCI Professional Services Thru Jan 31,2023	02/17/2023	5,522.50	03/02/2023	220-480-810 ARPA	223
8602	RESOURCE CONCEPTS	23-0149	FOR PROFESSIONAL SERVICES THRU 1/31/2023	02/17/2023	4,748.00	03/02/2023	220-480-810 ARPA	223
8602	RESOURCE CONCEPTS	23-0245	Water Right Database accounting project	02/28/2023	5,558.75		510-810-698 Water Rights Protection	223
Total 8602:					15,829.25			
SECTRAN SECURITY, INC.								
8629	SECTRAN SECURITY, INC.	23020520	ARMORED SERVICE - GF	02/09/2023	182.23	03/02/2023	100-415-322 Prof Serv-Other	223
8629	SECTRAN SECURITY, INC.	23020520	ARMORED SERVICE - WATER	02/09/2023	182.26	03/02/2023	510-810-342 Tech Services-Other	223
8629	SECTRAN SECURITY, INC.	23020520	ARMORED SERVICE - SEWER	02/09/2023	182.26	03/02/2023	520-810-342 Tech Services-Other	223
Total 8629:					546.75			
SIERRA NEVADA CONSTRUCTION INC								
287	SIERRA NEVADA CONSTRUCTION INC	REQ 01	Cottonwood lane reconstruction water	02/24/2023	11,875.00		510-166100 Construction In Progress	223
287	SIERRA NEVADA CONSTRUCTION INC	REQ 01	Cottonwood lane reconstruction sewer	02/24/2023	14,725.00		520-166100 Construction In Progress	223
287	SIERRA NEVADA CONSTRUCTION INC	REQ 01	Cottonwood lane reconstruction project	02/24/2023	109,777.25		100-475-745 RTC REIMBURSABLE EXPENDI	223
Total 287:					136,377.25			
SILVER STATE ANALYTICAL LABORATORIES								
7856	SILVER STATE ANALYTICAL LABORATORIES	RN295415	E. Farm lane second day samples	01/24/2023	40.00		510-810-423 Contract Services-ANALYTICAL	123
7856	SILVER STATE ANALYTICAL LABORATORIES	RN295416	Legacy trails samples	01/24/2023	160.00		510-810-423 Contract Services-ANALYTICAL	123
7856	SILVER STATE ANALYTICAL LABORATORIES	RN295418	E. Farm lane samples	01/24/2023	40.00		510-810-423 Contract Services-ANALYTICAL	123
7856	SILVER STATE ANALYTICAL LABORATORIES	RN295419	Hardie lane second sample	01/24/2023	20.00		510-810-423 Contract Services-ANALYTICAL	123
7856	SILVER STATE ANALYTICAL LABORATORIES	RN295469	Hardie lane sample	01/26/2023	20.00		510-810-423 Contract Services-ANALYTICAL	123
7856	SILVER STATE ANALYTICAL LABORATORIES	RN296617	Logan lane samples	02/23/2023	80.00		510-810-423 Contract Services-ANALYTICAL	223
7856	SILVER STATE ANALYTICAL LABORATORIES	RN296644	Lab samples	02/27/2023	415.00		510-810-423 Contract Services-ANALYTICAL	223
7856	SILVER STATE ANALYTICAL LABORATORIES	RN296708	first round February samples	02/27/2023	240.00		510-810-423 Contract Services-ANALYTICAL	223
7856	SILVER STATE ANALYTICAL LABORATORIES	RN296744	Logan lane second day samples	02/27/2023	80.00		510-810-423 Contract Services-ANALYTICAL	223
Total 7856:					1,095.00			
SIPPOLA, REENA G.								
8878	SIPPOLA, REENA G.	23-0209	Punjabi 22TR00283	02/10/2023	150.00		100-425-330 PROF SERV-INTERPRETER	223
Total 8878:					150.00			
SJC LIMITED								
8580	SJC LIMITED	13930	DG for GVP	02/27/2023	1,570.67		100-575-600 General Supplies	223
Total 8580:					1,570.67			

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
STATE COLLECTION & DISB. UNIT (SCaDU)								
176	STATE COLLECTION & DISB. UNIT (SCaDU)	MAR 2023-1	CHILD SUPPORT	03/10/2023	324.46		100-219900 OTHER PAYROLL PAYABLES	323
Total 176:					324.46			
THATCHER COMPANY, INC.								
8646	THATCHER COMPANY, INC.	2023400110439	PS Sodium Hypochlorite	02/23/2023	5,805.80	03/02/2023	510-840-617 Chemicals	223
Total 8646:					5,805.80			
TITAN ELECTRICAL CO								
6548	TITAN ELECTRICAL CO	11852	signal light repairs on Newlands and95-A	02/23/2023	989.92	03/02/2023	100-475-422 Contract-Traffic Light Mainten	223
Total 6548:					989.92			
TSK								
8714	TSK	21-058.00-12	CRRC Schematic Design 2/1/23 - 2/28/23	02/28/2023	119,892.00		220-480-810 ARPA	223
Total 8714:					119,892.00			
U S POSTAL SERVICE								
7344	U S POSTAL SERVICE	MAR 2023	PREPAID IN-HOUSE POSTAGE	03/01/2023	1,500.00	03/01/2023	510-810-550 Printing and Postage	323
7344	U S POSTAL SERVICE	MAR 2023	PREPAID IN-HOUSE POSTAGE	03/01/2023	1,500.00	03/01/2023	520-810-550 Printing and Postage	323
Total 7344:					3,000.00			
USA BLUEBOOK								
464	USA BLUEBOOK	283793	Lab supplies	02/28/2023	276.68		510-840-430 Service-Repair and Maintenance	223
464	USA BLUEBOOK	285020	Replacement PH Meter	03/01/2023	162.63		520-810-605 Minor Equipment	323
Total 464:					439.31			
VOYA FINANCIAL								
8591	VOYA FINANCIAL	FEB 2023-2	DEFERRED COMPENSATION, 457	02/24/2023	3,814.00	02/24/2023	100-215000 457 PAYABLE	223
8591	VOYA FINANCIAL	FEB 2023-2	ROTH IRA	02/24/2023	150.00	02/24/2023	100-215000 457 PAYABLE	223
Total 8591:					3,964.00			
WALKER LAKE DISPOSAL								
6118	WALKER LAKE DISPOSAL	23-0903	WWTP Dumpster	03/03/2023	297.00		520-810-412 Utility Service-Refuse	323
Total 6118:					297.00			

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
WASTE MANAGEMENT								
447	WASTE MANAGEMENT	25001 FEB 23	6-82646-25001	03/01/2023	1,383.30		100-475-412 Utility Services-Refuse	323
447	WASTE MANAGEMENT	33001 MAR 23	11-60772-33001	03/03/2023	103.14		100-417-412 Utility Services-Refuse	323
447	WASTE MANAGEMENT	33005 MAR 23	11-60745-33005	03/03/2023	14.39		510-840-412 Utility Service-Refuse	323
447	WASTE MANAGEMENT	33009 MAR 23	11-60774-33009	03/03/2023	244.39		510-810-412 Utility Service-Refuse	323
447	WASTE MANAGEMENT	43003 MAR 23	11-60760-43003	03/03/2023	42.20		520-810-412 Utility Service-Refuse	323
447	WASTE MANAGEMENT	63002 FEB 23	11-74239-63002	03/01/2023	797.06		100-575-412 Utility Service-Refuse	323
447	WASTE MANAGEMENT	95009 FEB 23	8-29467-95009	03/01/2023	448.45		100-575-412 Utility Service-Refuse	323
Total 447:					3,032.93			
WESTERN INDUSTRIAL PARTS, INC.								
8571	WESTERN INDUSTRIAL PARTS, INC.	2303-056528	FLEET SUPPLIES	03/03/2023	19.90		100-480-610 AUTOMOTIVE SUPPLIES	323
Total 8571:					19.90			
WESTERN INSURANCE SPECIALTIES								
881	WESTERN INSURANCE SPECIALTIES	MAR 2023	SUPPLEMENTAL INSURANCE	03/01/2023	188.14	03/02/2023	100-218100 Western Insurance Payable	323
Total 881:					188.14			
WESTERN NEVADA SUPPLY CO.								
195	WESTERN NEVADA SUPPLY CO.	19532644-1	Bin stock	02/27/2023	275.40		510-810-614 Supplies-Plant/Shop/Maint	223
195	WESTERN NEVADA SUPPLY CO.	19572954-2	Bin Stock	02/27/2023	150.20		510-810-614 Supplies-Plant/Shop/Maint	223
195	WESTERN NEVADA SUPPLY CO.	19616537	lperl 3/4 water meters	01/30/2023	2,917.74		510-166100 Construction In Progress	123
195	WESTERN NEVADA SUPPLY CO.	19648840	PS Sleeve Valve Isolation Valve Inspection Port	02/23/2023	151.68	03/02/2023	510-840-430 Service-Repair and Maintenance	223
195	WESTERN NEVADA SUPPLY CO.	19648868	Sensus Flexnet MXU	02/27/2023	4,644.00		510-166100 Construction In Progress	223
195	WESTERN NEVADA SUPPLY CO.	19650332	Bin Stock	02/27/2023	1,417.35		510-810-614 Supplies-Plant/Shop/Maint	223
195	WESTERN NEVADA SUPPLY CO.	19650332-1	Bin stock	03/03/2023	331.62		510-810-613 Supplies-Meter Service	323
195	WESTERN NEVADA SUPPLY CO.	19652316	hunter sprinkler heads	02/27/2023	1,796.16	03/02/2023	100-575-600 General Supplies	223
195	WESTERN NEVADA SUPPLY CO.	19658898	3/4 water meters	03/03/2023	4,461.60		510-166100 Construction In Progress	323
195	WESTERN NEVADA SUPPLY CO.	19661214	Cut away Hydrant for STEM	03/06/2023	.00		510-810-614 Supplies-Plant/Shop/Maint	323
195	WESTERN NEVADA SUPPLY CO.	CM19650387	Storz fitting- Return	02/28/2023	336.63		510-840-430 Service-Repair and Maintenance	223
Total 195:					15,809.12			
WTR ELECTRIC, INC								
8650	WTR ELECTRIC, INC	23016	repair lights at GVP restroom	03/02/2023	441.50		100-575-428 Contract Services-ELECTRICAL	323
8650	WTR ELECTRIC, INC	23034	replace GFI's at city hall	03/02/2023	1,258.32		100-417-428 Contract Services-ELECTRICAL	323
Total 8650:					1,699.82			
Grand Totals:					710,231.65			

Vendor	Vendor Name	Invoice Number	Description	Invoice Date	Invoice Amount	Date Paid	GL Account and Title	GL Period
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Dated: _____

Mayor: _____

City Treasurer: _____

Report Criteria:

Detail report.

Invoice detail records above \$0 included.

Paid and unpaid invoices included.

Vendor.Vendor Number = {<->} 2201

**MINUTES OF THE
FERNLEY CITY COUNCIL MEETING
FEBRUARY 21, 2023**

Mayor Neal E. McIntyre called the meeting to order at 12:30 PM at Fernley City Hall, 595 Silver Lace Blvd., Fernley, NV 89408

1. INTRODUCTORY ITEMS

1.1. Roll Call

Present: Mayor Neil E. McIntyre, Councilman Ryan Hanan. **Present Via Zoom:** Councilman Stan Lau, Councilman Albert Torres, Councilwoman Fran McKay. Staff: City Clerk Kim Swanson, Administrative Specialist I Sandy Harris, Deputy City Attorney Aaron Mouritsen; City Treasurer Denise Lewis. **Absent:** Councilwoman Felicity Zoberksi

1.2. Public Forum

None

1.3. (For Possible Action) Approval of Agenda

Motion: I MOVE TO APPROVE AGENDA. **Action:** Approved. **Moved by** Councilman Ryan Hanan. **Seconded by** Councilman Stan Lau. **Vote:** Passed, **Summary:** Yes 4, **Yes:** Councilman Ryan Hanan, Councilman Stan Lau, Councilman Albert Torres, Councilwoman Fran McKay. **Absent:** Councilwoman Felicity Zoberski.

2. STAFF REPORTS

2.1. (For Possible Action): Possible approval of a contract with Porter Group to provide federal legislative services at a cost of \$6000 a month for eight months beginning February 21, 2023.

Denise Lewis stated that the City of Fernley intends to apply for Community Project Funding (CPF) and Congressional Directed Spending (CDS). It has been recommended that the City contract with a federal lobbyist to assist in applying for and obtaining these federal funds. Therefore, the staff reached out to the city's state lobbyist for recommendations. The lobbyist recommend the Porter Group as their team's knowledge, relationships, experience, etc. really stood out.

Porter Group presented via Zoom.

Congressman Jon C. Porter thanked the Council for the consideration. He gave a brief biography of himself and how the Porter Group would make sure that funding would be a priority.

Chris Porter explained Community Project Funding (CPS) and Congressional Directed Spending (CDS) and how they work. He explained that Porter Group will work with staff and the project team to develop the applications necessary for applying for CPF and CDS funding.

Cameron Gresh explained the application phase and how they will work with the State of Nevada delegation throughout the process. He also stated how they will work with the city to clarify what the city's projects are and what funding will be available.

Councilman Stan Lau asked about other funding for infrastructure projects like water projects. Cameron Gresh explained different funding categories that the City may be eligible for, like infrastructure projects such as water and sewer and grants for different projects.

Aaron Mouritsen, Deputy City Attorney, recommended Item 21, Lobbying, be removed from the proposed contract.

Treasurer Lewis stated that in addition to the Community Response & Resource Center (CRRC) project, they are identifying other water & sewer projects and will bring the list to the March 15, 2023, City Council meeting.

Councilman Torres asked for clarification in regards to Item 21, Lobbying, being removed from the contract only, and where the lobbying costs would be coming from. City Treasurer Lewis clarified the lobbying costs will come from the City Managers' Office budget.

Motion: I MOVE TO APPROVE THE CONTRACT WITH PORTER GROUP FOR FEDERAL LEGISLATIVE SERVICES AT A COST OF \$6,000.00 A MONTH FOR EIGHT MONTHS BEGINNING FEBRUARY 21, 2023, WITH THE REMOVAL OF SECTION 21 OF THE CONTRACT FOR SERVICES PORTION LOBBYING **Action:** Approved, **Moved by** Councilman Ryan Hanan, **Seconded by** Councilman Stan Lau. **Vote:** Passed, **Summary:** Yes 4, **Yes:** Councilman Ryan Hanan, Councilman Stan Lau, Councilman Albert Torres, Councilwoman Fran McKay, **Absent:** Councilwoman Felicity Zoberski.

3. PUBLIC FORUM

None

4. ADJOURNMENT

There being no further business to come before it, the Fernley Special City Council meeting adjourned at 1:02 PM.

Approved by the Fernley City Council on March 15, 2023, by a vote of:

AYES _____ NAYS: _____ ABSTENTIONS: _____ ABSENT: _____

Mayor Neal E. McIntyre

ATTEST: City Clerk Kim Swanson

Report Criteria:

License.Status = "Active"

Business.Origination date = 2/23/2023-03/8/2023

Business Name	Name	Location	Location City	Location State	Location Zip	Business Tel	Description	Occupation
DK Mobile Oil LLC	Dean Presnell/kaitlin	960 Union Ln	Fallon	NV	89406	775-426-8973	Automotive Sales/Parts/S	Mobile Oil Changes
OG Solar Inc.	Jory Mack	240 S. Rock Blvd Ste. 101	Reno	NV	89502	775-420-0562	Contractor	Electrical/Solar Contractor#901
Kiss This Cosmetics	Natalya Frey	2205 Windrow Drive	Fernley	NV	89408	831-345-6910	Wholesale and/or Retail	Make up and skincare sales: S
Lemons, Grundy and Eisenberg	President, Robert Eis	6005 Plumas - Third Floor	Reno	NV	89519	775-786-6868	Attorney/Legal Services	Legal Services
Elizabeth Kummer	Elizabeth Kummer	708 Todd Ct.	Fernley	NV	89408	775-481-6589	Hobby/Crafter, Sewing, J	Hobby/Crafter
Needle In A Haystack	Mitzi Chapin	502 River Ranch	Fernley	NV	89408	775-453-8787	Hobby/Crafter, Sewing, J	Hobby/Crafter
Faith White	Faith White	420 Maple St.	Fernley	NV	89408	775-813-2441	Wholesale and/or Retail	Jewelry, skin care product sale
MG & Co. LLC	Mallorie Baltzell	1115 Freemont St. #314	Fernley	NV	89408	707-812-4520	Business Specific Profes	Schedulling flights/hotels/payro
HiLow Services LLC	Leroy Heath	9410 Prototype Dr. #6	Reno	NV	89521	775-386-2206	Pest Control	Pest Control
M & B Pet Apparel	Cathy Thews	1876 View Ct.	Fernley	NV	89408	775-404-4791	Hobby/Crafter, Sewing, J	Crafts: pet apparel & accessori
Tarably Creative	Tara Marie Morris	765 Garnet Way	Fenley	NV	89408	713-440-9075	Hobby/Crafter, Sewing, J	Crafts: water color arts
Crafty Cards and Such	Susan Hansen	1333 Desert Springs Ln	Fenley	NV	89408	775-220-1616	Hobby/Crafter, Sewing, J	Crafts: greeting cards, mini alb
Desert View Remodelers LLC	Tersas Moebius	6555 S Valley View Blvd. Sui	Las Vegas	NV	89118	702-483-6900	Contractor	Solar Contractor #79863
Grand Totals:								
13								

Report Criteria:

License.Status = "Active"

Business.Origination date = 2/23/2023-03/8/2023



CITY OF FERNLEY

City Council AGENDA REPORT

Meeting Date: March 15, 2023

REPORT TO: Mayor and City Council

REPORT FROM: Derek Starkey, City Engineer

FINANCIAL IMPACT:

Yes:x

No:

CURRENTLY BUDGETED:

Yes:

No: X

FUND/ACCOUNT:

Water, Sewer, and General Fund
Accounts

ACTION REQUESTED: Consent

AGENDA ITEM: (For Possible Action):

Possible action to accept new public water, sewer, streets and storm drain infrastructure constructed by new development projects within the City of Fernley.

AGENDA ITEM BRIEF:

When new public infrastructure is constructed as a part of development, the Council needs to accept the infrastructure and staff can include it as an asset to be depreciated. This staff report will summarize the infrastructure and estimated value of infrastructure that has been completed in the calendar year 2022 to the first quarter of 2023. Staff will include these at quarterly or biannual intervals depending on the amount of projects completed.

RECOMMENDED MOTION:

I move to accept the public infrastructure constructed by the following projects:

1. Sims Metal Phase 1
2. Cottonwood Self Storage
3. The Meadows at Inglewood Events Center
4. 2335 Farm District Road Water Connections
5. Victory Logistics Building A Offsite Improvements
6. The Meadows at Inglewood Connector Road

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

Council could request staff for additional information.

BACKGROUND:

When development projects are constructed within the City of Fernley they often construct new infrastructure that the City then takes ownership of and maintains in perpetuity. Examples of this infrastructure are roadways, sidewalks, water mains, water meters, sewer mains and laterals, and storm drain inlets and pipes. In order for finance to include these improvements as City assets, the Council needs to accept the improvements. Since these improvements are not part of a subdivision map, they do not need to be accepted by resolution per NRS 278.

Staff has combined multiple projects into one staff report to save multiple staff reports before Council. Below is a summary of each project and its estimated value for each fund:

Sims Metal Phase 1

- Streets - \$21,432
- Sanitary Sewer - \$6,400
- Water - \$8,400

Cottonwood Self Storage

- Streets - 12,113.00
- Water - \$1,050.00

The Meadows at Inglewood Events Center

- Streets - \$20,820.00
- Water - \$52,094.00

2335 Farm District Road Water Connection

- Water - \$21,120.00

Victory Logistics Phase 1

- Streets - \$32,401.00
- Storm Drain - \$158,595.00
- Water - \$85,941.00

The Meadows at Inglewood Connector Road

- Streets - \$137,475.00
- Sewer - \$51,600.00
- Storm Drain - \$9,650.00
- Water - \$94,150.00

RELEVANT LAWS, STATUTES, AND REGULATIONS:

N/A

FINANCIAL IMPLICATIONS:

Accepting the infrastructure includes it as an asset to be depreciated.

ATTACHMENTS:

None



CITY OF FERNLEY

City Council AGENDA REPORT

Meeting Date: March 15, 2023

REPORT TO: Mayor and City Council

REPORT FROM: Charity Birkel, Building Official

FINANCIAL IMPACT:

Yes: No:

CURRENTLY BUDGETED:

Yes: No:

FUND/ACCOUNT:

N/A

ACTION REQUESTED: Ordinance

AGENDA ITEM: (For Possible Action):

First Reading, Introduction of Bill #325 .

Bill # 325 as an ordinance amending title 16 Chapter 1 of the Fernley Municipal Code, Parking and Storage of junk vehicles.

AGENDA ITEM BRIEF:

First reading and introduction of Bill #325, an ordinance amending Title 16 Chapter 1 of the City of Fernley's Municipal code.

RECOMMENDED MOTION:

N/A

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

BACKGROUND:

Current code language is vague in content, so by amending Title 16 Chapter One of the Fernley Municipal Code,

it will allow staff to gain an increase in compliance. It will also provide clarity for the citizens of Fernley.

RELEVANT LAWS, STATUTES, AND REGULATIONS:

Title 16 Chapter 1, Sections 16.01.01 and 16.01.03

FINANCIAL IMPLICATIONS:

ATTACHMENTS:

1. BILL # 325 AMENDING TITLE 16 CHAPTER 1 OF THE FERNLEY MUNICIPAL CODE
2. BILL # 325 AMENDING TITLE 16 CHAPTER 1 OF THE FERNLEY MUNICIPAL CODE April 5th Clean Copy

BILL NO. 325

CITY OF FERNLEY

AN ORDINANCE AMENDING TITLE 16 CHAPTER 1 OF THE FERNLEY MUNICIPAL CODE, PARKING AND STORAGE OF JUNK VEHICLES AS FOLLOWS: This ordinance shall go into effect August 1st, 2023.

THE CITY COUNCIL OF THE CITY OF FERNLEY, hereinafter “the Council” DO ORDAIN That Section 16 of the City of Fernley Code of Ordinances is amended as follows:

Sec. 16.01.01. - Definitions.

The following words, terms and phrases, when used in this title, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Code enforcement officer means a city employee or department designated by the council to enforce the provisions of this title.

Council means the Fernley City Council.

Dangerous structure. ~~The term "dangerous structure" is defined in the city construction code.~~ **The term "dangerous structure" is defined in the International Property maintenance code sec 108.1.5.**

Junk vehicle means ~~any car, truck, trailer, recreational vehicle, boat or other vehicle, or parts thereof, that is non-operational, unlicensed, disassembled or in disrepair. Any motor vehicle, boat, trailer, or recreational vehicle or the remains thereof which does not bear a currently valid license plate, is disassembled or in a state of disrepair and is not housed in a garage or other building~~

Noxious plant growth means any accumulation of weeds or other harmful plants that create a danger to persons or animals or pose a fire hazard.

Rubbish means any litter, vegetable waste, debris, garbage, junk, non-running vehicles or trailers or parts thereof, filth or refuse of any kind.

Sec. 16.01.03 Parking and storage of junk vehicles

(a) Except for as stated herein, in section 16.01.04 exemptions, it shall be unlawful for any person to keep, for any reason:

1. More than 2 junk, inoperative vehicles on any private parcel of property.
2. More than 2 unregistered vehicles which are on private property.

3. Any junk, inoperative and/or unregistered vehicle must be placed outside of the front yard setback area.
4. Any person who is not currently in compliance with this code as modified, shall have until August 1, 2023 to meet the requirements of this code.

Sec. 16.01.04 Exemptions

The following items are exempt from the regulations.

1. Equipment and materials used for farming, ranching, or keeping of livestock, appropriate to the size and zoning of the parcel, including fencing, lumber, compost, gates, irrigation equipment and materials, etc.
- ~~2. Junk vehicles in one acre rural residential or lower density zoning, provided that they are placed outside the front yard setback area.~~

PROPOSED on the 15th day of March 2023.

PASSED, APPROVED and ADOPTED this 5th day of April 2023, by the following vote of the Council:

Ayes: _____ Nays: _____ Abstentions: _____ Absent: _____

FERNLEY CITY COUNCIL

By: _____
Neal E. McIntyre, Mayor

Date: _____

Attest By: _____
Kimberly Swanson, City Clerk

Date: _____

BILL NO. 325

CITY OF FERNLEY

ORDINANCE # 2023-___

CITY OF FERNLEY

AN ORDINANCE AMENDING TITLE 16 CHAPTER 1 OF THE FERNLEY MUNICIPAL CODE, PARKING AND STORAGE OF JUNK VEHICLES AS FOLLOWS: THIS ORDINANCE SHALL GO INTO EFFECT AUGUST 1st, 2023.

THE CITY COUNCIL OF THE CITY OF FERNLEY, hereinafter “the Council” DO ORDAIN That Section 16 of the City of Fernley Code of Ordinances is amended as follows:

Sec. 16.01.01. - Definitions.

The following words, terms and phrases, when used in this title, shall have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

Code enforcement officer means a city employee or department designated by the council to enforce the provisions of this title.

Council means the Fernley City Council.

Dangerous structure. The term "dangerous structure" is defined in the International Property maintenance code sec 108.1.5.

Junk vehicle means Any motor vehicle, boat, trailer, or recreational vehicle or the remains thereof which does not bear a currently valid license plate, is disassembled or in a state of disrepair and is not housed in a garage or other building

Noxious plant growth means any accumulation of weeds or other harmful plants that create a danger to persons or animals or pose a fire hazard.

Rubbish means any litter, vegetable waste, debris, garbage, junk, non-running vehicles or trailers or parts thereof, filth or refuse of any kind.

Sec. 16.01.03 Parking and storage of junk vehicles

(a) Except for as stated herein, in section 16.01.04 exemptions, it shall be unlawful for any person to keep, for any reason:

1. More than 2 junk, inoperative vehicles on any private parcel of property.
2. More than 2 unregistered vehicles which are on private property.

3. Any junk, inoperative and/or unregistered vehicle must be placed outside of the front yard setback area.
4. Any person who is not currently in compliance with this code as modified, shall have until August 1,2023 to meet the requirements of this code.

Sec. 16.01.04 Exemptions

The following items are exempt from the regulations.

1. Equipment and materials used for farming, ranching, or keeping of livestock, appropriate to the size and zoning of the parcel, including fencing, lumber, compost, gates, irrigation equipment and materials, etc.

PROPOSED on the 5th day of April 2023.

PASSED, APPROVED and ADOPTED this 5th day of April 2023, by the following vote of the Council:

Ayes: _____ Nays: _____ Abstentions: _____ Absent: _____

FERNLEY CITY COUNCIL

By: _____

Neal E. McIntyre, Mayor

Date: _____

Attest By: _____

Kimberly Swanson, City Clerk

Date: _____



CITY OF FERNLEY

City Council AGENDA REPORT

Meeting Date: March 15, 2023

REPORT TO: Mayor and City Council

REPORT FROM: Shay League

FINANCIAL IMPACT:

Yes: No: X

CURRENTLY BUDGETED:

Yes: No: X

FUND/ACCOUNT:

N/A

ACTION REQUESTED: Ordinance
Motion

AGENDA ITEM: (For Possible Action):

(For Possible Action) ZMA22009 River Ranch Apartments

Consideration and possible action on Bill # 324, an ordinance associated with a zoning map amendment request by ERGS, Inc., to change the zoning designation of a ±20.80-acre project site located at approximately 501 River Ranch Road (APNs: 021-281-03, 021-281-10, and portions of 021-281-04 and 021-281-09) from Industrial (I), Employment Center (EC), and General Commercial (C2) to Mixed Use (MU) to facilitate the construction of a 320-unit multi-family project.

AGENDA ITEM BRIEF:

The ±20.80-acre project site is currently composed of ±15.13-acres Industrial (I), ±3.67-acres Employment Center (EC), and ±2.00-acres General Commercial (C2). ERGS is requesting we rezone this site to Mixed Use (MU). The land use indicated by the Comprehensive Master Plan is Suburban Mixed Use (SMU). I, EC, and C2 are not equivalent land use categories for SMU; the proposed MU is an equivalent land use category, as are Residential, Medium Density Residential, 14 dwelling units per acre maximum (MDR14), Residential, Multiple Family, 30 dwelling units per acre maximum (MF30), and Neighborhood Commercial (C1). This item generally complies with all other portions of our comprehensive master plan, with the exception of the transportation section.

RECOMMENDED MOTION:

If Council determines that this item meets the intent of the Comprehensive Master Plan, and concurs with staff that the other required findings can be made:

Approval

"I move to approve the zoning map amendment associated with ZMA22009, based on findings Z1 to Z3, and the facts supporting those findings as set forth in the staff report."

If Council determines that this item does not meet the intent of the Comprehensive Master Plan due to incompatibility with section 4.2:

Denial

"Based on information presented in the staff report, and at the public hearings on this matter, I move to deny the zoning map amendment request associated with ZMA22009 because I have determined the proposed change is detrimental to the public's health, safety, and general welfare. I am unable to make the required finding that the proposed change is consistent with the city's master plan as it relates to Section 4.2 of the City of Fernley Comprehensive Master Plan approved in August of 2018; therefore, I cannot approve the zoning map amendment."

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

Though further specific language has not been supplied, any motion conforming with City Council parliamentary procedure is appropriate.

BACKGROUND:

ERGS purchased parcels 021-281-03 and 021-281-10 in July 2022. The project site contains both parcels and sections of neighboring parcels 021-281-04 and 021-281-09. The project site portion of -04 is currently the subject of a boundary line adjustment application. The applicant procured a portion of this neighboring parcel and has requested to move the boundary line between their parcel and the neighboring parcel north to encompass the portion of the neighboring parcel they've purchased. Though they do have a right-of-way easement across the -09 parcel, as of last update they are still in negotiations with Sierra Pacific Power to purchase the project site portion of parcel -09. Should this purchase be successful, the applicant intends to submit a second boundary line adjustment between -09 and -10 and a reversion to acreage to unite all sections they own into one parcel.

This item (ZMA22009) was recommended for approval by Planning Commission on December 14, 2022, by a vote of 5 - 1. At the same meeting, Planning Commission granted a Conditional Use Permit for this project to allow the site to be used for a maximum of 320 multi-family units. Though they now have a conditional use permit, establishing that use is contingent upon approval of the zoning map amendment to Mixed Use (MU).

FINDINGS:

The zoning map amendment should be approved if City Council can make the following findings:

ZM1. Consistent with the city's master plan and otherwise consistent with state and federal law.

Ways in which this zone change is directly consistent with the master plan include:

1. Bringing the project into conformance with the current master planned land use of SMU. Along with MDR14, MF-30, and C1, MU is an equivalent zoning district for this designation. The existing I, EC, and C2 are not.
2. The applicant has also identified several community goals and action strategies that this development supports, and staff concurs with all the goals and action strategies listed. Please refer to pages 7 and 44-47 of the applicant's project description (attached).

3. Staff found no significant conflicts between this project and the criteria established in Chapters 1-3 and 5 of the Comprehensive Master Plan that address population, housing, employment, conservation, land use, public services, and public facilities.

As mentioned in the agenda item brief, this project does not completely comply with a portion of the transportation section of our master plan. This is an unusual scenario because the master plan and Fernley Municipal Code are written in such a way that compliance with one typically ensures compliance with the other. Due to an amendment of the conditional use permit conditions of approval that the applicant requested at the Planning Commission meeting, River Ranch Road right-of-way (that would typically consist of 2 x 4' parkway strips, 2 x 4' sidewalk sections, 2 x 2' curb/gutter sections, and 40' of asphalt) will be narrower than our master plan indicates is appropriate for a street of this type.

Section 4.2 is the section of the transportation chapter that addresses functional classifications of roadways. Here is a summary:

- River Ranch Road is classified as an urban collector, which is “typically constructed with a 60-foot right-of-way width that includes sidewalks on both sides of the street”.
- Collector roadways of this type are intended to “provide the physical connection between regional roadways or arterials and residential subdivisions, shopping centers and/or employment centers”.
- A local road is intended to “serve subdivisions and individual properties”.
- Local roads “are not intended to provide direct access between nearby subdivisions and commercial or business opportunities”.

Finding ZM1 Analysis

River Ranch Road is currently constructed as a local road but is functioning as an urban collector. This same scenario has caused traffic issues along Fremont Street. Fremont Street was also once a local road, but the construction of the Raley’s shopping center, addition of an apartment complex, and approval of a second apartment complex have changed the function into that of a collector road. As a condition of approval for the Sherwood complex, the developer is working to rectify this issue by purchasing the appropriate right-of-way from neighboring land users and intends to expand it to the full 60-foot right-of-way.

Should River Ranch Road be unable to expand in a similar manner to Fremont Street, Council might consider reclassifying the master-planned land use of this and neighboring parcels to single family residential. The current zoning for I, EC, and C2 would remain unless the landowners petitioned to change them; those zones are all similarly incompatible with a local road size. However, by this action, the Council would not be encouraging further development that our master plan alludes is incompatible with a narrow local road. Staff also intends to condition any conditional use permit or administrative review permit required to develop these parcels to include the 60-foot urban collector right-of-way indicated as typical by our master plan (when applicable).

Because the master plan uses the phrase “typically constructed”, staff feels that there is room for Council to determine that this project's non-compliant right-of-way is consistent with the City's master plan. Staff recommends Council contemplate whether this project complies with the intent of the master plan as a whole, and the transportation plan specifically. Because this project so closely complies with all other portions of the master plan, this also may be considered as a policy choice that provides a determination on the parts of the master plan that are most important to Council.

ZM2. Consistent with the surrounding land uses.

Aside from the right-of-way issue, this project is consistent with the surrounding land uses. The applicant has provided a response for each of the findings in the attached Project Description (pages 7-9). Staff supports their

assessment as it pertains to surrounding land uses. This project will provide a nice buffer between single-family housing to the south and Highway 50 Alternate. Further, multi-family is generally considered an appropriate use of commercially adjacent parcels.

ZM3. Public notice was given, and a public hearing held per the requirements of the Development Code and Nevada Revised Statutes.

Staff certifies that public notice was given, and a public hearing will be held per the requirements of the Development Code and Nevada Revised Statutes.

RELEVANT LAWS, STATUTES, AND REGULATIONS:

Nevada Revised Statutes (NRS), Chapter 278 - Planning and Zoning

Fernley Municipal Code (FMC), Title 32 - Development Code

City of Fernley Comprehensive Master Plan - August 2018, 3rd Update

City of Fernley Department of Public Works Design Standards and Review Guidelines for Streets, Potable Water, Sewer Storm Drains, & Alternative Water (May 2008)

City of Fernley Standard Details for Public Works Construction

Items of specific interest:

- NRS 278.260 - Planning and Zoning | Planning Commissions | Determination, establishment, enforcement and amendment of zoning regulations, restrictions, and boundaries: Procedure and prerequisites; notice and hearing; signs; additional fee for certain applications.
- FMC Chapter 32.03.040 (e) - Development Code | Administration | Annexation, comprehensive master plan, and zoning applications | Zoning map amendments (rezoning)
- FMC Chapter 32.06.090 - Development Code | Zoning Districts | Mixed Use (MU)
- FMC Chapter 32.12.010 (d) - Development Code | Adequate Public Facilities | Determination of adequate public facilities
- Fernley Master Plan, Section 3.3, p. 66 - Land Use | Non-Residential Land Uses | Suburban Mixed Use (SMU)
- Fernley Master Plan, Section. 4.2, pp. 86-88 - Transportation | Functional Classifications

FINANCIAL IMPLICATIONS:

N/A

ATTACHMENTS:

1. Bill # 324
2. Vicinity Map
3. Existing and Proposed Zoning
4. Project Description
5. Initial Conditions
6. Approved Conditions
7. Exhibits
8. Technical Reports
9. Full Size Plans

When recorded, mail to:
City Clerk
City of Fernley
595 Silver Lace Boulevard
Fernley, NV 89408

BILL # 324
CITY OF FERNLEY
ORDINANCE # _____

A GENERAL ORDINANCE FOR A ZONING MAP AMENDMENT, ASSOCIATED WITH ZMA22009, TO CHANGE THE ZONING OF ±20.80 ACRES EAST OF RIVER RANCH ROAD, SOUTH OF US ROUTE 50 ALTERNATE, AND WEST OF FORT SUTTER BLVD (APNS: 021-281-03, 021-281-10, AND PORTIONS OF 021-281-04 AND 021-281-09) FROM I (INDUSTRIAL), EC (EMPLOYMENT CENTER), AND C2 (GENERAL COMMERCIAL) TO MU (MIXED USE).

THE CITY COUNCIL OF THE CITY OF FERNLEY, hereinafter “the Council”, DO HEREBY ORDAIN:

Section 1: The zoning of that certain real property totaling 20.80 acres, more or less, situated in the City of Fernley, Nevada, being more particularly described as Parcel 4-A and Parcel 1-B on Exhibit “A” attached hereto (consisting of 2 pages) and depicted on “Exhibit A-1” attached hereto (consisting of 1 page) is hereby reclassified from I (Industrial), C-2 (General Commercial) and EC (Employment Center) to MU (Mixed Use).

SECTION 2: The zoning map of the City of Fernley is hereby amended in accordance with the zoning map amendment herein.

SECTION 3: All ordinances or parts of ordinances in conflict herewith are hereby repealed.

SECTION 4: The City Clerk is instructed and authorized to publish the title to this ordinance as provided by law and to record the plan certified herein as provided by law.

SECTION 5: This ordinance shall become effective upon passage, approval, and publication.

SECTION 6: The provisions of this ordinance shall be liberally construed to effectively carry out its purposes in the interest of public health, safety, welfare and convenience.

SECTION 7: If any subsection, phrase, sentence or portion of this section is for any reason held invalid or unconstitutional by any court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions.

SECTION 8: The City Council finds that this ordinance is not likely to impose a direct and significant economic burden upon a business or directly restrict the formation, operation or expansion of a business, or is otherwise exempt from Nevada Revised Statutes Chapter 237.

BILL # 324 BEING HEREBY PROPOSED this 1st day of March 2023.

BILL # 324 BEING HEREBY PASSED, APPROVED and ADOPTED this 15th day of March 2023, by the following vote of the Council:

Ayes: _____ Nays: _____ Abstentions: _____ Absent: _____

FERNLEY CITY COUNCIL

By: _____ Date: _____
Neal E. McIntyre, Mayor

Attest By: _____ Date: _____
Kim Swanson, City Clerk

**EXHIBIT A
LEGAL DESCRIPTION FOR
ZONE CHANGE**

PARCEL 4-A

All that certain real property situate within a portion of the Southeast One-Quarter (SE 1/4) of Section Eighteen (18), Township Twenty (20) North, Range Twenty-Five (25) East, Mount Diablo Base Meridian, City of Fernley, Lyon County, State of Nevada, being a portion of Parcel 2 and Parcel 4 of Parcel Map No. 942, File No. 52626, recorded on April 8, 1980, filed in the Official Records of Lyon County, Nevada, being more particularly described as follows:

COMMENCING at the Northeasterly Corner of said Parcel 2;

THENCE along the Easterly boundary of said Parcel 2, South 01°19'36" West a distance of 248.74 feet to the **POINT OF BEGINNING**;

THENCE continuing along said Easterly boundary and along the Easterly boundary of said Parcel 4, South 01°19'36" West a distance of 917.11 feet to the Southerly boundary of said Parcel 4;

THENCE departing said Easterly boundaries and along said Southerly boundary, North 88°38'43" West a distance of 269.12 feet to the Westerly boundary of said Parcel 4;

THENCE departing said Southerly boundary and along said Westerly boundary, North 01°19'36" East a distance of 917.98 feet;

THENCE departing said Westerly boundary, South 88°27'41" East a distance of 269.12 feet to the **POINT OF BEGINNING**.

Containing 5.67 acres of land, more or less.

PARCEL 1-B

All that certain real property situate within a portion of the Southeast One-Quarter (SE 1/4) of Section Eighteen (18), Township Twenty (20) North, Range Twenty-Five (25) East, Mount Diablo Base Meridian, City of Fernley, Lyon County, State of Nevada, being a portion of Parcel 1 and Parcel 2 of Parcel Map No. 278267, recorded on June 13, 2002 filed in the Official Records of Lyon County, Nevada, and a portion of Parcel U-50A-LY-000 932 XS1 described in "Resolution of Abandonment of a Portion of State Highway Right-of-Way", Document No. 409890, recorded July 10, 2007, filed in said Official Records, being more particularly described as follows:

BEGINNING at the Southwesterly Corner of said Parcel 1;

THENCE along the Westerly boundary of said Parcel 1, North 01°19'35" East a distance of 1165.85 feet to the Northwesterly Corner of said Parcel 1;

THENCE departing said Northwesterly Corner and said Westerly boundary, North 01°19'35" East a distance of 101.20 feet to the Southerly Right-of-Way of U.S. Highway 50 per Nevada Department of Transportation Right-of-Way plans, being Project No. NH-050-A(002), dated December 20, 2004;

THENCE along said Southerly Right-of-Way, South 79°51'29" East a distance of 658.22 feet to the Easterly boundary of said Parcel U-50A-LY-000 932 XS1;

THENCE departing said Southerly Right-of-Way and along said Easterly boundary, South 01°05'44" West a distance of 101.26 feet to the Southeasterly Corner of said Parcel U-50A-LY-000 932 XS1;

THENCE departing said Southeasterly Corner and said Easterly boundary and along the Easterly boundary of said Parcel 1 and the Easterly boundary of said Parcel 2, South 01°05'44" West a distance of 690.25 feet;

THENCE departing said Easterly boundaries, North 88°38'43" West a distance of 360.00 feet to the Westerly boundary of said Parcel 2;

THENCE along said Westerly boundary, South 01°05'44" West a distance of 375.00 feet to the Southerly boundary of said Parcel 1;

THENCE departing said Westerly boundary and along said Southerly boundary, North 88°38'43" West a distance of 295.15 feet to the **POINT OF BEGINNING**.

Containing 15.13 acres of land, more or less.

See Exhibit A-1 attached hereto and made a part of.

The basis of bearings for these descriptions is Nevada State Plane Coordinate System, West Zone, North American Datum of 1983/1994, High Accuracy Reference Network (NAD 83/94-HARN), as determined using Real Time Kinematic (RTK) GPS observations. The bearing between NDOT monument 1528013 and 1528011 (LPN 1528) is taken as North 76°59'40" West.

Prepared by:
Wood Rodgers, Inc.
1361 Corporate Blvd.
Reno, NV 89502

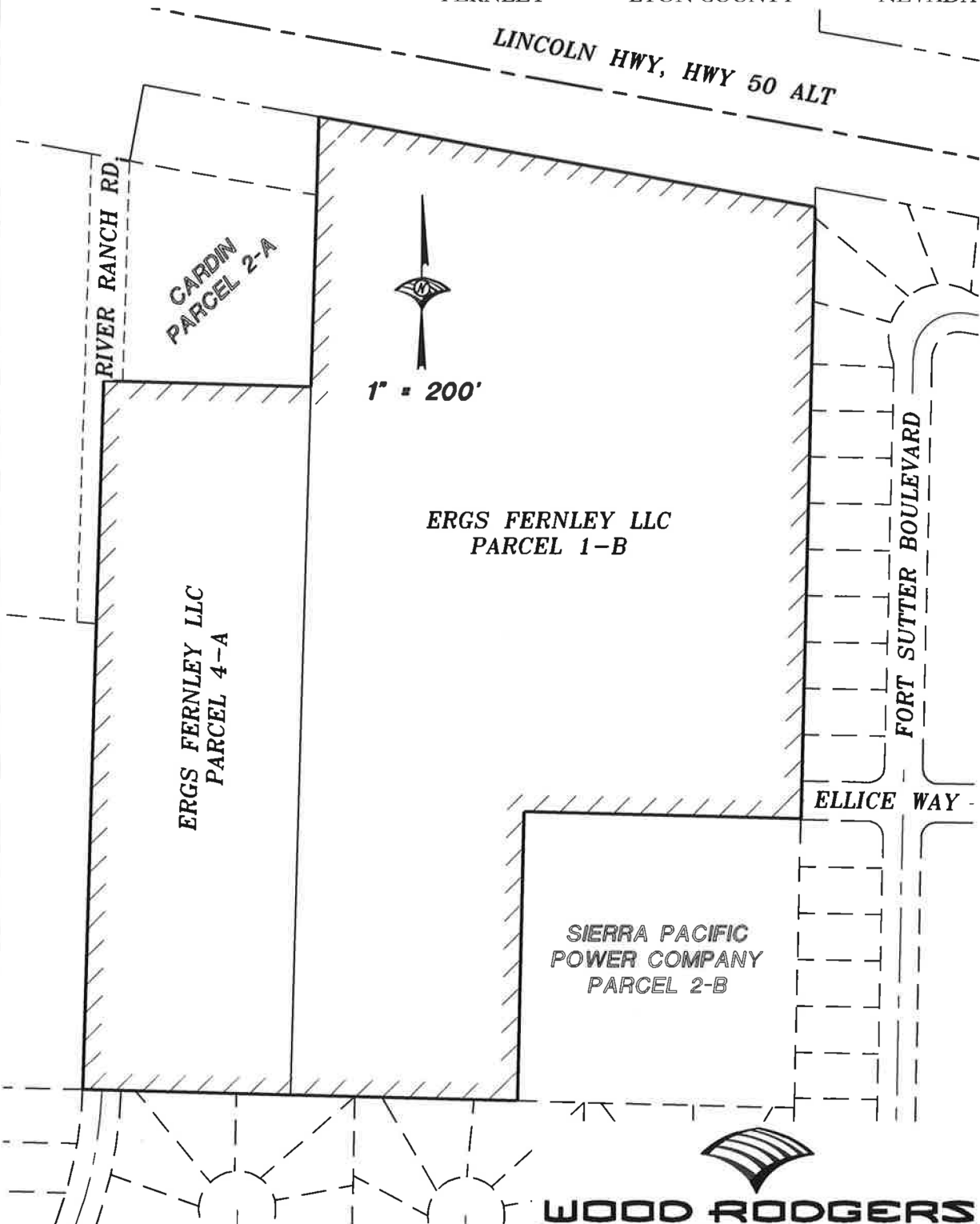


Kaitlin S. Constantine, P.L.S.
Nevada Certificate No. 30222

EXHIBIT A-1

PLAT TO ACCOMPANY

BOUNDARY MAP FOR ZONE CHANGE
BEING A PORTION OF THE SE 1/4 OF SECTION 18
TOWNSHIP 20 NORTH, RANGE 25 EAST, M.D.M.
FERNLEY LYON COUNTY NEVADA



JOB NO. 3034059
SHEET 1 OF 1

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard Tel 775.823.4068
Reno, NV 89502 Fax 775.823.4066



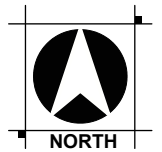
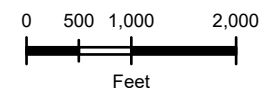
VICINITY MAP

RIVER RANCH APARTMENTS

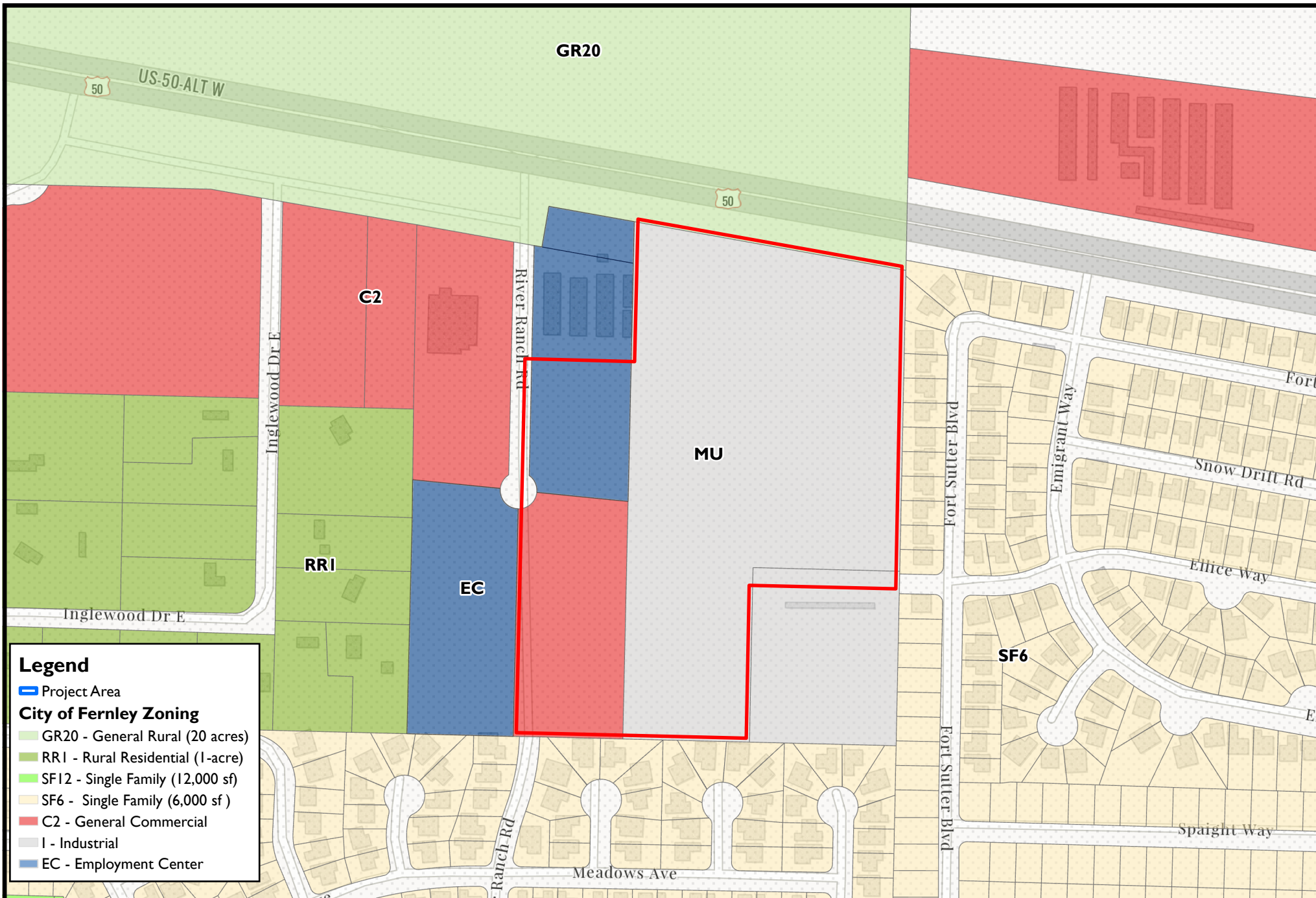
FERNLEY, NV

SEPTEMBER 2022

- Future Nevada Pacific Parkway
- BLA_Project_Boundary



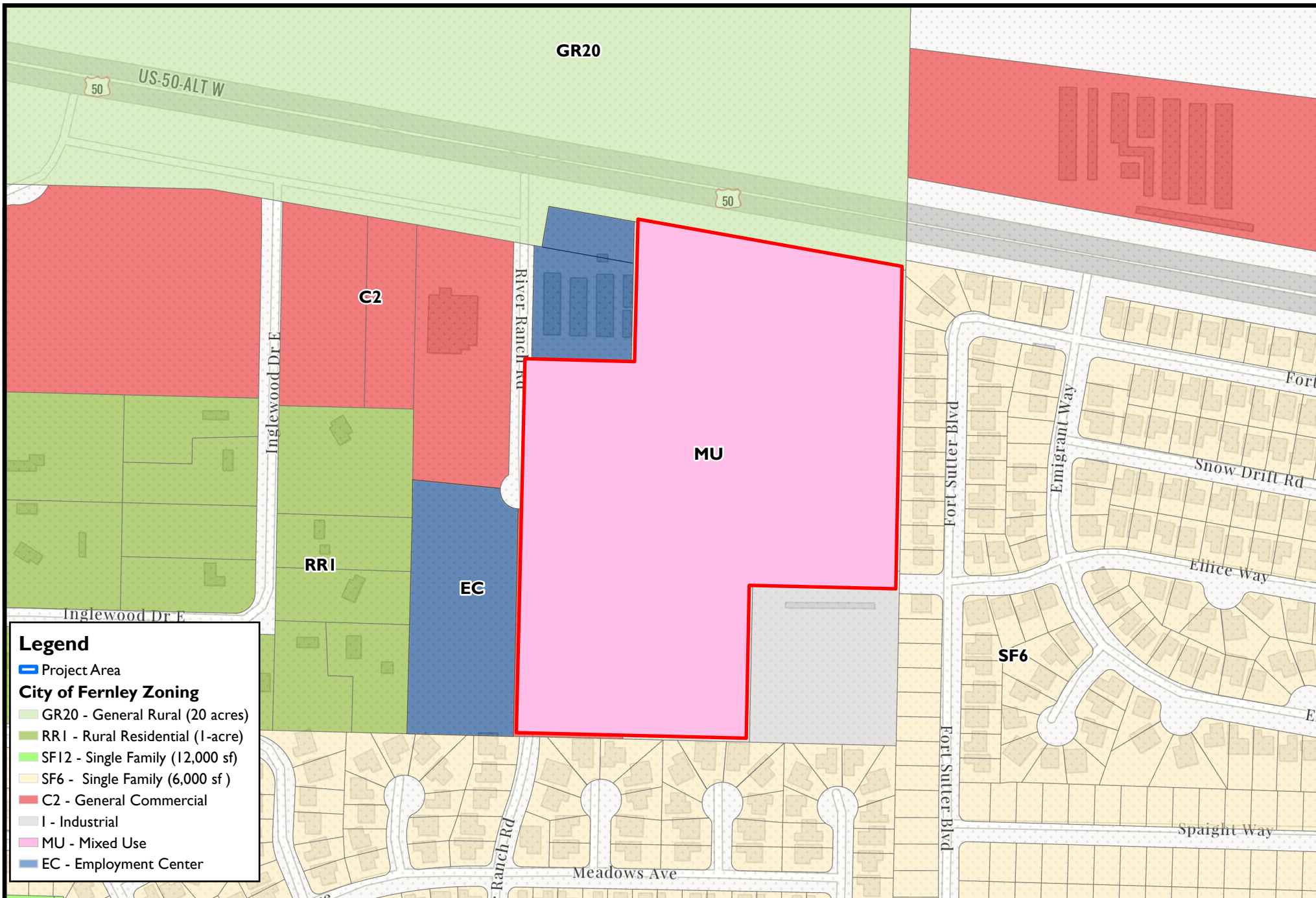
WOOD RODGERS



Existing Zoning River Ranch Apartments

September 2022

WOOD RODGERS
 BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
 1361 Corporate Boulevard Tel: 775.823.4068
 Reno, NV 89502 Fax: 775.823.4066



Proposed Zoning

River Ranch Apartments

September 2022

WOOD RODGERS
 BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
 1361 Corporate Boulevard Tel: 775.823.4068
 Reno, NV 89502 Fax: 775.823.4066

SECTION 2 – PROJECT DESCRIPTION AND FINDINGS

PROJECT DESCRIPTION

OVERALL REQUEST

The request is for the following:

- (1) A Zoning Map Amendment to change the designation on 20.80± acres as follows:
 - a. 15.13± acres from I to MU
 - b. 3.67± acres from EC to MU
 - c. 2.00± acres from C2 to MUand;
- (2) A Conditional Use Permit to allow a multi-family project over 100 units in size in the MU zone. The proposed project includes 320 units and the overall density is 15.38 units per acre.

BACKGROUND INFORMATION

LOCATION

The subject site consists of 20.80± acres and is generally located north of Meadows Avenue; south of U.S. Route 50 Alternate; east of River Ranch Road and; west of Fort Sutter Boulevard. The site is in close proximity to the Victory Logistics District, a 4,300± acre developing manufacturing, distribution, logistics and data center which will result in significant job growth in Fernley. In addition, with the recent announcement of federal funding to complete the extension of Nevada Pacific Parkway from I-80 to U.S. Highway 50 Alternate the connection will facilitate quick and easy access from the project site to work locations in the district.

(Refer to VICINITY MAP in Section 3 of this Submittal Packet).

PARCEL NUMBERS, OWNERSHIP, ACREAGES, MASTER PLAN AND ZONING DESIGNATIONS

The site includes the following Assessor Parcels with current ownership, existing and proposed acreage, comprehensive master plan and zoning designations noted as follows:

Assessor Parcel Number (APN) /Current Owner	Existing Acreage/Proposed Acreage	Comprehensive Plan Designation	Zoning Designation
021-281-03 ERGS Fernley LLC	3.67± acres/3.67± acres	Suburban Mixed Use (SMU)	EC (Employment Center)
021-281-04* Cardin, Carl D.	3.67± acres/2.00± acres**	Suburban Mixed Use (SMU)	C2 (General Commercial)
021-281-09* Sierra Pacific Power Co.	3.55± acres/.45± acres **	Suburban Mixed Use (SMU)	I (Industrial)
021-281-10 ERGS Fernley LLC	14.68± acres/14.68± acres	Suburban Mixed Use (SMU)	I (Industrial)

* Current APN.

** Acreage to be part of the subject project area and ownership will be ERGS Fernley LLC upon final approval of boundary line adjustments by the City of Fernley and sale/transfer of property.

(Refer to ASSESSOR PARCEL MAP, PARCEL AREAS, EXISTING ZONING MAP and MASTER PLAN LAND USE MAP EXHIBITS in Section 3 of this Submittal Packet).

SITE CHARACTERISTICS

The property is undeveloped and is characterized by disturbed and undisturbed areas with sparse native vegetation. There are a number of dirt/gravel trails and roads that cross the site. In addition, there are overhead power lines adjacent to the site to the north within the U.S. 50 Alternate right-of-way and to the east within the adjacent residential rear yards.

Easements on the property include a north/south 50 foot relocatable access easement from U.S. Highway 50 Alternate providing access to the NV Energy Lonely Substation utility facility (under the ownership of SPPCo) located southeast of the site; a 10 foot PUE adjacent to the easterly property boundary; an east/west 10 foot PUE for a gas feeder main and distribution main near the northerly portion of the site; and a 50± foot Public Roadway and Utility easement adjacent to the westerly boundary which is partially improved as River Ranch Road. In addition, there is a 55-foot wide access easement along the northerly property line of the (SPPCo owned) Lonely Substation site that provides access from the subject site and the SPPCo property to Fort Sutter Boulevard.

(Refer to SITE PHOTOS and SITE AERIAL in Section 3 and SITE CONDITIONS in Section 3 or 5 of this Submittal Packet).

There are no streams, waterways, drainageways or wetlands located on the property. The FEMA designation is Zone X. *A PRELIMINARY DRAINAGE REPORT addressing existing and proposed drainage conditions, as well as a GEOTECHNICAL REPORT outlining soil conditions is included in Section 4 of this Submittal Packet.*

The site slopes from south to north. The Fernley Municipal Code Title 32 Development Code (Code), Section 32.09.130, Slopes, Hilltops and Ridges is applicable to property that has slopes 10% or greater on 25% of the site.

The following is a summary of slopes on the property:

Slope (%)	Area (Acres)	% of Total
0-10	18.70	89.70
10+	2.10	10.30
TOTAL	20.80	100.00

Slopes exceeding 10% only occur on 10.30% of the site. Section 32.09.130 is, therefore, not applicable to this project.

(Refer to SLOPE MAP in Section 3 and SITE CONDITIONS EXHIBIT in Section 3 or 5 of this Submittal Packet).

SURROUNDING USES AND DESIGNATIONS

Surrounding and nearby properties include a variety of uses, as well as a mix of master plan and zoning designations as provided in the table below. *A Noticing Map and List of Addresses of properties within 300 feet of the project boundaries is included in Section 1 of this Submittal Packet.*

DIRECTION	USES	CITY OF FERNLEY MASTER PLAN LAND USE MAP	CITY OF FERNLEY ZONING
North	U.S. Highway 50 Alternate	Open Space and Parks (OSP)	GR20
South	Single Family Residential* and Lonely Utility Substation	Single Family Residential (SFR) and Suburban Mixed Use (SMU)	SF6 and I
East	Single Family Residential** and Lonely Substation Utility Facility	Single Family Residential (SFR) and Suburban Mixed Use (SMU)	SF6 and I
West	Mini-warehouses with outside storage; Pioneer Crossing Casino; Undeveloped Land	Suburban Mixed Use (SMU)	EC and C2

* There are 7 single family residential lots with rear yards abutting the property. The average lot size is 9,334± square feet. All lots are developed with single story homes and include 6 foot rear yard wood fences.

** There are 12 single family residential lots with rear yards abutting the property. The average lot size is 7,151 square feet. Eleven lots are developed with single story homes and one lot includes a two-story home. All lots include 6 foot rear yard wood fences.

(Refer to NOTICING MAP and LIST OF ADDRESSES WITHIN 300 FEET in Section 1 and EXISTING ZONING MAP, MASTER PLAN LAND USE MAP and SITE PHOTOS in Section 3 of this Submittal Packet).

1. ZONING MAP AMENDMENT REQUEST

The request is for a Zoning Map Amendment to change the designation on 20.80± acres from I, EC and C2 to MU.

(Refer to LEGAL DESCRIPTIONS and ZONING MAP AMENDMENT BOUNDARY MAP in Section 1 and EXISTING and PROPOSED ZONING MAP in Section 3 of this Submittal Packet).

REASON AND JUSTIFICATION

As outlined above, the project site currently has three different zoning classifications. The three classifications make it inefficient and problematic to plan and develop the 20.80± acre site as an integrated project. All properties, however, are designated Suburban Mixed Use (SMU) on the City of Fernley Master Plan Land Use Map.

(Refer to EXISTING ZONING and MASTER PLAN LAND USE MAPS in Section 3 of this Submittal Packet).

Pursuant to the City of Fernley Comprehensive Plan (Master Plan), the compatible zoning districts for property designated SMU include: MDR14; MF-30; MU; C1 and PD. The current zoning designations of I, EC and C2 on the properties are not consistent with the Master Plan.

The proposed project is a multi-family development which is compatible and consistent with the Master Plan goals and action strategies, associated with the Suburban Mixed Use (SMU) designation. The overall density of the project is 15.38 units per acre. The density is slightly higher than the limits of the MDR14 zone (7 to 14 units per acre) and lower than the MF30 zone (21 to 30 units per acre). The MU density range as provided in the Master Plan is 10 to 30 dwelling units per acre. Based on the project density, the MU zone is the appropriate conforming zoning for the property.

As noted in the Code, Table 32.06.090-1 Mixed Use Density/Intensity Standards, multi-family residential projects shall utilize MF30 design standards. Compliance

with the MF30 design standards is addressed in detail in the *Conditional Use Permit Request Section of this Submittal Packet*.

The proposed project density and MU zoning provides an excellent transition from the single family residences to the east and south to the commercial and industrial type uses (Lonely Substation utility facility, mini-warehouses with outside storage, and Pioneer Crossing Casino) to the south and west. Given the site's location in close proximity to the projected job growth associated with the Victory Logistics District and the Nevada Pacific Parkway extension, this housing project is the perfect fit for the City of Fernley. The proposed MU zoning is fully consistent with the Master Plan as outlined below.

COMPREHENSIVE MASTER PLAN COMPLIANCE

The following is a discussion of Goals and Policies from the 2018 (3rd updated) Master Plan that support the proposed Zoning Map Amendment. A full discussion of the specific project's compliance with the Master Plan is additionally provided in the *Conditional Use Permit Request Section of this Submittal Packet*.

PROJECT COMPLIANCE: The CHAPTER 3. LAND USE section of the Master Plan states that future growth and development, as well as the planned extension of infrastructure and services are all based on the Land Use Map. This section also states that a balanced land plan for the City of Fernley provides for a diverse mix of housing types. To accomplish these goals, the updated Plan added a number of land use categories including the Suburban Mixed Use (SMU) to encourage a broad mix of uses including high-density residential within close proximity to services and employment. The Plan states the goal for the City is to effectuate growth and redevelopment as depicted on the Land Use Map and to have the Master Plan and Zoning Maps in conformance with each other.

The updated Land Use Map designated several acres of land (including the subject 20.80± acres) south of U.S. Highway 50 Alternate and east and west of River Ranch Road as SMU. As outlined in Section 3.6 - Implementation, general guidelines necessary for the implementation of the plan including promoting the Land Use Map to encourage new employment opportunities, revitalization of the downtown core, and housing projects that support the Land Use Chapter. The

proposed Zoning Map Amendment to MU is supported by these guidelines and will allow for a new residential project (the River Ranch Apartments) to help meet workforce housing needs in the City of Fernley.

The following also specifically supports the Zoning Map Amendment:

3.7 GOALS AND ACTION STRATEGIES

L.U.1.2 Encourage new development to be in accordance with the Comprehensive Master Plan land use category, and other land use controls to accomplish community principles.

PROJECT COMPLIANCE: The project site is designated SMU on the Comprehensive Master Plan. Existing sit zoning designations of I, EC and C2 are not in compliance with the SMU designation. The requested zone change to MU, however, is consistent with the SMU designation and is supported by this goal and action strategy. The MU zoning will allow for diverse housing options including multi-family projects and is in compliance with other specific Master Plan Goals and Action Strategies for Population, Housing and Employment and Land Use as further discussed in the *Conditional Use Permit Request Section of this Submittal Packet*.

(Refer to EXISTING MASTER PLAN EXHIBIT and EXISTING and PROPOSED ZONING EXHIBITS in Section 3 of this Submittal Packet).

ZONING MAP AMENDMENT FINDINGS

The following outlines the required findings and provides responses to address the requested zoning map amendments as outlined in the Code.

Section 32.03.040 (e) Zoning Map Amendments (rezoning) (6) outlines Findings for approval and states a zoning map amendment is committed to the city council's legislative discretion. The zoning map amendment be approved if it is:

- a. Consistent with the city's master plan and otherwise consistent with state and federal law.

APPLICANT'S RESPONSE: The proposed MU zoning is fully consistent with the master plan Suburban Mixed Use (SMU) land use map designation, characteristics and location, as well as the equivalent consistent zoning categories. The existing zoning on the property (I, EC and C2) is currently not consistent with the master plan designation. Goals and Action Strategies fully support bringing zoning into conformance with the Land Use Plan. The zoning map amendment will be beneficial to the City of Fernley as it will encourage medium to high-density development to meet future housing demands in the City of Fernley.

- b. Consistent with the surrounding land uses.

APPLICANT'S RESPONSE: The existing zoning on the project site abutting the single family residences located to the south and east is I, EC and C2. These zones typically allow the more intense and heavier industrial uses including those labeled in the Code Section 32.06.150 – Unlisted Uses and Use Table under the categories of Vehicles and Equipment; Manufacturing and Employment; Warehousing, Storage and Distribution; and Waste Related Facilities. These uses can result in compatibility related issues with single family residential neighbors. The MU zoning, however, provides an opportunity for a mix of residential and commercial uses and can be more appropriate to help create a slightly higher residential density transition from lower intensity single family homes to the higher intensity commercial/industrial uses (mini-warehouses with outside storage and Pioneer Crossing Casino) to the west. The MU zone is consistent with the master plan designation of Suburban Mixed Use and is a better and more consistent zoning transition option adjacent to the surrounding land uses.

- c. Public notice was given, and a public hearing held per the requirements of the development code and Nevada Revised Statutes.

APPLICANT'S RESPONSE: The City of Fernley is responsible for providing public notice in accordance with the Development Code and Nevada

Revised Statues. A public hearing or hearings will be properly noticed and held with a decision as to the zoning amendment made in accordance with all legal requirements.

2. CONDITIONAL USE PERMIT REQUEST

Pursuant to Section 32.06.150-2 Use Table of the Code, a Conditional Use Permit is required for a multi-family project over 100 units in size in the MU zone. The proposed project includes 320 units, therefore, a Conditional Use Permit is required and requested as part of this application. The details of the Conditional Use Permit project and compliance with various Code sections are outlined *in this Section of the Submittal Packet*.

SITE PLAN

The 20.80± acre site has been designed to provide a high quality and well designed multi-family community to meet the needs of existing and future residents relocating to or moving within Fernley including those pursuing new nearby employment opportunities in the Victory Logistics District. The site plan ensures safe primary, as well as emergency access, accommodates (agreed upon) relocated access to the NV Energy Lonely Substation, respects gas and utility easements and minimizes impacts to and from adjacent uses through the use of landscape buffers, walls and generous setbacks.

The applicant has worked with adjacent property owners to add 2.00± acres of undeveloped land to the site from the southerly portion of APN 021-281-04 via a Boundary Line Adjustment (BLA) application that was recently submitted to the City. In addition, .45± acres of excess property from the northerly portion of the Lonely Substation property (APN 021-281-09) will be added to the site via a BLA application to be submitted in the near future.

The site plan considers topography, grading, drainage, access, buffering and ADA accessibility needs to create a well-planned community. Building pads are stepped down from the south to the north. To accommodate drainage, a retention basin has been located at the northeast corner of the site and provides additional buffering adjacent to U.S. Highway 50 Alternate. Access to U.S. Highway 50 Alternate has also been eliminated for safety purposes. Direct access is only provided from one point on River Ranch Road. The site plan also includes ample parking and community open space with passive and active spaces

throughout the project site. Construction of the project will be phased in a logical manner to ensure access and utilities connections are appropriate.

(Refer to PRELIMINARY PHASING PLAN in Section 3 and PRELIMINARY SITE, GRADING, UTILITY and LANDSCAPE PLANS in Sections 3 or 5 and PRELIMINARY DRAINAGE REPORT in Section 4 of this Submittal Packet).

PROJECT DETAILS

The proposed 320-unit apartment community includes 40 Apartment Buildings, a Clubhouse Building, a Maintenance Building, ample parking and landscaping, as well as community amenities. The overall density of the project is 15.38 units per acre. The project will provide high quality, needed housing to accommodate existing and future residents of Fernley including those pursuing employment opportunities in the nearby Victory Logistics District.

COMMUNITY FEATURES

The River Ranch Apartment community will feature the following:

- **BUILDINGS**

The project includes the following building types:

- “CLUBHOUSE”: A one-story, 2,670± square foot clubhouse building including an office space and leasing area for leasing staff, a staff kitchen, restrooms, a community exercise studio and a mail room. The CLUBHOUSE is located at the main entrance to the ±community.
- “MAINTENANCE”: A one-story, 1,395± square foot maintenance building including an office for maintenance staff, a restroom, tool room, key room and warehouse storage area. The MAINTENANCE building is located across from the Lonely Substation near the southeast corner of the site.
- “RESIDENCES”
All residential buildings are two-stories in height (28.50± - 31± feet high) and include 8 apartments per building. Buildings vary in size, however, the architectural style, materials, colors, and roof lines are

compatible and consistent. The buildings are spread throughout the site along with parking, landscaping and active and passive common open space areas. The building pads are stepped to accommodate grading needs and provide visual interest. Buildings are separated by a minimum of 20 feet to comply with fire access and separation requirements.

All individual residences include a lower-level outdoor patio or upper-level deck with storage space (featuring a half wall design for privacy); a laundry area with washer and dryer provided; living/dining space; closet space; separate bedrooms and bathrooms; a well-designed kitchen with a refrigerator, dishwasher, cooktop/oven and microwave, as well as central heat and air conditioning.

The following is a description of each apartment type:

- **ONE BEDROOM (THE ONE):** Thirteen buildings with a building height of 29.5± feet and a footprint of 4,322± square feet featuring one bedroom/one bath units are proposed. A total of 104 one bedroom apartments will be available in the community. Each one bedroom apartment is approximately 801 square feet in size.
- **TWO BEDROOM (THE STANDARD):** Twelve buildings with a footprint of square feet with a building height of 29± feet featuring two bedroom/two bath units are proposed. A total of 96 STANDARD units will be provided. Each STANDARD apartment is 1,068± square feet in size.
- **TWO BEDROOM SUITE (THE SUITE):** Thirteen buildings with a footprint of 6,652± square feet and a height of about 29± feet featuring larger two bedroom/two bath suite units are proposed. A total of 104 SUITE apartments will be offered in the community. Each SUITE apartment is 1,148 square feet in size.

- **THREE BEDROOM (THE TRIO):** Two buildings with a footprint of 7,284 square feet and a height of 31± feet featuring three bedroom/two bath units are proposed. A total of 16 apartments will be provided. Each TRIO apartment is 1,434 square feet in size.
- **PARKING, LANDSCAPING AND AMENITIES**
 - The project includes 698 Parking Spaces including 680 standard and 18 ADA accessible spaces.
 - A total of 6.98± acres (34.70% of the site) is dedicated to landscape area including buffers, parkway treatments, median/entry features, passive and active community spaces including open turf areas, a dog park and areas with children's play structures. The site includes integrated sidewalks throughout with connections to a meandering sidewalk along River Ranch Road.

(Refer to BUILDING ELEVATIONS, FLOOR PLANS, PRELIMINARY SITE PLAN and PRELIMINARY LANDSCAPE PLAN in Sections 3 or 5 of this Submittal Packet).

ARCHITECTURE

Building design incorporates the use of a variety of color, accents and materials, window size variations, pitched roofs, as well as building plane articulation including recesses and projections. A separate entrance and lower-level patios or upper-level balconies are provided for each unit. Each patio and balcony features a minimum outdoor use size of 140± square feet and includes an enclosed storage area and solid half-wall design for privacy. Building materials include wood frame construction with stucco exteriors and accents. Roof elements include a combination of hip, gable and shed roofing. Roof materials will consist of composite architectural shingles. Building colors include Tuscan, French and Spanish body color and trim palettes.

(Refer to COLOR PALETTE in Section 3 and BUILDING ELEVATIONS and FLOOR PLANS in Sections 3 or 5 of this Submittal Packet).

LANDSCAPING, OPEN SPACE AND AMENITIES

The Code requirement for landscaping for MU zoned projects is 15% of the project site area. The required landscape area is 135,918 square feet (3.12 acres). Based on the required area and number of parking spaces, a minimum of 341 trees and 2,718 shrubs will be planted on the site. Planting will include screening trees on the south and east boundaries of the site to additionally buffer the existing residences. The project includes 6.98± acres of open space/landscape area for a total of 34.70±% of the site area. The project **exceeds** Code requirements for the amount of landscape area provided.

(Refer to PRELIMINARY LANDSCAPE PLAN in Sections 3 or 5 of this Submittal Packet).

In addition, the community includes the following amenities:

- A Community Exercise Studio in the Clubhouse near the entrance to the community;
- 2 Playgrounds, with children's play structures, one located in the northerly portion and one located in the southerly portion of the community.
- 4 open Turf Areas, throughout the community for active outdoor play, passive and general use.
- A fenced Dog Park with tables and benches located in the north central portion of the community.

All landscaping and community amenities, as well as buildings, parking, drainage facilities, fencing and walls, etc. will be maintained by the owner with on-site management provided.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

NOISE AND VISUAL BUFFERING

The project has been designed with noise and visual buffering of adjacent uses in mind. Residential buildings will include dual pane windows, fiberglass filled exterior doors, 6-inch exterior walls with R19 insulation, central air conditioning and patios and balconies with half-wall designs to help mitigate privacy and noise

concerns from U.S. Highway 50 Alternate, River Ranch Road, the Lonely Substation, nearby commercial establishments and adjacent residences.

In addition, overall building setbacks; perimeter landscape buffers; a retaining wall adjacent to the north boundary of the Lonely Substation; and a retention basin located in the northeast corner of the site will allow for ample separation between the proposed buildings and the property boundaries. To further visually buffer the site and to provide sound attenuation, a 6-foot high decorative solid masonry type wall will be placed around most of the perimeter of the site with the exception of the River Ranch Road frontage which will include split rail fencing.

(Refer to PROPOSED FENCES & WALLS EXHIBIT in Section 3 and PRELIMINARY LANDSCAPE PLAN in Sections 3 or 5 of this Submittal Packet).

TRAFFIC AND ACCESS

The project is anticipated to generate approximately 2,157 Average Daily Trip with 163 PM peak hour trips. *A TRAFFIC IMPACT STUDY outlining trip generation details, existing and projected traffic volumes, analysis of key intersections and impacts on the adjacent street network is provided in Section 4 of this Submittal Packet.* Per the Study, the addition of project traffic does not have any significant impact on nearby intersections that would require mitigation.

With development access easements will be relocated and half-street improvements will be made to River Ranch Road in accordance with recommendations provided in the Traffic Impact Study. River Ranch Road adjacent to the property is currently within a 50-foot wide easement on the project site. With the project, street improvements will be made and .70± acres of right-of-way will be dedicated to the City. A meandering 5-foot wide sidewalk in a landscape strip on the project site adjacent to the street dedication area will also be constructed.

(Refer to Proposed Street Section on PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

Vehicular access to the project will be from one main entrance point off of River Ranch Road. The entry into the community is via a divided roadway with a landscape median. The entry is located in the central portion of the site providing easy access to the Clubhouse Building which includes the leasing office, exercise area and mail room. Vehicular access throughout the community is provided through perimeter and interior loops for emergency access and tenant convenience.

Access to U.S. Highway 50 Alternate will be eliminated with the project. This will ensure safety for residents. Secondary gated access to River Ranch Road at the southerly end of the project site will provide emergency access, as well as (agreed upon relocated) NV Energy access to the Lonely Substation property. In addition, gated access to Fort Sutter Boulevard will be provided near the southeasterly corner of the property. Sidewalks and walkways are provided to each building and throughout the community. Internal sidewalks will also connect to a meandering sidewalk along River Ranch Road to facilitate safe pedestrian travel along the roadway.

PARKING

The Code Table 32.09.120- 2 – Parking Ratios for multi-family projects of over 100 units requires the following: 1.5 spaces per 1 bedroom/studio units and 2 parking spaces per unit for 2 bedrooms and up plus .25 guest spaces.

Per Code, a total of 668 spaces are required as follows:

104 - 1 bedroom units x 1.5	=	156
216 - 2 and 3 bedroom units x 2	=	432
320 units x .25 guests	=	<u>80</u>
TOTAL	=	668

Of the required total parking amount, 2% of the total shall be designed as accessible parking spaces for a total of 14 ADA accessible spaces.

Site parking in the community consists of 698 spaces as follows:

- 680 standard spaces
- 18 ADA accessible spaces

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

With final design and consideration of trash receptacle locations and grading needs, however, it is possible that the overall final number of parking spaces may be reduced. The proposed parking, however, is expected to **exceed** Code requirements by 20-30 spaces.

SITE LIGHTING

Dark sky friendly lighting will be provided throughout the community to ensure the safety of residents and guests without contributing to light pollution. Exterior lighting will feature building mounted wall pack fixtures with cut off shields to reduce glare. Ground-mounted lighting will be provided for signage and the flag pole located near the project entry. Lighting will not project over the property boundaries. Parking lot pole lighting/street lighting is not proposed. A photometric analysis by an electrical engineer will be provided with final design of the project.

SIGNAGE

Project signage consisting of large granite boulders with individual black metal lettering identifying the River Ranch Apartment Community will be located on both sides of the entry driveway facing River Ranch Road. In addition, boulder type sign may be used to identify the office location. A Project Directory showing the site layout and the individual buildings will also be provided near the entry to assist visitors and emergency access personnel. Signage will be lit with ground level lighting fixtures.

(Refer to PROPOSED FENCES & WALLS EXHIBIT in Section 3 of this Submittal Packet).

UTILITIES

Public utilities are available to serve the site include:

- Water - City of Fernley - (*PRELIMINARY WATER CALCULATIONS are provided in Section 4 of this Submittal Packet*).
- Sanitary Sewer - City of Fernley (*A SEWER REPORT is provided in Section 4 of this Submittal Packet*).
- Gas – Southwest Gas (note this project is an electric only project and will not use gas)
- Electric – NV Energy
- Telephone – AT&T
- Cable TV/Internet – Charter, AT&T

SCHOOLS

Children residing in the community will attend the following Lyon County schools:

- East Valley Elementary School
- Fernley Intermediate School
- Silverland Middle School
- Fernley High School

DEVELOPMENT CODE COMPLIANCE

The following provides details as to how the project complies with various sections of the Code.

MIXED USE DENSITY/INTENSITY STANDARDS

The project is in compliance with **ALL** requirements of Table 32.06.090 -1 pertaining to the Mixed Use (MU) Density/Intensity Standards as follows:

- **Density/Intensity:**
The Code maximum is 30 dwelling units per acre. The project is 15.38 units per acre. The Code states multi-family residential in the MU zone shall utilize MF30 design standards per Chapter 32.06. The project follows the MF30 design standards which are explained in detail *in this Submittal Packet*.
- **Lot:**
The Code minimum lot size is 6,000 square feet. The overall site (lot size) is 20.80± acres (906,048± square feet). The Code minimum site width is 30 feet. The overall project site has a minimum lot width of approximately 655 feet. The overall project site **exceeds** the minimum requirements for both lot size and width.
- **Setbacks (principal buildings):**
 - **Front/exterior side (non-residential):** Required 10 feet (Front applies to River Ranch Road on the west and U.S. 50 Alternate on the north and; Exterior Side applies adjacent to south and east boundaries of self storage project (APN 021-281-04) and adjacent to the north and west boundaries of the Lonely Substation (APN 021-281-09): Minimum setbacks provided **exceed** the requirements.
 - **Rear:** Required – 0 or 10 feet (N/A due to project site configuration)

- Side or Rear (abutting any residential district): Required – Building height x 1 foot (applies adjacent to east and south property boundaries). The height of the tallest building is 31± feet resulting in a setback requirement of 31 feet. Minimum setbacks provided **exceed** the requirements.

(Refer to SETBACK EXHIBIT in Section 3 of this Submittal Packet).

- Height (maximum): Residential – 35 feet; Actual Building Height of Buildings ranges between 29± and 31± feet which is **below** the height maximum.

ADJACENCY STANDARDS

Section 32.09.030 of the Code outlines Adjacency Standards to minimize impacts on adjacent properties. The 20.80± acre project site is adjacent to a total of 19 single family residences and has been designed to minimize impacts as follows:

SOUTH:

Seven single family residences, all one story in height, are located on the south side of the site. To minimize impacts there are only three buildings with six upper and six lower units oriented with fronts (including unit entrances and lower-level patio and upper-level balcony areas) facing the rear yards of these residences. Blinds for tenant privacy and energy efficiency purposes are included for all windows for all apartment units. Both lower-level patios and upper-level balconies feature half-wall designs for screening and tenant privacy. Parking, landscape buffers and walls separate the buildings from the residences. Setbacks in this area range from 97± to 105± feet. The building pads and parking areas are stepped down from the southerly property boundary so that the residential lots are 7-8± feet higher than the proposed adjacent parking and finished floor of the first floor of the buildings. In addition, buffering will include a 20+ foot wide landscape area which will be planted with screening trees and a 6-foot high solid masonry wall located on the property line.

EAST:

Twelve single family residences (11 single story and 1 two-story) are located on the east side of the site. To minimize impacts, there are only five apartment buildings with ten upper and ten lower units with sides (windows only) facing eight of these residences. Blinds for tenant privacy and energy efficiency purposes are included for all windows for all apartment units. Parking and landscape buffers and walls, as well as a retention basin separate the buildings from the residences. The retention basin is located at the northeasterly boundary of the property adjacent to two of the residences. The side of the one-story maintenance building also faces two of the residences near the southeasterly boundary of the site. Setbacks range from a minimum of 39± feet near the northeasterly boundary of the site to a maximum of 97± feet. The setback from the maintenance building near the southeasterly corner of the site is 77± feet. Buffering will include a landscape area ranging in width from 6± to 39± feet which will be planted with screening trees and a 6-foot high solid masonry wall located on the property line.

(Refer to SITE PHOTOS in Section 3 and PRELIMINARY SITE PLAN, PRELIMINARY GRADING PLAN, CROSS SECTIONS, BUILDING ELEVATIONS and FLOOR PLANS in Sections 3 or 5 of this Submittal Packet).

Lot adjacency standards per Section 32.090.030 (c) Generally (1) a-e apply and are discussed below:

a. EXTERIOR LIGHTING

The applicant fully embraces Nevada's Dark Sky Designation Program. Dark sky friendly lighting will be provided throughout the community to ensure the safety of residents and guests without contributing to light pollution. Exterior lighting will feature building mounted wall pack fixtures with cut off shields to reduce glare. Ground-mounted lighting will be provided for signage and the flag pole located near the project entry. Lighting will not project over the property boundaries. Parking lot pole lighting/street lighting is not proposed. In addition, all residential units will be provided with blinds to limit spillage of interior lighting to the outside.

SOUTH:

As previously mentioned, setbacks in this area range from 97± to 105± feet and building pads and parking areas are stepped down from the southerly property boundary. The distance and grade difference between the existing residences and the buildings where the wall pack fixtures will be attached, as well as landscape buffers and walls will minimize overall lighting impacts.

EAST:

Setbacks range from 39± feet near the northeasterly boundary of the site to 97± feet. Buffering will include a landscape area ranging in width from 6± to 39± feet which will be planted with screening trees and a 6-foot high solid masonry wall located on the property line to buffer and minimize overall lighting impacts.

(Refer to SETBACK EXHIBIT in Section 3 and PRELIMINARY SITE PLAN and PRELIMINARY GRADING PLAN in Sections 3 or 5 of this Submittal Packet).

b. NOISE

Residential buildings will include dual pane windows, fiberglass filled exterior doors, 6-inch exterior walls with R19 insulation and central air conditioning to help mitigate noise concerns generated from inside the units. Amenity areas including the clubhouse, open turf play areas, children's playgrounds and the dog park are all located in the interior portions of the site to minimize outside noise.

SOUTH:

Only three buildings face the southerly property boundary. Blinds for all windows are included with all apartment units. As previously mentioned, setbacks in this area are robust and building pads and parking areas are stepped down from the property boundary. Visibility, noise and privacy impacts from the six lower units will, therefore, be minimal. The overall distance, grade differences and half-wall design of the upper-level balconies will help to mitigate noise impacts from the upper units. In addition, buffering will include a 20+ foot wide landscape area which will be

planted with screening trees and a 6-foot high solid masonry wall located on the property line to help attenuate noise.

EAST:

Only the side areas of five buildings face the easterly property boundary. Blinds for all windows are included with all apartment units. Setbacks meet and exceed adjacency requirements. Landscape buffering ranging from 6± to 39± feet including screening trees and a 6-foot high solid masonry wall located on the property line with help attenuate noise.

c. LOCATION OF OFF-STREET PARKING

Off-street parking and landscape buffers have been located around the perimeter of the site to provide for more setback separation between apartment buildings and existing residences. Parking lot pole lighting is not proposed.

SOUTH:

Parking is located adjacent to six of the seven adjacent residences. The nearest parking area is a minimum of 20 feet away from the south property line and separated by a landscape buffer which will be planted with screening trees and a 6-foot high solid masonry wall. The parking area also includes landscape islands for additional screening and visual relief. In addition, due to topography and grading, the parking in this area will be between 7± and 8± feet lower than the grade of the finish floor grade of the existing residences.

EAST:

Parking is not located adjacent to the four most northerly residences. Parking next to the other eight residences is separated by a 6-foot wide landscape buffer which will be planted with screening trees and a 6-foot high solid masonry wall. The parking area also includes landscape islands for additional screening and visual relief.

(Refer to PRELIMINARY SITE PLAN, PRELIMINARY GRADING PLAN and CROSS SECTIONS in Sections 3 or 5 of this Submittal Packet).

d. WINDOW PLACEMENT

SOUTH:

Only three buildings face the southerly property boundary. Windows facing the south are minimal and screened by lower-level half-wall designs associated with patios and balconies. In addition, setbacks in this area are robust and building pads and parking areas are stepped down from the property boundary. Visibility, noise and privacy impacts from the six lower units will, therefore, be minimal. The overall distance, grade to mitigate visibility from upper-level windows.

EAST:

Only the side areas (windows) of five buildings face the easterly property boundary. Blinds for all windows are included with all apartment units. Setbacks meet and exceed adjacency requirements and range from 39± to 97± feet. Landscape buffering ranging from 6± to 39± feet, screening trees and a 6-foot high solid masonry wall located on the property line will limit visibility through lower-level unit windows and help mitigate visibility from upper-level windows to the east.

(Refer to BUILDING FLOOR PLANS and ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

e. SETBACKS

SOUTH:

There are only three apartment buildings facing the south property line. Building setbacks in this area are generous and range from 97± to 105± feet. Setbacks **exceed** all Code requirements including the adjacency setback transition technique as discussed below.

EAST:

There are only five apartment buildings with sides only facing the east property line. Setbacks in this area range from 39± to 97± feet.

Setbacks **exceed** all Code requirements including the adjacency setback transition technique as further discussed.

(Refer to SETBACK EXHIBIT in Section 3 of this Submittal Packet).

ADDITIONAL TRANSITION ADJACENCY STANDARDS

In addition, Code sections 32.090.030 (e) Lot adjacency standards – Multiple-family residential (1) a-e, apply and are also discussed below:

Existing homes with the exception of one two-story home are one story in height. The proposed apartment buildings do not exceed the height of adjacent existing homes by more than one story as they are only two stories in height, however, the buildings are larger in terms of overall mass. Therefore, transitions using at least three techniques as outline in the Code are required on the east and south boundaries of the site.

The project includes the following three transition techniques as outlined in the Code under (1) b; c; and d as discussed below:

- b. Increasing side yard setback a minimum of five feet beyond that which is required and providing a landscape buffer along a shared lot edge.

PROJECT COMPLIANCE: The side yard setback required is the highest building height x 1 foot. Building heights range from approximately 29.5 feet to 31 feet. For the purpose of this calculation the tallest building has been used. To comply with this transition technique a setback of 31 + 5 feet for a total of 36 feet would be required along with a landscape buffer on the south and east project boundaries.

SOUTH:

There are only three apartment buildings that are located adjacent to the seven residential lots that border the site on the south. Setbacks in this area range from 97± to 105± feet and include a 20-foot minimum wide landscape buffer with wider portions at the easterly and westerly edges of the buffer adjacent to the residential lots. In addition, a solid 6-foot high wall will be constructed along the shared lot edge.

EAST:

All buildings near the east property line are oriented so sides only face the rear yards of the existing single family residences. The closest building to the east property line is the one-bedroom building which is approximately 29.5 feet in height and has the smallest footprint of the four building types. This setback from this location is building is 39± feet and is entirely landscaped with shrubs and screening trees. All other buildings are setback between 77± and 97± feet and include a 6-foot wide landscape buffer, as well as a solid 6-foot high wall along the shared lot edge.

The project design exceeds the requirements of this transition technique.

(Refer to SETBACK EXHIBIT in Section 3 and PRELIMINARY LANDSCAPE PLAN in Sections 3 or 5 of this Submittal Packet).

- c. Providing variations in the side building wall and roof form so that new structures have a comparable scale as adjacent homes along a shared side.

PROJECT COMPLIANCE: All buildings have been designed with variations in front and side walls and roof forms to provide visual interest.

SOUTH:

There are only three apartment buildings that front the adjacent seven residential lots bordering the site on the south. Three different building types are located in this area to provide visual interest. Variations in the building fronts, walls, colors and roof forms are provided. Setbacks in this area range from 97± to 105± feet and include a 20-foot minimum wide landscape buffer with wider portions at the easterly and westerly edges of the buffer adjacent to the residential lots. A solid 6-foot high wall will be constructed along the shared lot edge. In addition, due to topography and grading, the finished floors of the buildings are situated between 7± and 8± feet below the finished floor of

the existing residences. The proposed buildings have similar plate heights as typical two-story homes and due to grading in this area will be comparable in scale.

EAST:

All buildings (5 residential and the maintenance building) located near the east property line are oriented so sides only face the rear yards of the existing single family residences. Three building types are located in this area to provide visual interest. Variations in the building sides, walls, colors and roof forms are provided.

The closest building to the east property line, adjacent to the existing two-story single family residence, is the one-bedroom building. This building is approximately 29.5 feet in height and has the smallest footprint of the three building types making it comparable in scale. The setback from this location is 39± feet and is entirely landscaped with shrubs and screening trees. All other buildings are setback between 77± and 97± feet and include a 6-foot wide landscape buffer, as well as a solid 6-foot high wall along the shared lot edge. The proposed buildings have similar plate heights as typical two-story homes and with setbacks and architectural side wall and roof design variations are comparable in scale.

The project design meets and/or exceeds the requirements of this transition technique.

(Refer to SITE PHOTOS in Section 3 and PRELIMINARY SITE PLAN, PRELIMINARY GRADING PLAN, CROSS SECTIONS and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

- d. Utilizing a roof pitch and overhang similar to that of the adjacent structures.

PROJECT COMPLIANCE:

SOUTH and EAST:

Adjacent homes to the south and east have gable roofs with one to two-foot overhangs and a common roof pitch. Roofs are not flat. The project utilizes a combination of gable, hip and shed roofs of varying pitches with two-foot overhangs. The building roof forms complement the roof lines of adjacent residential properties.

The project design meets and/or exceeds the requirements of this transition technique.

(Refer to SITE PHOTOS in Section 3 and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

MF30 DESIGN STANDARDS

Table 32.06.090-1 of the Code addresses MU Density/Intensity Standards and states that multi-family projects in the MU zone shall follow the MF30 design standards. Section 32.06.080 outlines Residential Multiple family (MDR14, MF21 and MF30) design standards. Each standard (abbreviated) is stated below along with the applicant's project compliance response.

(c) Design Standards

(1) Site planning standards

(a) Site Character

1. *Natural Site Features shall be preserved...*

APPLICANT'S RESPONSE: The site is characterized by disturbed and undisturbed land with sparse native vegetation. There are no natural site features to be preserved.

(Refer to AERIAL and SITE PHOTOS and SITE CONDITIONS EXHIBITS in Section 3 of this Submittal Packet).

2. *Natural features such as mature trees, creeks...*

APPLICANT'S RESPONSE: There are no trees, creeks or riparian corridors on the site. There are no natural site features to be preserved.

(Refer to AERIAL and SITE PHOTOS and SITE CONDITIONS EXHIBITS in Section 3 of this Submittal Packet).

3. *Multifamily developments should be served by arterial and collector...*

APPLICANT'S RESPONSE: The project will be served by one entry point from River Ranch Road. River Ranch Road provides access to U.S. Highway 50 Alternate to the north and serves the Pioneer Crossing Casino and mini-warehouse facility to the north, as well as residential uses to the south. Half street improvements in accordance with the City's Collector Street standards are proposed with the project.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

(b) Site Design

1. *Provide landscape, open space and amenity areas...*

APPLICANT'S RESPONSE: The site includes 6.98± acres (34.70% of the site area) of landscape area which will beautify the entire community. Amenity areas including a clubhouse with an exercise studio, passive and active open space, turf areas, children's playgrounds and a dog park are located throughout the development ensuring access and useability for residents.

(Refer to PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

2. *Provide convenient pedestrian circulation...*

APPLICANT'S RESPONSE: The project site includes an integrated sidewalk system throughout the community. Pedestrian circulation includes access to parking, buildings and community amenity areas. Internal sidewalks will be 4-feet in width. In addition, the network provides access to the proposed 5-foot wide meandering sidewalk adjacent to River Ranch Road.

(Refer to PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

3. *Provide appropriate buffering...*

APPLICANT'S RESPONSE: The site is well buffered to and from adjacent uses. Setbacks and landscaping exceed Code requirements. A solid masonry type wall 6 feet in height will be provided adjacent to existing residences to the south and east, as well as adjacent to U.S. Highway 50 Alternate.

(Refer to SETBACK and FENCE, WALL AND SIGNAGE EXHIBITS in Section 3, as well as PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

4. *Provide convenient and adequate resident and guest parking.*

APPLICANT'S RESPONSE: Parking convenient to the Clubhouse and each apartment building is located throughout the project site. Parking exceeds Code requirements for residents and guests.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

5. *Activate street frontages with interesting building design, landscaping...*

APPLICANT'S RESPONSE: With the project, River Ranch Road will be improved with half street improvements. A 5-foot wide meandering sidewalk will be constructed within landscape areas along the street frontage with decorative split rail fencing as a pedestrian amenity. The meandering sidewalk will connect to 4-foot wide interior sidewalks located throughout the community. Buildings adjacent to the frontage vary in size and orientation to provide interest from the street.

(Refer to PROPOSED FENCES & WALLS EXHIBIT in Section 3 and PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

c. *Building Orientation*

1. *Buildings shall be generally oriented with varying setbacks...*

APPLICANT'S RESPONSE: The site plan has been designed to include buildings of varying sizes, orientations, offsets and setbacks to provide visual interest. In addition, open space areas have been included adjacent to and between the buildings to avoid a monotonous appearance.

(Refer to PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

2. *Buildings shall be oriented in such a way as to create courtyards and open space areas...*

APPLICANT'S RESPONSE: Buildings are oriented to provide open space yards and corridors between the structures to meet Fire Safety requirements and for strategic location of community amenities. The site includes 6.98± acres (34.70%) of landscape area. All units

include private patios and access to open space via an integrated sidewalk system throughout the community.

(Refer to PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

3. *To provide indoor privacy between living spaces, there should be distance separations, buffering or changes in the angle of units. Private outdoor space...*

APPLICANT'S RESPONSE: The orientation of the buildings varies with some fronts facing each other, some sides facing sides, some fronts facing sides and a mix facing open space or amenity areas. The buildings also step down from south to north and setbacks are varied to provide project interest and privacy between living units. All buildings are separated by at least 20 feet. Blinds for tenant privacy are provided for all windows for all apartment units. Private outdoor lower-level patios and upper-level balconies are provided for each unit. Solid half-wall designs help provide privacy for outdoor use of the patios and balconies. Community open space and amenities are located and spread throughout the project. All common open space and amenity areas are located in accessible and useable areas. There are no steep slopes or riparian areas on the project site.

(Refer to PRELIMINARY SITE and LANDSCAPE PLANS and BUILDING FOOTPRINTS and ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

(2) Parking and Circulation

a. Vehicular access

1. *Two points of ingress/egress shall...*

APPLICANT'S RESPONSE: There are three points of ingress/egress for the project. The primary access is from River Ranch Road near the center portion of the community. This access point includes a center

median. In addition, there is a gated access from River Ranch Road at the southerly boundary of the site. This access is intended for emergency access purposes, as well as for restricted access by NV Energy to the Lonely Substation. The third access point is located at the southeast corner of the site and will be gated for emergency access to and from Fort Sutter Boulevard to the east.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

2. *No vehicular access shall be provided on a local street...*

APPLICANT'S RESPONSE: River Ranch Road borders the site on the west and will provide primary access to the community. River Ranch Road provides direct access from this site, as well as the single family neighborhood to the south, to the north to U.S. Highway 50 Alternate. Access to the south through the residential neighborhood by future residents is not efficient and not anticipated to be frequent. No direct via Fort Sutter Boulevard. Access in this location will be gated for emergency vehicle use only.

b. *(Driveways) Entry driveways shall have a sidewalk on both sides and shall include...*

APPLICANT'S RESPONSE: There is only one entry driveway proposed from River Ranch Road located near the center portion of the site. The entry drive will have a 4-foot wide sidewalk on each side connecting to internal sidewalks, the Clubhouse and the 5 foot wide meandering sidewalk on River Ranch Road. The entry area will incorporate three features including ground lighted monument signage (large granite boulders on each side with raised individual lettering identifying the River Ranch Apartments); enhanced landscaping and a lighted flag pole.

(Refer to PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

c. *Parking*

1. *Off-street parking shall be designed to minimize...*

APPLICANT'S RESPONSE: Off-street parking is located throughout the community. There are only a few spaces located adjacent to River Ranch Road at the southwesterly corner of the site. These spaces, however, are separated from the road with a landscape buffer and meandering sidewalk. In addition, the design of the parking area includes a number of landscaped islands for visual relief.

(Refer to PRELIMINARY SITE and LANDSCAPE PLANS in Sections 3 or 5 of this Submittal Packet).

2. *On-site parking spaces shall be provided...*

APPLICANT'S RESPONSE: On-site surface parking is provided throughout the community. All parking is located to conveniently serve the residents. Parking spaces are within 150 feet or less from each building.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

3. *Carports and garages shall be designed...*

APPLICANT'S RESPONSE: N/A. Carports and garages will not be provided with this project.

4. *To the maximum extent possible, detached garages...*

APPLICANT'S RESPONSE: N/A. Carports and garages will not be provided with this project.

5. *Detached garages and carports shall be...*

APPLICANT'S RESPONSE: N/A. Carports and garages will not be provided with this project.

d. *Pedestrian Circulation*

1. *All multifamily/attached single-family developments shall...*

APPLICANT'S RESPONSE: Sidewalks, 4-feet in width, are provided throughout the community to facilitate access to and connections between parking, buildings, the Clubhouse, and all open space and amenity areas. The sidewalk system is integrated and connects to the 5-foot wide meandering sidewalk adjacent to River Ranch Road.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

2. *Sidewalks along public streets shall...*

APPLICANT'S RESPONSE: The proposed meandering sidewalk along River Ranch Road is 5-feet in width.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

3. *The parking area shall be designed in a manner which links...*

APPLICANT'S RESPONSE: All parking areas on the site have been designed with links to sidewalks that provide access to all buildings and open space amenity areas.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

(3) Community Amenities

- a. Clusters of buildings shall be arranged...*

APPLICANT'S RESPONSE: Common open spaces and recreational amenities are located throughout the project site. Clusters of buildings are arranged to frame and enclose these areas providing views from the fronts and side windows of the units.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

- b. Multifamily/attached single-family developments shall have useable community...*

APPLICANT'S RESPONSE: The project features useable community amenities including the Clubhouse exercise studio, passive and active open space areas, children's playgrounds, and a dog park to foster recreation and social activities.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

- c. Multifamily developments shall provide recreational amenities ...*

APPLICANT'S RESPONSE: The project includes 320 multifamily units. According to Table 32.03.080-2, at least 6 amenities are required. The project includes 8 amenities.

d. *Developments shall choose from the following recreational facilities...*

APPLICANT'S RESPONSE: The project includes the following 8 recreational facilities that are included on the list:

- Exercise equipment (Exercise studio in Clubhouse)
- Court and lawn areas for field games (4 large turf areas for open play and games)
- Play Structure (2 playground areas designated for Children's Play Structures)
- Dog Park (including fencing, tables and benches)

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

e. *To ensure that recreational facilities are conveniently located...*

1. *Be located within 1,000 feet...*

APPLICANT'S RESPONSE: The site length (longest portion) is 1,266± feet and the width (widest portion) is 925± feet. Recreational amenities are spread throughout the site and are within 1,000 feet from any dwelling unit.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

2. *Be connected to residential buildings...*

APPLICANT'S RESPONSE: All recreational amenities are connected to buildings by 4-foot wide internal sidewalks and open space.

(Refer to PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

f. All living units shall have a private open space...

APPLICANT'S RESPONSE: All units have either lower-level private outdoor patios or upper-level balconies featuring half-wall designs for tenant privacy. Patios and balconies are a minimum of 140 square feet in size and exceed Code requirements.

(Refer to BUILDING FLOOR PLANS and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

(4) Landscaping and Screening

a. Perimeter landscaping and buffers...

APPLICANT'S RESPONSE: Landscaping and buffers are provided around the perimeter of the community in accordance with Code Landscaping standards and requirements.

(Refer to PRELIMINARY LANDSCAPE PLAN in Sections 3 or 5 of this Submittal Packet).

b. Perimeter fencing and/or walls shall be a maximum of six feet tall except for the following conditions:

- 1. Walls that are adjacent to areas occupied or zoned for commercial development shall be eight feet tall.*

APPLICANT'S RESPONSE: All walls are proposed to be 6-feet in height. The site is adjacent to property zoned EC (mini-warehouses with outside storage) and I (Lonely Substation utility facility) which are industrial type uses but is not adjacent to property occupied or zoned commercial.

- 2. Walls that are adjacent to property occupied by or zoned for single family...*

APPLICANT'S RESPONSE: All walls adjacent to property occupied or zoned for single family residences will be 6 feet in height. This applies to the south and east property boundaries where properties are zoned SF6 and occupied by single family residences.

(Refer to PROPOSED FENCES & WALLS EXHIBIT in Section 3 and PRELIMINARY SITE PLAN in Sections 3 or 5 of this Submittal Packet).

3. *Fencing and wall shall incorporate the use of durable, decorative materials...*

APPLICANT'S RESPONSE: Solid masonry type walls (pre-cast decorative Verti-Crete or equivalent) and durable wood, split rail fences will be provided around perimeter areas of the site.

(Refer to PROPOSED FENCES & WALLS EXHIBIT in Section 3 of this Submittal Packet).

4. *Continuous lengths of blank walls or fencing without variation...*

APPLICANT'S RESPONSE: Walls will include a decorative type finish. Capped pillars will be provided approximately every 13 feet to provide interest and variation in the walls.

- c. *To promote visual interest, projects are encouraged to incorporate a combination of solid and open materials with offsets...*

APPLICANT'S RESPONSE: To promote visual interest, the project includes solid decorative type masonry walls and open view split rail fencing around the perimeter of the site. Solid walls include capped

pillars approximately every 13 feet providing visual interest, variation and offsets in the horizontal plane of the wall. All walls and fences are adjacent to landscape areas featuring planted trees and shrubs to also provide screening and visual relief.

(Refer to PROPOSED FENCES & WALLS EXHIBIT in Section 3 and PRELIMINARY LANDSCAPE PLAN in Section 3 or 5 of this Submittal Packet).

(5) Building Architecture

a. Building Design

- 1. There is no specific architectural “style” required...*

APPLICANT’S RESPONSE: The architectural style including form, size, color, materials and roof lines of all building types is compatible and complimentary throughout the community.

- 2. In order to avoid boxy and monotonous facades that lack...*

APPLICANT’S RESPONSE: All buildings incorporate articulation including the use of stairs, wall plane variations including recesses and projections, patio and balcony projections, windows, color bands and color variations to avoid boxy and monotonous facades. There are no flat wall planes exceeding 50 feet vertically or horizontally.

- 3. Architectural features shall be incorporated to emphasize building features...*

APPLICANT’S RESPONSE: The buildings have been designed with a distinct architectural style emphasizing features such as private, covered entries; lower-level

patios and upper-level balconies; variation in window sizes and shapes, as well as wall planes including recesses and projections and varying roof forms.

4. *The following standards apply:*

- a. *The architectural character (i.e. exterior materials, window trims, cornices, arches, etc.) of the exterior elevations...*

APPLICANT'S RESPONSE: The buildings have been situated on the site to include different sized buildings and orientations facing the River Ranch Road public street. The architectural character of the exterior elevations is consistent on all sides of all buildings.

- b. *Roof shall have variations in plane accomplished by changes in plane or by...*

APPLICANT'S RESPONSE: The buildings include a combination of hip, gable and shed roofing. The primary roof has a 4:12 pitch and the patio roof have a 3:12 pitch. There are no flat roofs proposed.

- c. *Stairs shall be compatible with the architecture...*

APPLICANT'S RESPONSE: Individual stairs serve the individual upper units and provide access to covered entries. Stairs are integrated into the design of the buildings. Stair steps are concrete and include black metal railings.

- d. Access points to units shall be clustered...

APPLICANT'S RESPONSE: Private, covered access entry points are provided to each unit. Two entry points, one to the lower unit and one to the upper unit via a stairway, are provided on each side of the building (front and back). The lower and upper-level front doors line up with each other in a clustered manner. Entry doors are painted an accent color for distinction.

(Refer to COLOR PALETTE in Section 3 and BUILDING FLOOR PLANS and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

b. Roof Forms

1. *Roof forms shall be designed to correspond...*

APPLICANT'S RESPONSE: The buildings include a combination of hip, gable and shed roof forms. The various forms have been designed to correspond to building elements and functions including entries, building plane variation areas and patios/balconies.

2. *All roof vents, pipes, other roof penetrations and attachments...*

APPLICANT'S RESPONSE: Roof penetrations are limited and will not extend above roof ridgelines. No chimneys or equipment on the roof are proposed. All roof vents, pipes and other penetrations will be painted to match and blend in with the roof design to minimize visual impacts from River Ranch Road and other public areas.

c. *Building Materials*

1. *Exterior elevation shall demonstrate...*

APPLICANT'S RESPONSE: Exterior elevations provide a unified appearance and include a logical use of complementary materials and colors to prevent expansive areas of visual monotony.

2. *Change of materials or color shall occur at changes in plane...*

APPLICANT'S RESPONSE: Changes in color and the use of accents occur at changes in wall plane recesses and projections and logical break points. In addition, the buildings include the use of distinctive door colors.

3. *Building materials and color schemes shall be consistent with the...*

APPLICANT'S RESPONSE: Building materials include stucco and complimentary composite architectural shingles and are consistent with the architectural style. Color schemes for the individual buildings include Tuscan, French and Spanish body color and trim palettes.

The use of compatible color schemes avoid monotony and provides visual interest throughout the community.

4. *Materials such as brick and stone shall be left in their natural colors.*

APPLICANT'S RESPONSE: All accent materials including brick and stone, if and where used, will be left in their natural colors.

(Refer to COLOR PALETTE in Section 3 and BUILDING FLOOR PLANS and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

COMPREHENSIVE MASTER PLAN COMPLIANCE

The following is an overview of specific Chapters, Sections and Goals and Policies Strategies provided in the 2018 Comprehensive Master Plan that support the proposed River Ranch Apartment project.

As stated in the document, the purpose of the Plan is to guide decision making regarding the physical development of the City. Growth, future employment and economic development opportunities are discussed, as well as the need for Fernley to consider a variety of land uses and economic development strategies. The Plan states the need to diversify the current housing stock by providing options including additional multi-family and renter-occupied housing opportunities.

PROJECT COMPLIANCE: The proposed project provides new multi-family renter-occupied housing in the City of Fernley in accordance with the comprehensive plan including the following:

CHAPTER 1 - POPULATION, HOUSING AND EMPLOYMENT

1.4 EMPLOYMENT, POPULATION AND HOUSING PROJECTIONS

This section discusses the growth in employment through new job creation leading to significant increases in the demand for housing in the Northern Nevada region. It also cites the need for Fernley to compete by diversifying the housing stock and providing workforce housing units to meet future population and employment demands. The proposed River Ranch Apartments project is specifically in compliance with the following Goals and Action Strategies outlined in the Plan:

1.5 GOALS AND ACTION STRATEGIES

HP.1.1 Enhance Fernley's vitality as a community by providing a variety of housing types, density and costs that accommodate the needs, desires and financial abilities of the current and future households.

PROJECT COMPLIANCE: The multi-family project has a density of 15.38 units per acre and will add to the diversity of housing options in the City of Fernley. The project will provide entry-level rental housing to accommodate the needs of existing and future residents seeking nearby job opportunities.

HP.1.1.4 Encourage the efficient use of land and existing infrastructure by focusing on achieving good design in new housing or redeveloped housing on either vacant land, infill parcels and/or underdeveloped parcels.

PROJECT COMPLIANCE: The project is efficiently designed at a density of 15.38 units per acre. The project is served by existing infrastructure and is well designed in full accordance with MU density/intensity standards, adjacency standards and MF30 design standards.

(Refer to PRELIMINARY SITE PLAN and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

HP.1.4 Provide opportunities for high-density residential development near the downtown core and in the community where elsewhere in the community where appropriate.

PROJECT COMPLIANCE: The project is a multi-family residential project with a density of 15.38 units per acre and is located in an appropriate area designated on the Comprehensive Master Plan for Suburban Mixed Use Development. The project provides a logical transition from single family residences to the south and east to more intense industrial and commercial type uses to the north and west.

(Refer to EXISTING MASTER PLAN EXHIBIT in Section 3 of this Submittal Packet).

HP.1.4.1 Multi-family land use should be dispersed throughout the community near employment centers and transportation corridors rather than concentrated in a few areas.

PROJECT COMPLIANCE: The site is located south of U.S. Highway 50 Alternate with direct access from River Ranch Road. The site is in close proximity to the Victory Logistics District employment center and the

planned extension of Nevada Pacific Parkway. The project will be key in providing needed close by workforce housing.

(Refer to VICINITY MAP in Section 3 of this Submittal Packet).

HP.1.6 Provide a spectrum of high quality housing to meet the City's need.

PROJECT COMPLIANCE: The project has been well designed as a high quality entry-level multi-family apartment community that will provide new housing opportunities for existing and future residents. The project meets all City design standards.

(Refer to PRELIMINARY SITE PLAN and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

3. LAND USE

This section references that future growth and development, as well as the planned extension of infrastructure and services are all based on the Land Use Map. This section also states that a balanced land plan for the City of Fernley provides for a diverse mix of housing types. The Plan adds the Suburban Mixed Use land use designation to encourage a broad mix of uses including high-density residential within close proximity to services and employment. The Plan further states the goal for the City is to effectuate growth and redevelopment as depicted on the Land Use Map and to have the Master Plan and Zoning Maps in conformance with each other.

3.7 GOALS AND ACTION STRATEGIES

L.U.1.2 Encourage new development to be in accordance with the Comprehensive Master Plan land use category, and other land use controls to accomplish community principles.

PROJECT COMPLIANCE: The project site is designated Suburban Mixed Use on the Comprehensive Master Plan and is in compliance with the Master Land Use Plan and specific Master Plan Goals and Action Strategies for Population, Housing and Employment and Land Use.

(Refer to EXISTING MASTER PLAN EXHIBIT in Section 3 of this Submittal Packet).

L.U.1.4 Ensure existing and future land uses are compatible.

PROJECT COMPLIANCE: The project design meets all Adjacency Standards and is compatible with existing and future land uses. The project density provides a logical transition from existing single family residences to the south and east and more intense industrial and commercial type uses to the north and west.

(Refer to PRELIMINARY SITE PLAN and BUILDING ELEVATIONS in Sections 3 or 5 of this Submittal Packet).

CONDITIONAL USE PERMIT FINDINGS

The following outlines the required findings and provides responses to address the requested Conditional Use Permit request as outlined in the Development Code per Section 32.03.050 (b) Conditional Use Permit (6) a-f:

- a. The approving agency must make findings that the proposed conditional use will be in compliance with the master plan;

APPLICANT'S RESPONSE: The master plan designation for this property is Suburban Mixed Use (SMU). The requested Conditional Use Permit, as well as the Zoning Change to MU, is consistent with the master land use plan and meets all the requirements of the Code. The proposed project is additionally in conformance with specific Population, Housing and Employment and Land Use Goals and Action Strategies.

- b. The conditional use will be compatible with the existing or permitted uses of adjacent properties;

APPLICANT'S RESPONSE: The project density is 15.38 dwelling units per acre and provides a perfect density transition from the adjacent single family residences to the south and east and the more intensive industrial and commercial type uses (mini-warehouses, Lonely Substation utility facility and Pioneer Crossing Casino) to the south and west. The project has been designed to be compatible with existing and planned adjacent uses.

The project meets and/or exceeds all compatibility requirements including mixed use density/intensity standards; adjacency standards and MF30 design standards.

- c. The potential impairment of natural resources and the total population, which the available natural resources will support without unreasonable impairment;

APPLICANT'S RESPONSE: There is no potential impairment of natural resources as a result of the proposed project. The site consists of disturbed and undisturbed land with sparse native vegetation. There are no trees, streams, waterways, drainageways, wetlands or other natural resources located on the property. In terms of water resources, water rights to support the residential and irrigation needs of the project are readily available and will be dedicated to the City with development.

- d. The availability of and need for affordable housing in the community, including affordable housing that is accessible to persons with disabilities;

APPLICANT'S RESPONSE: The need for additional affordable housing in Northern Nevada including Fernley is well documented. In August, 2022, United States Secretary of Transportation, Pete Buttigieg, visited the City of Fernley to announce a grant to complete Nevada Pacific Parkway linking I-80 with U.S. Highway 50 Alternate. During the ceremony, various officials spoke and announced 10,000 new jobs would be coming to Fernley largely in the Victory Logistics District which is in close proximity to the project site.

(Refer to VICINITY MAP in Section 3 of this Submittal Packet).

The River Ranch Apartments project will provide homes to many of the anticipated 10,000 workers. The project is an entry-level, obtainable, market rate 320-unit development. All ground floor units (160 apartments) will be accessible and a minimum of two percent of those units will be fully handicap adapted in compliance with the Fair Housing Act (FHA) and Americans with Disabilities Act (ADA). Additionally, there will be fully

accessible amenities, accessible sidewalks and handicap parking to meet requirements throughout the community.

- e. The conditional use permits impact have been conditioned to address identified impacts;

APPLICANT'S RESPONSE: The submitted Conditional Use Permit application addresses all City of Fernley requirements for projects located in a MU zone including density/intensity standards, multi-family design standards and residential adjacency standards. The City of Fernley will be responsible for providing any conditions to address impacts that have not been mitigated by the applicant through the submitted project application.

- f. Public notice has been given and a public hearing held per the requirements of the development code and the Nevada Revised Statutes.

APPLICANT'S RESPONSE: The City of Fernley is responsible for providing public notice in accordance with the Development Code and Nevada Revised Statutes. A public hearing or hearings will be properly noticed and held with a decision as to the Conditional Use Permit request made in accordance with all legal requirements.

OVERALL PROJECT SUMMARY

- The project site consists of 20.80± acres and is located south of U.S. Highway 50 Alternate and east of River Ranch Road in close proximity to the Victory Logistics District and within easy access to the proposed extension of Nevada Pacific Parkway.
- Infrastructure and utilities are available to serve the proposed project.
- In the coming years, approximately 10,000 new jobs are expected to be created in Fernley as a result of the opportunities in the Victory Logistics District and other new employment areas.
- A variety of new housing options including entry level multi-family projects with rental opportunities are needed to accommodate future anticipated work force growth.
- The project is a well designed apartment community in an ideal location to help meet the future housing needs of the City of Fernley.

ZONING MAP AMENDMENT

- The proposed MU Zoning is in full conformance with the SMU master land use plan designation, as well as applicable Goals and Action Strategies.
- The existing site zoning (I, EC and C2) is not in conformance with the existing master plan designation of Suburban Mixed Use (SMU).
- The Comprehensive Master Plan states the City's goal is to have Zoning be in conformance with the Master Land Use Plan.
- All Zoning Map Amendment Required Findings are justified in detail and can be made by the Planning Commission and City Council.

CONDITIONAL USE PERMIT

- The project is a 320-unit multi-family apartment community and will provide entry level housing options to meet the needs of new and existing residents seeking new job opportunities in the City of Fernley.

- The project has a density of 15.38 units per acre and provides a logical transition from existing single family residences to the south and east and higher intensity industrial and commercial type uses to the north and west.
- The project has been well designed to be compatible with surrounding land uses.
- The project is in compliance with all zoning and land use compatibility requirements including MU Density/Intensity Standards; Adjacency Standards; and MF30 Design Standards.
- The project is in compliance with the Comprehensive Master Plan Land Use Plan designation of Suburban Mixed Use (SMU), as well as specific Goals and Action Strategies relating to Population, Housing and Employment and Land Use.
- All Conditional Use Permit Required Findings are justified in detail and can be made by the Planning Commission and City Council.

Conditions of Approval for CUP22004

Conditional Use Permit

1. APPROVAL:

THE PROJECT IS APPROVED AS SUBMITTED AND CONDITIONED. ANY SUBSTANTIVE CHANGE SHALL REQUIRE REVIEW AND APPROVAL BY THE PLANNING COMMISSION AS AN AMENDMENT TO THIS CONDITIONAL USE PERMIT.

2. PROJECT DESCRIPTION:

THE PROJECT APPROVAL IS LIMITED TO A MAXIMUM OF 320 MULTI-FAMILY UNITS ON ±20.80 ACRES.

3. EXPIRATION DATE:

THE CONDITIONAL USE PERMIT SHALL EXPIRE WITHIN ONE (1) YEAR OF THE DATE OF APPROVAL, UNLESS THE PERMITTED USE HAS BEEN ESTABLISHED OR CONSTRUCTION TO ACCOMMODATE THAT USE HAS BEGUN AND IS BEING DILIGENTLY PURSUED. A ONE-YEAR EXTENSION MAY BE GRANTED BY THE PLANNING COMMISSION IF REQUESTED PRIOR TO THE EXPIRATION DATE OF THE CONDITIONAL USE PERMIT APPROVAL.

4. WATER RIGHTS:

THE DEVELOPER SHALL COMPLY WITH ALL CITY OF FERNLEY MUNICIPAL CODES REGARDING THE DEDICATION OF WATER RIGHTS, INCLUDING ALL ASSOCIATED FEES, FOR THE CONNECTION TO THE CITY'S MUNICIPAL WATER SYSTEM IN THE AMOUNT THAT IS REQUIRED PRIOR TO THE ISSUANCE OF ANY BUILDING PERMIT FOR ANY PHASE OF THE PROJECT.

5. LANDSCAPING/IRRIGATION:

THE DEVELOPER SHALL SUBMIT A LANDSCAPING AND IRRIGATION PLAN FOR THE PROJECT IN CONFORMANCE WITH THE CITY OF FERNLEY'S DEVELOPMENT CODE FOR REVIEW AND APPROVAL BY THE ADMINISTRATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE PROJECT. THE LANDSCAPING AND IRRIGATION SHALL BE INSTALLED PER THE APPROVED PLANS PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR EACH BUILDING TO THE APPROVAL OF THE ADMINISTRATOR.

6. WATER AND SEWER MAINS AND SERVICES:

THE DEVELOPER SHALL COMPLY WITH ALL STANDARDS, CODES, AND REQUIREMENTS REGARDING CONNECTION TO THE CITY'S SANITARY SEWER AND POTABLE WATER SYSTEMS, INCLUDING BUT NOT LIMITED TO, ASSOCIATED FEES, EASEMENTS, DESIGN STANDARDS, SYSTEM LOOPING, DEVELOPMENT CODE REQUIREMENTS, AND STATE REQUIREMENTS.

THE DEVELOPER SHALL PROVIDE THE CITY WITH A UTILITY PLAN FOR WATER AND SANITARY SEWER THAT IS IN CONFORMANCE WITH THE CITY OF FERNLEY'S MUNICIPAL CODE AND PUBLIC WORKS DESIGN MANUAL TO THE APPROVAL OF THE CITY ENGINEER, PUBLIC WORKS DIRECTOR, AND ADMINISTRATOR. EACH PHASE MUST ALSO BE REVIEWED AND APPROVED BY THE NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION PRIOR TO CONSTRUCTION.

7. UTILITY EASEMENTS:

THE DEVELOPER SHALL PROVIDE EASEMENTS TO THE CITY OF FERNLEY FOR THE MAINTENANCE OF THE PUBLIC INFRASTRUCTURE BEING INSTALLED ON PRIVATE PROPERTY. THE EASEMENTS SHALL INCLUDE THE CITY OF FERNLEY'S STANDARD EASEMENT LANGUAGE AND SHALL BE RECORDED PRIOR TO ISSUING A PERMIT TO START CONSTRUCTION OF THE INFRASTRUCTURE. IN NO SITUATION SHALL WORK TAKE PLACE ON PRIVATE PROPERTY WITHOUT A RECORDED EASEMENT IN PLACE.

Conditions of Approval for CUP22004

Conditional Use Permit

8. WATER SYSTEM LOOPING:

THE DEVELOPER SHALL PROVIDE THE CITY WITH A UTILITY PLAN FOR THE WATER SYSTEM THAT DEMONSTRATES ADEQUATE SYSTEM LOOPING PRIOR TO THE ISSUANCE OF A PERMIT. THE PLAN SHALL BE IN CONFORMANCE WITH THE CITY OF FERNLEY'S MUNICIPAL CODE, NEVADA ADMINISTRATIVE CODE, AND PUBLIC WORKS DESIGN MANUAL TO THE APPROVAL OF THE CITY ENGINEER, PUBLIC WORKS DIRECTOR, AND ADMINISTRATOR.

9. WATER AND SEWER SYSTEM MODELING:

THE DEVELOPER SHALL COMPLETE WATER AND SEWER MODELING FOR THE PROJECT PRIOR TO THE ISSUANCE OF A PERMIT. THE DEVELOPER SHALL CONSTRUCT ANY IMPROVEMENTS IDENTIFIED BY THE MODELING AS NECESSARY TO SERVE THE PROJECT IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. THE PROJECT WILL REQUIRE CAPACITY UPGRADES TO BE COMPLETED AT THE EXISTING TMAI LIFT STATION. THE WORK SHALL BE COMPLETED PRIOR TO ISSUING FIRST CERTIFICATE OF OCCUPANCY FOR ANY BUILDING ON THE PROJECT SITE.

10. NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION:

THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION – BUREAU OF SAFE DRINKING WATER AND BUREAU OF WATER POLLUTION CONTROL FOR THE WATER AND SEWER INFRASTRUCTURE DESIGN AND CONSTRUCTION TO THE APPROVAL OF THE ADMINISTRATOR, CITY ENGINEER, AND PUBLIC WORKS DIRECTOR.

11. GRADING PERMIT:

THE DEVELOPER SHALL SUBMIT A GRADING PLAN FOR ANY PHASE OF THE PROJECT TO THE APPROVAL OF THE CITY ENGINEER. PRIOR TO THE ISSUANCE OF A GRADING PERMIT FOR THE DEVELOPMENT, THE DEVELOPER SHALL POST A SURETY BOND FOR REGRADING AND RECLAMATION OF THE SITE. THE DEVELOPER SHALL PROVIDE A STAMPED ENGINEER'S ESTIMATE FOR REGRADING AND RECLAMATION OF THE SITE. THE DEVELOPER SHALL COMPLY WITH ALL GRADING REQUIREMENTS SET FORTH IN THE CITY OF FERNLEY'S DEVELOPMENT CODE AS WELL AS ALL STATE AND FEDERAL REGULATIONS. THE DEVELOPER OR THEIR DESIGNEE SHALL BE RESPONSIBLE FOR OBTAINING AND MAINTAINING A STORM WATER POLLUTION PREVENTION PERMIT WITH THE STATE OF NEVADA AS WELL AS A SURFACE AREA DISTURBANCE PERMIT.

12. STORM DRAINAGE:

THE DEVELOPER SHALL PROVIDE A FINAL DRAINAGE REPORT FOR THE PROJECT IN CONFORMANCE WITH THE FERNLEY MUNICIPAL CODE AND THE PUBLIC WORKS DESIGN MANUAL FOR REVIEW AND APPROVAL BY THE CITY ENGINEER PRIOR TO APPROVAL OF A BUILDING PERMIT FOR ANY PORTION OF THE PROJECT. EACH SUCCESSIVE PHASE OF THE PROJECT SHALL SUBMIT AN UPDATED DRAINAGE REPORT FOR REVIEW AND APPROVAL BY THE CITY ENGINEER SHOWING THE CUMULATIVE EFFECT OF THE DEVELOPED PORTION OF THE PROJECT ALONG WITH THE PROPOSED PHASE'S EFFECT ON THE TOTAL DISCHARGE INTO THE DRAINAGE SYSTEM. THE STORM WATER AND DRAINAGE PLANS FOR THE PHASES OF THE DEVELOPMENT SHALL BE REVIEWED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE ISSUANCE OF A GRADING PERMIT FOR THE PHASES OF THE PROJECT.

ALL INTERNAL STORM DRAIN INFRASTRUCTURE SHALL BE MAINTAINED BY THE PROPERTY OWNER.

13. GEOTECHNICAL REPORT:

THE DEVELOPER SHALL PROVIDE A GEOTECHNICAL REPORT FOR THE PROJECT IN CONFORMANCE WITH THE REQUIREMENTS OF THE DEVELOPMENT CODE FOR REVIEW AND APPROVAL BY THE CITY ENGINEER PRIOR TO THE APPROVAL OF A GRADING PERMIT OR BUILDING PERMIT FOR ANY PORTION OF THE PROJECT.

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Conditional Use Permit

14. STRUCTURAL CONTROLS:

THE DEVELOPER SHALL UTILIZE STRUCTURAL CONTROLS FOR THE TREATMENT OF STORM WATER RUNOFF IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES TO THE APPROVAL OF THE PUBLIC WORKS DIRECTOR AND CITY ENGINEER.

15. SANITARY SEWER REPORT:

THE DEVELOPER SHALL PROVIDE A FINAL SANITARY SEWER REPORT FOR THE PROJECT IN CONFORMANCE WITH THE FERNLEY MUNICIPAL CODE AND THE PUBLIC WORKS DESIGN MANUAL FOR REVIEW AND APPROVAL BY THE CITY ENGINEER PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR ANY PORTION OF THE PROJECT.

16. DESIGN STANDARDS:

THE DEVELOPER SHALL COMPLY WITH ANY DESIGN STANDARDS AND REGULATIONS AS SET FORTH IN THE CITY OF FERNLEY DEVELOPMENT CODE AND CITY OF FERNLEY DESIGN STANDARDS UNLESS IN CONFLICT WITH THE LOCAL, STATE OR FEDERAL REGULATIONS, IN WHICH CASE THE MORE STRINGENT REGULATION WILL TAKE PRECEDENCE.

17. ENGINEERING/PUBLIC WORKS:

THE DEVELOPER SHALL COMPLY WITH ALL THE REQUIREMENTS OF THE CITY OF FERNLEY MUNICIPAL CODE, DEVELOPMENT CODE, AND PUBLIC WORKS DESIGN MANUAL FOR THE CONSTRUCTION OF ANY PUBLIC OR PRIVATE INFRASTRUCTURE TO THE APPROVAL OF THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR THE PROJECT.

18. NORTH LYON COUNTY FIRE PROTECTION DISTRICT:

THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE NORTH LYON COUNTY FIRE PROTECTION DISTRICT, INCLUDING BUT NOT LIMITED TO: DEVELOPING A PLAN TO PROVIDE ADEQUATE EMERGENCY ACCESS THROUGHOUT THE SITE, DEVELOPING A MASTER FIRE HYDRANT AND FIRE FLOW PLAN, DEVELOPING A MASTER FIRE DEPARTMENT CONNECTION (FDC) PLAN, AND INSTALLING FIRE SUPPRESSION AND/OR ALARM SYSTEMS TO THE APPROVAL OF THE FIRE CHIEF PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

19. BUILDING DEPARTMENT:

THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE BUILDING DEPARTMENT TO THE APPROVAL OF THE BUILDING OFFICIAL PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

20. ACCESS AND CIRCULATION:

THE DEVELOPER SHALL USE APPROPRIATE STRIPING AND SIGNAGE AS MAY BE NECESSARY TO MINIMIZE TRAFFIC CONFLICT WITHIN THE DEVELOPMENT SITE TO THE APPROVAL OF THE ADMINISTRATOR AND CITY ENGINEER FOR THE LIFE OF THE PROJECT.

21. FEDERAL, STATE, AND LOCAL AGENCIES:

THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF ANY FEDERAL, STATE, OR LOCAL AGENCY WITH JURISDICTION OVER THE PROJECT TO THE APPROVAL OF THE ADMINISTRATOR.

22. TRAFFIC ANALYSIS REPORT:

THE DEVELOPER SHALL PROVIDE A TRAFFIC ANALYSIS REPORT FOR THE PROJECT IN CONFORMANCE WITH THE CITY OF FERNLEY'S MUNICIPAL CODE AND THE PUBLIC WORKS DESIGN MANUAL FOR REVIEW AND APPROVAL BY THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR ANY PORTION OF THE PROJECT. EACH SUCCESSIVE PHASE OF THE PROJECT SHALL SUBMIT AN UPDATED TRAFFIC ANALYSIS REPORT FOR REVIEW AND APPROVAL BY THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR SHOWING THE CUMULATIVE EFFECT

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OF THE DEVELOPED PORTION OF THE PROJECT ALONG WITH THE PROPOSED PHASE'S EFFECT.

23. PARKING:

VISITOR PARKING SHALL BE PROVIDED THROUGHOUT THE SITE. THE DEVELOPER SHALL SUBMIT IMPROVEMENT PLANS THAT SHOW APPROPRIATE STRIPING AND SIGNAGE FOR THE VISITOR PARKING STALLS.

24. CONSTRUCTION MAINTENANCE:

THE DEVELOPER SHALL LOCATE AND UTILIZE A SUFFICIENT NUMBER OF TRASH CONTAINERS ON-SITE TO BE UTILIZED DURING THE CONSTRUCTION OF THE PROJECT TO MAINTAIN THE PROJECT SITE IN A CLEAN AND ORDERLY STATE TO THE APPROVAL OF THE ADMINISTRATOR.

25. CONSTRUCTION HOURS:

THE DEVELOPER SHALL LIMIT ALL CONSTRUCTION AND CONSTRUCTION-RELATED ACTIVITIES TO BETWEEN THE HOURS OF 7:00 AM TO 7:00 PM, SEVEN DAYS A WEEK. THE DEVELOPER SHALL INSTALL SIGNS AT ALL ACCESS POINTS TO THE PROJECT THAT CLEARLY INDICATE THE HOURS OF ACTIVITY ON-SITE PRIOR TO THE START OF ANY CONSTRUCTION-RELATED ACTIVITIES TO THE APPROVAL OF THE ADMINISTRATOR. THE DEVELOPER SHALL MAINTAIN THESE SIGNS IN GOOD REPAIR FOR THE DURATION OF THE CONSTRUCTION OF THE PROJECT. ONCE CONSTRUCTION IS FINISHED, THE DEVELOPER SHALL REMOVE THESE SIGNS.

26. PROJECT CONTACT:

THE DEVELOPER SHALL DESIGNATE TO THE ADMINISTRATOR A PROJECT CONTACT PERSON RESPONSIBLE/AUTHORIZED TO CORRECT PROBLEMS REGARDING THE PROJECT ON A 24-HOUR/7-DAYS A WEEK BASIS. THE DEVELOPER SHALL DESIGNATE THE PROJECT CONTACT PERSON TO THE ADMINISTRATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE PROJECT.

27. ARCHITECTURE/BUILDING ELEVATIONS:

THE DEVELOPMENT OF THE SUBJECT SITE SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE ARCHITECTURAL/BUILDING ELEVATIONS SUBMITTED AS PART OF THIS APPLICATION. SUBSTANTIAL CHANGES TO THE ARCHITECTURE/BUILDING ELEVATIONS SHALL REQUIRE REVIEW AND APPROVAL BY THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR THAT BUILDING. THE DEVELOPER SHALL ARTICULATE LONG FACADES BY VARYING BUILDING MASS, FORM, TEXTURE, MATERIALS, AND INTERPLAY OF SOLID AND OPEN AREAS.

28. TRASH ENCLOSURES:

THE DEVELOPER SHALL LOCATE AND INSTALL TRASH ENCLOSURES TO THE APPROVAL OF WASTE MANAGEMENT AND THE ADMINISTRATOR INCLUDING THE APPROPRIATE SIZE AND LOCATION. THE TRASH ENCLOSURES SHALL MATCH THE PROJECT'S ARCHITECTURE AND BUILDING MATERIALS TO THE APPROVAL OF THE ADMINISTRATOR PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR THE INDIVIDUAL BUILDINGS.

29. UTILITY SCREENING:

THE DEVELOPER SHALL WORK IN CONJUNCTION WITH THE UTILITY COMPANIES TO LOCATE UTILITY EQUIPMENT SUCH AS ELECTRICAL, GAS, AND WATER JUNCTION BOXES, INCLUDING TRANSFORMER BOXES, VAULTS, AND ELECTRICAL PANELS, IN AREAS WHERE THE EQUIPMENT IS SCREENED BY EITHER ARCHITECTURAL ELEMENTS THAT MATCH THE MAIN STRUCTURE'S COLORS AND MATERIALS OR BY ADJUSTING THE APPROVED LANDSCAPING TO COMPENSATE TO THE APPROVAL OF THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR EACH INDIVIDUAL BUILDING.

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30. SCREENING:

THE MECHANICAL EQUIPMENT SHALL BE SCREENED FROM VIEW OF THE PARKING LOT, ADJACENT PUBLIC STREETS, AND PUBLIC AREAS BY USING AN ARCHITECTURAL ELEMENT OF THE BUILDING CONSISTING OF THE SAME, DURABLE MATERIALS AS THE BUILDING TO THE APPROVAL OF ADMINISTRATOR. ANY LOADING DOCKS AND SERVICE AREAS INCLUDING TRASH COMPACTION AND/OR DUMPSTER(S) SHALL BE SCREENED FROM VIEW OF PARKING LOTS AND PUBLIC AREAS. LOADING DOCK SCREENING SHALL BE HIGH ENOUGH TO SCREEN THE TRUCKS. THE SCREENING SHALL BE REVIEWED AND APPROVED BY THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR EACH INDIVIDUAL BUILDING.

31. LIGHTING:

THE DEVELOPER SHALL SUBMIT A LIGHTING PLAN FOR REVIEW AND APPROVAL BY THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. THE DEVELOPER IS REQUIRED TO COMPLY WITH THE LIGHTING STANDARDS AND REQUIREMENTS IN THE CITY OF FERNLEY MUNICIPAL CODE. TO REDUCE THE IMPACT OF GLARE AND MINIMIZE THE EFFECT OF FIELD AND PARKING LIGHTING, LIGHTING FIXTURES WITH EXTERNAL "HOODS" AND INTERNAL GLARE REDUCTION LOUVERS SHALL BE USED.

32. RESIDENTIAL CONSTRUCTION TAX:

THE DEVELOPER IS SUBJECT TO THE PROVISIONS OF FERNLEY MUNICIPAL CODE RELATED TO RESIDENTIAL CONSTRUCTION TAX. THE RESIDENTIAL CONSTRUCTION TAX FEE SHALL BE PAID PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR EACH BUILDING.

33. ADDRESSING AND STREET NAMES:

THE DEVELOPER SHALL SUBMIT A REQUEST FOR ADDRESSING AND STREET NAME RESERVATION APPLICATION TO THE CITY OF FERNLEY FOR REVIEW AND APPROVAL. ALL ADDRESSING OF LOTS SHALL BE COMPLETED BY THE CITY. STREET NAMES SHALL BE APPROVED BY THE CITY PRIOR TO THE SUBMITTAL OF A FINAL MAP FOR THE PROJECT.

34. PROJECT PHASING:

THE PROJECT SHALL BE DEVELOPED IN ACCORDANCE WITH THE PHASING PLAN INCLUDED AS PART OF THIS APPROVAL. EACH PHASE SUBMITTED MUST BE DESIGNED TO MEET THE PUBLIC FACILITIES AND IMPROVEMENT STANDARDS AND BE ABLE TO OPERATE INDEPENDENTLY AND AS PART OF THE OVERALL DESIGN. CHANGES TO THE PHASING PLAN WILL REQUIRE REVIEW AND APPROVAL BY THE ADMINISTRATOR, CITY ENGINEER, AND PUBLIC WORKS DIRECTOR PRIOR TO BEING IMPLEMENTED.

35. WASTE MANAGEMENT:

THE DEVELOPER SHALL PROVIDE A WILL SERVE FROM WASTE MANAGEMENT TO THE APPROVAL OF THE ADMINISTRATOR PRIOR TO THE APPROVAL AND RECORDATION OF A FINAL MAP.

36. NEVADA DEPARTMENT OF TRANSPORTATION:

THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE NEVADA DEPARTMENT OF TRANSPORTATION TO THE APPROVAL OF THE ADMINISTRATOR, PUBLIC WORKS DIRECTOR, AND CITY ENGINEER.

37. UNITED STATES POSTAL SERVICE:

THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE UNITED STATES POSTAL SERVICE FOR MAIL DELIVERY AND MAILBOX DESIGN AND LOCATION TO THE APPROVAL OF THE ADMINISTRATOR, PUBLIC WORKS

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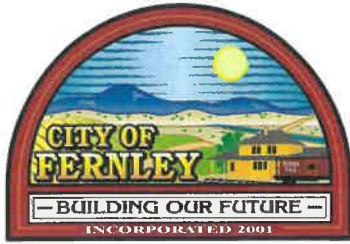
DIRECTOR, AND CITY ENGINEER PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR THE PROJECT.

38. RIVER RANCH ROAD AND US-50 INTERSECTION IMPROVEMENTS:

THE DEVELOPER SHALL SUBMIT A PROPOSED PLAN FOR THE RIVER RANCH/US-50 INTERSECTION, TO THE APPROVAL OF THE CITY ENGINEER, ADMINISTRATOR, PUBLIC WORKS DIRECTOR, AND THE NEVADA DEPARTMENT OF TRANSPORTATION. THE PLAN SHALL INCLUDE RECOMMENDATIONS FOR STRIPING, LIGHTING, AND PEDESTRIAN ACCESS AND SAFETY INCLUDING ADA COMPLIANT PEDESTRIAN RAMPS.

39. RIVER RANCH ROAD IMPROVEMENTS:

THE DEVELOPER SHALL COMPLETE IMPROVEMENTS ON RIVER RANCH ROAD FROM US-50 TO THE ENTRANCE TO THE SINGLE-FAMILY HOME SUBDIVISION TO THE SOUTH OF THE PROJECT IN ACCORDANCE WITH THE CITY OF FERNLEY DEVELOPMENT CODE. ADEQUATE RIGHT OF WAY SHALL BE DEDICATED BY THE DEVELOPER AND ACQUIRED BY THE DEVELOPER AND OFFERED FOR DEDICATION TO THE CITY OF FERNLEY. AT A MINIMUM, RIVER RANCH ROAD SHALL BE IMPROVED TO THE CITY'S 60-FOOT RIGHT-OF-WAY STANDARD INCLUDING CURB AND GUTTER AND SIDEWALK ALONG THE EASTERN BOUNDARY OF THE STREET. THE IMPROVEMENTS SHALL ALSO INCLUDE APPROPRIATE PEDESTRIAN CROSSINGS, STRIPING, SIGNAGE, AND LIGHTING. IMPROVEMENTS ALONG THE WESTERN BOUNDARY OF THE STREET THAT DO NOT ALREADY HAVE CURB AND GUTTER SHALL ADEQUATELY ADDRESS DRAINAGE TO THE SATISFACTION OF THE ADMINISTRATOR, CITY ENGINEER, AND PUBLIC WORKS DIRECTOR.



Planning Department

Permits
Planning
Development Review
Sustainability

January 6, 2023

Melissa Lindell, AICP
ERGS, Inc.
melissa@ergsinc.com

RE: Final Action – Conditional Use Permit CUP22004 – River Ranch Apartments

Dear Applicant:

On December 14, 2022, the City of Fernley Planning Commission reviewed a Conditional Use Permit request to allow for the development of a 320-unit apartment community located on APNs: 021-281-03, 021-281-04, 021-281-09, and 021-281-10 located at approximately north of Meadows Avenue, south of U.S. Route 50 Alternate, east of River Ranch Road, and west of Fort Sutter Blvd.

Following careful consideration based upon the written materials and public comment, the Planning Commission voted to approve the Conditional Use Permit request subject to the Conditions of Approval 1 through 39 as attached hereto. No appeal was filed in accordance with the provisions outlined in Fernley Municipal Code Section 32.03.090(e); therefore, the Planning Commission's action is final.

You may not conduct or establish the use for which this application was approved until all conditions of approval have been satisfied to the approval of the Planning Department. If you have any questions concerning this application, please contact the Planning Department at (775) 784-9810.

Sincerely,

Lisa Warner

Lisa Warner
Assistant Planner

Attachments: Conditions of Approval for CUP22004

Conditions of Approval for CUP22004

Conditional Use Permit

1. APPROVAL:

THE PROJECT IS APPROVED AS SUBMITTED AND CONDITIONED. ANY SUBSTANTIVE CHANGE SHALL REQUIRE REVIEW AND APPROVAL BY THE PLANNING COMMISSION AS AN AMENDMENT TO THIS CONDITIONAL USE PERMIT.

2. PROJECT DESCRIPTION:

THE PROJECT APPROVAL IS LIMITED TO A MAXIMUM OF 320 MULTI-FAMILY UNITS ON ±20.80 ACRES.

3. EXPIRATION DATE:

THE CONDITIONAL USE PERMIT SHALL EXPIRE WITHIN ONE (1) YEAR OF THE DATE OF APPROVAL, UNLESS THE PERMITTED USE HAS BEEN ESTABLISHED OR CONSTRUCTION TO ACCOMMODATE THAT USE HAS BEGUN AND IS BEING DILIGENTLY PURSUED. A ONE-YEAR EXTENSION MAY BE GRANTED BY THE PLANNING COMMISSION IF REQUESTED PRIOR TO THE EXPIRATION DATE OF THE CONDITIONAL USE PERMIT APPROVAL.

4. WATER RIGHTS:

THE DEVELOPER SHALL COMPLY WITH ALL CITY OF FERNLEY MUNICIPAL CODES REGARDING THE DEDICATION OF WATER RIGHTS, INCLUDING ALL ASSOCIATED FEES, FOR THE CONNECTION TO THE CITY'S MUNICIPAL WATER SYSTEM IN THE AMOUNT THAT IS REQUIRED PRIOR TO THE ISSUANCE OF ANY BUILDING PERMIT FOR ANY PHASE OF THE PROJECT.

5. LANDSCAPING/IRRIGATION:

THE DEVELOPER SHALL SUBMIT A LANDSCAPING AND IRRIGATION PLAN FOR THE PROJECT IN CONFORMANCE WITH THE CITY OF FERNLEY'S DEVELOPMENT CODE FOR REVIEW AND APPROVAL BY THE ADMINISTRATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE PROJECT. THE LANDSCAPING AND IRRIGATION SHALL BE INSTALLED PER THE APPROVED PLANS PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR EACH BUILDING TO THE APPROVAL OF THE ADMINISTRATOR.

6. WATER AND SEWER MAINS AND SERVICES:

THE DEVELOPER SHALL COMPLY WITH ALL STANDARDS, CODES, AND REQUIREMENTS REGARDING CONNECTION TO THE CITY'S SANITARY SEWER AND POTABLE WATER SYSTEMS, INCLUDING BUT NOT LIMITED TO, ASSOCIATED FEES, EASEMENTS, DESIGN STANDARDS, SYSTEM LOOPING, DEVELOPMENT CODE REQUIREMENTS, AND STATE REQUIREMENTS.

THE DEVELOPER SHALL PROVIDE THE CITY WITH A UTILITY PLAN FOR WATER AND SANITARY SEWER THAT IS IN CONFORMANCE WITH THE CITY OF FERNLEY'S MUNICIPAL CODE AND PUBLIC WORKS DESIGN MANUAL TO THE APPROVAL OF THE CITY ENGINEER, PUBLIC WORKS DIRECTOR, AND ADMINISTRATOR. EACH PHASE MUST ALSO BE REVIEWED AND APPROVED BY THE NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION PRIOR TO CONSTRUCTION.

7. UTILITY EASEMENTS:

THE DEVELOPER SHALL PROVIDE EASEMENTS TO THE CITY OF FERNLEY FOR THE MAINTENANCE OF THE PUBLIC INFRASTRUCTURE BEING INSTALLED ON PRIVATE PROPERTY. THE EASEMENTS SHALL INCLUDE THE CITY OF FERNLEY'S STANDARD EASEMENT LANGUAGE AND SHALL BE RECORDED PRIOR TO ISSUING A PERMIT TO START CONSTRUCTION OF THE INFRASTRUCTURE. IN NO SITUATION SHALL WORK TAKE PLACE ON PRIVATE PROPERTY WITHOUT A RECORDED EASEMENT IN PLACE.

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8. WATER SYSTEM LOOPING:

THE DEVELOPER SHALL PROVIDE THE CITY WITH A UTILITY PLAN FOR THE WATER SYSTEM THAT DEMONSTRATES ADEQUATE SYSTEM LOOPING PRIOR TO THE ISSUANCE OF A PERMIT. THE PLAN SHALL BE IN CONFORMANCE WITH THE CITY OF FERNLEY'S MUNICIPAL CODE, NEVADA ADMINISTRATIVE CODE, AND PUBLIC WORKS DESIGN MANUAL TO THE APPROVAL OF THE CITY ENGINEER, PUBLIC WORKS DIRECTOR, AND ADMINISTRATOR.

9. WATER AND SEWER SYSTEM MODELING:

THE DEVELOPER SHALL COMPLETE WATER AND SEWER MODELING FOR THE PROJECT PRIOR TO THE ISSUANCE OF A PERMIT. THE DEVELOPER SHALL CONSTRUCT ANY IMPROVEMENTS IDENTIFIED BY THE MODELING AS NECESSARY TO SERVE THE PROJECT IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS. THE PROJECT WILL REQUIRE CAPACITY UPGRADES TO BE COMPLETED AT THE EXISTING TMAI LIFT STATION. THE WORK SHALL BE COMPLETED PRIOR TO ISSUING FIRST CERTIFICATE OF OCCUPANCY FOR ANY BUILDING ON THE PROJECT SITE.

10. NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION:

THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION – BUREAU OF SAFE DRINKING WATER AND BUREAU OF WATER POLLUTION CONTROL FOR THE WATER AND SEWER INFRASTRUCTURE DESIGN AND CONSTRUCTION TO THE APPROVAL OF THE ADMINISTRATOR, CITY ENGINEER, AND PUBLIC WORKS DIRECTOR.

11. GRADING PERMIT:

THE DEVELOPER SHALL SUBMIT A GRADING PLAN FOR ANY PHASE OF THE PROJECT TO THE APPROVAL OF THE CITY ENGINEER. PRIOR TO THE ISSUANCE OF A GRADING PERMIT FOR THE DEVELOPMENT, THE DEVELOPER SHALL POST A SURETY BOND FOR REGRADING AND RECLAMATION OF THE SITE. THE DEVELOPER SHALL PROVIDE A STAMPED ENGINEER'S ESTIMATE FOR REGRADING AND RECLAMATION OF THE SITE. THE DEVELOPER SHALL COMPLY WITH ALL GRADING REQUIREMENTS SET FORTH IN THE CITY OF FERNLEY'S DEVELOPMENT CODE AS WELL AS ALL STATE AND FEDERAL REGULATIONS. THE DEVELOPER OR THEIR DESIGNEE SHALL BE RESPONSIBLE FOR OBTAINING AND MAINTAINING A STORM WATER POLLUTION PREVENTION PERMIT WITH THE STATE OF NEVADA AS WELL AS A SURFACE AREA DISTURBANCE PERMIT.

12. STORM DRAINAGE:

THE DEVELOPER SHALL PROVIDE A FINAL DRAINAGE REPORT FOR THE PROJECT IN CONFORMANCE WITH THE FERNLEY MUNICIPAL CODE AND THE PUBLIC WORKS DESIGN MANUAL FOR REVIEW AND APPROVAL BY THE CITY ENGINEER PRIOR TO APPROVAL OF A BUILDING PERMIT FOR ANY PORTION OF THE PROJECT. EACH SUCCESSIVE PHASE OF THE PROJECT SHALL SUBMIT AN UPDATED DRAINAGE REPORT FOR REVIEW AND APPROVAL BY THE CITY ENGINEER SHOWING THE CUMULATIVE EFFECT OF THE DEVELOPED PORTION OF THE PROJECT ALONG WITH THE PROPOSED PHASE'S EFFECT ON THE TOTAL DISCHARGE INTO THE DRAINAGE SYSTEM. THE STORM WATER AND DRAINAGE PLANS FOR THE PHASES OF THE DEVELOPMENT SHALL BE REVIEWED AND APPROVED BY THE CITY ENGINEER PRIOR TO THE ISSUANCE OF A GRADING PERMIT FOR THE PHASES OF THE PROJECT.

ALL INTERNAL STORM DRAIN INFRASTRUCTURE SHALL BE MAINTAINED BY THE PROPERTY OWNER.

13. GEOTECHNICAL REPORT:

THE DEVELOPER SHALL PROVIDE A GEOTECHNICAL REPORT FOR THE PROJECT IN CONFORMANCE WITH THE REQUIREMENTS OF THE DEVELOPMENT CODE FOR REVIEW AND APPROVAL BY THE CITY ENGINEER PRIOR TO THE APPROVAL OF A GRADING PERMIT OR BUILDING PERMIT FOR ANY PORTION OF THE PROJECT.

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14. STRUCTURAL CONTROLS:

THE DEVELOPER SHALL UTILIZE STRUCTURAL CONTROLS FOR THE TREATMENT OF STORM WATER RUNOFF IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES TO THE APPROVAL OF THE PUBLIC WORKS DIRECTOR AND CITY ENGINEER.

15. SANITARY SEWER REPORT:

THE DEVELOPER SHALL PROVIDE A FINAL SANITARY SEWER REPORT FOR THE PROJECT IN CONFORMANCE WITH THE FERNLEY MUNICIPAL CODE AND THE PUBLIC WORKS DESIGN MANUAL FOR REVIEW AND APPROVAL BY THE CITY ENGINEER PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR ANY PORTION OF THE PROJECT.

16. DESIGN STANDARDS:

THE DEVELOPER SHALL COMPLY WITH ANY DESIGN STANDARDS AND REGULATIONS AS SET FORTH IN THE CITY OF FERNLEY DEVELOPMENT CODE AND CITY OF FERNLEY DESIGN STANDARDS UNLESS IN CONFLICT WITH THE LOCAL, STATE OR FEDERAL REGULATIONS, IN WHICH CASE THE MORE STRINGENT REGULATION WILL TAKE PRECEDENCE.

17. ENGINEERING/PUBLIC WORKS:

THE DEVELOPER SHALL COMPLY WITH ALL THE REQUIREMENTS OF THE CITY OF FERNLEY MUNICIPAL CODE, DEVELOPMENT CODE, AND PUBLIC WORKS DESIGN MANUAL FOR THE CONSTRUCTION OF ANY PUBLIC OR PRIVATE INFRASTRUCTURE TO THE APPROVAL OF THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR THE PROJECT.

18. NORTH LYON COUNTY FIRE PROTECTION DISTRICT:

THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE NORTH LYON COUNTY FIRE PROTECTION DISTRICT, INCLUDING BUT NOT LIMITED TO: DEVELOPING A PLAN TO PROVIDE ADEQUATE EMERGENCY ACCESS THROUGHOUT THE SITE, DEVELOPING A MASTER FIRE HYDRANT AND FIRE FLOW PLAN, DEVELOPING A MASTER FIRE DEPARTMENT CONNECTION (FDC) PLAN, AND INSTALLING FIRE SUPPRESSION AND/OR ALARM SYSTEMS TO THE APPROVAL OF THE FIRE CHIEF PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

19. BUILDING DEPARTMENT:

THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE BUILDING DEPARTMENT TO THE APPROVAL OF THE BUILDING OFFICIAL PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

20. ACCESS AND CIRCULATION:

THE DEVELOPER SHALL USE APPROPRIATE STRIPING AND SIGNAGE AS MAY BE NECESSARY TO MINIMIZE TRAFFIC CONFLICT WITHIN THE DEVELOPMENT SITE TO THE APPROVAL OF THE ADMINISTRATOR AND CITY ENGINEER FOR THE LIFE OF THE PROJECT.

21. FEDERAL, STATE, AND LOCAL AGENCIES:

THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF ANY FEDERAL, STATE, OR LOCAL AGENCY WITH JURISDICTION OVER THE PROJECT TO THE APPROVAL OF THE ADMINISTRATOR.

22. TRAFFIC ANALYSIS REPORT:

THE DEVELOPER SHALL PROVIDE A TRAFFIC ANALYSIS REPORT FOR THE PROJECT IN CONFORMANCE WITH THE CITY OF FERNLEY'S MUNICIPAL CODE AND THE PUBLIC WORKS DESIGN MANUAL FOR REVIEW AND APPROVAL BY THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR ANY PORTION OF THE PROJECT. EACH SUCCESSIVE PHASE OF THE PROJECT SHALL SUBMIT AN UPDATED TRAFFIC ANALYSIS REPORT FOR REVIEW AND APPROVAL BY THE CITY ENGINEER AND PUBLIC WORKS DIRECTOR SHOWING THE CUMULATIVE EFFECT

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OF THE DEVELOPED PORTION OF THE PROJECT ALONG WITH THE PROPOSED PHASE'S EFFECT.

23. PARKING:

VISITOR PARKING SHALL BE PROVIDED THROUGHOUT THE SITE. THE DEVELOPER SHALL SUBMIT IMPROVEMENT PLANS THAT SHOW APPROPRIATE STRIPING AND SIGNAGE FOR THE VISITOR PARKING STALLS.

24. CONSTRUCTION MAINTENANCE:

THE DEVELOPER SHALL LOCATE AND UTILIZE A SUFFICIENT NUMBER OF TRASH CONTAINERS ON-SITE TO BE UTILIZED DURING THE CONSTRUCTION OF THE PROJECT TO MAINTAIN THE PROJECT SITE IN A CLEAN AND ORDERLY STATE TO THE APPROVAL OF THE ADMINISTRATOR.

25. CONSTRUCTION HOURS:

THE DEVELOPER SHALL LIMIT ALL CONSTRUCTION AND CONSTRUCTION-RELATED ACTIVITIES TO BETWEEN THE HOURS OF 7:00 AM TO 7:00 PM, SEVEN DAYS A WEEK. THE DEVELOPER SHALL INSTALL SIGNS AT ALL ACCESS POINTS TO THE PROJECT THAT CLEARLY INDICATE THE HOURS OF ACTIVITY ON-SITE PRIOR TO THE START OF ANY CONSTRUCTION-RELATED ACTIVITIES TO THE APPROVAL OF THE ADMINISTRATOR. THE DEVELOPER SHALL MAINTAIN THESE SIGNS IN GOOD REPAIR FOR THE DURATION OF THE CONSTRUCTION OF THE PROJECT. ONCE CONSTRUCTION IS FINISHED, THE DEVELOPER SHALL REMOVE THESE SIGNS.

26. PROJECT CONTACT:

THE DEVELOPER SHALL DESIGNATE TO THE ADMINISTRATOR A PROJECT CONTACT PERSON RESPONSIBLE/AUTHORIZED TO CORRECT PROBLEMS REGARDING THE PROJECT ON A 24-HOUR/7-DAYS A WEEK BASIS. THE DEVELOPER SHALL DESIGNATE THE PROJECT CONTACT PERSON TO THE ADMINISTRATOR PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE PROJECT.

27. ARCHITECTURE/BUILDING ELEVATIONS:

THE DEVELOPMENT OF THE SUBJECT SITE SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THE ARCHITECTURAL/BUILDING ELEVATIONS SUBMITTED AS PART OF THIS APPLICATION. SUBSTANTIAL CHANGES TO THE ARCHITECTURE/BUILDING ELEVATIONS SHALL REQUIRE REVIEW AND APPROVAL BY THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR THAT BUILDING. THE DEVELOPER SHALL ARTICULATE LONG FACADES BY VARYING BUILDING MASS, FORM, TEXTURE, MATERIALS, AND INTERPLAY OF SOLID AND OPEN AREAS.

28. TRASH ENCLOSURES:

THE DEVELOPER SHALL LOCATE AND INSTALL TRASH ENCLOSURES TO THE APPROVAL OF WASTE MANAGEMENT AND THE ADMINISTRATOR INCLUDING THE APPROPRIATE SIZE AND LOCATION. THE TRASH ENCLOSURES SHALL MATCH THE PROJECT'S ARCHITECTURE AND BUILDING MATERIALS TO THE APPROVAL OF THE ADMINISTRATOR PRIOR TO ISSUANCE OF THE CERTIFICATE OF OCCUPANCY FOR THE INDIVIDUAL BUILDINGS.

29. UTILITY SCREENING:

THE DEVELOPER SHALL WORK IN CONJUNCTION WITH THE UTILITY COMPANIES TO LOCATE UTILITY EQUIPMENT SUCH AS ELECTRICAL, GAS, AND WATER JUNCTION BOXES, INCLUDING TRANSFORMER BOXES, VAULTS, AND ELECTRICAL PANELS, IN AREAS WHERE THE EQUIPMENT IS SCREENED BY EITHER ARCHITECTURAL ELEMENTS THAT MATCH THE MAIN STRUCTURE'S COLORS AND MATERIALS OR BY ADJUSTING THE APPROVED LANDSCAPING TO COMPENSATE TO THE APPROVAL OF THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR EACH INDIVIDUAL BUILDING.

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30. SCREENING:

THE MECHANICAL EQUIPMENT SHALL BE SCREENED FROM VIEW OF THE PARKING LOT, ADJACENT PUBLIC STREETS, AND PUBLIC AREAS BY USING AN ARCHITECTURAL ELEMENT OF THE BUILDING CONSISTING OF THE SAME, DURABLE MATERIALS AS THE BUILDING TO THE APPROVAL OF ADMINISTRATOR. ANY LOADING DOCKS AND SERVICE AREAS INCLUDING TRASH COMPACTION AND/OR DUMPSTER(S) SHALL BE SCREENED FROM VIEW OF PARKING LOTS AND PUBLIC AREAS. LOADING DOCK SCREENING SHALL BE HIGH ENOUGH TO SCREEN THE TRUCKS. THE SCREENING SHALL BE REVIEWED AND APPROVED BY THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR EACH INDIVIDUAL BUILDING.

31. LIGHTING:

THE DEVELOPER SHALL SUBMIT A LIGHTING PLAN FOR REVIEW AND APPROVAL BY THE ADMINISTRATOR PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. THE DEVELOPER IS REQUIRED TO COMPLY WITH THE LIGHTING STANDARDS AND REQUIREMENTS IN THE CITY OF FERNLEY MUNICIPAL CODE. TO REDUCE THE IMPACT OF GLARE AND MINIMIZE THE EFFECT OF FIELD AND PARKING LIGHTING, LIGHTING FIXTURES WITH EXTERNAL "HOODS" AND INTERNAL GLARE REDUCTION LOUVERS SHALL BE USED.

32. RESIDENTIAL CONSTRUCTION TAX:

THE DEVELOPER IS SUBJECT TO THE PROVISIONS OF FERNLEY MUNICIPAL CODE RELATED TO RESIDENTIAL CONSTRUCTION TAX. THE RESIDENTIAL CONSTRUCTION TAX FEE SHALL BE PAID PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR EACH BUILDING.

33. ADDRESSING AND STREET NAMES:

THE DEVELOPER SHALL SUBMIT A REQUEST FOR ADDRESSING AND STREET NAME RESERVATION APPLICATION TO THE CITY OF FERNLEY FOR REVIEW AND APPROVAL. ALL ADDRESSING OF LOTS SHALL BE COMPLETED BY THE CITY. STREET NAMES SHALL BE APPROVED BY THE CITY PRIOR TO THE SUBMITTAL OF A FINAL MAP FOR THE PROJECT.

34. PROJECT PHASING:

THE PROJECT SHALL BE DEVELOPED IN ACCORDANCE WITH THE PHASING PLAN INCLUDED AS PART OF THIS APPROVAL. EACH PHASE SUBMITTED MUST BE DESIGNED TO MEET THE PUBLIC FACILITIES AND IMPROVEMENT STANDARDS AND BE ABLE TO OPERATE INDEPENDENTLY AND AS PART OF THE OVERALL DESIGN. CHANGES TO THE PHASING PLAN WILL REQUIRE REVIEW AND APPROVAL BY THE ADMINISTRATOR, CITY ENGINEER, AND PUBLIC WORKS DIRECTOR PRIOR TO BEING IMPLEMENTED.

35. WASTE MANAGEMENT:

THE DEVELOPER SHALL PROVIDE A WILL SERVE FROM WASTE MANAGEMENT TO THE APPROVAL OF THE ADMINISTRATOR PRIOR TO THE APPROVAL AND RECORDATION OF A FINAL MAP.

36. NEVADA DEPARTMENT OF TRANSPORTATION:

THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE NEVADA DEPARTMENT OF TRANSPORTATION TO THE APPROVAL OF THE ADMINISTRATOR, PUBLIC WORKS DIRECTOR, AND CITY ENGINEER.

37. UNITED STATES POSTAL SERVICE:

THE DEVELOPER SHALL COMPLY WITH ALL REQUIREMENTS OF THE UNITED STATES POSTAL SERVICE FOR MAIL DELIVERY AND MAILBOX DESIGN AND LOCATION TO THE APPROVAL OF THE ADMINISTRATOR, PUBLIC WORKS

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DIRECTOR, AND CITY ENGINEER PRIOR TO THE ISSUANCE OF A BUILDING PERMIT FOR THE PROJECT.

38. RIVER RANCH ROAD AND US-50 INTERSECTION IMPROVEMENTS:

THE DEVELOPER SHALL SUBMIT A PROPOSED PLAN FOR THE RIVER RANCH/US-50 INTERSECTION, TO THE APPROVAL OF THE CITY ENGINEER, ADMINISTRATOR, PUBLIC WORKS DIRECTOR, AND THE NEVADA DEPARTMENT OF TRANSPORTATION. THE PLAN SHALL INCLUDE RECOMMENDATIONS FOR STRIPING, LIGHTING, AND PEDESTRIAN ACCESS AND SAFETY INCLUDING ADA COMPLIANT PEDESTRIAN RAMPS.

39. RIVER RANCH ROAD IMPROVEMENTS:

AS MODIFIED IN THE PLANNING COMMISSION MEETING ON DECEMBER 14, 2022:

THE DEVELOPER SHALL COMPLETE IMPROVEMENTS ON RIVER RANCH ROAD ADJACENT TO THE ENTIRE PROJECT SITE AND NORTH OF THE SITE TO US 50 IN ACCORDANCE WITH THE CITY OF FERNLEY DEVELOPMENT CODE WITH MODIFICATIONS AS OUTLINED BELOW:

- 1. ADJACENT TO PROJECT SITE:** RIVER RANCH ROAD SHALL BE IMPROVED TO HALF STREET IMPROVEMENTS FOR A TYPICAL 60 FOOT STREET SECTION TO INCLUDE 20 FEET OF PAVEMENT PLUS TWO FEET TO ACCOMMODATE CURB AND GUTTER PLUS AN ADDITIONAL EIGHT FEET TO ACCOMMODATE SIDEWALK AND LANDSCAPING. RIGHT OF WAY TO ACCOMMODATE THE IMPROVEMENTS SHALL BE DEDICATED TO THE CITY OF FERNLEY BY THE DEVELOPER. THE TOTAL IMPROVEMENT WIDTH SHALL BE 30 FEET FROM THE EXISTING CENTERLINE OF RIVER RANCH ROAD.
- 2. NORTH OF THE PROJECT SITE TO US 50:** RIVER RANCH ROAD SHALL BE IMPROVED TO MODIFIED HALF STREET IMPROVEMENTS FOR A TYPICAL 60 FOOT STREET SECTION TO INCLUDED 19' 10" OF PAVEMENT PLUS TWO FEET TO ACCOMMODATE CURB AND GUTTER. CROSSWALKS TO DIRECT PEDESTRIANS TO THE EXISTING SIDEWALK ON THE WEST SIDE OF RIVER RANCH ROAD ADJACENT TO THE PIONEER CROSSING CASINO SHALL BE PROVIDED IN LOCATIONS AS DIRECTED BY THE CITY ENGINEER. DUE TO THE EXISTING CONSTRAINTS, SIDEWALK AND LANDSCAPING SHALL NOT BE REQUIRED IN THIS AREA, THEREFORE, THE TOTAL IMPROVEMENT WIDTH SHALL BE A MINIMUM OF 21'10" FROM THE EXISTING CENTERLINE OF RIVER RANCH ROAD.
- 3. RIVER RANCH ROAD DRAINAGE:** THE DEVELOPER SHALL MITIGATE THE EXISTING DRAINAGE ISSUES LOCATED AT THE NORTH END OF RIVER RANCH ROAD TO THE APPROVAL OF THE ADMINISTRATOR, CITY ENGINEER, AND PUBLIC WORKS DIRECTOR.

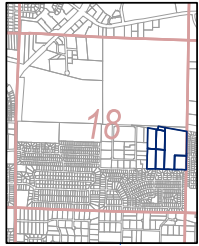
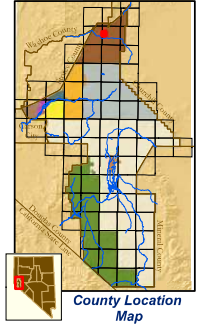
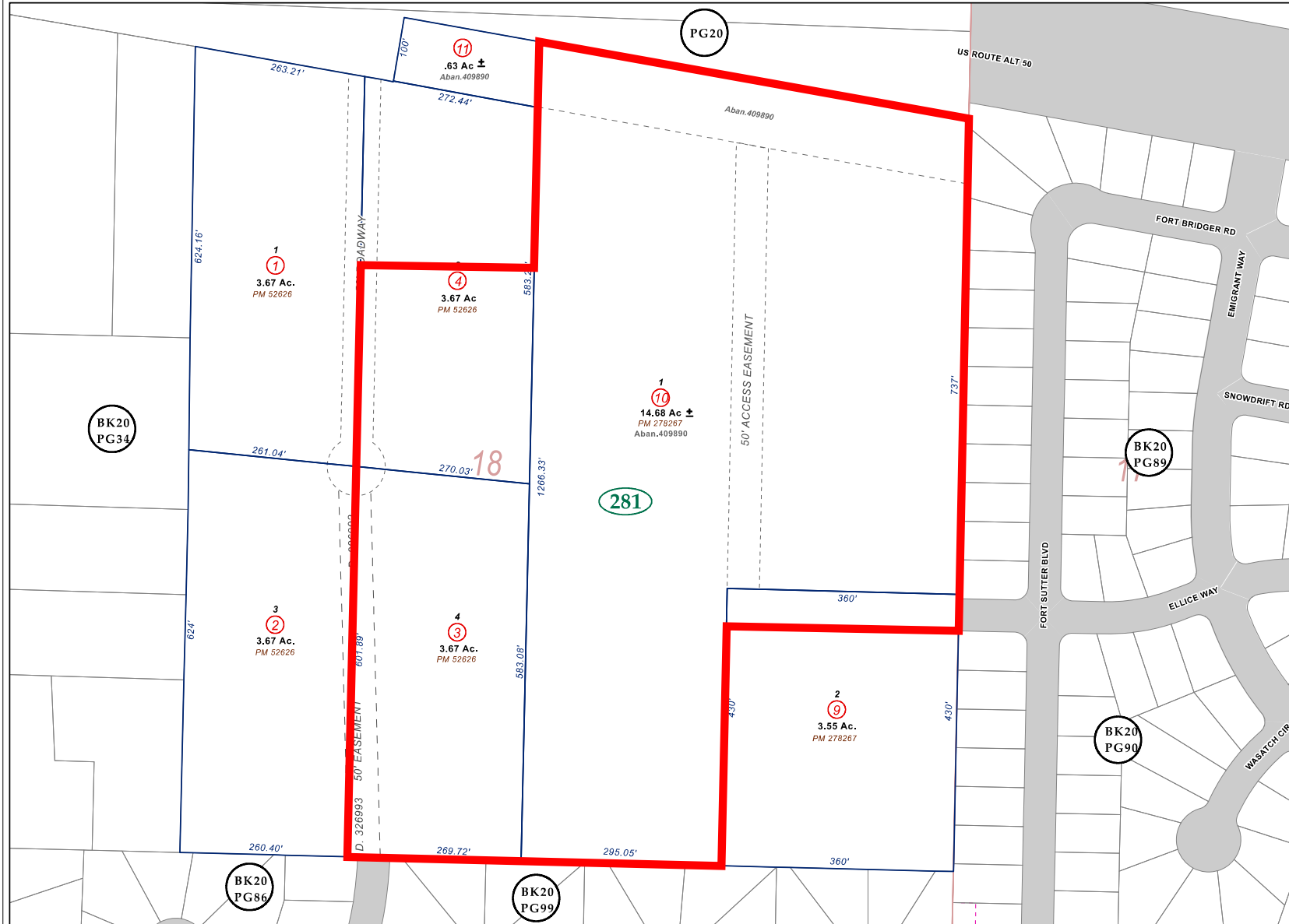
ALL IMPROVEMENTS SHALL INCLUDE APPROPRIATE PEDESTRIAN CROSSINGS, STRIPING, SIGNAGE AND LIGHTING. IMPROVEMENTS ALONG THE WESTERN BOUNDARY OF RIVER RANCH ROAD ACROSS FROM THE SITE THAT DO NOT ALREADY HAVE CURB AND GUTTER SHALL ADEQUATELY ADDRESS DRAINAGE TO THE SATISFACTION OF THE ADMINISTRATOR, CITY ENGINEER AND PUBLIC WORKS DIRECTOR.

SECTION 3 – MAPS AND EXHIBITS

ASSESSOR'S PARCEL MAP

SE1/4 Section 18 T20N - R25E, MD&M

21-28



Location Map

Map Elements

- 1/4 Corner Section
- Section Ties
- 300' Dimensions
- Parcel Lot
- Parcel Number
- 0.13 Ac. Acreage of Parcel
- PM 136149 Recorded Map Image
- Parcel Boundaries
- Block Number
- Parcel Book & Page Number
- Page Number
- Cities & Townships
 - Dayton
 - Dayton Valley
 - Fernley
 - Mark Twain
 - Mason Valley
 - Mound House
 - Silver City
 - Silver Springs
 - Smith Valley
 - Stagecoach
 - Yerington

Scale: 1" = 150'
Revised: June 10, 2014



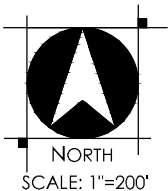
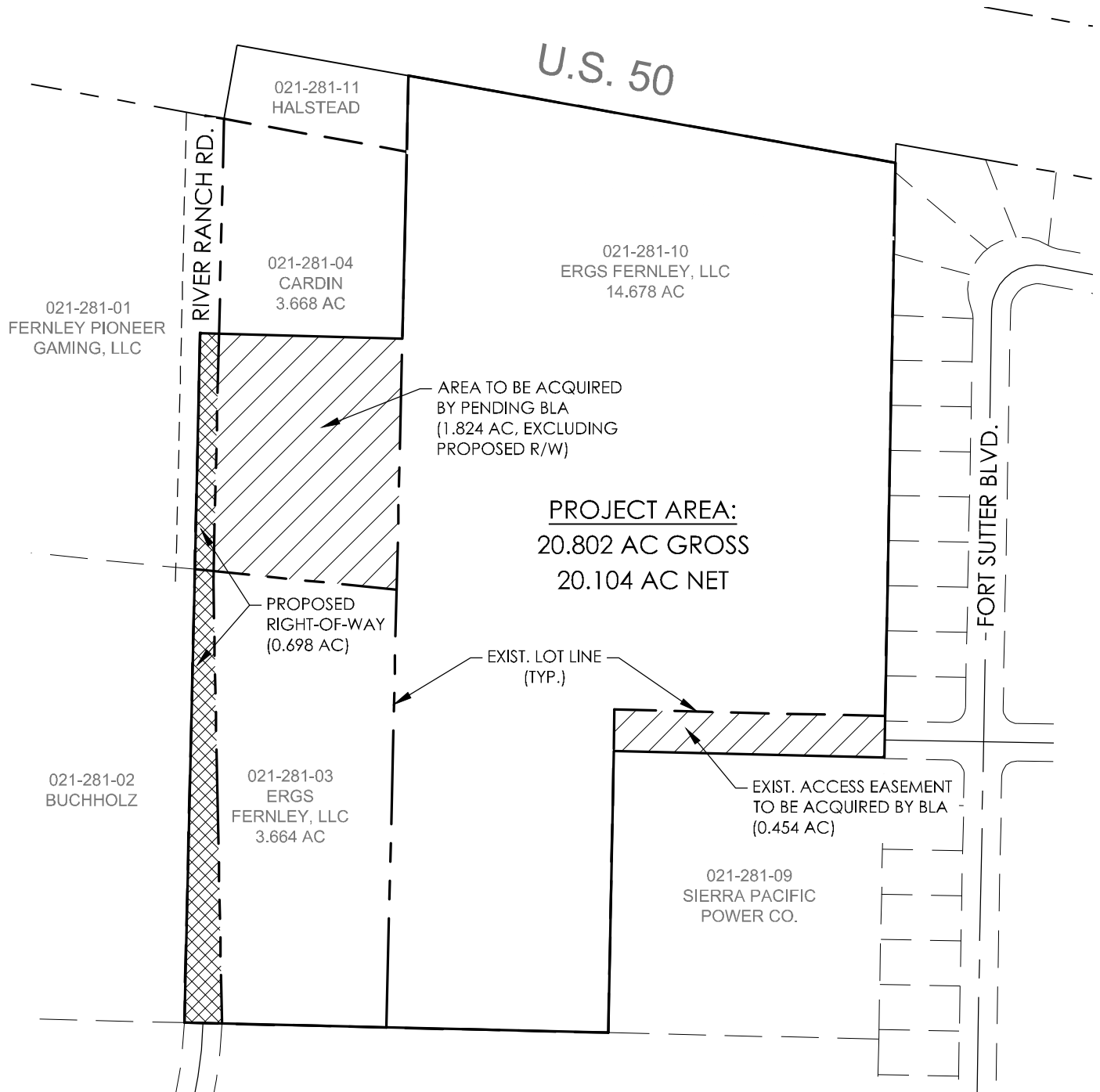
NOTE: This is for assessment use only and does not represent a survey. No liability is assumed as to the accuracy of the data delineated hereon. Use of this plat for other than assessment purposes is forbidden unless approved by the Lyon County Assessor's Office.

ZMA / CUP FOR RIVER RANCH APARTMENTS

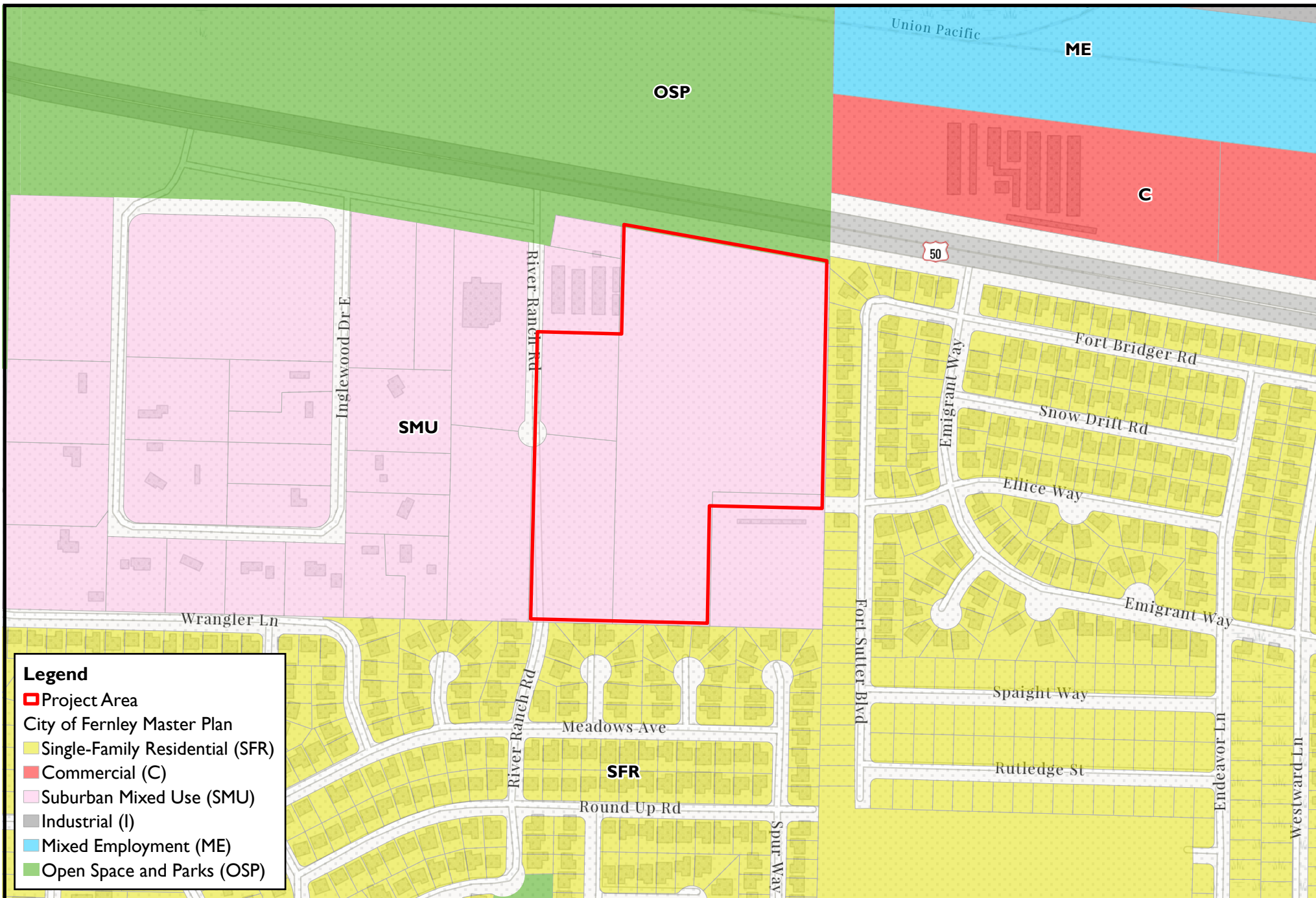
PARCEL AREAS

FERNLEY, NEVADA

SEPTEMBER 2022



WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1961 Corporate Boulevard Tel 775.823.4068
Reno, NV 89502 Fax 775.823.4066



Existing Master Plan River Ranch Apartments September 2022

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Reno, NV 89502 Fax: 775.823.4066

SITE PHOTOS

River Ranch Apartments ZMA-CUP



Overall site – view northeast



Overall site – view north



Overall site – view southeast

SITE PHOTOS

River Ranch Apartments ZMA-CUP



NV Energy substation panorama – view northeast



NV Energy substation panorama – view east



NV Energy substation panorama – view southeast

SITE PHOTOS

River Ranch Apartments ZMA-CUP



Houses on south boundary – view southeast



Houses on south boundary – view south



Houses on south boundary – view southwest

SITE PHOTOS

River Ranch Apartments ZMA-CUP



Houses on east boundary – view south-southeast



Houses on east boundary – view north-northeast

SITE PHOTOS
River Ranch Apartments ZMA-CUP



Highway 50A on north boundary – view east



Highway 50A on north boundary – view west



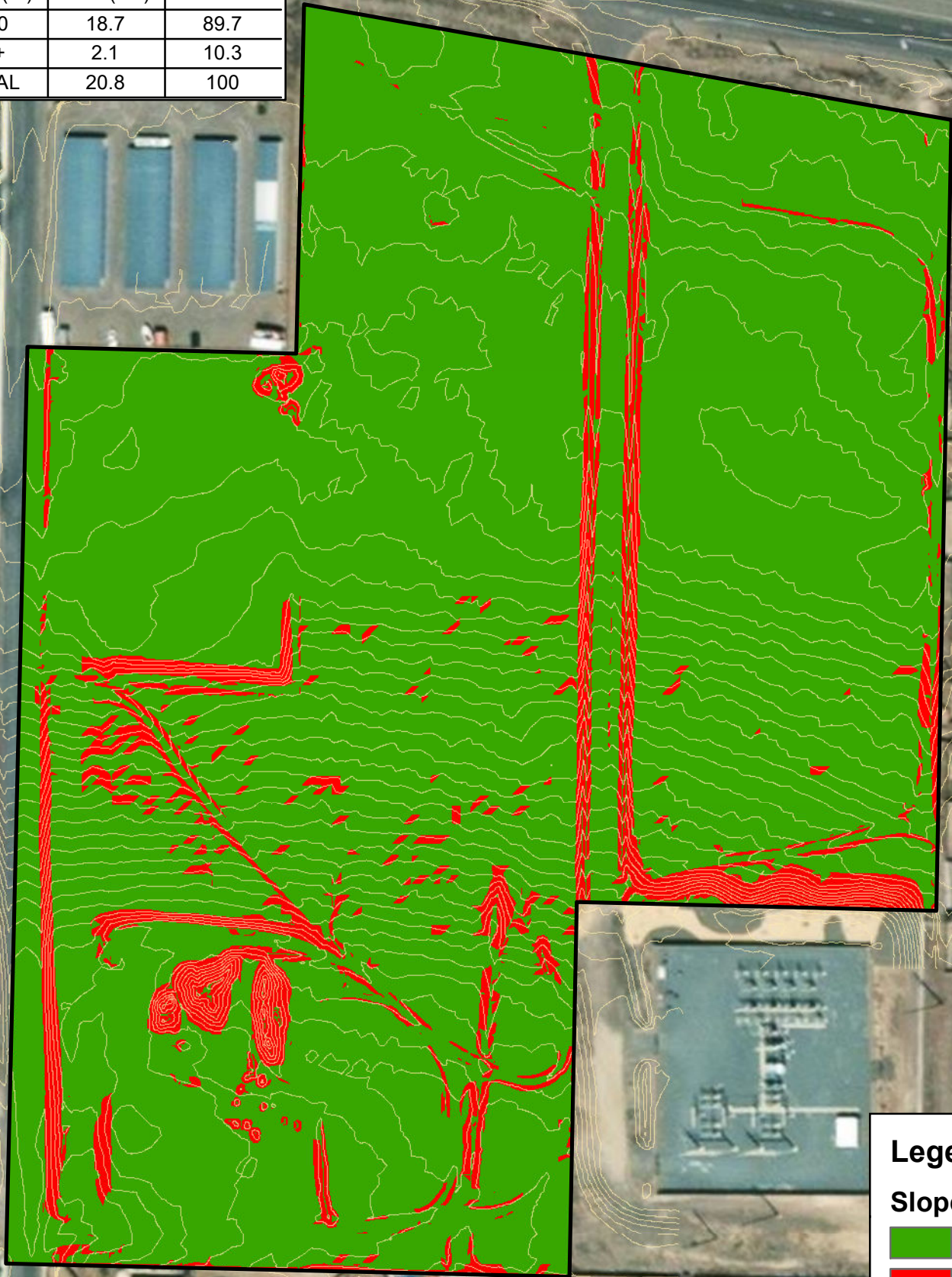
Self-storage units on adjacent (NW) parcel – view southwest



Aerial Map
River Ranch Apartments ZMA/CUP
September 2022

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Reno, NV 89502 Fax: 775.823.4066

Slope (%)	Area (ac.)	% of Total
0-10	18.7	89.7
10+	2.1	10.3
TOTAL	20.8	100

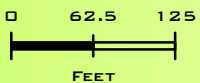


Legend

Slope (%)

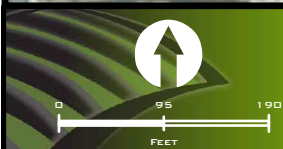
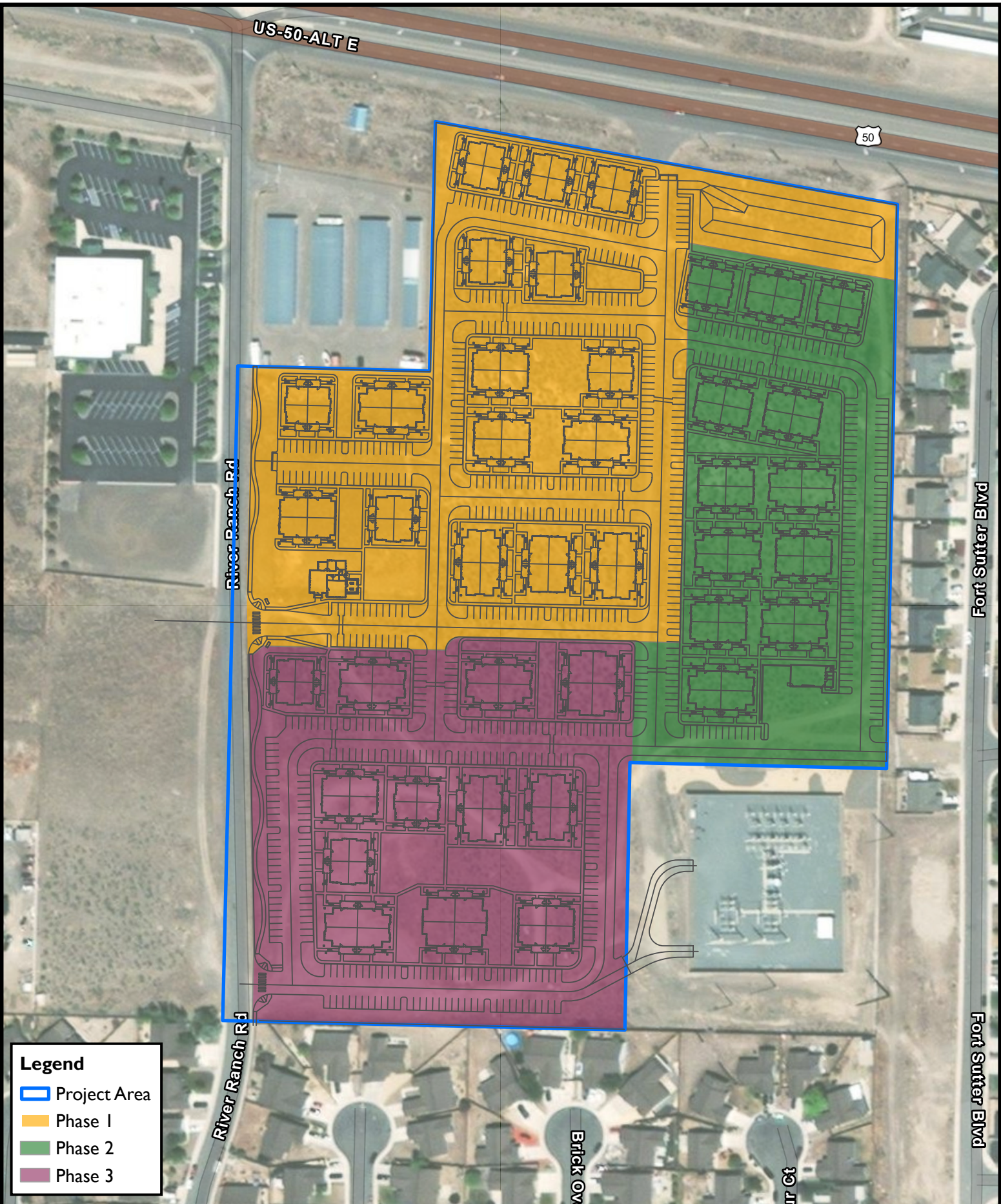
0-10

10+



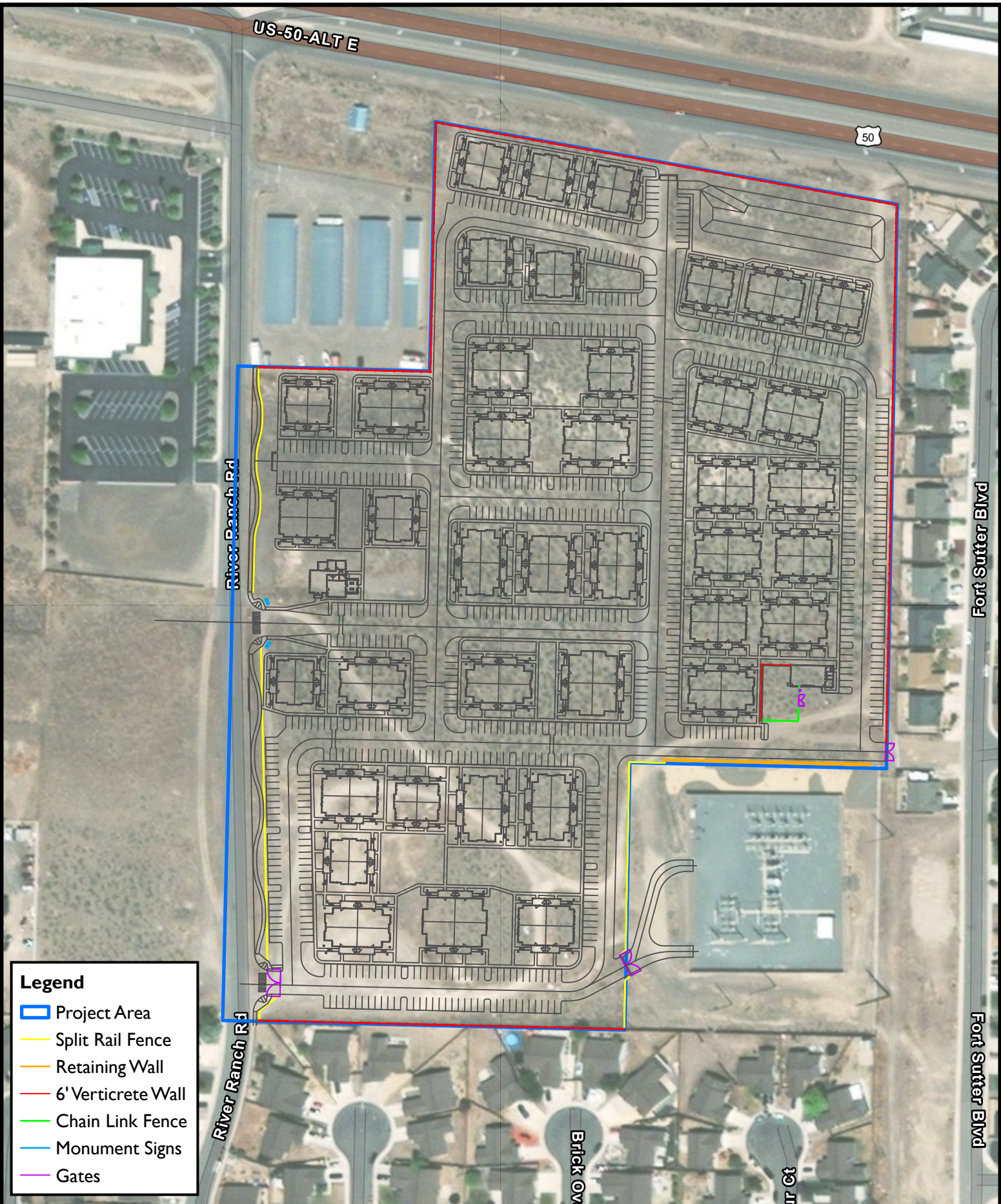
Slope Map
River Ranch
Apartments
 Fernley, NV
 August 2022

WOOD RODGERS
 BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
 1361 Corporate Boulevard
 Reno, NV 89502
 Tel: 775.823.4068



Proposed Phasing **River Ranch Apartments ZMA/CUP** **September 2022**

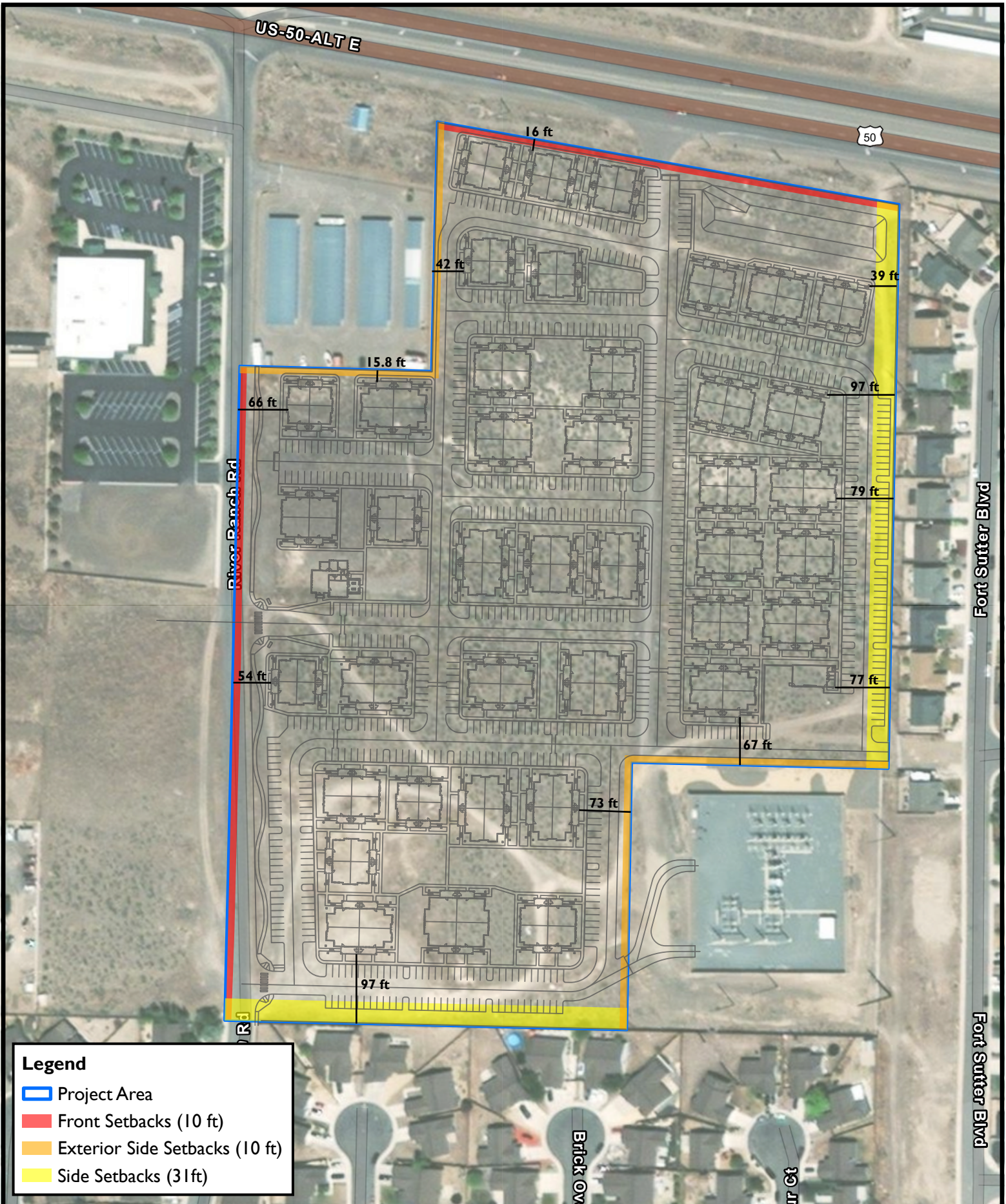
WOOD ROGERS
 BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
 1361 Corporate Boulevard
 Reno, NV 89502
 Tel: 775.823.4068
 Fax: 775.823.4066



Proposed Fences & Walls River Ranch Apartments ZMA/CUP

September 2022

WOOD ROGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard Tel: 775.823.4068
Reno, NV 89502 Fax: 775.823.4066





TUSCAN



Body Color #1:
Frazee #CL 2707N
Cinder

Body Color #2:
Frazee #CL2745D
Magic Eye

Body Color #3:
Frazee #CL2876N
Dug Up

Trim Color:
Frazee #CL3277N
Bon Nuit





FRENCH

Body Color #1:
Frazee #CL2925A
Sicklepod

Body Color #2:
Frazee #CL2834D
Falcon

Body Color #3:
Frazee #CL2886N
Sea Blite

Trim Color:
Frazee #CL3277N
Bon Nuit





SPANISH

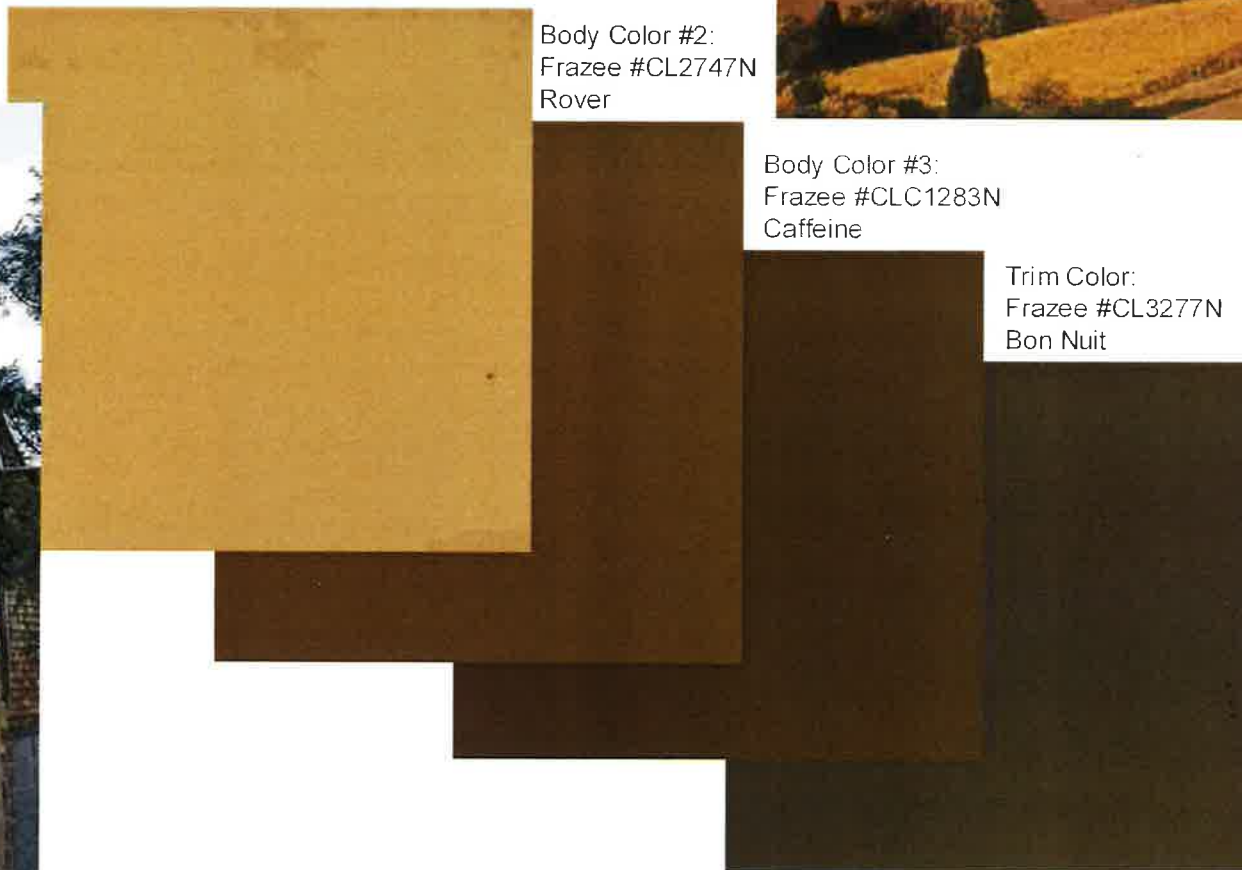
Body Color #1:
Frazee #CL2824M
Shareware



Body Color #2:
Frazee #CL2747N
Rover

Body Color #3:
Frazee #CLC1283N
Caffeine

Trim Color:
Frazee #CL3277N
Bon Nuit



SECTION 4 – REPORTS



GEOTECHNICAL DESIGN REPORT

River Ranch Apartments

Fernley, Lyon County, Nevada

Submitted To:

Greg Peek
ERGS, Inc.
9345 Lemmon Drive
Reno, Nevada 89506

Project No.

3034059

Date

September 2022

Digitally signed
by Lilian Lorincz
Date:
2022.09.12
13:44:26-07'00



Lilian Lorincz, PE
RE Number 030237 (NV)

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Table 6 – Structural Pavement Sections

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Figure 1 – Vicinity Map

Figure 2 – Improvement Plan

Figure 3 – Site Map & Approximate Exploration Locations

Appendix B – Field Exploration

B-1a through B-1o– Logs of Explorations

B-2 – Unified Soil Classification and Key to Soil Descriptions

B-3 – S-Wave ReMi Results

Appendix C –Laboratory Testing Results

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Appendix D – ASCE 7 Hazards Report

EXECUTIVE SUMMARY

The project is located in Fernley, Nevada and consists of constructing an apartment complex with structures up to two stories in height, founded on standard spread foundations with concrete slab on grade flooring. Utilities and associated parking and access drives will also be part of the project. A storm water retention pond is also proposed to be constructed in the northeastern portion of the property. Access to the property is from US Highway 50 and River Ranch Road.

During the geotechnical investigation, a 3-feet thick fill layer consisting of clayey sand was encountered within the southwestern portion of the site. Overall, the site is mapped as Holocene-age alluvial and lacustrine deposits consisting of aeolian sands, silts, and clays interlayered with colluvial gravels. Native soils encountered in the geotechnical investigation typically consisted of non-plastic silty and poorly graded sands, low plasticity silts, and clayey sands and gravels. Additionally, a high plasticity sandy clay zone was encountered, at an average thickness approaching 1-foot in two of the test pits. Groundwater was not encountered during investigation.

A grading plan was not available at the time of preparation of this report. However, maximum cuts and fills are currently anticipated to approach 14-feet and 5-feet, respectively.

Sloughing soils should be anticipated during trenching and excavating, especially in deeper excavations.

Mitigation of corrosive soils should also be anticipated. Severe sulfate levels were measured in the site soils. Therefore, special concrete considerations have been presented as discussed and addressed by the American Concrete Institute (ACI). Chloride ion concentration was measured at 58 mg/Kg. The structural engineer should specify any required mitigation due to the presence of chlorides.

Special inspection and materials' testing services are integral to the success of any geotechnical and/or construction project and have been recommended herein as required by the International Building Code and City of Fernley adoptions to the Standard Specifications for Public Works Construction and Engineer-of-Record program.

1. INTRODUCTION

Presented herein are the results of Wood Rodgers' geotechnical exploration, laboratory testing, and associated geotechnical design recommendations for the proposed River Ranch Apartments development in Fernley, Nevada. The assessments and recommendations presented in this geotechnical report have been determined, in part, around the surface and subsurface conditions identified by our exploration program which was developed to be consistent with locally accepted industry practices regarding exploratory means and methods for geotechnical investigations of similar projects. The proposed structural elements, topography, grading design, soils, and geology are all unique; therefore, the engineering judgment employed by those in responsible charge of geotechnical design is in general conformance with the accepted standards of care for engineering analyses as defined by the Nevada State Board of Engineers and Land Surveyors.

This report has been prepared in consideration of the applicable provisions of the International Building Code (IBC, 2018), ASCE 7, and the amendments and modifications adopted by the City of Fernley. These documents establish the minimum requirements to safeguard the public health, safety and general welfare of the occupants as well as the minimum level of structural integrity, life safety, and fire safety for inhabitants of new and existing structures. Geotechnical considerations for public improvements have been formulated around the requirements of the City of Fernley Public Works Design Manual and the Standard Specifications for Public Works Construction. Performance standards around which our primary recommendations have been framed are based upon the requirements of the referenced documents. Any expectations of performance inconsistent with, outside the purview of, or exceeding the requirements of the referenced documents are subjective and, therefore, a function of materials, design, workmanship, and ownership. Unless these expectations of performance are specifically stipulated or quantified herein, they are considered in excess to the scope and design standards of this report.

The objectives of this study were to:

1. Explore, test, and assess general soil, geology, and ground water conditions pertaining to design and construction considerations for the proposed development as required by the IBC.
2. Provide recommendations associated with the design and construction of the project, as related to the identified geotechnical conditions and the stipulated design levels and performance standards established herein, and the requirements of the IBC.

2. SCOPE OF SERVICES

As indicated in our proposal, upon completion of our field and office studies, a geotechnical investigation report, consistent with the requirements of the 2018 International Building Code (IBC), was to be completed for the project and would present the following:

- General summary of the site soils and geology, including documented geotechnical natural hazards as they might affect foundations.
- Summary of surface and ground water conditions encountered.
- Summary of seismic hazards including site seismicity, design parameters, and potential for surface fault rupture.
- Determination of Site Class.
- A preliminary assessment of liquefaction susceptibility.
- Site preparation and grading recommendations based on the results of our field exploration and laboratory testing.
- Types of suitable foundations, allowable bearing pressures, appropriate footing depths and widths, and anticipated settlement.
- Lateral earth pressures and design parameters, as applicable for planned structures.
- Concrete and concrete slab-on-grade support options.
- Drainage considerations that may affect foundation and concrete slab-on-grade performance.
- Structural pavement sections for parking and drive areas.
- Percolation test results for design of the storm water retention pond.

Our study included field exploration, laboratory testing, and engineering analyses to identify the physical and mechanical properties of the various on-site materials. Results of our field exploration and testing programs are included in this report. In consideration of the stated design levels and performance standards, these results form the basis for our conclusions and recommendations.

3. PROJECT CHARACTERIZATION

3.1. Project Description

- The project is located in Fernley, Nevada and encompasses APN's 021-281-03, -10, and a portion of -04. (Figure 1 – Vicinity Map)
- The project consists of constructing an apartment complex with planned structures up to two stories in height with standard spread foundation and concrete slab on grade flooring. Associated utilities, access drives, parking, and public improvements (Figure 2 – Improvement Plan) will also be constructed.
- Maximum cuts and fills are anticipated to be on the order of 14-feet and 5-feet, respectively.
- The northeastern portion of the property has been reserved for the construction of a storm water retention pond.
- Services will be provided by a combination of public and private utilities.

3.2. Site Conditions

- The overall site encompasses an area of approximately 19 acres.
- The development area is located at a central latitude and longitude of 39.5981°N and 119.2100°W, respectively.
- Single family residential developments border the property to the east and south. US Highway 50 and River Ranch Road border the site to the north and west, respectively.
- A Nevada Energy substation is located proximate to the southeastern portion of the site. Markers for an existing gas line, trending northeast, were observed in the northern portion of the property.
- The site is mostly undeveloped with native vegetation consisting of brush and grasses. A portion of the southwestern project area has been capped with soil stockpiles consisting mostly of clayey and silty sands.

3.3. Exploration

3.3.1. Excavating and Sampling

- The project was explored in July 2022 by advancing a series of 15 test pits with a rubber-tired backhoe utilizing a 24-inch bucket.
- Approximate exploration locations are presented in Figure 3 - Site Map and Approximate Exploration Locations in Appendix A of this report.

- Maximum depths of exploration advance extended to 10-feet below the existing ground surface. Refusal was met as shallow as 7-feet due to sloughing of the soils.
- Wood Rodgers' personnel examined and classified soils in the field in general accordance with ASTM D2488 (Description and Identification of Soils).
- Representative bulk samples were sampled from the trench sidewalls and placed in sealed plastic bags or buckets and returned to our Reno, Nevada laboratory for testing.

3.3.2. Geophysical Methods

- Seismic refraction methods (ReMi™) were utilized to measure shear wave velocity and determine V_{s100} .
- Shear wave velocity measurements have been relied upon to aid in the determination of an appropriate Site Class (ASCE 7). Figure B-3 (Appendix B) presents the shear wave geophysical profile.

3.4. Sampling, Classification and Reporting

- Wood Rodgers' personnel examined and classified soils in the field in general accordance with ASTM D2488 (Standard Practice for Description and Identification of Soils (Visual-Manual Procedure)).
- It should be noted that soil classifications performed for geotechnical investigations are specific to geotechnical engineering characterization of soils and do not meet the scientifically based quantitative sampling protocols necessary for consideration in bidding.
- Representative bulk samples were placed in sealed plastic bags and returned to our Reno, Nevada laboratory for testing.
- Logs of the test pits are presented as figures B-1a through B-1o in Appendix B.

3.5. Percolation Testing

- Percolation testing was performed to assess retention characteristics at the proposed storm retention pond location in Test Pits 1, 2, and 3, shown in Figure 3 – Site Map and Approximate Exploration Locations.
- Percolation tests were prepared by excavating an 8-inch diameter hole to a depth of 12-inches, backfilling with gravel to preclude sloughing, pre-soaking the hole and performing the designated slow percolation test per Lyon County's Standards (Lyon County, 2019).
- Percolation test results are presented on B-1a through B-1c and summarized in Table 1.

Table 1: Summary of Percolation Test Results

Location and Depth (ft)	Existing Ground Surface Elevation ¹ (ft)	Percolation Test Elevation ² (ft)	Percolation Rate (min/in)
TP-1 @ 8	4127	4119	7.6
TP-2 @ 8	4129	4121	4.8
TP-3 @ 8	4128	4120	1.5 ³

¹ Approximate elevation is based on Lyon County Contours (NAVD 88).

² Elevation is approximate based on ground surface elevation.

³ Percolation test was performed in soils that had sloughed from the sidewall during excavating.

3.6. Laboratory Testing

- Soil testing performed in the Wood Rodgers' laboratory was conducted in general accordance with the standards and methods described in Volume 4.08 (Soil and Rock; Dimension Stone; Geosynthetics) of the ASTM Standards.
- Samples of significant soil types were analyzed to determine in-situ moisture contents (ASTM D2216), grain size distributions (ASTM D6913), and plasticity indices (ASTM D4318).
- Test results were used to classify the soils according the USCS (ASTM D2487) and to verify the field logs which were then updated.
- The USCS explanatory chart of soil unit symbols and related descriptions has been included as B-2 - Unified Soil Classification and Key to Soil Descriptions.
- Results of the laboratory testing is presented in Appendix C in C-1a through C-1d. Table 2 also presents a summary of the test data.

Table 2 - Summary of Test Data

Test Hole	Depth (Ft.)	Moisture (%)	%Gravel (+ #4)*	% Sand (#4-#200)	%Fines (-#200)	Liquid Limit	Plastic Index	R-Value	USCS
ASTM Standard		D2216	D6913			D4318		D2844	D2487
TP-1	8.0-10.0	5.3	0.1	94.6	5.3	---	---	---	SP-SM ²
TP-2	3.0-4.0	21.7	0.0	5.9	94.1	--	---	---	ML ²

Table 2 - Summary of Test Data

Test Hole	Depth (Ft.)	Moisture (%)	%Gravel (+ #4)*	% Sand (#4-#200)	%Fines (-#200)	Liquid Limit	Plastic Index	R-Value	USCS
ASTM Standard		D2216	D6913			D4318		D2844	D2487
TP-4	0-2.0	---	---	---	---	NP	NP	70	SM ²
TP-5	3.0-4.0	10.7	61.4	25.8	12.8	51	25	---	GC
TP-6	5.0-6.0	13.2	36.7	37.6	25.7	51	29	---	SC
TP-7	5.0-6.0	14.7	0.0	20.2	79.8	41	15	---	ML
TP-8	2.0-3.0	6.3	1.8	67.1	31.1	23	10	---	SC
TP-9	7.0-8.0	15.4	0.4	61.6	38.0	31	7	---	SM

¹ Since ASTM D2487 is limited by a maximum particle size of 3", the gradation test data presented is based on a maximum particle size of 3". Larger particles (i.e., 8 to 12" in diameter) if observed in our test holes would be documented on the logs and should be anticipated as part of grading.

² ASTM D2488, Description and Identification of Soils (Visual – Manual Procedure)

- R-Value Testing, ASTM D2844, resulted in a subgrade R-Value of 70.
- Chemical testing, performed to indicate the potential for corrosion to concrete and steel elements, is presented on C-2 (Appendix C).

Wood Rodgers, Inc. is not a corrosion engineering firm. Therefore, a corrosion engineer or structural engineer knowledgeable in the project steel specifications should be consulted for final assessments of corrosion potential at the site.

3.7. Geologic and General Soil and Groundwater Conditions

- Based on geologic mapping by Faulds and Ramelli (2005), the site is mapped in an area of Holocene alluvial and lacustrine deposits (Qfe, Qsmb, Qc). These deposits consist of aeolian sands, clays, and silts with layers of colluvial gravels.
- A 3-feet thick fill layer consisting of clayey sand was encountered near the southwestern portion of the site in Test Pits 8, 9, and 10. Google Earth Imagery from 2004 shows evidence of grading and development within the southwestern portion of the site.

- A sporadic high plasticity sandy clay layer was encountered at an average thickness approaching 1-foot in Test Pits 2, 3, 6, and 7.
- In addition to the sporadic clay zone, the native soils encountered in our explorations typically consisted of non-plastic silty and poorly graded sands, low plasticity silts, and clayey sands and gravels.
- The gravels can also present a significant amount of highly plastic clay fines.
- Groundwater was not encountered to the depths explored. Domestic well logs indicate groundwater levels approaching 30-feet below ground surface (NDWR, 2022).

4. SEISMIC HAZARDS

The International Building Code (IBC) requires that structures assigned to Seismic Design Category D, E, or F be evaluated for the following potential geologic and seismic hazards: surface rupture or displacement due to faulting, slope instability, liquefaction including the potential for seismically induced spreading or lateral flow, and slope instability. The following sections present our discussion and assessments of the stipulated hazards.

4.1. Surface Rupture

4.1.1. Evaluation Guidelines

In 1998, the Nevada Earthquake Safety Council formulated guidelines for evaluating potential surface rupture due to faulting. The intent of the guidelines is to provide *a standardized minimum level of investigation for fault rupture in Nevada*; these guidelines have been adopted with the 2018 Northern Nevada Amendments of the IBC. Specifically, the guidelines state that investigation of sites for potential surface rupture or hazards shall be included in all geotechnical investigations. Further, if any Quaternary age surface rupture is mapped or otherwise interpreted to be present on the site, the feature is to be investigated further.

In addition to establishing the minimum level of investigation for fault rupture, the guidelines also offer recommendations for dealing with or mitigating identified hazards, including:

- Holocene active faults (evidence of movement within the past 10,000 years) shall be set-back a minimum distance of 50-feet for occupied structures.
- Late Quaternary (evidence of movement within the past 130,000 years) faults shall not be spanned by any critical facilities (hospitals, schools, fire stations, etc.). The facility under investigation does not meet the requisite requirements to be considered critical.

These guidelines allow for set-back distances to be adjusted by the competent professional. No additional constraints regarding fault-structure location are presented in the guidelines.

4.1.2. Investigation

- The United States Geological Survey's (USGS) interactive fault map was accessed to determine the presence of any mapped features transecting the property. No faults have been mapped crossing, intersecting, or trending toward the property.

4.2. Liquefaction

Liquefaction is a loss of soil shear strength that can occur during a seismic event as excessive pore water pressure between the soil grains is induced by cyclic shear stresses. This phenomenon is limited to poorly consolidated (Standard Penetration Test less than 30, overburden stress corrected shear wave velocity less than 700 fps) clean to silty sand/sandy silt lying below the ground water table (typically less than 50

feet deep). In addition, we are using AASHTO's recommendation of Bray and Sancio (2006) criteria for assessing liquefaction susceptibility of soils which suggests that a soil with a plasticity index less than 12 and a water content to liquid limit ratio greater than 0.85 will be susceptible to liquefaction.

- Due to the soil stiffness (based on shear wave velocity) and a review of anticipated depth to groundwater and geotechnical data from investigations performed in the nearby area, the potential for liquefaction induced settlement or lateral spread is considered low.

4.2.1. *Lateral Spread*

- Liquefaction induced horizontal ground displacement from lateral spreading or flow failure has been calculated from our software using the Zhang et al. 2004 method to be less than one foot.

4.3. Slope Instability

- When evaluating for slope instability, the terms incidence and susceptibility are used. Susceptibility is the likelihood a landslide would occur based on local terrain. Incidence reflects the number of known landslides, irrespective of the age or climate at the time they occurred.
- MyHAZARDS – MyHAZARDS – Nevada was reviewed for a mapped susceptibility rating. The absence of a susceptibility rating would indicate that less than unless widespread artificial cutting or high precipitation would occur, the area would present a less than 1.5 percent of the land area be considered susceptible to landslides.
- Provided the final site grading recommendations presented in this report are incorporated in cut and fill slope designs, the susceptibility for future potential slope instability would be considered very low.

4.4. Seismic Compression

- Seismic compression is an accrual of volumetric strains during seismic events in unsaturated soil and is typically confined to poorly compacted engineered fills and Holocene soils.
- The bulk of the site soils, as mapped, are older than Holocene and would therefore not be considered susceptible to seismic compression.
- When considering engineered fills, the settlement potential due to seismic compression is considered negligible providing the recommendations for site preparation and grading are followed.

5. DISCUSSION AND RECOMMENDATIONS

5.1. General Information

- *Conformance with the Geotechnical Report:* The recommendations provided herein, particularly under Site Preparation, Grading and Filling, Foundations, Site Drainage, and Construction Observations and Testing Services are intended to reduce risks of structural distress related to consolidation or expansion of native soils and/or structural fills. These recommendations, along with proper design and construction of the planned structure(s) and associated improvements, work together as a system to improve overall performance. If any aspect of this system is ignored or poorly implemented, the performance of the project will suffer.
- *Clarification of Structural Areas:* Structural areas referred to in this report include all areas of buildings, concrete slabs, asphalt pavements, as well as pads for any minor structures or retaining walls. Areas which extend behind or under rockery or other retaining structures are considered structural zones. In addition, the structural zone shall be considered to extend at a 1:1 (H:V) slope out from the edge of the structural footprint. All compaction requirements presented in this report are relative to ASTM D 1557 (ASTM D Volume 4, 2022).
- *Hazardous Materials:* Any evaluation of the site for the presence of surface or subsurface hazardous substances is beyond the scope of this study. When suspected hazardous substances are encountered during routine geotechnical investigations, they are noted in the exploration logs and reported to the client. No such substances were identified during our exploration.
- *Backfill of Exploration Locations:* Explorations were advanced at the approximate locations shown on the Site Map and Approximate Exploration Locations (Figure 3). Each exploration was backfilled upon completion of the field portion of our study, and the backfill was compacted to the extent possible with the equipment on hand. However, the backfill was not compacted to the requirements presented herein under Grading and Filling. If structures, concrete flatwork, pavement, utilities, or other improvements located in the vicinity of any of the test pits, the backfill should be removed and re-compacted in accordance with the requirements contained in the soils report. Failure to properly compact backfill could result in excessive settlement of improvements located over test pits.
- *SWPPP Requirements:* The site-specific Stormwater Pollution Prevention Plan (SWPPP), as required by the State of Nevada, will be the responsibility of the general contractor and/or owner. Recommendations presented herein regarding moisture conditioning are for the benefit of creating a targeted fill behavior. Moisture conditioning recommendations are not intended to direct the contractor in their means and methods for dust and SWPPP control.
- *Public Improvements:* Recommendations for paved improvements in right-of-way areas will be consistent with City of Fernley standards. On-site parking and driveway recommendations are in

general conformance with AASHTO's Low Volume Road design protocols, the Portland Cement Association (PCA) and American Concrete Institute (ACI) recommendations. Underground utilities will be provided by a variety of public and private companies; trenching and backfill recommendations presented herein are generally consistent with OSHA and City of Fernley's requirements, respectively.

5.2. Soil Profile Type Amplification Factors

- Seismic design values were determined based on a representative latitude and longitude of 39.5981°N and 119.2100°W, respectively.
- In accordance with ASCE 7-16 (Table 20.3-1) and the Northern Nevada Amendments of the 2018 IBC, Site Class D has been assigned to the project and Seismic Risk Category II has been evaluated for soil profile type amplification factors. (Appendix D)
- Per ASCE 7-16, the site's modified Peak Ground Acceleration (PGA_M) to be used for engineering analyses is equal to 0.61g.

5.3. Earthwork

5.3.1. Clarification of Geomaterials

The following definitions characterize terms utilized in this report:

- Rock fill possesses more than 30-percent retained on the 3/4-inch sieve. Rock fill may present particles up to 12-inches.
- Fine-grained soil possesses more than 40 percent by weight passing the number 200 sieve and exhibits a plasticity index lower than 15.
- Clay soil possesses more than 30 percent passing the number 200 sieve and exhibits a plasticity index greater than 15.
- Granular soil does not meet the above criteria and has a maximum particle size less than 6-inches.

It should be noted these definitions have been formulated around anticipated soil behavior and may not coincide with classifications provided by the Unified Soil Classification System.

5.3.2. Clearing and Grubbing

- All vegetation and topsoil are to be cleared and grubbed from structural areas. A minimum stripping depth of 0.3 to 0.5 feet is anticipated.
- Vegetation and organic debris should be disposed of offsite or placed in designated non-structural areas.

- If on-site disposal is approved, vegetation could be blended with soil (at a maximum ratio of 1:10 vegetation to soil, by mass) prior to placement in nonstructural fill or landscape areas.
- Organic material should be broken up using a large sheep's foot roller or chipper prior to blending with soil and moisture conditioning.

5.3.3. *Undocumented Fill*

- Approximately 3-feet of undocumented fill was encountered in Test Pits 8, 9, and 10.
- All undocumented fills must be dozed up, stockpiled, and qualified prior to use as fill. Assessments during the geotechnical investigation and test results so far indicate the stockpiled fills would be suitable as structural fill.
- Refer to Section 5.3.6 for placement limitations of undocumented fill.
- Refer to Section 5.3.6 for material quality and compaction requirements for reuse of undocumented fill.

5.3.4. *Subgrade Preparation*

- Prior to placing fill or constructing improvements, subgrade soils shall be scarified for a minimum depth of 12-inches, moisture conditioned to within 3-percent of optimum moisture content and compacted to not less than 90-percent of the soil's maximum dry density (ASTM D1557).
- In all cases, the final subgrade shall be smooth, firm, and relatively unyielding as determined by the testing agencies' qualified representative.

5.3.5. *Subgrade Stabilization*

- The fine-grained soils encountered within the project limits may tend to pump and or destabilize when moisture content exceeds optimum.
- Care should be taken during grading to assure irrigation water, precipitation, or construction activities do not lead to an increase in or ponding of water on exposed grade.
- Pumping soils may be scarified and allowed to dry or removed and replaced with a layer of clean, angular, 12-inch minus rock fill or stabilized with a geogrid.
- The size of the rock could vary depending on the soil's consistency and depth of soft, saturated soils.
- Typically, a stabilization depth of 12 to 18-inches is adequate to develop a firm and relatively unyielding subgrade, but variations may exist.
- The rock zone should be separated from the adjacent soils by encasing the rock in a geomembrane such as Mirafi 180N installed per the manufacturer's instructions.

- As an alternative, the use of a stabilizing geogrid (such as Tensar TX160), complemented by an aggregate layer to bridge unstable and/or pumping subgrade, may be used to stabilize subgrade.
- The City of Reno requires prior approval where subgrade stabilization measures incorporating geomembrane or geogrid are used.
- Subgrade stabilization is a trial-and-error process, and it is recommended that a test section of suitable depth and length be conducted.
- The contractor should propose a stabilization protocol that is consistent with their readily available means and methods, and this proposal presented for review, by the owner, the general contractor, and grading inspector.
- Subgrade stabilization is considered adequate if the subgrade is firm and relatively unyielding (as approved by the engineer) when proof-rolled with a fully loaded water truck.
- Subgrade stabilization may not be required for walkways or private improvements subject solely to foot traffic providing the required compaction levels are achieved.
- Where walkways or private improvements are structurally connected to the building, subgrade stabilization is required.

5.3.6. Mass Grading

- Verification testing of onsite soils to be qualified as structural fill shall be in accordance with ASTM D75, ASTM D6913, and ASTM D4318 and shall meet the requirements of Table 3.
- For fill generated on-site, material should be excavated, dozed, and processed into a uniform stockpile prior to being sampled and tested for material quality prior to acceptance.
- Existing fill and native soils generated from cut and meeting the requirements of Table 3 may be placed as structural fill to pad grade.
- Existing fill and native soils generated from cut and not meeting the requirements of Table 3 may be placed as structural fill at least 4-feet below pad grade.
- Import structural fill, meeting the requirements of Table 3, shall be obtained from a commercial borrow source.
- Prior to importing material to the site, a submittal verifying import quality shall be received and approved by Wood Rodgers.

Table 3 - Guideline Specification for Import Structural Fill

Sieve Size (ASTM D6913)		Percent by Weight Passing Sieve	
6 Inch ¹		100	
4 Inch		90 - 100	
¾ Inch ²		50 - 100	
Percent Passing #200 (ASTM D6913)	Maximum Liquid Limit (ASTM D4318) ³	Maximum Plasticity Index (ASTM D4318) ³	Maximum Expansion Index (ASTM D4829)
5 - 20	50	25	20
20 - 40	50	15	20
Soluble Sulfate Level (ACI 318, Table 4.3.1)		Negligible	
R-Value (ASTM D2844) ⁴		30 Min.	

¹ Pending approval of the means and methods of the contractor, maximum particle size may be increased to 12-inches.

² Material presenting more than 30-percent material retained on the ¾" sieve shall be referred to as rockfill. (Section 5.3.7)

³ Dry Method

⁴ Within right-of-way only.

- All fill soils shall be moisture conditioned to within 3-percent of optimum, placed in 12-inch maximum loose lifts, and compacted to not less than 90-percent of the soil's maximum dry density.
- Some of the soils on-site meet the definition of rockfill (i.e. greater than 30% of the soil mass is retained on the ¾-inch sieve) and rockfill placement protocols (Section 5.3.7) will be required for verification of fill placement.

5.3.7. Rockfill Placement and Verification

Soils that are classified as rockfill should be placed and verified in accordance with the following placement procedures.

- Oversize (i.e., rock > 6-inches in least dimension but less than 12-inches) must be blended and placed in such a manner that: nesting of the rock does not occur, rock is uniformly distributed throughout the fill lift, and voids are uniformly filled with the soil matrix.
- A maximum lift thickness of 12-inches should be observed for 6-inch minus rock fill. A maximum lift thickness of 18-inches should be observed for 12-inch minus rock fill.

5.3.7.a. Rockfill Verification Protocols

- Determine a moisture-density relationship (ASTM D1557 Method C) on the portion of the sample passing the ¾-inch sieve.
- Rockfill shall be placed and compacted with the ¾-inch minus fraction moisture conditioned to at least optimum as determined in accordance with ASTM D1557, Method C.
- Where standard density testing cannot be performed due to oversize material, performance criteria for acceptance of the compacted fill shall be established; otherwise rockfill shall be compacted to not less than 90-percent of the soil's maximum dry density.
- For acceptance based on performance criteria, an initial rolling pattering consisting of at least five single passes with a minimum 20-ton roller (815 Caterpillar "Sheepsfoot" compactor, or equivalent) for mass grading, or five complete passes with hand compactors or pneumatic trench roller in footing trenches is recommended.
- Increase the number of passes as necessary until no notable increase in density can be measured (ASTM D6938, Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods) or notable deflection is reduced to negligible.
- Modifications to the rolling pattern will be required with change in percentage of + ¾-inch rock and/or changes in moisture content of the ¾-inch minus portion of the rockfill.
- The established rolling patterns, and estimated percentage of + ¾-inch material, shall be recorded.

5.3.8. Trenching and Excavations

- OSHA - Regulations amended in Part 1926, Volume 54, Number 209 of the Federal Register (Table B-1, October 31, 1989) require that the temporary sidewall slopes be limited to maintain trench stability. Minimum sidewall slopes and acceptable trench configurations are also presented in the referenced register.
- Zones of difficulty with excavatability should be expected due to the presence of cobbles and sloughing soils.
- Should any large precipitation events be forecast, open excavations should be protected from flooding. Covering trenches with plates or tarps, constructing berms around the excavations, daylighting trenches to drain or temporary backfilling should be considered by the contractor to prevent flooding damage and erosion in general.

- Based on the results of our exploration program, it is our opinion that the bulk of the native site soils appear to be predominately Type C, although variations exist.
- All fills should conservatively be considered Type C unless directed otherwise by the contractor's competent individual trained in trench safety.
- All trenching should be performed and stabilized in accordance with local, state, and OSHA standards. Bank stability is the responsibility of the contractor or contractor's qualified representative who is present at the site, able to observe changes in ground conditions, and has control over personnel and equipment.
- Pipe bedding, initial backfill, and trench backfill shall be consistent with the approved civil and/or utility plans.

5.3.9. Earthwork Testing and Observation

- Verification of subgrade and fills should be performed by a firm that is AMRL accredited in ASTM E329.
- Special inspection of fill soils is required during mass grading of the development; the Special Inspector should be ICC certified in soils or NAQTC certified in Sampling and Density disciplines.
- The special inspector shall verify and document that placement of fill is consistent with the Mass Grading (5.3.6) section and Rockfill Placement and Verification Requirements (5.3.7).
- Density testing of fills should be in accordance with ASTM D6938 (Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods) or ASTM D1556 (Standard Test Method for Density and Unit Weight of Soil in Place by Sand-Cone Method).
- Subgrade should be density tested approximately every 500 square yards.
- Fill should be density tested once for every 1,000 square yards per lift of material placed during mass grading and one test per 300 feet of footing trenches or overexcavation of footings.
- One density test should be performed for each 500 square yards or per each lift for smaller, localized fill zones.
- Full time construction observation is required for mass graded fills and for any rock fill placement.
- The testing frequency should be increased if the contractor is having difficulty achieving and maintaining the required moisture levels.
- Utility bedding and trench backfill should be density tested per the requirements of the governing agency. Typically, agencies prescribe density testing per foot of bedding/backfill thickness, at a frequency of one test between manholes or valves, or one test every 500 lineal feet, including laterals.

- Nonstructural fills should be density tested for every 2,000 yards or for every 2-feet of fill for smaller, localized fill zones.

5.3.10. Embankments

- The surface of any embankment should be compacted to the same percent compaction as the body of the fill. This may be accomplished by compacting the surface of the embankment as it is constructed or by overbuilding the fill and cutting back to its compacted core.
- The exterior face of embankments should be constructed with an inclination no steeper than 2H:1V.
- Minor variations in slope gradient due to sculpting or landscaping of the slope face should not be considered inconsistent with the recommendations of this report or adverse to the ultimate performance of the global stability of the overall slope.
- Refer to Section 5.6.1 Slopes and Drainage for erosion protection considerations.

5.4. Structures

The following sections have been developed based on the understanding and expectation that the requirements specified in Section 5.3 Earthwork of this report have been met.

5.4.1. Standard Spread Foundations

The following table and supporting statements present design values and considerations for use in the development of standard spread foundation design.

Table 4 - Allowable Foundation Bearing Pressures for Standard Spread Foundations

Loading Condition	Maximum Net Allowable Bearing Pressure (PSF) ¹
Dead Load Plus Full Time Live Load	2,500
Dead Load Plus Live Loads, Plus Transient Wind or Seismic Loads	3,300

¹ Net allowable bearing pressure is that pressure at the base of the footing is in addition to the adjacent overburden pressure.

- For frost protection, footings should be founded at least 1 ½-feet below adjacent outside or unheated interior finish grades.
- Interior footings not located within frost prone areas should be founded at least 12 inches below surrounding ground or slab level for confinement.
- Regardless of loading, individual pad foundations and continuous spread foundations should be at least 18 and 12 inches wide, respectively, or as required by code.

- The minimum footing sizes recommended are based on the ability to develop bearing capacity. Footing dimensions should be determined by the engineer responsible for structural design.
- Lateral loads, such as wind or seismic, may be resisted by passive soil pressure and friction on the bottom of the footing. A coefficient of base friction of 0.45 is typical to the structural fills and native granular or fine-grained soils.
- Design values for active and passive equivalent fluid pressures of 35 and 350 pounds per square foot per foot of depth, respectively, can be utilized.
- When designing for passive pressure, the upper one foot of the soil profile should not be included unless confined by a concrete slab, or pavement.
- The integrity of the foundation support soils shall be maintained until concrete is placed.
- Total post-construction settlement for the structures is anticipated to be on the order of 1-inch, or less.
- Differential settlement between foundations with similar loads and sizes is anticipated to be half of the total settlement across 40-feet.

5.4.1.a. Slab-on-Grade Flooring

- A 4-inch minimum compacted aggregate base course (Type 2, Class B, Standard Specifications for Public Works Construction) compacted to 95-percent relative compaction is recommended beneath interior or exterior concrete slabs-on-grade subject solely to foot traffic.
- Some floor coverings, such as tile or linoleum, are sensitive to moisture that can be transmitted through slabs. Floor coverings should be installed in accordance with the manufacturer's recommendations including restrictions related to maximum vapor transmission rates.
- Wood Rodgers typically recommends a moisture vapor retarder, consisting of Stego Wrap (15 mil), or equal, to be placed beneath the aggregate base course as part of the moisture vapor system.

Wood Rodgers does not practice in the field of moisture vapor transmission evaluation/mitigation. Therefore, if a vapor retarder system more rigorous than the requirement of the IBC/IRC is desired, we recommend that a qualified person/firm be engaged/consulted with to evaluate the general and specific moisture vapor transmission paths and any impact on the proposed construction.

5.4.1.b. Site Drainage

- Adequate surface drainage must be constructed and maintained away from the structures.
- Permanent finish slopes away from the structures should be constructed to allow water to drain away quickly from and prevent any ponding of water adjacent to the structure per code requirements.
- Runoff should be collected within permanent drainage paths that can convey water off the property or to designated collection facilities. A system of roof gutters and downspouts are recommended to collect roof drainage and direct it away from foundations.
- Foundation and stem wall backfill should be densified to at least 90 percent relative compaction in accordance with the requirements given in the Grading and Filling Section. Compacting the backfill material decreases permeability and reduces the amount of irrigation and storm water available to enter under floor areas.

5.4.2. Retaining Structures

- Recommended lateral earth pressures for consideration in the design of retaining walls and landscaping walls are presented in Table 5.

Table 5 - Lateral Earth Pressures¹

Condition	Minimum Cohesion Modeled (psf)	Active (psf/f)		Passive (psf/f)		At Rest
		Static	Pseudo-Static	Static	Pseudo-Static	
Level	50	35	65	350	250	57

¹ Walls retaining sloping backfill or are greater than six feet in exposed height, require specific analyses and design values should be evaluated and presented by the geotechnical engineer.

- Changes in earth pressures due to seismic influences were assessed via the AASHTO LRFD protocol that considers some component of cohesion will be maintained within the backfill.
- In addition, it has been assumed that some displacement is allowable during the design event, and our recommended values have therefore been based on 50% of the USGS' predicted PGA.
- The values presented in Table 5 do not consider hydrostatic pressures or surcharge loading.
- Excessive wall pressures can be developed due to heavy compaction equipment proximate to the wall during backfill placement. Therefore, due care during placement and compaction of backfill is required.

- Backfill behind retaining structures should be granular and compacted to not less than 90 percent of the soils' maximum dry density.
- French drains, a drainage gravel backfill layer wrapped in geotextile such as Mirafi 140 N, or a pre-manufactured drain system such as Tensor[®] DC1200 should be utilized if buildup of hydrostatic pressure is possible which may cause excessive loading on pool walls or buoyancy conditions.
- Site preparation and foundations for retaining structures shall be consistent with Section 5.3 Earthwork and Section 5.4.1 Standard Spread Foundations.
- Walls retaining sloping backfill, or walls greater than six feet in exposed height, require specific analyses, and design values should be evaluated and presented by the geotechnical engineer.

5.5. Concrete

The American Concrete Institute (ACI) considers three different exposure classes to address the degree of severity for environmental conditions: freezing and thawing (Exposure Category F), concrete in contact with soil that contains water soluble sulfate ions (Exposure Category S), and Exposure Class W for concrete in contact with water. Exposure categories F and S, and potential mitigation, are discussed in Section 5.5.1.

5.5.1. Materials

The concrete material recommendations vary between Exposure Class F and Exposure Class S. Therefore, those specifying concrete subject to both freezing and thawing and water-soluble sulfate ions should consider the potential exposure conditions for Class F and Class S and select the most appropriate. When considering post-tensioned slabs-on-grade chlorides can also present an aggressive environment (Section 5.5.1c).

5.5.1.a. Exposure Class F

- Class F3 has been assigned because of the potential for some portions of concrete to absorb sufficient water to be saturated prior to freezing and the potential application of deicing salts.
- Per ACI, concrete for Class F3 should present a maximum water: cement ratio of 0.40, a minimum 28-day compressive strength of 5,000 psi, and be air entrained to 6.0 ± 1.5 -percent.
- Per the Standard Specifications for Public Works Construction (Table 337.10.01.03-I), the 28-day compressive strength minimum is specified at 4,000 psi.

5.5.1.b. Exposure Class S

Mitigation for sulfate exposure is required based on the test results. The summary below presents excerpts from ACI and SSPWC. Refer to the referenced standards in their entirety

when specifying sulfate resistance exceeding the presented geotechnical or civil considerations.

Mitigation for sulfate exposure is required based on the chemical test results (C-2, Appendix C). The summary below presents excerpts from ACI and SSPWC. Refer to the referenced standards in their entirety when specifying sulfate resistance exceeding the presented geotechnical or civil considerations.

- Sulfate testing on the native soils yielded results in the S2 severe range (ACI 318, $0.20\% \leq \text{SO}_4^{2-} \% < 2\% \text{SO}_4^{2-}$, by mass).
- Per ACI, concrete for Class S2 should: present a maximum water: cementitious ratio of 0.45, and a minimum 28-day compressive strength of 4,500 psi. Type IP cement is recommended for use.
- Per the SSPWC (Table 337.10.01.03-I), concrete subject to severe sulfate exposure shall present a maximum water: cementitious ratio of 0.45, a minimum 28-day compressive strength of 4,000 psi, and be air entrained to 6.0 ± 1.5 -percent. Type II + Flyash (25% min.) cementitious materials are recommended for use.
- Because signification grading will occur across the project site, soils should be retested for sulfate levels at the end of grading and the mitigation requirements presented herein lessened as appropriate.

5.5.1.c. Chlorides

- Chemical testing on the native soils presented chloride ion concentrations of 58 mg/kg.
- The structural engineer will identify any required mitigation due to the presence of chlorides.

5.5.2. Construction

- Concrete placement and curing should be performed in accordance with procedures outlined by the American Concrete Institute. Special considerations should be given to concrete placed and cured during hot or cold weather conditions.
- The occurrence of concrete shrinkage cracking may be reduced and/or controlled by limiting the amount of water within the mix (water cement ratio of 0.45 or less), the incorporation of crack control joints and proper concrete placing and curing practices including ACI 318 provisions for areas subject to freeze thaw conditions.
- Proper curing, finishing, control joints and reinforcing should be provided to minimize any damage resulting from shrinkage including cracks and slab curling.

- Western Nevada is a region with absorptive aggregates and exceptionally low relative humidity. Therefore, concrete flatwork will shrink and curl in a manner which is not typical of many other US regions.
- Proper site preparation and placement of reinforcement are imperative to the performance of slab-on-grade improvements.
- Joint spacing, locally, is typically on 10-to-12-foot centers for large slabs and no more than five feet for sidewalks.
- Cracking that occurs within the slab-on-grade floors will often reflect through overlying improvements even if adequate substrate preparation has occurred.
- Control of the rate of moisture loss in concrete slab-on-grade improvements by using curing compounds, fogging, or other suitable means is imperative to protecting the slab from excessive curling.
- Slabs-on-grade will still exhibit some cracking and curling. The occurrence of concrete shrinkage cracks is independent of the soil supporting characteristics.

5.6. Public Improvements

Unless noted otherwise, dedicated improvements shall be designed and constructed in accordance with the approved civil plans, the Standard Specifications for Public Works Construction, and the jurisdiction's standard details.

5.6.1. Slopes and Drainage

- Surface drainage shall be per the approved project Civil design drawings.
- Refer to Section 5.3.10 for embankment considerations.
- Due to the sloughing soils encountered during our exploration program, temporary slope protection may be required in deeper trenches and/or on the sidewalls of the retention basin especially if vibration loading due to construction equipment is proximate.
- The second aspect of slope stability involves erosion potential which is dependent on numerous factors involving grain size distribution, cohesion, moisture content, slope angle and the velocity of the water or wind across the ground surface.
- Erosion protection should be as indicated on the approved Civil drawings and/or per the jurisdiction's design standards.
- Typically, 2:1 (H:V) slopes typically require armoring. Slopes steeper than 3:1 (H:V) are typically addressed with a combination of revegetation and localize armoring or landscape retaining walls.

- Temporary (during construction) and permanent (after construction) erosion control will be required for all disturbed areas.
- Brow ditches are recommended above any slopes greater than 10-feet in height and should be incorporated into the overall drainage considerations presented on the civil drawings.
- Provisions for drainage from behind common retaining walls should be considered and presented in the approved civil plans.
- In compliance with all applicable city, county, state and federal regulations the contractor shall prevent dust from being generated during construction, and the contractor shall submit an acceptable dust control plan prior to starting site preparation or earthwork.

5.6.2. Structural Pavement Sections

- Materials and workmanship shall be consistent with the requirements of the jurisdiction and the Standard Specifications for Public Works Construction.
- Table 6 presents the recommended minimum structural pavement sections for the development based on planned use. Minimum sections required by the jurisdictions shall govern if more than specified in Table 6.

Table 6 - Structural Pavement Sections¹

Road Type	Pavement Thickness (In.)	Pavement Type ²	Type II Class B Base Course Thickness (In.)
Main Access Drives	4	2" Type 3 + Lime / 2" Type 2	6
Parking and Automobile Traffic Driveways	3	Type 3 + Lime	6
Dumpster Aprons ⁴	6	Reinforced Portland Cement Concrete	6

¹ Per City of Fernley Public Works Department Standard Details. Final design shall be verified based on lot distribution, street loading, subgrade R-value and separation requirements.

² Per the Standard Specifications for Public Works Construction.

The Contractor should submit a pavement mix design to the Owner or Engineer, for approval, at least five working days prior to paving. When pavement is placed directly adjacent to concrete flatwork, the finish compacted grade of the pavement should be at least ½ of an inch higher than the edge of adjacent concrete surface to allow adequate compaction of the pavement without damaging the concrete.

5.6.3. Pavement Design Life

- Maintenance is mandatory to ensure long-term pavement performance and to meet or exceed the assumed 20-year design life.

- Maintenance refers to any activity performed on the pavement that is intended to preserve its original service life or load-carrying capacity. Examples of maintenance activities include patching, crack or joint sealing, and seal coats. If these maintenance activities are ignored or deferred, premature failure of the pavement will occur.
- Premature failure of asphaltic concrete frequently occurs adjacent to poorly graded ponding areas and/or landscape areas. Failures may occur due to excessive precipitation, irrigation and landscaping water infiltrating into the subgrade soils causing subgrade failure.
- In areas where saturation of the subgrade soils beneath asphaltic pavement may occur, it is strongly recommended the owner/project manager include provisions by design for a subdrain system to eliminate the potential for saturation of subgrade soils. The subdrain system should discharge into a permanent drainage area that will not impede drainage flow to cause the system to back-up and/or clog. Appropriate maintenance procedures should be implemented to ensure the subdrain system does not plug and allow for proper drainage of surface and subsurface water beneath paved areas. Subdrain location and configuration should be evaluated once final grading and landscaping plans have been prepared.
- If the ultimate traffic exceeds the anticipated levels, it may be necessary to reevaluate and overlay the pavement at some time in the future.
- The cost associated with proper maintenance is generally much less than the cost for reconstruction due to the premature failure of the pavement. Therefore, it is strongly recommended the owner/project manager implement a pavement management program.

6. CONSTRUCTION OBSERVATION AND TESTING SERVICES

- The recommendations presented in this report assume that the contractors perform their work as required by the project documents and that owner/project manager provides for sufficient field-testing and construction review during each phase of construction.
- Prior to construction, the owner/project manager should schedule a pre-construction conference including, but not limited to representatives of the owner, architect, civil engineer, the general contractor, earthwork and materials subcontractors, building official, and geotechnical engineer.
- It is the owner's/project manager responsibility to set-up this meeting and contact all responsible parties. The conference will allow parties to review the project plans, specifications, scheduling and recommendations presented in this report, and discuss applicable material quality and mix design requirements.
- Quality control reports should be submitted to the owner/project manager for review and distributed to the appropriate parties. It is essential that any changes or revisions to project plans be provided to Wood Rodgers in a timely fashion to ensure contractor compliance and avoid construction delays or the need to remove completed work.
- During construction, Wood Rodgers Incorporated should have the opportunity to provide sufficient on-site observation of site preparation and grading, over-excavation, fill placement, foundation installation, and paving.

These observations would allow us to document the geotechnical conditions are as anticipated and that the contractor's work meets with the criteria in the approved plans and specifications. Verification of horizontal and vertical control must be provided by whoever was responsible for establishing those boundaries and constructing associated improvements.

7. STANDARD LIMITATION CLAUSE

- This report has been prepared in accordance with generally accepted local geotechnical practices.
- The analyses and recommendations submitted are based upon field exploration performed at the specific locations identified and the conditions encountered, as discussed in our report.
- No guarantee or warranty as to the continuity of soil conditions between exploration points is implied or intended.
- Therefore, this report does not reflect soil variations that may become evident during the construction period, at which time re-evaluation of the recommendations may be necessary.
- Final plans and specifications should be reviewed by the design engineer responsible for this geotechnical report to determine if they have been prepared in accordance with the recommendations contained in this report prior to submitting to the building department for review.
- It is the owner's/project manager responsibility to provide the plans and specifications to the engineer.
- This report is issued with the understanding that it is the responsibility of the owner or their representative to ensure that the information and recommendations contained herein are brought to the attention of the design team for the project and incorporated into the plans and specifications, and that the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.
- We recommend our firm be retained to perform construction observation in all phases of the project related to geotechnical factors to document compliance with our recommendations.
- The owner/project manager is responsible for distribution of this geotechnical report to all designers and contractors whose work is related to geotechnical factors.
- It is the contractor's responsibility for the grading and construction of the designed improvements. This responsibility includes the means, methods, techniques, sequence, and procedures of construction and safety of construction at the site.
- All construction shall conform to the requirements of the most recently adopted version of the Standard Specifications for Public Works Construction and the requirements of the City of Fernley and Lyon County, Nevada.
- Failure to inspect the work shall not relieve the contractor from his obligation to perform sound and reliable work as described herein and as described in the Standard Specifications for Public Works Construction.

- In the event of changes in the design, location, or ownership of the project after presentation of this report, our recommendations should be reviewed and possibly modified by the Geotechnical Engineer.
- If the Geotechnical Engineer is not accorded the privilege of making this recommended review, we can assume no responsibility for misinterpretation or misapplication of our recommendations or their validity in the event changes have been made in the original design concept without our prior review. The engineer makes no other warranties, either expressed or implied, as to the professional advice provided under the terms of this agreement and included in this report.
- This report was prepared by Wood Rodgers, Inc. for the benefit of ERGS, Inc. and their duly assigned agents or other responsible parties.
- The material in this report reflects Wood Rodgers' best judgment considering the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties.
- Wood Rodgers accepts no responsibility for damages, if any, suffered by any third party because of decisions made by third parties or actions based on this report without consultation with Wood Rodgers and written approval for such actions.

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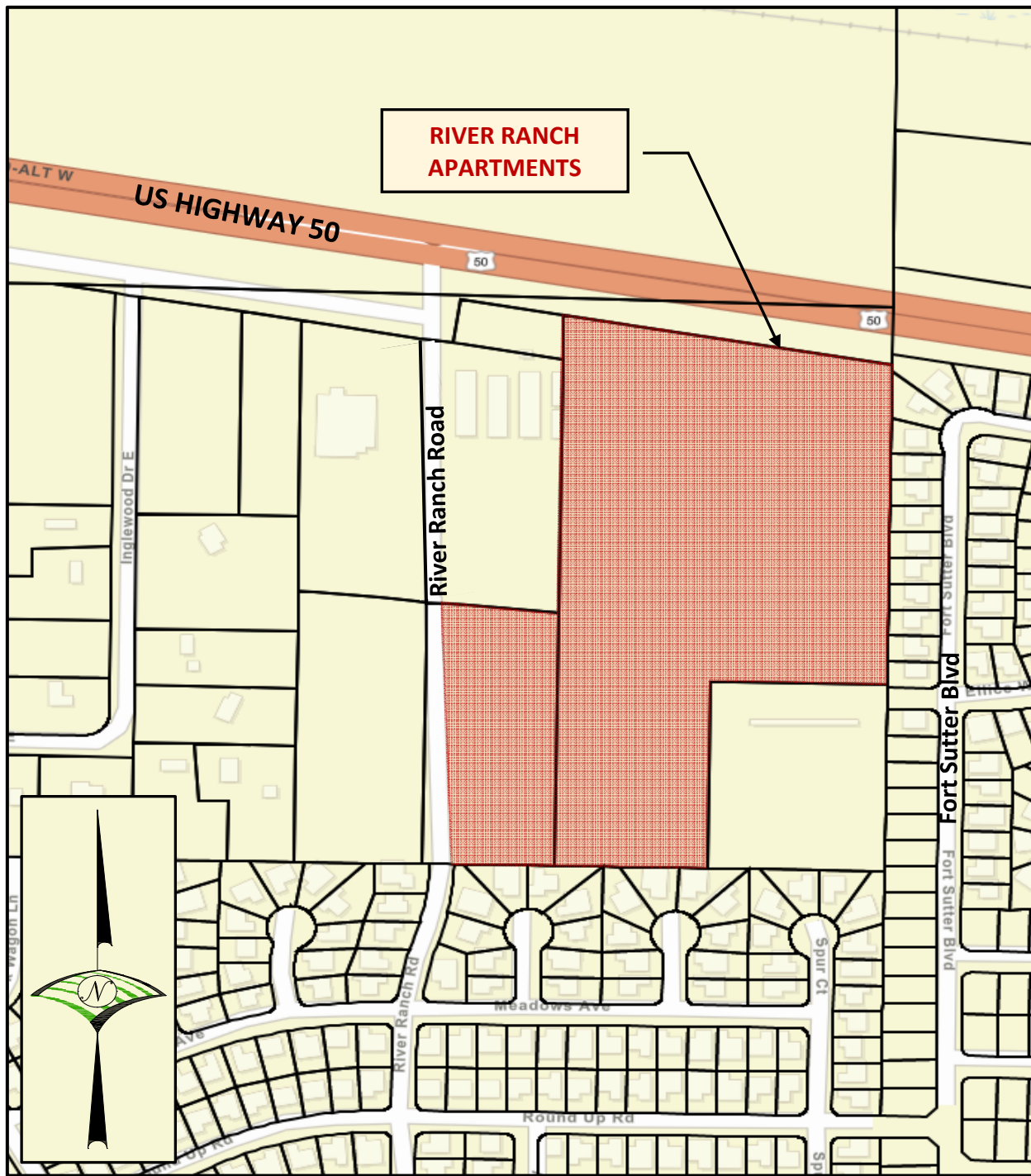
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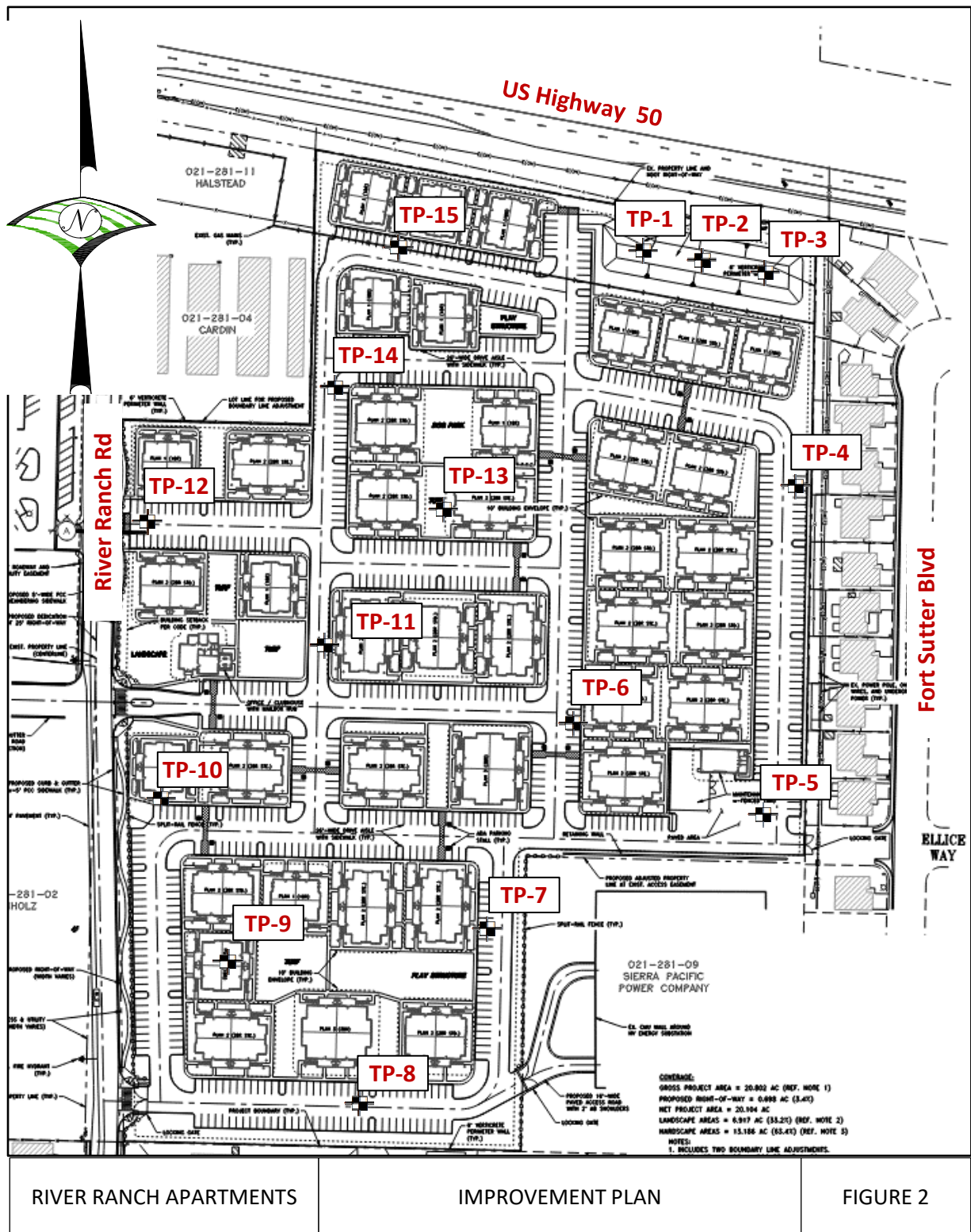
APPENDIX A FIGURES

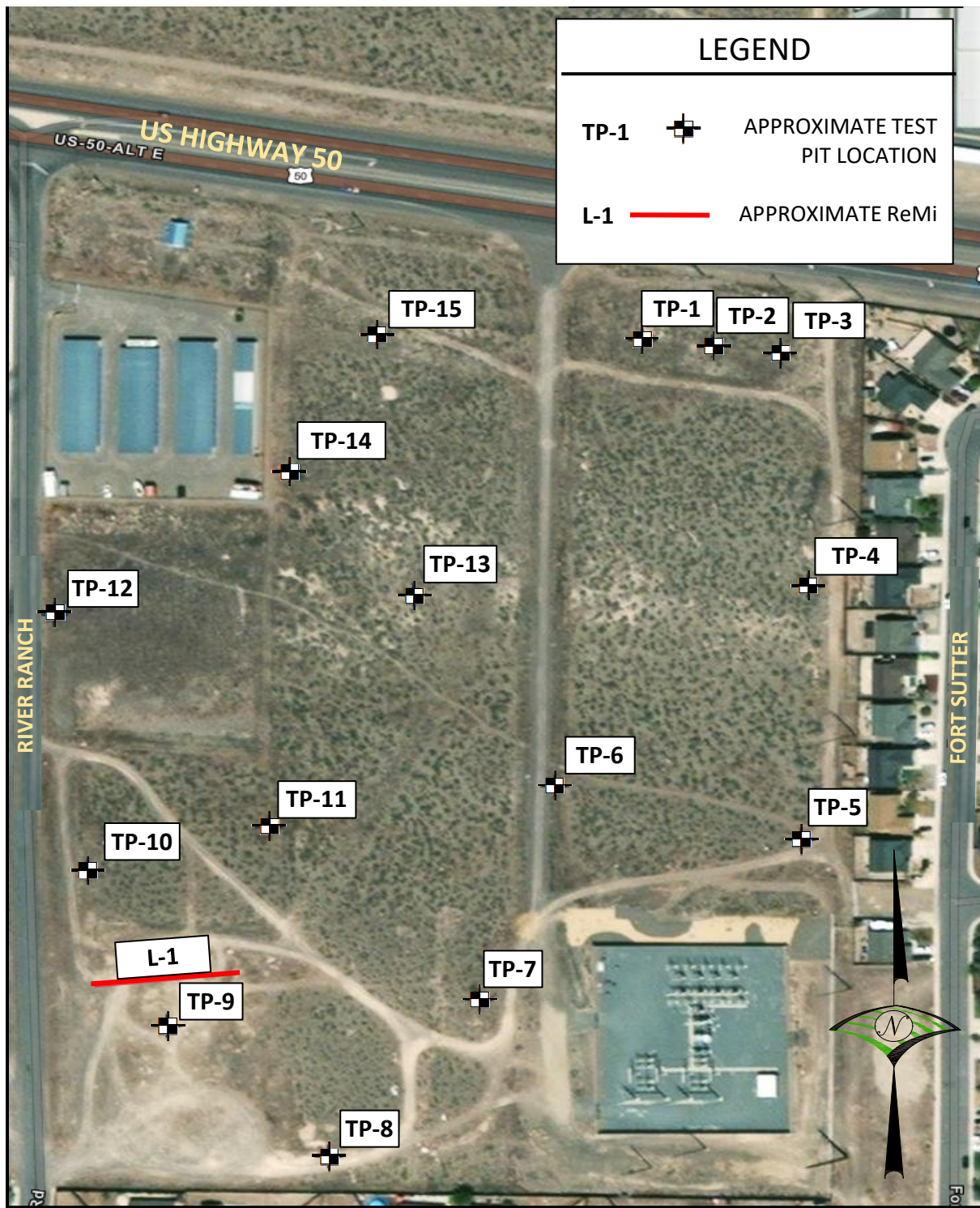


RIVER RANCH APARTMENTS

VICINITY MAP

FIGURE 1





RIVER RANCH APARTMENTS

SITE PLAN & APPROXIMATE EXPLORATION
LOCATIONS

FIGURE 3



APPENDIX B FIELD EXPLORATION



Wood Rodgers

TEST PIT NUMBER TP-1

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4127 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59946, -119.20922 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0												
		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic, trace rootlets	GB 1A									
		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 1B									
5		Medium dense	GB 1C									
		Silt seams	GB 1D									
		PERCOLATION TEST, sloughing	GB 1E					2.6				5.3
10												

Bottom of Test Pit at 10.0 Feet.

Soil Percolation Recorded Measurements

1. Depth to test : 8 ft
 2. Time of 1st saturation to 12" 9:50 Date : 7/13/2022
If 12" of water drains from hole in 10 mins or less, refill to 12".
 3. Time of 2nd saturation : 10:00
 4. If 2nd filling drains in less than 10 mins, begin 1 hour test with 10 mins or less reading intervals.
 5. If either filling exceeds 10 mins to drain from hole, begin a 4-hr pre-soak.
- Return between 16 - 24 hrs to start test.

Date of percolation test : 7/14/2022Hole # : TP-1 Diameter : 8 in Depth : 12 in Soil Type : SP-SM

Reading	Time		Water Level (in)		Elapsed	Water
	Start	Finish	Start	Finish	Time min	Fall (in)
1	10:06	10:16	6	8 1/16	10	2 1/16
2	10:16	10:26	6	7 5/8	10	1 5/8
3	10:26	10:36	6	7 5/8	10	1 5/8
4	10:36	10:46	6	7 3/8	10	1 3/8
5	10:46	10:56	6	7 5/16	10	1 5/16
6	10:56	11:06	6	7 5/16	10	1 5/16

Stabilized Rate : 7.6 Min/inch
 Tested by: SB
 Checked by: LL

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH.DOUBLE_R.OA\GEOTECH\GINT\TP1\TP1.RANCH.APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-2

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4129 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59944, -119.20894 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0		SANDY FAT CLAY, (CH) stiff, dry, yellowish brown, high plasticity	GB 2A									
		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic										
		SILT, (ML) very stiff, slightly moist, olive yellow, low plasticity	GB 2B					21.7				94.1
5		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 2C									
		Medium dense	GB 2D									
		Loose, sloughing, PERCOLATION TEST										

Bottom of Test Pit at 9.5 Feet.

Soil Percolation Recorded Measurements

1. Depth to test : 8 ft
 2. Time of 1st saturation to 12" 10:50 Date : 7/13/2022
 If 12" of water drains from hole in 10 mins or less, refill to 12".
 3. Time of 2nd saturation : 11:00
 4. If 2nd filling drains in less than 10 mins, begin 1 hour test with 10 mins or less reading intervals.
 5. If either filling exceeds 10 mins to drain from hole, begin a 4-hr pre-soak.
 Return between 16 - 24 hrs to start test.

Date of percolation test : 7/14/2022Hole # : TP-2 Diameter : 8 in Depth : 12 in Soil Type : SP-SM

Reading	Time		Water Level		Elapsed Time min	Water Fall (in)
	Start	Finish	Start	Finish		
1	10:10	10:20	6	8 7/16	10	2 7/16
2	10:20	10:30	6	8 1/4	10	2 1/4
3	10:30	10:40	6	8 1/8	10	2 1/8
4	10:40	10:50	6	8 1/8	10	2 1/8
5	10:50	11:00	6	8 1/16	10	2 1/16

Stabilized Rate : 4.8 Min/inch
 Tested by: SB
 Checked by : LL



Wood Rodgers

TEST PIT NUMBER TP-3

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4128 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59941, -119.20864 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0		SANDY FAT CLAY, (CH) stiff, dry, yellowish brown, high plasticity	GB 3A									
		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic										
		SILT, (ML) stiff, slightly moist, yellowish brown, low plasticity	GB 3B									
		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic										
5		Sloughing	GB 3C									

Bottom of Test Pit at 7.5 Feet.

Soil Percolation Recorded Measurements

1. Depth to test : 8 ft
 2. Time of 1st saturation to 12" 11:45 Date : 7/13/2022
 If 12" of water drains from hole in 10 mins or less, refill to 12".
 3. Time of 2nd saturation : 11:55
 4. If 2nd filling drains in less than 10 mins, begin 1 hour test with 10 mins or less reading intervals.
 5. If either filling exceeds 10 mins to drain from hole, begin a 4-hr pre-soak.
 Return between 16 - 24 hrs to start test.

Date of percolation test : 7/14/2022Hole # : TP-3 Diameter : 8 in Depth : 12 in Soil Type : SP-SM

Reading	Time		Water Level		Elapsed Time min	Water Fall (in)
	Start	Finish	Start	Finish		
1			6	9 9/16	5	
2			6	9 7/16	5	
3			6	9 3/8	5	
4			6	9 5/16	5	
5			6	9 5/16	5	
6			6	9 1/4	5	
7			6	9 1/4	5	
8			6	9 1/4	5	
9			6	9 1/4	5	

Stabilized Rate : 1.5 Min/inch*

*Rate may be due to test performed in sloughed soils

Tested by: SBChecked by: LL



Wood Rodgers

TEST PIT NUMBER TP-4

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22 **GROUND ELEVATION** 4133 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59857, -119.20834 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic	GB 4A			70			NP	NP	NP	
2.5			GB 4B									
5.0		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 4C									
7.5		SILT, (ML) very stiff, dry, olive yellow, low plasticity										
10.0												

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH_DOUBLE - R_OA\GEOTECH\GEO\TECH\06 GINT\RIVER_RANCH APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-5

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22 **GROUND ELEVATION** 4142 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59941, -119.20846 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		CLAYEY GRAVEL WITH SAND, (GC) medium dense, dry, yellowish brown, medium plasticity	GB 5A									
2.5		Dense, slightly moist	GB 5B					10.7	51	26	25	12.8
5.0			GB 5C									
7.5			GB 5D									
10.0												

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GINT\TRIVER_RANCH_APARTMENTS.GPJ



PAGE 1 OF 1

PROJECT NAME River Ranch Apartments

PROJECT LOCATION Fernley, Nevada

COMPLETED 7/13/22

GROUND ELEVATION 4144 ft

TEST PIT SIZE 24 inches

EXCAVATION CONTRACTOR King Construction

GROUND WATER LEVELS:

EXCAVATION METHOD Backhoe

AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED

LOGGED BY Lilian Lorincz

CHECKED BY Justin McDougal

AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED

NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59784, -119.20934 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

[illegible]

Bottom of Test Pit at 10.0 Feet.



Wood Rodgers

TEST PIT NUMBER TP-7

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22 **GROUND ELEVATION** 4160 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59706, -119.20926 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		FAT CLAY WITH SAND, (CH) stiff, dry, olive brown, high plasticity, rootlets	GB 7A									
2.5		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity	GB 7B									
5.0		Slightly moist	GB 7C					14.7	41	26	15	79.8
7.5		CLAYEY SAND WITH GRAVEL, (SC) dense, dry, yellowish brown, high plasticity	GB 7D									
10.0		SILT WITH GRAVEL, (ML) stiff, dry, yellowish brown, low plasticity	GB 7E									

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH_DOUBLE - R_OA\GEOTECH\GEO\TECH\06 GINT\RIVER_RANCH APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-8

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22 **GROUND ELEVATION** 4161 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59941, -119.20846 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0												
		FILL - CLAYEY SAND, (SC) medium dense, dry, yellowish brown, medium plasticity	GB 8A									
2.5			GB 8B					6.3	23	13	10	31.1
		SILT WITH SAND, (ML) stiff, dry, olive yellow, low plasticity Yellowish brown										
5.0			GB 8C									
		POORLY GRADED SAND WITH SILT, (SP-SM) dense, dry, light brownish gray, non plastic										
7.5			GB 8D									
10.0												

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 ERGS\RIVER_RNCH_DOUBLE_R.OA\GEOTECH\GINT\06 GINT\RIVER_RANCH_APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-9

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4162 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59696, -119.211 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		FILL - CLAYEY SAND, (SC) medium dense, dry, yellowish brown, medium plasticity, construction debris	GB 9A									
2.5		SILTY SAND, (SM) medium dense, dry, yellowish brown, low plasticity, rootlets	GB 9B									
5.0		Dense, olive yellow	GB 9C									
7.5		Slightly moist	GB 9D					15.4	31	24	7	38.0
10.0			GB 9E									

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034_ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GINT\TP-9_RIVER_RNCH_APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-10

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4153 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59753, -119.2114 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0												
		FILL - CLAYEY SAND, (SC) medium dense, dry, yellowish brown, medium plasticity, construction debris	GB 10A									
2.5			GB 10B									
		SILT WITH SAND, (ML) stiff, dry, olive yellow, medium plasticity, rootlets	GB 10C									
5.0												
		Very stiff	GB 10D									
7.5												
		SILT WITH GRAVEL, (ML) very stiff, slightly moist, olive yellow, non plastic										
10.0												

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:24 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GINT\TP10 RIVER RANCH APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-11

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4149 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59769, -119.21064 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		SILTY SAND, (SM) loose, dry, yellowish brown, non plastic	GB 11A									
2.5		Silt seam										
5.0		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity	GB 11B									
			GB 11C									
7.5		POORLY GRADED SAND WITH GRAVEL, (SP) medium dense, dry, light brownish gray to olive brown, non plastic	GB 11D									
10.0												

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:24 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 ERGS\RIVER RNCH DOUBLE R.OA\GEOTECH\GEO\TECH\06 GINT\RIVER RANCH APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-12

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4135 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59845, -119.21134 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0												
		SILT WITH GRAVEL, (ML) stiff, dry, yellowish brown, medium plasticity	GB 12A									
		SILT WITH SAND, (ML) stiff, dry, olive yellow, medium plasticity, rootlets	GB 12B									
2.5		SILTY SAND, (SM) medium dense, dry, yellowish brown, low plasticity	GB 12C									
5.0		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brownish gray, non plastic	GB 12D									
7.5		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity	GB 12E									
10.0												

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:24 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH.DOUBLE_R_OA\GEOTECH\GEO\TECH\06 GINT\RIVER_RANCH APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-13

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4135 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59853, -119.210 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0												
		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic, trace rootlets	GB 13A									
2.5		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brownish gray, non plastic	GB 13B									
5.0		SILT WITH SAND, (ML) stiff, dry, olive yellow, medium plasticity, rootlets	GB 13C									
7.5		Slightly moist										
10.0			GB 13D									

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:24 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GEO\TECH\06 GINT\RIVER RANCH APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-14

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4133 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59899, -119.21046 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		SILTY SAND, (SM) medium dense, dry, yellowish brown, non plastic	GB 14A									
2.5		Low plasticity, silt seam	GB 14B									
5.0												
7.5		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity	GB 14C									
10.0		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brownish gray, non plastic	GB 14D									

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:24 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GEO\TP06 GINT\RIVER RANCH APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-15

PAGE 1 OF 1

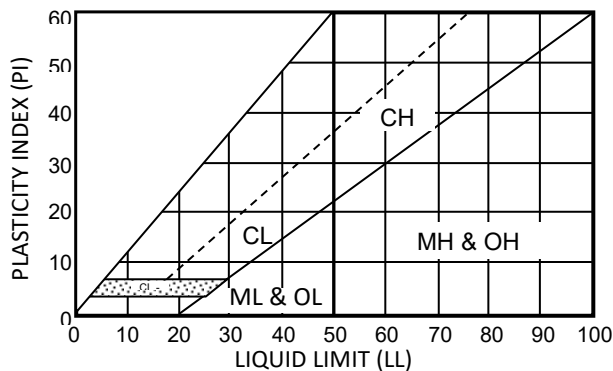
CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4131 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59949, -119.21024 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0												
		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic, trace rootlets	GB 15A									
2.5		SILT WITH SAND, (ML) very stiff, dry, yellowish brown, medium plasticity	GB 15B									
5.0		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 15C									
		Sloughing										

Bottom of Test Pit at 7.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:24 - \\WOODRODGERS.LOC\\PRODUCTION\\DATA\\JOBS-RENO\\JOBS\\3034 - ERGS\\RIVER_RNCH_DOUBLE_R_OA\\GEOTECH\\GEO\\TECH\\06 GINT\\RIVER_RANCH APARTMENTS.GPJ

MAJOR DIVISION				TYPICAL NAMES	
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	GRAVEL MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES		GW	WELL GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
		GRAVELS WITH OVER 12% FINES		GP	POORLY GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
				GM	SILTY GRAVELS, SILTY GRAVELS WITH SAND
				GC	CLAYEY GRAVELS, CLAYEY GRAVELS WITH SAND
	SAND MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES		SW	WELL GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
				SP	POORLY GRADED SAND WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
		SANDS WITH OVER 12% FINES		SM	SILTY SANDS WITH OR WITHOUT GRAVEL
				SC	CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOILS MORE THAN HALF IS FINER THAN NO. 200 SIEVE	SILT AND CLAY LIQUID LIMIT 50% OR LESS			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTS WITH SANDS AND GRAVELS
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY CLAYS WITH SANDS AND GRAVELS, LEAN CLAYS
				OL	ORGANIC SILTS OR CLAYS OF LOW PLASTICITY
	SILT AND CLAY LIQUID LIMIT GREATER THAN 50%			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOLID, ELASTIC SILTS
				CH	INORGANIC CLAYS OR HIGH PLASTICITY, FAT CLAYS
				OH	ORGANIC SILTS OR CLAYS MEDIUM TO HIGH PLASTICITY
	HIGHLY ORGANIC SOILS			PT	PEAT AND OTHER HIGHLY ORGANIC SOILS



CONSISTENCY		RELATIVE DENSITY	
SILTS & CLAYS	SPT BLOW* COUNTS (N)	SANDS & GRAVELS	SPT BLOW* COUNTS (N)
VERY SOFT	0 - 2	VERY LOOSE	0 - 4
SOFT	3 - 4	LOOSE	5 - 10
MEDIUM STIFF	5 - 8	MD DENSE	11 - 30
STIFF	9 - 15	DENSE	31 - 50
VERY STIFF	16 - 30	VERY DENSE	50 +
HARD	30 +		

* The Standard Penetration Resistance (N) in blows per foot is obtained by the ASTM D1585 procedure using 2" O.D., 1 3/8" I.D. samplers.

PLASTICITY DESCRIPTIONS			
DESCRIPTION	RANGE	DESCRIPTION	RANGE
NONPLASTIC	<5	MEDIUM	10-20
LOW	< 10	MEDIUM-HIGH	15 - 25
LOW-MEDIUM	5 - 15	HIGH	>25

DESCRIPTION OF ESTIMATED PERCENTAGES OF GRAVEL, SAND, AND FINES	
TRACE	Particles are present but est. < 5%
FEW	5% - 10%
LITTLE	15% - 20%
SOME	30% - 45%
MOSTLY	50% - 100%

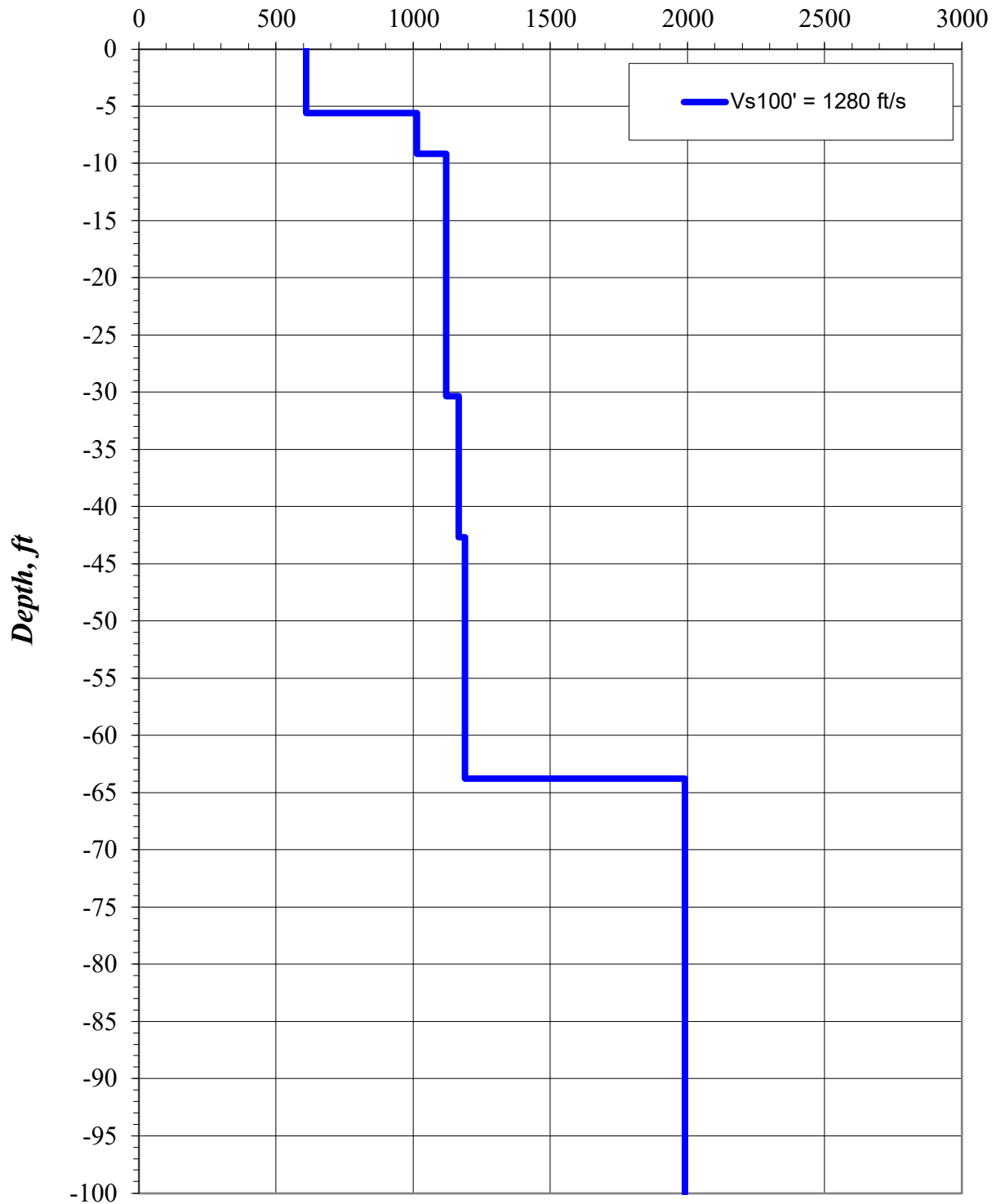
NOTE: Percentages are presented within soil description for soil horizon with laboratory tested soil samples.

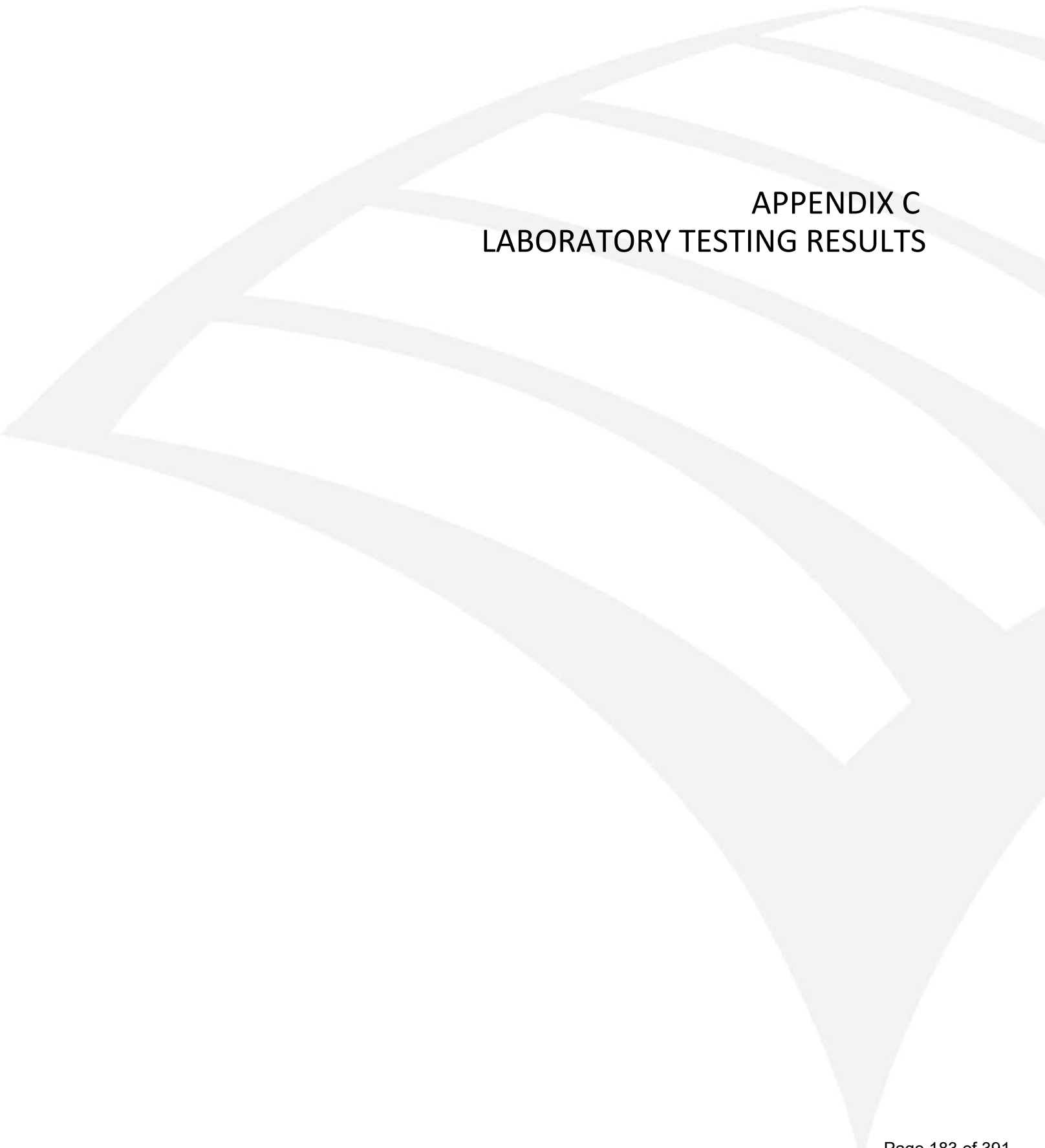
DEFINITIONS OF SOIL FRACTIONS	
SOIL COMPONENT	PARTICLE SIZE RANGE
BOULDERS	> 12 INCHES
COBBLES	3 to 12 Inches
GRAVEL	3 IN. TO NO. 4 SIEVE
COARSE GRAVEL	3 IN. TO 3/4 IN.
FINE GRAVEL	3/4 IN. TO NO. 4 SIEVE
SAND	NO. 4 TO NO. 200
COARSE SAND	NO. 4 TO NO. 10
MEDIUM SAND	NO. 10 TO NO. 40
FINE SAND	NO. 40 TO NO. 200
FINES (SILT OR CLAY)	MINUS NO. 200 SIEVE

RIVER RANCH APARTMENTS	UNIFIED SOIL CLASSIFICATION AND KEY TO SOIL DESCRIPTIONS	B-2
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River Ranch Apartments, 165': Vs Model

Shear-Wave Velocity, ft/s





APPENDIX C LABORATORY TESTING RESULTS



Wood Rodgers Inc.
1361 Corporate Blvd
Reno NV 89521
Telephone: 775-823-4068
Fax: 775-823-4066

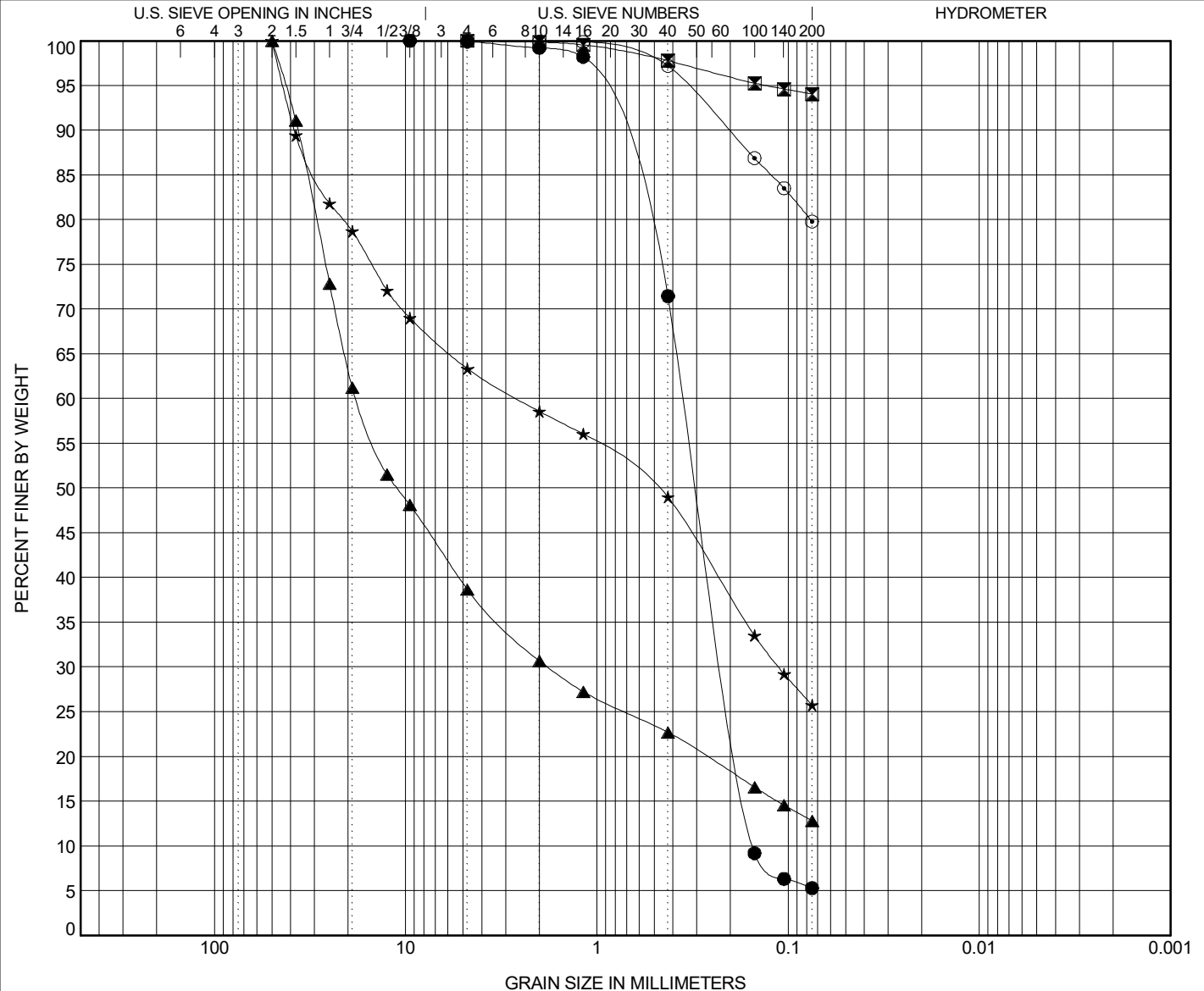
GRAIN SIZE DISTRIBUTION

CLIENT ERGS, Inc.

PROJECT NAME River Ranch Apartments

PROJECT NUMBER 3034059

PROJECT LOCATION Fernley, Nevada



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

TEST PIT	DEPTH	Classification					LL	PL	PI	Cc	Cu
● TP-1	8.0	POORLY GRADED SAND with SILT (SP-SM)								0.85	2.31
☒ TP-2	3.0	SILT (ML)									
▲ TP-5	3.0	CLAYEY GRAVEL with SAND(GC)					51	26	25		
★ TP-6	5.0	CLAYEY SAND with GRAVEL(SC)					51	22	29		
⊙ TP-7	5.0	SILT with SAND(ML)					41	26	15		
TEST PIT	DEPTH	D100	D60	D30	D10	%Gravel	%Sand	%Silt		%Clay	
● TP-1	8.0	9.5	0.351	0.212	0.152	0.1	94.6	5.3			
☒ TP-2	3.0	4.75				0.0	5.9	94.1			
▲ TP-5	3.0	50	18.025	1.808		61.4	25.8	12.8			
★ TP-6	5.0	50	2.593	0.112		36.7	37.6	25.7			
⊙ TP-7	5.0	9.5				0.0	20.2	79.8			



Wood Rodgers Inc.
1361 Corporate Blvd
Reno NV 89521
Telephone: 775-823-4068
Fax: 775-823-4066

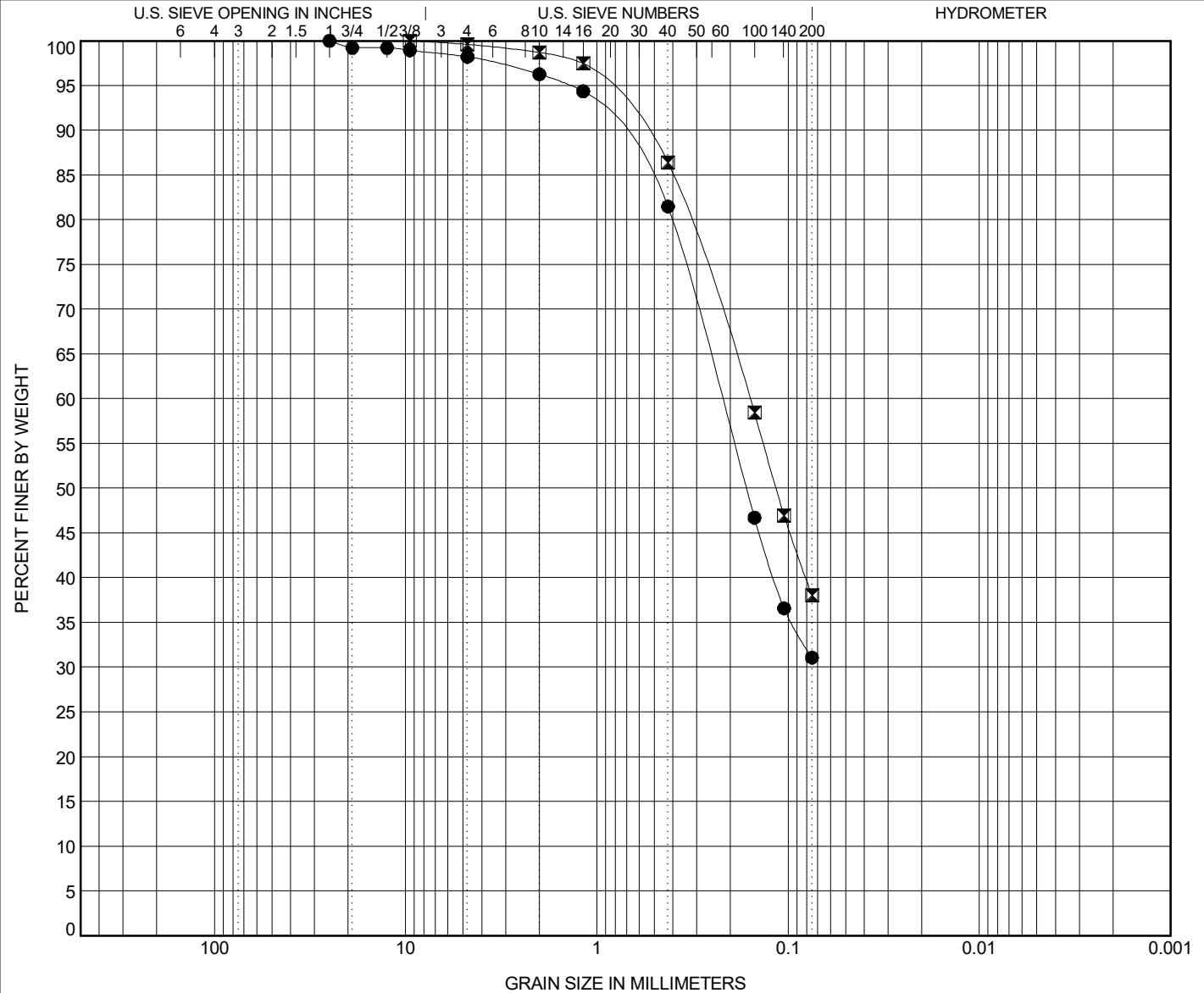
GRAIN SIZE DISTRIBUTION

CLIENT ERGS, Inc.

PROJECT NAME River Ranch Apartments

PROJECT NUMBER 3034059

PROJECT LOCATION Fernley, Nevada





PROJECT NAME River Ranch Apartments

CLIENT ERGS, Inc.

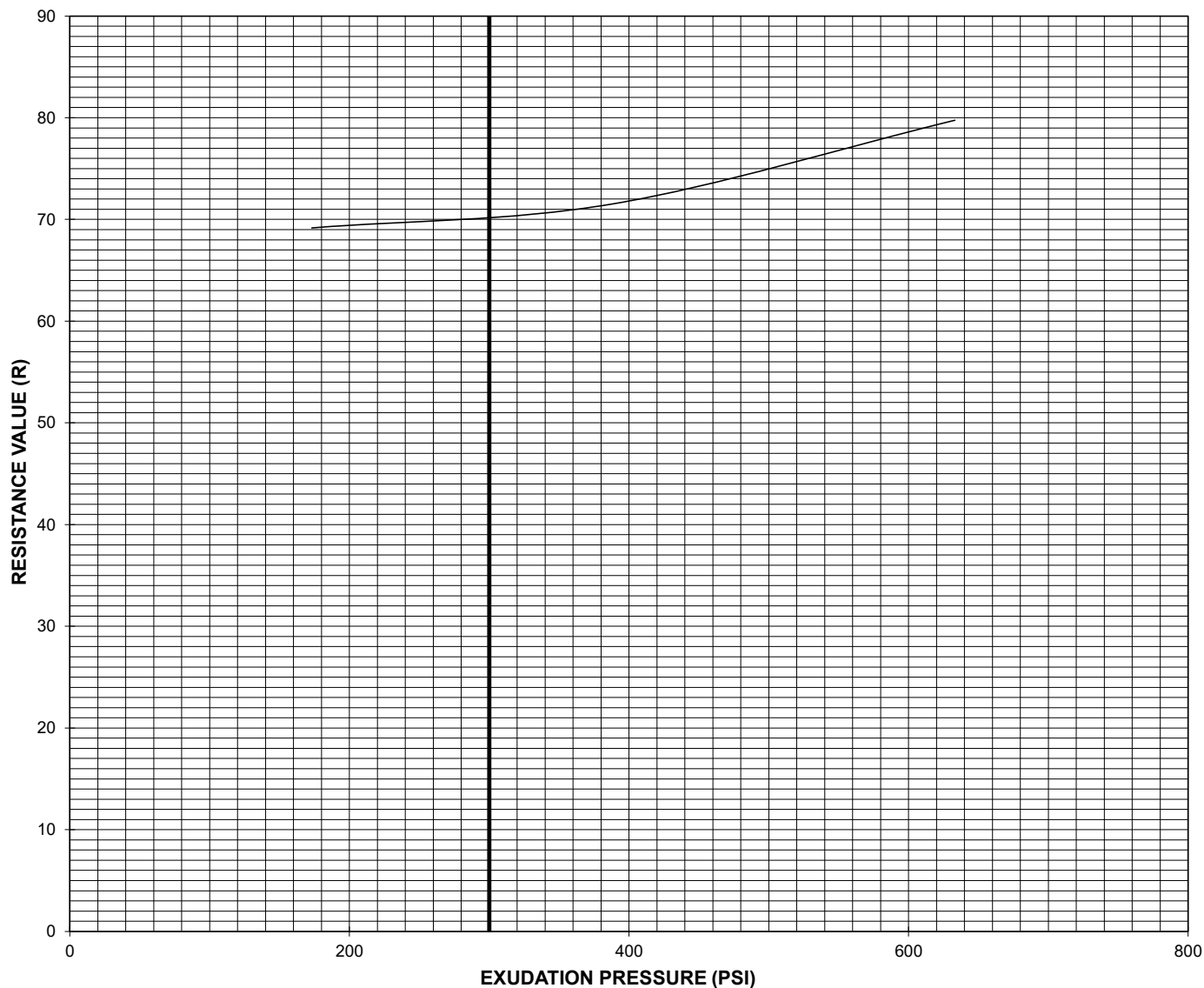
PROJECT NUMBER 3034059

PROJECT LOCATION Fernley, Nevada



C-1c

R-Value and Expansion Pressure of Compacted Soils AASHTO T190 / ASTM D2844



Lab Log #	Sample Source	Material	Expansion Pressure (psf) @ 300 (psi)	R-Value @ 300 (psi)
6388	TP - 4 @ 0' - 2'	SILTY SAND (SM)	0	70

POINT #	WATER CONTENT (%)	DRY DENSITY (PCF)	EXUDATION PRESS. (PSI)	EXPANSION PRESS. (PSF)	RESISTANCE VALUE (R)
1	11.0	115.9	633	0	80
2	12.1	113.4	388	0	72
3	13.2	111.5	173	-62	69
4					
5					

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Reno, NV 89502
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Fax: 775.823.4066

River Ranch Apartments
0



TESTED BY	JOB NUMBER	APPROVED	DATE	REVISED	DATE
BL	3034059		7/18/2022		



Silver State Labs-Reno
1135 Financial Blvd
Reno, NV 89502
(775) 857-2400 FAX: (888) 398-7002
www.ssalabs.com

Analytical Report

Workorder#: 22070953
Date Reported: 8/3/2022

Client: Wood Rodgers
Project Name: River Ranch Apartments / 3034059 / TP-9 5-6'
PO #: LAB 3961

Sampled By: Client

Laboratory Accreditation Number: NV015/CA2990

Laboratory ID	Client Sample ID	Date/Time Sampled	Date Received
22070953-01	TP - 9 @ 5'-6'	07/20/2022 9:30	7/20/2022

Parameter	Method	Result	Units	PQL	Analyst	Date/Time Analyzed	Data Flag
Sodium	ASTM D2791	< 0.01	%	0.01	AC	07/29/2022 8:38	
Sodium Sulfate as Na ₂ SO ₄	Calculation	< 0.01	%	0.01	AC	08/01/2022 14:47	
Sulfate	SM4500 SO ₄ E	1.2	%	0.01	SR	08/01/2022 10:29	

Laboratory Accreditation Number: NV015/CA2990

Laboratory ID	Client Sample ID	Date/Time Sampled	Date Received
22070953-02	TP-1 @ 0'-2'	07/20/2022 9:30	7/20/2022

Parameter	Method	Result	Units	PQL	Analyst	Date/Time Analyzed	Data Flag
Chloride	EPA 9056	58	mg/Kg	50	CTR	07/27/2022 14:06	
Oxidation-Reduction Potential	SM 2580B	227	mV		AC	07/28/2022 9:28	
pH	SW-846 9045D	7.44	pH Units		AC	07/27/2022 15:06	
pH Temperature	SW-846 9045D	22.0	°C		AC	07/27/2022 15:06	
Resistivity	AASHTO T288	90	Ohms-cm		AL	08/01/2022 14:15	
Sodium	ASTM D2791	< 0.01	%	0.01	AC	07/29/2022 8:38	
Sodium Sulfate as Na ₂ SO ₄	Calculation	< 0.01	%	0.01	AC	08/01/2022 14:47	
Sulfate	SM4500 SO ₄ E	0.40	%	0.01	SR	08/01/2022 10:29	
Sulfide	AWWA C105	Negative	POS/NEG		AC	08/01/2022 9:58	

RIVER RANCH APARTMENTS

CHEMICAL TESTING RESULTS

FIGURE C-2



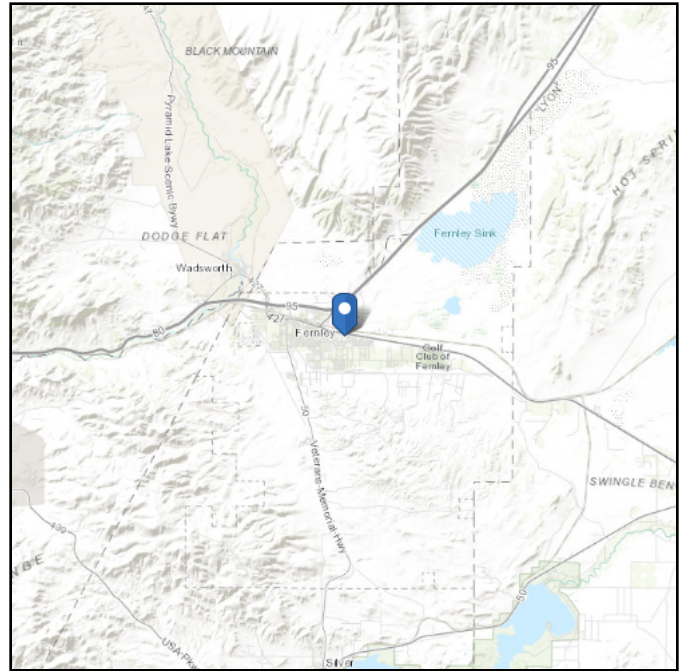
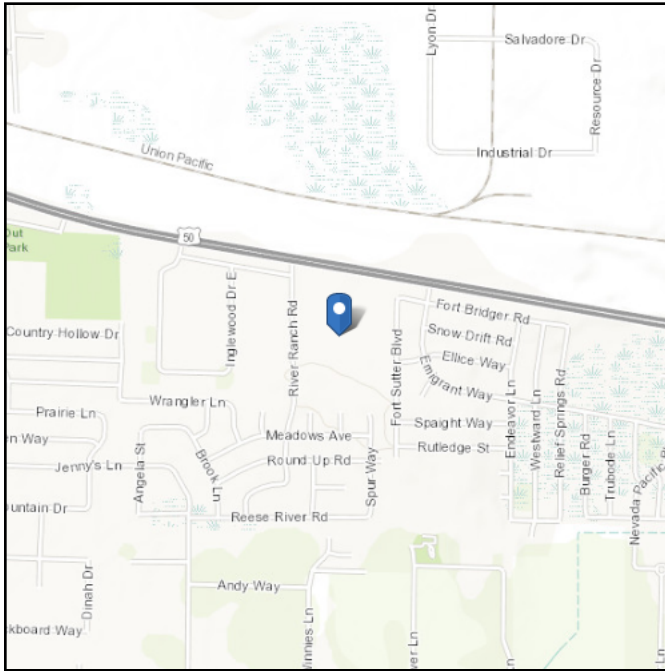
APPENDIX D ASCE 7 HAZARDS REPORT

ASCE 7 Hazards Report

Address:
No Address at This
Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 4139.01 ft (NAVD 88)
Latitude: 39.598122
Longitude: -119.210001



Site Soil Class: D - Stiff Soil

Results:

S_S :	1.215	S_{D1} :	N/A
S_1 :	0.44	T_L :	6
F_a :	1.014	PGA :	0.553
F_v :	N/A	PGA_M :	0.608
S_{MS} :	1.232	F_{PGA} :	1.1
S_{M1} :	N/A	I_e :	1
S_{DS} :	0.821	C_v :	1.343

Ground motion hazard analysis may be required. See ASCE/SEI 7-16 Section 11.4.8.

Data Accessed: Wed Aug 24 2022

Date Source: [USGS Seismic Design Maps](#)

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

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PRELIMINARY DRAINAGE REPORT

FOR THE

RIVER RANCH APARTMENTS CONDITIONAL USE PERMIT

FERNLEY, NEVADA

Prepared for:

ERGS, INC.
9345 Lemmon Drive
Reno, Nevada 89506
775.972.0213

SEPTEMBER 13, 2022

Prepared by:

WOOD RODGERS, INC.
1361 Corporate Boulevard
Reno, Nevada 89502
775.823.4068

Evan Nikirk, P.E.
Associate



WOOD RODGERS
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1 INTRODUCTION

This report describes existing drainage conditions and provides preliminary estimates of storm water runoff and facility sizing for the conceptual design of the proposed River Ranch apartment complex in Fernley, Nevada. The report has been prepared in support of the Conditional Use Permit and will provide the foundation for subsequent detailed analysis and facility design pursuant to Chapter 10 of the *City of Fernley Department of Public Works Design Standards*, dated May 2008 (*Design Standards*). The following sections summarize the design criteria, flow analysis, and preliminary design of facilities proposed to collect and convey runoff generated within the project boundary. Supporting exhibits, data, and calculations are included in the appendices to this report.

The project parcels are not currently served by storm drain facilities in either River Ranch Road or U.S. Highway 50A, both of which front the site. Both roadways have unimproved shoulders, with neither curb and gutter nor roadside ditch installed along the edge of pavement. Curb and gutter has been installed on the west side of River Ranch Road where it fronts the Pioneer Crossing Casino located northwest of the project. All storm water runoff generated within project limits will be collected by swales, yard drains, curb and gutter, and catch basins for routing to an on-site retention pond. The surface impoundment will be constructed with sufficient storage capacity to manage the entire volume of anticipated post-development runoff for the 100-year, 24-hour storm event. The private pond will be maintained by the apartment complex.

1.1 PROJECT LOCATION

The River Ranch apartment project will be a multi-family residential complex created from two existing parcels, which will be modified by two boundary line adjustments (BLAs), in central Fernley, as shown on the Vicinity Map enclosed in Appendix A. The project parcels are located at 501 River Ranch Road (APN 021-281-03) and 1855 U.S. Highway 50A (APN 021-281-10). The site is bounded by River Ranch Road to the west, U.S. Highway 50A to the north, single-family residences in the Donner Trails Estates subdivision on its eastern border, and single-family residences in the River Ranch subdivision on its southern boundary. A NV Energy substation located on a parcel (APN 021-281-09) at the southeast corner of the project, and an existing self-storage warehouse business is located on a parcel (APN 021-281-04) at the northwest corner of the site. According to the Public Land Survey System, the site is situated within the southeast quarter of Section 18, Township 20 North, Range 25 East, Mount Diablo Meridian (SE1/4, Sec. 18, T.20 N., R.25 E., M.D.M.). The centroid of the site is approximately located at latitude 39.5982°N, longitude -119.2096°W.

1.2 PROJECT DESCRIPTION

The owner proposes to construct a network of paved drive aisles with parking, curb and gutter, sidewalk, and utility infrastructure for 40 apartment buildings comprising 320 dwelling units. The complex will also include an office / clubhouse, a maintenance building, amenities, landscaped areas, and a storm water retention pond at the northeast corner of the site. There will be four styles of apartment buildings, each



of which contains eight units, with sizes ranging from one-bedroom to three-bedroom floor plans. The general layout of the development and its infrastructure is shown on the “Preliminary Storm Drain Exhibit,” enclosed in Appendix A. Type 4R catch basins will collect runoff from curb and gutter and route flows via ten-inch-diameter PVC SDR35 laterals to storm drain manholes installed in the drive aisles. Yard drains will collect runoff from walks and landscaped areas around the buildings and connect to storm drains by blind tap. The 12-inch-diameter PVC SDR35 storm drain mains will gravity flow to the north for discharge to the retention pond constructed adjacent to the U.S. Highway 50A right-of-way at the northeast corner of the site.

Site infrastructure will include 26-foot-wide paved drive aisles with curb, gutter, sidewalk, pedestrian ramps, storm drain facilities, water and sewer systems extended from the City’s existing networks, and dry utilities (i.e., power, telephone, cable television). The site entrance will connect with River Ranch Road directly across from the unnamed connector street currently being constructed as part of The Meadows at Inglewood development. Emergency access connections will be made at two locations: River Ranch Road at the southwest corner of the site and Ellice Way on the eastern boundary adjacent to the NV Energy substation.

1.3 SITE TOPOGRAPHY AND VEGETATION

The combined adjusted parcels comprise a net project area (i.e., less proposed River Ranch Road right-of-way) of 20.104 acres, as shown in the “Parcel Areas” exhibit included in Appendix A. The project site is currently undeveloped. High-voltage power poles and backyard wood fencing from the adjacent Donner Trails Estates subdivision border the eastern boundary, and backyard wood fencing and a segmental block retaining wall on lots in the adjacent River Ranch subdivision border the south boundary. The project site is bisected by a 50-foot-wide access easement with a gravel road from U.S. Highway 50A to the NV Energy substation. Existing terrain generally slopes from south to north at an overall average rate of 2.5 percent, with relatively flat areas in the southern and northern thirds of the site separated by a 6.0 percent slope in the middle third. Elevations range from highs between 4156 feet to 4164 feet along the south property line to lows between 4127 feet and 4132 feet at the highway right-of-way on the north boundary. Native vegetation includes sparse desert grasses and shrubs.

1.4 SITE SOILS

A geotechnical site investigation was performed in July, 2022 (Wood Rodgers, 2022) to evaluate soil, bedrock, and ground water conditions and to provide design recommendations for site development. Field work included exploration of subsurface conditions with 15 test pits extended to 10 feet below ground surface (bgs) to evaluate the soil horizon and ground water conditions. Test pit locations are shown in the exhibit enclosed in Appendix B. Soils were classified in the field and representative bulk samples were obtained for laboratory index testing. Shear wave velocity measurements were also made to a depth of 100 feet to characterize soil stiffness and determine the appropriate Site Class for structural design. Laboratory testing included in-situ moisture content, soil classification, grain size distribution,

plasticity indices, and chemical testing for corrosion potential. Free water was not encountered in test pits, and nearby well records indicate the static groundwater level is about 30 feet bgs.

In general, near-surface soils consist of non-plastic silty sands and poorly-graded sands, low plasticity silts, clayey sands, and and clayey gravels.

Because on-site retention ponds are proposed for storm water infiltration, percolation tests were performed in three test pits at the proposed location of the storm water retention pond at the northeast corner of the site. Test results indicate infiltration rates of less than 10 minutes per inch, which is well below the maximum rate of 60 minutes per inch specified in the City's Design Standards. The test pit locations are shown in Figure 3 from the geotechnical design report, a copy of which is enclosed in Appendix C; test pit logs and test results are also enclosed in Appendix C.

1.5 FLOOD HAZARD INFORMATION

According to Flood Insurance Rate Map (FIRM) Panel 32019C0105E, effective January 16, 2009, prepared by the Federal Emergency Management Agency (FEMA, 2009), the project parcel is located within an "Unshaded X" Flood Zone, which indicates an area of minimal flood hazard. An excerpt of the FIRM panel ("FIRMette") for the subject area is included in Appendix B.

1.6 PRIOR DRAINAGE STUDIES

No prior drainage studies are known to have been prepared for the project site. Prior to the current proposal, the site was undeveloped.

1.7 REGULATORY PERSPECTIVE

The project site is located within the City of Fernley jurisdiction. The drainage facilities will not be dedicated to the City of Fernley but will be privately owned and maintained by the apartment complex.

2 HYDROLOGIC METHODOLOGY, CRITERIA, AND DESIGN

The preliminary hydrologic analysis for the River Ranch apartments consists of peak runoff flow and volumetric computations for post-development conditions in accordance with City of Fernley Municipal Code and the City of Fernley Department of Public Works Design Standards (May 2008). Runoff generated on the project site will be retained on-site. For this preliminary analysis, the 5-year design storm was not considered but rather peak flows were developed for storm drain design using the 25-year, 6-hour design storm. The 100-year, 24-hour storm event is used to determine the minimum required retention pond storage volume.

The Rational Method was used to compute peak runoff flow rates for proposed site conditions for the 25-year, 6-hour design storm. The Rational Method requires only the area of the basin or watershed, the

rainfall intensity corresponding to the time of concentration, and the Rational Runoff Coefficient correlating to the anticipated land use. Peak runoff flows are determined using the following equation:

$$Q = ciA$$

Where:

Q = peak runoff in cubic feet per second (cfs).

c = Rational runoff coefficient (dimensionless)

i = rainfall intensity for design storm (inches/hr)

A = area of the basin (acres)

Rational Method runoff coefficients were taken from Table 701, Runoff Coefficient Table in the Truckee Meadows Regional Drainage Manual (TMRDM) for post-development conditions. Table 701 was used rather than the table provided in Chapter 10 of the Design Standards because it provides coefficients for the 5-year and 100-year storm events and a value for the 25-year storm event can be estimated by linear interpolation. A copy of the Rational Runoff Coefficient table is included in Appendix B.

The time of concentration (t_c) is defined as the time required for water to flow from the hydraulically most distant part of the drainage area to the point of consideration. Usually, the point of consideration is the discharge point of the hydrologic basin or sub-basin. Time of concentration is used in the Rational Method to determine the corresponding rainfall intensity for calculation of the peak runoff rate of a given storm event for the basin or sub-basin. The final time of concentration is the greater of the calculated t_c (equations not shown) or 10 minutes, per Section 10.3.2.1 of Chapter 10 in the Design Standards.

For design of the retention pond, the Natural Resources Conservation Service (formerly SCS) unit hydrograph method was used to determine total runoff volumes for proposed conditions. The SCS method requires a curve number (CN) and accumulated rainfall depth. The equations for the SCS method are:

$$V = q_d \cdot A / (12 \text{ in. / ft.})$$

$$q_d = (P - 0.2S)^2 / (P - 0.8S)$$

$$S = \left(\frac{1000}{CN} \right) - 10$$

Where:

V = Storm volume (cubic feet)

A = Area of the hydrologic basin (square feet)

q_d = Excess rainfall depth (inches)

P = Accumulated rainfall depth (inches)

S = Currently-available soil moisture storage deficit (inches)

CN = Curve number (dimensionless)



For preliminary storm drain design, the analysis used the prescribed 25-year storm return frequency with a 6-hour duration. The minimum storage volume for on-site retention basins was estimated from the 100-year, 24-hour storm event using the SCS method (above).

3 HYDROLOGIC ANALYSIS

The hydrologic analyses for post-development conditions consist of peak discharge computations using the Rational Method and volumetric runoff calculations using the SCS Unit Hydrograph Method, as described above.

3.1 DESIGN RAINFALL DATA

Precipitation intensity and depth estimates were taken from the Point Precipitation Frequency Data Server website for Atlas 14, Volume 1, Version 5, which is maintained by the National Oceanic and Atmospheric Administration (NOAA). The Point Precipitation Frequency Data Server provides site-specific rainfall data based on latitude and longitude. The latitude and longitude used to obtain storm intensities and depths for the 5-, 25-, and 100-year storm events were 39.5982°N and -119.2096°W, respectively. The resulting tables with precipitation intensities and depths for various storm durations and return intervals are included in Appendix B of this report.

3.2 RUNOFF COEFFICIENTS

For the multi-unit residential development, C-values of 0.60 and 0.78 are applied to developed areas for the 5-year and 100-year storm events, respectively, based on Table 701. The resulting coefficient for the 25-year storm is interpolated as 0.64.

3.3 CURVE NUMBER

The Runoff Curve Number (CN) for each hydrologic basin is determined by overlaying land use information, vegetation type and coverage or surface material, and soil data available for the area. Soil types are rated from A to D with correspondingly higher curve number values for higher runoff potential. Based on test pit logs, percolation test results, and the general presence of gravels and poorly-graded sands, the preliminary watershed identified for this analysis was estimated to be in hydrologic soil group (HSG) "A". This HSG is assigned to soils with a low runoff potential and high infiltration rate. For apartments, townhouses, and very small residential lots, the corresponding curve number for HSG "A" is 77. The SCS table for runoff curve numbers in urban areas is included in Appendix B.

4 EXISTING HYDROLOGIC CONDITIONS

Historically the site drains from south to north at an overall average slope of 2.5 percent but the ground is sloped at approximately 6 percent in the middle third of the site. Nominal runoff from surfaces abutting River Ranch Road discharge off-site, but the majority of sheet flow historically discharges to the self-storage warehouse business at the northwest corner of the site and to the U.S. Highway 50A right-of-way. In addition, the gravel access road to the NV Energy substation has roadside ditches on each side; these



terminate off-site at the highway shoulder. The site sits below the residential lots along the southern and eastern perimeters, but those lots are sloped toward the streets they front, largely eliminating storm water run-on to the project site. Existing topography is depicted in the figure, "Existing Conditions" exhibit included in Appendix A.

5 PROPOSED DRAINAGE SYSTEM

The proposed drainage system will consist of swales and yard drains in landscape areas around buildings, with curb and gutter on the downhill side of drive aisles to collect and convey runoff to catch basins at curb returns. Runoff will be routed via 12-inch-diameter storm drains for discharge into the proposed retention pond at the northeast corner of the site. Runoff stored in the retention pond will drain into the underlying soil through infiltration. The general layout of the development and its storm water facilities are shown on the "Preliminary Storm Drain Exhibit" enclosed in Appendix A.

5.1 PROPOSED HYDROLOGIC BASINS

For final design the proposed development will be analyzed in detail with hydrologic basins delineated by the storm drain they contribute to, but for purposes of this preliminary analysis the site has been analyzed as a single basin. The total runoff volume for the 25-year, 6-hour and 100-year, 24-hour storm and the peak discharge for the 25-year, 6-hour storm event are calculated in the following sections.

5.2 PROPOSED STORM DRAIN SYSTEM

Proposed drainage control facilities will consist of landscape swales, yard drains, curb and gutter, and catch basins to collect and convey runoff to the retention pond. Catch basin laterals will be 10-inch-diameter PVC SDR35 pipe and the storm drain main will be 12-inch-diameter PVC SDR35 pipe. Runoff from roofs will be collected by roof gutters and discharged via downspouts to landscape swales and yard drains, which will discharge to the storm drain fronting the area.

The storm water retention pond will be 6 to 8 feet deep and provide a storage capacity of at least 45,000 cubic feet below the one-foot freeboard. It will be constructed with 3:1 (horizontal to vertical) sideslopes and a 10-foot-wide paved ramp will be constructed to provide maintenance access to the pond interior and base. The final pond dimensions will be determined during detailed design.

5.3 WATER QUALITY CONTROLS

The retention pond will settle sediment or pollutants transported by storm water runoff. Water quality controls that will be utilized during construction of subdivision improvements will include fiber rolls on the exterior boundary of the grading, construction entrances, and any additional best management practices presented in the approved Erosion Control Plan.

5.4 RESULTS OF DRAINAGE ANALYSES

For purposes of this preliminary study, the site was analyzed as a single watershed, with all storm drains combining and flowing to the retention pond at the northeast corner of the site. The peak flow rate calculated for the overall hydrologic basin in post-development conditions and the 25-year, 6-hour storm event is as follows:

$$Q = (0.64)(0.205 \text{ in/hr})(20.10 \text{ ac}) = 2.64 \text{ cfs}$$

During detailed design, hydraulic calculations will be performed using the computer software FlowMaster® V8i by Bentley Systems (Watertown, CT) to determine flow characteristics for peak discharge in each hydrologic sub-basin.

The results of post-development volumetric analyses by the SCS method as described above indicate a 25-year, 6-hour storm event will generate approximately 8,070 cubic feet (cf) of runoff, whereas an estimated 44,670 cf will be generated for the 100-year, 24-hour design storm.

5.5 RETENTION REQUIREMENTS

The proposed River Ranch apartment complex will use a single retention pond to collect and temporarily store runoff generated on-site. The pond will be sized to accommodate the full post-development runoff volume of the 100-year, 24-hour storm event. To provide a conservative design that includes an adequate freeboard and a factor of safety for the assumptions made, the design volume of the pond will have a minimum capacity of 44,670 cubic feet at the 1-foot freeboard. Detailed stage-storage volume calculations for the pond will be prepared during final design.

In addition, the storm drain discharging into the retention pond will be analyzed during detailed design to ensure the pipe won't back up into the street and will continue to flow under pressure. The basin depth will provide adequate capacity below the invert elevations of storm drain outlets for most storm events.

6 SPECIAL FLOOD HAZARDS

As noted above, the entire site lies within a FEMA "Unshaded X" flood hazard area, which indicates that the project is outside the 0.2% probability per year flood zone. As such, there are no special flood hazard considerations proposed with this project.

6.1 IMPACTS OF PROPOSED DEVELOPMENT ON FLOOD HAZARD AREA

On a broad scale, the project is within a closed hydrologic basin and, theoretically, storm water runoff discharged from site will ultimately drain to the Fernley Reservoir Number 1 / Fernley Wildlife Management Area. However, no runoff is expected to be discharged from the site and no negative impacts on downstream facilities are anticipated.

6.2 FEMA AND LOCAL CODE COMPLIANCE

Development of the Desert Shadows subdivision will be compliant with all federal and local code requirements.

7 CONCLUSIONS

The proposed River Ranch apartment complex will be designed to collect, convey, and retain storm flows generated on-site. Increases in runoff from relatively impervious surfaces following site development will be temporarily stored in the proposed on-site retention pond, where it will infiltrate into the underlying soil. Storm water quality measures will be installed during construction to reduce probability of sediment being discharged off-site by storm runoff. No negative downstream impacts are anticipated from the development of the project.

8 REFERENCES

Fernley, 2008a. *City of Fernley Department of Public Works Design Standards and Review Guidelines for Streets, Potable Water, Sewer, Storm Drains & Alternative Water*, published by the City of Fernley Department of Public Works, Fernley, Nevada, May 2008. <http://www.cityoffernley.org/DocumentCenter/Index/279>.

Wood Rodgers, 2022. *Geotechnical Design Report, River Ranch Apartments*, unpublished report prepared by Wood Rodgers, Inc.. for ERGS, Inc.; Wood Rodgers, Inc., Reno, Nevada, September 2022.



APPENDIX A

EXHIBITS





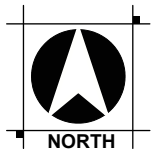
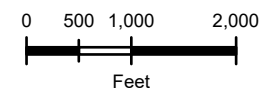
VICINITY MAP

RIVER RANCH APARTMENTS

FERNLEY, NV

SEPTEMBER 2022

- Future Nevada Pacific Parkway
- BLA_Project_Boundary




WOOD RODGERS



Aerial Map

River Ranch Apartments ZMA/CUP

September 2022



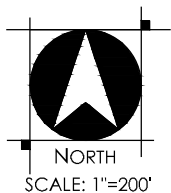
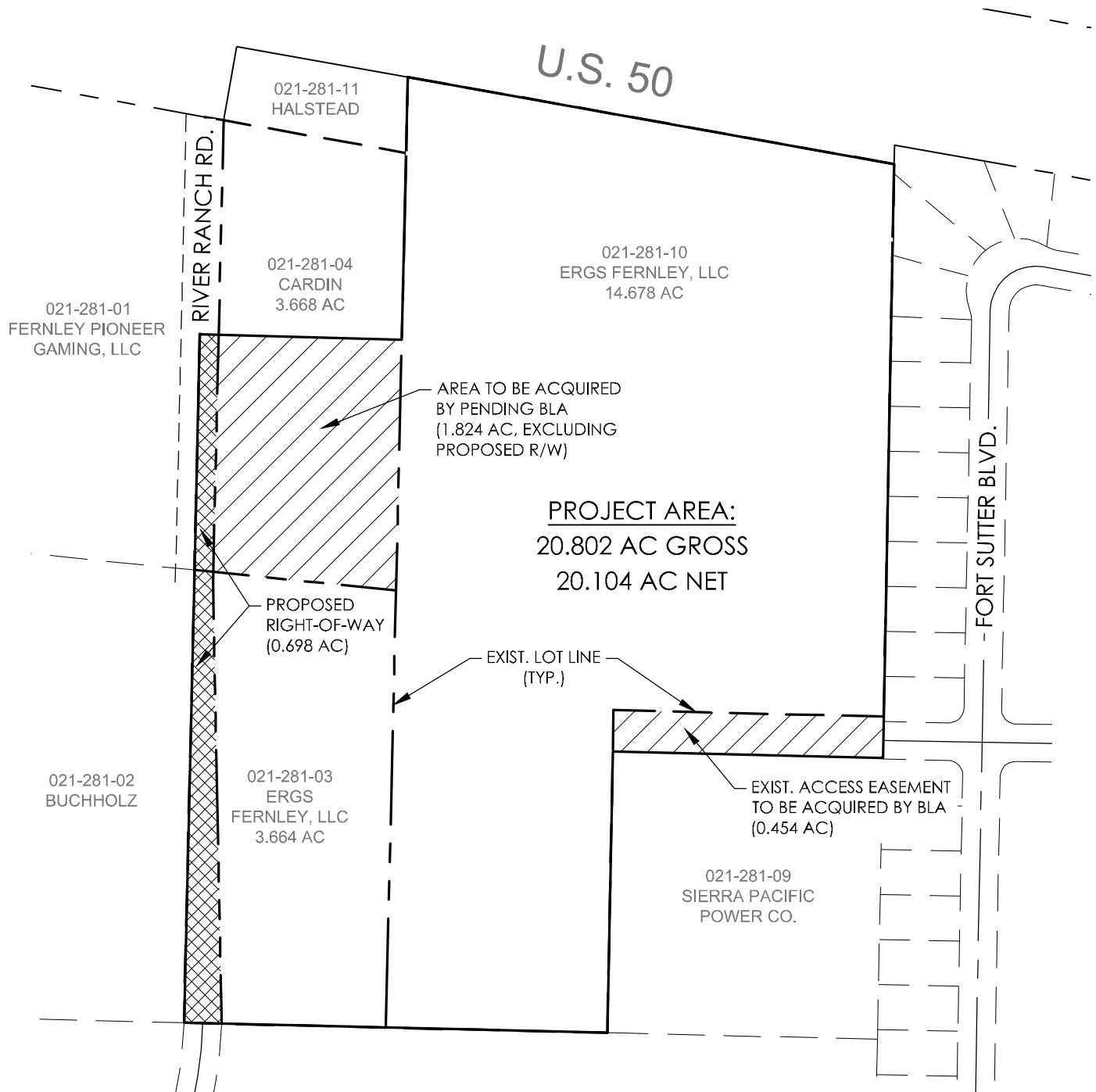
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Reno, NV 89502 Fax: 775.823.4066

ZMA / CUP FOR RIVER RANCH APARTMENTS

PARCEL AREAS

FERNLEY, NEVADA

SEPTEMBER 2022



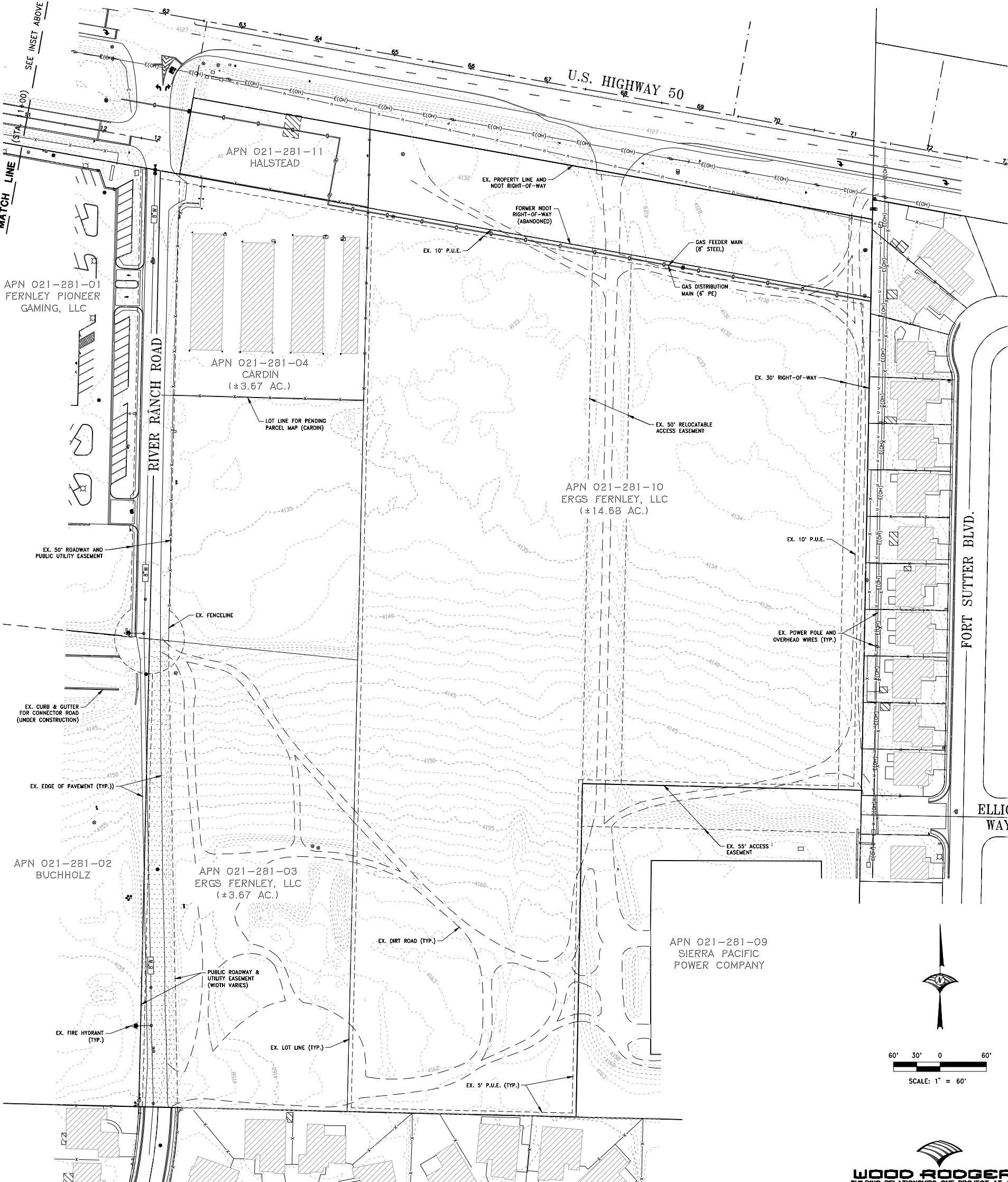
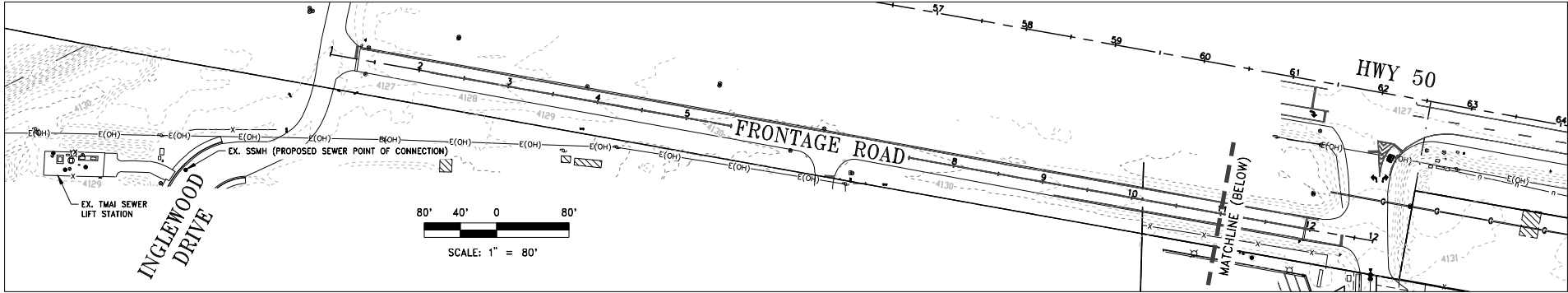
WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1961 Corporate Boulevard Tel 775.823.4068
Reno, NV 89502 Fax 775.823.4066

RIVER RANCH APARTMENTS
EXISTING CONDITIONS
ERGS, INC.

FERNLEY

NEVADA

AUGUST 29, 2022



NOTE: BASE SURVEY AND TOPOGRAPHY PREPARED BY WOOD RODGERS, INC. (RENO). DATE OF PHOTOGRAPHY: JUNE 30, 2022.

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1961 Corporate Boulevard Tel 775.823.4088
Reno, NV 89502 Fax 775.823.4086

ERGS FERNLEY, LLC
FERNLEY, NEVADA
SEPTEMBER, 2022



APPENDIX B

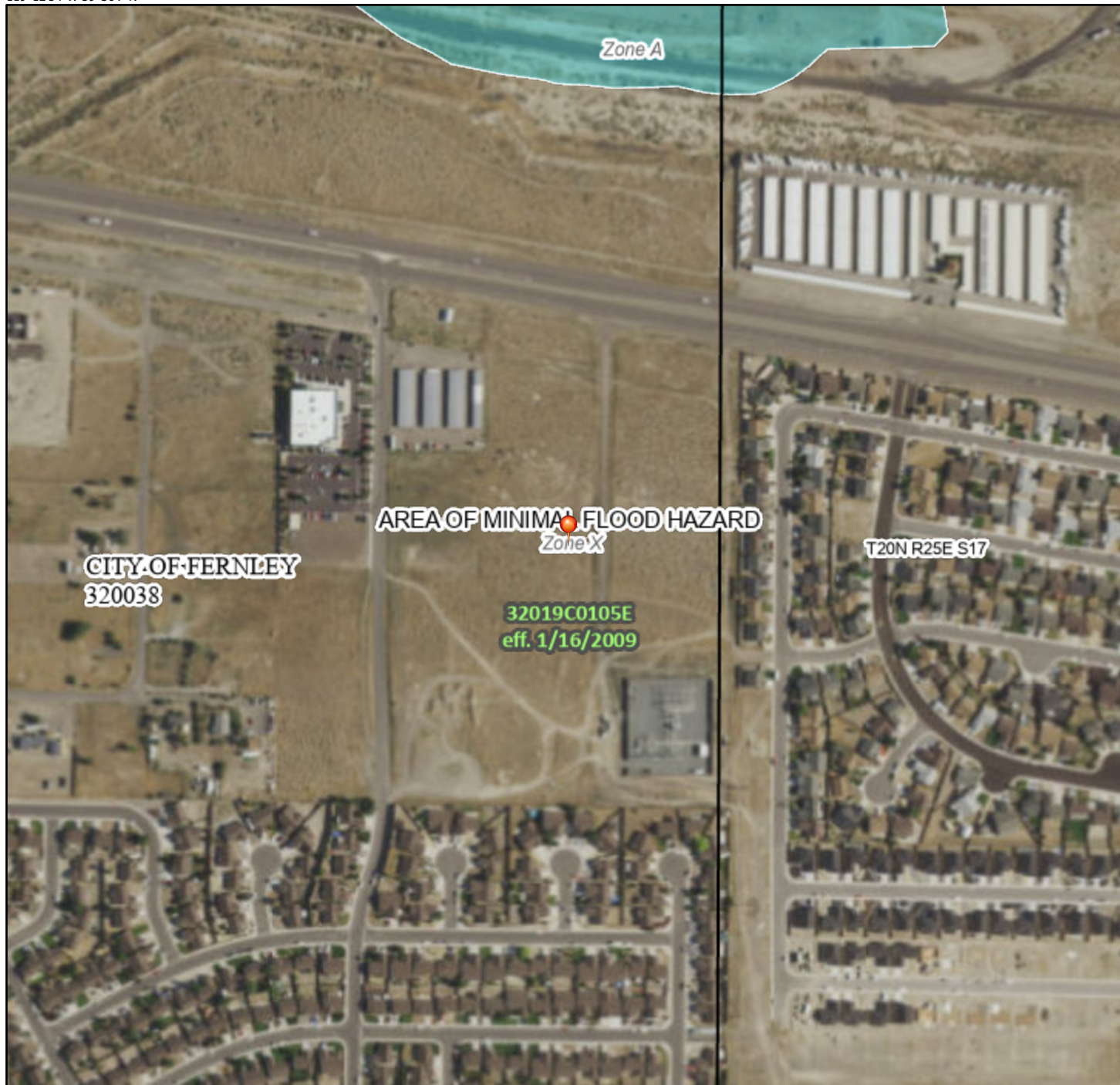
PRECIPITATION AND HYDROLOGIC DATA



National Flood Hazard Layer FIRMette



119°12'54"W 39°36'7"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

119°12'17"W 39°35'40"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		Cross Sections with 1% Annual Chance Water Surface Elevation
OTHER FEATURES		Coastal Transect
		Base Flood Elevation Line (BFE)
OTHER FEATURES		Limit of Study
		Jurisdiction Boundary
OTHER FEATURES		Coastal Transect Baseline
		Profile Baseline
OTHER FEATURES		Hydrographic Feature
		Digital Data Available
MAP PANELS		No Digital Data Available
		Unmapped



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **8/24/2022 at 10:55 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



NOAA Atlas 14, Volume 1, Version 5
Location name: Fernley, Nevada, USA*
Latitude: 39.5982°, Longitude: -119.2096°
Elevation: 4136.3 ft**
* source: ESRI Maps
** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps_&_aerials](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.101 (0.083-0.121)	0.127 (0.103-0.154)	0.170 (0.140-0.207)	0.210 (0.170-0.256)	0.274 (0.217-0.337)	0.333 (0.256-0.413)	0.402 (0.300-0.503)	0.484 (0.347-0.619)	0.614 (0.417-0.814)	0.733 (0.474-0.990)
10-min	0.153 (0.126-0.185)	0.193 (0.157-0.234)	0.259 (0.212-0.316)	0.319 (0.259-0.389)	0.417 (0.330-0.514)	0.507 (0.390-0.629)	0.612 (0.456-0.765)	0.737 (0.529-0.941)	0.935 (0.635-1.24)	1.12 (0.722-1.51)
15-min	0.190 (0.156-0.229)	0.239 (0.195-0.290)	0.321 (0.263-0.391)	0.396 (0.322-0.483)	0.517 (0.409-0.637)	0.629 (0.484-0.780)	0.759 (0.565-0.949)	0.913 (0.655-1.17)	1.16 (0.787-1.54)	1.38 (0.895-1.87)
30-min	0.257 (0.210-0.309)	0.322 (0.263-0.391)	0.433 (0.355-0.527)	0.533 (0.433-0.650)	0.696 (0.550-0.858)	0.847 (0.651-1.05)	1.02 (0.761-1.28)	1.23 (0.882-1.57)	1.56 (1.06-2.07)	1.86 (1.21-2.52)
60-min	0.318 (0.260-0.382)	0.398 (0.326-0.483)	0.536 (0.439-0.653)	0.659 (0.536-0.804)	0.862 (0.681-1.06)	1.05 (0.806-1.30)	1.26 (0.942-1.58)	1.52 (1.09-1.95)	1.93 (1.31-2.56)	2.31 (1.49-3.11)
2-hr	0.395 (0.333-0.482)	0.495 (0.418-0.602)	0.641 (0.536-0.784)	0.766 (0.632-0.937)	0.955 (0.766-1.18)	1.12 (0.880-1.39)	1.32 (1.01-1.67)	1.57 (1.17-2.00)	1.97 (1.40-2.58)	2.34 (1.60-3.14)
3-hr	0.450 (0.381-0.541)	0.565 (0.480-0.681)	0.718 (0.603-0.864)	0.840 (0.700-1.02)	1.02 (0.835-1.23)	1.17 (0.945-1.43)	1.37 (1.08-1.69)	1.61 (1.24-2.01)	2.00 (1.50-2.61)	2.36 (1.72-3.17)
6-hr	0.556 (0.473-0.660)	0.697 (0.594-0.835)	0.883 (0.750-1.07)	1.03 (0.867-1.24)	1.23 (1.02-1.48)	1.37 (1.12-1.66)	1.53 (1.24-1.87)	1.76 (1.39-2.18)	2.12 (1.64-2.66)	2.44 (1.85-3.20)
12-hr	0.646 (0.558-0.752)	0.819 (0.706-0.958)	1.05 (0.906-1.23)	1.23 (1.06-1.44)	1.47 (1.25-1.73)	1.66 (1.39-1.97)	1.85 (1.53-2.22)	2.05 (1.66-2.48)	2.31 (1.82-2.86)	2.59 (1.99-3.26)
24-hr	0.775 (0.687-0.875)	0.980 (0.870-1.11)	1.26 (1.12-1.42)	1.48 (1.31-1.67)	1.79 (1.57-2.02)	2.04 (1.77-2.30)	2.29 (1.98-2.59)	2.56 (2.19-2.90)	2.92 (2.48-3.34)	3.22 (2.69-3.70)
2-day	0.860 (0.758-0.972)	1.09 (0.957-1.23)	1.40 (1.24-1.58)	1.65 (1.44-1.85)	1.99 (1.74-2.24)	2.26 (1.97-2.56)	2.55 (2.20-2.89)	2.85 (2.43-3.24)	3.26 (2.74-3.74)	3.58 (2.98-4.14)
3-day	0.923 (0.819-1.04)	1.17 (1.03-1.32)	1.51 (1.34-1.70)	1.78 (1.57-2.00)	2.15 (1.89-2.42)	2.45 (2.13-2.76)	2.76 (2.39-3.13)	3.09 (2.64-3.51)	3.54 (2.98-4.05)	3.90 (3.24-4.50)
4-day	0.986 (0.879-1.12)	1.25 (1.11-1.41)	1.61 (1.43-1.82)	1.91 (1.69-2.15)	2.31 (2.04-2.60)	2.63 (2.30-2.96)	2.98 (2.58-3.36)	3.33 (2.86-3.77)	3.83 (3.22-4.37)	4.22 (3.50-4.86)
7-day	1.13 (1.00-1.29)	1.43 (1.26-1.63)	1.85 (1.63-2.11)	2.18 (1.92-2.48)	2.64 (2.30-3.01)	3.01 (2.60-3.43)	3.39 (2.92-3.88)	3.79 (3.23-4.35)	4.34 (3.64-5.03)	4.79 (3.96-5.58)
10-day	1.26 (1.10-1.45)	1.60 (1.40-1.83)	2.07 (1.81-2.38)	2.44 (2.13-2.81)	2.94 (2.55-3.39)	3.34 (2.87-3.84)	3.75 (3.20-4.32)	4.17 (3.53-4.84)	4.74 (3.96-5.55)	5.18 (4.27-6.12)
20-day	1.48 (1.31-1.69)	1.89 (1.66-2.16)	2.43 (2.14-2.77)	2.84 (2.50-3.24)	3.39 (2.96-3.87)	3.81 (3.31-4.35)	4.23 (3.64-4.84)	4.65 (3.98-5.34)	5.21 (4.41-6.04)	5.63 (4.72-6.56)
30-day	1.65 (1.46-1.88)	2.09 (1.85-2.38)	2.69 (2.37-3.07)	3.14 (2.76-3.57)	3.73 (3.26-4.25)	4.18 (3.64-4.77)	4.64 (4.01-5.31)	5.09 (4.37-5.85)	5.68 (4.83-6.57)	6.12 (5.16-7.13)
45-day	1.91 (1.69-2.16)	2.43 (2.14-2.74)	3.12 (2.74-3.51)	3.63 (3.18-4.08)	4.29 (3.75-4.83)	4.78 (4.16-5.39)	5.26 (4.56-5.95)	5.72 (4.93-6.50)	6.31 (5.40-7.21)	6.73 (5.72-7.72)
60-day	2.17 (1.92-2.44)	2.76 (2.44-3.11)	3.54 (3.13-3.98)	4.10 (3.62-4.59)	4.80 (4.22-5.38)	5.30 (4.65-5.97)	5.78 (5.06-6.52)	6.24 (5.44-7.06)	6.79 (5.88-7.70)	7.17 (6.19-8.18)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.

Please refer to NOAA Atlas 14 document for more information.

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PF graphical



NOAA Atlas 14, Volume 1, Version 5
Location name: Fernley, Nevada, USA*
Latitude: 39.5982°, Longitude: -119.2096°
Elevation: 4136.3 ft**
* source: ESRI Maps
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NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps_&_aerials](#)

PF tabular

PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches/hour) ¹										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	1.21 (0.996-1.45)	1.52 (1.24-1.85)	2.04 (1.68-2.48)	2.52 (2.04-3.07)	3.29 (2.60-4.04)	4.00 (3.07-4.96)	4.82 (3.60-6.04)	5.81 (4.16-7.43)	7.37 (5.00-9.77)	8.80 (5.69-11.9)
10-min	0.918 (0.756-1.11)	1.16 (0.942-1.40)	1.55 (1.27-1.90)	1.91 (1.55-2.33)	2.50 (1.98-3.08)	3.04 (2.34-3.77)	3.67 (2.74-4.59)	4.42 (3.17-5.65)	5.61 (3.81-7.43)	6.70 (4.33-9.04)
15-min	0.760 (0.624-0.916)	0.956 (0.780-1.16)	1.28 (1.05-1.56)	1.58 (1.29-1.93)	2.07 (1.64-2.55)	2.52 (1.94-3.12)	3.04 (2.26-3.80)	3.65 (2.62-4.67)	4.64 (3.15-6.14)	5.53 (3.58-7.48)
30-min	0.514 (0.420-0.618)	0.644 (0.526-0.782)	0.866 (0.710-1.05)	1.07 (0.866-1.30)	1.39 (1.10-1.72)	1.69 (1.30-2.10)	2.04 (1.52-2.56)	2.46 (1.76-3.14)	3.12 (2.12-4.14)	3.73 (2.41-5.03)
60-min	0.318 (0.260-0.382)	0.398 (0.326-0.483)	0.536 (0.439-0.653)	0.659 (0.536-0.804)	0.862 (0.681-1.06)	1.05 (0.806-1.30)	1.26 (0.942-1.58)	1.52 (1.09-1.95)	1.93 (1.31-2.56)	2.31 (1.49-3.11)
2-hr	0.198 (0.166-0.241)	0.248 (0.209-0.301)	0.320 (0.268-0.392)	0.383 (0.316-0.468)	0.478 (0.383-0.588)	0.560 (0.440-0.696)	0.662 (0.506-0.832)	0.784 (0.583-0.999)	0.986 (0.700-1.29)	1.17 (0.802-1.57)
3-hr	0.150 (0.127-0.180)	0.188 (0.160-0.227)	0.239 (0.201-0.288)	0.280 (0.233-0.339)	0.339 (0.278-0.409)	0.391 (0.315-0.477)	0.456 (0.360-0.562)	0.536 (0.414-0.670)	0.667 (0.500-0.869)	0.785 (0.573-1.06)
6-hr	0.093 (0.079-0.110)	0.116 (0.099-0.139)	0.147 (0.125-0.178)	0.172 (0.145-0.206)	0.205 (0.170-0.246)	0.229 (0.188-0.278)	0.256 (0.206-0.312)	0.294 (0.232-0.364)	0.354 (0.274-0.445)	0.408 (0.308-0.535)
12-hr	0.054 (0.046-0.062)	0.068 (0.059-0.080)	0.087 (0.075-0.102)	0.102 (0.088-0.120)	0.122 (0.104-0.144)	0.138 (0.115-0.164)	0.154 (0.127-0.184)	0.170 (0.137-0.206)	0.192 (0.151-0.237)	0.215 (0.165-0.270)
24-hr	0.032 (0.029-0.036)	0.041 (0.036-0.046)	0.052 (0.047-0.059)	0.062 (0.055-0.070)	0.075 (0.065-0.084)	0.085 (0.074-0.096)	0.096 (0.083-0.108)	0.107 (0.091-0.121)	0.122 (0.103-0.139)	0.134 (0.112-0.154)
2-day	0.018 (0.016-0.020)	0.023 (0.020-0.026)	0.029 (0.026-0.033)	0.034 (0.030-0.039)	0.042 (0.036-0.047)	0.047 (0.041-0.053)	0.053 (0.046-0.060)	0.059 (0.051-0.067)	0.068 (0.057-0.078)	0.075 (0.062-0.086)
3-day	0.013 (0.011-0.014)	0.016 (0.014-0.018)	0.021 (0.019-0.024)	0.025 (0.022-0.028)	0.030 (0.026-0.034)	0.034 (0.030-0.038)	0.038 (0.033-0.043)	0.043 (0.037-0.049)	0.049 (0.041-0.056)	0.054 (0.045-0.063)
4-day	0.010 (0.009-0.012)	0.013 (0.012-0.015)	0.017 (0.015-0.019)	0.020 (0.018-0.022)	0.024 (0.021-0.027)	0.027 (0.024-0.031)	0.031 (0.027-0.035)	0.035 (0.030-0.039)	0.040 (0.034-0.046)	0.044 (0.036-0.051)
7-day	0.007 (0.006-0.008)	0.009 (0.008-0.010)	0.011 (0.010-0.013)	0.013 (0.011-0.015)	0.016 (0.014-0.018)	0.018 (0.015-0.020)	0.020 (0.017-0.023)	0.023 (0.019-0.026)	0.026 (0.022-0.030)	0.028 (0.024-0.033)
10-day	0.005 (0.005-0.006)	0.007 (0.006-0.008)	0.009 (0.008-0.010)	0.010 (0.009-0.012)	0.012 (0.011-0.014)	0.014 (0.012-0.016)	0.016 (0.013-0.018)	0.017 (0.015-0.020)	0.020 (0.016-0.023)	0.022 (0.018-0.025)
20-day	0.003 (0.003-0.004)	0.004 (0.003-0.004)	0.005 (0.004-0.006)	0.006 (0.005-0.007)	0.007 (0.006-0.008)	0.008 (0.007-0.009)	0.009 (0.008-0.010)	0.010 (0.008-0.011)	0.011 (0.009-0.013)	0.012 (0.010-0.014)
30-day	0.002 (0.002-0.003)	0.003 (0.003-0.003)	0.004 (0.003-0.004)	0.004 (0.004-0.005)	0.005 (0.005-0.006)	0.006 (0.005-0.007)	0.006 (0.006-0.007)	0.007 (0.006-0.008)	0.008 (0.007-0.009)	0.008 (0.007-0.010)
45-day	0.002 (0.002-0.002)	0.002 (0.002-0.003)	0.003 (0.003-0.003)	0.003 (0.003-0.004)	0.004 (0.003-0.004)	0.004 (0.004-0.005)	0.005 (0.004-0.006)	0.005 (0.005-0.006)	0.006 (0.005-0.007)	0.006 (0.005-0.007)
60-day	0.002 (0.001-0.002)	0.002 (0.002-0.002)	0.002 (0.002-0.003)	0.003 (0.003-0.003)	0.003 (0.003-0.004)	0.004 (0.003-0.004)	0.004 (0.004-0.005)	0.004 (0.004-0.005)	0.005 (0.004-0.005)	0.005 (0.004-0.006)

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).
Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values.
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PF graphical

**RATIONAL FORMULA METHOD
RUNOFF COEFFICIENTS**

Land Use or Surface Characteristics	Aver. % Impervious Area	Runoff Coefficients	
		5-Year (C ₅)	100-Year (C ₁₀₀)
<u>Business/Commercial:</u>			
Downtown Areas	85	.82	.85
Neighborhood Areas	70	.65	.80
<u>Residential:</u> (Average Lot Size)			
1/8 Acre or Less (Multi-Unit)	65	.60	.78
1/4 Acre	38	.50	.65
1/8 Acre	30	.45	.60
1/2 Acre	25	.40	.55
1 Acre	20	.35	.50
<u>Industrial:</u>	72	.68	.82
<u>Open Space:</u> (Lawns, Parks, Golf Courses)	5	.05	.30
<u>Undeveloped Areas:</u>			
Range	0	.20	.50
Forest	0	.05	.30
<u>Streets/Roads:</u>			
Paved	100	.88	.93
Gravel	20	.25	.50
<u>Drives/Walks:</u>	95	.87	.90
<u>Roof:</u>	90	.85	.87

Notes:

1. Composite runoff coefficients shown for Residential, Industrial, and Business/Commercial Areas assume irrigated grass landscaping for all pervious areas. For development with landscaping other than irrigated grass, the designer must develop project specific composite runoff coefficients from the surface characteristics presented in this table.

VERSION: April 30, 2009

REFERENCE:

USDCM, DROCOG, 1969
(with modifications)

TABLE
701

WRC ENGINEERING, INC.

RUNOFF CURVE NUMBERS FOR URBAN AREAS¹

Runoff Curve Numbers

Cover Type and Hydrologic Condition	Aver. % Impervious Area ²	Soil Comp A	Soil Comp B	Soil Comp C	Soil Comp D
<i>Fully developed urban area (vegetation established)</i>					
Open space (lawns, parks, golf courses, cemeteries, etc.) ³					
Poor condition (grass cover < 50%)		68	79	86	89
Fair condition (grass cover 50 to 75%)		49	69	79	84
Good condition (grass cover > 75%)		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way)		98	98	98	98
Paved; open ditches (including right-of-way)		83	89	92	93
Gravel (including right-of-way)		76	85	89	91
Dirt (including right-of-way)		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) ⁴		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders)		96	96	96	96
Urban districts:					
Commercial and business	85	89	92	94	95
Industrial	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses)	65	77	85	90	92
1/4 acre	38	61	75	83	87
1/3 acre	30	57	72	81	86
1/2 acre	25	54	70	80	85
1 acre	20	51	68	79	84
2 acres	12	46	65	77	82
<i>Developing urban areas</i>					
Newly graded areas (pervious only, no vegetation) ⁵		77	86	91	94
Idle lands (CNs are determined using cover types similar to those Table 702 - 3 of 4)					

¹Average runoff condition, and $I_a = 0.2S$

²The average percent impervious area shown was used to develop the composite CNs. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CNs for other combinations of conditions may be computed using figure 2-3 or 2-4 in TR-55 (SCS, 1986).

³CNs shown are equivalent to those of pasture. Composite CNs may be computed for other combinations of open space cover type.

⁴Composite CNs for natural desert landscaping should be computed using figure 2-3 or 2-4 in TR-55 (SCS, 1986) based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CNs are assumed equivalent to desert shrub in poor hydrologic condition.

⁵Composite CNs to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 in TR-55 (SCS, 1986) based on the degree of development (impervious area percentage) and the CNs for the newly graded pervious areas.

VERSION: April 30, 2009

REFERENCE:

210-VI-TR-55, Second Edition, June 1986

TABLE

702

1 of 4

WRC ENGINEERING, INC.

Appendix A

Hydrologic Soil Groups

Soils are classified into hydrologic soil groups (HSG's) to indicate the minimum rate of infiltration obtained for bare soil after prolonged wetting. The HSG's, which are A, B, C, and D, are one element used in determining runoff curve numbers (see chapter 2). For the convenience of TR-55 users, exhibit A-1 lists the HSG classification of United States soils.

The infiltration rate is the rate at which water enters the soil at the soil surface. It is controlled by surface conditions. HSG also indicates the transmission rate—the rate at which the water moves within the soil. This rate is controlled by the soil profile. Approximate numerical ranges for transmission rates shown in the HSG definitions were first published by Musgrave (USDA 1955). The four groups are defined by SCS soil scientists as follows:

Group Asoils have low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sand or gravel and have a high rate of water transmission (greater than 0.30 in/hr).

Group Bsoils have moderate infiltration rates when thoroughly wetted and consist chiefly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse textures. These soils have a moderate rate of water transmission (0.15-0.30 in/hr).

Group Csoils have low infiltration rates when thoroughly wetted and consist chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine texture. These soils have a low rate of water transmission (0.05-0.15 in/hr).

Group Dsoils have high runoff potential. They have very low infiltration rates when thoroughly wetted and consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. These soils have a very low rate of water transmission (0-0.05 in/hr).

In exhibit A-1, some of the listed soils have an added modifier; for example, "Abrazo, gravelly." This refers to a gravelly phase of the Abrazo series that is found in SCS soil map legends.

Disturbed soil profiles

As a result of urbanization, the soil profile may be considerably altered and the listed group classification may no longer apply. In these circumstances, use the following to determine HSG according to the texture of the new surface soil, provided that significant compaction has not occurred (Brakensiek and Rawls 1983).

<i>HSG</i>	<i>Soil textures</i>
A	Sand, loamy sand, or sandy loam
B	Silt loam or loam
C	Sandy clay loam
D	Clay loam, silty clay loam, sandy clay, silty clay, or clay

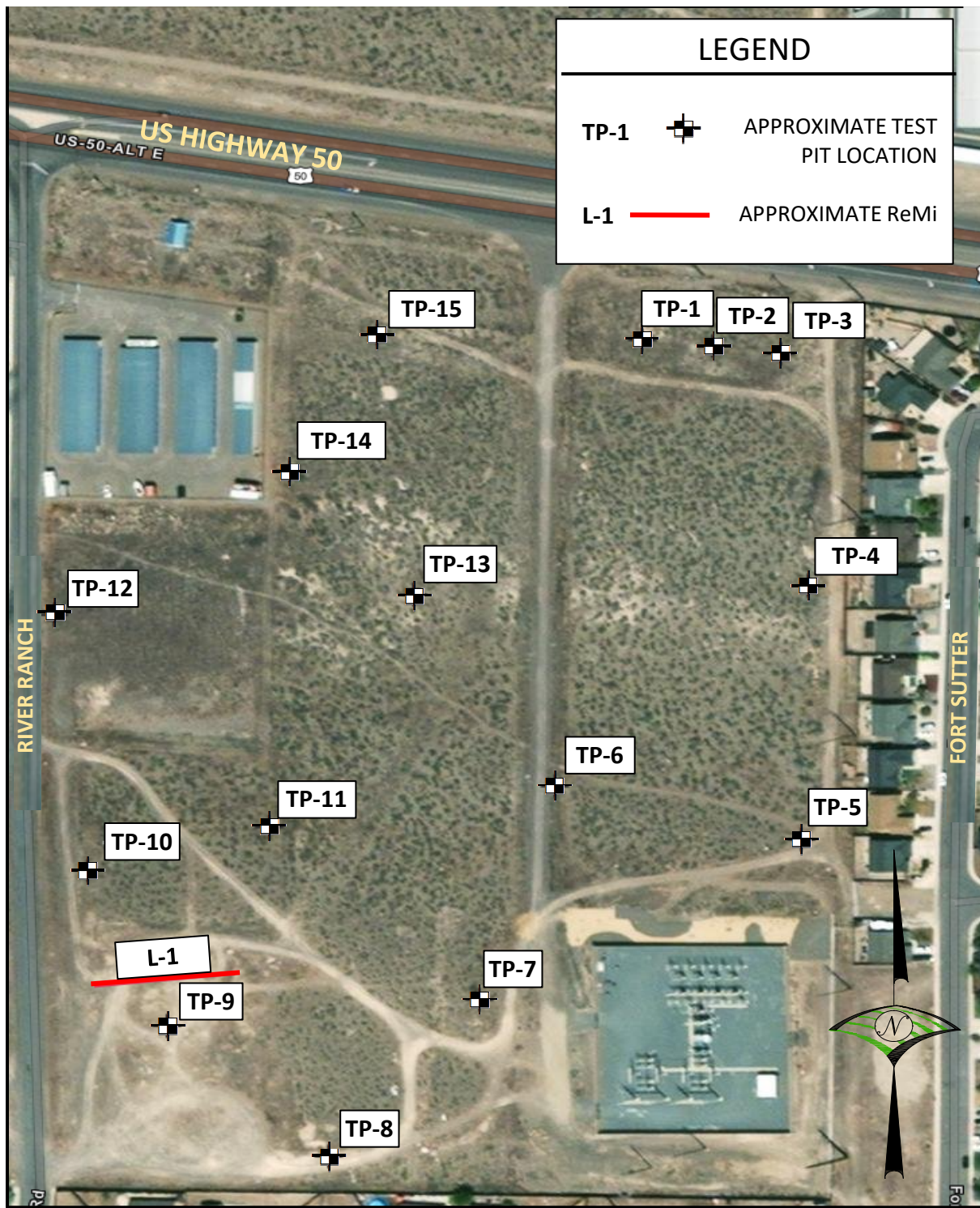
Drainage and group D soils

Some soils in the list are in group D because of a high water table that creates a drainage problem. Once these soils are effectively drained, they are placed in a different group. For example, Ackerman soil is classified as A/D. This indicates that the drained Ackerman soil is in group A and the undrained soil is in group D.

APPENDIX C

TEST PIT LOGS & PERCOLATION TEST RESULTS





RIVER RANCH APARTMENTS

SITE PLAN & APPROXIMATE EXPLORATION
LOCATIONS

FIGURE 3



Wood Rodgers

TEST PIT NUMBER TP-1

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4127 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59946, -119.20922 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0												
		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic, trace rootlets	GB 1A									
		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 1B									
5		Medium dense	GB 1C									
		Silt seams	GB 1D									
		PERCOLATION TEST, sloughing	GB 1E					2.6				5.3
10												

Bottom of Test Pit at 10.0 Feet.

Soil Percolation Recorded Measurements

1. Depth to test : 8 ft
 2. Time of 1st saturation to 12" 9:50 Date : 7/13/2022
If 12" of water drains from hole in 10 mins or less, refill to 12".
 3. Time of 2nd saturation : 10:00
 4. If 2nd filling drains in less than 10 mins, begin 1 hour test with 10 mins or less reading intervals.
 5. If either filling exceeds 10 mins to drain from hole, begin a 4-hr pre-soak.
- Return between 16 - 24 hrs to start test.

Date of percolation test : 7/14/2022Hole # : TP-1 Diameter : 8 in Depth : 12 in Soil Type : SP-SM

Reading	Time		Water Level (in)		Elapsed	Water
	Start	Finish	Start	Finish	Time min	Fall (in)
1	10:06	10:16	6	8 1/16	10	2 1/16
2	10:16	10:26	6	7 5/8	10	1 5/8
3	10:26	10:36	6	7 5/8	10	1 5/8
4	10:36	10:46	6	7 3/8	10	1 3/8
5	10:46	10:56	6	7 5/16	10	1 5/16
6	10:56	11:06	6	7 5/16	10	1 5/16

Stabilized Rate : 7.6 Min/inch
 Tested by: SB
 Checked by: LL



Wood Rodgers

TEST PIT NUMBER TP-2

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4129 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59944, -119.20894 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0		SANDY FAT CLAY, (CH) stiff, dry, yellowish brown, high plasticity	GB 2A									
		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic										
		SILT, (ML) very stiff, slightly moist, olive yellow, low plasticity	GB 2B					21.7				94.1
5		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 2C									
		Medium dense	GB 2D									
		Loose, sloughing, PERCOLATION TEST										

Bottom of Test Pit at 9.5 Feet.

Soil Percolation Recorded Measurements

1. Depth to test : 8 ft
 2. Time of 1st saturation to 12" 10:50 Date : 7/13/2022
 If 12" of water drains from hole in 10 mins or less, refill to 12".
 3. Time of 2nd saturation : 11:00
 4. If 2nd filling drains in less than 10 mins, begin 1 hour test with 10 mins or less reading intervals.
 5. If either filling exceeds 10 mins to drain from hole, begin a 4-hr pre-soak.
 Return between 16 - 24 hrs to start test.

Date of percolation test : 7/14/2022Hole # : TP-2 Diameter : 8 in Depth : 12 in Soil Type : SP-SM

Reading	Time		Water Level		Elapsed Time min	Water Fall (in)
	Start	Finish	Start	Finish		
1	10:10	10:20	6	8 7/16	10	2 7/16
2	10:20	10:30	6	8 1/4	10	2 1/4
3	10:30	10:40	6	8 1/8	10	2 1/8
4	10:40	10:50	6	8 1/8	10	2 1/8
5	10:50	11:00	6	8 1/16	10	2 1/16

Stabilized Rate : 4.8 Min/inch
 Tested by: SB
 Checked by : LL



Wood Rodgers

TEST PIT NUMBER TP-3

PAGE 1 OF 1

CLIENT ERGS, Inc.PROJECT NAME River Ranch ApartmentsPROJECT NUMBER 3034059PROJECT LOCATION Fernley, NevadaDATE STARTED 7/14/22COMPLETED 7/14/22GROUND ELEVATION 4128 ftTEST PIT SIZE 24 inchesEXCAVATION CONTRACTOR King Construction

GROUND WATER LEVELS:

EXCAVATION METHOD BackhoeAT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTEREDLOGGED BY Lilian LorinczCHECKED BY Justin McDougalAT END OF EXCAVATION --- NO FREE WATER ENCOUNTEREDNOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59941, -119.20866 AFTER EXCAVATION --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0		SANDY FAT CLAY, (CH) stiff, dry, yellowish brown, high plasticity	GB 3A									
		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic										
		SILT, (ML) stiff, slightly moist, yellowish brown, low plasticity	GB 3B									
		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic										
5		Sloughing	GB 3C									

Bottom of Test Pit at 7.5 Feet.

Soil Percolation Recorded Measurements

1. Depth to test : 8 ft
2. Time of 1st saturation to 12" 11:45 Date : 7/13/2022
If 12" of water drains from hole in 10 mins or less, refill to 12".
3. Time of 2nd saturation : 11:55
4. If 2nd filling drains in less than 10 mins, begin 1 hour test with 10 mins or less reading intervals.
5. If either filling exceeds 10 mins to drain from hole, begin a 4-hr pre-soak.
- Return between 16 - 24 hrs to start test.

Date of percolation test : 7/14/2022Hole # : TP-3 Diameter : 8 in Depth : 12 in Soil Type : SP-SM

Reading	Time		Water Level		Elapsed Time min	Water Fall (in)
	Start	Finish	Start	Finish		
1			6	9 9/16	5	
2			6	9 7/16	5	
3			6	9 3/8	5	
4			6	9 5/16	5	
5			6	9 5/16	5	
6			6	9 1/4	5	
7			6	9 1/4	5	
8			6	9 1/4	5	
9			6	9 1/4	5	

Stabilized Rate : 1.5 Min/inch*Tested by: SB

*Rate may be due to test performed in sloughed soils

Checked by: LL



Wood Rodgers

TEST PIT NUMBER TP-4

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22 **GROUND ELEVATION** 4133 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59857, -119.20834 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic	GB 4A			70			NP	NP	NP	
2.5												
			GB 4B									
5.0		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 4C									
7.5		SILT, (ML) very stiff, dry, olive yellow, low plasticity										
10.0												

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GEO\TECH\06 GINT\RIVER_RANCH APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-5

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22 **GROUND ELEVATION** 4142 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59941, -119.20864 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		CLAYEY GRAVEL WITH SAND, (GC) medium dense, dry, yellowish brown, medium plasticity	GB 5A									
2.5		Dense, slightly moist	GB 5B					10.7	51	26	25	12.8
5.0			GB 5C									
7.5			GB 5D									
10.0												

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH_DOUBLE - R_OA\GEOTECH\GINT\06 GINT\RIVER RANCH APARTMENTS.GPJ



PAGE 1 OF 1

PROJECT NAME River Ranch Apartments

PROJECT LOCATION Fernley, Nevada

COMPLETED 7/13/22

GROUND ELEVATION 4144 ft

TEST PIT SIZE 24 inches

EXCAVATION CONTRACTOR King Construction

GROUND WATER LEVELS:

EXCAVATION METHOD Backhoe

AT TIME OF EXCAVATION --- NO FREE WATER ENCOUNTERED

LOGGED BY Lilian Lorincz

CHECKED BY Justin McDougal

AT END OF EXCAVATION --- NO FREE WATER ENCOUNTERED

NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59784, -119.20934 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

[illegible]

Bottom of Test Pit at 10.0 Feet.



Wood Rodgers

TEST PIT NUMBER TP-7

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22 **GROUND ELEVATION** 4160 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59706, -119.20926 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		FAT CLAY WITH SAND, (CH) stiff, dry, olive brown, high plasticity, rootlets	GB 7A									
2.5		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity	GB 7B									
5.0		Slightly moist	GB 7C					14.7	41	26	15	79.8
7.5		CLAYEY SAND WITH GRAVEL, (SC) dense, dry, yellowish brown, high plasticity	GB 7D									
10.0		SILT WITH GRAVEL, (ML) stiff, dry, yellowish brown, low plasticity	GB 7E									

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034_ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GINT\06 GINT\RIVER_RANCH_APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-8

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/13/22 **COMPLETED** 7/13/22 **GROUND ELEVATION** 4161 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59941, -119.20846 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0												
		FILL - CLAYEY SAND, (SC) medium dense, dry, yellowish brown, medium plasticity	GB 8A									
2.5			GB 8B					6.3	23	13	10	31.1
		SILT WITH SAND, (ML) stiff, dry, olive yellow, low plasticity Yellowish brown										
5.0			GB 8C									
		POORLY GRADED SAND WITH SILT, (SP-SM) dense, dry, light brownish gray, non plastic										
7.5			GB 8D									
10.0												

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH_DOUBLE - R.OA\GEOTECH\GINT\06 GINT\RIVER RANCH APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-9

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4162 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59696, -119.211 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0												
		FILL - CLAYEY SAND, (SC) medium dense, dry, yellowish brown, medium plasticity, construction debris	GB 9A									
2.5		SILTY SAND, (SM) medium dense, dry, yellowish brown, low plasticity, rootlets	GB 9B									
5.0		Dense, olive yellow	GB 9C									
7.5		Slightly moist	GB 9D					15.4	31	24	7	38.0
10.0			GB 9E									

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:23 - \\WOODRODGERS.LOC\PRODUCTIONDATA\JOBS-RENO\JOBS\3034_ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GINT\TP-9_RIVER_RNCH_APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-10

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4153 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59753, -119.2114 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0												
		FILL - CLAYEY SAND, (SC) medium dense, dry, yellowish brown, medium plasticity, construction debris	GB 10A									
2.5			GB 10B									
		SILT WITH SAND, (ML) stiff, dry, olive yellow, medium plasticity, rootlets	GB 10C									
5.0												
		Very stiff	GB 10D									
7.5												
		SILT WITH GRAVEL, (ML) very stiff, slightly moist, olive yellow, non plastic										
10.0												

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:24 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GINT\06 GINT\RIVER_RANCH APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-11

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4149 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59769, -119.21064 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		SILTY SAND, (SM) loose, dry, yellowish brown, non plastic	GB 11A									
2.5		Silt seam										
5.0		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity	GB 11B									
			GB 11C									
7.5		POORLY GRADED SAND WITH GRAVEL, (SP) medium dense, dry, light brownish gray to olive brown, non plastic	GB 11D									
10.0												

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:24 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH_DOUBLE - R_OA\GEOTECH\GEO\TECH\06 GINT\RIVER RANCH APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-12

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4135 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59845, -119.21134 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0												
		SILT WITH GRAVEL, (ML) stiff, dry, yellowish brown, medium plasticity	GB 12A									
		SILT WITH SAND, (ML) stiff, dry, olive yellow, medium plasticity, rootlets	GB 12B									
2.5		SILTY SAND, (SM) medium dense, dry, yellowish brown, low plasticity	GB 12C									
5.0		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brownish gray, non plastic	GB 12D									
7.5		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity	GB 12E									
10.0												

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:24 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH.DOUBLE_R_OA\GEOTECH\GEO\TECH\06 GINT\RIVER_RANCH APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-13

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4135 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59853, -119.210 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0												
		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic, trace rootlets	GB 13A									
2.5		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brownish gray, non plastic	GB 13B									
5.0		SILT WITH SAND, (ML) stiff, dry, olive yellow, medium plasticity, rootlets	GB 13C									
7.5		Slightly moist										
10.0			GB 13D									

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:24 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GINT\TP13\TP13.RCH



Wood Rodgers

TEST PIT NUMBER TP-14

PAGE 1 OF 1

CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4133 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59899, -119.21046 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0		SILTY SAND, (SM) medium dense, dry, yellowish brown, non plastic	GB 14A									
2.5		Low plasticity, silt seam	GB 14B									
5.0												
7.5		SILT WITH SAND, (ML) stiff, dry, yellowish brown, medium plasticity	GB 14C									
10.0		POORLY GRADED SAND WITH SILT, (SP-SM) medium dense, dry, light brownish gray, non plastic	GB 14D									

Bottom of Test Pit at 10.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:24 - \\WOODRODGERS.LOC\PRODUCTION\DATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH_DOUBLE_R.OA\GEOTECH\GEO\TP06 GINT\RIVER RANCH APARTMENTS.GPJ



Wood Rodgers

TEST PIT NUMBER TP-15

PAGE 1 OF 1

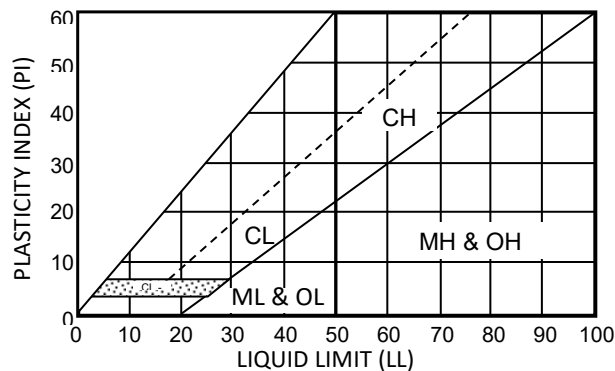
CLIENT ERGS, Inc. **PROJECT NAME** River Ranch Apartments
PROJECT NUMBER 3034059 **PROJECT LOCATION** Fernley, Nevada
DATE STARTED 7/14/22 **COMPLETED** 7/14/22 **GROUND ELEVATION** 4131 ft **TEST PIT SIZE** 24 inches
EXCAVATION CONTRACTOR King Construction **GROUND WATER LEVELS:**
EXCAVATION METHOD Backhoe **AT TIME OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
LOGGED BY Lilian Lorincz **CHECKED BY** Justin McDougal **AT END OF EXCAVATION** --- NO FREE WATER ENCOUNTERED
NOTES: Elevations: Fernley GIS 09/07/22 (NAVD 88); Loc: 39.59949, -119.21024 **AFTER EXCAVATION** --- NO FREE WATER ENCOUNTERED

DEPTH (ft)	GRAPHIC LOG	MATERIAL DESCRIPTION	SAMPLE TYPE NUMBER	RECOVERY % (RQD)	BLOW COUNTS (N VALUE)	R-VALUE	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	ATTERBERG LIMITS			FINES CONTENT (%)
									LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	
0.0												
		SILTY SAND, (SM) loose, dry, light brownish gray, non plastic, trace rootlets	GB 15A									
2.5		SILT WITH SAND, (ML) very stiff, dry, yellowish brown, medium plasticity	GB 15B									
5.0		POORLY GRADED SAND WITH SILT, (SP-SM) loose, dry, light brownish gray, non plastic	GB 15C									
		Sloughing										

Bottom of Test Pit at 7.0 Feet.

GEOTECH BH COLUMNS - GINT STD US LAB.GDT - 9/9/22 14:24 - \\WOODRODGERS.LOC\PRODUCTIONDATA\JOBS-RENO\JOBS\3034 - ERGS\RIVER_RNCH_DOUBLE_R_OA\GEOTECH\GEO\GINT\TP15\TP15.GPJ

MAJOR DIVISION				TYPICAL NAMES	
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	GRAVEL MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES		GW	WELL GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
		GRAVELS WITH OVER 12% FINES		GP	POORLY GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
				GM	SILTY GRAVELS, SILTY GRAVELS WITH SAND
				GC	CLAYEY GRAVELS, CLAYEY GRAVELS WITH SAND
	SAND MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE	CLEAN SANDS WITH LITTLE OR NO FINES		SW	WELL GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
				SP	POORLY GRADED SAND WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
		SANDS WITH OVER 12% FINES		SM	SILTY SANDS WITH OR WITHOUT GRAVEL
				SC	CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOILS MORE THAN HALF IS FINER THAN NO. 200 SIEVE	SILT AND CLAY LIQUID LIMIT 50% OR LESS			ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTS WITH SANDS AND GRAVELS
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY CLAYS WITH SANDS AND GRAVELS, LEAN CLAYS
				OL	ORGANIC SILTS OR CLAYS OF LOW PLASTICITY
	SILT AND CLAY LIQUID LIMIT GREATER THAN 50%			MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SANDY OR SILTY SOLID, ELASTIC SILTS
				CH	INORGANIC CLAYS OR HIGH PLASTICITY, FAT CLAYS
				OH	ORGANIC SILTS OR CLAYS MEDIUM TO HIGH PLASTICITY
	HIGHLY ORGANIC SOILS			PT	PEAT AND OTHER HIGHLY ORGANIC SOILS



CONSISTENCY		RELATIVE DENSITY	
SILTS & CLAYS	SPT BLOW* COUNTS (N)	SANDS & GRAVELS	SPT BLOW* COUNTS (N)
VERY SOFT	0 - 2	VERY LOOSE	0 - 4
SOFT	3 - 4	LOOSE	5 - 10
MEDIUM STIFF	5 - 8	MD DENSE	11 - 30
STIFF	9 - 15	DENSE	31 - 50
VERY STIFF	16 - 30	VERY DENSE	50 +
HARD	30 +		

* The Standard Penetration Resistance (N) in blows per foot is obtained by the ASTM D1585 procedure using 2" O.D., 1 3/8" I.D. samplers.

PLASTICITY DESCRIPTIONS			
DESCRIPTION	RANGE	DESCRIPTION	RANGE
NONPLASTIC	<5	MEDIUM	10-20
LOW	< 10	MEDIUM-HIGH	15 - 25
LOW-MEDIUM	5 - 15	HIGH	>25

DESCRIPTION OF ESTIMATED PERCENTAGES OF GRAVEL, SAND, AND FINES	
TRACE	Particles are present but est. < 5%
FEW	5% - 10%
LITTLE	15% - 20%
SOME	30% - 45%
MOSTLY	50% - 100%

NOTE: Percentages are presented within soil description for soil horizon with laboratory tested soil samples.

DEFINITIONS OF SOIL FRACTIONS	
SOIL COMPONENT	PARTICLE SIZE RANGE
BOULDERS	> 12 INCHES
COBBLES	3 to 12 Inches
GRAVEL	3 IN. TO NO. 4 SIEVE
COARSE GRAVEL	3 IN. TO 3/4 IN.
FINE GRAVEL	3/4 IN. TO NO. 4 SIEVE
SAND	NO. 4 TO NO. 200
COARSE SAND	NO. 4 TO NO. 10
MEDIUM SAND	NO. 10 TO NO. 40
FINE SAND	NO. 40 TO NO. 200
FINES (SILT OR CLAY)	MINUS NO. 200 SIEVE

RIVER RANCH APARTMENTS	UNIFIED SOIL CLASSIFICATION AND KEY TO SOIL DESCRIPTIONS	B-2
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PRELIMINARY SANITARY SEWER REPORT

FOR THE
RIVER RANCH APARTMENTS
CONDITIONAL USE PERMIT
FERNLEY, NEVADA

Prepared for:

ERGS, INC.
9345 Lemmon Drive
Reno, Nevada 89506
775.972.0213

SEPTEMBER 13, 2022

Prepared by:

WOOD RODGERS, INC.
1361 Corporate Boulevard
Reno, Nevada 89502
775.823.4068

Evan Nikirk, P.E.
Associate



09.13.2022



WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME

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7 REFERENCES 5

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- APPENDIX A – EXHIBITS
- APPENDIX B – SEWER DISCOVERY
- APPENDIX C – HYDRAULIC CALCULATIONS



1 INTRODUCTION

This report describes existing sanitary sewer conditions and provides an estimate of sewage flows anticipated from the proposed River Ranch apartment complex in Fernley, Nevada. The report has been prepared in support of the Conditional Use Permit and proposed site development, which will consist of 320 apartments in 40 buildings on a network of 26-foot-wide drive aisles with curb, gutter, sidewalk, utility infrastructure, and a storm water retention pond.

The following sections summarize the design criteria, general flow analysis, and preliminary design of sewer facilities proposed to serve the multi-family residences, which will connect to existing City infrastructure at the TMAI Lift Station on Inglewood Drive. The proposed sewer system, as described below, is consistent with Chapter 8 of the *City of Fernley Department of Public Works Design Standards and Review Guidelines for Streets, Potable Water, Sewer, Storm Drains & Alternative Water (Design Standards)*, dated May 2008 (Fernley, 2008a).

The proposed project is located within the City's Rolling Meadows Contributory Area, as delineated in Figure 14 from the unpublished 2009 Sewer Master Plan Update (TRC, 2009). Domestic sewage from the River Ranch apartment complex will be collected by newly-constructed sewer laterals and gravity mains, which will extend off-site under Frontage Road adjacent to U.S. Highway 50A for connection to the existing TMAI Lift Station on Inglewood Drive. The recently-constructed lift station routes flows via force main up Inglewood Drive, then west for discharge to a gravity manhole in Wagon Wheel Lane. Sewage flows within the Rolling Meadows Contributory Area gravity drain to the Rolling Meadows Lift Station, which pumps to the Farm District Road Lift Station for discharge into the South Fernley Interceptor and East Lift Station for treatment at the East Wastewater Treatment Plant.

2 PROJECT BACKGROUND

The River Ranch apartment project will be a multi-family residential complex created from two existing parcels, which will be modified by two boundary line adjustments (BLAs), in central Fernley, as shown on the Vicinity Map enclosed in Appendix A. The existing parcels, designated by Lyon County as Assessor's Parcel Numbers (APNs) 021-281-03 and -10, are undeveloped.

2.1 Site Location

The project parcels are located at 501 River Ranch Road (APN 021-281-03) and 1855 U.S. Highway 50A (APN 021-281-10). The site is bounded by River Ranch Road to the west, U.S. Highway 50A to the north, single-family residences in the Donner Trails Estates subdivision on its eastern border, and single-family residences in the River Ranch subdivision on its southern boundary. A NV Energy substation is located on a parcel (APN 021-281-09) at the southeast corner of the project, and an existing self-storage warehouse business is located on a parcel (APN 021-281-04) at the northwest corner of the site. According to the



Public Land Survey System, the site is situated within the southeast quarter of Section 18, Township 20 North, Range 25 East, Mount Diablo Meridian (SE1/4, Sec. 18, T.20 N., R.25 E., M.D.M.). The centroid of the site is approximately located at latitude 39.5982°N, longitude -119.2096°W.

2.2 Existing Conditions

The combined adjusted parcels comprise a net project area (i.e., less proposed River Ranch Road right-of-way) of 20.104 acres, as shown in the “Parcel Areas” exhibit included in Appendix A. The project site is currently undeveloped. High-voltage power poles and backyard wood fencing from the adjacent Donner Trails Estates subdivision border the eastern boundary, and backyard wood fencing and a segmental block retaining wall on lots in the adjacent River Ranch subdivision border the south boundary. The project site is bisected by a 50-foot-wide north-south access easement with gravel road from U.S. Highway 50A to the NV Energy substation. Existing terrain slopes from south to north at an overall average rate of 2.5 percent, with relatively flat areas in the southern and northern thirds of the site separated by a 6.0 percent slope in the middle third. Elevations range from highs between 4156 feet to 4164 feet along the south property line to lows between 4127 feet and 4132 feet at the highway right-of-way on the north boundary.

A public gravity sewer system is not available adjacent to the project in River Ranch Road, though there is a dedicated sewer force main from the Pioneer Crossing Casino. The point of connection to the City’s sanitary sewer system will be off-site at an existing manhole in Inglewood Drive adjacent to the TMAI Lift Station. This manhole represents the closest point of the City’s gravity sewer system to the project’s low point. The TMAI Lift Station is part of a network that ultimately drains to the South Fernley Interceptor west of the project site, with flows ultimately reaching the East Lift Station and East Wastewater Treatment Plant. The TMAI sewershed serves development in the vicinity of The Meadows at Inglewood (TMAI) commercial complex, including the proposed River Ranch apartment complex, as shown in the modified Summit Engineering exhibit (Summit, 2018) included in Appendix A. This sewershed is a sub-unit of the larger Rolling Meadows Contributory Area, shown in Figure 14 from the City’s unpublished Sewer Master Plan Update (TRC, 2008).

3 PROJECT DESCRIPTION

The owner proposes to construct a network of paved drive aisles with parking, curb and gutter, sidewalk, and utility infrastructure for 40 apartment buildings comprising 320 dwelling units. The complex will also include an office / clubhouse, a maintenance building, amenities, landscaped areas, and a storm water retention pond at the northeast corner of the site. There will be four styles of apartment buildings, each of which contains eight units, with sizes ranging from one-bedroom to three-bedroom floor plans. The general layout of the development and its sewer infrastructure is shown on the “Preliminary Sanitary Sewer Exhibit,” enclosed in Appendix A. Four-inch-diameter PVC SDR35 sewer laterals will be installed to serve each building; the laterals will connect to a new 8-inch-diameter sewer main constructed in the drive aisles. The gravity mains will sewer to the north, then connect to the City’s TMAI Lift Station west of



the project. The off-site sewer extension will be constructed within the U.S. Highway 50A right-of-way by permit from the State of Nevada Department of Transportation.

Site infrastructure will include 26-foot-wide paved drive aisles with curb, gutter, sidewalk, pedestrian ramps, storm drain facilities, water and sewer systems extended from the City's existing networks, and dry utilities (i.e., power, telephone, cable television). The site entrance will connect with River Ranch Road directly across from the unnamed connector street currently being constructed as part of The Meadows at Inglewood development. Emergency access connections will be made at two locations: River Ranch Road at the southwest corner of the site and Ellice Way on the eastern boundary adjacent to the NV Energy substation. In general, on-site sewage will gravity flow north to the low end of the site adjacent to U.S. Highway 50A, then west to the TMAI Lift Station, and ultimately to the South Fernley Interceptor, East Lift Station, and East Wastewater Treatment Plant. A preliminary analysis and model of apartment complex flows was completed in a discovery performed by Shaw Engineering (Shaw, 2022) on behalf of the City of Fernley. The discovery indicates the City's system has the capacity to serve the project, but the TMAI Lift Station will require upgrades. A copy of the discovery letter with pre- and post-development model results is enclosed in Appendix B of this report.

4 TRIBUTARY AREAS

The project is located within the City's Rolling Meadows Contributory Area, at the northeast corner of the sewershed, with no tributary flows upstream from the site. The project area is shown within the sewershed in modified figures included in Appendix A. As noted above, the point of connection represents the manhole nearest to the project's low point. Residential and commercial development within the TMAI Sewershed and Rolling Meadows Contributory Area currently flow to the South Fernley Interceptor, which is ultimately processed by the East Wastewater Treatment Plant. This facility takes wastewater flows from several interceptors and lift stations throughout the City.

Per the *City of Fernley Public Works Design Standards*, the downstream tributary areas were analyzed to verify adequate sewer pipe capacities within the City's existing sewer network. The discovery by Shaw Engineering (Shaw, 2022) includes figures and pre- and post-development model flows routed through the City's network, with sewer main identification, diameter, slope, and flow for each segment. The discovery includes an analysis of downstream flows and project impact on the sewershed as a result of the proposed apartment complex. A copy of the discovery is attached as Appendix B.

A copy of Figure 14 from the City's unpublished Sewer Master Plan Update (TRC, 2009) is enclosed in Appendix A to show sewershed boundaries; the figure has been modified to indicate the proposed project area. The figure identifies existing parcels and sewer main sizes, as well as the total residential and commercial Equivalent Residential Connections (ERCs) anticipated within the contributory area at full build-out (i.e., 915 residential ERCs, 113 commercial ERCs). However, these estimates are out of date.



5 PROPOSED CONDITIONS

On-site sewer laterals, mains, and manholes will be privately-owned and maintained by the apartment complex owner. Off-site sewer mains and manholes will be dedicated to the City of Fernley. Wastewater generated by apartment complex residents will be collected by 8-inch-diameter sewer mains, which will gravity-drain to the north project boundary, as described above. The proposed project layout and associated sewer network are shown on the exhibit, "Preliminary Sanitary Sewer Exhibit," in Appendix A.

The proposed on-site and off-site sanitary sewer system constructed for the River Ranch Apartment complex will conform with design standards specified in Chapter 8 of the *City of Fernley Department of Public Works Design Standards and Review Guidelines* (Fernley, 2008a) and with the *City of Fernley Standard Details for Public Works Construction* (Fernley, 2008b). Gravity sewer mains will be 8-inch-diameter PVC SDR35 sewer pipe installed under drive aisles. At the upper end of a given sewer trunk, two apartment buildings comprising a total of 16 dwelling units will connect to the adjacent main set at a 1.00 percent slope. Downstream mains may be set as flat as 0.40 percent to 0.60 percent, depending on how many units contribute to it. These flowline slopes are consistent with minimums specified in Table 8.1 of the *Design Standards* for an 8-inch-diameter main serving up to 10 dwelling units (1.0 percent), between 10 to 20 dwelling units (0.6 percent), and more than 20 units (0.40 percent). Each building will drain via 4-inch-diameter PVC SDR35 sewer lateral connected to the adjacent sewer main. Minimum clearances will be maintained over the sewer mains and over the laterals at the curb. No non-domestic waste will be introduced into the City's sanitary sewer system from the proposed project.

As specified in Chapter 8 of the *Design Standards*, the on-site sewer system will be designed to satisfy the minimum flow velocity of 2 feet per second (fps) at half-full capacity, and a maximum velocity of 10 fps, with a Manning's roughness coefficient ("n") of 0.012 used for pipe hydraulic calculations. Further, all sanitary sewer mains within the proposed development are designed to carry the calculated peak flow at no more than three-quarters full (0.75D).

5 HYDRAULIC ANALYSIS

This report evaluates the predicted sewage contribution from the River Ranch Apartment complex to the City's existing sewer system. The average daily flows expected for the project are calculated using a sewage generation rate of 345 gallons per dwelling unit per day, as specified by the *Design Standards* for an 8-inch-diameter main. This results in an average flow rate of **110,400 gallons per day (gpd)**. For the Peak Hourly Flow, a peaking factor of 3.0 is applied. The estimated peak flow rate collected by the subdivision's single 8-inch-diameter gravity sewer main is calculated as:

$$\text{Peak Flow Rate} = (3.0 \text{ peaking factor}) \times (320 \text{ residences}) \times (345 \text{ gal. / residence / day}) = \mathbf{331,200 \text{ GPD}}$$



The shallowest pipe slope within the on-site network could be 0.4 percent for an 8-inch-diameter PVC SDR35 sewer main. Hydraulic calculations were performed using the computer software FlowMaster® V8i by Bentley Systems (Watertown, CT) to determine flow characteristics at pipe capacity (0.75D) and, by extension, this information was used to evaluate compliance within the sewer system. At three-quarters full an 8-inch pipe set at 0.4 percent slope has a flow rate of 487,939 gpd, which far exceeds the anticipated peak flow from the project. By definition, the capacities of an 8-inch pipe set at slopes steeper than 0.4 percent will have greater capacity. Hydraulic calculations were also performed for a half-full 8-inch pipe set at 0.4 percent to verify compliance with the minimum velocity of 2.0 fps; this condition will result in a flow velocity of 2.4 fps; mains set at slopes over 0.4 percent will exceed this velocity. Detailed calculations are provided in Appendix C.

6 CONCLUSIONS

The proposed sanitary sewer system described in this report has been designed to meet the City's design criteria and adequately serve the residents of the River Ranch apartment complex. Exhibits showing the site location, existing conditions, the general site layout, and the proposed sewer system for the project are included in Appendix A. The project's gravity mains will discharge into an existing sanitary sewer manhole on Inglewood Drive adjacent to the TMAI Lift Station, which ultimately drains to the South Fernley Interceptor located west of the project. Based on data presented in unpublished 2009 Sewer Master Plan Update (TRC, 2009), the interceptor was designed to have sufficient capacity to manage the additional flows, which ultimately discharge into the City's East Wastewater Treatment Plant.

7 REFERENCES

Fernley, 2008a. *City of Fernley Department of Public Works Design Standards and Review Guidelines for Streets, Potable Water, Sewer, Storm Drains & Alternative Water*, published by the City of Fernley Department of Public Works, Fernley, Nevada, May 2008. <http://www.cityoffernley.org/DocumentCenter/Index/279>.

Fernley, 2008b. *City of Fernley Standard Details for Public Works Construction*, published by the City of Fernley Department of Public Works, Fernley, Nevada, July 15, 2008. <http://www.cityoffernley.org/DocumentCenter/View/2009>.

Shaw, 2022. *501 River Ranch Road Sewer Discovery*, unpublished letter report prepared by Shaw Engineering, Inc. for the City of Fernley Engineering Department, Shaw Engineering, Inc., Reno, Nevada, September 13, 2022.

Summit, 2018. *Sanitary Sewer Report for TMAI Phase 1*, unpublished report prepared by Summit Engineering Corp. for the City of Fernley Engineering Department, Summit Engineering Corp., Reno, Nevada, April, 2018.

TRC, 2009. *Sewer Master Plan Update*, unpublished report prepared by TRC Engineers for the City of Fernley Department of Public Works, TRC Engineers, Inc., Reno, Nevada, February 2009.



APPENDIX A

EXHIBITS

VICINITY MAP

AERIAL MAP

SEWERSHED (FIGURE 14, 2009 SEWER MASTER PLAN)

TMAI LIFT STATON SEWERSHED

PROJECT PARCELS

EXISTING CONDITIONS

PRELIMINARY SANITARY SEWER EXHIBIT



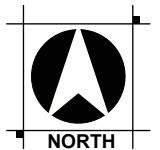
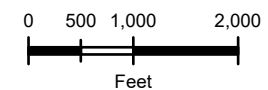
VICINITY MAP

RIVER RANCH APARTMENTS

FERNLEY, NV

SEPTEMBER 2022

- Future Nevada Pacific Parkway
- BLA_Project_Boundary

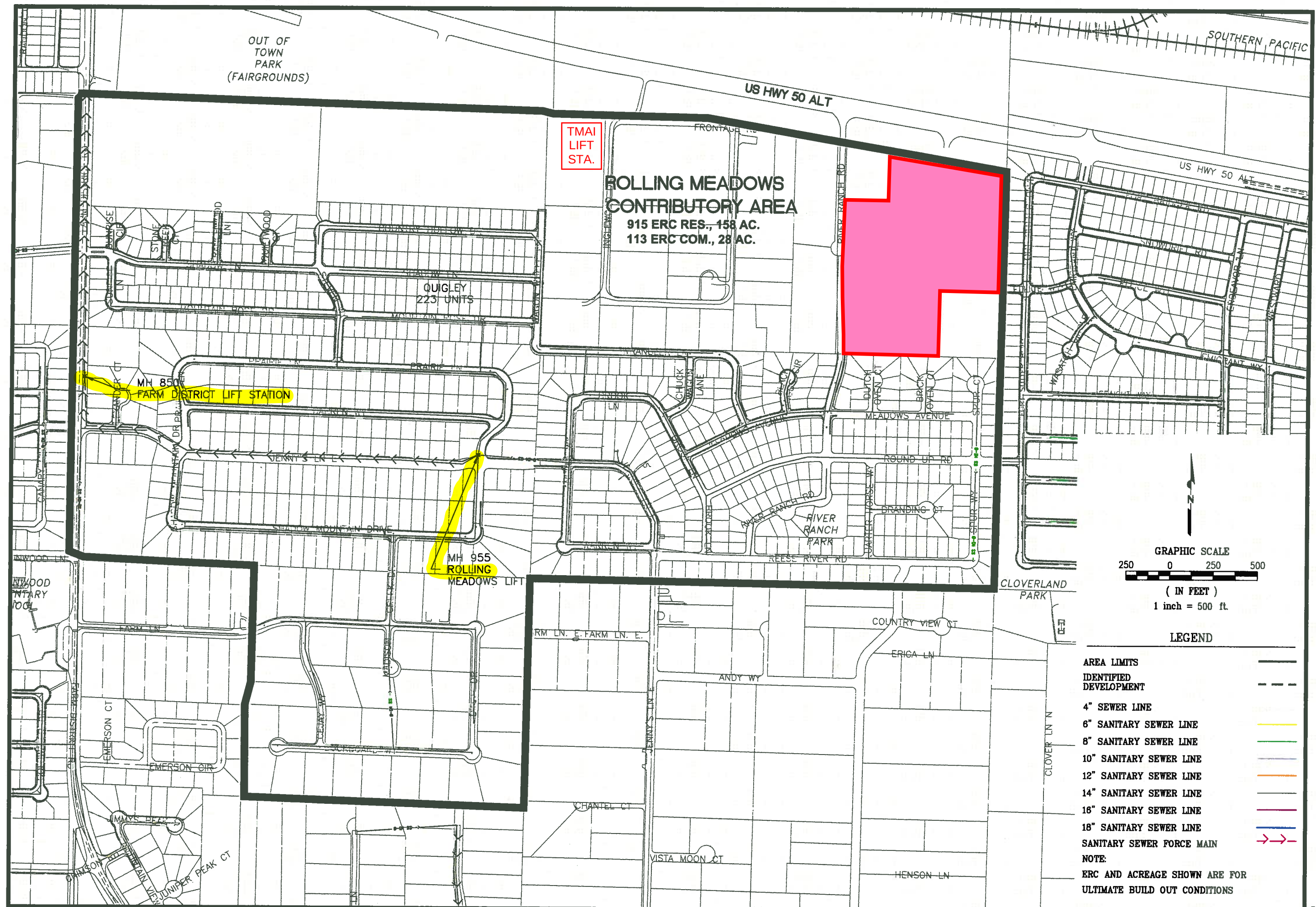


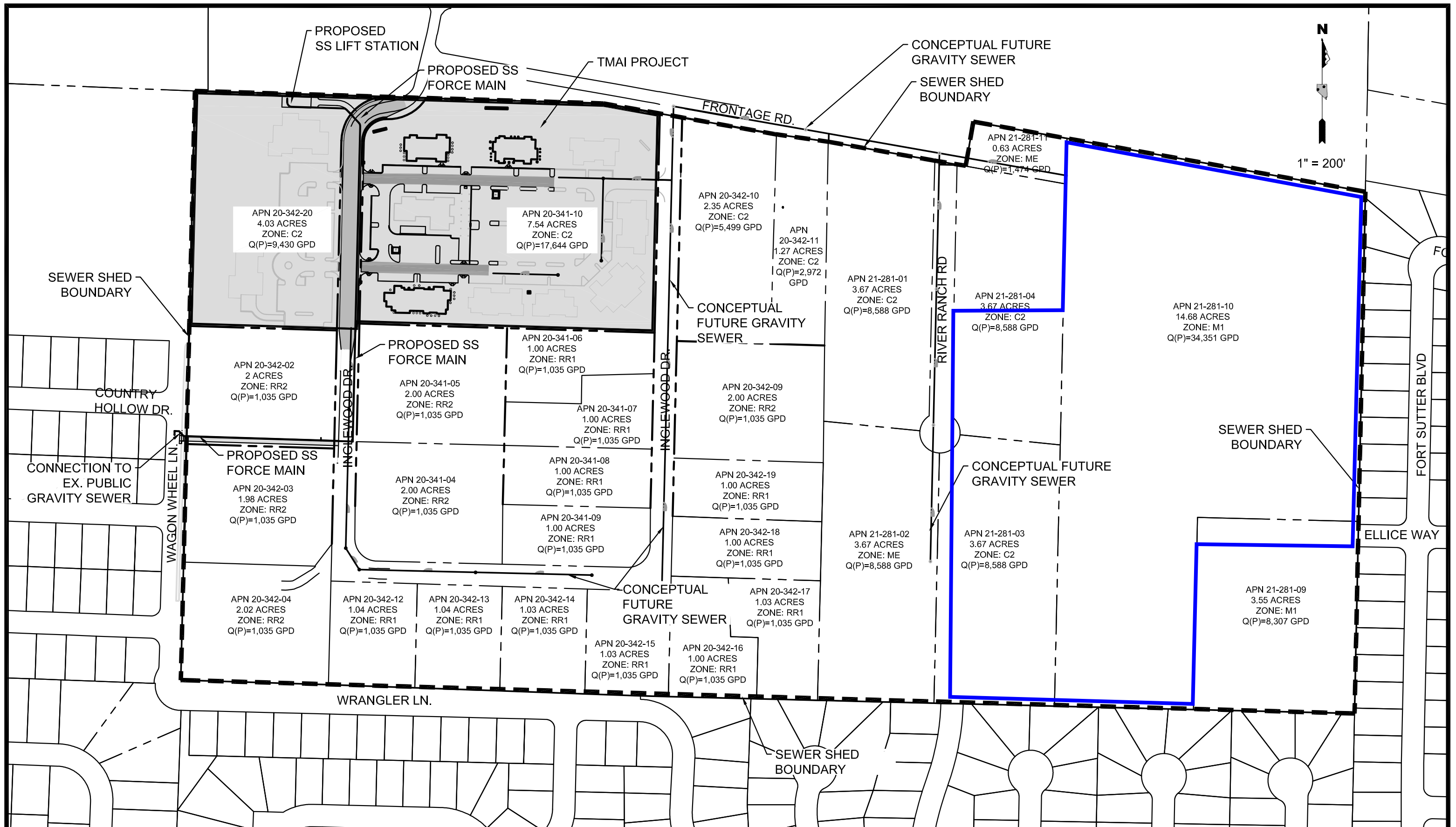

WOOD RODGERS



Aerial Map
River Ranch Apartments ZMA/CUP
September 2022

WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard Tel: 775.823.4068
Reno, NV 89502 Fax: 775.823.4066





SCALE: 1"=200'	DESIGNED BY: CH,CM
JOB #: 1-30638	CHECKED BY: CH
Copyright SUMMIT ENG 2018	DRAWN BY: chayes
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TMAI PHASE 1
SANITARY SEWER REPORT
SEWERSHED

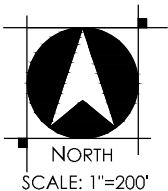
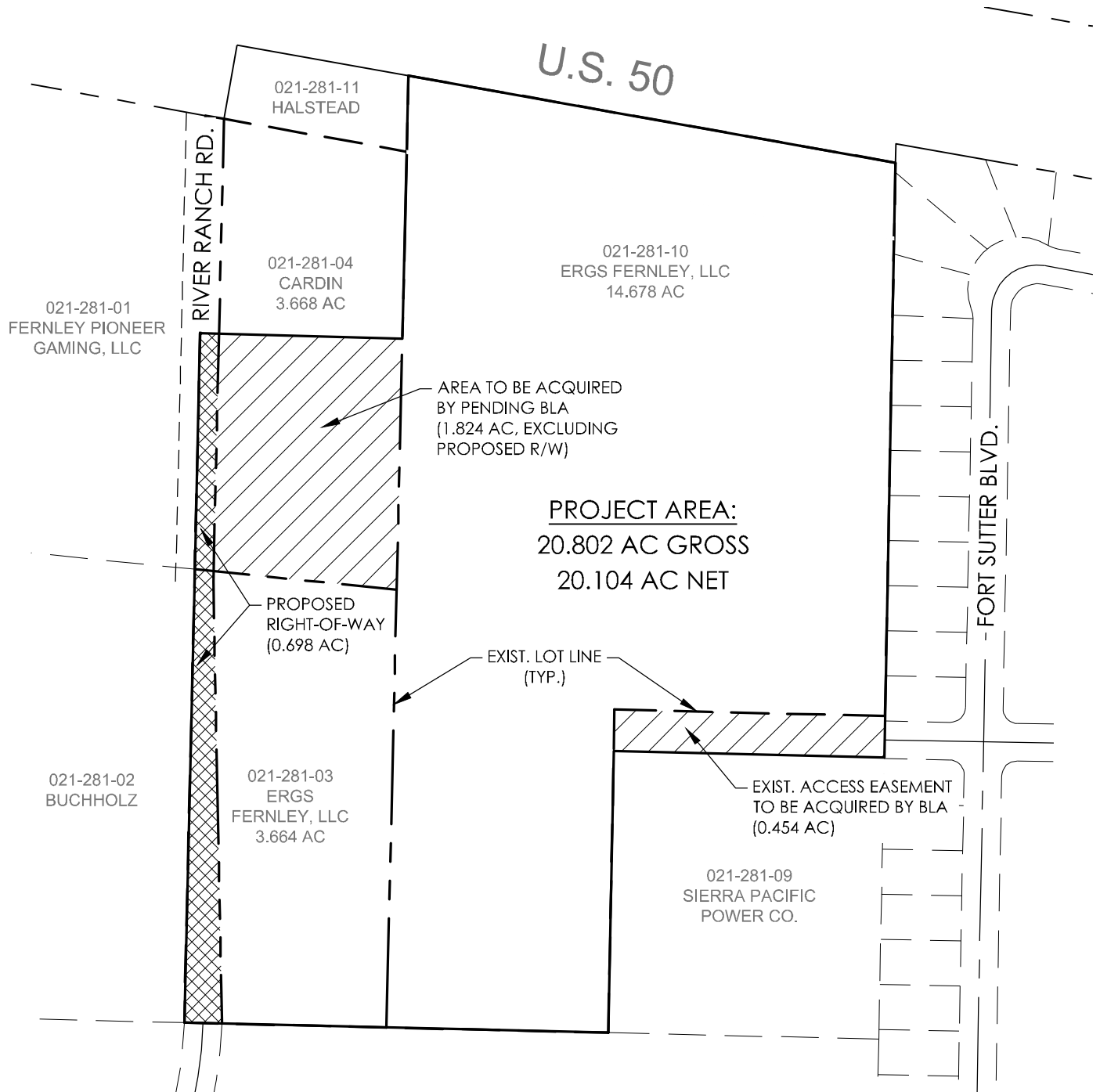
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ZMA / CUP FOR RIVER RANCH APARTMENTS

PARCEL AREAS

FERNLEY, NEVADA

SEPTEMBER 2022



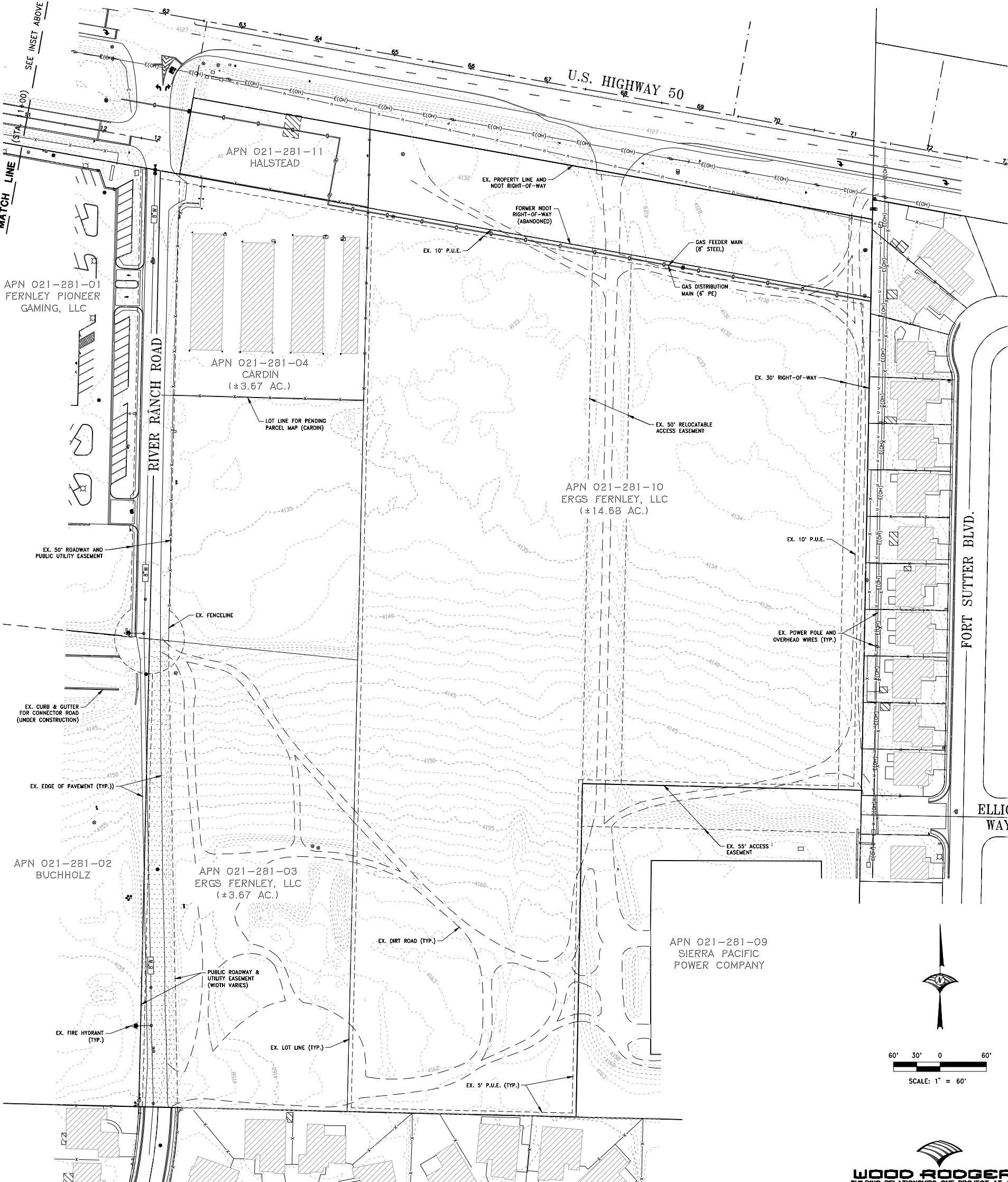
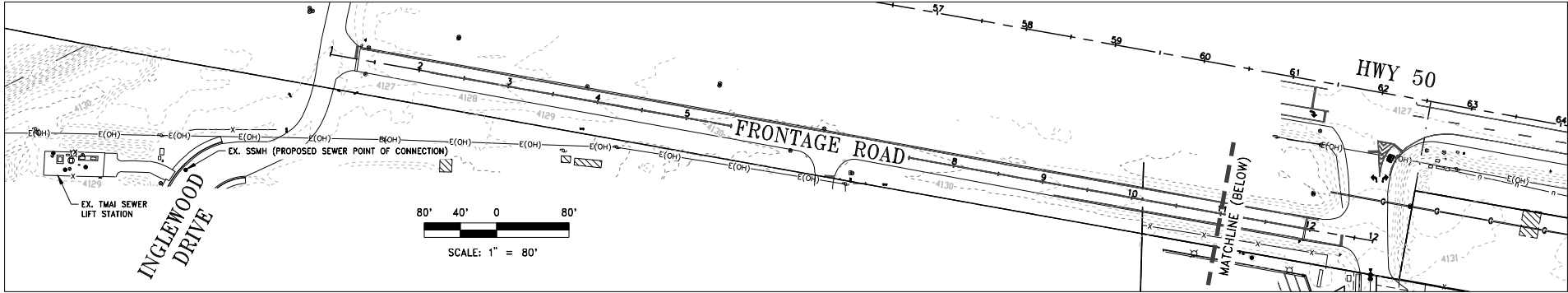
WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1961 Corporate Boulevard Tel 775.823.4068
Reno, NV 89502 Fax 775.823.4066

RIVER RANCH APARTMENTS
EXISTING CONDITIONS
ERGS, INC.

FERNLEY

NEVADA

AUGUST 29, 2022



NOTE: BASE SURVEY AND TOPOGRAPHY PREPARED BY WOOD RODGERS, INC. (RENO). DATE OF PHOTOGRAPHY: JUNE 30, 2022.

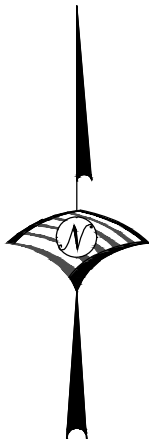
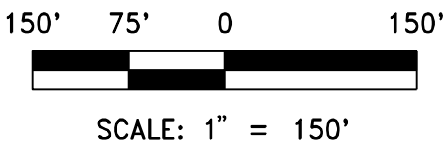
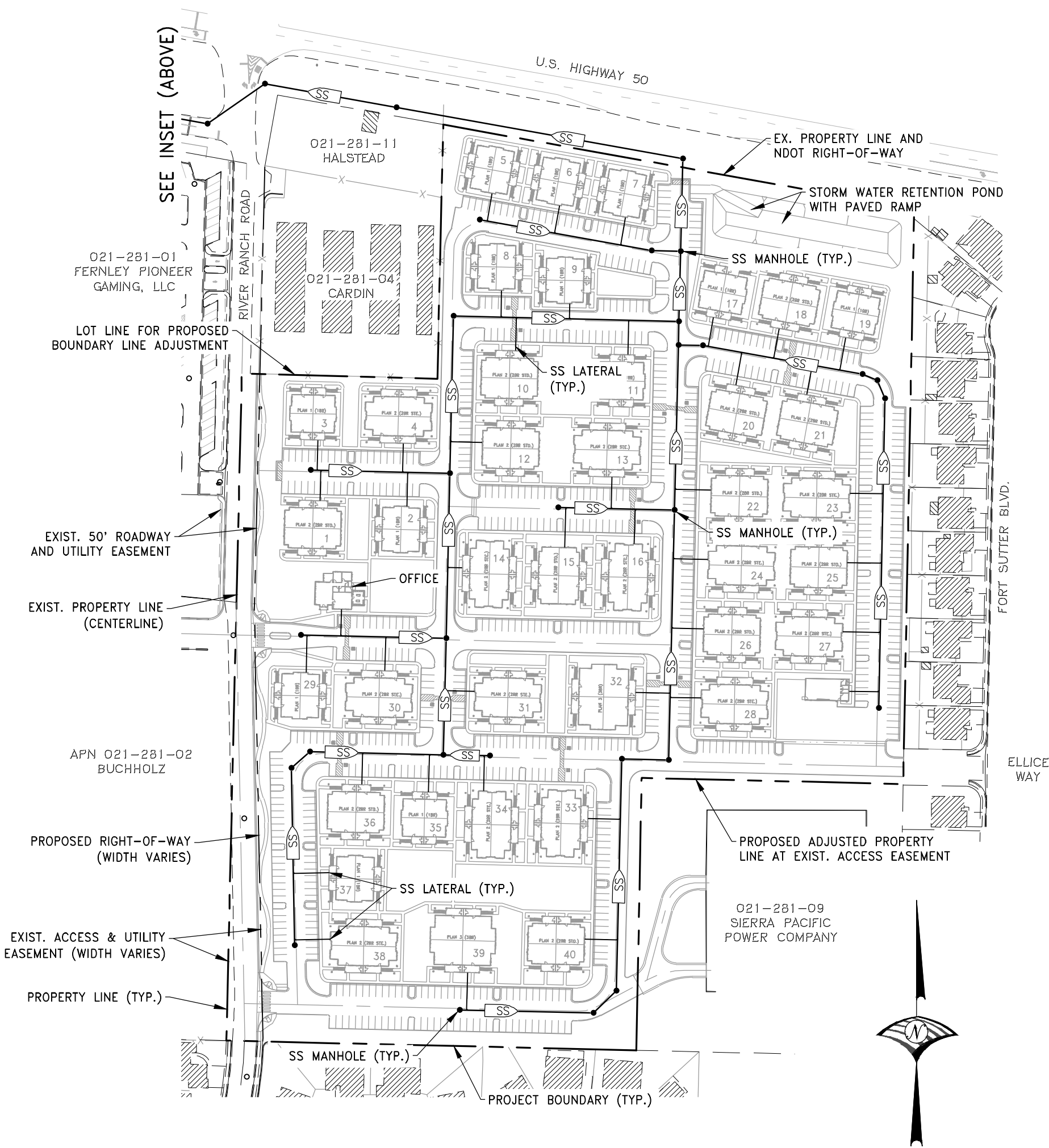
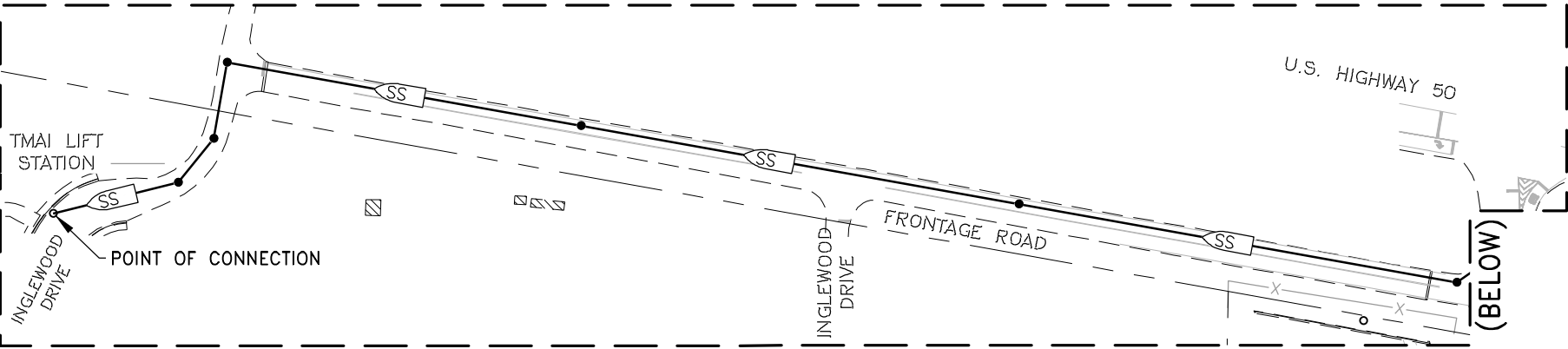
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Reno, NV 89502 Fax 775.823.4086

PRELIMINARY SANITARY SEWER EXHIBIT RIVER RANCH APARTMENTS

ERGS FERNLEY, LLC

FERNLEY, NEVADA

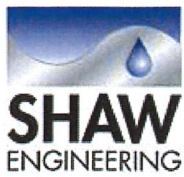
SEPTEMBER, 2022



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APPENDIX B

SEWER DISCOVERY FOR RIVER RANCH APARTMENTS



TO: Derek Starkey, P.E.

DATE: September 13, 2022

FROM: Cody Black, P.E.

RE: 501 River Ranch Road Sewer Discovery CoF W&S2022.06.24

Summary:

The applicant has proposed the residential development and construction of 8 multi-family residential buildings composed of 320 units on 3 parcels. The existing City of Fernley sewer system is capable of serving the project; however, offsite extensions and upgrades are required. Wood Rodgers, Inc. is the consulting engineer for the 501 River Ranch Road Development and Shaw Engineering has been retained to provide an analysis of the development's impacts on the City of Fernley's sewer system.

Purpose:

The purpose of this discovery is to identify the offsite required sewer facility improvements to serve the project.

The Project is comprised of 3 parcels totaling 22.02± acres. The project is located within the City of Fernley's retail service territory south of Highway 50 and straddled by River Ranch Road and the Donner Trails Subdivision.

Discussion:

Project parcels are listed in Table 1 and are shown in Figure 1. Sewer capacity is available on a first-come, first-serve basis. The existing system is deemed to have sufficient capacity for the referenced project provided offsite facilities are constructed and permitted.

Table 1: Proposed Parcel Information

APN	Proposed Parcel-Use	Acreage±
021-281-03	Parcel 1 – Vacant - Commercial	3.67
021-281-04	Parcel 2 – General Industrial	3.67
021-281-10	Parcel 3 – Vacant – Industrial	14.68
Total Acres =		22.02

Project Sewage Peak Hour Flows:

Based on a similar project recently permitted in the City, the anticipated sewer flows for the 501 River Ranch Road development are estimated to be 317.83 ERC's for a total average day flow of 79,458 gpd (55.18 gpm) for a total average day flow of and peak hour flow of 238,374 gpd (165.54 gpm) with a peak hour factor (PHF) of 3. Per the 2009 Sewer Master Plan, 1 ERC equals 250 gpd. Table 2 lists the estimated project flows based on master planning criteria.

Table 2: 501 River Ranch Road Project Flows

Phase	Site Total ERC's	ADF (GPM/GPD)	PHF (GPM/GPD)
501 River Ranch Road	317.83	55.18/79,458	165.54/238,374

20 Vine Street
Reno, Nevada
89503

Telephone:
775.
329.5559

Facsimile:
775.
329.5406

Email:
mail@
shawengineering
.com

Conclusions

Based on topography and previous planning efforts by neighboring developments, the project will need to extend offsite sewer mains from The Meadows at Inglewood (TMAI) development. In addition, the City's TMAI Lift Station will need to be upgraded to serve the project. Further analysis of the sewer shed and lift station will need to be performed during final design and permitting. Sewer flows from the TMAI Lift Station will flow through the Rolling Meadows, Farm District Road, and East Lift Stations (Figure 1).

Table 2: Infrastructure Capacity Analysis

Lift Station	Current Flow	Future Flow	Capacity
TMAI Lift Station	6.5 gpm	171 gpm	34 gpm
Rolling Meadows Lift Station	228 gpm	393 gpm	605 gpm
Farm District Road Lift Station	315 gpm	480 gpm	1,134* gpm
East Lift Station	1,963 gpm	2,128 gpm	4,765 gpm
East Wastewater Treatment Plant	1.67 MGD	1.91 MGD	3.05 MGD

*Estimated capacity after Phase II improvements, Fall 2022

Preliminary analysis determined nearby downstream infrastructure upgrades are required and other gravity mains, lift station(s), force main(s), and the East Wastewater Treatment Plant downstream of the TMAI Lift Station have sufficient capacity to serve the development.

The TMAI Lift Station was installed with a 2" Force Main and Grinder Pumps for Phase 1 operation. Due to the anticipated growth within the sewer shed, a 4" force main was installed to accommodate future flows up to 212 gpm with the replacement of the current grinder pumps with larger solids passing submersible pumps. The pipe report after development included represents the lift station operating with the 4" force main and upgraded pumps.

System capacity is available on a first-come, first-serve basis, and is secured once will-serve documents have been issued to the owner. Additional modeling will need to be performed again before will-serves are issued and NDEP approval is organized.

Permitting

The offsite gravity main extension will require NDOT permitting and possibly additional easement(s) from neighboring property owners. We highly recommend significant due diligence be pursued prior to moving forward with this project.

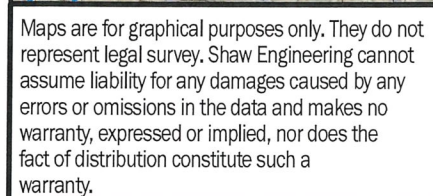
Assumptions and Final Design Guidance:

1. The applicant shall be responsible for all application, review, inspection, connection, permit, easements, and other fees pertinent to the project as adopted by the City of Fernley at the time of application.
2. Future development may alter the conclusions of this discovery. Capacity in the City of Fernley's system is available on a first-come, first-served basis, and commitment to providing service is not established until a contract for service is executed and all fees are paid.
3. All manholes are to be designed with only one outlet pipe.

4. Portions of the project will require gravity sewer lines to remain private. Final improvement plans shall delineate public vs. private infrastructure.
5. All sewer mains, existing and proposed, must not have depth to diameter ratios (d/D) exceeding 0.75.
6. Separation between manholes shall be no greater than 400 feet.
7. Manholes shall have a 0.10-foot drop from the entrance pipe to the outlet.
8. All new collection mains must be tested to determine the degree of leak potential.
9. All new manholes must be vacuum tested.
10. All residential lateral connections must be installed with tracer wire at no less than 2% slope and 4-Inches in diameter.
11. Cleanouts shall be placed at the property line or easement line for every connection.
12. All new mains must be inspected using sewer cameras to verify all laterals meet specifications following installation.
13. All new mains must be inspected for vertical and horizontal alignment to be compared with designed plans.
14. Pipe reports attached are created under the assumption that all downstream lift stations have capacity and only provide information on capacity of the collection system itself.

Attachments:

Figure 1: City of Fernley Sewer System



501 River Ranch Road - Peak Hour Pipe Report - Before Development						
ID	Full Depth (ft)	Length (ft)	Percent Slope (%)	Maximum Flow (gpm)	Maximum Velocity (ft/s)	Max.Depth/ Full Depth
0940-9	8	86	0.5	70.6	1.9	0.29
0991-11	8	86	0.4	71.2	2.0	0.28
1195-6	12	425	0.7	472.3	3.5	0.41
1196-10	24	83	0.3	875.6	1.2	0.51
1197-10	24	399	0.4	853.0	3.2	0.24
1198-10	24	349	0.4	809.5	3.2	0.24
1199-10	24	351	0.4	771.3	3.1	0.23
1200-8	24	172	0.3	768.8	3.0	0.24
1201-7	24	127	0.3	767.6	3.0	0.24
1202-8	24	401	0.4	750.6	3.2	0.22
1214-7	24	142	0.6	768.4	3.2	0.23
1639-12	15	262	0.1	30.3	0.9	0.12
1643-9	15	318	0.1	31.6	0.9	0.11
1874-6	8	260	0.2	35.7	1.1	0.26
1880-12	10	250	0.2	30.0	1.2	0.16
2014-10.5	42	11	0.5	773.8	3.0	0.11
2016-9	42	511	0.2	773.2	1.6	0.17
2017-9	42	465	0.1	1341.5	2.1	0.20
2018-9	42	487	0.1	1341.0	2.0	0.22
2019-6	42	515	0.1	1340.5	2.0	0.21
2020-9	42	589	0.1	1350.9	2.1	0.21
2021-9	42	509	0.1	1350.2	2.3	0.19
2022-9	42	20	1.2	1362.3	2.5	0.19
2023-9	42	573	0.1	1573.6	2.0	0.24
2024-9	42	587	0.1	1573.5	2.0	0.24
2025-9	42	493	0.1	1573.5	2.3	0.22
2026-9	42	486	0.1	1635.3	2.5	0.21
2027-9	42	528	0.1	1635.3	2.4	0.21
2028-9	42	216	0.1	1705.4	2.4	0.22
2029-9	42	598	0.1	1705.2	2.0	0.26
2030-9	42	598	0.1	1705.1	2.1	0.24
2031-9	42	416	0.1	1705.0	2.3	0.23
2032-9	42	47	0.1	1705.0	3.2	0.18
2033-7	42	29	0.4	1705.0	5.4	0.13
2034-9	42	15	6.7	1705.0	6.2	0.12
289-6	18	142	0.6	751.0	3.5	0.32
290-6	18	254	0.6	748.0	2.7	0.39
291-6	18	410	0.2	735.3	2.4	0.43
292-9	18	357	0.2	727.1	2.5	0.41
293-9	18	373	0.2	723.0	2.5	0.40
294-6	18	412	0.3	720.6	2.6	0.39
295-6	18	502	0.2	717.6	2.7	0.38
296-9	21	10	9.3	773.9	9.5	0.13
409-6	12	481	0.4	612.2	3.1	0.56

501 River Ranch Road - Peak Hour Pipe Report - Before Development						
ID	Full Depth (ft)	Length (ft)	Percent Slope (%)	Maximum Flow (gpm)	Maximum Velocity (ft/s)	Max.Depth/ Full Depth
874-1	8	176	0.3	81.7	1.9	0.32
875-12	8	212	0.9	71.5	2.2	0.26
955-12.5	8	81	1.6	82.5	3.0	0.23
CDT-21	12	11	22.6	891.8	4.0	0.61
CDT-217	12	4	26.8	222.4	12.3	0.10
CDT-221	44	239	0.9	1939.8	4.7	0.24
CDT-313	8	223	0.3	6.5	0.8	0.10
CDT-315	8	207	0.4	6.5	0.9	0.09
CDT-317	8	151	0.9	6.5	1.1	0.08
CDT-319	4	1064	0.2	210.4	7.2	0.73
CDT-321	8	228	0.6	6.5	1.0	0.09
CDT-323	8	262	0.5	6.5	1.0	0.09
P-1609	15	34	8.1	35.7	1.2	0.10

501 River Ranch Road - Peak Hour Pipe Report - After Development/LS Upgrade						
ID	Full Depth (ft)	Length (ft)	Percent Slope (%)	Maximum Flow (gpm)	Maximum Velocity (ft/s)	Max.Depth/ Full Depth
0940-9	8	86	0.5	260.8	2.8	0.58
0991-11	8	86	0.4	261.4	2.9	0.56
1195-6	12	425	0.7	471.6	3.5	0.41
1196-10	24	83	0.3	874.6	1.2	0.51
1197-10	24	399	0.4	852.1	3.2	0.24
1198-10	24	349	0.4	808.7	3.2	0.24
1199-10	24	351	0.4	770.6	3.1	0.23
1200-8	24	172	0.3	768.0	3.0	0.24
1201-7	24	127	0.3	766.8	3.0	0.24
1202-8	24	401	0.4	749.9	3.2	0.22
1214-7	24	142	0.6	767.7	3.2	0.23
1639-12	15	262	0.1	225.8	1.7	0.29
1643-9	15	318	0.1	226.7	1.4	0.36
1874-6	8	260	0.2	230.2	1.9	0.72
1880-12	10	250	0.2	231.0	2.1	0.47
2014-10.5	42	11	0.5	773.5	3.0	0.11
2016-9	42	511	0.2	772.9	1.6	0.17
2017-9	42	465	0.1	1341.5	2.1	0.20
2018-9	42	487	0.1	1341.0	2.0	0.22
2019-6	42	515	0.1	1340.4	2.0	0.21
2020-9	42	589	0.1	1350.7	2.1	0.21
2021-9	42	509	0.1	1349.7	2.3	0.19
2022-9	42	20	1.2	1361.8	2.5	0.19
2023-9	42	573	0.1	1573.1	2.0	0.24
2024-9	42	587	0.1	1573.0	2.0	0.24
2025-9	42	493	0.1	1572.9	2.3	0.22
2026-9	42	486	0.1	1634.7	2.5	0.21
2027-9	42	528	0.1	1634.7	2.4	0.21
2028-9	42	216	0.1	1704.7	2.4	0.22
2029-9	42	598	0.1	1704.5	2.0	0.26
2030-9	42	598	0.1	1704.5	2.1	0.24
2031-9	42	416	0.1	1704.3	2.3	0.23
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2033-7	42	29	0.4	1704.3	5.4	0.13
2034-9	42	15	6.7	1704.3	6.1	0.12
289-6	18	142	0.6	750.4	3.5	0.32
290-6	18	254	0.6	747.3	2.7	0.39
291-6	18	410	0.2	734.7	2.3	0.43
292-9	18	357	0.2	726.6	2.5	0.41
293-9	18	373	0.2	722.5	2.5	0.40
294-6	18	412	0.3	720.1	2.6	0.39
295-6	18	502	0.2	717.2	2.7	0.38
296-9	21	10	9.3	773.5	9.5	0.13
409-6	12	481	0.4	611.5	3.1	0.55

501 River Ranch Road - Peak Hour Pipe Report - After Development/LS Upgrade						
ID	Full Depth (ft)	Length (ft)	Percent Slope (%)	Maximum Flow (gpm)	Maximum Velocity (ft/s)	Max.Depth/ Full Depth
874-1	8	176	0.3	270.8	2.5	0.65
875-12	8	212	0.9	261.8	2.7	0.61
955-12.5	8	81	1.6	271.6	4.2	0.43
CDT-21	12	11	22.6	892.5	4.0	0.61
CDT-217	12	4	26.8	415.4	14.7	0.14
CDT-221	44	239	0.9	1939.5	4.7	0.24
CDT-313	8	223	0.3	172.0	2.0	0.53
CDT-315	8	207	0.4	172.0	2.3	0.48
CDT-317	8	151	0.9	172.0	2.8	0.42
CDT-319	4	1064	0.2	279.3	7.2	0.43
CDT-321	8	228	0.6	172.0	2.5	0.45
CDT-323	8	262	0.5	172.0	2.4	0.46
P-1609	15	34	8.1	230.2	2.5	0.22
CDT-303	8	439	0.8	165.5	2.6	0.43
CDT-305	8	422	0.7	165.5	2.6	0.43
CDT-307	8	337	0.8	165.5	2.6	0.43
CDT-309	8	302	0.8	165.5	2.6	0.43
CDT-311	8	301	0.7	165.5	2.5	0.45

APPENDIX C

HYDRAULIC CALCULATIONS

8" SDR35 PVC Main at 0.4% and 0.75D (River Ranch Apts)

Project Description	
Friction Method	Manning
Solve For	Formula Discharge
Input Data	
Roughness Coefficient	0.012
Channel Slope	0.004 ft/ft
Normal Depth	6.0 in
Diameter	8.0 in
Results	
Discharge	487,939 gal/day
Flow Area	0.3 ft ²
Wetted Perimeter	1.4 ft
Hydraulic Radius	2.4 in
Top Width	0.58 ft
Critical Depth	4.9 in
Percent Full	75.0 %
Critical Slope	0.007 ft/ft
Velocity	2.69 ft/s
Velocity Head	0.11 ft
Specific Energy	0.61 ft
Froude Number	0.680
Maximum Discharge	575,603 gal/day
Discharge Full	535,093 gal/day
Slope Full	0.003 ft/ft
Flow Type	Subcritical
GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0
GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	50.0 %
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	6.0 in
Critical Depth	4.9 in
Channel Slope	0.004 ft/ft
Critical Slope	0.007 ft/ft

8" SDR35 PVC Main at 0.4% and 0.5D (River Ranch Apartments)

Project Description	
Friction Method	Manning
Solve For	Formula Discharge
Input Data	
Roughness Coefficient	0.012
Channel Slope	0.004 ft/ft
Normal Depth	4.0 in
Diameter	8.0 in
Results	
Discharge	267,546 gal/day
Flow Area	0.2 ft ²
Wetted Perimeter	1.0 ft
Hydraulic Radius	2.0 in
Top Width	0.67 ft
Critical Depth	3.6 in
Percent Full	50.0 %
Critical Slope	0.006 ft/ft
Velocity	2.37 ft/s
Velocity Head	0.09 ft
Specific Energy	0.42 ft
Froude Number	0.817
Maximum Discharge	575,603 gal/day
Discharge Full	535,093 gal/day
Slope Full	0.001 ft/ft
Flow Type	Subcritical
GVF Input Data	
Downstream Depth	0.0 in
Length	0.0 ft
Number Of Steps	0
GVF Output Data	
Upstream Depth	0.0 in
Profile Description	N/A
Profile Headloss	0.00 ft
Average End Depth Over Rise	0.0 %
Normal Depth Over Rise	50.0 %
Downstream Velocity	Infinity ft/s
Upstream Velocity	Infinity ft/s
Normal Depth	4.0 in
Critical Depth	3.6 in
Channel Slope	0.004 ft/ft
Critical Slope	0.006 ft/ft

TRAFFIC IMPACT STUDY FOR River Ranch Apartments

September 12, 2022

PREPARED FOR:
Wood Rogers, Inc

PREPARED BY:



Headway Transportation, LLC
5482 Longley Lane, Suite B, Reno, Nevada 89511
775.322.4300
www.HeadwayTransportation.com

YOUR QUESTIONS ANSWERED QUICKLY

Why did you perform this study?

This Traffic Impact Study evaluates the potential traffic impacts associated with the proposed River Ranch Apartments multifamily residential project in Fernley, Nevada. This study of potential transportation impacts was undertaken for planning purposes and to assist in determining what traffic controls or mitigations may be needed to reduce potential impacts, if any are found.

What does the project consist of?

The project consists of 320 multifamily housing units in the southeast quadrant of the US 50 / River Ranch Road intersection in Fernley, NV. The project location is shown in **Figure 1** and the preliminary site plan is shown in **Figure 2**.

How much traffic will the project generate?

The project is anticipated to generate approximately 2,157 Daily, 128 AM peak hour, and 163 PM peak hour trips to the external roadway network.

How will project traffic affect the roadway network?

Under Existing Plus Project and Future Year Plus Project conditions, the study intersections are expected to operate within policy level of service thresholds. The addition of project traffic does not have any significant impact on the studied intersections which would require mitigation.

Are any improvements recommended?

No improvements are recommended at the study intersections based on the addition of project traffic. The project should construct half street improvements and sidewalk along the property frontage of River Ranch Road.



LIST OF FIGURES

1. Project Location
2. Preliminary Site Plan
3. Existing Traffic Volumes, Lane Configurations, and Controls
4. Project Trip Distribution and Assignment
5. Existing Plus Project Traffic Volumes, Lane Configurations, and Controls
6. Future Year Traffic Volumes, Lane Configurations, and Controls
7. Future Year Plus Project Traffic Volumes, Lane Configurations, and Controls

LIST OF APPENDICES

- A. NDOT Crash Data History
- B. Existing Conditions LOS Calculations
- C. Existing Plus Project Conditions LOS Calculations
- D. Future Year Conditions LOS Calculations
- E. Future Year Plus Project Conditions LOS Calculations



INTRODUCTION

This Traffic Impact Study evaluates the potential traffic impacts associated with the proposed River Ranch multifamily residential project in Fernley, Nevada. This study of potential transportation impacts was undertaken for planning purposes and to assist in determining what traffic controls or mitigations may be needed to reduce potential impacts, if any are found. The location of the project is shown on **Figure 1** and the preliminary project site plan is shown on **Figure 2**.

Study Area and Evaluated Scenarios

The project consists of 320 multifamily housing units in the southeast quadrant of the US 50 / River Ranch Road intersection in Fernley, NV. The following intersections shown on **Figure 1** are included in this study:

1. US 50 / River Ranch Road
2. River Ranch Road / Project Access / Future Connector Road

This study includes analysis of both the weekday AM and PM peak hours as these are the periods of time in which peak traffic is anticipated to occur. The evaluated development scenarios are:

- ▶ Existing Conditions
- ▶ Existing Plus Project Conditions
- ▶ Future Year Conditions (20-year horizon)
- ▶ Future Year Plus Project Conditions

ANALYSIS METHODOLOGY

Level of service (LOS) is a term commonly used by transportation practitioners to measure and describe the operational characteristics of intersections, roadway segments, and other facilities. This term equates seconds of delay per vehicle at intersections to letter grades “A” through “F”, with “A” representing optimum conditions and “F” representing breakdown or over capacity flows.

Intersections

The complete methodology for intersection level of service analysis is established in *the Highway Capacity Manual (HCM)*, 6th Edition published by the Transportation Research Board (TRB). **Table 1** presents the delay thresholds for each level of service grade at signalized and unsignalized intersections.



Table 1: Level of Service Definition for Intersections

Level of Service	Brief Description	Average Delay (seconds per vehicle)	
		Signalized Intersections	Unsignalized Intersections
A	Free flow conditions.	< 10	< 10
B	Stable conditions with some affect from other vehicles.	10 to 20	10 to 15
C	Stable conditions with significant affect from other vehicles.	20 to 35	15 to 25
D	High density traffic conditions still with stable flow.	35 to 55	25 to 35
E	At or near capacity flows.	55 to 80	35 to 50
F	Over capacity conditions.	> 80	> 50

Source: *Highway Capacity Manual, 6th Edition*

Level of service calculations were performed for the study intersections using the Synchro 11 software package with analysis and results reported in accordance with *HCM 6th Edition* methodology.

Level of Service Policy

The *City of Fernley Comprehensive Master Plan* indicates that “the minimum Level of Service on all city-maintained roadways shall be LOS D.” This is consistent with Nevada Department of Transportation (NDOT) policies, which indicate that “*Level of Service “C” will be the design objective for capacity and under no circumstances will less than Level of Service “D” be accepted for site and non-site traffic.*”

Therefore, LOS D was used as the threshold for evaluating this project. Where intersections are currently experiencing LOS beyond the thresholds, conditions should not be exacerbated.

The level of service policies are not specific to minor side street approaches, but rather focus on maintaining quality operations on the mainline corridors. LOS “E” or “F” on a side street approach does not constitute an exceedance of the level of service policy as this is understood to be a common and manageable condition in the urban environment, particularly during peak hours. Overall intersection operation is the measure to which the level of service policy applies.

EXISTING CONDITIONS

Roadway Facilities

A brief description of the key roadways in the study area is provided below:

US 50 is classified by NDOT as an Other Principal Arterial in the project vicinity. The roadway has 4 through lanes, two in each direction of travel. The posted speed limit is 65 mph.



River Ranch Road is classified by NDOT as a Local Road. The roadway has 2 lanes, one in each direction of travel. The posted speed limit is 25 mph.

The intersection of US 50 / River Ranch Road is signalized for all movements except for the westbound through movement. This movement is unsignalized and is a free movement. The configuration is a signalized High – T.

Bicycle & Pedestrian Facilities

No bicycle lanes or sidewalks exist on US 50. No bicycle lanes exist on River Ranch Road, but a sidewalk exists south of Inglewood Drive for approximately 600 feet on the west side of River Ranch Road.

Transit Facilities

Transit services in Lyon County are offered to and from senior centers with advanced scheduling. Park-and-ride transit facilities are planned in the future.

Crash History

Vehicle crash data for the intersection of US 50 and River Ranch Road was provided by NDOT and includes information for the five-year period between 2016 and 2020 (the most current data available). Fifteen (15) crashes occurred during this time, six of which were property damage only, while nine crash resulted in an injury. The crash data is provided in **Appendix A**. The intersection was recently signalized to address former operational and safety concerns.

Traffic Volumes

AM and PM peak hour traffic volumes were collected at the intersection of US 50 / River Ranch Road on June 29 and June 30, 2022. The intersection counts were collected from 7:00 to 9:00 AM and 4:00 to 6:00 PM which are the typical commuter periods. The peak hours were identified as 7:15 to 8:15 AM and 4:30 to 5:30 PM. The traffic volumes used in this analysis include the existing truck percentage and peak hour factor. **Figure 3** shows the existing peak hour traffic volumes, lane configurations, and controls at the study intersections.

Comparison to Recent Counts

The collected AM and PM peak hour intersection turning movement volumes were compared to the following recent data sources:

- ▶ Hourly traffic volume data (2021) from the Nevada Department of Transportation (NDOT) Traffic Record Information Access (TRINA) database.



- ▶ Baseline Conditions on US 50 for the Nevada Pacific Boulevard Development Traffic Impact Study (Headway January 2022). That proposed development is off US 50 less than a mile to the east of River Ranch Road.

The volume data collected was higher than both sources; therefore, the counts were not adjusted.

Intersection Level of Service Analysis

Existing AM and PM peak hour intersection level of service analysis was performed for the study intersections using Synchro 11 analysis software. Signal timings were derived from the data collection videos of the intersection during the peak hours. **Table 2** shows the existing conditions level of service results, and the technical calculations are provided in **Appendix B**.

Table 2: Existing Intersection Level of Service

ID	Intersection	Intersection Control	AM Peak		PM Peak	
			LOS	Delay ¹	LOS	Delay ¹
1	US 50 / River Ranch Road	Signalized				
	Overall		A	6.2	A	7.0

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized and all way stop controlled intersections, and for the worst approach/movement for side street stop-controlled intersections.

As shown in the table, the study intersection operates at LOS “A” which is within policy level of service thresholds for the existing conditions AM and PM peak hours.

PROJECT CONDITIONS

Trip Generation

Trip generation rates from the *Trip Generation Manual, 11th Edition* published by the Institute of Transportation Engineers (ITE) were used to develop trip generation estimates for the proposed project based on the Multifamily Housing (ITE Code 220) for 320 dwelling units. **Table 3** shows the Daily, AM peak hour, and PM peak hour trip generation estimates.



Table 3: Trip Generation Estimates

Land Use (ITE Code)	Size ¹	Trips ²				
		Daily	AM In/Out	AM	PM In/Out	PM
Multifamily Housing (220)	320 du	2,157	31 / 97	128	103 / 60	163

Notes: 1. du = dwelling units

2. Trips were calculated based on the following rates per du: Daily – 6.74; AM – 0.40 (24% in / 76% out); PM – 0.51 (63% in / 37% out)

Source: Headway Transportation, 2022

As shown in the table, the project is expected to generate 2,157 Daily, 128 AM peak hour, and 163 PM peak hour trips to the external roadway network.

Trip Distribution

Project trips were distributed to the adjacent roadway network based on existing traffic volumes, the locations of complimentary land uses, and anticipated travel patterns. Project trips were distributed based on the following:

- ▶ 65% to/from west via US 50
- ▶ 30% to/from the east via US 50
- ▶ 5% to/from the south via River Ranch Road

Figure 4 shows the project trip distribution and assignment.

Project Access

Project access is proposed on River Ranch Road, opposite a future planned roadway connecting to Inglewood Drive, shown on **Figure 1**. Two emergency vehicle access points are proposed, one on the southwest corner of the project site and the other connecting to Fort Sutter Boulevard on the east side of the project site. The proposed emergency vehicle access points are shown on **Figure 2**.

EXISTING PLUS PROJECT CONDITIONS

Traffic Volumes

Project trips (**Figure 4**) were added to the existing traffic volumes (**Figure 3**) to develop the Existing Plus Project conditions traffic volumes, shown on **Figure 5**.



Intersection Level of Service

AM and PM peak hour intersection level of service analysis was performed for the study intersections based on the Existing Plus Project traffic volumes, and the lane configurations and controls shown on **Figure 5**. **Table 4** shows the level of service results, and the technical calculations are provided in **Appendix C**.

Table 4: Existing Plus Project Intersection Level of Service

ID	Intersection Name	Intersection Control	Existing				Existing Plus Project			
			AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS	Delay ¹
1	US 50 / River Ranch Rd	Signalized								
	Overall		A	6.2	A	7.0	A	7.8	A	8.6
2	River Ranch Road / Project Access	Side Street Stop								
	Overall		N/A				A	4.5	A	3.5
	Southbound Left		N/A				A	7.4	A	7.7
	Westbound Approach		N/A				A	9.2	A	9.5

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized and all way stop controlled intersections, and for the worst approach/movement for side street stop-controlled intersections.

As shown in the table, the addition of project traffic will have minimal impact on the study intersections. All the study intersections continue to operate within LOS policy.

FUTURE YEAR CONDITIONS

Roadway Facilities

The *City of Fernley Transportation Master Plan* includes the Nevada Pacific Parkway Extension project, less than a mile to the east on US 50. The project is to “extend the existing Nevada Pacific Parkway south across the UPRR railroad to existing US 50A to provide additional north/south and I-80 connectivity.”

A road connection is planned to be built opposite the Project access and connect to Inglewood Drive, as shown on **Figure 1**. This future roadway is part of the Meadows at Inglewood project, a business/ retail park currently under construction.

Traffic Volume Forecasts

Future Year (20-year horizon) traffic volumes were developed considering regional growth rates, planned roadway projects such as the Nevada Pacific Parkway connection, and planned development in the area, including the *Nevada Pacific Boulevard Development Traffic Impact Study* (Headway January 2022). A



growth rate of 2% per year was applied to the existing traffic volumes, consistent with the annual growth rate used in the *Comprehensive Master Plan*, the *Transportation Master Plan*, and previous approved traffic impact studies. Project trips from the proposed Nevada Pacific Boulevard Development were added on top of the background growth. A road connection is planned to be built opposite the Project Access. Volumes for this connection were estimated using trip generation rates from the *Trip Generation Manual, 11th Edition* published by the Institute of Transportation Engineers (ITE) and added to future year volume forecasts. **Figure 6** shows the Future (20-year horizon) traffic volumes at the study intersections.

Intersection Level of Service

AM and PM peak hour intersection level of service analysis was performed for the study intersections using Synchro 11 analysis software. **Table 5** shows the Future Year conditions level of service results, and the technical calculations are provided in **Appendix D**.

Table 5: Future Year Intersection Level of Service

ID	Intersection	Intersection Control	AM Peak		PM Peak	
			LOS	Delay ¹	LOS	Delay ¹
1	US 50 / River Ranch Road	Signalized				
	Overall		A	6.6	A	8.2
2	River Ranch Road / Future Connector	Side Street Stop				
	Overall		A	0.1	A	0.3
	Northbound Left		A	7.4	A	0.0
	Eastbound Approach		A	9.6	B	10.1

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized and all way stop controlled intersections, and for the worst approach/movement for side street stop-controlled intersections.

As shown in the table, all intersections are expected to operate within level of service policy in the Future Year conditions.

FUTURE YEAR PLUS PROJECT CONDITIONS

Traffic Volumes

Project trips (**Figure 4**) were added to the Future Year traffic volumes (**Figure 6**) to develop the Future Year Plus Project conditions traffic volumes, shown on **Figure 7**.

Intersection Level of Service

AM and PM peak hour intersection level of service analysis was performed for the study intersections based on the Future Year Plus Project traffic volumes. **Table 6** shows the level of service results, and the technical calculations are provided in **Appendix E**.



Table 6: Future Year Plus Project Intersection Level of Service

ID	Intersection Name	Intersection Control	Future				Future Plus Project			
			AM Peak		PM Peak		AM Peak		PM Peak	
			LOS	Delay ¹	LOS	Delay ¹	LOS	Delay ¹	LOS	Delay ¹
1	US 50 / River Ranch Rd	Signalized								
	Overall		A	6.6	A	8.2	A	8.3	B	10.4
2	River Ranch Road / Project Access / Future Connector	Side Street Stop								
	Overall		A	0.1	A	0.3	A	3.8	A	3.1
	Northbound Left		A	7.4	A	0.0	A	7.4	A	0
	Southbound Left		N/A				A	7.5	A	7.8
	Eastbound Approach		A	9.6	B	10.1	B	11.5	B	14.0
	Westbound Approach		N/A				A	9.5	A	9.9

Notes: 1. Delay is reported in seconds per vehicle for the overall intersection for signalized and all way stop controlled intersections, and for the worst approach/movement for side street stop-controlled intersections.

As shown in the table, all intersections are expected to operate within level of service policy in the Future Year Plus Project conditions.

CONCLUSIONS

The following is a list of our key findings and recommendations:

- ▶ The proposed project consists of 320 multifamily housing units and is anticipated to generate approximately 2,157 Daily, 128 AM peak hour, and 163 PM peak hour trips to the external roadway network.
- ▶ Under all conditions, all study intersections will operate within the level of service policy. The addition of project traffic does not have any significant impact on the studied intersection operations which would require mitigation.
- ▶ No improvements are recommended at the study intersections based on the addition of project traffic.
- ▶ The project should construct half street improvements and sidewalk along the property frontage of River Ranch Road.



Study Location

- ① US 50 / River Ranch Rd
- ② River Ranch Rd / Future Rd / Project Access



Project Site

Future Road

Project Access

River Ranch Rd

Fort Sutter Blvd

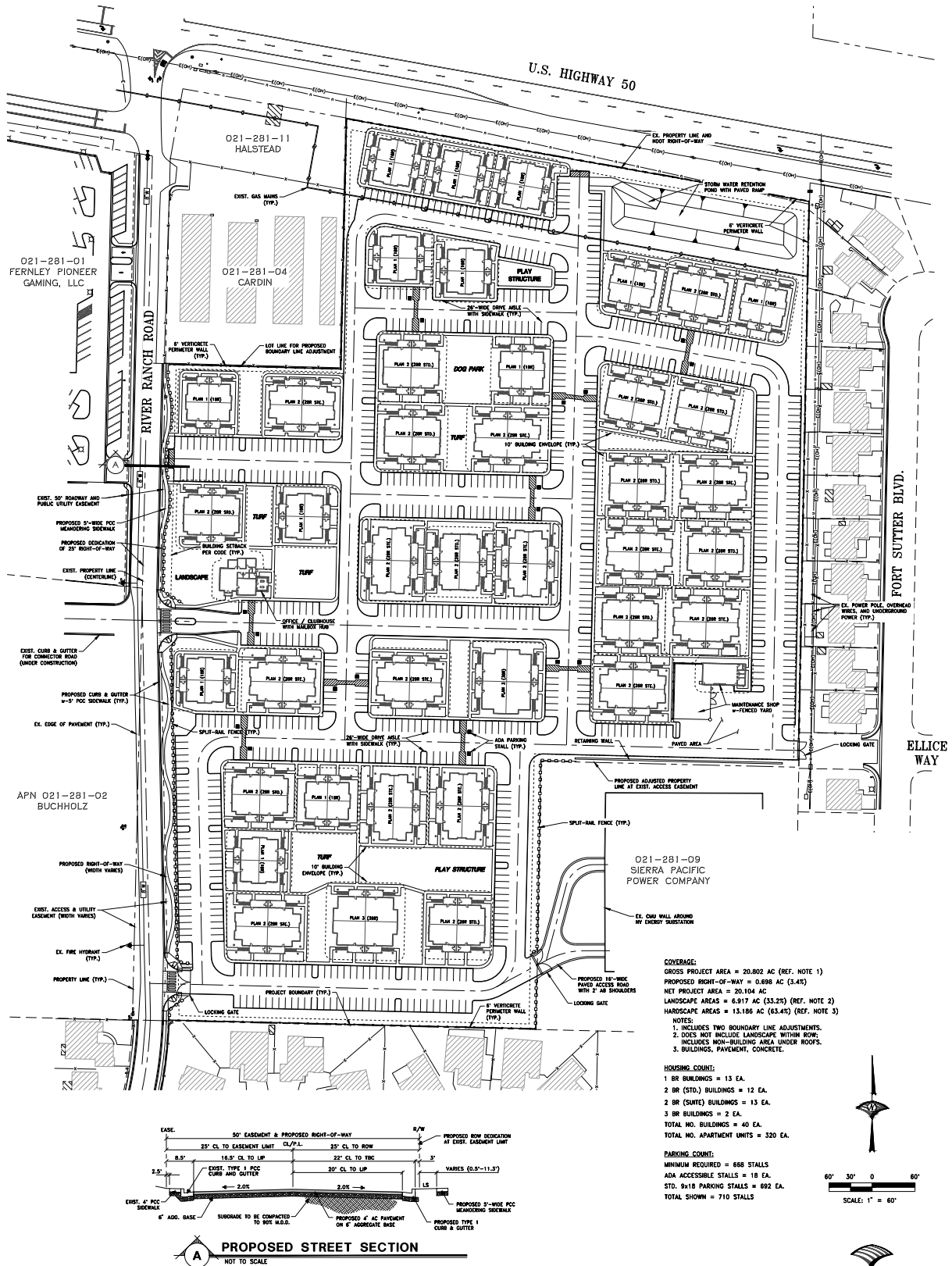
RIVER RANCH APARTMENTS PRELIMINARY SITE PLAN

ERGS, INC.

FERNLEY

NEVADA

SEPTEMBER 3, 2022

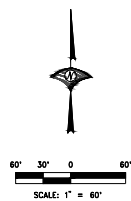
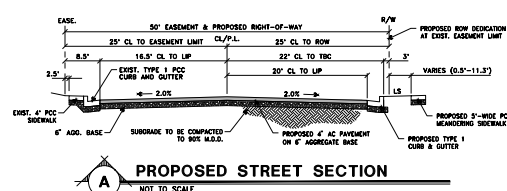


COVERAGE:
 GROSS PROJECT AREA = 20.802 AC (REF. NOTE 1)
 PROPOSED RIGHT-OF-WAY = 0.698 AC (8.4%)
 NET PROJECT AREA = 20.104 AC
 LANDSCAPE AREAS = 6.917 AC (33.2%) (REF. NOTE 2)
 HARDSCAPE AREAS = 13.186 AC (65.4%) (REF. NOTE 3)

NOTES:
 1. INCLUDES TWO BOUNDARY LINE ADJUSTMENTS.
 2. DOES NOT INCLUDE LANDSCAPE WITHIN ROW.
 3. INCLUDES NON-BUILDING AREA UNDER ROOFS.
 3. BUILDINGS, PAVEMENT, CONCRETE.

HOUSING COUNT:
 1 BR BUILDINGS = 13 EA.
 2 BR (STD.) BUILDINGS = 12 EA.
 2 BR (SUITE) BUILDINGS = 13 EA.
 3 BR BUILDINGS = 2 EA.
 TOTAL NO. BUILDINGS = 40 EA.
 TOTAL NO. APARTMENT UNITS = 320 EA.

PARKING COUNT:
 MINIMUM REQUIRED = 688 STALLS
 ADA ACCESSIBLE STALLS = 18 EA.
 STD. 9x18 PARKING STALLS = 692 EA.
 TOTAL SHOWN = 710 STALLS

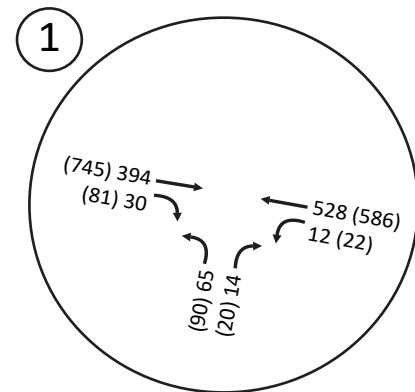


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RIVER RANCH APTS



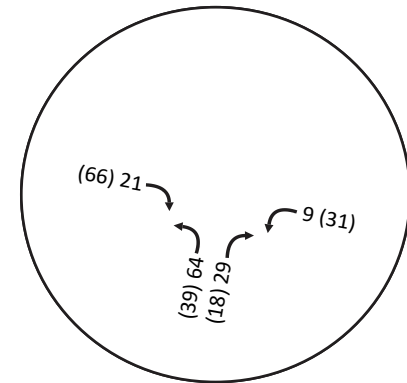
US 50 / River Ranch Rd





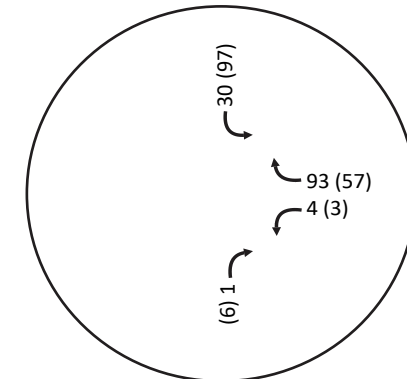
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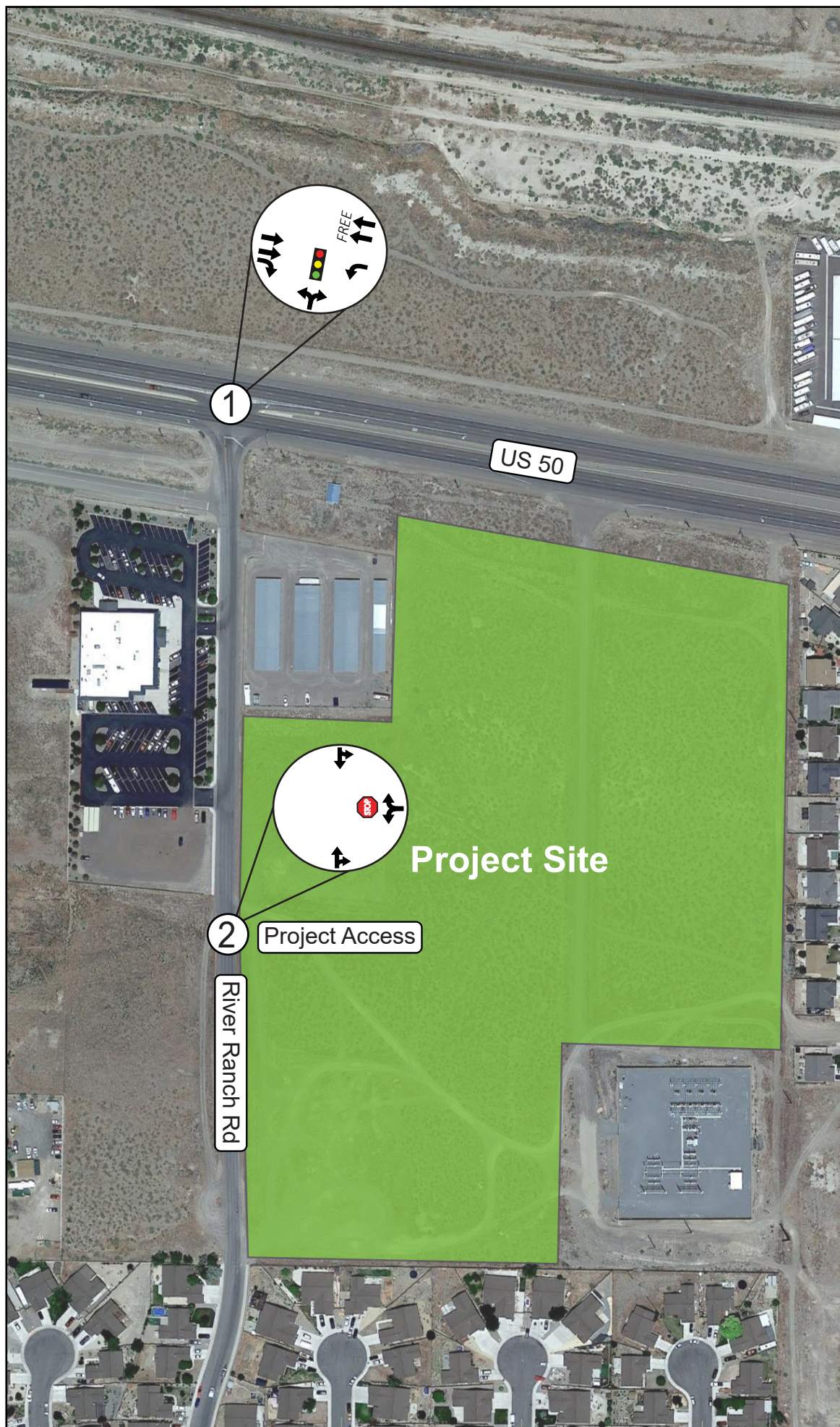
US 50 / River Ranch Rd



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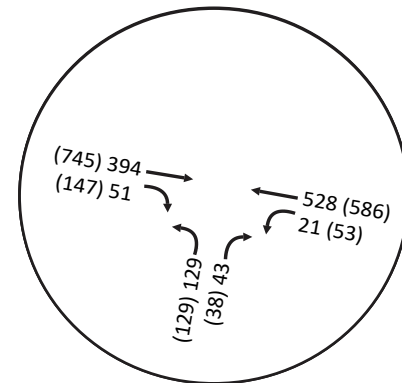
River Ranch Rd / Future Rd / Project Access





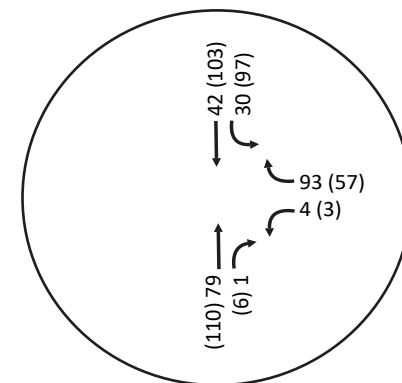
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US 50 / River Ranch Rd



2

River Ranch Rd / Project Access





1

US 50 / River Ranch Rd

2

River Ranch Rd / Future Rd

Figure 6

River Ranch Apartments

Traffic Impact Study

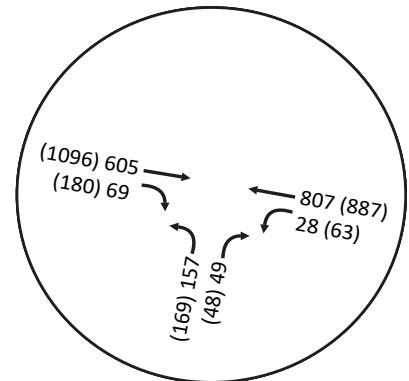
Page 27 of 39

Future Year Traffic Volumes, Lane Configurations, and Controls



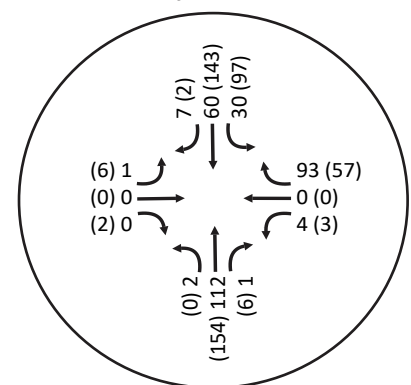
1

US 50 / River Ranch Rd



2

River Ranch Rd / Future Rd /
Project Access



Appendix A

NDOT Crash Data



Crash Severity	Crash Date	Crash Year	Crash Time	Primary Street	Distance	Dir	Secondary Street	Weather	Fatalities	Injured	Property Damage Only	Injury Type	Crash Type	Total Vehicles
INJURY ACCIDENT	23-Nov-2016	2016	12:00 PM	US50A		AT INT	RIVER RANCH RD	CLOUDY		3		C	ANGLE	2
INJURY ACCIDENT	18-Mar-2016	2016	08:34 PM	RIVER RANCH RD		AT INT	US50A	CLEAR		1		A	ANGLE	2
PROPERTY DAMAGE ONLY	11-Apr-2016	2016	03:40 PM	RIVER RANCH RD		AT INT	US50A	CLEAR			PDO		ANGLE	2
INJURY ACCIDENT	20-Oct-2016	2016	02:00 PM	RIVER RANCH RD		AT INT	US50A	CLEAR		1		A	ANGLE	2
INJURY ACCIDENT	29-Apr-2017	2017	12:10 PM	US50A		AT INT	RIVER RANCH RD	CLEAR		3		A	ANGLE	2
INJURY ACCIDENT	7-Aug-2017	2017	04:17 PM	RIVER RANCH RD		AT INT	US50A	CLEAR		3		B	ANGLE	2
PROPERTY DAMAGE ONLY	4-Dec-2018	2018	06:01 PM	US50A	528	E	RIVER RANCH RD	FOG, SMOG, SMOKE			PDO		NON-COLLISION	1
PROPERTY DAMAGE ONLY	5-Jan-2018	2018	11:26 AM	US50A		AT INT	RIVER RANCH RD	CLEAR			PDO		ANGLE	2
PROPERTY DAMAGE ONLY	28-Oct-2018	2018	08:17 PM	US50A		AT INT	RIVER RANCH RD	CLEAR			PDO		ANGLE	2
INJURY ACCIDENT	23-May-2018	2018	06:17 PM	US50A		AT INT	RIVER RANCH RD	CLEAR		2		C	ANGLE	2
INJURY ACCIDENT	22-Jan-2018	2018	11:45 AM	RIVER RANCH RD		AT INT	US50A	CLEAR		2		C	ANGLE	2
PROPERTY DAMAGE ONLY	20-Feb-2018	2018	06:20 PM	RIVER RANCH RD		AT INT	US50A	CLOUDY			PDO		ANGLE	2
INJURY ACCIDENT	13-Apr-2018	2018	01:05 PM	RIVER RANCH RD		AT INT	US50A	CLEAR		3		A	ANGLE	2
INJURY ACCIDENT	2-Sep-2019	2019	04:31 PM	US50A	300	E	RIVER RANCH RD	CLOUDY		2		C	ANGLE	2
PROPERTY DAMAGE ONLY	22-Aug-2018	2018	09:50 AM	RIVER RANCH RD	150	S	INGLEWOOD DR	CLEAR			PDO		ANGLE	2
									Sum: 0	Sum: 20	Count: 6			
									Count: 0	Count: 9				
									Total:	15				

V1 Type	V1 Dir	V1 Driver Age	V1 Lane Num	V1 Action	V1 Driver Factors	V1 Driver Distracted	V1 Vehicle Factors	V1 Most Harmful Event	V1 All Events
SEDAN	N	77		TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		
SEDAN, 4 DOOR	N	18		TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		
SEDAN, 4 DOOR	N	32		TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		
SEDAN	N	31		TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		
PICKUP	W	74		TURNING LEFT	PHYSICAL IMPAIRMENT: FELL ASLEEP, FAINTED, FATIGUED, ETC.: OTHER IMPROPER DRIVING		FAILED TO YIELD RIGHT OF WAY		
SEDAN, 4 DOOR	N	17		GOING STRAIGHT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		
CARRY-ALL	W	60	2	GOING STRAIGHT	DRUG INVOLVEMENT		DRIVING TOO FAST FOR CONDITIONS	OVERTURN/ROLLOVER	RAN OFF ROAD RIGHT: OVERTURN/ROLLOVER
SEDAN	E	68		GOING STRAIGHT	OTHER IMPROPER DRIVING		OTHER IMPROPER DRIVING		SLOW/STOPPED VEHICLE
PICKUP	N	70	L1	TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY	MOTOR VEHICLE IN TRANSPORT	
CARRY-ALL	N	79	2	TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY	MOTOR VEHICLE IN TRANSPORT	
HATCHBACK, 4 DOOR	N	74		TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		
PICKUP	N	71		TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		
SEDAN, 4 DOOR	N	70	2	TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY		NOT REPORTED
SEDAN	W	70	L1	TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY	MOTOR VEHICLE IN TRANSPORT	
PICKUP	E			TURNING LEFT	APPARENTLY NORMAL		FAILED TO YIELD RIGHT OF WAY	MOTOR VEHICLE IN TRANSPORT	

V2 Type	V2 Dir	V2 Driver Age	V2 Lane Num	V2 Action	V2 Driver Factors	V2 Driver Distracted	V2 Vehicle Factors	V2 Most Harmful Event	V2 All Events	First Harmful Event	Nonmotorist Factors	Factors Roadway	Lighting	HWY Factors	Agency	Accident Rec Num
PICKUP	E	62		GOING STRAIGHT	APPARENTLY NORMAL							DRY	DAYLIGHT	NONE	NHP	2340877
PICKUP	E	51		GOING STRAIGHT	APPARENTLY NORMAL							DRY	DARK - SPOT LIGHTING	NONE	NHP	2235145
HATCHBACK, 4 DOOR	E	42		GOING STRAIGHT	APPARENTLY NORMAL							DRY	DAYLIGHT	NONE	NHP	2236481
CARRY-ALL	E	39		GOING STRAIGHT	APPARENTLY NORMAL		UNKNOWN					DRY	DAYLIGHT	NONE	NHP	2338887
UTILITY	E	42		GOING STRAIGHT	APPARENTLY NORMAL							DRY	DAYLIGHT	NONE	NHP	2306640
SEDAN, 4 DOOR	E	21		GOING STRAIGHT	APPARENTLY NORMAL							DRY	DAYLIGHT	OTHER HIGHWAY	NHP	2395523
										RAN OFF ROAD RIGHT		SNOW	DARK - SPOT LIGHTING	WET, ICY, SNOW, SLUSH	NHP	3112819
UTILITY	N	46		STOPPED	APPARENTLY NORMAL							DRY	DAYLIGHT	NONE	NHP	2418531
SEDAN	W	19	L1	TURNING LEFT	APPARENTLY NORMAL			MOTOR VEHICLE IN TRANSPORT		MOTOR VEHICLE IN TRANSPORT		DRY	DARK - SPOT LIGHTING	NONE	NHP	3107221
SEDAN, 4 DOOR	E	55	2	GOING STRAIGHT	APPARENTLY NORMAL			MOTOR VEHICLE IN TRANSPORT		MOTOR VEHICLE IN TRANSPORT		DRY	DAYLIGHT	NONE	NHP	3063360
SEDAN, 4 DOOR	E	30		GOING STRAIGHT	APPARENTLY NORMAL		UNKNOWN					DRY	DAYLIGHT	NONE	NHP	2419549
PICKUP	E	29		GOING STRAIGHT	APPARENTLY NORMAL							DRY	DARK - SPOT LIGHTING	NONE	NHP	2421201
VAN	E	88	2	GOING STRAIGHT	APPARENTLY NORMAL				NOT REPORTED			DRY	DAYLIGHT	NONE	NHP	2522878
SEDAN	E	35	1	GOING STRAIGHT	APPARENTLY NORMAL			SLOW/STOPPED VEHICLE	SLOW/STOPPED VEHICLE	SLOW/STOPPED VEHICLE		DRY	DAYLIGHT	NONE	NHP	3150699
PICKUP	S			GOING STRAIGHT	APPARENTLY NORMAL										LYSO	3096496

Appendix B

Existing Conditions

LOS Calculations



HCM 6th Signalized Intersection Summary

1: River Ranch Rd & US 50

09/08/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↙	↑↑	↘	
Traffic Volume (veh/h)	394	30	12	528	65	14
Future Volume (veh/h)	394	30	12	528	65	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	402	31	12	539	66	14
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	7	7	7
Cap, veh/h	944	421	27	1705	118	25
Arrive On Green	0.28	0.28	0.02	0.50	0.09	0.09
Sat Flow, veh/h	3503	1522	1711	3503	1366	290
Grp Volume(v), veh/h	402	31	12	539	81	0
Grp Sat Flow(s),veh/h/ln	1706	1522	1711	1706	1676	0
Q Serve(g_s), s	2.3	0.4	0.2	2.3	1.1	0.0
Cycle Q Clear(g_c), s	2.3	0.4	0.2	2.3	1.1	0.0
Prop In Lane		1.00	1.00		0.81	0.17
Lane Grp Cap(c), veh/h	944	421	27	1705	145	0
V/C Ratio(X)	0.43	0.07	0.44	0.32	0.56	0.00
Avail Cap(c_a), veh/h	4236	1889	708	6354	1387	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.2	6.5	11.8	3.6	10.6	0.0
Incr Delay (d2), s/veh	0.3	0.1	10.6	0.1	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.1	0.0	0.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.5	6.5	22.4	3.7	13.9	0.0
LnGrp LOS	A	A	C	A	B	A
Approach Vol, veh/h	433			551	81	
Approach Delay, s/veh	7.4			4.1	13.9	
Approach LOS	A			A	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		7.1	5.4	11.7		17.1
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s		20.0	10.0	30.0		45.0
Max Q Clear Time (g_c+I1), s		3.1	2.2	4.3		4.3
Green Ext Time (p_c), s		0.2	0.0	2.4		3.3
Intersection Summary						
HCM 6th Ctrl Delay			6.2			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary

1: River Ranch Rd & US 50

09/08/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↙	↑↑	↘	
Traffic Volume (veh/h)	745	81	22	586	90	20
Future Volume (veh/h)	745	81	22	586	90	20
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	793	86	23	623	96	21
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1402	625	51	2058	143	31
Arrive On Green	0.40	0.40	0.03	0.58	0.10	0.10
Sat Flow, veh/h	3618	1572	1767	3618	1407	308
Grp Volume(v), veh/h	793	86	23	623	118	0
Grp Sat Flow(s),veh/h/ln	1763	1572	1767	1763	1730	0
Q Serve(g_s), s	5.6	1.1	0.4	2.8	2.1	0.0
Cycle Q Clear(g_c), s	5.6	1.1	0.4	2.8	2.1	0.0
Prop In Lane		1.00	1.00		0.81	0.18
Lane Grp Cap(c), veh/h	1402	625	51	2058	176	0
V/C Ratio(X)	0.57	0.14	0.45	0.30	0.67	0.00
Avail Cap(c_a), veh/h	3325	1483	556	4988	1088	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.4	6.1	15.2	3.3	13.8	0.0
Incr Delay (d2), s/veh	0.4	0.1	6.1	0.1	4.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.1	0.2	0.0	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.8	6.2	21.3	3.4	18.1	0.0
LnGrp LOS	A	A	C	A	B	A
Approach Vol, veh/h	879			646	118	
Approach Delay, s/veh	7.6			4.1	18.1	
Approach LOS	A			A	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		8.2	5.9	17.7		23.6
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s		20.0	10.0	30.0		45.0
Max Q Clear Time (g_c+I1), s		4.1	2.4	7.6		4.8
Green Ext Time (p_c), s		0.3	0.0	5.1		3.9
Intersection Summary						
HCM 6th Ctrl Delay			7.0			
HCM 6th LOS			A			

Appendix C

Existing Plus Project Conditions

LOS Calculations



HCM 6th Signalized Intersection Summary

1: River Ranch Rd & US 50

09/08/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↙	↑↑	↘	
Traffic Volume (veh/h)	394	51	21	528	129	43
Future Volume (veh/h)	394	51	21	528	129	43
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	402	52	21	539	132	44
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	7	7	7
Cap, veh/h	904	403	46	1641	175	58
Arrive On Green	0.26	0.26	0.03	0.48	0.14	0.14
Sat Flow, veh/h	3503	1522	1711	3503	1238	413
Grp Volume(v), veh/h	402	52	21	539	177	0
Grp Sat Flow(s),veh/h/ln	1706	1522	1711	1706	1660	0
Q Serve(g_s), s	2.6	0.7	0.3	2.6	2.7	0.0
Cycle Q Clear(g_c), s	2.6	0.7	0.3	2.6	2.7	0.0
Prop In Lane		1.00	1.00		0.75	0.25
Lane Grp Cap(c), veh/h	904	403	46	1641	235	0
V/C Ratio(X)	0.44	0.13	0.45	0.33	0.75	0.00
Avail Cap(c_a), veh/h	3867	1725	646	5801	1254	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.1	7.4	12.7	4.2	10.9	0.0
Incr Delay (d2), s/veh	0.3	0.1	6.8	0.1	4.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.1	0.2	0.0	1.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.5	7.5	19.5	4.4	15.8	0.0
LnGrp LOS	A	A	B	A	B	A
Approach Vol, veh/h	454			560	177	
Approach Delay, s/veh	8.3			4.9	15.8	
Approach LOS	A			A	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		8.7	5.7	12.0		17.7
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s		20.0	10.0	30.0		45.0
Max Q Clear Time (g_c+I1), s		4.7	2.3	4.6		4.6
Green Ext Time (p_c), s		0.4	0.0	2.4		3.3
Intersection Summary						
HCM 6th Ctrl Delay			7.8			
HCM 6th LOS			A			

HCM 6th TWSC
2: Project Access & River Ranch Rd

09/08/2022

Intersection						
Int Delay, s/veh	4.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	93	79	1	30	42
Future Vol, veh/h	4	93	79	1	30	42
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	103	88	1	33	47
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	202	89	0	0	89	0
Stage 1	89	-	-	-	-	-
Stage 2	113	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	787	969	-	-	1506	-
Stage 1	934	-	-	-	-	-
Stage 2	912	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	770	969	-	-	1506	-
Mov Cap-2 Maneuver	770	-	-	-	-	-
Stage 1	934	-	-	-	-	-
Stage 2	892	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.2	0		3.1		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	959	1506	-	
HCM Lane V/C Ratio	-	-	0.112	0.022	-	
HCM Control Delay (s)	-	-	9.2	7.4	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.4	0.1	-	

HCM 6th Signalized Intersection Summary

1: River Ranch Rd & US 50

09/08/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↙	↑↑	↘	
Traffic Volume (veh/h)	745	147	53	586	129	38
Future Volume (veh/h)	745	147	53	586	129	38
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	793	156	56	623	137	40
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1349	602	105	2052	183	54
Arrive On Green	0.38	0.38	0.06	0.58	0.14	0.14
Sat Flow, veh/h	3618	1572	1767	3618	1324	386
Grp Volume(v), veh/h	793	156	56	623	178	0
Grp Sat Flow(s),veh/h/ln	1763	1572	1767	1763	1720	0
Q Serve(g_s), s	6.4	2.4	1.1	3.2	3.6	0.0
Cycle Q Clear(g_c), s	6.4	2.4	1.1	3.2	3.6	0.0
Prop In Lane		1.00	1.00		0.77	0.22
Lane Grp Cap(c), veh/h	1349	602	105	2052	238	0
V/C Ratio(X)	0.59	0.26	0.53	0.30	0.75	0.00
Avail Cap(c_a), veh/h	2955	1318	494	4432	961	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.8	7.6	16.3	3.8	14.8	0.0
Incr Delay (d2), s/veh	0.4	0.2	4.1	0.1	4.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.4	0.4	0.1	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.2	7.8	20.4	3.9	19.4	0.0
LnGrp LOS	A	A	C	A	B	A
Approach Vol, veh/h	949			679	178	
Approach Delay, s/veh	9.0			5.2	19.4	
Approach LOS	A			A	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		10.0	7.1	18.7		25.8
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s		20.0	10.0	30.0		45.0
Max Q Clear Time (g_c+I1), s		5.6	3.1	8.4		5.2
Green Ext Time (p_c), s		0.4	0.0	5.3		3.9
Intersection Summary						
HCM 6th Ctrl Delay			8.6			
HCM 6th LOS			A			

HCM 6th TWSC
2: Project Access & River Ranch Rd

09/08/2022

Intersection						
Int Delay, s/veh	3.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	3	57	110	6	97	103
Future Vol, veh/h	3	57	110	6	97	103
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	67	129	7	114	121
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	482	133	0	0	136	0
Stage 1	133	-	-	-	-	-
Stage 2	349	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	543	916	-	-	1448	-
Stage 1	893	-	-	-	-	-
Stage 2	714	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	497	916	-	-	1448	-
Mov Cap-2 Maneuver	497	-	-	-	-	-
Stage 1	893	-	-	-	-	-
Stage 2	654	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.5	0		3.7		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		879	1448	-
HCM Lane V/C Ratio	-	-		0.08	0.079	-
HCM Control Delay (s)	-	-		9.5	7.7	0
HCM Lane LOS	-	-		A	A	A
HCM 95th %tile Q(veh)	-	-		0.3	0.3	-

Appendix D

Future Year Conditions

LOS Calculations



HCM 6th Signalized Intersection Summary

1: River Ranch Rd & US 50

09/08/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↙	↑↑	↘	
Traffic Volume (veh/h)	605	48	19	807	93	20
Future Volume (veh/h)	605	48	19	807	93	20
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	617	49	19	823	95	20
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	7	7	7
Cap, veh/h	1183	528	42	1862	144	30
Arrive On Green	0.35	0.35	0.02	0.55	0.11	0.11
Sat Flow, veh/h	3503	1522	1711	3503	1372	289
Grp Volume(v), veh/h	617	49	19	823	116	0
Grp Sat Flow(s),veh/h/ln	1706	1522	1711	1706	1676	0
Q Serve(g_s), s	4.1	0.6	0.3	4.1	1.9	0.0
Cycle Q Clear(g_c), s	4.1	0.6	0.3	4.1	1.9	0.0
Prop In Lane		1.00	1.00		0.82	0.17
Lane Grp Cap(c), veh/h	1183	528	42	1862	176	0
V/C Ratio(X)	0.52	0.09	0.45	0.44	0.66	0.00
Avail Cap(c_a), veh/h	3575	1595	597	5363	1170	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	7.5	6.3	13.8	3.9	12.3	0.0
Incr Delay (d2), s/veh	0.4	0.1	7.5	0.2	4.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.2	0.0	0.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.8	6.4	21.3	4.1	16.5	0.0
LnGrp LOS	A	A	C	A	B	A
Approach Vol, veh/h	666			842	116	
Approach Delay, s/veh	7.7			4.4	16.5	
Approach LOS	A			A	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		8.0	5.7	14.9		20.6
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s		20.0	10.0	30.0		45.0
Max Q Clear Time (g_c+I1), s		3.9	2.3	6.1		6.1
Green Ext Time (p_c), s		0.3	0.0	3.8		5.6
Intersection Summary						
HCM 6th Ctrl Delay			6.6			
HCM 6th LOS			A			

HCM 6th TWSC
2: River Ranch Rd & Future Rd

09/08/2022

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	0	2	112	60	7
Future Vol, veh/h	1	0	2	112	60	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1	0	2	124	67	8
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	199	71	75	0	-	0
Stage 1	71	-	-	-	-	-
Stage 2	128	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	790	991	1524	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	789	991	1524	-	-	-
Mov Cap-2 Maneuver	789	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	898	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.6	0.1		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1524	-	789	-	-	
HCM Lane V/C Ratio	0.001	-	0.001	-	-	
HCM Control Delay (s)	7.4	0	9.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Future AM

Synchro 11 Light Report

HCM 6th Signalized Intersection Summary

1: River Ranch Rd & US 50

09/08/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↙	↑↑	↘	
Traffic Volume (veh/h)	1096	113	32	887	130	30
Future Volume (veh/h)	1096	113	32	887	130	30
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1166	120	34	944	138	32
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1679	749	69	2232	183	43
Arrive On Green	0.48	0.48	0.04	0.63	0.13	0.13
Sat Flow, veh/h	3618	1572	1767	3618	1394	323
Grp Volume(v), veh/h	1166	120	34	944	171	0
Grp Sat Flow(s),veh/h/ln	1763	1572	1767	1763	1728	0
Q Serve(g_s), s	11.0	1.8	0.8	5.7	4.1	0.0
Cycle Q Clear(g_c), s	11.0	1.8	0.8	5.7	4.1	0.0
Prop In Lane		1.00	1.00		0.81	0.19
Lane Grp Cap(c), veh/h	1679	749	69	2232	227	0
V/C Ratio(X)	0.69	0.16	0.49	0.42	0.75	0.00
Avail Cap(c_a), veh/h	2491	1111	416	3736	814	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.7	6.3	20.0	3.9	17.8	0.0
Incr Delay (d2), s/veh	0.5	0.1	5.4	0.1	5.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.3	0.4	0.2	1.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.2	6.4	25.4	4.0	22.8	0.0
LnGrp LOS	A	A	C	A	C	A
Approach Vol, veh/h	1286			978	171	
Approach Delay, s/veh	9.0			4.8	22.8	
Approach LOS	A			A	C	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		10.6	6.7	25.2		31.9
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s		20.0	10.0	30.0		45.0
Max Q Clear Time (g_c+I1), s		6.1	2.8	13.0		7.7
Green Ext Time (p_c), s		0.4	0.0	7.2		6.7
Intersection Summary						
HCM 6th Ctrl Delay			8.2			
HCM 6th LOS			A			

HCM 6th TWSC
2: River Ranch Rd & Future Rd

09/08/2022

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	2	0	154	143	2
Future Vol, veh/h	6	2	0	154	143	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	2	0	167	155	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	323	156	157	0	-	0
Stage 1	156	-	-	-	-	-
Stage 2	167	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	671	890	1423	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	863	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	671	890	1423	-	-	-
Mov Cap-2 Maneuver	671	-	-	-	-	-
Stage 1	872	-	-	-	-	-
Stage 2	863	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.1	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1423	-	715	-	-	
HCM Lane V/C Ratio	-	-	0.012	-	-	
HCM Control Delay (s)	0	-	10.1	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Future PM

Synchro 11 Light Report

Appendix E

Future Year Plus Project

LOS Calculations



HCM 6th Signalized Intersection Summary

1: River Ranch Rd & US 50

09/08/2022

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↙	↑↑	↘	
Traffic Volume (veh/h)	605	69	28	807	157	49
Future Volume (veh/h)	605	69	28	807	157	49
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1796	1796	1796	1796	1796
Adj Flow Rate, veh/h	617	70	29	823	160	50
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	7	7	7	7	7	7
Cap, veh/h	1124	502	61	1776	213	67
Arrive On Green	0.33	0.33	0.04	0.52	0.17	0.17
Sat Flow, veh/h	3503	1522	1711	3503	1261	394
Grp Volume(v), veh/h	617	70	29	823	211	0
Grp Sat Flow(s),veh/h/ln	1706	1522	1711	1706	1662	0
Q Serve(g_s), s	4.8	1.0	0.5	4.9	3.9	0.0
Cycle Q Clear(g_c), s	4.8	1.0	0.5	4.9	3.9	0.0
Prop In Lane		1.00	1.00		0.76	0.24
Lane Grp Cap(c), veh/h	1124	502	61	1776	281	0
V/C Ratio(X)	0.55	0.14	0.48	0.46	0.75	0.00
Avail Cap(c_a), veh/h	3181	1419	532	4772	1033	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	8.8	7.6	15.2	4.9	12.7	0.0
Incr Delay (d2), s/veh	0.4	0.1	5.7	0.2	4.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.2	0.2	0.2	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.3	7.7	21.0	5.1	16.8	0.0
LnGrp LOS	A	A	C	A	B	A
Approach Vol, veh/h	687			852	211	
Approach Delay, s/veh	9.1			5.6	16.8	
Approach LOS	A			A	B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		10.4	6.1	15.6		21.7
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s		20.0	10.0	30.0		45.0
Max Q Clear Time (g_c+I1), s		5.9	2.5	6.8		6.9
Green Ext Time (p_c), s		0.5	0.0	3.8		5.6
Intersection Summary						
HCM 6th Ctrl Delay			8.3			
HCM 6th LOS			A			

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	0	0	4	0	93	2	112	1	30	60	7
Future Vol, veh/h	1	0	0	4	0	93	2	112	1	30	60	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	0	4	0	103	2	124	1	33	67	8
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	317	266	71	266	270	125	75	0	0	125	0	0
Stage 1	137	137	-	129	129	-	-	-	-	-	-	-
Stage 2	180	129	-	137	141	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	636	640	991	687	636	926	1524	-	-	1462	-	-
Stage 1	866	783	-	875	789	-	-	-	-	-	-	-
Stage 2	822	789	-	866	780	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	554	624	991	674	620	926	1524	-	-	1462	-	-
Mov Cap-2 Maneuver	554	624	-	674	620	-	-	-	-	-	-	-
Stage 1	865	764	-	874	788	-	-	-	-	-	-	-
Stage 2	730	788	-	845	761	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	11.5		9.5		0.1		2.3					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1524	-	-	554	912	1462	-	-				
HCM Lane V/C Ratio	0.001	-	-	0.002	0.118	0.023	-	-				
HCM Control Delay (s)	7.4	0	-	11.5	9.5	7.5	0	-				
HCM Lane LOS	A	A	-	B	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.4	0.1	-	-				

HCM 6th Signalized Intersection Summary

1: River Ranch Rd & US 50

09/08/2022

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↗	↘	↑↑	↘	
Traffic Volume (veh/h)	1096	180	63	887	169	48
Future Volume (veh/h)	1096	180	63	887	169	48
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1166	191	67	944	180	51
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	1604	716	108	2185	231	66
Arrive On Green	0.46	0.46	0.06	0.62	0.17	0.17
Sat Flow, veh/h	3618	1572	1767	3618	1335	378
Grp Volume(v), veh/h	1166	191	67	944	232	0
Grp Sat Flow(s),veh/h/ln	1763	1572	1767	1763	1721	0
Q Serve(g_s), s	13.0	3.6	1.8	6.7	6.2	0.0
Cycle Q Clear(g_c), s	13.0	3.6	1.8	6.7	6.2	0.0
Prop In Lane		1.00	1.00		0.78	0.22
Lane Grp Cap(c), veh/h	1604	716	108	2185	298	0
V/C Ratio(X)	0.73	0.27	0.62	0.43	0.78	0.00
Avail Cap(c_a), veh/h	2188	976	366	3282	712	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	10.7	8.2	22.1	4.8	19.1	0.0
Incr Delay (d2), s/veh	0.8	0.2	5.6	0.1	4.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	0.8	0.8	0.7	2.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	11.5	8.4	27.7	4.9	23.5	0.0
LnGrp LOS	B	A	C	A	C	A
Approach Vol, veh/h	1357			1011	232	
Approach Delay, s/veh	11.1			6.4	23.5	
Approach LOS	B			A	C	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		13.4	8.0	27.0		35.0
Change Period (Y+Rc), s		5.0	5.0	5.0		5.0
Max Green Setting (Gmax), s		20.0	10.0	30.0		45.0
Max Q Clear Time (g_c+I1), s		8.2	3.8	15.0		8.7
Green Ext Time (p_c), s		0.5	0.0	7.0		6.6
Intersection Summary						
HCM 6th Ctrl Delay			10.4			
HCM 6th LOS			B			

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	0	2	3	0	57	0	154	6	97	143	2
Future Vol, veh/h	6	0	2	3	0	57	0	154	6	97	143	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	7	0	2	4	0	67	0	181	7	114	168	2
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	615	585	169	583	583	185	170	0	0	188	0	0
Stage 1	397	397	-	185	185	-	-	-	-	-	-	-
Stage 2	218	188	-	398	398	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	403	423	875	424	424	857	1407	-	-	1386	-	-
Stage 1	629	603	-	817	747	-	-	-	-	-	-	-
Stage 2	784	745	-	628	603	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	346	385	875	393	385	857	1407	-	-	1386	-	-
Mov Cap-2 Maneuver	346	385	-	393	385	-	-	-	-	-	-	-
Stage 1	629	548	-	817	747	-	-	-	-	-	-	-
Stage 2	723	745	-	569	548	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	14		9.9		0		3.1					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1407	-	-	408	809	1386	-	-				
HCM Lane V/C Ratio	-	-	-	0.023	0.087	0.082	-	-				
HCM Control Delay (s)	0	-	-	14	9.9	7.8	0	-				
HCM Lane LOS	A	-	-	B	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	0.3	0.3	-	-				

River Ranch Apartments

Water Calculations

	ERC	# of bldgs	ERC*	AF	AF
1 bedroom/1 bath	1.9	12	22.8	2.1	25.2
2 bedroom/2 bath	3.4	26	88.4	3.8	98.8
3 bedroom/2 bath	3.4	2	6.8	3.8	7.6
Office/Clubhouse	0.36	1	0.36	0.24	0.24
Maintenance	0.21	1	0.21	0.4	0.4
Landscape**				5.35	5.35
TOTALS			118.57		137.59

*ERC and AF based on Fremont Apartment building/calculations

** Landscape AF is actual from landscape architect



PRELIMINARY ESTIMATE OF PROBABLE LANDSCAPE WATER DEMAND

Project: River Ranch Apartments

L.A. Studio Nevada Job No: 632-504-08-22

Prepared for: ERGS, Inc.

Prepared by: L.A. Studio Nevada/Kevin Kirk

Date: September 13, 2022

This water demand is preliminary and based on the landscape plan for "River Ranch Apartments" prepared by L.A. Studio Nevada. This demand utilizes Fernley Public Works ERC calculations.

Required Landscape Area: 135,918 min.

Required Min. Trees: 341

Required Min. Shrubs: 2,718

Fernely Public Works, ERC Calculation

	Qty	Size	# emitters	GPH	load	run time (hr)	x week	Season	Totals
Evergreen tree	190	15 gal	3	2	1140	1	3	32	109,440
Decidius tree	151	5 ft. ht.	4	2	1208	1	3	32	115,968
Shrub, large	2,718	#5	2	1	5436	1	3	32	521,856
Shrub, small	0	#1	1	1	0	1	3	32	-
Groundcover/perennials	0	flats	1	0.5	0	1	3	32	-
lawn	-	Roll	spray*		(see below)				--
drip, Gal/Yr:									747,264

				2.29	AFY				
*Turf Spray:	39,000	Sq. Ft.	x	3.41	=	3.05	AFY	spray, Gal/Yr:	994,836
		43,560							
Total use, Gal/Yr:									1,742,100
AFY:									5.35

SECTION 5 – FULL SIZE PLANS

TITLE SHEET

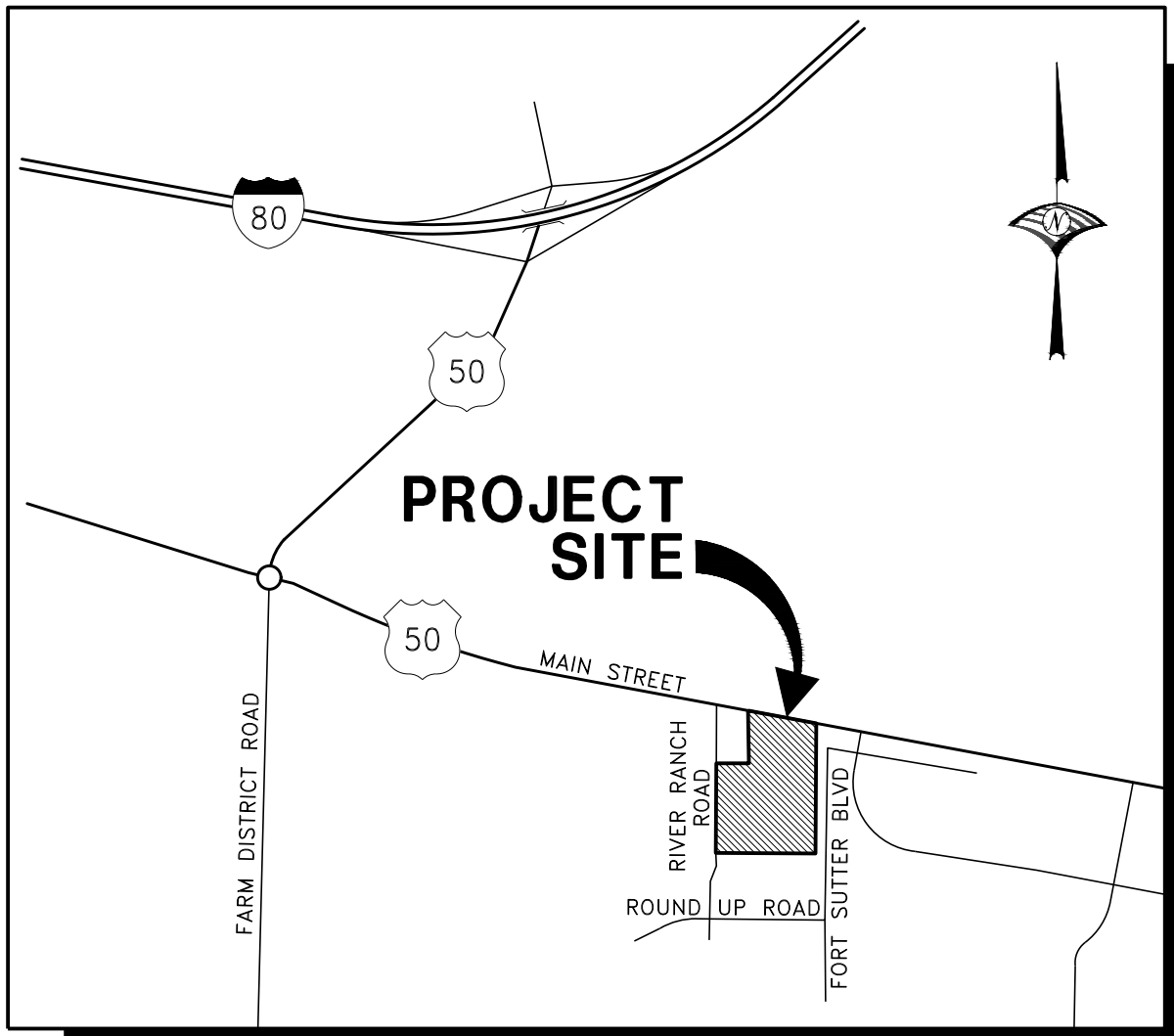
RIVER RANCH APARTMENTS

ERGS FERNLEY, LLC

FERNLEY

NEVADA

SEPTEMBER, 2022



VICINITY MAP

NOT TO SCALE

OWNER/DEVELOPER:

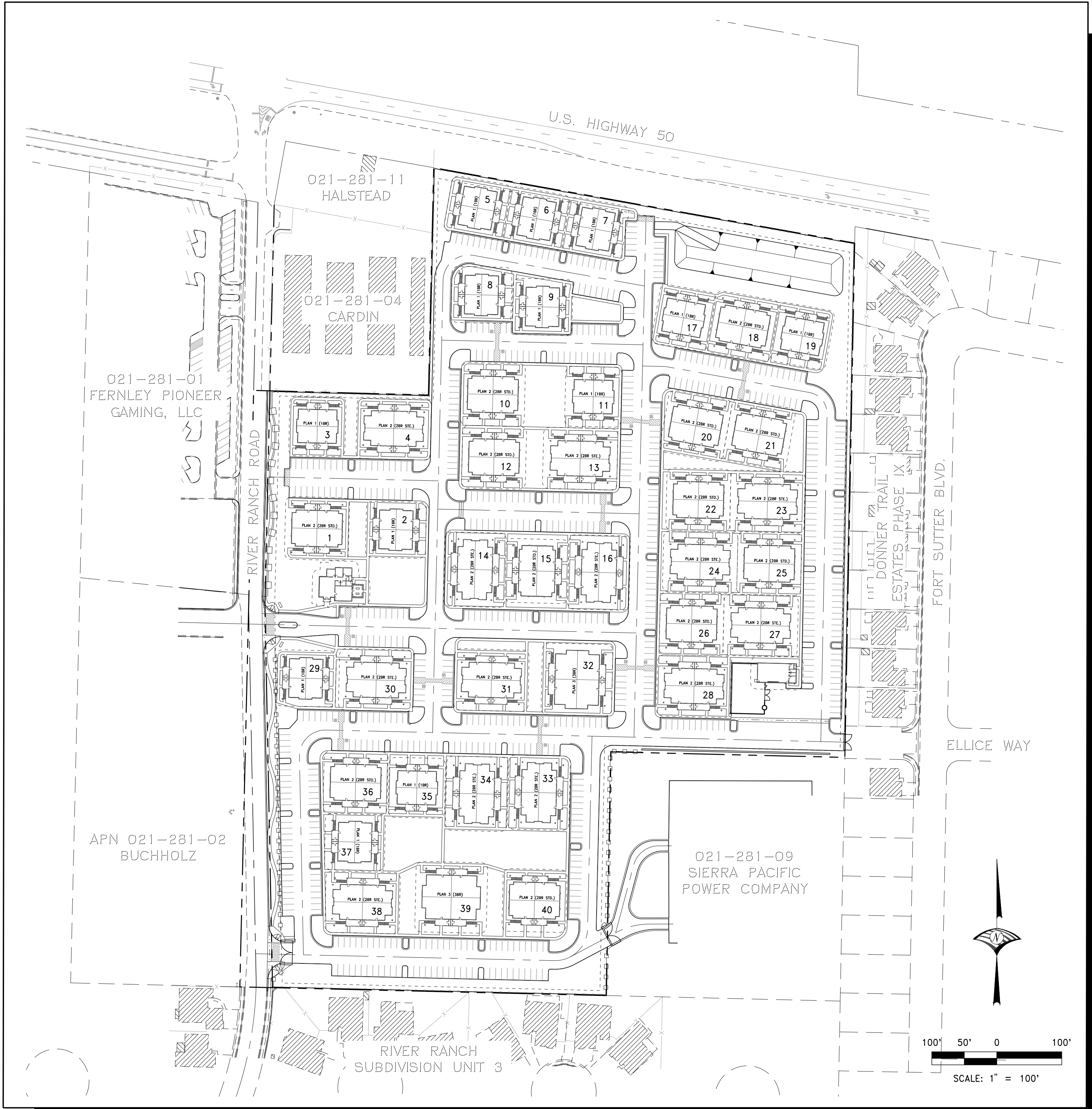
ERGS FERNLEY, LLC
9345 LEMMON DRIVE
RENO, NV 89506
775.972.0213

BASIS OF BEARINGS

NEVADA STATE PLANE COORDINATE SYSTEM, WEST ZONE, NORTH AMERICAN DATUM OF 1983/1994, HIGH ACCURACY REFERENCE NETWORK (NAD 83/94-HARN), AS DETERMINED USING REAL TIME KINEMATIC (RTK) GPS OBSERVATIONS. THE BEARING BETWEEN NDOT MONUMENT 1528013 AND 1528011 (LPN 1528) IS TAKEN AS NORTH 76°59'40" WEST. ALL DIMENSIONS SHOWN ARE GROUND DISTANCES. GRID TO GROUND COMBINED FACTOR = 1.0002694480

BASIS OF ELEVATIONS

BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88) AS TAKEN FROM NDOT BENCHMARK 1528013 (LPN 1528), WITH A PUBLISHED ELEVATION OF 4104.87 FEET. BENCHMARK 1528013 IS DESCRIBED AS BEING A 2.5" ALUMINUM CAP IN FENO POLYROC STAMPED "1528013M 2017". THE MONUMENT IS LOCATED AT US-50A MILEPOST LYON 14.5, 25-FEET SOUTH OF THE EDGE OF OIL AND 30-FEET EAST OF CINDER BLOCK FENCE END.



SITE PLAN



WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard
Reno, NV 89502
Tel 775.823.4068
Fax 775.823.4066

EXISTING CONDITIONS

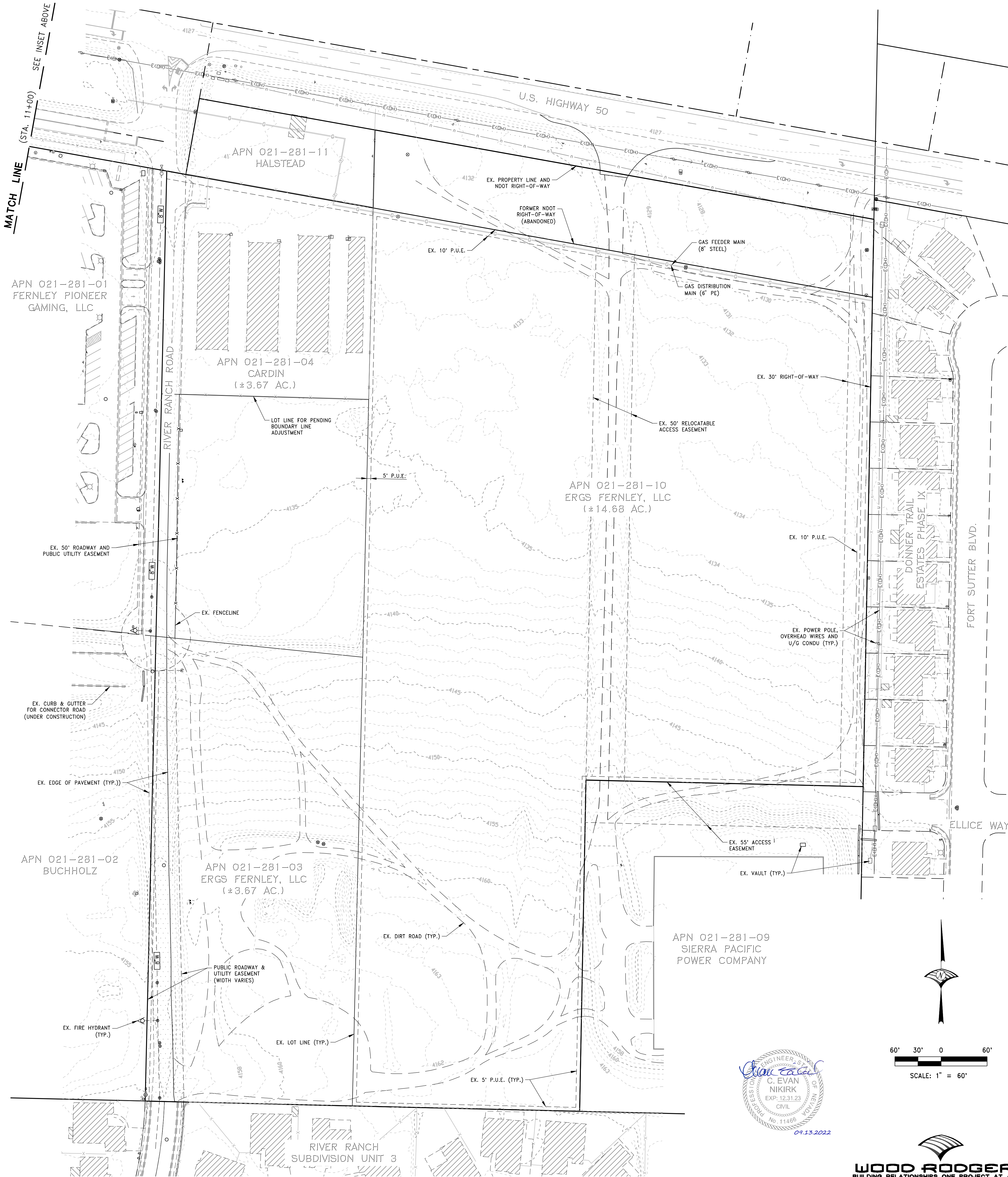
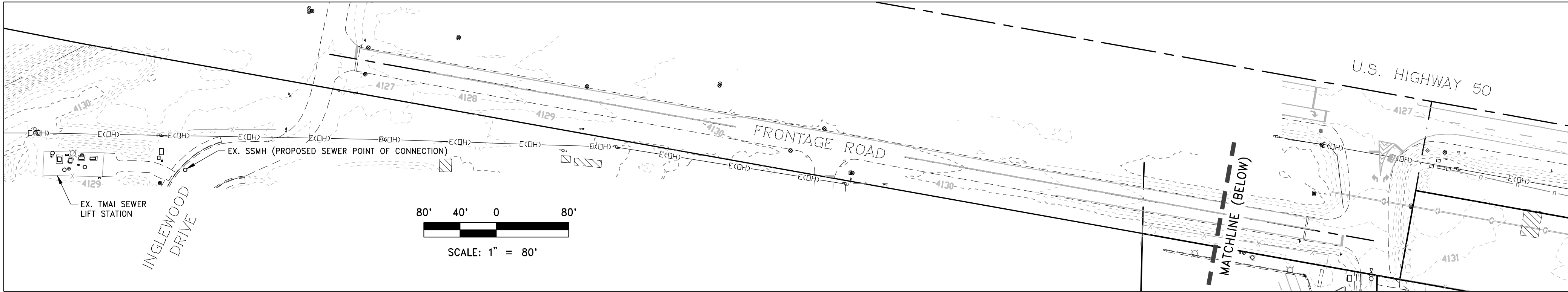
RIVER RANCH APARTMENTS

ERGS FERNLEY, LLC

FERNLEY

NEVADA

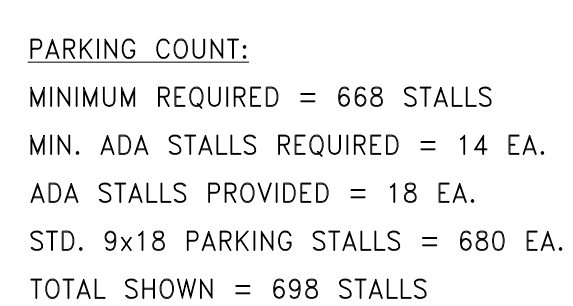
SEPTEMBER, 2022



NOTE: BASE SURVEY AND TOPOGRAPHY PREPARED BY WOOD RODGERS, INC. (RENO). DATE OF PHOTOGRAPHY: JUNE 30, 2022.

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Reno, NV 89502 Fax 775.823.4066

SEPTEMBER, 2022



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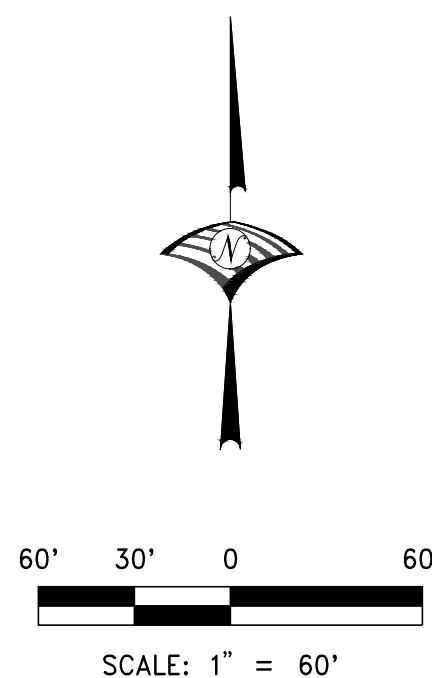
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Reno, NV 89502 Fax 775.823.4066

PRELIMINARY GRADING PLAN

RIVER RANCH APARTMENTS

ERGS FERNLEY, LLC
FERNLEY NEVADA

SEPTEMBER, 2022



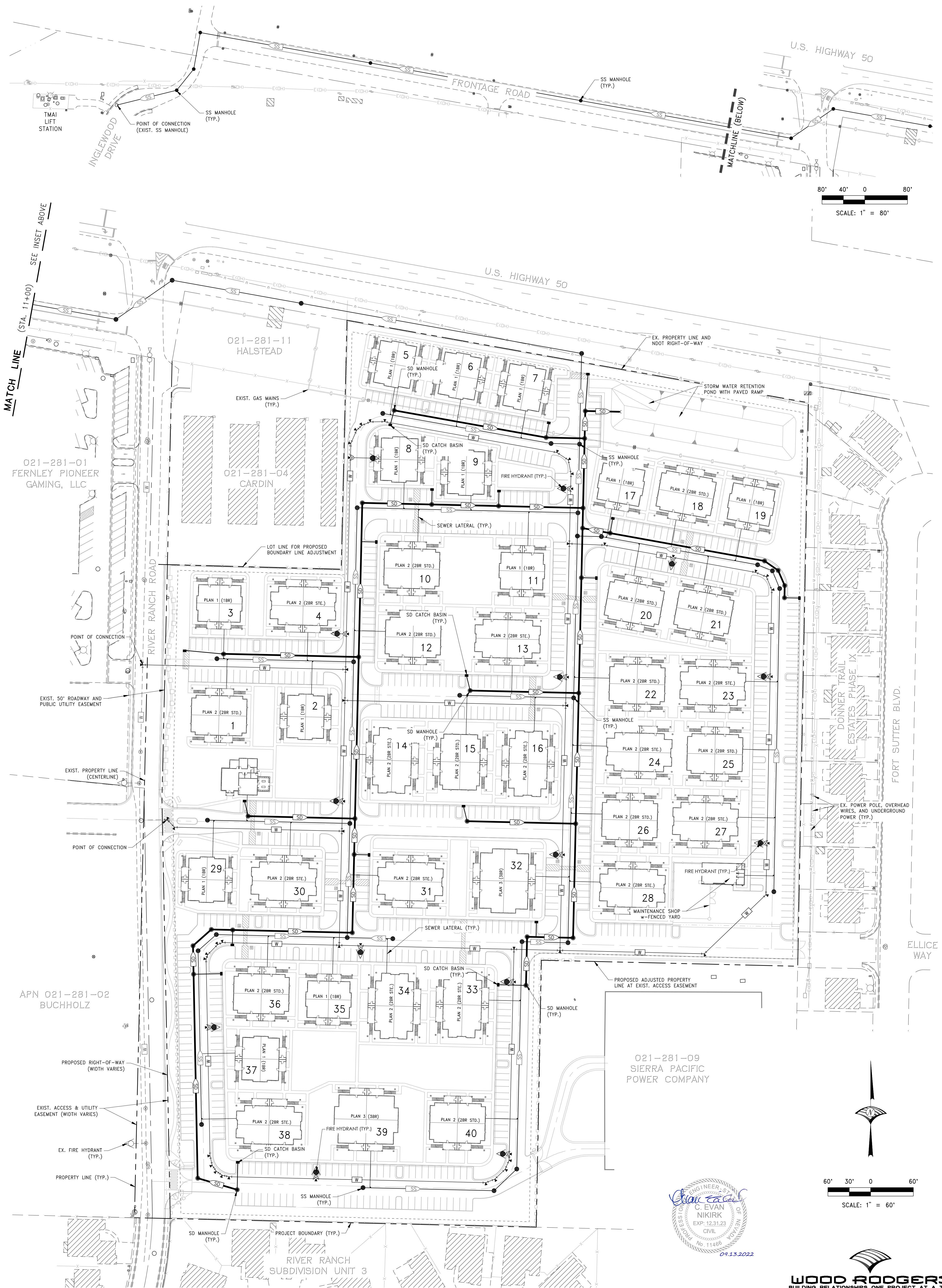
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PRELIMINARY UTILITY PLAN

RIVER RANCH APARTMENTS

ERGS FERNLEY, LLC
FERNLEY NEVADA

SEPTEMBER, 2022



80' 40' 0 80'
SCALE: 1" = 80'

60' 30' 0 60'
SCALE: 1" = 60'



WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard Reno, NV 89502
Tel 775.823.4068 Fax 775.823.4066

PRELIMINARY CROSS SECTIONS

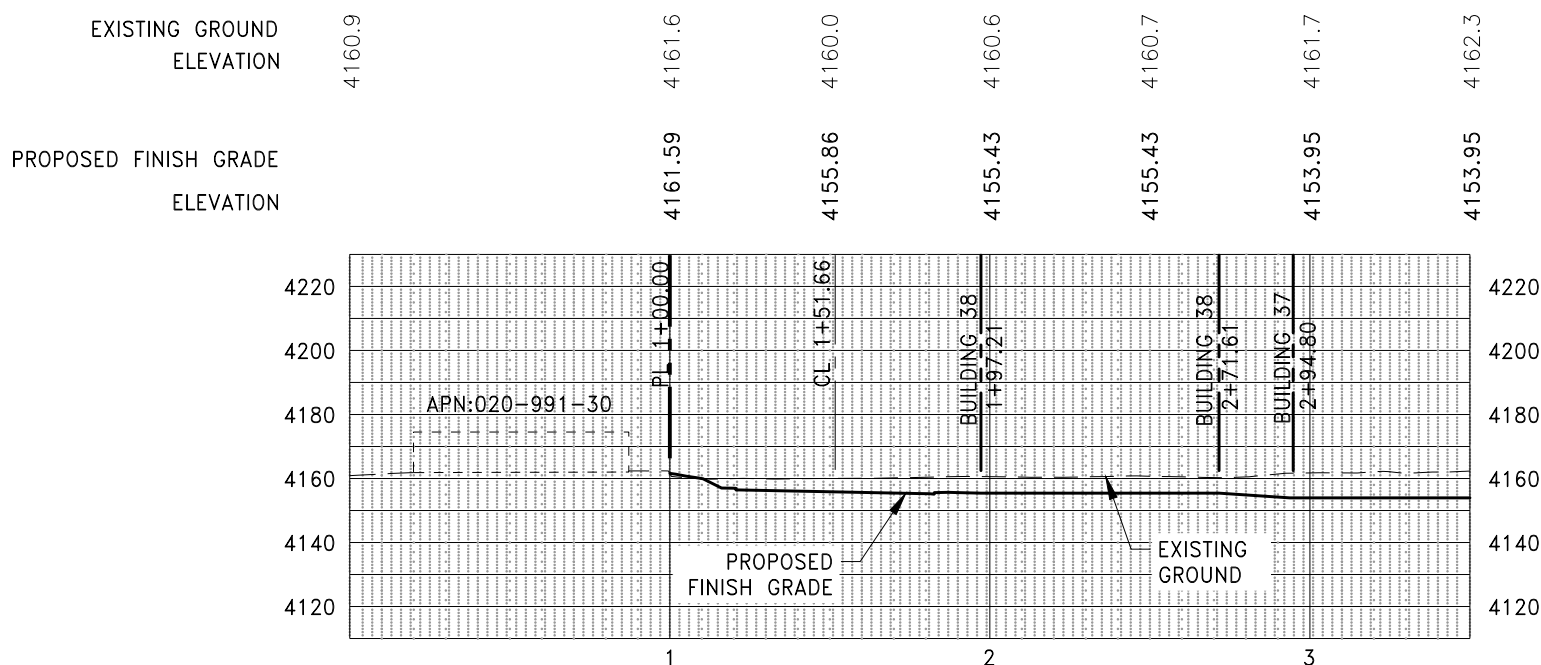
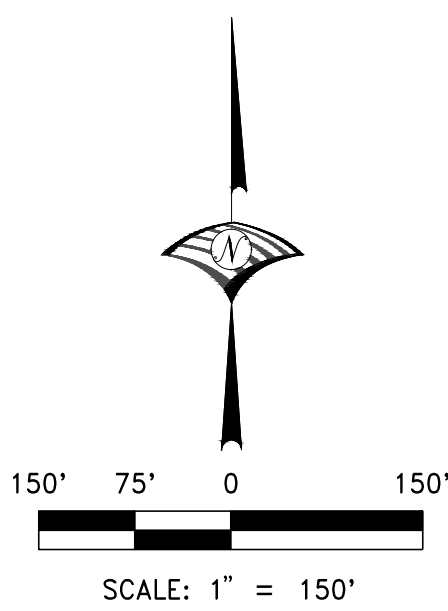
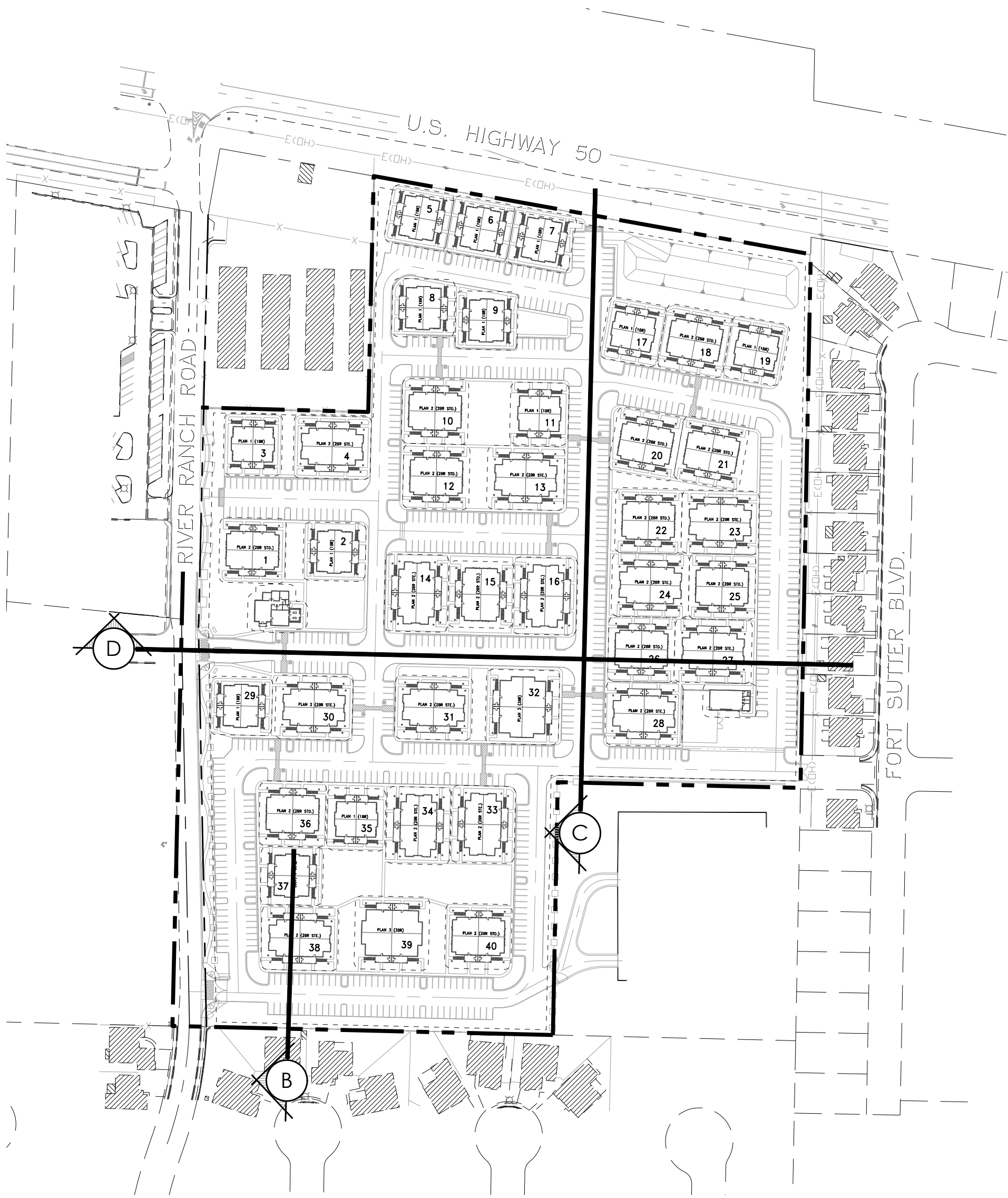
RIVER RANCH APARTMENTS

ERGS FERNLEY, LLC

FERNLEY

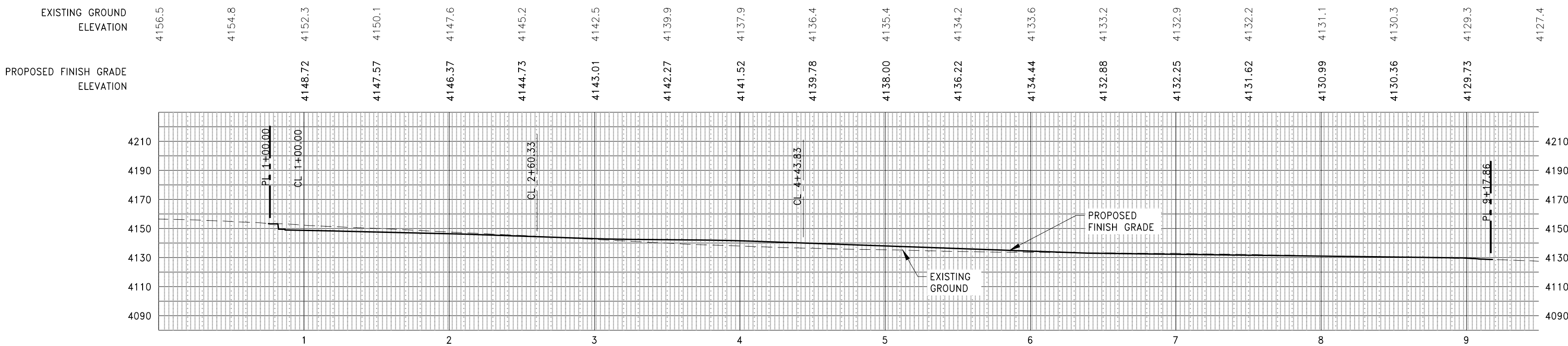
NEVADA

SEPTEMBER, 2022



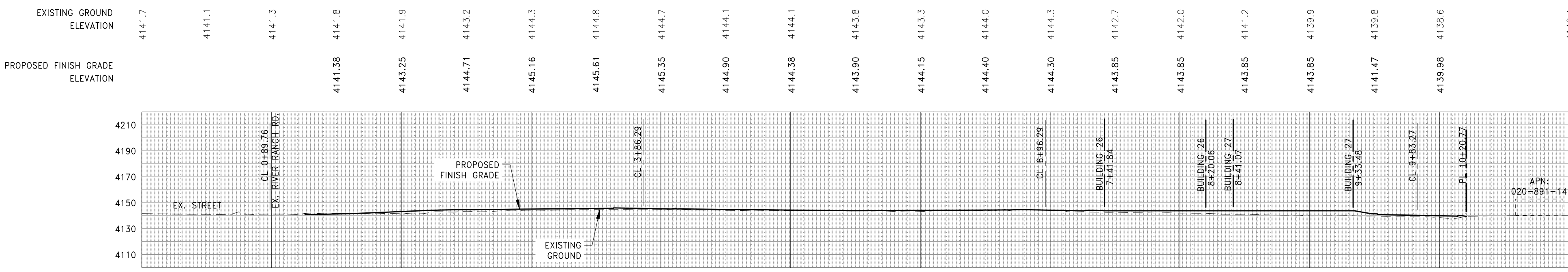
CROSS SECTION B

SCALE:
HORIZ: 1"=60'
VERT: 1"=60'



CROSS SECTION C

SCALE:
HORIZ: 1"=60'
VERT: 1"=60'

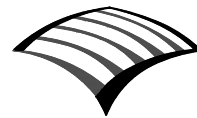


CROSS SECTION D

SCALE:
HORIZ: 1"=60'
VERT: 1"=60'



09.13.2022



WOOD RODGERS
BUILDING RELATIONSHIPS ONE PROJECT AT A TIME
1361 Corporate Boulevard Tel 775.823.4068
Reno, NV 89502 Fax 775.823.4066

ORNAMENTAL TREES

DECIDUOUS SHADE TREES

EVERGREEN TREES

BUFFER TREES ALONG SOUTH AND EAST BOUNDARIES

LANDSCAPE AREA

LAWN AREA

AMENITIES

SITE AREA: 906,119 SQ FT (21 ACRES)
JURISDICTION: FERNLEY
ZONING: MIXED USE

REQUIRED LANDSCAPE AREA = 135,918 SQ FT
(15% OF TOTAL SITE AREA)

PROVIDED LANDSCAPE AREA = 135,918 SQ FT MIN.

REQUIRED TREES = 341 MIN.

- (1) TREE PER 500 SQ FT OF REQUIRED LANDSCAPE AREA = 272
- (1) TREE PER 10 PARKING SPACES (642 PARKING SPACES) = 64

REQUIRED SHRUBS = 2,718 MIN.

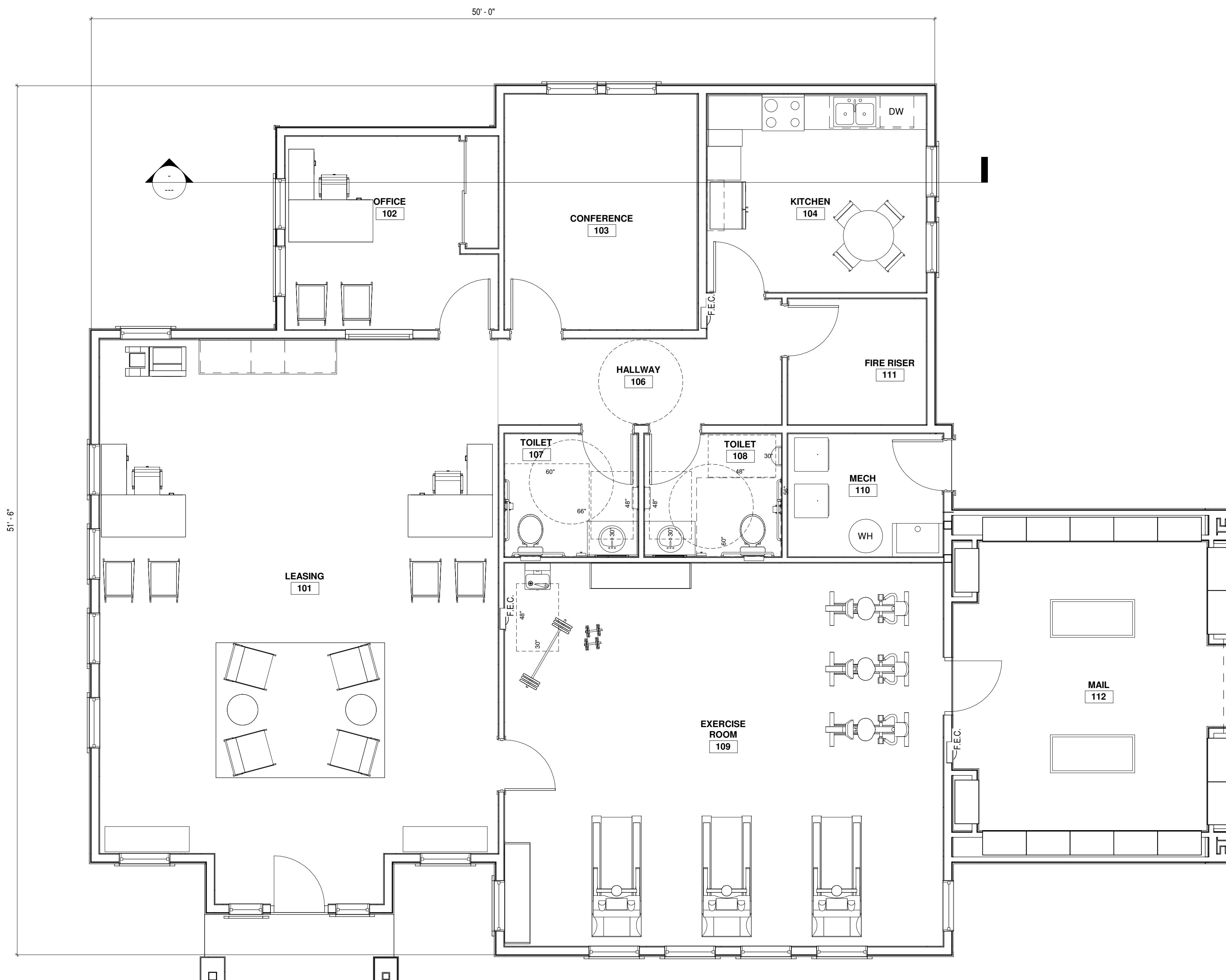
- (6 SHRUBS PER REQUIRED TREE)

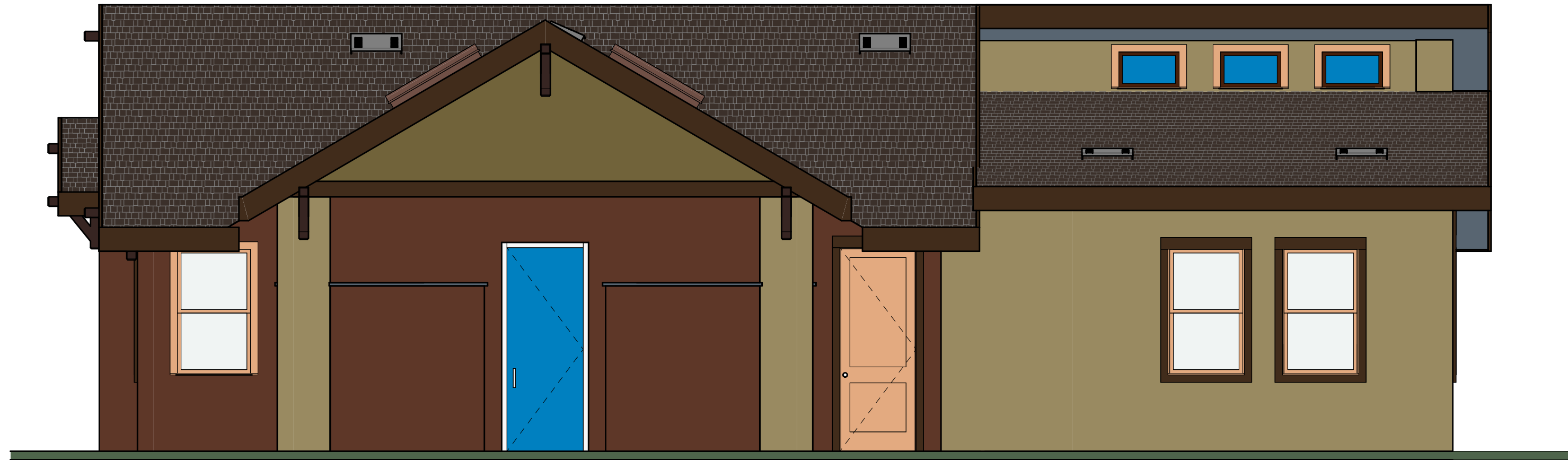
- 1) ALL PLANTING AND IRRIGATION SHALL BE INSTALLED PER LOCAL GOVERNING CODES.
- 2) TREES
 - DECIDUOUS TREES SHALL HAVE A MINIMUM CALIPER OF 2 INCHES.
 - EVERGREEN TREES SHALL HAVE A MINIMUM HEIGHT OF 6 FEET.
 - ADDITIONAL TREES, BEYOND THOSE REQUIRED BY CODE, MAY BE REDUCED IN SIZE AT INSTALLATION.
 - BUFFER TREES PROVIDED ALONG SOUTH AND EAST BOUNDARIES
- 3) FINAL PLANT SELECTION AND LAYOUT WILL BE BASED ON SOUND HORTICULTURAL PRACTICES RELATING TO MICRO-CLIMATE, SOIL, AND WATER REGIMES. ALL TREES WILL BE STAKED SO AS TO REMAIN UPRIGHT AND PLUMB FOLLOWING INSTALLATION. PLANT SIZE AND QUALITY AT TIME OF PLANTING WILL BE PER THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-1990).
- 4) ALL SHRUB BEDS WILL RECEIVE 4" DEPTH MULCH WITH WEED CONTROL.
- 5) ALL LANDSCAPING WILL BE AUTOMATICALLY IRRIGATED. CONTAINER PLANTINGS WILL BE DRIP IRRIGATED BASED ON THE SPECIFIC HORTICULTURAL REQUIREMENTS OF EACH SPECIES. A REDUCED-PRESSURE-TYPE BACKFLOW PREVENTER WILL BE PROVIDED ON THE IRRIGATION SYSTEM AS REQUIRED PER CODE.
- 6) PLAN IS CONCEPTUAL. PLANT QUANTITIES INDICATED ARE PER CITY OF FERNLEY REQUIREMENTS. PLANT LOCATIONS, FINAL SPECIES SELECTION, AND SIZE AT PLANTING SHALL BE DETERMINED DURING DEVELOPMENT OF THE FINAL CONSTRUCTION DOCUMENTS.



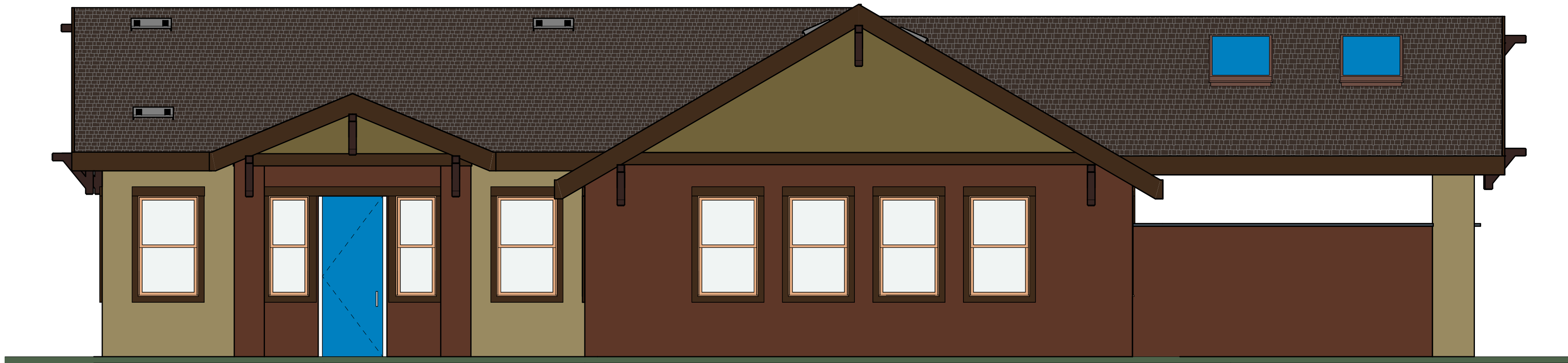
Preliminary Landscape Plan
River Ranch Apartments
ERGS Properties

[illegible]

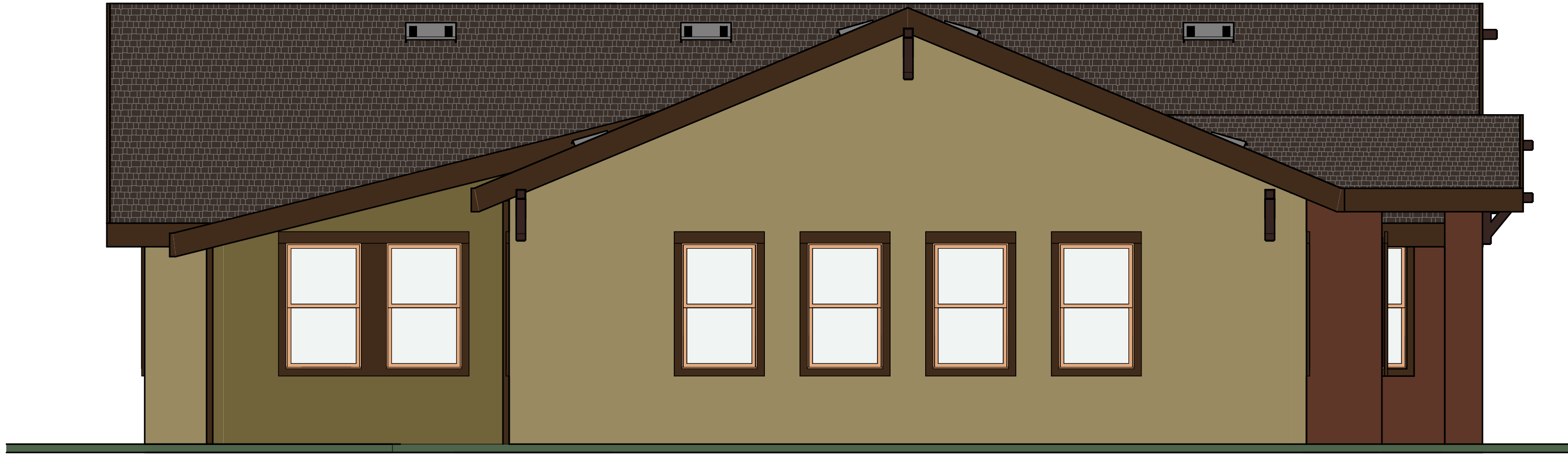




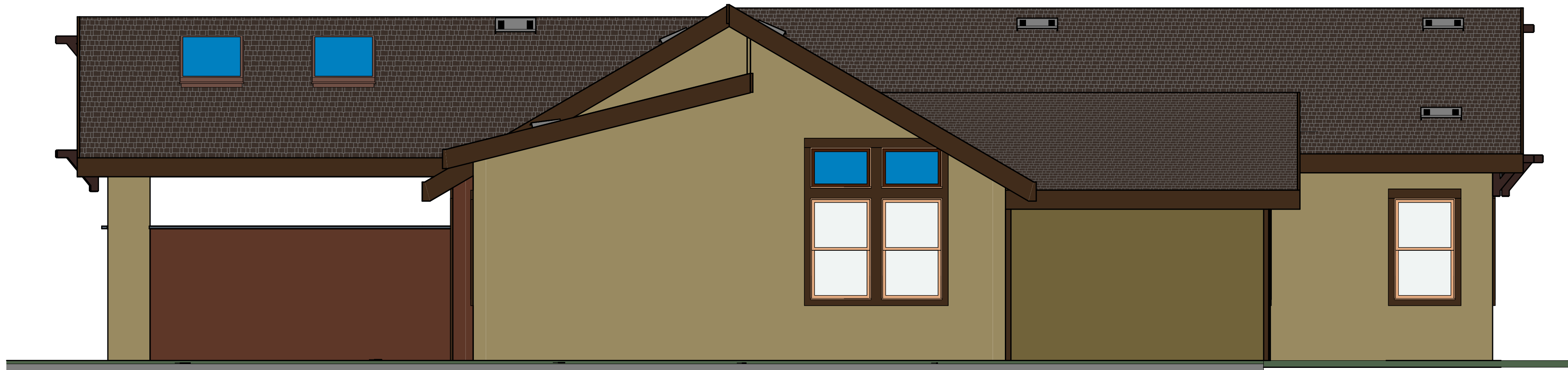
1 East -presentation
1/4" = 1'-0"



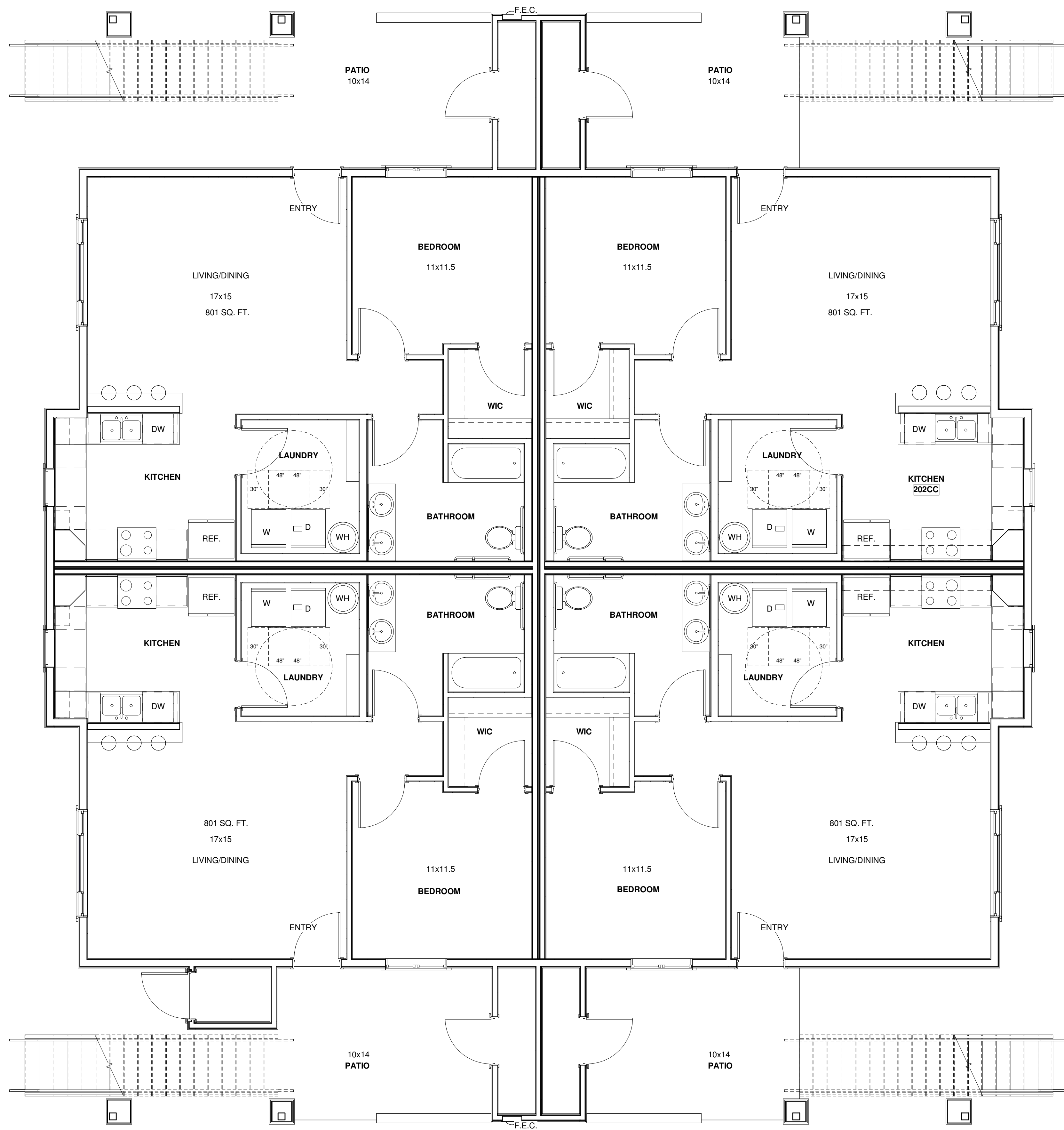
2 ENTRY - SOUTH-presentation
1/4" = 1'-0"



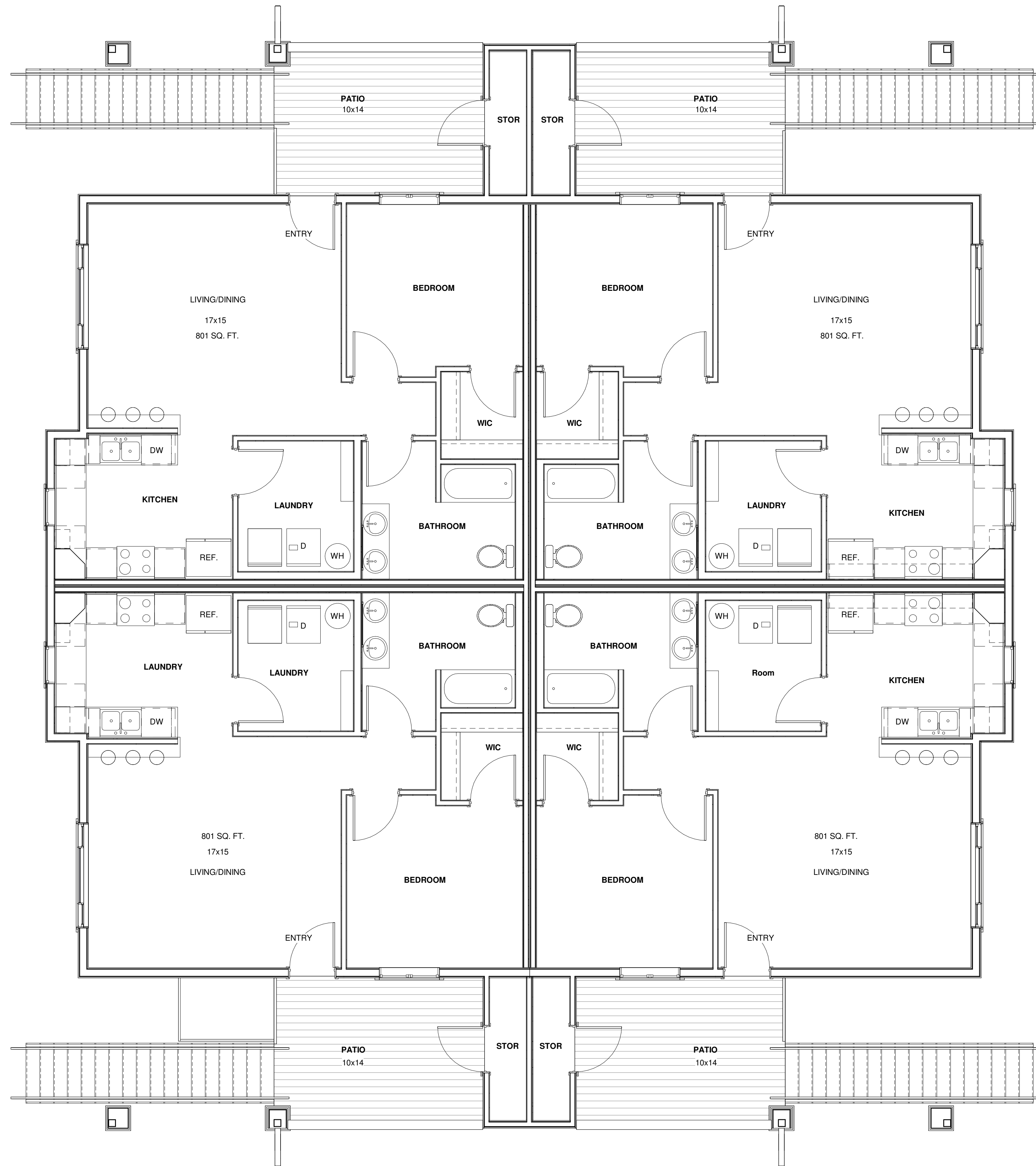
2 West-Presentation
1/4" = 1'-0"



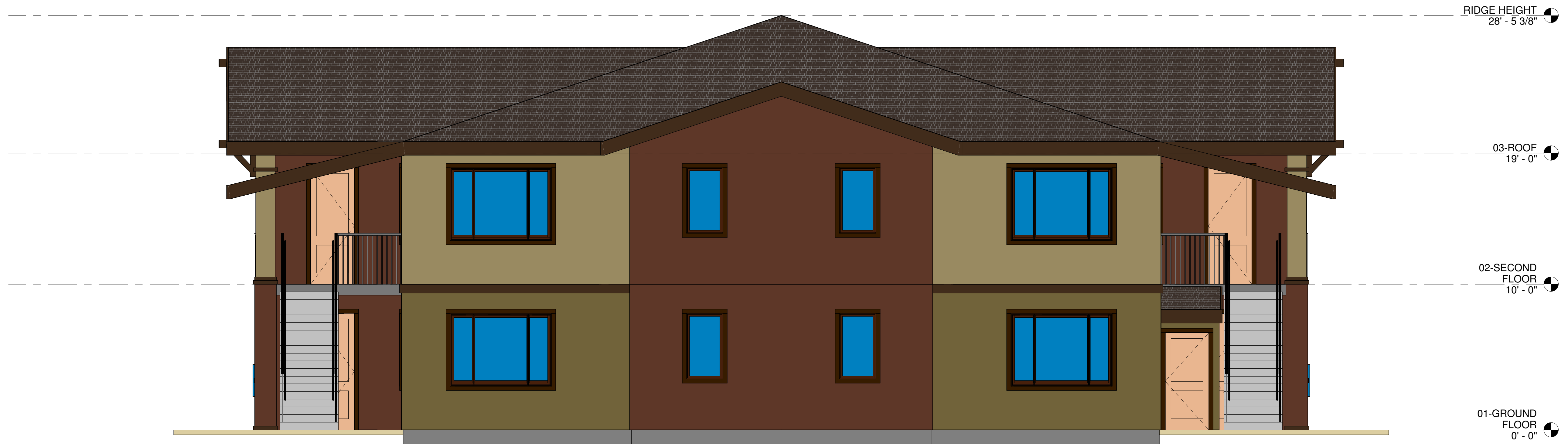
1 North-Presentation
1/4" = 1'-0"



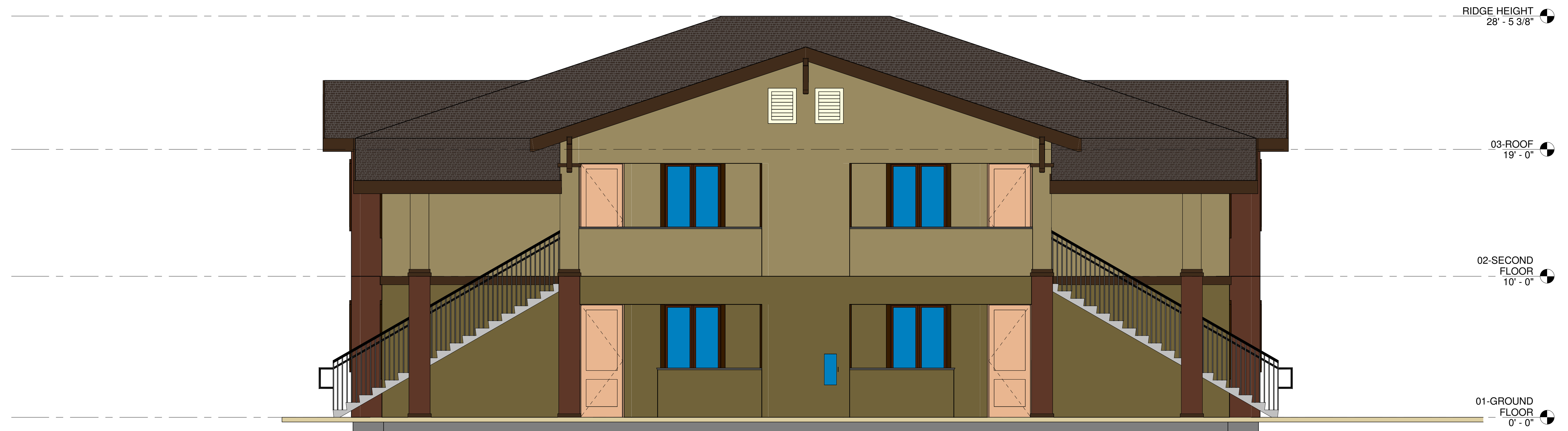
1 THE ONE - GROUND FLOOR PLAN (1 BEDROOM)
1/4" = 1'-0"



1 THE ONE - SECOND FLOOR PLAN (1 BEDROOM)
A-5.0 SD 1/4" = 1'-0"



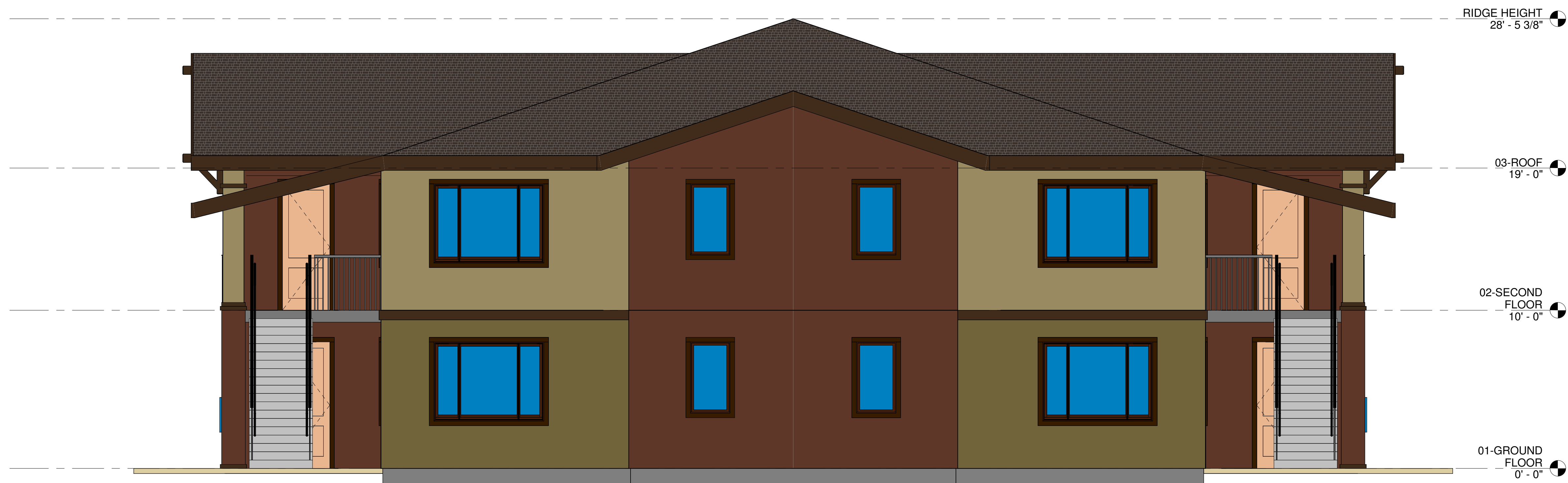
1 East Elevation
1/4" = 1'-0"



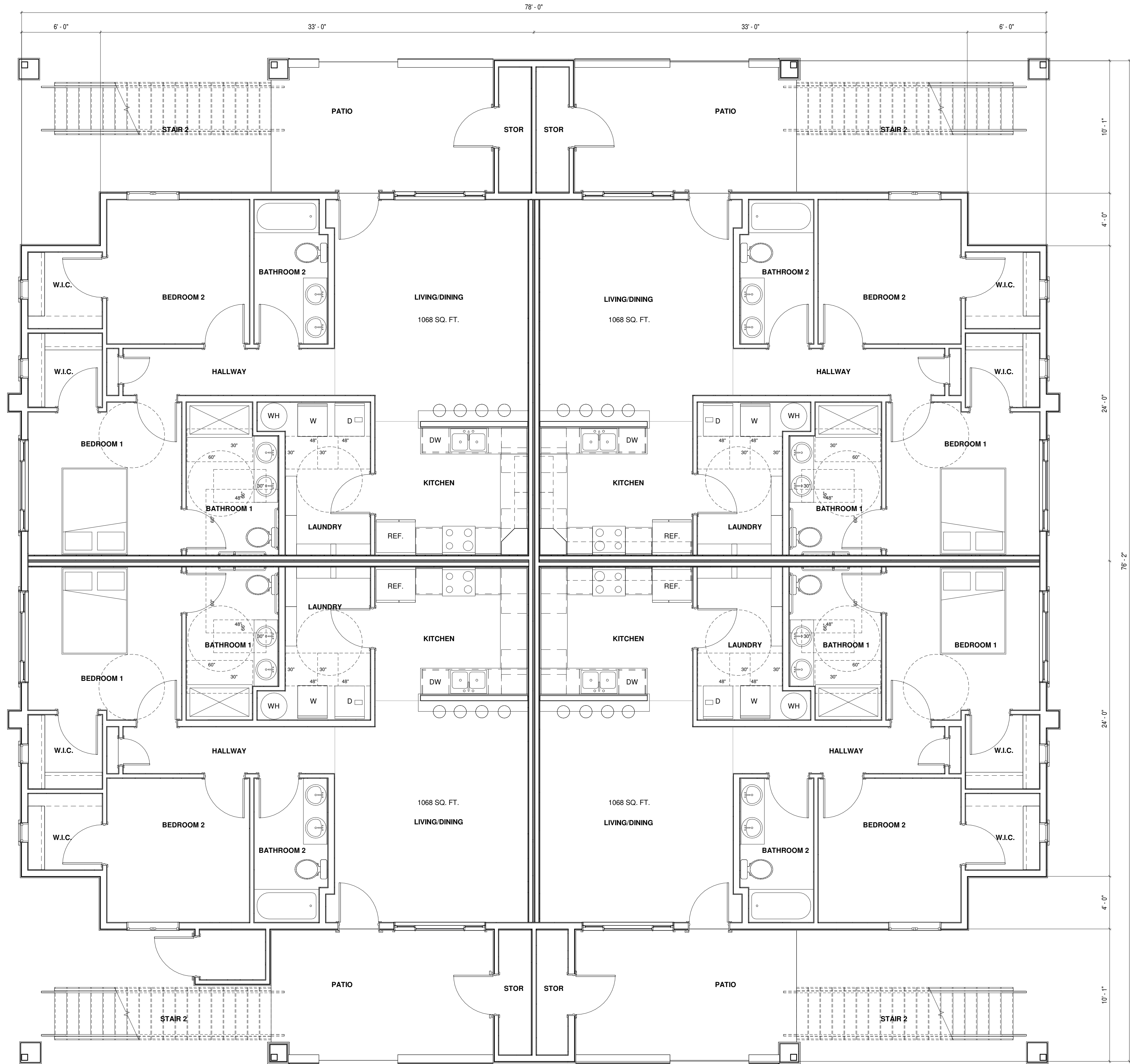
2 North Elevations
1/4" = 1'-0"



1 South Elevation.
1/4" = 1'-0"



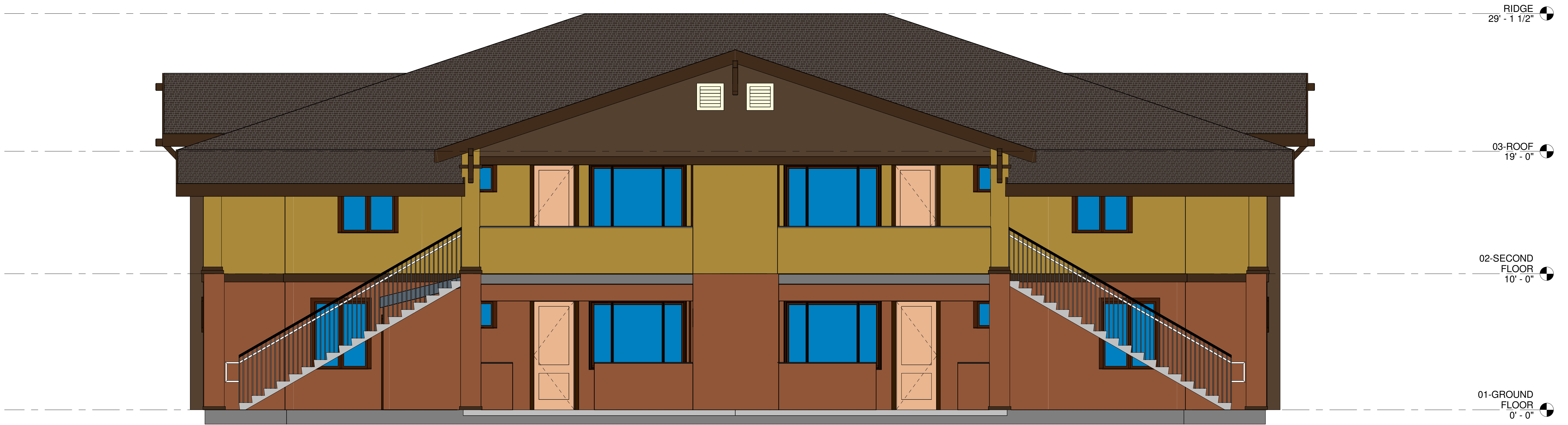
2 West Elevation
1/4" = 1'-0"



1 THE STANDARD - GROUND FLOOR PLAN (2 Bedroom)
1/4" = 1'-0"



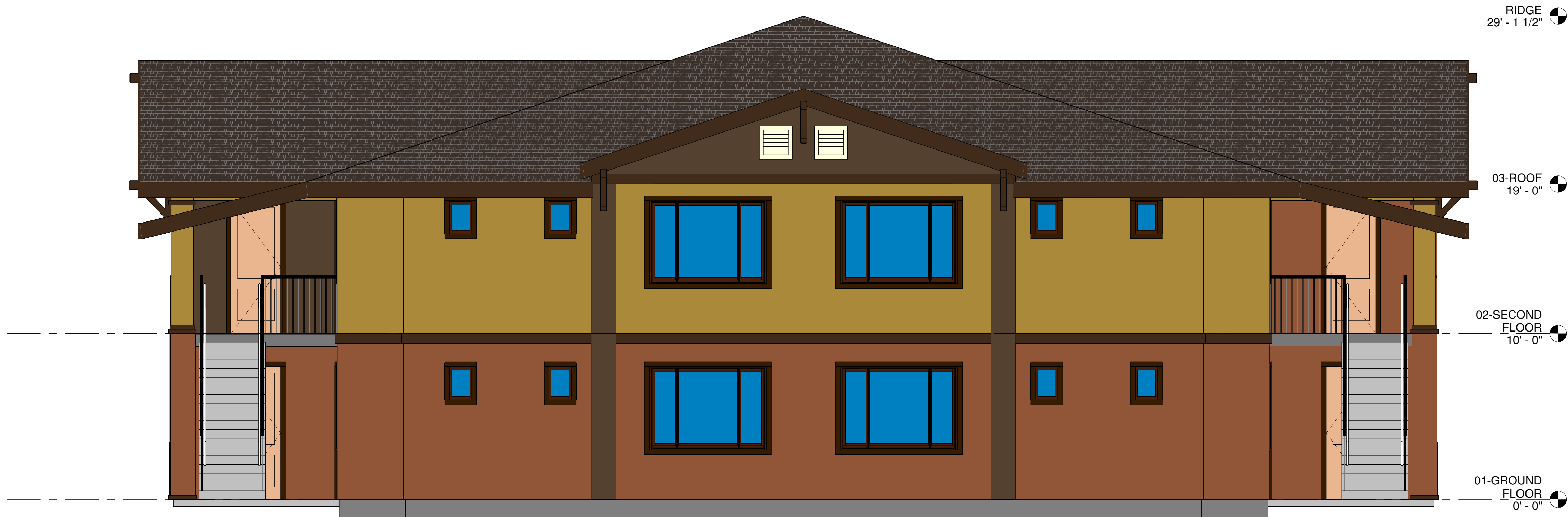
1 SECOND FLOOR PLAN
1/4" = 1'-0"



1 EAST ELEVATION
1/4" = 1'-0"



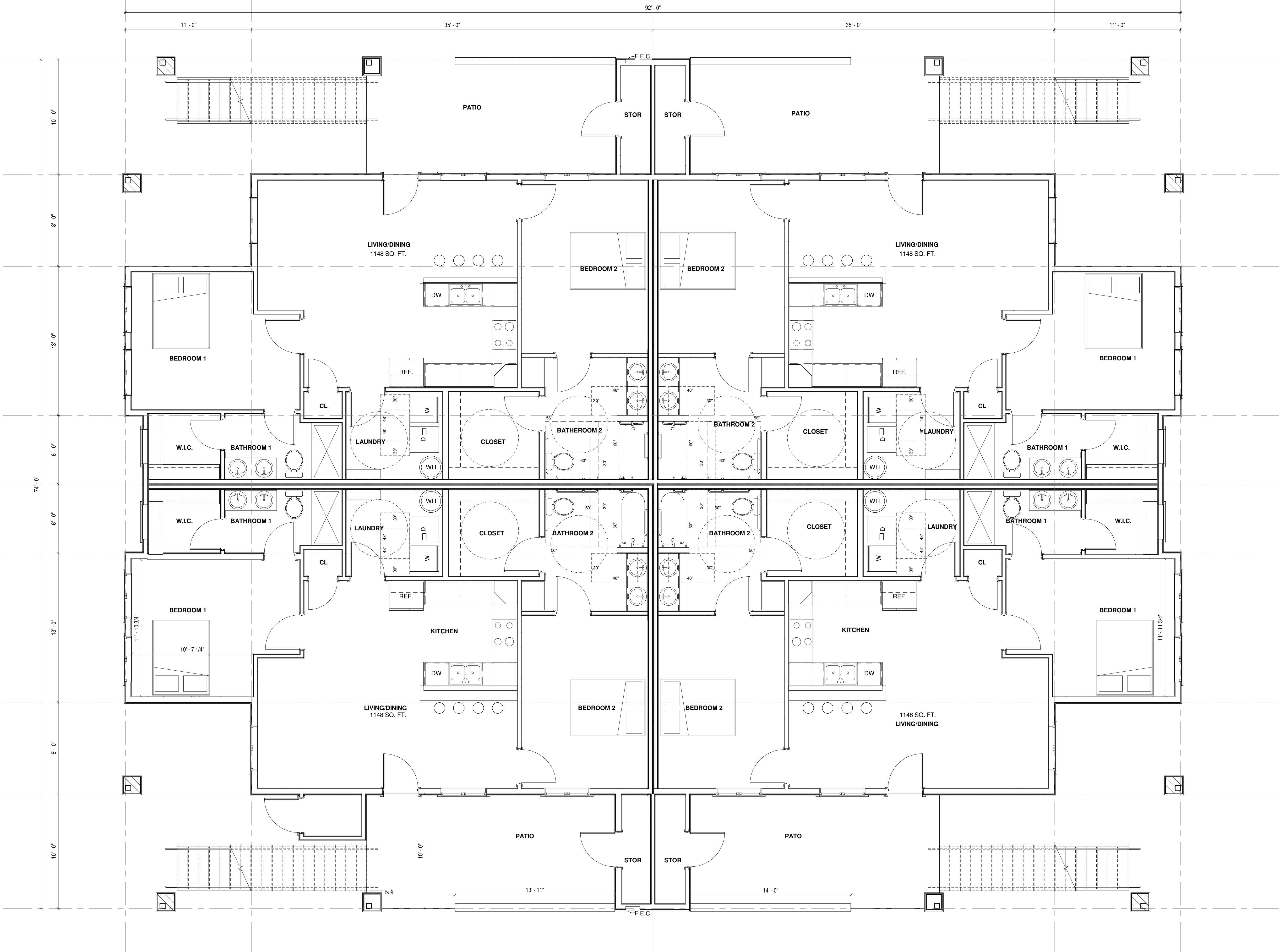
2 NORTH ELEVATION
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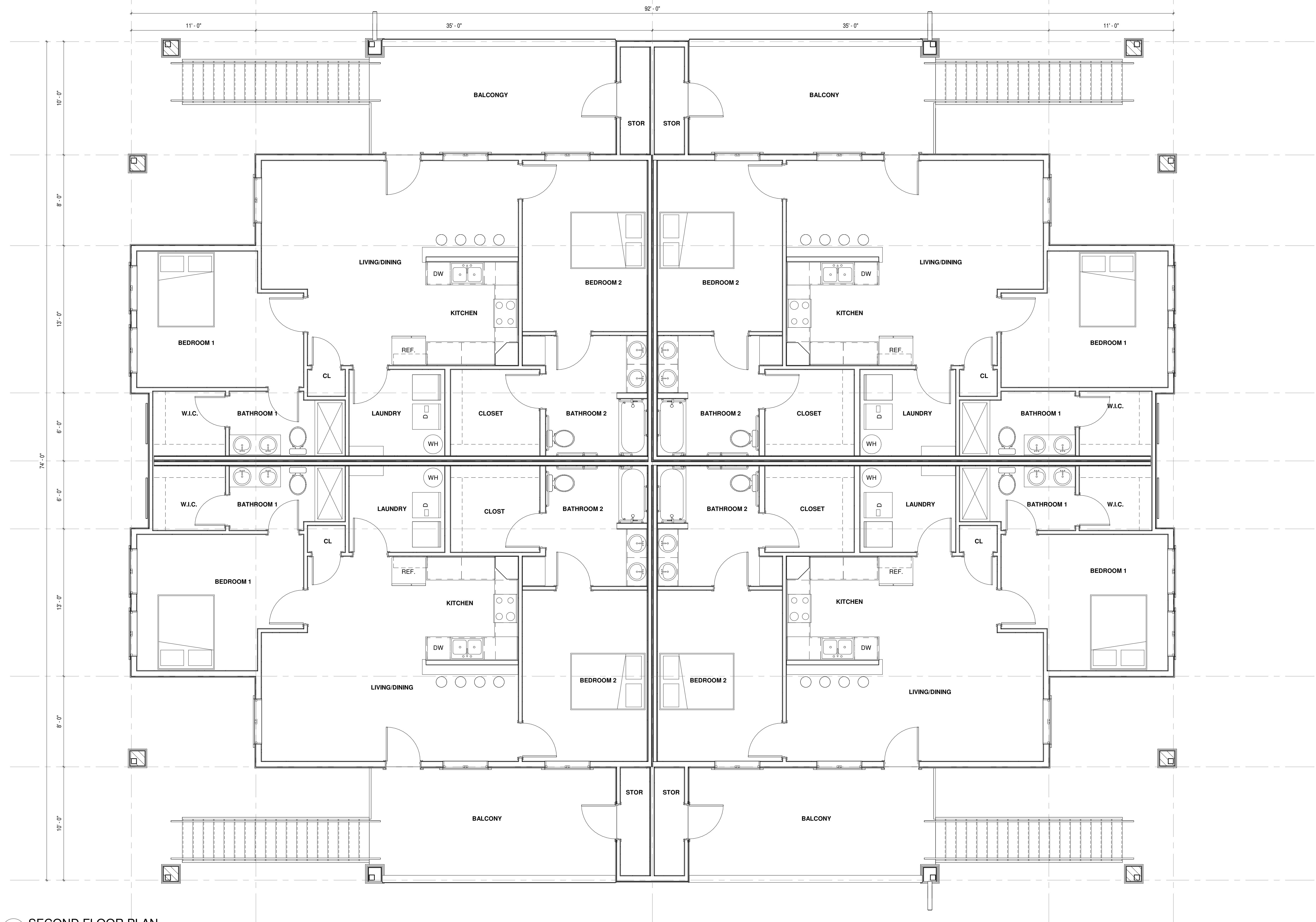
1 SOUTH ELEVATION
1/4" = 1'-0"



2 WEST ELEVATION
1/4" = 1'-0"



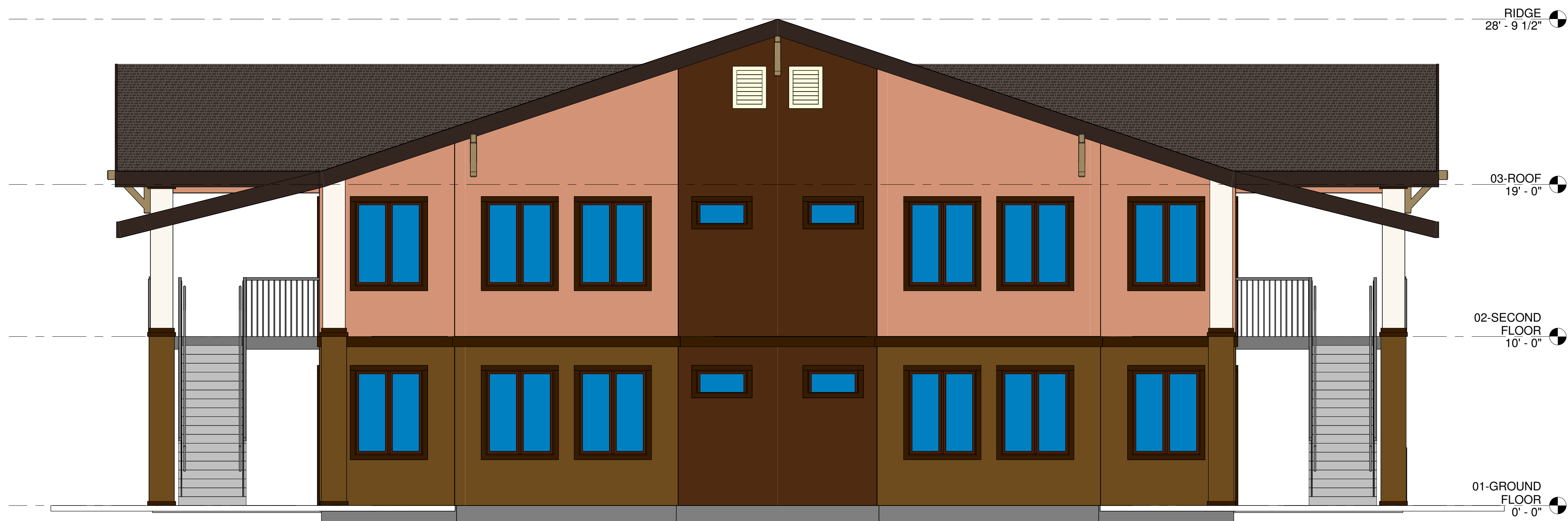
1 THE SUITES - GROUND FLOOR PLAN (2 Bedroom)
1/4" = 1'-0"



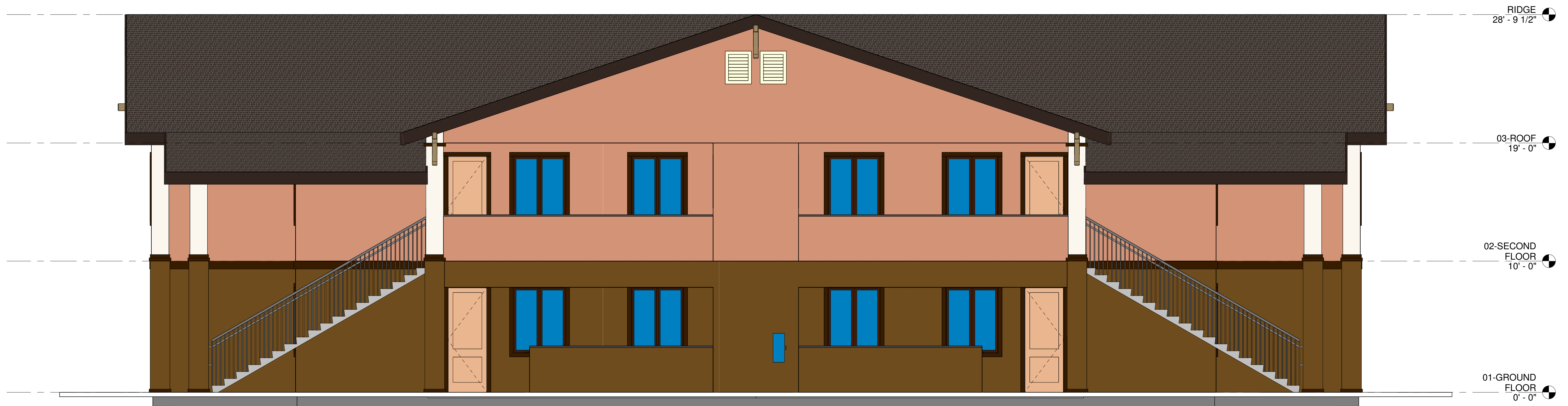
1 SECOND FLOOR PLAN
1/4" = 1'-0"



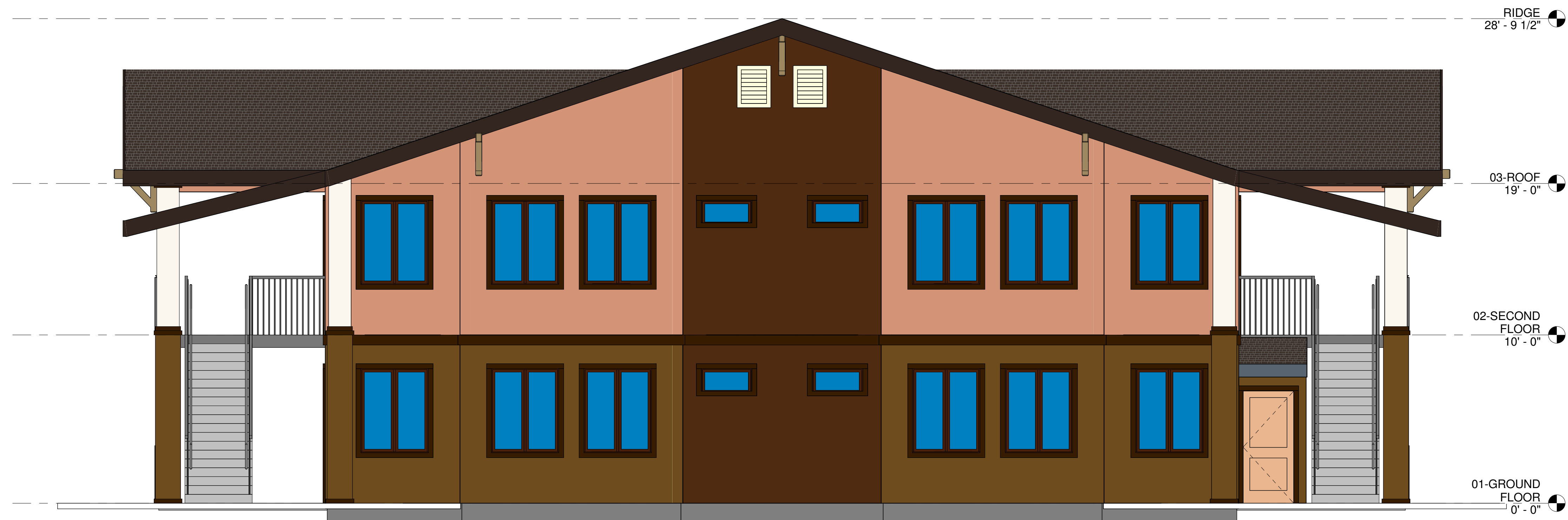
1 Elevation 2 - a1
1/4" = 1'-0"



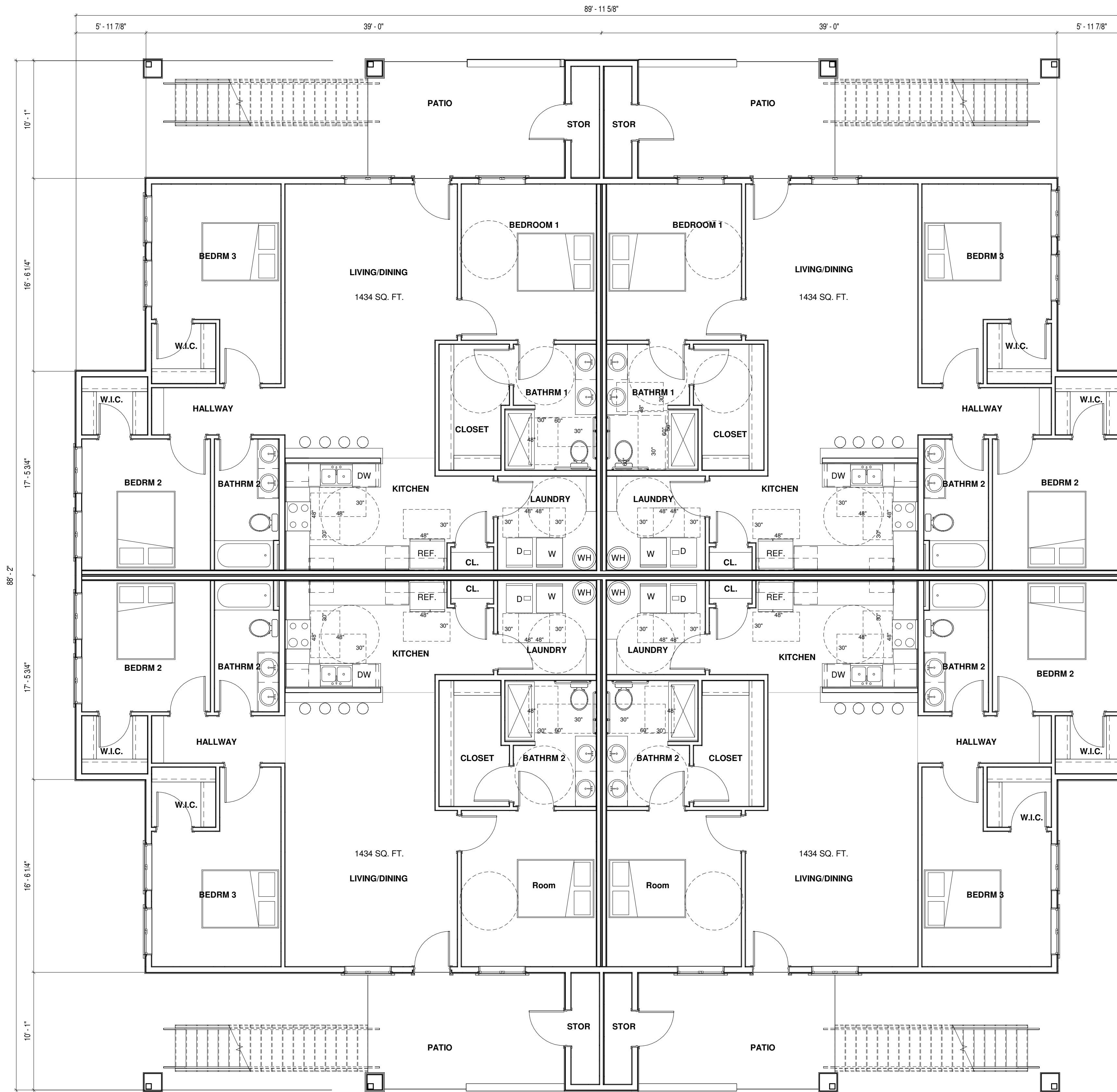
2 Elevation 1 - a1
1/4" = 1'-0"



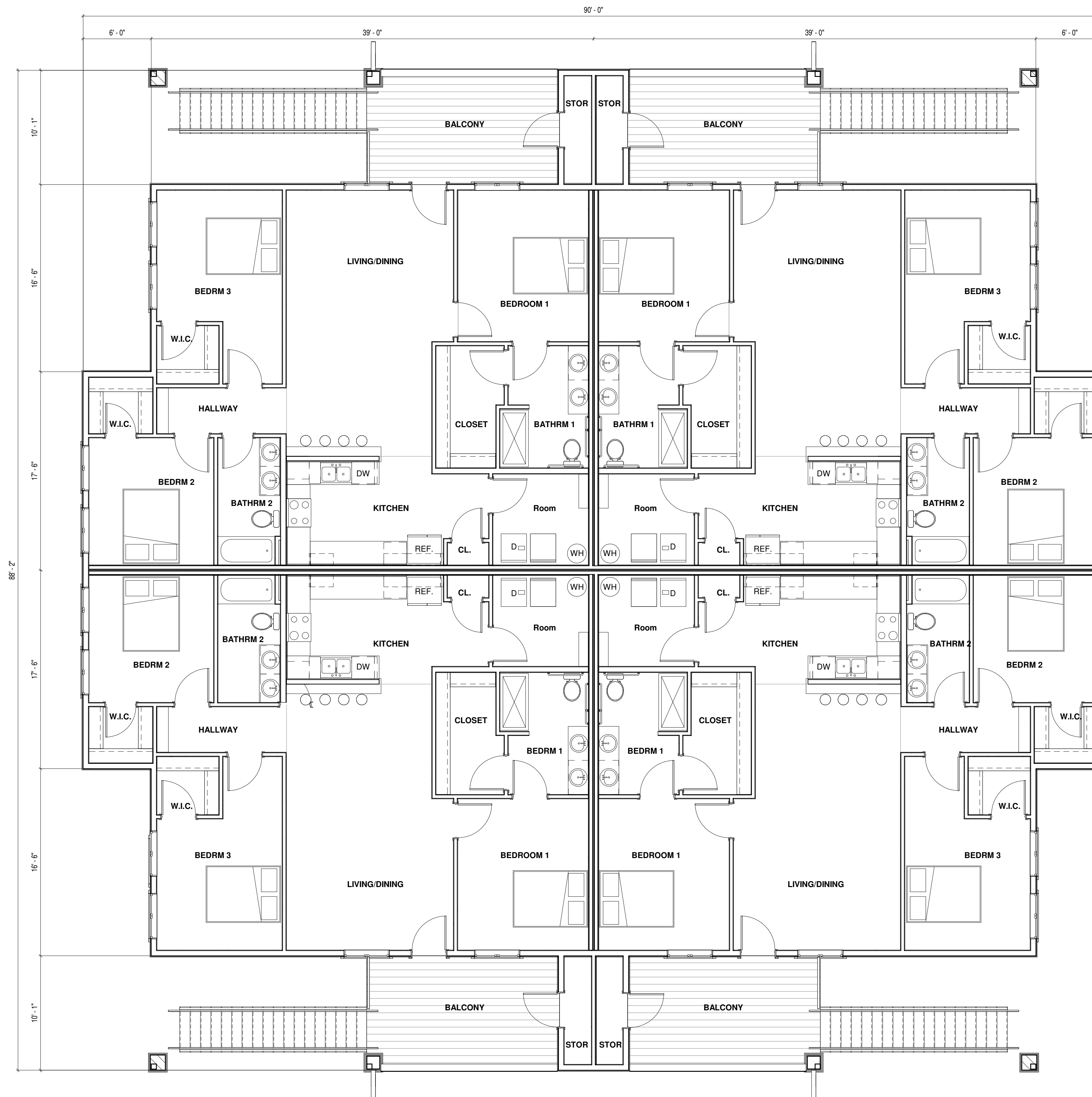
1 Elevation 2 - a
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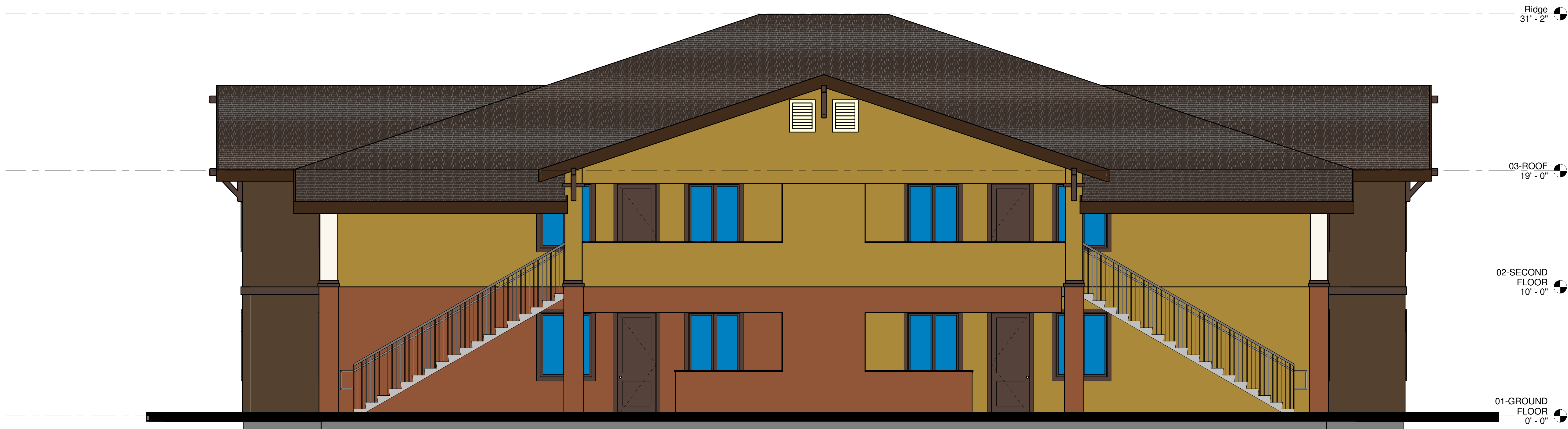
2 Elevation 1 - a
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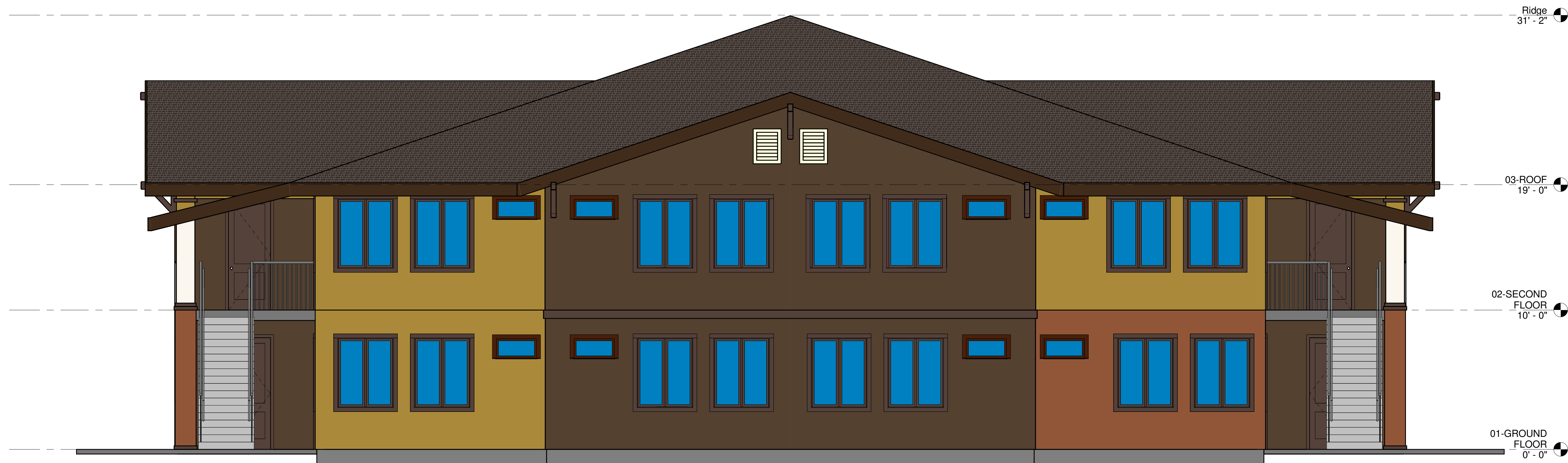
1 THE TRIO- GROUND FLOOR PLAN (3 Bedroom)
3/16" = 1'-0"



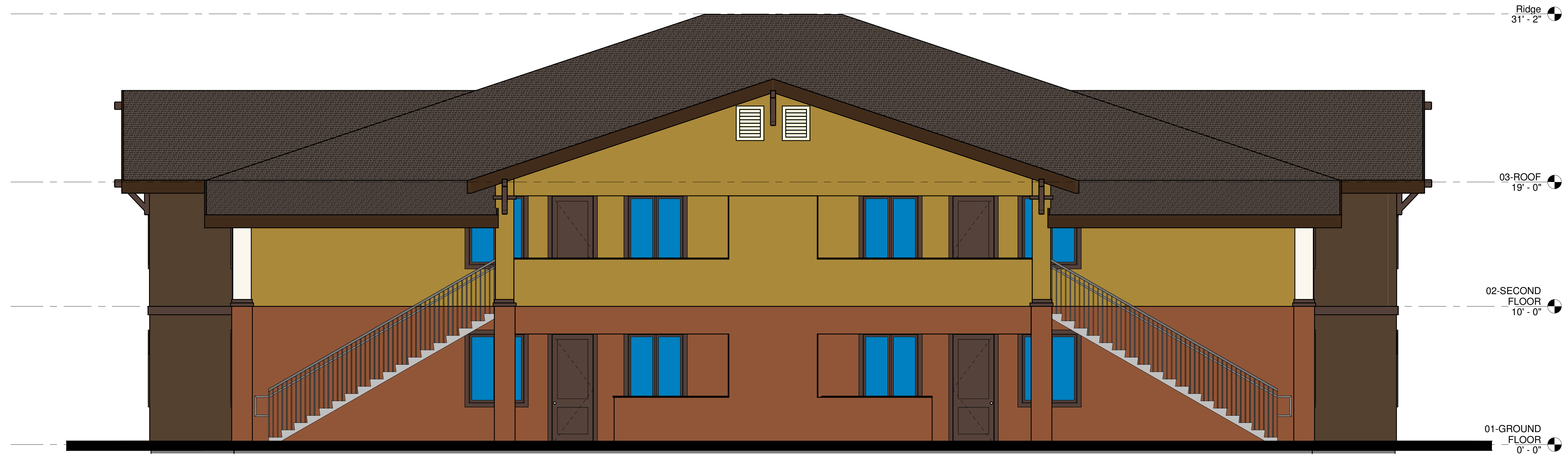
1 SECOND FLOOR PLAN
3/16" = 1'-0"



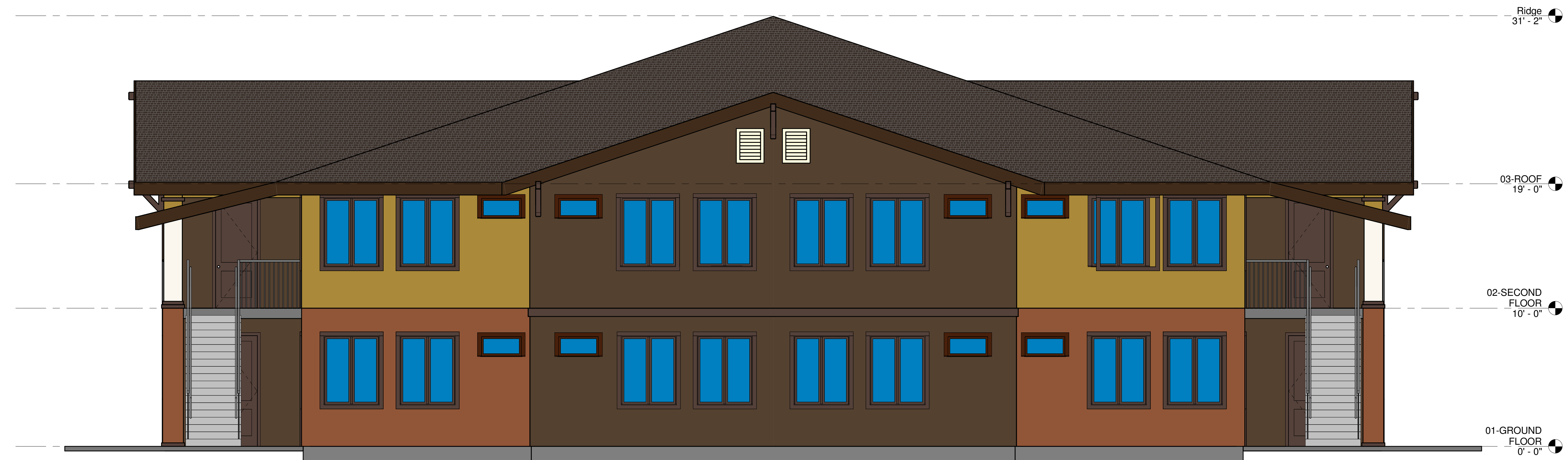
1 SOUTH ELEVATION
1/4" = 1'-0"



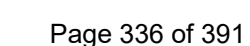
2 EAST ELEVATION
1/4" = 1'-0"



1 NORTH ELEVATION
1/4" = 1'-0"

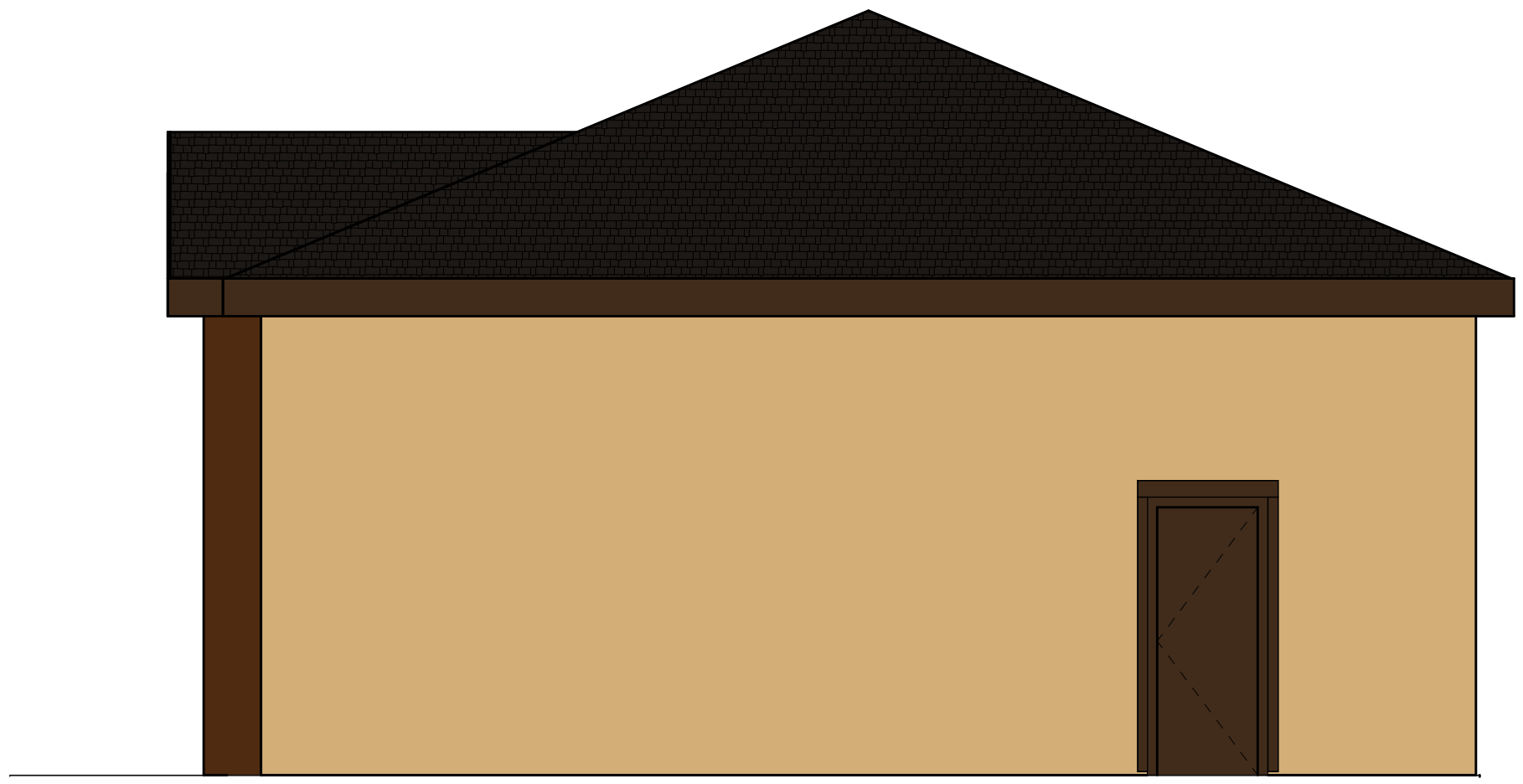


2 WEST ELEVATION
1/4" = 1'-0"

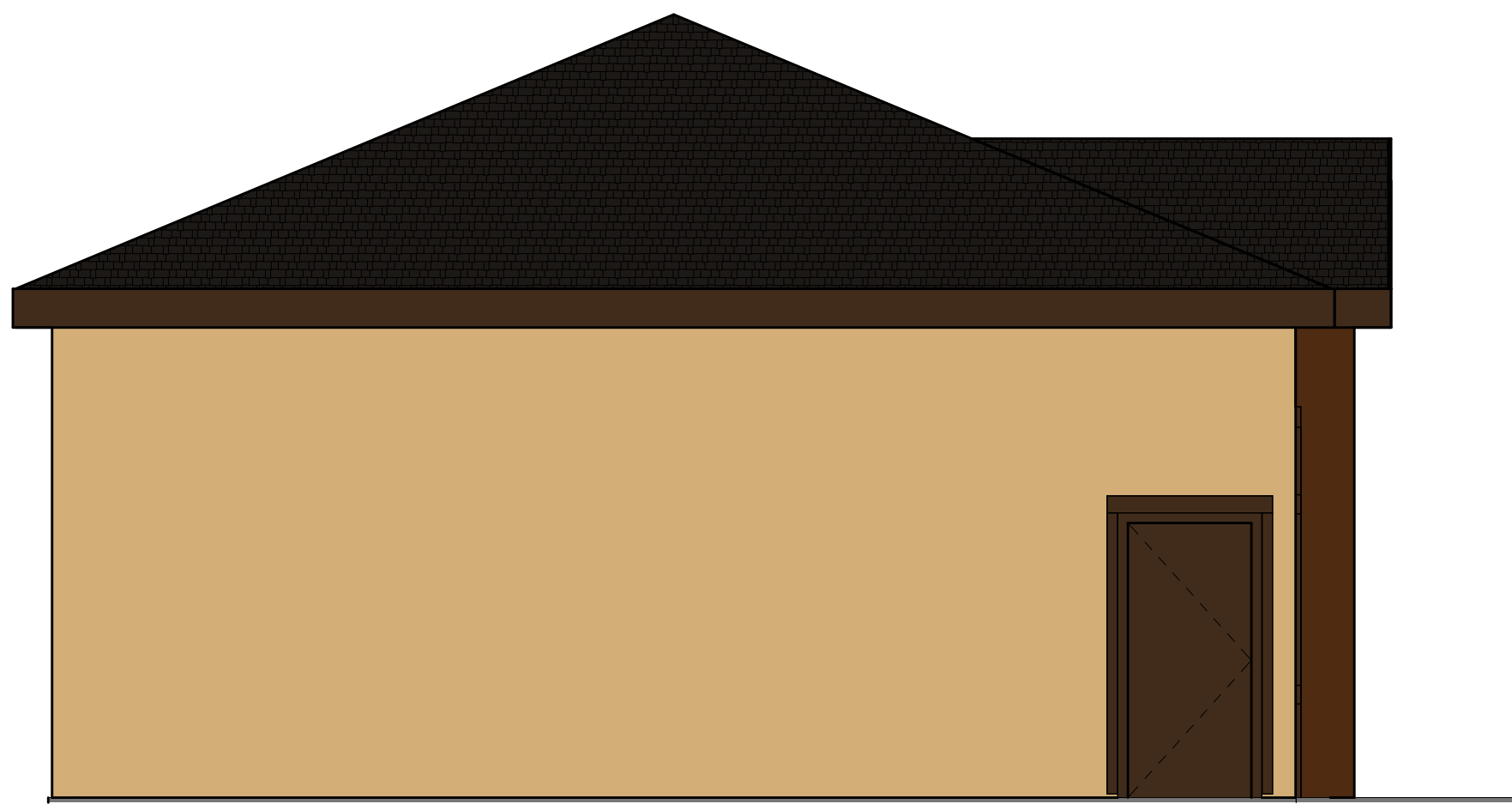




2 NORTH PRESENTATION
1/4" = 1'-0"



1 EAST PRESENTATION
1/4" = 1'-0"



4 WEST PRESENTATION
1/4" = 1'-0"



3 SOUTH PRESENTATION
1/4" = 1'-0"



CITY OF FERNLEY

City Council AGENDA REPORT

Meeting Date: March 15, 2023

REPORT TO: Mayor and City Council

REPORT FROM: April Homme

FINANCIAL IMPACT:

Yes:X

No:

CURRENTLY BUDGETED:

Yes:X

No:

FUND/ACCOUNT:

100.414.100

ACTION REQUESTED: Motion

AGENDA ITEM: (For Possible Action):

Discussion and Possible Action to approve the City Attorney, Brandi Jensen's past year's employment performance, and the City Council and Mayor's satisfaction with the City Attorney's employment performance including but not limited to:

- a. City Attorney Contract Compliance
- b. General Performance as the City Attorney
- c. Compensation

AGENDA ITEM BRIEF:

1. City Attorney, Brandi Jensen was hired on March 22, 2010.
2. As a Statutory Officer, the City Attorney is evaluated by the Mayor and City Council annually.
3. The City Attorney is currently at the top of the City Attorney wage scale.

RECOMMENDED MOTION:

"I move to approve the City Attorney, Brandi Jensen's evaluation."

"I move to approve a (?)% increase for the City Attorney, Brandi Jensen effective March 20, 2023."

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

BACKGROUND:

April 6, 2011 – City Attorney’s annual evaluation approved by City Council.
June 6, 2012 – City Attorney’s annual evaluation form revised and approved by City Council.
June 20, 2012 – City Attorney’s annual evaluation approved by City Council.
March 20, 2013 – City Attorney’s annual evaluation approved by City Council.
March 8, 2014 – City Attorney’s annual evaluation approved by City Council.
March 18, 2015 – City Attorney’s annual evaluation approved by City Council.
February 3, 2016 – City Attorney’s annual evaluation form revised and approved by City Council.
March 1, 2017 – City Attorney’s annual evaluation approved by City Council.
March 7, 2018 – City Attorney’s annual evaluation approved by City Council.
March 20, 2019 – City Attorney’s annual evaluation approved by City Council.
March 18, 2020 – City Attorney’s annual evaluation approved by City Council.
March 3, 2021 - City Attorney's annual evaluation approved by City Council.
March 2, 2022 - City Attorney's annual evaluation approved by City Council.
February 1, 2023 - City Attorney's revised job evaluation form approved by City Council.

RELEVANT LAWS, STATUTES, AND REGULATIONS:**FINANCIAL IMPLICATIONS:**

Pursuant to the Employment Services Agreement, Amendment A “Upon an average rating of satisfactory or higher, Jensen shall be entitled to the same increase given to other employees, **or** as otherwise agreed upon by Jensen and Council, until Jensen has reached the top of the currently approved salary range. The City Attorney has reached the top of the currently approved salary range. The City Attorney's wage scale tops out at \$66.24 per hour. On July 01, 2022 City Attorney received a 2% COLA increase. Therefore, the City Attorney's current wage is \$67.56.

ATTACHMENTS:

None



CITY OF FERNLEY

City Council AGENDA REPORT

Meeting Date: March 15, 2023

REPORT TO: Mayor and City Council

REPORT FROM: Trisha Conner, Assistant to the City Manager

FINANCIAL IMPACT:

Yes: X

No:

CURRENTLY BUDGETED:

Yes: X

No:

FUND/ACCOUNT:

220-480-810

ACTION REQUESTED: Motion

AGENDA ITEM: (For Possible Action):

Discussion and Possible Action to approve moving forward with local, state and federal grant funding requests and to commit \$4M in City funds for the construction of the Community Response & Resource Center project.

AGENDA ITEM BRIEF:

Staff will present funding options for the Community Response & Resource Center project. The City has \$12 million in ARPA funding, \$1 million from the transient lodging tax fund, and \$300,000 from the County (ARPA funds) thus far and has obligated \$2,916,902 for the development of the project. The Base Bid estimate is \$18,286,205; the Alt #A Early Learning Center estimate is \$3,604,829; and the Alt #B Gymnasium estimate is \$8,643,953. City staff recommends the City apply for multiple grant sources for the construction of the project. In addition, staff strongly recommends the City of Fernley commit and contribute city monies in the amount of no more than \$4 million as good faith to those we are sending applications to.

RECOMMENDED MOTION:

"I motion to approve and direct staff to move forward with local, state and federal grant funding requests and commit \$4M in City funds for the construction of the Community Response & Resource Center project."

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

Council may ask for more information.

**BACKGROUND:
PRIOR CITY COUNCIL ACTION**

- On February 15, 2023, City Council approved the Community Response & Resource Center project Design Development Submittal.
- On December 21, 2022, City Council approved the contract with Headway Transportation LLC to conduct a traffic study for the Community Response & Resource Center in the amount of \$22,000.00.
- On November 16, 2022, City Council approved the submission of the State CDBG application for the Community Response & Resource Center in the amount of \$750,000 to construction costs.
- On November 2, 2022, City Council approved the revised re-scoping, floor plan, schematic plan, and cost estimate for the Community Response & Resource Center.
- On October 5, 2022, City Council tabled the decision regarding the revised schematic design and cost estimates of the Community Response & Resource Center. Council directed staff to report back on November 2, 2022, and inform council why the workgroup discussion were made regarding the revised schematic design. The council also appointed two council members to the CRRC workgroup to discuss layout options.
- On October 5, 2022, City Council approved a contract between the City of Fernley and Resource Concepts, Inc. for environmental consulting services for the CRRC project in the amount of \$25,000.00.
- On July 7, 2022, City Council approved the schematic design and cost estimate of the Community Response & Resource Center. The CRRC, as presented on July 7th, was a single story 56,000 gsf facility that consisted of two separate structures at a total base bid construction cost of \$38,491,547.00.
- On July 7, 2022, City Council approved the Owner-Construction Manager At Risk Pre-Construction agreement between the City of Fernley and Core Construction in the amount of \$94,500.00.
- On June 15, 2022, City Council approved the Lyon County and City of Fernley Subrecipient ARPA Agreement in the amount of \$300,00 for the construction of the Community Response & Resource Center. On April 14, 2022, at the Lyon County Board of Commissioners meeting, the CRRC workgroup presented the project and requested ARPA funding. The Lyon County Board of Commissioners graciously awarded ARPA funds to the City of Fernley in the amount of \$350,000 for the CRRC project. On May 23, 2022, the Lyon County Board of Commissioners revisited their ARPA allocations and reduced the subaward amount to \$300,000 for the CRRC project.
- On June 15, 2022, City Council approved the Letter of Intent to a lease agreement between the Boys & Girls Club of Truckee Meadows to operate and maintain sections of the Community Response & Resource Center once constructed. This is in part due to the leadership, and the Boys & Girls Club experience of operating and maintaining facilities and programs like the CRRC. Under this agreement, the Boys & Girls Club would operate the daycare, afterschool programming, kitchen, cafeteria and gym. This letter of intent is critical to project funding opportunities.
- On February 16, 2022, City Council approved the contract for the Owners Representative Construction Manager as Agent contract with Cumming Management Group. This contract is to ensure there is a person/firm who represents the City and focuses on evaluating the project from the City's perspective beginning at the earliest stages of planning and continuing through occupancy. At the same meeting, the Council also approved staff to enter into contract negotiations with the selected CMAR for reconstruction services for the CRRC.
- On January 19, 2022, City Council approved the programming and services that will be housed in the CRRC. The scope of program and services must be ARPA eligible due to the use of ARPA monies to fund the development of the project.
- On October 20, 2021, City Council approved the contract with TSK Architects for the architectural engineering services for the Community Response & Resource Center project. The scope of work, among other items, includes the Pre-Design Services/Concepts Update, Schematic Design, and Design

Development.

- On August 4, 2021, City Council approved the American Rescue Plan Act spending plan which included \$12,000,000 for the development of the Community Response & Resource Center project.

BACKGROUND

The City of Fernley Community Response & Resource Center is based on a need to better serve the residents of Fernley. City of Fernley leadership foresaw the potential of community growth and developed the Fernley Comprehensive Master Plan in 2001 with an update in 2005. It was this Master Plan that initially identified the property adjacent to the historic Train Depot as an ideal location for a multipurpose center. Fernley has grown significantly since incorporation in 2001, with a population of approximately 8,500 to just under 23,000 in the 2020 Census. In 2017, the City of Fernley purchased approximately 8.5 acres east of the existing City Hall and south of the historic train station using transient lodging tax funds. Unfortunately, the land purchase exhausted most of the money saved for construction of a resource center. As intended, in collaboration with project partners Lyon County, the Boys & Girls Club of Truckee Meadows, and the Fernley Community Foundation, this land purchase will be the future site of a new resource center. The project has the potential to immediately and tangibly impact the lives and well-being of the citizens of Fernley. Utilizing the historic Train Depot as an anchor of the campus as well as the recently constructed Lyon County Senior Center and Human Services administration offices, the addition of the Community Response & Resource Center will develop this campus into a hub for resources for all ages for generations to come.

The City of Fernley 2021-2026 Strategic Plan, Livable Community Goal 2.2 is to Develop the Community Response & Resource Center. Established strategic goals and long-range plans are implemented and incorporated into budgets and work plans to realize the vision of the community. As the Community Response & Resource Center project develops from concept to construction documents, we must evaluate and move forward with funding options to complete the construction of the facility.

As of February 15, 2023, the project Design Development and Design Development Cost Estimate are complete. Moving forward from the Design Development, the project team is working on the Construction/Guaranteed Maximum Price (GMP) Documents beginning February 16, 2023, with a projected completion date of June 1, 2023. The construction documents will be submitted to the City of Fernley for initial plan review in June 2023. The project team will incorporate review comments and re-submit the plan for final plan review, roughly in August-September 2023. The expected date to receive the building permits is October 2023. Concurrently with permitting, the Bidding/GMP will begin, June 5, 2023, thru November 16, 2023, and includes subcontractor prequalification, issuance of the RFP to qualified subcontractors, and subcontractor bidding of no less than 21 days. The subcontractor bidding includes bid opening, site visits and/or preproposal meeting, request for proposal deadline date, issuance of final addendum date, bid due date and bid opening. Thereafter, subcontractor interviews will be conducted, then the GMP will be developed. Developing the GMP includes the 1% trade listing submission to the City and the draft submission of the GMP. The GMP is due to the city of Fernley in Oct 2023 and will be presented to City Council in November 2023 for approval.

The GMP is basically the construction contract to build the CRRC, whether this agreement is for the construction of the Base Bid only, Base Bid plus Alt #A or Base Bid plus Alt #A and Alt #B. The Base Bid/Youth Services estimate is \$18,286,205; the Alt #A Early Learning Center estimate is \$3,604,829; and the Alt #B Gymnasium estimate is \$8,643,953. The total construction cost of the project is \$30,534,987. The City has \$12 million in ARPA funding, \$1 million from the transient lodging tax fund, and \$300,000 from the County (ARPA funds) thus far and has obligated \$2,916,902 for the development of the project.

- Cost estimate for Phase 1 - Base Bid/Youth Services only \$18,286,205.

- The project funding gap for the Base Bid/Youth Services is \$7,903,107.
- Cost estimate for Phase 2 - Alt #A/Early Learning Center only \$3,604,829.
- The project funding gap for Alt #A/Early Learning Center is \$3,604,829.
- Cost estimate for Phase 3 - Alt #B/Gymnasium only \$8,643,953.
- The project funding gap for Alt #B/Gymnasium is \$8,643,953.
- **Total project construction cost \$30,534,987**
- **Total available funds \$10,383,098**
- **Total Project Funding Gap \$20,151,889.**

Pending Project Grant Funding

On November 16, 2022, City Council approved staff to submit a grant application for the State CDBG program in the amount of \$750,000 for construction costs of the Community Response & Resource Center. This grant application was submitted by the deadline of February 17, 2023. If the project is eligible, staff will present the project to the CDBG Advisory Committee in mid-March 2023. Applicants will be notified late March or early April 2023 if the project is allocated funding. Staff will bring back the funding agreement to Council for approval if the project is approved for CDBG funding.

PROJECT FUNDING OPTIONS

Community Project Funding and Congressional Directed Spending, State ARPA, and Local Grant Funding

Staff is working with the City's state government affairs consultant, Flynn Guidici, to examine and determine if the project is eligible for State of Nevada ARPA funding. Flynn Guidici has and will set up meetings with state offices to discuss the project, the project needs, and if the project is eligible for available State ARPA funding. The City will also work to put together applications for local grant funding for the construction of the project. Staff is asking Council for approval to move forward with these applications.

The City of Fernley intends to apply for Community Project Funding (CPF) and Congressional Directed Spending (CDS) for the Community Response & Resource Center project and has contracted with the Porter Group to assist staff with the process. The Porter Group, the City's federal legislative consultant, is working with staff and the project team to develop applications necessary to apply for CPF and CDS funding. There is only a one-month window, from mid-February to mid-March, to prepare these applications and submit them. Porter Group will recommend which CPF and CDS funding grants the CRRC qualifies for. The Porter group has also been setting up meetings with congressional offices to discuss the projects and determine the amount to apply for. Staff is asking Council for approval to move forward with the submission of the applications and the amounts recommended by Porter Group and the congressional offices. The City of Fernley will be notified in the summer of 2023 if awarded or not awarded CPF and/or CDS funding. The City can apply again in 2024 if the same funding is available. **Please note, staff has learned that certain federal funds will require a 15% match of the total project cost in non-federal funds. 15% of \$30M is \$4.5M.

There may be a funding gap for Phases 1 and 2, so for good faith and to meet any matching requirements, staff asks City Council to commit up to \$4M in funding for the CRRC given the early learning center is the money maker.

Use General Fund Savings, Lodging Tax & Possible Financing for the Project

1) Council has the option to include funds in the annual budgets for fiscal years 2024 and 2025 and commit them for the construction of the building. Committed funds plus any budget savings at the end of the '23, '24 and '25 fiscal years could be committed for the construction of the CRRC should the City need it. There is currently \$2 million dollars of existing general fund reserves that could be committed for the project now. These monies would need to be recommitted from roads to the CRRC, but funds would not be expended until FY 2025 if they are needed.

2) Council has the option of also using Lodging Tax to assist with funding the CRRC. Council has already committed \$1M toward construction of the building if it is needed. It is estimated that by the end of FY '25, the lodging tax fund may have approximately \$800-900K in additional funds saved, which could be expended for the CRRC.

Medium-Term Financing

The City has the option to enter into financing arrangements. The most advantageous external arrangements at this time include bank financing of 10 years or less. At this point in time a \$4M loan for 10 years will cost \$505,515 per year. The City would not need to enter into such an arrangement until 2025 when it has been determined whether the City has accumulated all the funding needed for the CRRC. There will be costs associated with hiring the city's financial consultant as well as loan fees.

Enterprise Fund Loan Using Medium Term Financing

The city has the capability of using its own assets while also paying itself back. In other words, the City has the option to borrow from the water and/or sewer funds using medium-term financing per NRS 354.613. If the money borrowed is not repaid in full in five years, the committee on local government finance must be notified. This option saves bank costs. The City could use general fund and TLT revenue to pay back the loan. Again, the City would not need to enter into such an arrangement until FY 2025 when it has been determined whether the City has accumulated all the funding needed for the CRRC.

NRS 354.613 Enterprise funds: Loan or transfer of money in or associated with fund; increase in amount of fee imposed for purpose of fund; compliance reports; remedy for violation; regulations; applicability; plan to eliminate certain transfers from fund. [Effective through June 30, 2024.]

1. Except as otherwise provided in this section and NRS 354.59894, the governing body of a local government may, on or after July 1, 2011, loan or transfer money from an enterprise fund, money collected from fees imposed for the purpose for which an enterprise fund was created or any income or interest earned on money in an enterprise fund only if the loan or transfer is made:

(a) In accordance with a medium-term obligation issued by the recipient in compliance with the provisions of chapter 350 of NRS, the loan or transfer is proposed to be made and the governing body approves the loan or transfer under a nonconsent item that is separately listed on the agenda for a regular meeting of the governing body, and:

(1) The money is repaid in full to the enterprise fund within 5 years; or

(2) If the recipient will be unable to repay the money in full to the enterprise fund within 5 years, the recipient notifies the Committee on Local Government Finance of:

(I) The total amount of the loan or transfer;

(II) The purpose of the loan or transfer;

(III) The date of the loan or transfer; and

(IV) The estimated date that the money will be repaid in full to the enterprise fund;

(b) To pay the expenses related to the purpose for which the enterprise fund was created;

(c) For a cost allocation for employees, equipment or other resources related to the purpose of the enterprise fund which is approved by the governing body under a nonconsent item that is separately listed on the agenda for a regular meeting of the governing body; or

(d) Upon the dissolution of the enterprise fund.

Upon buildout of Phase 1 and 2 in 2025, should the City have accumulated all that is needed for the CRRC, City Council may recommit funds back to roads or use them for future phases. In any case, the City would continue to seek outside funding for the remaining phases of the project.

Staff Recommendations

Staff recommends Council approve funding sources to include local, state and federal grant funding opportunities and to approve a blanket commitment of at least \$4M in City funds as not all funding requests may come to fruition. City staff will start doing what is necessary to save and commit the funding for the CRRRC. Funding community development can be complex and requires both patience and adaptability, as funding sources not initially considered might be necessary to ensure the project is fully funded. In addition, it is necessary to show good faith to those we are requesting funds from. It shows the City is determined and committed to the completion of this project.

RELEVANT LAWS, STATUTES, AND REGULATIONS:

NRS 354.613 - Enterprise Fund loan
2 CFR Part 200, Section 601 and 602 of the Social Security Act

FINANCIAL IMPLICATIONS:

The council's decision on whether to move forward with the described project funding options or go in a different direction will impact the funding of the construction of the Community Response & Resource Center project. In addition, the City of Fernley must comply with the Department of Treasury 2 CFR Part 200, Section 601 and 602 of the Social Security Act. American Rescue Act funds may be used to cover eligible costs incurred during the period that begins March 3, 2021, and ends on December 31, 2024, as long as the award funds for the obligations incurred by December 31, 2024 are expended by December 31, 2026. Any funds not expended by December 31, 2026 to cover such obligation must be returned.

ATTACHMENTS:

1. Fernley CRRRC - DD Estimate 2.10.23 v2
2. CRRRC Funding

City of Fernley

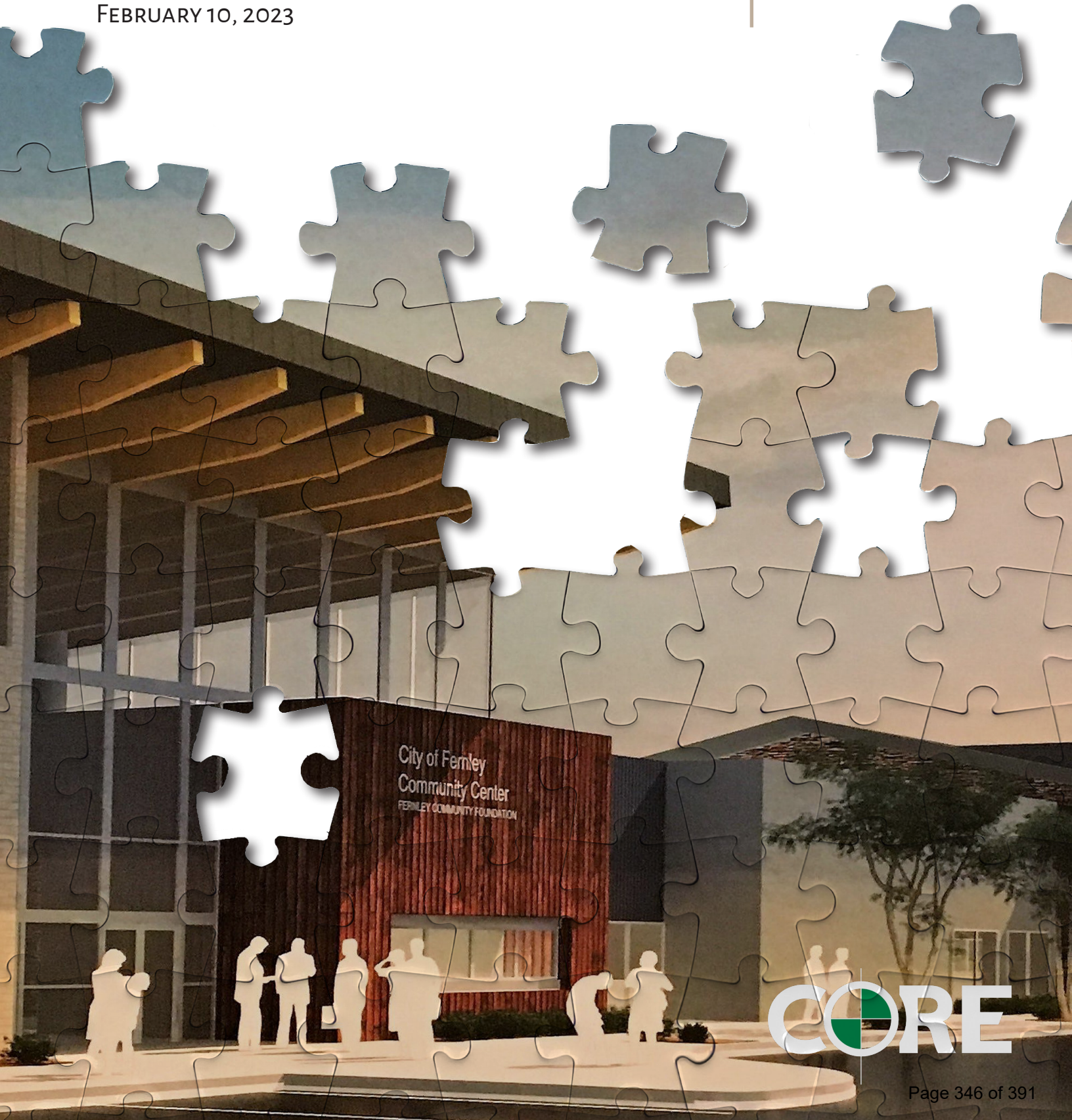
COMMUNITY RESPONSE AND RESOURCE CENTER

DESIGN DEVELOPMENT ESTIMATE

FEBRUARY 10, 2023

Table of Contents:

1. Estimate
2. Basis of Estimate
3. Schedule
4. Logistics

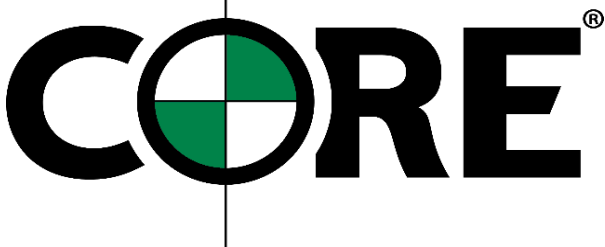


CORE

7

Estimate





City of Fernley Community Response & Resource Center

Design Development Cost Estimate, 02/10/2023

LOCATION: Fernley, NV

ARCHITECT: TSK Architects

#	Description		Base Bid Estimate	ADD ALTERNATES	
GENERAL			\$292,825	ALT #A Early Childhood Education Center	ALT #B Gymnasium
GEN1	Temporary Site Construction Requirements		\$137,425	\$63,488	\$73,987
GEN2	Temporary Building Construction Requirements		\$155,400	\$0	\$0
DEMOLITION / OFF-SITE INFRASTRUCTURE			\$70,596	\$63,488	\$73,987
3	Selective Demolition		\$70,596	\$0	\$0
SITE WORK (ROUGH)			\$2,337,324	\$49,774	\$213,734
7	Horizontal Survey & Staking		\$41,696	\$2,750	\$5,500
8	Site Clearing, Demo, and Earthwork		\$1,018,942	\$47,024	\$166,949
9	Utilities		\$671,939	\$0	\$18,820
10	Dust Control		\$87,041	\$0	\$0
11	SWPPP / Erosion Control		\$28,142	\$0	\$0
12	Asphalt Paving		\$401,369	\$0	\$22,466
13	Construction Waste Management		\$88,196	\$0	\$0
SITE WORK (FINISH)			\$1,085,322	\$321,155	\$66,560
14	Site Signage, Striping and Parking Accessories		\$37,775	\$0	-\$731
15	Landscaping & Irrigation		\$526,374	-\$54,213	\$32,484
16	Fencing and Gates		\$161,050	\$59,922	\$0
17	Play Area Surfacing	Alternate A	\$0	\$85,446	\$0
18	Fabric Shade Structure	Alternate A	\$0	\$100,000	\$0
21	Playground Equipment	Alternate A	\$0	\$130,000	\$0
23	Site Concrete		\$327,108	\$0	\$34,807
24	Site Masonry		\$33,015	\$0	\$0
STRUCTURE			\$1,939,074	\$480,933	\$1,677,199
27	Structural Layout & Coordination		\$27,543	\$7,874	\$18,488
29	Building Concrete		\$316,068	\$84,448	\$314,264
30	Structural Masonry		\$1,010,878	\$186,942	\$411,251
32	Structural Metals		\$455,271	\$152,995	\$859,824
33	Ornamental & Misc. Metals		\$26,330	\$6,176	\$18,876
35	Rough Carpentry		\$102,984	\$42,498	\$54,497
ENCLOSURE			\$1,244,906	\$432,353	\$1,076,129
37	Waterproofing & Dampproofing		\$15,894	\$4,637	\$11,836
38	Air/Vapor & moisture Barriers		\$34,029	\$13,032	\$44,082
39	Caulking and Sealants		\$29,139	\$8,501	\$21,699
43	Thermal and Sound Insulation		\$116,372	\$34,331	\$66,778
44	Membrane Roofing		\$254,682	\$26,332	\$349,909
45	Metal Roofing		\$312,130	\$171,200	\$38,875
46	Wood Rainscreen Siding		\$108,680	\$60,320	\$229,775
47	Metal Panel Soffit & Siding		\$115,995	\$28,600	\$44,715
48	Masonry Veneer	Alternate B	\$0	\$0	\$31,900
50	Exterior Aluminum, Glass and Glazing		\$257,985	\$85,400	\$236,560
INTERIOR FINISHES			\$2,254,001	\$539,336	\$932,794
55	Interior Layout & Coordination		\$17,660	\$5,152	\$13,151
56	Doors, Frames and Hardware		\$263,300	\$63,200	\$98,200
58	Interior Aluminum, Glass and Glazing		\$102,950	\$37,735	\$0
59	Finish Carpentry / Millwork		\$118,200	\$85,600	\$0
61	Metal Studs, Drywall, and Paint		\$728,695	\$207,224	\$347,920
62	Acoustical Ceiling Treatment		\$335,507	\$40,084	\$6,688
63	Acoustical & Wood Wall Finishes		\$249,560	\$0	\$49,200
64	Tile Walls		\$99,808	\$18,963	\$26,270
65	Carpet and Resilient Flooring		\$48,760	\$38,450	\$6,416
66	Athletic Gym Flooring	Alternate B	\$0	\$0	\$321,024
67	Epoxy & Fluid-Applied Flooring		\$115,722	\$9,036	\$9,522
68	Concrete Finishing		\$108,664	\$9,925	\$12,487
70	Progressive & Final Clean Requirements		\$65,176	\$23,967	\$41,916
SPECIALTIES			\$109,999	\$46,698	\$70,523
71	Building Signage		\$12,599	\$8,173	\$47,723
72	Wall and Door Protection		\$38,900	\$16,625	\$1,500
73	Toilet, Bath and Laundry Accessories		\$45,000	\$13,500	\$19,500
74	Fire Protection Specialties		\$2,700	\$900	\$1,800
77	Visual Display Boards		\$10,800	\$7,500	\$0
EQUIPMENT			\$811,983	\$54,465	\$362,438
84	Transfer Kitchen Equipment	Alternate A	\$0	\$51,300	\$0
85	Commercial Kitchen Equipment		\$781,770	\$0	\$0
87	Gymnasium Equipment	Alternate B	\$0	\$0	\$165,730
89	Window Blinds and Shades		\$12,365	\$3,165	\$3,860
90	Telescoping Seating	Alternate B	\$0	\$0	\$175,000
91	Projectors & Projection Screens		\$17,848	\$0	\$17,848
MEP SYSTEMS			\$2,432,675	\$661,432	\$1,514,444
98	Fire Sprinkler Systems		\$88,300	\$25,760	\$65,755
99	Plumbing Systems		\$402,545	\$154,579	\$194,302
100	HVAC Systems		\$765,625	\$210,355	\$526,040
101	Building Controls		\$123,620	\$36,064	\$92,057
102	Test & Balance		\$14,128	\$4,122	\$10,521
103	Temporary Conditioning Requirements		\$13,245	\$3,864	\$9,863
104	Electrical, Low Voltage, & Fire Alarm Systems		\$1,025,212	\$226,688	\$615,906

Subtotal		\$12,578,703	\$2,649,633	\$5,987,807
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	CONTINGENCIES & ALLOWANCES	SUB TOTAL	SUB TOTAL	SUB TOTAL
8.00%	Design & Estimating Contingency	\$1,006,297	\$211,971	\$479,025
2.50%	Contractor Construction Contingency	\$314,468	\$66,241	\$149,695
5.00%	Owner Contingency	\$628,936	\$132,482	\$299,390

Subtotal		\$14,528,404	\$3,060,326	\$6,915,917
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	GENERAL CONDITIONS	SUB TOTAL	SUB TOTAL	SUB TOTAL
LS	General Conditions	\$1,399,047	\$7,953	\$428,016
LS	Warranty Service	\$73,145	\$14,419	\$34,576

Subtotal		\$16,000,596	\$3,082,698	\$7,378,509
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RATE	INSURANCE, BONDS, AND BUILDERS RISK	SUB TOTAL	SUB TOTAL	SUB TOTAL
1.00%	General Liability	\$182,863	\$36,049	\$86,440
1.38%	Subcontractor Default Insurance	\$200,492	\$42,233	\$101,824
0.67%	Payment and Performance Bond	\$122,518	\$24,153	\$57,915
LS	Builders Risk Insurance	\$44,801	\$9,031	\$34,542

Subtotal		\$16,551,270	\$3,194,165	\$7,659,230
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RATE	CONTRACTOR'S FEE	SUB TOTAL	SUB TOTAL	SUB TOTAL
4.15%	Construction Manager At Risk Fee	\$728,639	\$143,639	\$344,430

Subtotal		\$17,279,909	\$3,337,804	\$8,003,660
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		Current Base Bid	ALT #A Early Childhood Education Center	ALT #B Gymnasium
Current Estimate Total		\$17,279,909	\$3,337,804	\$8,003,660

	RECOMMENDED CONTINGENCIES & ALLOWANCES	SUB TOTAL	SUB TOTAL	SUB TOTAL
8.00%	Recommended Market & Escalation Contingency	\$1,006,296	\$267,024	\$640,293

		Projected Base Bid	ALT #A Early Childhood Education Center	ALT #B Gymnasium
Projected Estimate Total		\$18,286,205	\$3,604,829	\$8,643,953

DESCRIPTION	QUANTITY	UNIT COST	TOTAL	BREAKOUTS & ALTERNATES	COMMENTS
GROSS BUILDING AREA			35,963		
Building Area Breakdown					
Base Bid	17,660	SF			
Early Childhood Education Center Alt A	5,152	SF			
Gymnasium Alt B	13,151	SF			
Total (GSF)	35,963	SF			
GENERAL			292,825		
GEN1 Temporary Site Construction Requirements			137,425		
Temp. Construction Fence	2,870	LF	16.00	45,920	Base Bid Sitework
Lockable Access Gate	2	PR	600.00	1,200	Base Bid Sitework
Public Safety / Site Security Signage	10	EA	100.00	980	Base Bid Sitework
Protective Clothing & Equipment	30	EA	100.00	3,000	Base Bid Sitework
First Aid Supplies	1	LS	500.00	500	Base Bid Sitework
Construction Storage Units				0	Base Bid Sitework
Mobilization	3	EA	250.00	750	Base Bid Sitework
Monthly Rental	14	MO	600.00	8,400	Base Bid Sitework
Construction Toilets				0	Base Bid Sitework
Mobilization	6	EA	250.00	1,500	Base Bid Sitework
Monthly Rental	14	MO	1,050.00	14,700	Base Bid Sitework
Additional Service / Cleanings	61	WK	100.00	6,066	Base Bid Sitework
Wash Stations				0	Base Bid Sitework
Mobilization	6	EA	200.00	1,200	Base Bid Sitework
Monthly Rental	14	MO	930.00	13,020	Base Bid Sitework
Street Sweeping	30	DAY	850.00	25,781	Base Bid Sitework
Snow Removal	15	DAY	950.00	14,407	Base Bid Sitework
				0	
				0	
GEN2 Temporary Building Construction Requirements			155,400		
Base Bid				0	
Temporary Opening Protection	17,660	GSF	0.30	5,298	Base Bid Building
Temporary Finish Protection	17,660	GSF	0.50	8,830	Base Bid Building
Finish Masonry Protection	17,660	GSF	0.20	3,532	Base Bid Building
Mockups	1	LS	10,000.00	10,000	Base Bid Building
Temporary Power Bills	14	MO	1,000.00	14,000	Base Bid Building
Forklift Rental	20	WK	180.00	3,623	Base Bid Building
Operator Allowance (10 HR/WK)	201	HR	95.00	19,124	Base Bid Building
1/2 Time Coordination Labor	30	WK	3,000.00	90,993	Base Bid Building
				0	
Early Childhood Education Center Alt A			See Alternate / 0	ALT #A Early Childhood Education Center	
Temporary Opening Protection	5,152	GSF	0.30	See Alternate / 1545.6	ALT #A Early Childhood Education Center
Temporary Finish Protection	5,152	GSF	0.50	See Alternate / 2576	ALT #A Early Childhood Education Center
Finish Masonry Protection	5,152	GSF	0.20	See Alternate / 1030.4	ALT #A Early Childhood Education Center
Mockups	1	LS	2,500.00	See Alternate / 2500	ALT #A Early Childhood Education Center
Forklift Rental	9	WK	180.00	See Alternate / 1647	ALT #A Early Childhood Education Center
Operator Allowance (10 HR/WK)	92	HR	95.00	See Alternate / 8692.5	ALT #A Early Childhood Education Center
1/2 Time Coordination Labor	15	WK	3,000.00	See Alternate / 45496.5	ALT #A Early Childhood Education Center
				0	
Gymnasium Alt B			See Alternate / 0	ALT #B Gymnasium	
Temporary Opening Protection	13,151	GSF	0.30	See Alternate / 3945.3	ALT #B Gymnasium
Temporary Finish Protection	13,151	GSF	0.50	See Alternate / 6575.5	ALT #B Gymnasium
Finish Masonry Protection	13,151	GSF	0.20	See Alternate / 2630.2	ALT #B Gymnasium
Mockups	1	LS	5,000.00	See Alternate / 5000	ALT #B Gymnasium
Forklift Rental	9	WK	180.00	See Alternate / 1647	ALT #B Gymnasium
Operator Allowance (10 HR/WK)	92	HR	95.00	See Alternate / 8692.5	ALT #B Gymnasium
1/2 Time Coordination Labor	15	WK	3,000.00	See Alternate / 45496.5	ALT #B Gymnasium
				0	
				0	
DEMOLITION / OFF-SITE INFRASTRUCTURE			70,596		
3 Selective Demolition			70,596		
Site Selective Demolition	5.19	ACRE		0	Base Bid Sitework
Demo Infiltration Basin	1,081	SF	1.00	1,081	Base Bid Sitework
Demo Landscape / Irrigation	9,133	SF	1.00	9,133	Base Bid Sitework
Demo Fencing & Gates	1,294	LF	5.00	6,470	Base Bid Sitework
Sawcut Ex Asphalt paving	1,556	LF	4.00	6,224	Base Bid Sitework
Demo Ex Asphalt paving	13,634	SF	2.00	27,268	Base Bid Sitework
Demo Ex Curb & Gutter	612	LF	2.00	1,224	Base Bid Sitework
Demo Ex PCC / Sidewalk paving	239	SF	2.00	478	Base Bid Sitework
Building Removal - Train Depot Shed	492	SF	25.00	12,300	Base Bid Sitework
Misc. Demolition & Haul Debris	1	LS	6,417.80	6,418	Base Bid Sitework
				0	
				0	
SITE WORK (ROUGH)			2,337,324		
7 Horizontal Survey & Staking			41,696		
Mobilization & Office Support / Calculations	1	LS	6,000.00	6,000	Base Bid Sitework
Restaking / Additional Mobs, Allowance of 25%	1	LS	7,139.18	7,139	Base Bid Sitework
Survey & Staking - Base Bid	5.19	ACRE	5,500.00	28,557	Base Bid Sitework
Survey & Staking - ELC	0.50	ACRE	5,500.00	See Alternate / 2750	ALT #A Early Childhood Education Center
Survey & Staking - Gym	1.00	ACRE	5,500.00	See Alternate / 5500	ALT #B Gymnasium
				0	
				0	
8 Site Clearing, Demo, and Earthwork			1,018,942		
Base Bid				0	

Design Development
Fernley CRRC

DESCRIPTION	QUANTITY	UNIT COST	TOTAL	BREAKOUTS & ALTERNATES	COMMENTS
Mobilization	1.00 LS	50,000.00	50,000	Base Bid Sitework	
Traffic Control			0	Base Bid Sitework	
Construction Water	5.19 ACRE	4,800.00	24,922	Base Bid Sitework	
Site Clear & Grub	5.19 ACRE	3,000.00	15,576	Base Bid Sitework	
Earthwork			0	Base Bid Sitework	
Scarify & Re-compact	226,169 SF	0.25	56,542	Base Bid Sitework	
Building Pad Cut to Fill	719 CY	18.00	12,951	Base Bid Sitework	
Import Structural Fill Material	1,332 CY	30.00	39,959	Base Bid Sitework	
Footing Excavation & Backfill	3,269 SF	16.00	52,309	Base Bid Sitework	
Building 2' Over-ex & Backfill	1,439 CY	24.00	34,535	Base Bid Sitework	
Vapor Barrier	17,660 SF	0.80	14,128	Base Bid Sitework	
MPE Trenching	250 LF	50.00	12,500	Base Bid Sitework	
Site Cut to Fill	4,631 CY	18.00	83,352	Base Bid Sitework	
Site 1' Over-ex & Backfill	5,309 CY	16.00	84,938	Base Bid Sitework	
Site Fine Grading	79,743 SF	0.50	39,871	Base Bid Sitework	
Type II			0	Base Bid Sitework	
DG/Gravel Access Roads	20,500 SF	1.95	39,975	Base Bid Sitework	
Building Pad, 6" Agg Base	17,660 SF	3.90	68,874	Base Bid Sitework	
Site Concrete, 4" Agg Base	32,764 SF	2.60	85,187	Base Bid Sitework	
AC Pavement Base, 4" Agg Base	113,662 SF	2.60	295,521	Base Bid Sitework	
			0	Base Bid Sitework	
Lois Ln. Improvements			0	Base Bid Sitework	
AC Pavement Base, 4" Agg. Base	3,000 SF	2.60	7,800	Base Bid Sitework	
			0		
Early Childhood Education Center Alt A			0		
Earthwork			0		
Building Pad Cut to Fill	382 CY	18.00	See Alternate / 6869.3333333333	ALT #A Early Childhood Education Center	
Footing Excavation	696 SF	15.00	See Alternate / 10440	ALT #A Early Childhood Education Center	
MPE Trenching	110 LF	50.00	See Alternate / 5500	ALT #A Early Childhood Education Center	
Vapor Barrier	5,152 SF	0.80	See Alternate / 4121.6	ALT #A Early Childhood Education Center	
Type II			0		
Building Pad, 6" Agg Base	5,152 SF	3.90	See Alternate / 20092.8	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
Earthwork			0		
Building Pad Cut to Fill	974 CY	18.00	See Alternate / 17534.6666666667	ALT #B Gymnasium	
Footing Excavation	4,786 SF	15.00	See Alternate / 71787.5	ALT #B Gymnasium	
MPE Trenching	45 LF	50.00	See Alternate / 2250	ALT #B Gymnasium	
Vapor Barrier	13,151 SF	0.80	See Alternate / 10520.8	ALT #B Gymnasium	
Type II			0		
Building Pad, 6" Agg Base	13,151 SF	3.90	See Alternate / 51288.9	ALT #B Gymnasium	
Deduct Site Base, 4" Agg Base	(13,151) SF	2.60	See Alternate / -34192.6	ALT #B Gymnasium	
Parking Add Concrete Base, 4" Agg Base	834 SF	2.60	See Alternate / 2168.4	ALT #B Gymnasium	
Parking Add Pavement Base, 4" Agg Base	17,535 SF	2.60	See Alternate / 45591	ALT #B Gymnasium	
			0		
			0		
9 Utilities			671,939		
Base Bid			0		
Utility Demolition			0		
Trench, Remove DW Pipe, & Backfill	100 LF	40.00	4,000	Base Bid Sitework	
Remove Fire Hydrant	1 EA	750.00	750	Base Bid Sitework	
Demo SDCO	4 EA	150.00	600	Base Bid Sitework	
Demo SD Infiltration Trench	90 LF	75.00	6,750	Base Bid Sitework	
			0		
Domestic & Fire Water System			0		
Connect to Existing Service	2 EA	4,500.00	9,000	Base Bid Sitework	
Fire Backflow	1 EA	55,000.00	55,000	Base Bid Sitework	
FDC	1 EA	4,000.00	4,000	Base Bid Sitework	
PIV	1 EA	5,500.00	5,500	Base Bid Sitework	
Relocated Fire Hydrant Assembly	1 EA	6,000.00	6,000	Base Bid Sitework	
Piping, Inc. Trench & Backfill			0	Base Bid Sitework	
4"	50 LF	85.00	4,250	Base Bid Sitework	
8"	78 LF	115.00	8,970	Base Bid Sitework	
Fire Riser Sweep Into Building	1 EA	5,250.00	5,250	Base Bid Sitework	
Irrigation Water			0	Base Bid Sitework	
Connect to Existing Service	1 EA	4,500.00	4,500	Base Bid Sitework	
Meter and Backflow	1 EA	20,000.00	20,000	Base Bid Sitework	
Piping, Inc. Trench & Backfill			0	Base Bid Sitework	
2"	80 LF	75.00	6,000	Base Bid Sitework	
Sanitary Sewer System			0	Base Bid Sitework	
Connect to Existing Service	1 EA	5,500.00	5,500	Base Bid Sitework	
1500 Gal Grease Interceptor	1 EA	16,500.00	16,500	Base Bid Sitework	
Manhole	1 EA	6,500.00	6,500	Base Bid Sitework	
Cleanout	6 EA	800.00	4,800	Base Bid Sitework	
Piping, Inc. Trench & Backfill			0	Base Bid Sitework	
3"	25 LF	98.00	2,450	Base Bid Sitework	
4"	117 LF	105.00	12,285	Base Bid Sitework	
Storm Water System			0	Base Bid Sitework	
Connect to Existing Service	1 EA	5,500.00	5,500	Base Bid Sitework	
Catch Basin	4 EA	2,500.00	10,000	Base Bid Sitework	
Area Drain	6 EA	1,500.00	9,000	Base Bid Sitework	
NDS Storm Drainage Trench Drain	225 LF	200.00	45,000	Base Bid Sitework	
NDS Storm Drainage Infiltration Basin	51 EA	2,500.00	127,500	Base Bid Sitework	
Manhole, Adjust to Grade	1 EA	4,000.00	4,000	Base Bid Sitework	
Manhole, New	1 EA	6,500.00	6,500	Base Bid Sitework	
Cleanout	6 EA	800.00	4,800	Base Bid Sitework	
Piping, Inc. Trench & Backfill			0	Base Bid Sitework	

**Design Development
Fernley CRRC**

DESCRIPTION	QUANTITY	UNIT COST	TOTAL	BREAKOUTS & ALTERNATES	COMMENTS
6"	160 LF	110.00	17,600	Base Bid Sitework	
8"	25 LF	115.00	2,875	Base Bid Sitework	
10"	180 LF	120.00	21,600	Base Bid Sitework	
15"	100 LF	150.00	15,000	Base Bid Sitework	
Natural Gas System			0	Base Bid Sitework	
Connect to Existing Service	1 EA	3,500.00	3,500	Base Bid Sitework	
Gas Meter & Seismic Valve - By Plumbing			0	Base Bid Sitework	
Trench & Backfill, Piping by Utility			0	Base Bid Sitework	
4"	100 LF	65.00	6,500	Base Bid Sitework	
Electrical Primary/Secondary			0	Base Bid Sitework	
Primary Power to Transformer			0	Base Bid Sitework	
Connect to Existing Service	1 EA	3,500.00	3,500	Base Bid Sitework	
Excavate Light Pole Bases	13 EA	500.00	6,500	Base Bid Sitework	
Transformer Pad	1 EA	5,000.00	5,000	Base Bid Sitework	
Pullbox	6 EA	2,750.00	16,500	Base Bid Sitework	
Conduits, Trench & Backfill			0	Base Bid Sitework	
1"	1,750 LF	45.00	78,750	Base Bid Sitework	
3"	50 LF	80.00	4,000	Base Bid Sitework	
Transformer - By Utility			0	Base Bid Sitework	
Conductors & Cable - By Utility			0	Base Bid Sitework	
Secondary Feed to Building			0	Base Bid Sitework	
Conduits, Trench & Backfill			0	Base Bid Sitework	
3"	150 LF	80.00	12,000	Base Bid Sitework	
Telecom Infrastructure			0	Base Bid Sitework	
Conduit, Trench & Backfill			0	Base Bid Sitework	
(1) 2"	20 LF	70.00	1,400	Base Bid Sitework	
(1) 4"	180 LF	80.00	14,400	Base Bid Sitework	
			0	Base Bid Sitework	
Lois Ln. Improvements			0	Base Bid Sitework	
Sanitary Sewer System			0	Base Bid Sitework	
Conect to Exisitng Service	1 EA	5,500.00	5,500	Base Bid Sitework	
Piping, Inc. Trench & Backfill			0	Base Bid Sitework	
4" SS	54 LF	92.00	4,968	Base Bid Sitework	
Domestic & Fire Water System			0	Base Bid Sitework	
Conect to Exisitng Service	3 EA	4,500.00	13,500	Base Bid Sitework	
2" DW Meter	1 EA	25,000.00	25,000	Base Bid Sitework	
New Fire Hydrant	1 EA	6,000.00	6,000	Base Bid Sitework	
Piping, Inc. Trench & Backfill			0	Base Bid Sitework	
4"	49 LF	94.50	4,631	Base Bid Sitework	
6"	22 LF	105.00	2,310	Base Bid Sitework	
			0		
Gymnasium Alt B			0		
Sanitary Sewer System			0		
Connect to Exisitng Service	1 EA	5,500.00	See Alternate / 5500	ALT #B Gymnasium	
Piping, Inc. Trench & Backfill			See Alternate / 0	ALT #B Gymnasium	
4"	64 LF	105.00	See Alternate / 6720	ALT #B Gymnasium	
Storm Water System			See Alternate / 0	ALT #B Gymnasium	
Piping, Inc. Trench & Backfill			See Alternate / 0	ALT #B Gymnasium	
6"	60 LF	110.00	See Alternate / 6600	ALT #B Gymnasium	
			0		
			0		
10 Dust Control			87,041		
Dust Control			0		
Plan and Permit	5.19 ACRE	250.00	1,298	Base Bid Sitework	
Trackout Pad	2 EA	3,500.00	7,000	Base Bid Sitework	
Water Truck	30 WK	750.00	22,286	Base Bid Sitework	
Water Truck Operator (20 Hr/WK)	594 HR	95.00	56,457	Base Bid Sitework	
			0		
			0		
11 SWPPP / Erosion Control			28,142		
Storm Water Prevention			0		
Plan and Permit	5.19 ACRE	250.00	1,298	Base Bid Sitework	
Silt Fence	2,000 LF	2.50	5,000	Base Bid Sitework	
Prevention Methods, Initial Setup	5 ACRE	2,050.00	10,644	Base Bid Sitework	
Prevention Methods, Maintenance	14 MO	800.00	11,200	Base Bid Sitework	
			0		
			0		
12 Asphalt Paving			401,369		
Base Bid			0		
AC Pavement, 3"	73,989 SF	3.15	233,065	Base Bid Sitework	
Outdoor Basketball Courts, 3"	10,403 SF	3.15	32,769	Base Bid Sitework	
AC Pavement, 4"	29,270 SF	4.20	122,934	Base Bid Sitework	
			0	Base Bid Sitework	
Lois Ln. Improvements			0	Base Bid Sitework	
AC Pavement, 4" Utility Patch-back	3,000 SF	4.20	12,600	Base Bid Sitework	
			0		
Gymnasium Alt B			0		
AC Pavement, 3"	17,535 SF	3.15	See Alternate / 55235.25	ALT #B Gymnasium	Added South Parking Lot Area
Deduct Outdoor Basketball Courts, 3"	(10,403) SF	3.15	See Alternate / -32769.45	ALT #B Gymnasium	
			0		
			0		
13 Construction Waste Management			88,196		
General Debris Dumpster Pull	52 EA	650.00	33,797	Base Bid Sitework	
Waste Diversion Dumpster Pull	26 EA	650.00	16,899	Base Bid Sitework	
Cleanup / Waste Management Labor	500 HR	75.00	37,500	Base Bid Sitework	
			0		

DESCRIPTION	QUANTITY	UNIT	COST	TOTAL	BREAKOUTS & ALTERNATES	COMMENTS
				0		
SITE WORK (FINISH)				1,085,322		
14 Site Signage, Striping and Parking Accessories				37,775		
Base Bid				0		
Post Mounted Signage	15	EA	400.00	6,000	Base Bid Sitework	
Paint & Striping				0	Base Bid Sitework	
Paint Curb	1,268	LF	5.00	6,338	Base Bid Sitework	
Linear Striping	3,510	LF	2.00	7,020	Base Bid Sitework	
Basketball Court Striping	2	EA	3,000.00	6,000	Base Bid Sitework	
Diagonal Striping	1,838	SF	3.00	5,514	Base Bid Sitework	
Stop Bar	3	EA	200.00	600	Base Bid Sitework	
Handicap Stall Striping	12	EA	65.00	780	Base Bid Sitework	
Handicap Stall Symbol	12	EA	300.00	3,600	Base Bid Sitework	
				0	Base Bid Sitework	
Lois Ln. Improvements				0		
Paint & Striping				0	Base Bid Sitework	
Linear Striping	282	LF	2.00	564	Base Bid Sitework	
Diagonal Striping	253	SF	3.00	759	Base Bid Sitework	
Handicap Stall Symbol	2	EA	300.00	600	Base Bid Sitework	
				0		
Gymnasium Alt B				0		
Deduct Basketball Court Striping	(2)	EA	3,000.00	See Alternate / -6000	ALT #B Gymnasium	
Parking Add Post Mounted Signage	2	EA	400.00	See Alternate / 800	ALT #B Gymnasium	
Parking Add Paint & Striping				0		
Paint Curb	352	LF	5.00	See Alternate / 1760	ALT #B Gymnasium	
Linear Striping	1,110	LF	2.00	See Alternate / 2220	ALT #B Gymnasium	
Diagonal Striping	163	SF	3.00	See Alternate / 489	ALT #B Gymnasium	
				0		
				0		
15 Landscaping & Irrigation				526,374		
Base Bid				0		
Mobilization	1	LS	60,000.00	60,000	Base Bid Sitework	
Turf Sod over Topsoil	12,100	SF	3.00	36,300	Base Bid Sitework	
Drip Irrigation System	79,743	SF	2.80	223,280	Base Bid Sitework	
Planting - Trees	82	EA	800.00	65,600	Base Bid Sitework	
Planting - Shrubs (5 gal)	459	EA	50.00	22,960	Base Bid Sitework	(8) per tree 70% 5 gal. / 30% 1 gal.
Planting - Shrubs (1 gal)	197	EA	30.00	5,904	Base Bid Sitework	(8) per tree 70% 5 gal. / 30% 1 gal.
Stabilized DG	6,190	SF	7.00	43,330	Base Bid Sitework	
River Rock	11,300	SF	2.50	28,250	Base Bid Sitework	
Rock Mulch	9,900	SF	1.50	14,850	Base Bid Sitework	
Boulders	22	EA	400.00	8,800	Base Bid Sitework	
Sensory Garden Headers	1,710	LF	10.00	17,100	Base Bid Sitework	Redwood / Railroad Ties
				0		
Early Childhood Education Center Alt A				0		
Deduct Drip Irrigation System	(4,373)	SF	2.80	See Alternate / -12243	ALT #A Early Childhood Education Center	
Deduct Planting - Trees	(16)	EA	800.00	See Alternate / -12800	ALT #A Early Childhood Education Center	
Deduct Planting - Shrubs (5 gal)	(90)	EA	50.00	See Alternate / -4480	ALT #A Early Childhood Education Center	
Deduct Planting - Shrubs (1 gal)	(38)	EA	30.00	See Alternate / -1152	ALT #A Early Childhood Education Center	
Deduct Stabilized DG	(1,548)	SF	7.00	See Alternate / -10832.5	ALT #A Early Childhood Education Center	
Deduct River Rock	(2,825)	SF	2.50	See Alternate / -7062.5	ALT #A Early Childhood Education Center	
Deduct Sensory Garden Headers	(564)	LF	10.00	See Alternate / -5643	ALT #A Early Childhood Education Center	
				0		
Gymnasium Alt B				0		
Parking Lot Add				0		
Drip Irrigation System	2,580.00	SF	2.80	See Alternate / 7224	ALT #B Gymnasium	
Planting - Trees	9	EA	800.00	See Alternate / 7200	ALT #B Gymnasium	
Stabilized DG	2,580	SF	7.00	See Alternate / 18060	ALT #B Gymnasium	
				0		
				0		
16 Fencing and Gates				161,050		
Base Bid				0		
Fencing				0		
6', Decorative	565	LF	250.00	141,250	Base Bid Sitework	
Gates				0	Base Bid Sitework	
Man-gate, 3' x 6'	3	EA	1,386.00	4,158	Base Bid Sitework	
Vehicular-gate, 20' x 6'	1	PR	5,544.00	5,544	Base Bid Sitework	
Electrical Enclosure, 17' x 6', Steel	1	PR	4,590.00	4,590	Base Bid Sitework	
Trash Enclosure, 17' x 8', Steel	1	PR	5,508.00	5,508	Base Bid Sitework	
				0		
Early Childhood Education Center Alt A				0		
Fencing				0		
4', Decorative	381	LF	150.00	See Alternate / 57150	ALT #A Early Childhood Education Center	
Gates				See Alternate / 0	ALT #A Early Childhood Education Center	
Man-gate, 3' x 6'	2	EA	1,386.00	See Alternate / 2772	ALT #A Early Childhood Education Center	
				0		
				0		
17 Play Area Surfacing				0		
Early Childhood Education Center Alt A				0		
Playground Surfacing	4,747	SF	18.00	See Alternate / 85446	ALT #A Early Childhood Education Center	
				0		
				0		
18 Fabric Shade Structure				0		
Early Childhood Education Center Alt A				0		
Playground Shade Structure	2	EA	50,000.00	See Alternate / 100000	ALT #A Early Childhood Education Center	
				0		

DESCRIPTION	QUANTITY	UNIT COST	TOTAL	BREAKOUTS & ALTERNATES	COMMENTS
			0		
21 Playground Equipment			0		
Early Childhood Education Center Alt A			0		
Playground Equipment, Pre-K	2	EA	45,000.00	See Alternate / 90000	ALT #A Early Childhood Education Center
Playground Equipment, Daycare	2	EA	20,000.00	See Alternate / 40000	ALT #A Early Childhood Education Center
			0		
			0		
23 Site Concrete			327,108		
Base Bid			0		
Driveway Entrance	2	EA	5,000.00	10,000	Base Bid Sitework
A Curb	2,535	LF	25.00	63,375	Base Bid Sitework
L Curb	323	LF	35.00	11,305	Base Bid Sitework
Valley Gutter	235	LF	50.00	11,767	Base Bid Sitework
Sidewalk	29,671	SF	6.50	192,862	Base Bid Sitework
ADA Ramp w/ Truncated Domes	6	EA	800.00	4,800	Base Bid Sitework
Light Pole Foundations	13	EA	2,000.00	26,000	Base Bid Sitework
Standard Bollard Foundations	4	EA	500.00	2,000	Base Bid Sitework
LED Bollard Foundations	5	EA	1,000.00	5,000	Base Bid Sitework
			0		
Gymnasium Alt B			0		
A Curb	704	LF	35.00	See Alternate / 24640	ALT #B Gymnasium
Valley Gutter	43	LF	50.00	See Alternate / 2166.6666666667	ALT #B Gymnasium
Light Pole Foundations	4	EA	2,000.00	See Alternate / 8000	ALT #B Gymnasium
			0		
			0		
24 Site Masonry			33,015		
Site Enclosures (Trash Enclosure)			0		
8" CMU, Precision/Split Face, & Stem Wall	309	SF	37.00	11,415	Base Bid Sitework
Reinforcing	309	SF	5.00	1,543	Base Bid Sitework
CMU Precast Cap, 2"	28	LF	45.00	1,260	Base Bid Sitework
			0		
Site Enclosures (Electrical Enclosure)			0		
8" CMU, Precision/Split Face, & Stem Wall	409	SF	37.00	15,133	Base Bid Sitework
Reinforcing	409	SF	5.00	2,045	Base Bid Sitework
CMU Precast Cap, 2"	36	LF	45.00	1,620	Base Bid Sitework
			0		
			0		
STRUCTURE			1,939,074		
27 Structural Layout & Coordination			27,543		
Base Bid			0		
Underslab Utility Layout	1,000	LF	1.00	1,000	Base Bid Building
Foundation Layout	17,660	SF	0.25	4,415	Base Bid Building
Concrete Layout	3,173	LF	2.50	7,933	Base Bid Building
Masonry Layout	1,073	LF	5.00	5,365	Base Bid Building
Steel Layout	17,660	SF	0.50	8,830	Base Bid Building
			0		
Early Childhood Education Center Alt A			0		
Underslab Utility Layout	1,000	LF	1.00	See Alternate / 1000	ALT #A Early Childhood Education Center
Foundation Layout	5,152	SF	0.25	See Alternate / 1288	ALT #A Early Childhood Education Center
Concrete Layout	648	LF	2.50	See Alternate / 1620	ALT #A Early Childhood Education Center
Masonry Layout	278	LF	5.00	See Alternate / 1390	ALT #A Early Childhood Education Center
Steel Layout	5,152	SF	0.50	See Alternate / 2576	ALT #A Early Childhood Education Center
			0		
Gymnasium Alt B			0		
Underslab Utility Layout	1,000	LF	1.00	See Alternate / 1000	ALT #B Gymnasium
Foundation Layout	13,151	SF	0.25	See Alternate / 3287.75	ALT #B Gymnasium
Concrete Layout	2,458	LF	2.50	See Alternate / 6144.5833333333	ALT #B Gymnasium
Masonry Layout	296	LF	5.00	See Alternate / 1480	ALT #B Gymnasium
Steel Layout	13,151	SF	0.50	See Alternate / 6575.5	ALT #B Gymnasium
			0		
			0		
29 Building Concrete			316,068		
Base Bid			0		
Continuous Footings	118	CY	900.00	105,778	Base Bid Building
Spread Footings	3.6	CY	900.00	3,200	Base Bid Building
Slab on Grade, 5"	17,660	SF	10.00	176,600	Base Bid Building
Sinak VC-5	17,660	SF	1.50	26,490	Base Bid Building
Equipment Pads	200	SF	15.00	3,000	Base Bid Building
Grouting Embeds/Baseplates	2	EA	500.00	1,000	Base Bid Building
			0		
Early Childhood Education Center Alt A			0		
Continuous Footings	24	CY	900.00	See Alternate / 21600	ALT #A Early Childhood Education Center
Spread Footings	1.8	CY	900.00	See Alternate / 1600	ALT #A Early Childhood Education Center
Slab on Grade, 5"	5,152	SF	10.00	See Alternate / 51520	ALT #A Early Childhood Education Center
Sinak VC-5	5,152	SF	1.50	See Alternate / 7728	ALT #A Early Childhood Education Center
Equipment Pads	100	SF	15.00	See Alternate / 1500	ALT #A Early Childhood Education Center
Grouting Embeds/Baseplates	1	EA	500.00	See Alternate / 500	ALT #A Early Childhood Education Center
			0		
Gymnasium Alt B			0		
Continuous Footings	42	CY	900.00	See Alternate / 37727.7777777778	ALT #B Gymnasium
Grade Beams	49	CY	900.00	See Alternate / 44200	ALT #B Gymnasium
Spread Footings	86.2	CY	900.00	See Alternate / 77600	ALT #B Gymnasium
Slab on Grade, 5"	13,151	SF	10.00	See Alternate / 131510	ALT #B Gymnasium
Sinak VC-5	13,151	SF	1.50	See Alternate / 19726.5	ALT #B Gymnasium
Grouting Embeds/Baseplates	7	EA	500.00	See Alternate / 3500	ALT #B Gymnasium

DESCRIPTION	QUANTITY	UNIT COST	TOTAL	BREAKOUTS & ALTERNATES	COMMENTS
			0		
			0		
30 Structural Masonry			1,010,878		
Base Bid			0		
8" CMU, Precision, & Stem Wall	10,695	SF	35.00	374,308	Base Bid Building
8" CMU, Split Face Premium	10,695	SF	2.00	21,389	Base Bid Building
12" CMU, Precision, & Stem Wall	13,063	SF	38.00	496,394	Base Bid Building
Steel Reinforcement	23,758	SF	5.00	118,788	Base Bid Building
			0		
Early Childhood Education Center Alt A			0		
8" CMU, Precision, & Stem Wall	4,451	SF	35.00	See Alternate / 155785	ALT #A Early Childhood Education Center
8" CMU, Split Face Premium	4,451	SF	2.00	See Alternate / 8902	ALT #A Early Childhood Education Center
Steel Reinforcement	4,451	SF	5.00	See Alternate / 22255	ALT #A Early Childhood Education Center
			0		
Gymnasium Alt B			0		
8" CMU, Precision, & Stem Wall	560	SF	35.00	See Alternate / 19600	ALT #B Gymnasium
8" CMU, Split Face Premium	560	SF	2.00	See Alternate / 1120	ALT #B Gymnasium
12" CMU, Precision, & Stem Wall	9,017	SF	38.00	See Alternate / 342646	ALT #B Gymnasium
Steel Reinforcement	9,577	SF	5.00	See Alternate / 47885	ALT #B Gymnasium
			0		
			0		
32 Structural Metals			455,271		
Base Bid			0		
Structural Framing	36.6	TN	7,600.00	278,474	Base Bid Building
Roof Deck, PLB-1	13,046	SF	9.00	117,414	Base Bid Building
Misc. Steel, Embeds/Plates, & Detailing	1	LS	59,383.15	59,383	Base Bid Building
			0		
Early Childhood Education Center Alt A			0		
Structural Framing	10.7	TN	7,600.00	See Alternate / 81523.3	ALT #A Early Childhood Education Center
Roof Deck, PLB-1	5,724	SF	9.00	See Alternate / 51516	ALT #A Early Childhood Education Center
Misc. Steel, Embeds/Plates, & Detailing	1	LS	19,955.90	See Alternate / 19955.895	ALT #A Early Childhood Education Center
			0		
Gymnasium Alt B			0		
Structural Framing	60.6	TN	7,600.00	See Alternate / 460843.1	ALT #B Gymnasium
Roof Deck, PLB-1	2,614	SF	9.00	See Alternate / 23526	ALT #B Gymnasium
Roof Deck, ER3.5A	10,971	SF	24.00	See Alternate / 263304	ALT #B Gymnasium
Misc. Steel, Embeds/Plates, & Detailing	1	LS	112,150.97	See Alternate / 112150.965	ALT #B Gymnasium
			0		
			0		
33 Ornamental & Misc. Metals			26,330		
Base Bid			0		
Ladders			0		
Roof Hatch & Up Ladder	1	EA	3,100.00	3,100	Base Bid Building
Cross-Over Ladder	2	EA	6,200.00	12,400	Base Bid Building
Miscellaneous Metals			0		Base Bid Building
Roof Drain Pans	4	EA	500.00	2,000	Base Bid Building
Metal Fabrications Allowance	17,660	SF	0.50	8,830	Base Bid Building
			0		
Early Childhood Education Center Alt A			0		
Ladders			0		
Roof Hatch & Up Ladder	1	EA	3,100.00	See Alternate / 3100	ALT #A Early Childhood Education Center
Miscellaneous Metals			0	See Alternate / 0	ALT #A Early Childhood Education Center
Roof Drain Pans	1	EA	500.00	See Alternate / 500	ALT #A Early Childhood Education Center
Metal Fabrications Allowance	5,152	SF	0.50	See Alternate / 2576	ALT #A Early Childhood Education Center
			0		
Gymnasium Alt B			0		
Ladders			0		
Roof Hatch & Up Ladder	1	EA	3,100.00	See Alternate / 3100	ALT #B Gymnasium
Cross-Over Ladder	1	EA	6,200.00	See Alternate / 6200	ALT #B Gymnasium
Miscellaneous Metals			0	See Alternate / 0	ALT #B Gymnasium
Roof Drain Pans	6	EA	500.00	See Alternate / 3000	ALT #B Gymnasium
Metal Fabrications Allowance	13,151	SF	0.50	See Alternate / 6575.5	ALT #B Gymnasium
			0		
			0		
35 Rough Carpentry			102,984		
Base Bid			0		
Rough Carpentry, Materials	17,660	SF	1.50	26,490	Base Bid Building
Carpentry Labor	20	WK	3,800.00	76,494	Base Bid Building
			0		
Early Childhood Education Center Alt A			0		
Rough Carpentry, Materials	5,152	SF	1.50	See Alternate / 7728	ALT #A Early Childhood Education Center
Carpentry Labor	9	WK	3,800.00	See Alternate / 34770	ALT #A Early Childhood Education Center
			0		
Gymnasium Alt B			0		
Rough Carpentry, Materials	13,151	SF	1.50	See Alternate / 19726.5	ALT #B Gymnasium
Carpentry Labor	9	WK	3,800.00	See Alternate / 34770	ALT #B Gymnasium
			0		
			0		
ENCLOSURE			1,244,906		
37 Waterproofing & Dampproofing			15,894		
Base Bid			0		
Foundation Dampproofing	17,660	GSF	0.90	15,894	Base Bid Building
			0		
Early Childhood Education Center Alt A			0		
Foundation Dampproofing	5,152	GSF	0.90	See Alternate / 4636.8	ALT #A Early Childhood Education Center

DESCRIPTION	QUANTITY	UNIT COST	TOTAL	BREAKOUTS & ALTERNATES	COMMENTS
			0		
Gymnasium Alt B			0		
Foundation Dampproofing	13,151 GSF	0.90	See Alternate / 11835.9	ALT #B Gymnasium	
			0		
			0		
38 Air/Vapor & moisture Barriers			34,029		
Base Bid			0		
Ice / Water Shield at Wood Panels	1,672 SF	9.00	15,048	Base Bid Building	
Ice / Water Shield at Metal Soffit & Panels	2,109 SF	9.00	18,981	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Ice / Water Shield at Wood Panels	1,020 SF	9.00	See Alternate / 9180	ALT #A Early Childhood Education Center	
Ice / Water Shield at Metal Soffit & Panels	520 SF	9.00	See Alternate / 4680	ALT #A Early Childhood Education Center	
Deduct Ice / Water Shield at Wood Panels	(92) SF	9.00	See Alternate / -828	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
Ice / Water Shield at Wood Panels	3,535 SF	9.00	See Alternate / 31815	ALT #B Gymnasium	
Ice / Water Shield at Metal Soffit & Panels	813 SF	9.00	See Alternate / 7317	ALT #B Gymnasium	
Ice / Water Shield at CMU Veneer	550 SF	9.00	See Alternate / 4950	ALT #B Gymnasium	
			0		
			0		
39 Caulking and Sealants			29,139		
Base Bid	17,660 GSF	1.65	29,139	Base Bid Building	
			0		
Early Childhood Education Center Alt A	5,152 GSF	1.65	See Alternate / 8500.8	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B	13,151 GSF	1.65	See Alternate / 21699.15	ALT #B Gymnasium	
			0		
			0		
43 Thermal and Sound Insulation			116,372		
Base Bid			0		
Thermal Insulation			0		
Foundation Rigid Insulation	2,758 SF	5.50	15,169	Base Bid Building	
Exterior Wall Insulation, Batt	31,425 SF	1.25	39,281	Base Bid Building	
Exterior Wall Insulation, Rigid	3,781 SF	5.50	20,796	Base Bid Building	
Sound Insulation			0	Base Bid Building	
Interior Batt Insulation	15,722 SF	1.25	19,653	Base Bid Building	
Top & Bottom of Wall Sealants	1,193 LF	18.00	21,474	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Thermal Insulation			0		
Foundation Rigid Insulation	782 SF	5.50	See Alternate / 4301	ALT #A Early Childhood Education Center	
Exterior Wall Insulation, Batt	6,544 SF	1.25	See Alternate / 8180	ALT #A Early Childhood Education Center	
Exterior Wall Insulation, Rigid	1,540 SF	5.50	See Alternate / 8470	ALT #A Early Childhood Education Center	
Sound Insulation			See Alternate / 0	ALT #A Early Childhood Education Center	
Interior Batt Insulation	5,621 SF	1.25	See Alternate / 7026.25	ALT #A Early Childhood Education Center	
Top & Bottom of Wall Sealants	353 LF	18.00	See Alternate / 6354	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
Thermal Insulation			0		
Foundation Rigid Insulation	1,299 SF	5.50	See Alternate / 7144.5	ALT #B Gymnasium	
Exterior Wall Insulation, Batt	9,537 SF	1.25	See Alternate / 11921.25	ALT #B Gymnasium	
Exterior Wall Insulation, Rigid	4,348 SF	5.50	See Alternate / 23914	ALT #B Gymnasium	
Sound Insulation			See Alternate / 0	ALT #B Gymnasium	
Interior Batt Insulation	11,392 SF	1.25	See Alternate / 14240	ALT #B Gymnasium	
Top & Bottom of Wall Sealants	531 LF	18.00	See Alternate / 9558	ALT #B Gymnasium	
			0		
			0		
44 Membrane Roofing			254,682		
Base Bid			0		
Single Ply Membrane, TPO 60 Mil.	9,537 SF	26.00	247,962	Base Bid Building	
Pre-Manufactured Coping	192 LF	35.00	6,720	Base Bid Building	
Misc. Flashings	INCL		0	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Single Ply Membrane, TPO 60 Mil.	862 SF	26.00	See Alternate / 22412	ALT #A Early Childhood Education Center	
Pre-Manufactured Coping	112 LF	35.00	See Alternate / 3920	ALT #A Early Childhood Education Center	
Misc. Flashings	INCL		See Alternate / 0	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
Single Ply Membrane, TPO 60 Mil.	13,384 SF	26.00	See Alternate / 347984	ALT #B Gymnasium	
Pre-Manufactured Coping	55 LF	35.00	See Alternate / 1925	ALT #B Gymnasium	
Misc. Flashings	INCL		See Alternate / 0	ALT #B Gymnasium	
			0		
			0		
45 Metal Roofing			312,130		
Base Bid			0		
Standing Seam Metal Roof	8,714 SF	35.00	304,990	Base Bid Building	
Gutters & Downspouts	238 LF	30.00	7,140	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Standing Seam Metal Roof	4,714 SF	35.00	See Alternate / 164990	ALT #A Early Childhood Education Center	
Gutters & Downspouts	207 LF	30.00	See Alternate / 6210	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		

DESCRIPTION	QUANTITY	UNIT COST	TOTAL	BREAKOUTS & ALTERNATES	COMMENTS
Standing Seam Metal Roof	1,025 SF	35.00	See Alternate / 35875	ALT #B Gymnasium	
Gutters & Downspouts	100 LF	30.00	See Alternate / 3000	ALT #B Gymnasium	
			0		
			0		
46 Wood Rainscreen Siding			108,680		
Base Bid			0		
Trex/Kebony Wood Siding	1,672 SF	65.00	108,680	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Trex/Kebony Wood Siding	1,020 SF	65.00	See Alternate / 66300	ALT #A Early Childhood Education Center	
Deduct Siding from Base Bid (West)	(92) SF	65.00	See Alternate / -5980	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
Trex/Kebony Wood Siding	3,535 SF	65.00	See Alternate / 229775	ALT #B Gymnasium	
			0		
			0		
47 Metal Panel Soffit & Siding			115,995		
Base Bid	2,109 SF	55.00	115,995	Base Bid Building	
			0		
Alternate A Early Learning Center	520 SF	55.00	See Alternate / 28600	ALT #A Early Childhood Education Center	
			0		
Gymnasium	813 SF	55.00	See Alternate / 44715	ALT #B Gymnasium	
			0		
			0		
48 Masonry Veneer			0		
Gymnasium	550 SF	58.00	See Alternate / 31900	ALT #B Gymnasium	
			0		
			0		
50 Exterior Aluminum, Glass and Glazing			257,985		
Base Bid			0		
Storefront & Windows	1,863 SF	95.00	176,985	Base Bid Building	
Storefront Entries	18 EA	4,500.00	81,000	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Storefront & Windows	520 SF	95.00	See Alternate / 49400	ALT #A Early Childhood Education Center	
Storefront Entries	8 EA	4,500.00	See Alternate / 36000	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
Curtain Wall	1,028 SF	115.00	See Alternate / 118220	ALT #B Gymnasium	
Storefront & Windows	772 SF	95.00	See Alternate / 73340	ALT #B Gymnasium	
Storefront Entries	10 EA	4,500.00	See Alternate / 45000	ALT #B Gymnasium	
			0		
			0		
INTERIOR FINISHES			2,254,001		
55 Interior Layout & Coordination			17,660		
Base Bid			0		
Interior Wall Layout	17,660 SF	1.00	17,660	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Interior Wall Layout	5,152 SF	1.00	See Alternate / 5152	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
Interior Wall Layout	13,151 SF	1.00	See Alternate / 13151	ALT #B Gymnasium	
			0		
			0		
56 Doors, Frames and Hardware			263,300		
Base Bid			0		
HM Exterior Doors, Frames & Hardware	14 EA	2,700.00	37,800	Base Bid Building	
FRP Restroom Doors, Frames & Hardware	15 EA	6,500.00	97,500	Base Bid Building	
WD Interior Doors, Frames & Hardware	40 EA	3,200.00	128,000	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
HM Exterior Doors, Frames & Hardware	8 EA	2,700.00	See Alternate / 21600	ALT #A Early Childhood Education Center	
WD Interior Doors, Frames & Hardware	13 EA	3,200.00	See Alternate / 41600	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
HM Exterior Doors, Frames & Hardware	10 EA	2,700.00	See Alternate / 27000	ALT #B Gymnasium	
FRP Restroom Doors, Frames & Hardware	8 EA	6,500.00	See Alternate / 52000	ALT #B Gymnasium	
WD Interior Doors, Frames & Hardware	6 EA	3,200.00	See Alternate / 19200	ALT #B Gymnasium	
			0		
			0		
58 Interior Aluminum, Glass and Glazing			102,950		
Base Bid			0		
Interior Storefront Assembly	610 SF	95.00	57,950	Base Bid Building	
Storefront Entries, Per Leaf	10 EA	4,500.00	45,000	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Interior Storefront Assembly	113 SF	95.00	See Alternate / 10735	ALT #A Early Childhood Education Center	
Storefront Entries, Per Leaf	6 EA	4,500.00	See Alternate / 27000	ALT #A Early Childhood Education Center	
			0		
			0		
59 Finish Carpentry / Millwork			118,200		
Base Bid			0		

**Design Development
Fernley CRRC**

DESCRIPTION	QUANTITY	UNIT COST	TOTAL	BREAKOUTS & ALTERNATES	COMMENTS
Plastic Laminate			0		
Base Cabinets	85 LF	550.00	46,750	Base Bid Building	
Upper Cabinets	85 LF	400.00	34,000	Base Bid Building	
Solid Surface			0	Base Bid Building	
Classroom Countertops	32 LF	250.00	8,000	Base Bid Building	
Entry Desk Countertop, Lobby	40 LF	250.00	10,000	Base Bid Building	
Check-in Desk, Teen Center	13 LF	250.00	3,250	Base Bid Building	
Tall Cabinets	12 EA	1,200.00	14,400	Base Bid Building	
Custom Casework			0	Base Bid Building	
Parent Seating, Lobby	1 EA	1,800.00	1,800	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Plastic Laminate			0		
Base Cabinets	84 LF	550.00	See Alternate / 46200	ALT #A Early Childhood Education Center	
Upper Cabinets	46 LF	400.00	See Alternate / 18400	ALT #A Early Childhood Education Center	
Solid Surface			See Alternate / 0	ALT #A Early Childhood Education Center	
Classroom Countertops	46 LF	250.00	See Alternate / 11500	ALT #A Early Childhood Education Center	
Secured Entry Countertop	18 LF	250.00	See Alternate / 4500	ALT #A Early Childhood Education Center	
Reception Countertop	20 LF	250.00	See Alternate / 5000	ALT #A Early Childhood Education Center	
			0		
			0		
61 Metal Studs, Drywall, and Paint			728,695		
Base Bid			0		
Framing Package			0		
Exterior Wall Furring	30,238 SF	5.00	151,188	Base Bid Building	
Interior Partitions, 3-5/8"	4,800 SF	7.00	33,600	Base Bid Building	
Interior Partitions, 6"	10,922 SF	9.00	98,298	Base Bid Building	
Hardlid Ceiling Framing	2,237 SF	9.00	20,133	Base Bid Building	
Soffit Framing	1,187 SF	12.50	14,838	Base Bid Building	
Sheathing & Drywall			0	Base Bid Building	
Gypsum Wall Board	65,106 SF	3.50	227,869	Base Bid Building	
Exterior Sheathing Board	2,859 SF	4.50	12,866	Base Bid Building	
Cement Tile Backer Board	5,395 SF	4.00	21,580	Base Bid Building	
Metal Strap Backing	17,660 GSF	0.50	8,830	Base Bid Building	
Install Access Doors, FOB By Others	17,660 GSF	0.25	4,415	Base Bid Building	
Install Recessed FEC	6 EA	100.00	600	Base Bid Building	
Install Door Frames in Metal Framing	55 EA	220.00	12,100	Base Bid Building	
Paint & High-performance Coatings	17,660 GSF	5.25	92,715	Base Bid Building	
Custom Graphics Mural	2,472 SF	12.00	29,664	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Framing Package			0		
Exterior Wall Furring	6,024 SF	5.00	See Alternate / 30120	ALT #A Early Childhood Education Center	
Interior Partitions, 3-5/8"	1,349 SF	7.00	See Alternate / 9443	ALT #A Early Childhood Education Center	
Interior Partitions, 6"	4,272 SF	9.00	See Alternate / 38448	ALT #A Early Childhood Education Center	
Hardlid Ceiling Framing	1,016 SF	9.00	See Alternate / 9144	ALT #A Early Childhood Education Center	
Soffit Framing	520 SF	12.50	See Alternate / 6500	ALT #A Early Childhood Education Center	
Sheathing & Drywall			See Alternate / 0	ALT #A Early Childhood Education Center	
Gypsum Wall Board	18,802 SF	3.50	See Alternate / 65807	ALT #A Early Childhood Education Center	
Exterior Sheathing Board	1,540 SF	4.50	See Alternate / 6930	ALT #A Early Childhood Education Center	
Cement Tile Backer Board	1,025 SF	4.00	See Alternate / 4100	ALT #A Early Childhood Education Center	
Metal Strap Backing	5,152 GSF	0.50	See Alternate / 2576	ALT #A Early Childhood Education Center	
Install Access Doors, FOB By Others	5,152 GSF	0.25	See Alternate / 1288	ALT #A Early Childhood Education Center	
Install Recessed FEC	2 EA	100.00	See Alternate / 200	ALT #A Early Childhood Education Center	
Install Door Frames in Metal Framing	13 EA	220.00	See Alternate / 2860	ALT #A Early Childhood Education Center	
Paint & High-performance Coatings	5,152 GSF	5.25	See Alternate / 27048	ALT #A Early Childhood Education Center	
Custom Graphics Mural	230 SF	12.00	See Alternate / 2760	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
Framing Package			0		
Exterior Wall Furring	8,724 SF	5.00	See Alternate / 43620	ALT #B Gymnasium	
Interior Partitions, 3-5/8"	2,474 SF	7.00	See Alternate / 17318	ALT #B Gymnasium	
Interior Partitions, 6"	4,355 SF	9.00	See Alternate / 39195	ALT #B Gymnasium	
Interior Partitions, 8"	4,563 SF	11.00	See Alternate / 50193	ALT #B Gymnasium	
Hardlid Ceiling Framing	643 SF	9.00	See Alternate / 5787	ALT #B Gymnasium	
Soffit Framing	813 SF	12.50	See Alternate / 10162.5	ALT #B Gymnasium	
Sheathing & Drywall			See Alternate / 0	ALT #B Gymnasium	
Gypsum Wall Board	23,025 SF	3.50	See Alternate / 80587.5	ALT #B Gymnasium	
Exterior Sheathing Board	4,348 SF	4.50	See Alternate / 19566	ALT #B Gymnasium	
Cement Tile Backer Board	1,420 SF	4.00	See Alternate / 5680	ALT #B Gymnasium	
Install Access Doors, FOB By Others	13,151 GSF	0.25	See Alternate / 3287.75	ALT #B Gymnasium	
Install Recessed FEC	4 EA	100.00	See Alternate / 400	ALT #B Gymnasium	
Install Door Frames in Metal Framing	14 EA	220.00	See Alternate / 3080	ALT #B Gymnasium	
Paint & High-performance Coatings	13,151 GSF	5.25	See Alternate / 69042.75	ALT #B Gymnasium	
			0		
			0		
62 Acoustical Ceiling Treatment			335,507		
Base Bid			0		
Standard ACT, 2x2	5,615 SF	9.00	50,535	Base Bid Building	
Upgrade Finish Premium	5,615 SF	2.00	11,230	Base Bid Building	
Washable ACT, 2x4	1,636 SF	14.00	22,904	Base Bid Building	
Linear Wood Ceilings	6,601 SF	38.00	250,838	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Standard ACT, 2x2	3,644 SF	9.00	See Alternate / 32796	ALT #A Early Childhood Education Center	
Upgrade Finish Premium	3,644 SF	2.00	See Alternate / 7288	ALT #A Early Childhood Education Center	
			0		

DESCRIPTION	QUANTITY	UNIT COST	TOTAL	BREAKOUTS & ALTERNATES	COMMENTS
Gymnasium Alt B			0		
Standard ACT, 2x2	608 SF	9.00	See Alternate / 5472	ALT #B Gymnasium	
Upgrade Finish Premium	608 SF	2.00	See Alternate / 1216	ALT #B Gymnasium	
			0		
			0		
63 Acoustical & Wood Wall Finishes			249,560		
Base Bid			0		
Plywood Wall Finish, Diagonal Pattern	1,070 SF	55.00	58,850	Base Bid Building	
Plywood Wall Finish, Birch Forest Cut Outs	2,934 SF	65.00	190,710	Base Bid Building	
			0		
Gymnasium Alt B			0		
Acoustical Wall Panels, Standard	1,640 SF	30.00	See Alternate / 49200	ALT #B Gymnasium	
			0		
			0		
64 Tile Walls			99,808		
Base Bid	5,395 SF	18.50	99,808	Base Bid Building	
			0		
Early Childhood Education Center Alt A	1,025 SF	18.50	See Alternate / 18962.5	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B	1,420 SF	18.50	See Alternate / 26270	ALT #B Gymnasium	
			0		
			0		
65 Carpet and Resilient Flooring			48,760		
Base Bid			0		
Minor Floor Prep	3,895 SF	1.00	3,895	Base Bid Building	
Carpet Flooring	3,568 SF	8.00	28,544	Base Bid Building	
Walk-off Carpet Flooring	327 SF	10.00	3,273	Base Bid Building	
Resilient/Rubber Base	1,864 LF	7.00	13,048	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Minor Floor Prep	3,464 SF	1.00	See Alternate / 3464	ALT #A Early Childhood Education Center	
Carpet Flooring	3,154 SF	8.00	See Alternate / 25232	ALT #A Early Childhood Education Center	
Walk-off Carpet Flooring	112 SF	10.00	See Alternate / 1120	ALT #A Early Childhood Education Center	
VCT Flooring	198 SF	12.00	See Alternate / 2376	ALT #A Early Childhood Education Center	At Classroom Sinks & Lavs
Resilient/Rubber Base	894 LF	7.00	See Alternate / 6258	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
Minor Floor Prep	120 SF	1.00	See Alternate / 120	ALT #B Gymnasium	
Walk-off Carpet Flooring	120 SF	10.00	See Alternate / 1200	ALT #B Gymnasium	
Resilient/Rubber Base	728 LF	7.00	See Alternate / 5096	ALT #B Gymnasium	
			0		
			0		
66 Athletic Gym Flooring			0		
Gymnasium			0		
Rubber/Athletic, Multi-purpose Flooring	10,032 SF	32.00	See Alternate / 321024	ALT #B Gymnasium	
			0		
			0		
67 Epoxy & Fluid-Applied Flooring			115,722		
Base Bid			0		
Kitchen Flooring & Base	2,313 SF	18.00	41,634	Base Bid Building	
Kitchen Wainscot Wall Surface	2,313 SF	24.00	55,512	Base Bid Building	
Restroom Flooring & Base	1,032 SF	18.00	18,576	Base Bid Building	
			0		
Alternate A Early Learning Center			0		
Kitchen Flooring & Base	171 SF	18.00	See Alternate / 3078	ALT #A Early Childhood Education Center	
Restroom Flooring & Base	331 SF	18.00	See Alternate / 5958	ALT #A Early Childhood Education Center	
			0		
Gymnasium			0		
Restroom Flooring & Base	529 SF	18.00	See Alternate / 9522	ALT #B Gymnasium	
			0		
			0		
68 Concrete Finishing			108,664		
Base Bid			0		
Sealed Concrete	1,910 SF	3.00	5,730	Base Bid Building	
Ground & Polished Concrete	7,918 SF	9.00	71,262	Base Bid Building	
Floor Protection	7,918 SF	4.00	31,672	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Sealed Concrete	145 SF	3.00	See Alternate / 435	ALT #A Early Childhood Education Center	
Ground & Polished Concrete	730 SF	9.00	See Alternate / 6570	ALT #A Early Childhood Education Center	
Floor Protection	730 SF	4.00	See Alternate / 2920	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
Sealed Concrete	1,233 SF	3.00	See Alternate / 3699	ALT #B Gymnasium	
Ground & Polished Concrete	676 SF	9.00	See Alternate / 6084	ALT #B Gymnasium	
Floor Protection	676 SF	4.00	See Alternate / 2704	ALT #B Gymnasium	
			0		
			0		
70 Progressive & Final Clean Requirements			65,176		
Base Bid			0		
Progressive Cleanup Labor	15 WK	3,000.00	45,750	Base Bid Building	
Final Cleaning Service	17,660 GSF	1.10	19,426	Base Bid Building	
			0		
Alternate A Early Learning Center			0		

DESCRIPTION	QUANTITY	UNIT COST	TOTAL	BREAKOUTS & ALTERNATES	COMMENTS
Progressive Cleanup Labor	6 WK	3,000.00	See Alternate / 18300	ALT #A Early Childhood Education Center	
Final Cleaning Service	5,152 GSF	1.10	See Alternate / 5667.2	ALT #A Early Childhood Education Center	
			0		
Gymnasium			0		
Progressive Cleanup Labor	9 WK	3,000.00	See Alternate / 27450	ALT #B Gymnasium	
Final Cleaning Service	13,151 GSF	1.10	See Alternate / 14466.1	ALT #B Gymnasium	
			0		
			0		
			109,999		
71 Building Signage			12,599		
Base Bid			0		
Building ID Signage	1 EA	5,000.00	5,000	Base Bid Building	
Room Signage	33 EA	150.00	4,950	Base Bid Building	
Misc. Code Compliance	17,660 SF	0.15	2,649	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Building ID Signage	1 EA	5,000.00	See Alternate / 5000	ALT #A Early Childhood Education Center	
Room Signage	16 EA	150.00	See Alternate / 2400	ALT #A Early Childhood Education Center	
Misc. Code Compliance	5,152 SF	0.15	See Alternate / 772.8	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
Custom Graphic Signage, Steel Letters	1 EA	45,000.00	See Alternate / 45000	ALT #B Gymnasium	
Room Signage	5 EA	150.00	See Alternate / 750	ALT #B Gymnasium	
Misc. Code Compliance	13,151 SF	0.15	See Alternate / 1972.65	ALT #B Gymnasium	
			0		
			0		
72 Wall and Door Protection			38,900		
Base Bid			0		
Corner Guards	36 EA	125.00	4,500	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
	5 EA	125.00	See Alternate / 625	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
	12 EA	125.00	See Alternate / 1500	ALT #B Gymnasium	
			0		
FRP			0		
Base Bid			0		
	2,150 SF	16.00	34,400	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
	1,000 SF	16.00	See Alternate / 16000	ALT #A Early Childhood Education Center	
			0		
			0		
73 Toilet, Bath and Laundry Accessories			45,000		
Base Bid			0		
Individual (Per fix)	20 EA	1,500.00	30,000	Base Bid Building	
Group Restroom (Per fix)	15 EA	1,000.00	15,000	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Individual (Per fix)	3 EA	1,500.00	See Alternate / 4500	ALT #A Early Childhood Education Center	
Group Restroom (Per fix)	9 EA	1,000.00	See Alternate / 9000	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
Individual (Per fix)	9 EA	1,500.00	See Alternate / 13500	ALT #B Gymnasium	
Group Restroom (Per fix)	6 EA	1,000.00	See Alternate / 6000	ALT #B Gymnasium	
			0		
			0		
74 Fire Protection Specialties			2,700		
Base Bid			0		
Fire Extinguisher Cabinets	6 EA	450.00	2,700	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
	2 EA	450.00	See Alternate / 900	ALT #A Early Childhood Education Center	
			0		
Gymnasium Alt B			0		
	4 EA	450.00	See Alternate / 1800	ALT #B Gymnasium	
			0		
			0		
77 Visual Display Boards			10,800		
Base Bid			0		
Marker Boards	12 EA	500.00	6,000	Base Bid Building	
Tack Boards	12 EA	400.00	4,800	Base Bid Building	
			0		
Early Childhood Education Center Alt A			0		
Marker Boards	7 EA	500.00	See Alternate / 3500	ALT #A Early Childhood Education Center	
Tack Boards	10 EA	400.00	See Alternate / 4000	ALT #A Early Childhood Education Center	
			0		
			0		
EQUIPMENT			811,983		
84 Transfer Kitchen Equipment			0		
Early Childhood Education Center Alt A			0		
	171 SF	300.00	See Alternate / 51300	ALT #A Early Childhood Education Center	
			0		
			0		
85 Commercial Kitchen Equipment			781,770		
Base Bid			0		
	2,369 SF	330.00	781,770	Base Bid Building	
			0		
			0		

DESCRIPTION	QUANTITY	UNIT COST	TOTAL	BREAKOUTS & ALTERNATES	COMMENTS
87 Gymnasium Equipment			0		
Gymnasium Alt B			0		
Wall Pads with Graphics	832	SF	65.00	See Alternate / 54080	ALT #B Gymnasium
Wall-Mount Scoreboard - 5'x9'	1	EA	11,500.00	See Alternate / 11500	ALT #B Gymnasium
Basketball Hoops - Manual	2	EA	6,500.00	See Alternate / 13000	ALT #B Gymnasium
Basketball Hoops - Motorized	4	EA	8,000.00	See Alternate / 32000	ALT #B Gymnasium
Volleyball Equipment & Post Sleeves	4	EA	6,600.00	See Alternate / 26400	ALT #B Gymnasium
Gym Divider Curtain	1	EA	28,750.00	See Alternate / 28750	ALT #B Gymnasium
			0		
			0		
89 Window Blinds and Shades			12,365		
Manual Shades			0		
Base Bid	2,473	SF	5.00	12,365	Base Bid Building
			0		
Early Childhood Education Center Alt A	633	GSF	5.00	See Alternate / 3165	ALT #A Early Childhood Education Center
			0		
Gymnasium Alt B	772	GSF	5.00	See Alternate / 3860	ALT #B Gymnasium
			0		
			0		
90 Telescoping Seating			0		
Gymnasium Alt B			0		
Bleachers - Telescopic, Per Seat	500	EA	350.00	See Alternate / 175000	ALT #B Gymnasium
			0		
			0		
91 Projectors & Projection Screens			17,848		
Base Bid			0		
Ceiling Hung Projector	1	EA	3,348.00	3,348	Base Bid Building
Structure Hung Motorized Screen	250	SF	58.00	14,500	Base Bid Building
			0		
Gymnasium Alt B			0		
Wall/Ceiling Hung Projector	1	EA	3,348.00	See Alternate / 3348	ALT #B Gymnasium
Structure Hung Motorized Screen	250	SF	58.00	See Alternate / 14500	ALT #B Gymnasium
			0		
			0		
MEP SYSTEMS			2,432,675		
98 Fire Sprinkler Systems			88,300		
Base Bid	17,660	GSF	5.00	88,300	Base Bid Building
			0		
Early Childhood Education Center Alt A	5,152	GSF	5.00	See Alternate / 25760	ALT #A Early Childhood Education Center
			0		
Gymnasium Alt B	13,151	GSF	5.00	See Alternate / 65755	ALT #B Gymnasium
			0		
			0		
99 Plumbing Systems			402,545		
Base Bid			0		
Plumbing (Per Fix)	44	EA	7,000.00	308,000	Base Bid Building
Kitchen Plumbing	2,369	SF	25.00	59,225	Base Bid Building
Misc Plumbing, Piping, & Connections	17,660	GSF	2.00	35,320	Base Bid Building
			0		
Early Childhood Education Center Alt A			0		
Plumbing (Per Fix)	20	EA	7,000.00	See Alternate / 140000	ALT #A Early Childhood Education Center
Kitchen Plumbing	171	SF	25.00	See Alternate / 4275	ALT #A Early Childhood Education Center
Misc Plumbing, Piping, & Connections	5,152	GSF	2.00	See Alternate / 10304	ALT #A Early Childhood Education Center
			0		
Gymnasium Alt B			0		
Plumbing (Per Fix)	24	EA	7,000.00	See Alternate / 168000	ALT #B Gymnasium
Misc Plumbing, Piping, & Connections	13,151	GSF	2.00	See Alternate / 26302	ALT #B Gymnasium
			0		
			0		
100 HVAC Systems			765,625		
Base Bid			0		
Building HVAC System	17,660	GSF	40.00	706,400	Base Bid Building
Kitchen HVAC - Premium	2,369	SF	25.00	59,225	Base Bid Building
			0		
Early Childhood Education Center Alt A			0		
Building HVAC System	5,152	GSF	40.00	See Alternate / 206080	ALT #A Early Childhood Education Center
Kitchen HVAC - Premium	171	SF	25.00	See Alternate / 4275	ALT #A Early Childhood Education Center
			0		
Gymnasium Alt B			0		
Building HVAC System	13,151	GSF	40.00	See Alternate / 526040	ALT #B Gymnasium
			0		
			0		
101 BCS, Building Controls			123,620		
Base Bid	17,660	GSF	7.00	123,620	Base Bid Building
			0		
Early Childhood Education Center Alt A	5,152	GSF	7.00	See Alternate / 36064	ALT #A Early Childhood Education Center
			0		
Gymnasium Alt B	13,151	GSF	7.00	See Alternate / 92057	ALT #B Gymnasium
			0		
			0		
102 Test & Balance			14,128		
Base Bid	17,660	GSF	0.80	14,128	Base Bid Building
			0		

DESCRIPTION	QUANTITY	UNIT COST	TOTAL	BREAKOUTS & ALTERNATES	COMMENTS
Early Childhood Education Center Alt A	5,152	GSF	0.80	See Alternate / 4121.6	ALT #A Early Childhood Education Center
				0	
Gymnasium Alt B	13,151	GSF	0.80	See Alternate / 10520.8	ALT #B Gymnasium
				0	
				0	
103 Temporary Conditioning Requirements			13,245		
Base Bid	17,660	GSF	0.75	13,245	Base Bid Building
				0	
Early Childhood Education Center Alt A	5,152	GSF	0.75	See Alternate / 3864	ALT #A Early Childhood Education Center
				0	
Gymnasium Alt B	13,151	GSF	0.75	See Alternate / 9863.25	ALT #B Gymnasium
				0	
				0	
104 Electrical, Low Voltage, & Fire Alarm Systems			1,025,212		
Base Bid				0	Base Bid Building
Emergency Generator Allowance	1	EA	75,000.00	75,000	Base Bid Building
Building Electrical & Low Voltage	17,660	GSF	44.00	777,040	Base Bid Building
Site Electrical & Lighting - Parking Lot	113,662	SF	1.00	113,662	Base Bid Building
Site Electrical & Low Voltage - Event Lawn	39,673	SF	1.50	59,510	Base Bid Building
				0	
				0	
Early Childhood Education Center Alt A					
Building Electrical & Low Voltage	5,152	GSF	44.00	See Alternate / 226688	ALT #A Early Childhood Education Center
				0	
				0	
Gymnasium Alt B					
Building Electrical & Low Voltage	13,151	GSF	44.00	See Alternate / 578644	ALT #B Gymnasium
Gymnasium A/V & Low Voltage	13,151	GSF	1.50	See Alternate / 19726.5	ALT #B Gymnasium
Site Electrical & Lighting - Parking Lot	17,535	SF	1.00	See Alternate / 17535	ALT #B Gymnasium

2

Basis of Estimate



Assumptions, Clarifications, & Exclusions

Schedule

Preconstruction: Bidding and Guaranteed Maximum Price (GMP)

- Anticipated Bids Due and Bid Opening with City of Fernley: **9/27/2023**
- Anticipated Draft GMP Due to City of Fernley for Review: **10/17/2023**
- Anticipated Contract Issuance and Notice to Proceed (NTP): **11/16/2023**

Construction Schedule: Base Bid (Baseline)

- Anticipated Start Date (Permit in Hand): **4/16/2024**
- Anticipated Substantial Completion Date: **5/9/2025**
- Anticipated Final Completion Date: **6/9/2025**

Cost

This estimate is based on **2023 Rural Counties Prevailing Wage Rates** and includes Nevada sales tax. The estimated value provided in the proposal includes all direct and indirect construction costs, but does not include typical project "soft costs". These costs include, but are not limited to design professional fees, permits and plan review fees, utility connection fees, land acquisition costs, "loose" furniture, fixtures and equipment (FF&E), special inspections, etc.

Contingency & Allowances

- **Design & Estimating Contingency** – Design Contingency is included in this proposal and is intended as a place holder during early design submittals for costs associated to unidentified details. Design contingency is not intended to cover added / unidentified scope of work. This contingency is intended to reduce at each submittal level and will be zeroed out for the GMP.
- **CMAR Construction Contingency** – CMAR Construction Contingency is included in this proposal and is intended to be used at CORE's discretion to cover costs that have not been completely identified as trade specific scope on the GMP setting documents may require further clarification or coordination. These costs include, but not limited to, scope gap, coordination issues between trades, and missed scope during the bidding process. The CMAR Construction Contingency is not intended to account for design revisions or additional scope requests by the design / owner during construction.
- **Owner Project Contingency** – CORE Construction is carrying an Owner Contingency within the estimated construction costs of this project. This contingency is intended to be used at the owner's discretion to cover unforeseen conditions, design revisions and/or additional scope requests made by the owner and/or design team.

Basis of Design Development Estimate

City of Fernley: Community Response and Resource Center (CRRC)

FEBRUARY 10, 2023



Fernley, NV

Alternates

The following scopes of work are NOT INCLUDED as part of the base contract work. They are carried as bid alternates so that if there is money available at the time of the G.M.P. they can be added to the project at the discretion of the owner.

- **Add Alternate A – Early Childhood Education Center**

- Includes the addition of the Early Childhood Education Center at the west side of the Fernley Community Center. Additional time for construction is anticipated for this work and is outlined in the following construction schedule breakdown.

Construction Schedule: Alt A

- Anticipated Start Date (Permit in Hand): **4/16/2024**
- Anticipated Substantial Completion Date: **5/22/2025**
- Anticipated Final Completion Date: **6/20/2025**

- **Add Alternate B – Gymnasium**

- Includes the addition of the Early Childhood Education Center at the west side of the Fernley Community Center as well as the addition of a Gymnasium building at the north side of the Community Center. Additional time for construction is anticipated for this work and is outlined in the following construction schedule breakdown.

Construction Schedule: Alt B

- Anticipated Start Date (Permit in Hand): **4/16/2024**
- Anticipated Substantial Completion Date: **6/20/2025**
- Anticipated Final Completion Date: **7/21/2025**

General Assumptions

- This cost proposal is considered lump sum, not line itemed. Scope values are provided for transparency and as a contract schedule of values.
- Based on the Design Development documents provided by TSK Architects, dated 1/19/2023.
- We anticipate normal working hours 6:00 AM to 3:00 PM, Monday through Friday.
- CORE's proposal is for construction costs only, unless otherwise specified. Soft costs, permits and fees, inspections, etc. are expected to be covered by others.
- Building permits are to be procured by the Client and in hand prior to CORE Construction mobilizing on site. CORE shall be granted an extension of time for delays resulting from not having an approved grading / building permit in place on the anticipated start date.
- The Client will have all necessary leasing or ownership agreements for the property in place in advance of the anticipated start date. CORE shall be granted an extension of time for delays resulting and potential adjustment of the GMP via change order if accelerating the schedule is

Basis of Design Development Estimate

City of Fernley: Community Response and Resource Center (CRRC)

FEBRUARY 10, 2023



Fernley, NV

required resulting from the Client not having all necessary property procurement documentation and legal action complete prior to mobilization.

- Due to current volatile market conditions, all parties acknowledge that some of the materials and products to be used and installed in the construction of this project may become unavailable, delayed in shipment and/or subject to price increase due to circumstances beyond the control of the Contractor, including COVID-19 pandemic. If a specified product is unavailable or shipment is delayed, Contractor shall provide written notice and shall be afforded additional time and substitute products may be considered. If there is an increase in the price of materials, equipment, or products between the date of this contract and the time when the job is ready for the installation of the affected material, the amount of this contract shall be increased to reflect the additional cost to obtain the materials, provided that the contractor gives the Owner written notice and documentation of the increased costs.

Specific Exclusions

- Typical Project "Soft Costs" unless otherwise specified. These include, but are not limited to: design professional costs, permits and fees, utility connection charges, land acquisition, legal fees, equipment and furnishings, etc.
- Soils Investigations, Hazardous material remediation / encapsulation (lead, asbestos, mold, etc.)
- "Loose" furniture, fixtures and equipment (FF&E)
- Special systems other than fire alarm not specifically indicated in the schedule of values
- Power company / communication companies (telephone / internet) / gas company costs other than trenching, backfill, conduits and coordination
- Salvaging and relocation of any existing equipment or furnishings, unless other specified
- Servers, equipment, data cabling, terminations, etc. (pathways and cable tray included)
- Stone or CMU Veneer at interior walls.
- Waste/Recycling Equipment or Trash Compactor.
- Whiteboard paint or markable wall surfacing.
- Fry reglets or Interior wall reveals/finishes.
- Televisions, assumed to be OFCI.
- Site Furnishings including Trash Receptacles, Benches, or Fixed Seating.
- Custom colors or finishes for Telescoping Bleachers.
- Wood or Metal Panel fencing.
- Painting of pre-finished wood doors.
- Train Depot Roofing/remodel or Restroom Addition/remodel assumed separate projects.

Fernley, NV

Other scope specific Assumptions and Clarifications:

DEMOLITION / OFF-SITE INFRASTRUCTURE

003 | SELECTIVE DEMOLITION

- Site selective demolition of curb, gutter, asphalt and concrete paving.

SITE WORK (ROUGH)

007 | HORIZONTAL SURVEY AND STAKING

- Surveying, layout, and staking of buildings and utilities.

008 | SITE CLEARING, DEMO, AND EARTHWORK

- Site clearing & grubbing, earthwork cut to fill, import structural material, rough grading and mass excavation, 1' over-excavation and backfill of site hardscape elements, 2' over-excavation and backfill of buildings, or as recommended in the Geotechnical Report; Actual underground conditions are to be determined during construction.
- Type II aggregate base below buildings, asphalt paving, and site concrete.

009 | UTILITIES

- Wet and Dry utilities; Storm Sewer, Sanitary Sewer, Domestic and Fire Water systems, Irrigation underground, Electrical primary and secondary systems, telecom infrastructure, and Natural gas system.

010 | DUST CONTROL

- Dust control, track-out pads, water truck and operator.

011 | SWPPP / EROSION CONTROL

- Storm water prevention measures, setup and maintenance.

012 | ASPHALT PAVING

- 3' Asphalt paving at pedestrian parking and roadways, outdoor basketball courts.
- 4" Asphalt paving at Lois Ln. and drop off areas.

013 | CONSTRUCTION WASTE MANAGEMENT

- General debris dumpsters, waste diversion, and cleanup / waste management.

SITE WORK (FINISH)

014 | SITE SIGNAGE, STRIPING AND PARKING ACCESSORIES

- Post-mounted signage, painting, striping at exterior parking lot and basketball courts.

015 | LANDSCAPING AND IRRIGATION

- Turf sod, planting, drip irrigation system, stabilized DG, river rock and rock mulch, boulders, and sensory garden headers.

016 | FENCING AND GATES

- 6' high fencing around exterior play areas, basketball courts and Event lawn.

Basis of Design Development Estimate

City of Fernley: Community Response and Resource Center (CRRC)

FEBRUARY 10, 2023



Fernley, NV

- 4' high fencing around exterior playground area for the Childhood Education Center (Alternate A).

017 | PLAY AREA SURFACING

- Exterior playground surfacing, pending final design by Owner and architect for the Childhood Education Center (Alternate A).

018 | FABRIC SHADE STRUCTURE

- (2) fabric shade structures at the exterior playground, pending final design by Owner and architect for the Childhood Education Center (Alternate A).

021 | PLAYGROUND EQUIPMENT

- (2) sets of Pre-K and Daycare exterior playground equipment, pending final design by Owner and architect for the Childhood Education Center (Alternate A).

023 | SITE CONCRETE

- Sidewalk, curbs and gutters, drive entrances, ADA ramps and truncated domes, light pole foundations, standard and LED bollard foundations.

024 | SITE MASONRY

- Exterior enclosures; Trash enclosure and Electrical Equipment enclosure.

STRUCTURE

027 | STRUCTURAL LAYOUT & COORDINATION

- Layout of structural walls and systems for coordination of multiple trades.

029 | BUILDING CONCRETE

- Footings/foundations, slab-on-grade, and equipment pads.

030 | STRUCTURAL MASONRY

- 8" and 12" structural CMU, with precision faced and split faced exterior finishes.

032 | STRUCTURAL METALS

- Supply and Installation of Structural joist, wide flange, HSS framing, and standard metal roof decking, including crane/hoisting.
- Epic Metals/acoustical metal roof decking at the Gymnasium (Alternate B).

033 | ORNAMENTAL & MISC. METALS

- Roof hatch ladders, cross-over roof ladders, and misc. metals.

035 | ROUGH CARPENTRY

- Labor, layout and material for temporary systems, window and door bucks at CMU walls.

ENCLOSURE

037 | WATERPROOFING & DAMPPROOFING

- Below-grade waterproofing and dampproofing for slabs and footings.

038 | AIR/VAPOR & MOISTURE BARRIERS

- Ice/Water shield at wood rainscreen siding, metal panel soffits and siding, masonry/CMU veneer.

039 | CAULKING AND SEALANTS

Basis of Design Development Estimate

City of Fernley: Community Response and Resource Center (CRRRC)

FEBRUARY 10, 2023



Fernley, NV

- Standard caulking and sealants for multiple trades.

044 | MEMBRANE ROOFING

- TPO roofing, roof hatches, flashing, and accessories.

045 | METAL ROOFING

- Standing seam metal roofing, flashing, and accessories.

046 | WOOD RAINSCREEN SIDING

- Trex or Kebony style wood rainscreen siding at lower walls and windows.
- Trex or Kebony style wood rainscreen siding at upper walls and windows at the Gymnasium (Alternate B).

047 | METAL PANEL SOFFIT & SIDING

- Exterior metal wall panel and soffit siding at upper parapet where membrane roofing occurs.

048 | MASONRY VENEER

- Exterior masonry/CMU veneer at the Gymnasium (Alternate B).

050 | EXTERIOR ALUMINUM, GLASS, & GLAZING

- Exterior glass, glazing and storefront entries.
- Curtain Wall system at the Gymnasium (Alternate B).

INTERIOR FINISHES

055 | INTERIOR LAYOUT & COORDINATION

- Layout of interior walls and finishes for coordination of multiple trades.

056 | DOORS, FRAMES AND HARDWARE

- Hollow metal doors and frames.
- FRP Doors and aluminum frames at individual restrooms.
- Wood doors and hollow metal frames at classrooms, interior corridors office and event spaces.

058 | INTERIOR ALUMINUM, GLASS, AND GLAZING

- Interior glass, glazing and storefront entries.

059 | FINISH CARPENTRY / MILLWORK

- Solid Surface countertops, wall-mounted countertops at lobby and entry spaces.
- Base and upper cabinets in classroom and office spaces.

061 | METAL STUDS, DRYWALL AND PAINT

- Exterior and interior framing, furring and drywall.
- Painting of interior walls, door frames, and metal doors.
- Mural wall painting and graphics at Event and Lobby spaces.

062 | ACOUSTICAL CEILING TREATMENT

- 2x2 acoustical ceilings in classrooms, corridors, and office spaces.
- 2x4 washable tile ceiling in kitchen spaces.
- Linear wood ceiling tiles at lobby and event spaces.

063 | ACOUSTICAL WALL TREATMENT

- Plywood wall covering with Birch cut-outs and decorative box features.

Basis of Design Development Estimate

City of Fernley: Community Response and Resource Center (CRRRC)

FEBRUARY 10, 2023



Fernley, NV

- Acoustical wall covering at the Gymnasium (Alternate B).

064 | TILE WALLS

- Tile walls in restrooms.

065 | CARPET AND RESILIENT FLOORING

- Carpet tile flooring in classroom and office spaces.
- Walk-off carpet tile at corridor entrances.
- VCT flooring at classroom spaces with sinks.

066 | ATHLETIC GYM FLOORING

- Resinous/rubberized athletic flooring at the Gymnasium (Alternate B).

067 | EPOXY & FLUID-APPLIED FLOORING

- Epoxy resin flooring in restroom spaces, epoxy/resinous flooring at main and transfer kitchens.

068 | CONCRETE FINISHING

- Sealed concrete in back-of-house storage, mechanical, and janitorial spaces.

070 | PROGRESSIVE & FINAL CLEAN REQUIREMENTS

- Labor and material for progressive cleaning required during construction.
- Final cleaning service required at the end of construction.

SPECIALTIES

071 | BUILDING SIGNAGE

- Room ID signage and code compliance signage.
- Gymnasium steel building identification signage (Alternate B).

072 | WALL AND DOOR PROTECTION

- Corner guards at corridor and restroom spaces, FRP at janitorial closets.

073 | RESTROOM SPECIALTIES

- Grab Bars, toilet/tissue dispensers, seat cover dispensers, soap dispensers, mirrors, and automatic hand dryers.

075 | FIRE PROTECTION SPECIALTIES

- Fire extinguisher cabinets.

077 | VISUAL DISPLAY BOARDS

- Mark boards and Tack boards in Classroom and Events spaces.

EQUIPMENT

084 | TRANSFER KITCHEN EQUIPMENT

- Transfer kitchen equipment, shelving, and fixtures (Alternate A).

085 | COMMERCIAL KITCHEN EQUIPMENT

- Main kitchen equipment, shelving, and fixtures; Hoods included in HVAC systems.

087 | GYMNASIUM EQUIPMENT

- Wall pads with graphics, wall-mounted scoreboard, basketball hoops, and volleyball equipment with floor inserts, and divider curtain in the Gymnasium (Alternate B).

Basis of Design Development Estimate

City of Fernley: Community Response and Resource Center (CRRRC)

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Fernley, NV

089 | WINDOW BLINDS AND SHADES

- Manual shades at interior side of exterior windows; excludes upper windows.

090 | TELESCOPING SEATING

- 500 seats, telescoping bleachers in the Gymnasium (Alternate B).

091 | PROJECTORS AND PROJECTION SCREENS

- (2) Projectors with structure-mounted motorized screens (Base Bid).
- (2) Projectors with structure-mounted motorized screens (Alternate B).

MP&E SYSTEMS

098 | FIRE SPRINKLER SYSTEMS

- Complete design-build fire sprinkler system.

099 | PLUMBING SYSTEMS

- Plumbing fixtures and equipment; wall-mounted water closets and lavatories at restrooms, countertop sinks at classrooms.

100 | HEATING, VENTILATING AND AIR CONDITIONING (HVAC) SYSTEMS

- Rooftop units, ductwork, restroom exhaust fans, kitchen hoods and exhaust fans.

101 | BUILDING CONTROLS

- Building controls integral to Mechanical systems.

102 | TEST & BALANCE

- Testing, adjusting, and balancing for building systems.

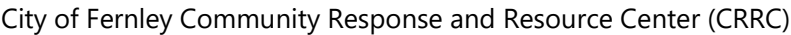
104 | ELECTRICAL, LOW VOLTAGE, & FIRE ALARM SYSTEMS

- Building Electrical systems; Exterior and interior lighting, power, tele/data, safety and security, access control, as well as design-build fire alarm system.
- Site Electrical systems; Exterior parking lot lighting, power, and data to event fields.



Schedule





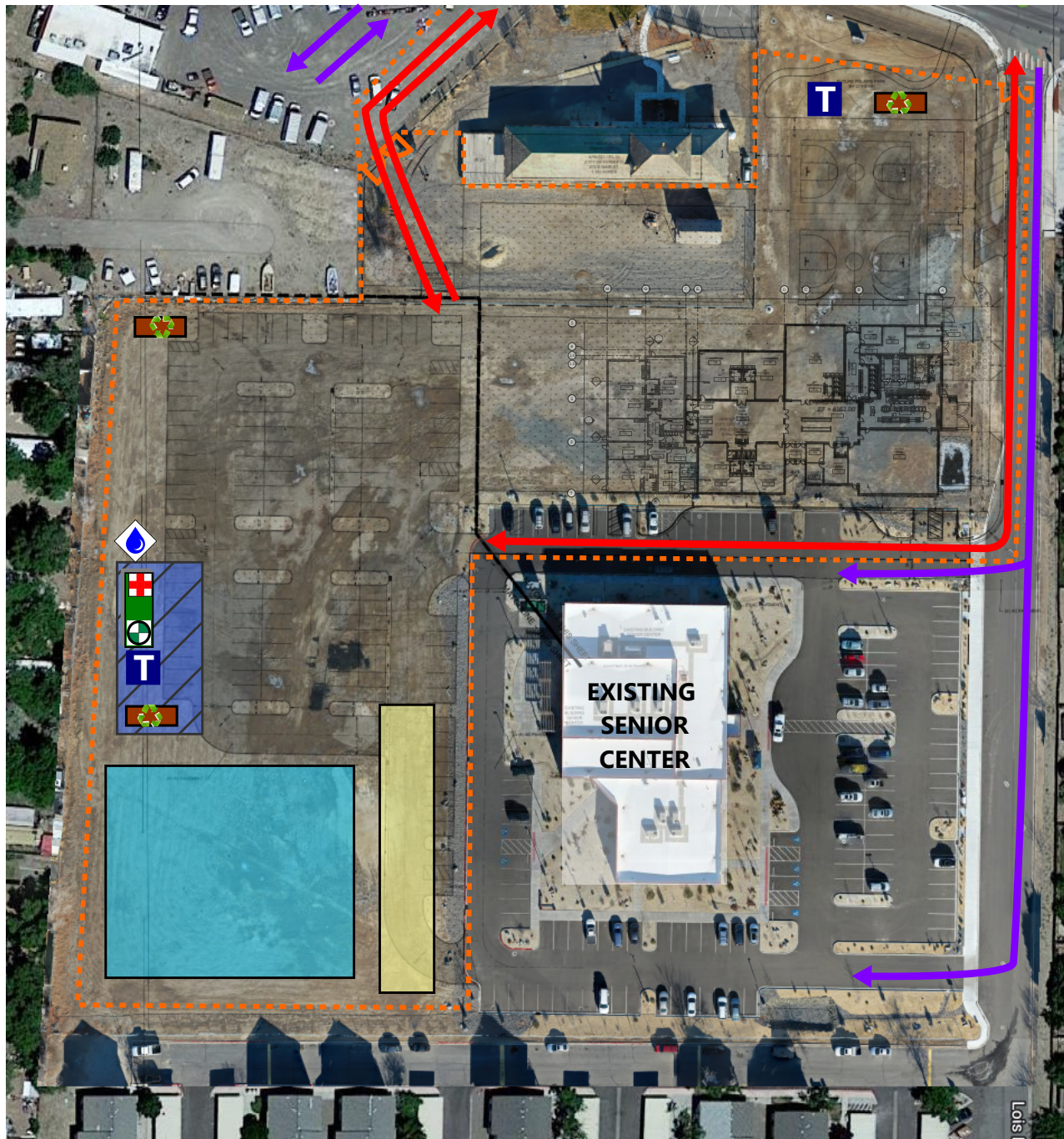
Task Summary Deadline Progress

Milestone Project Summary Critical



Logistics





Legend | Activities

-  Construction Entrance
-  Construction Fence
-  Dumpster / Recycle
-  First Aid
-  Construction Limits
-  Access Road / Crane Road
-  Temporary Toilets
-  Pedestrian Traffic
-  Construction Traffic
-  Wash Down / Wash Out Area
-  Trailer Area
-  Trailer
-  Parking
-  Lay Down Area
-  Flagger

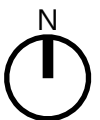
Construction Duration March 2024 - June 2025

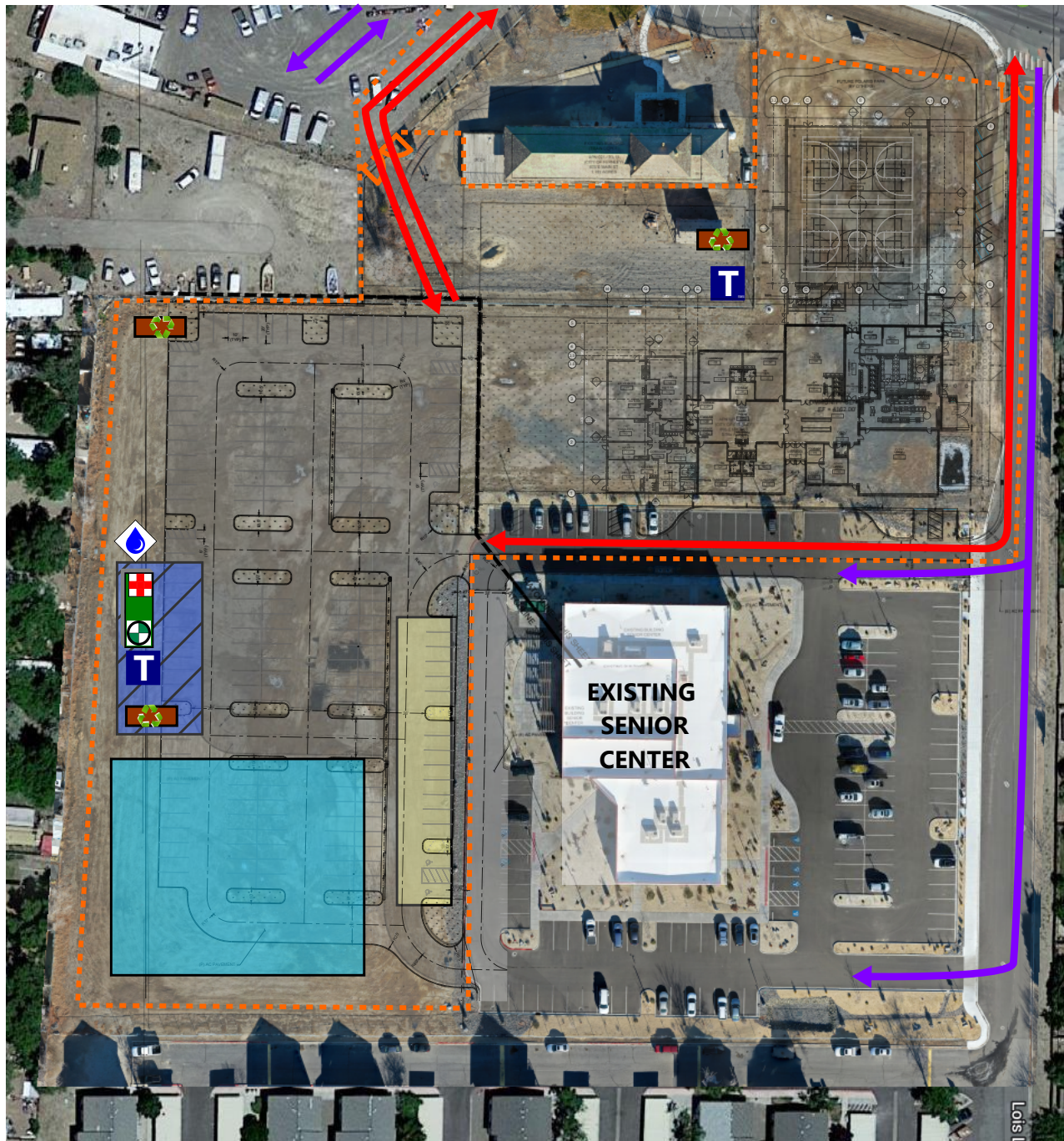
Coordinate all on site deliveries with Superintendent at 775-525-5775.



City of Fernley Community Response and Resource Center

Preliminary Site Logistics - Base Bid / Alternate A



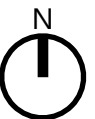


Legend | Activities

-  Construction Entrance
-  Construction Fence
-  Dumpster / Recycle
-  First Aid
-  Construction Limits
-  Access Road / Crane Road
-  Temporary Toilets
-  Pedestrian Traffic
-  Construction Traffic
-  Wash Down / Wash Out Area
-  Trailer Area
-  Trailer
-  Parking
-  Lay Down Area
-  Flagger

Construction Duration March 2024 - July 2025

Coordinate all on site deliveries with Superintendent at 775-525-5775.





5330 Reno Corporate Dr.
Reno, NV 89511



There may be a funding gap for Phases 1 and 2, and for good faith, staff asks City Council to commit up to \$4M in funding for the CRRRC given the early learning center is the money maker.

Phase 1 Cost Estimate (Base Bid/Youth Services)	18,286,205.00	
Phase 2 Cost Estimate (Early Learning Center)	3,604,829.00	
Total Cost estimate	<u>21,891,034.00</u>	
Less City ARPA	(12,000,000.00)	
Less TLT (City contribution)	(1,000,000.00)	
Less County ARPA	(300,000.00)	
Add back costs to date	<u>2,916,902.00</u>	
	<u>11,507,936.00</u>	Current GAP
Federal grants	-	
State grants	-	
Local grants	-	
City Funds	<u>4,000,000.00</u>	City contributions would total 23% of project costs (Ph 1&2)
**Potential GAP	<u><u>7,507,936.00</u></u>	

****Options:**

- 1)Commit currently available funds of \$2M (must recommit from roads)
- 2)Include funding in the '24 and '25 budgets and commit any budget savings for '23, '24 and '25
- 3)Use additional lodging tax for '23, '24 and '25.
- 4)Do a blanket commitment and allow staff to do what is necessary to start saving funds
- 5)Bank loan - medium term financing (last resort)
- 6)Enterprise loan - medium term financing (last resort)

****Note: City funds will likely not be needed until FY 25**



CITY OF FERNLEY

City Council AGENDA REPORT

Meeting Date: March 15, 2023

REPORT TO: Mayor and City Council

REPORT FROM: Dave Whalen, Public Works Director

FINANCIAL IMPACT:

Yes:

No: ☒ X

ACTION REQUESTED: Motion

AGENDA ITEM: (For Possible Action):

Discussion and Possible Action to approve a Memorandum of Understanding (MOU) between the City of Fernley and Mark IV concerning the RAISE Grant Administration.

AGENDA ITEM BRIEF:

Discussion and Action for an MOU between the City and Mark IV Capital for RAISE Grant Administration

RECOMMENDED MOTION:

"I move to approve a Memorandum of Understanding between the City of Fernley and Mark IV Capital for the specific purpose of working collaboratively to secure the funding offered by the award of the RAISE Grant for the Victory Project."

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

To work together with Mark IV towards RAISE Grant fulfillment, design, and construction process without an MOU in place.

BACKGROUND:

Mark IV Capital purchased more than 4,300 acres of industrial-zone land in the City of Fernley and established the Victory Logistics District with the intention of developing an industrial park.

A Memorandum of Understanding (MOU) between the City and Mark IV Capital was approved by City Council on February 21, 2021, for the specific purpose of seeking grant funding for Nevada Pacific Parkway.

On September 6, 2022, The City of Fernley received a Rebuilding American Infrastructure with Sustainability and Equity, or RAISE Grant program, award letter from the U.S. Department of Transportation for the Victory Project. The RAISE Grant funding is for \$25,000,000, with an estimated total Victory Project cost of \$52,410,060. The non-Federal contribution is comprised of private cash funding from Mark IV Capital in the amount of \$27,410,060. The City has the authority under NRS 338.168 to enter into any contracts required to receive such assistance in connection with the RAISE Grant.

The Victory Project will complete the planning, environmental studies, engineering design and construction for the Victory Project, which will complete the remaining 3,100 feet of Nevada Pacific Parkway from I-80 to Highway 50. Specifically, the Victory Project will fund the Nevada Pacific Parkway roadway and bridge component, including a new switch off the Union Pacific mainline railroad (Segment Ia) and the segment of lead rail from that new switch to the point of connection of the first switch (Segment Ib) of three that will create a “rail switching yard”.

The execution of a grant agreement will obligate RAISE grant funding, making it available to reimburse eligible expenses for the awarded Victory Project. The US Department of Transportation has said that all RAISE funding needs to be obligated by September 30, 2026 and expended by September 30, 2031.

The current MOU does not create a binding agreement between the City and Mark IV Capital, but rather an understanding between the City and Mark IV Capital to work collaboratively to submit all required documents, studies, budgets, third-party agreements, administrative updates, and all other necessary material requested by applicable third party public and private entities (e.g. the USDOT, UPRR, Federal Railroad Administration (“FRA”), and, if applicable, the Federal Highway Administration (“FHWA”)) to secure the funding offered by the RAISE Grant. The City is committed to the Victory Project, and in the interest of the City, every effort must be made, and every detail followed, so that the City does not come out of pocket.

Once a grant agreement is in place, a future binding agreement will be negotiated with Mark IV Capital with very clear terms and conditions addressing grant guidelines, and with provisions in place for reimbursement.

RELEVANT LAWS, STATUTES, AND REGULATIONS:

NRS 338.168

FRA Terms and conditions for grant award

City of Fernley Grants Administration Policy

FINANCIAL IMPLICATIONS:

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

ATTACHMENTS:

1. Mark IV - City of Fernley MOU revised 2.24.23

Memorandum of Understanding Mark IV Capital and the City of Fernley

This Memorandum of Understanding is established between **M4 NEW FERNLEY, LLC**, a Nevada limited liability company, and **M4 NEW FERNLEY QOZB, LLC**, a Nevada limited liability company (collectively, “Mark IV Capital”), and the **CITY OF FERNLEY** (the “City of Fernley”), as of March 15, 2023.

Whereas, the City of Fernley and Mark IV Capital are parties to that certain Memorandum of Understanding dated February 17, 2021, pursuant to which the City of Fernley and Mark IV Capital agreed to work collaboratively to submit grant applications to the U.S. Department of Transportation (“USDOT”) for funding to complete Nevada Pacific Pkwy (“NPP”).

Whereas, the City of Fernley, with Mark IV Capital’s support, has been selected by USDOT to receive a federal grant in the amount of \$25M under the Rebuilding American Infrastructure with Sustainability and Equity program (“RAISE Grant”) to complete the remaining 3,100 feet of the NPP roadway and bridge component that will connect the US I-80 to US Hwy 50, and the installation of a new rail switch off the Union Pacific Railroad (“UPRR”) main line rail with the initial segment of industrial lead track into Victory (“Project”).

Whereas, the RAISE Grant funds will not become available for disbursement until the City of Fernley and the USDOT enter into a written grant agreement (“Grant Agreement”) after all applicable administrative requirements have been satisfied, including but not limited to the review process under the National Environmental Protection Act (“NEPA”).

Whereas, the City of Fernley does not have within its budget the capability to contribute the funding needed to complete the NEPA review process and satisfy the other administrative requirements to finalize the Grant Agreement. Any costs incurred before the Grant Agreement is executed (“pre-award costs”) are ineligible for reimbursement and non-Federal match requirements unless authorized in writing by USDOT.

Whereas, the City has the authority under NRS 338.168 to take any action necessary to obtain federal, state, or local assistance and may enter into any contracts required to receive such assistance in connection with the RAISE Grant.

Whereas, the City of Fernley and Mark IV Capital intend for this Memorandum of Understanding to provide the foundation for the anticipated future binding agreements between them, related to the Project. However, except for Mark IV Capital’s reimbursement obligations hereunder, this Memorandum of Understanding does not create a binding agreement between the City of Fernley and Mark IV Capital, but rather an understanding between them to work together collaboratively to secure the funding offered by the RAISE Grant awarded to the City of Fernley.

Now, therefore, the City of Fernley and Mark IV Capital agree to work collaboratively to submit all required documents, studies, budgets, third-party agreements, administrative updates, and all other necessary material requested by applicable third party public and private entities (e.g. the USDOT, UPRR, Federal Railroad Administration (“FRA”), and, if applicable, the Federal Highway Administration (“FHWA”)) to secure the funding offered by the RAISE Grant.

Mark IV Capital shall undertake or to cause to undertake any and all work to the extent permissible to secure the funding offered by the RAISE Grant, including without limitation, the following: (a) preparing the scope of work, budget, and timeline for the Grant Agreement; (b) taking all actions necessary to comply with the NEPA review process; (c) retaining the necessary consultants to generate all required materials for the NEPA review process, including any reports, studies, and plans for environmental assessments, traffic, engineering, regional air quality and vehicular safety; and (d) paying for any expenses, fees and costs related to the foregoing. Mark IV Capital agrees to comply with all required local, State and Federal laws and regulations applicable to the RAISE Grant awarded to the City of Fernley. Mark IV acknowledges that all costs incurred directly by Mark IV hereunder may not be entitled to reimbursement as pre-award costs.

Mark IV and its consultants shall not submit any of the materials referenced in the preceding paragraph to the applicable reviewing agency or entity without the City’s prior written approval. The City of Fernley agrees to expeditiously review, comment on and edit, as necessary, and approve all material required for the Grant Agreement, which includes but is not limited to: (a) the scope of work, budget, and timeline for the Grant Agreement; (b) design and crossing agreements; and (c) all other materials or actions required to be produced/submitted to USDOT/UPRR/FRA/FHWA and any other public or private parties as may be required to secure the funding offered by the RAISE Grant.

The City of Fernley and Mark IV Capital agree to work collaboratively in negotiating a project agreement addressing: (a) their respective roles and responsibilities in connection with the design, construction, financing, operations, and maintenance of the Project; (b) policies and procedures for procurement; (c) engaging consultants with specific industry knowledge and qualifications for administration and project management in connection with federal grants and utilizing federal financial payment software, (d) USDOT grant deliverables and reporting; (e) construction permits; (f) potential assumption of the NEPA review process, and generation of any reports, studies, and plans for environmental assessments, traffic, engineering, regional air quality and vehicular safety related thereto; and (g) all other materials or actions required to be produced/submitted to USDOT, UPRR, FRA, FHWA and any other public or private parties in furtherance of each phase of the RAISE Grant fulfillment, design, and construction process.

In connection with preparing and finalizing the Grant Agreement, the City of Fernley further agrees to use commercially reasonable efforts to: (a) provide staff support; (b) provide access to studies that may be needed in any submission to USDOT, UPRR, FRA, and FHWA; (c) work with NDOT and or other governmental agencies required to process these requests; and (d) provide updates to Mark IV Capital concerning potential city actions that may impact the Project; provided, however, all of the foregoing subsections (a) through (f) shall be at the sole discretion

of the City of Fernley and subject to all applicable laws relating to public bidding or other procurement procedures.

Given that the City of Fernley agreed to only be a pass through applicant to the RAISE grant award, and the City indicated that it would not fund the grant process or the planning, design, engineering, or construction of the Project, Mark IV Capital agrees to reimburse the City of Fernley for all costs incurred by the City of Fernley in connection with the activities taken hereunder, including but not limited to fees to cover the costs of processing, reviewing and evaluating all materials and contracts contemplated by this memorandum of understanding. This also includes any administrative costs associated with the Grant.

Notwithstanding the foregoing, the City of Fernley hereby agrees that it shall not incur more than \$15,000 in administrative costs without prior written approval of Mark IV Capital. The aforementioned right to prior approval shall apply to each subsequent increment of \$15,000 in administrative costs incurred by the City. Any required prior written approval may be provided by email from Mark IV Capital to the City of Fernley. For the avoidance of doubt, the \$15,000 limitation applies solely to administrative costs incurred by the City and shall not apply to any costs or expenses incurred pursuant to contracts or agreements the City of Fernley may enter into with third parties (including, but not limited to, UPRR and any design and engineering consultants) with Mark IV Capital's approval. The City of Fernley agrees that Mark IV Capital shall be entitled to reimbursement of funds advanced to the City of Fernley hereunder upon actual receipt by the City of Fernley of RAISE grant funding to the extent approved by the FRA or USDOT for reimbursement as pre-award costs. The City of Fernley further agrees to cooperate with and support Mark IV Capital in its attempts to recover from RAISE grant funds pre-award costs for amounts expended by Mark IV Capital directly rather than as reimbursement to the City of Fernley; provided, however, that nothing herein shall obligate the City of Fernley for any such costs, nor obligate the City of Fernley to undertake any action or grant any approval in violation of applicable law or its ordinary procurement procedures. Mark IV further understands the COF may reimburse itself for administrative costs prior to distribution to Mark IV for any costs already incurred but outstanding.

[remainder of page intentionally left blank; signature page follows]

[signature page to Memorandum of Understanding]

MARK IV CAPITAL:

M4 NEW FERNLEY, LLC,

a Nevada limited liability company

By: Mark IV Capital Properties, Inc.,
a California corporation,
its Manager

By: _____
Name: _____
Its: _____

M4 NEW FERNLEY QOZB, LLC,

a Nevada limited liability company

By: Mark IV Capital Properties, Inc.,
a California corporation,
its Manager

By: _____
Name: _____
Its: _____

CITY OF FERNLEY:

CITY OF FERNLEY

By: _____
Name: _____
Its: _____

20852319_v7



CITY OF FERNLEY

City Council AGENDA REPORT

Meeting Date: March 15, 2023

REPORT TO: Mayor and City Council

REPORT FROM: Derek Starkey, City Engineer

FINANCIAL IMPACT:

Yes:x

No:

CURRENTLY BUDGETED:

Yes:x

No:

FUND/ACCOUNT:

510-166100

ACTION REQUESTED: Motion

AGENDA ITEM: (For Possible Action):

Discussion and possible action regarding the design and construction of improvements for the surface water conveyance project and surface water treatment projects at the City's water treatment plant and the ratification of the current change orders for the surface water conveyance project.

AGENDA ITEM BRIEF:

As we move to the end of the City's project to deliver surface water to the City's water treatment plant, staff wanted to update the Mayor and City Council on the progress of construction and costs to date and begin to discuss the next phases of the project .

This staff report will briefly summarize the progress and costs of the project to date and give the total amount of change orders for the project incurred so far during construction. It will also discuss the next steps the City will need to make to be able to treat and serve surface water.

RECOMMENDED MOTION:

I move to ratify the current change orders 1-12 in an amount not to exceed \$522,041.81 for the surface water conveyance project.

BUSINESS IMPACT (per NRS Chapter 237):

A Business Impact Statement is not required because this is not a rule (term excludes vehicles by which legislative powers are exercised under NRS Chapters 271, 278, 278A, or 278B).

See attached report for background, analysis, alternatives.

ALTERNATIVES:

Council could provide further directions to staff or request additional information from staff to be provided at a future meeting of the City Council.

BACKGROUND:

The City of Fernley Water Treatment Plant currently utilizes multiple groundwater wells to supply groundwater to the plant that is then treated and served to its municipal water customers. The City has accepted dedication of surface water rights throughout the years as a part of the development of new homes and businesses within the City. The City needs to pursue the use of its surface water rights through the Canal in order to diversify its water resources to meet growing demand and to eventually prove beneficial use of the rights.

The project is broken into two general phases:

- The first phase will design and construct an outtake structure at the Truckee Canal, piping to convey the water from the outtake to the treatment plant site, and a pump station to pump the water into the treatment plant piping. This phase is called the surface water conveyance project.
- The second phase will design and construct improvements within the treatment plant that are required to allow the plant to treat and serve the surface water. This phase is collectively called the surface water treatment project.

The City awarded a design contract to AECOM engineering in 2018 to design the outtake structure, pipeline, and pump station. The design was started and the city began a long permitting process with the United States Bureau of Reclamation, the Nevada Department of Environmental Protection, Bureau of Safe Drinking Water, and the Truckee Carson Irrigation District.

The final permits and approvals were received by June of 2021. Once the approvals were received, the plans and specifications were finalized, and the project was advertised for bid (see Figure 1 for the outtake, pipeline, and pump station map).

The lowest and most responsible bidder was found to be Farr Construction (dba Resource Development Corporation). In August of 2021, the City Council approved a contract for construction for \$4,835,798.00 with a two percent contingency of \$96,716 for a total of

During construction, several changes occurred which changed the cost to deliver the project. The largest changes in cost, \$261,103.00 are attributed to new or additional requirements from the USBR that impacted construction schedule and methods. This included additional time for sheet pile installation to accommodate additional inspection, special inspections during sheet pile installation, modification to the outtake structure and purchase of sheet piles, and additional metering at the outtake structure.

Others were due to the field conditions that differed from the approved plans and required extra work or design modifications to complete the work. The largest field change, \$169,480.00, was due to a conflict between the existing electrical conduits for the plant and the new conveyance pipeline. The existing conduit pipes were concrete encased which was not shown on record drawings for the plant. The new pipeline had to be relocated and additional time and labor was needed to work around the existing electrical lines and concrete encasement.

Construction of the surface water conveyance project started in Mid-January 2022 with excavation for the wet well at the new pump station, and with the placement of the steel piles at the canal. Currently, all the underground piping is completed, and the remaining tasks are:

- Finish removing sheet piles from the canal embankment.
- Finish compacting and grading the canal bank to USBR Specifications.
- Construct Box Culverts at the intersection of Truckee Lane and the access road for the pipeline.
- Finalize Electrical Equipment at the new Pump Station (Currently underway)
- Pump Delivery and Installation. Pumps are currently scheduled to arrive to the site in mid-January 2023 with installation to follow.
- Paving of the intersection of Truckee Lane and the access road for the pipeline.
- Commissioning of pumps and monitoring equipment (SCADA).

Staff is now looking to start the next phase of the project, which is the design of the improvements at the water treatment plant needed to treat surface water. The next steps will be the award of a design contract for a secondary treated water reservoir and the award of a contract for conceptual engineering services for treatment facility improvements.

The design contract for the secondary treatment reservoir was awarded in February of 2023 and preliminary work will begin as soon as final contract documents are executed. The engineering firm selected is Shaw Engineering. The contract will design and prepare plans and specifications for a second treated water reservoir for the water treatment plant. The design and permitting of the secondary reservoir should be complete in Winter of 2023.

The draft proposal for conceptual design of the the treatment facilities is currently being reviewed with the engineer, CDM Smith. The proposal currently includes the following tasks; a corrosion control study, conceptual evaluations for carbon dioxide system for pH adjustment, sludge drying beds, and granular activated carbon for taste and odor control. The final proposal and contract will be coming to Council for approval in the coming months. The conceptual engineering work is tentatively estimated to be complete by July of 2023. It is important to note that this work is conceptual and further work to finalize the facility improvements will be needed.

RELEVANT LAWS, STATUTES, AND REGULATIONS:

Nevada Revised Statutes 338 - Public Works

FINANCIAL IMPLICATIONS:

Below is a summary of charges to date for the design and construction of the surface water conveyance project.

AECOM – Design Engineer and Construction Manager for the Conveyance Project

Construction Management and Testing Contract	\$349,519.00
Change Orders to expand Services due to BOR	<u>\$ 32,387.00</u>

Total Fees \$381,906.00

Paid to Date \$304,255.00

Balance to Complete \$ 77,651.00**Farr Construction (aka RDC)- General Contractor for Conveyance Project**

Original Construction Contract Amount	\$4,835,798.00
Change Orders 1-12 (please see attached list for further detail)	<u>\$ 522,041.81</u>

Total \$5,357,839.81

Paid to Date \$4,915,776.07

Balance to Complete \$ 687,852.55

TOTAL DESIGN AND CONSTRUCTION	\$5,739,745.81
TOTAL APPROVED BUDGET FY 22/23	\$5,000,000.00

The additional funding over the original budget amount will come from the water enterprise fund.

Below is a summary of estimates for the design and improvements for the surface water treatment portion of the project.

Secondary 1.5 MG Treated Water Reservoir Fiscal Year 2022-2023

1.5 Million Gallon Tank and related Appurtenances	\$3,000,000.00
Tank Design Fees (Shaw Engineering)	<u>\$ 66,500.00</u>
Total	\$3,066,500.00

Conceptual Design of Water Treatment Facility Improvements

Conceptual Treatment Facility Improvements (CDM Smith)	\$200,000.00
Estimated Future Cost to Upgrade Facilities	<u>\$8,500,000.00</u>
Total	\$8,700,000.00

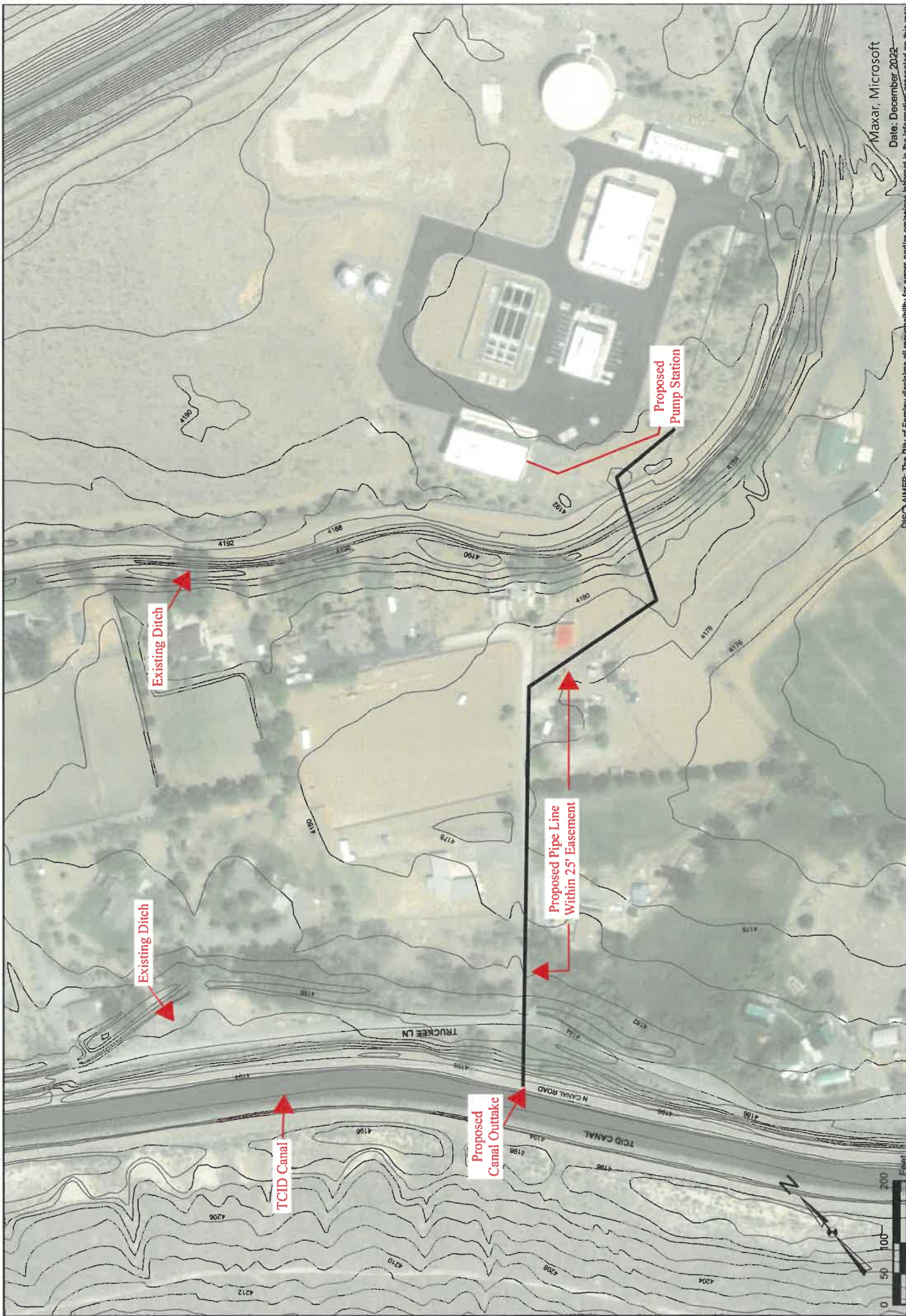
The estimates provided are planning level cost estimates and are subject to change as work is progressed and as the labor and materials markets change.

ATTACHMENTS:

1. Figure 1
2. Figure 2
3. Change Order Summary



Surface Water Conveyance Project - Figure 1: Route Plan





CITY OF FERNLEY - WATER TREATMENT PLANT LAYOUT

FIGURE 2



City of Fernley
Water Treatment Plant- Surface Water Conveyance Project
Change Order Description

	Original Contract Price	\$ 4,835,798.00
Change Order	Description	Amount
No. 1	Upgrade of Electric Panel board for compatability with existing plant electrical configuration	\$ 7,864.00
No. 2	Remove & Replace 24" Concrete Encased Culvert not shown in plans	\$ 4,796.00
No. 3	Coating of concrete structures in contact with raw water with NSF 61 certified coating as required by the State of Nevada Bureau of Safe Drinking Water	\$ 22,557.00
No. 4	Add stairway Nosing at Entrance steps	\$ 1,842.00
No. 5	Removal of Cottonwood Tree due to Outtake Structure Shift due to proximity to electric overhead	\$ 4,627.00
No. 6	Sheet Pile Crew Stand-By Time due to Field Delays by USBR additional Geotech Inspection	\$ 4,069.00
No. 7	Special Inspection Req. by USBR during Sheet Pile Placement	\$ 38,034.00
No. 8	Outtake Construction Modifications by USBR and Buying Sheet Piles that were already placed	\$ 196,300.00
No. 9	Electrical improvements at the canal water meter vault to include a transformer for sump pump	\$ 22,700.00
No. 10	Labor, equipment and materials required to reloacte the 8-inch, 20-inch, and 30-inch pipelines services laterias and tunnel under existing electrical concrete encased bank of conduits	\$ 196,480.00
No. 11	Roof Framing Modifications to Avoid vibrations from HVAC in the new pump building	\$ 20,566.37
No. 12	Labor, equipment and materials to complete the HVAC control conduit and wiring per RFI 45.	<u>\$ 2,206.44</u>
	Total Change Orders	\$ 522,041.81
	Total contract price with change orders:	\$ 5,357,839.81