

Appendix D

Future Year

LOS Calculations



Intersection Level Of Service Report**Intersection 1: US 50 / N. Lompa Ln**

Control Type: Signalized
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 25.3
Level Of Service: C
Volume to Capacity (v/c): 0.580

Intersection Setup

Name	N. Lompa Ln			N. Lompa Ln			US 50			US 50		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	125.00	100.00	100.00	125.00	100.00	100.00	150.00	100.00	100.00	200.00	100.00	150.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	300.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N. Lompa Ln			N. Lompa Ln			US 50			US 50		
Base Volume Input [veh/h]	164	37	20	46	35	114	35	743	118	14	1591	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.1000	1.0500	1.0500	1.1000	1.0500	1.0500	1.1000	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	99	0	0	64	0
Site-Generated Trips [veh/h]	37	0	0	0	0	0	0	0	14	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	36	0	0	41	0	0	11
Total Hourly Volume [veh/h]	209	39	15	48	39	84	37	916	97	15	1814	24
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	56	10	4	13	10	23	10	246	26	4	488	6
Total Analysis Volume [veh/h]	225	42	16	52	42	90	40	985	104	16	1951	26
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			1			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	10	0	5	10	0
Maximum Green [s]	0	25	0	0	25	0	20	40	0	20	40	0
Amber [s]	0.0	4.4	0.0	0.0	4.4	0.0	3.9	4.8	0.0	3.9	4.8	0.0
All red [s]	0.0	3.3	0.0	0.0	3.3	0.0	3.1	1.0	0.0	2.7	1.0	0.0
Split [s]	0	44	0	0	44	0	17	45	0	26	54	0
Vehicle Extension [s]	0.0	2.2	0.0	0.0	2.2	0.0	2.0	2.5	0.0	2.0	2.5	0.0
Walk [s]	0	11	0	0	11	0	0	9	0	0	7	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	16	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	5.7	0.0	0.0	5.7	0.0	5.0	3.8	0.0	4.6	3.8	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	7.70	7.70	7.70	7.70	7.00	5.80	5.80	6.60	5.80	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	5.70	5.70	5.70	5.70	5.00	3.80	3.80	4.60	3.80	3.80
g_i, Effective Green Time [s]	32	32	32	32	4	61	61	2	59	59
g / C, Green / Cycle	0.28	0.28	0.28	0.28	0.03	0.53	0.53	0.02	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.18	0.03	0.04	0.08	0.02	0.21	0.21	0.01	0.37	0.37
s, saturation flow rate [veh/h]	1227	1740	1312	1629	1738	3475	1737	1738	3475	1813
c, Capacity [veh/h]	308	486	376	455	55	1836	918	30	1776	926
d1, Uniform Delay [s]	45.05	30.90	34.71	32.50	55.22	16.15	16.17	56.03	21.95	21.96
k, delay calibration	0.06	0.06	0.06	0.06	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.86	0.06	0.09	0.19	6.89	0.64	1.28	5.22	2.70	5.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.73	0.12	0.14	0.29	0.73	0.40	0.40	0.53	0.73	0.73
d, Delay for Lane Group [s/veh]	46.91	30.96	34.80	32.69	62.11	16.79	17.44	61.25	24.65	27.06
Lane Group LOS	D	C	C	C	E	B	B	E	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	6.47	1.23	1.18	2.95	1.23	5.42	5.60	0.49	13.14	14.35
50th-Percentile Queue Length [ft/ln]	161.82	30.78	29.59	73.80	30.63	135.57	140.06	12.33	328.58	358.71
95th-Percentile Queue Length [veh/ln]	10.65	2.22	2.13	5.31	2.21	9.24	9.48	0.89	19.09	20.56
95th-Percentile Queue Length [ft/ln]	266.13	55.40	53.26	132.84	55.14	231.05	237.11	22.19	477.22	514.02

Movement, Approach, & Intersection Results

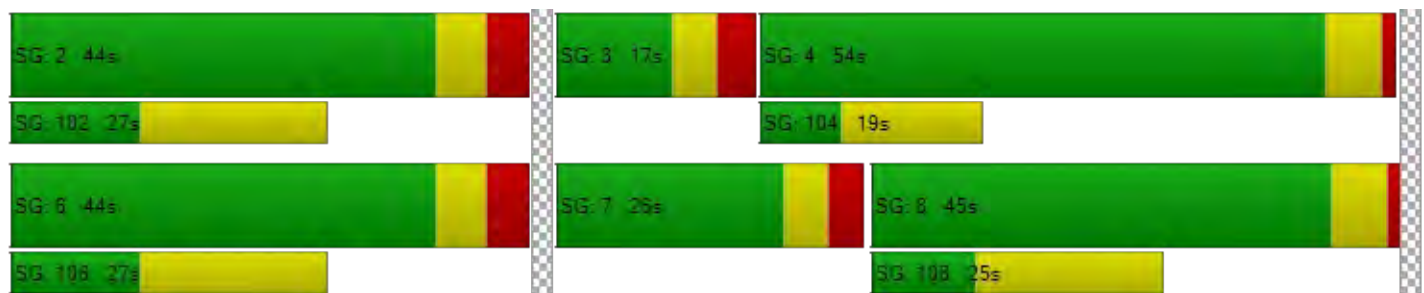
d_M, Delay for Movement [s/veh]	46.91	30.96	30.96	34.80	32.69	32.69	62.11	16.96	17.44	61.25	25.45	27.06
Movement LOS	D	C	C	C	C	C	E	B	B	E	C	C
d_A, Approach Delay [s/veh]	43.64			33.28			18.61			25.76		
Approach LOS	D			C			B			C		
d_I, Intersection Delay [s/veh]	25.31											
Intersection LOS	C											
Intersection V/C	0.580											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	11.0	15.0	15.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	7839.66	0.00	0.00
d_p, Pedestrian Delay [s]	45.23	47.03	43.48	43.48
I_p,int, Pedestrian LOS Score for Intersection	2.092	2.095	3.566	3.332
Crosswalk LOS	B	B	D	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	631	631	682	838
d_b, Bicycle Delay [s]	26.93	26.93	24.98	19.40
I_b,int, Bicycle LOS Score for Intersection	2.036	1.923	2.203	2.662
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: US 50 / Airport Rd

Control Type: Signalized
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 28.3
Level Of Service: C
Volume to Capacity (v/c): 0.595

Intersection Setup

Name	Airport Rd			Airport Rd			US 50			US 50		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	250.00	100.00	150.00	150.00	100.00	100.00	250.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Airport Rd			Airport Rd			US 50			US 50		
Base Volume Input [veh/h]	167	84	16	44	100	98	38	616	97	16	1286	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.1000	1.0500	1.0500	1.1000	1.0500
In-Process Volume [veh/h]	26	0	22	0	0	0	0	75	15	12	31	0
Site-Generated Trips [veh/h]	0	5	19	0	2	0	0	0	0	7	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	17	0	0	54	0	0	61	0	0	20
Total Hourly Volume [veh/h]	201	93	41	46	107	49	40	753	56	36	1446	18
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	25	11	12	28	13	11	200	15	10	385	5
Total Analysis Volume [veh/h]	214	99	44	49	114	52	43	801	60	38	1538	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			1			0		
v_di, Inbound Pedestrian Volume crossing major street	0			1			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	20	25	0	20	25	0	20	40	0	20	40	0
Amber [s]	3.3	4.3	0.0	3.1	4.3	0.0	3.9	4.8	0.0	4.0	4.8	0.0
All red [s]	2.9	2.9	0.0	2.6	2.9	0.0	3.4	1.0	0.0	3.6	1.0	0.0
Split [s]	18	34	0	18	34	0	24	39	0	24	39	0
Vehicle Extension [s]	1.5	1.5	0.0	1.5	1.5	0.0	1.0	2.2	0.0	1.0	2.2	0.0
Walk [s]	0	14	0	0	11	0	0	16	0	0	15	0
Pedestrian Clearance [s]	0	13	0	0	16	0	0	17	0	0	11	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.2	5.2	0.0	3.7	5.2	0.0	5.3	3.8	0.0	5.6	3.8	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	Yes		No	Yes	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	6.70	7.20	6.45	7.20	7.20	7.30	5.80	5.80	7.60	5.80	5.80
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	5.20	0.00	5.20	5.20	5.30	3.80	3.80	5.60	3.80	3.80
g_i, Effective Green Time [s]	30	15	31	15	15	4	62	62	4	62	62
g / C, Green / Cycle	0.26	0.13	0.27	0.13	0.13	0.03	0.54	0.54	0.03	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.14	0.08	0.03	0.06	0.03	0.02	0.23	0.04	0.02	0.45	0.01
s, saturation flow rate [veh/h]	1482	1717	1498	1810	1535	1724	3446	1507	1724	3446	1538
c, Capacity [veh/h]	331	229	325	242	205	58	1846	807	55	1849	825
d1, Uniform Delay [s]	42.45	47.19	40.46	46.09	44.69	55.13	16.16	12.91	55.18	22.33	12.52
k, delay calibration	0.09	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.04	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.70	1.05	0.08	0.53	0.24	6.74	0.74	0.18	5.74	4.54	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.65	0.63	0.15	0.47	0.25	0.74	0.43	0.07	0.69	0.83	0.02
d, Delay for Lane Group [s/veh]	44.15	48.23	40.54	46.61	44.93	61.87	16.91	13.09	60.92	26.88	12.57
Lane Group LOS	D	D	D	D	D	E	B	B	E	C	B
Critical Lane Group	Yes	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.26	3.97	1.03	3.02	1.34	1.31	6.08	0.74	1.15	16.81	0.23
50th-Percentile Queue Length [ft/ln]	131.52	99.28	25.77	75.57	33.38	32.86	152.01	18.62	28.80	420.28	5.71
95th-Percentile Queue Length [veh/ln]	9.02	7.15	1.86	5.44	2.40	2.37	10.12	1.34	2.07	23.54	0.41
95th-Percentile Queue Length [ft/ln]	225.57	178.71	46.39	136.03	60.08	59.14	253.11	33.52	51.84	588.38	10.28

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.15	48.23	48.23	40.54	46.61	44.93	61.87	16.91	13.09	60.92	26.88	12.57
Movement LOS	D	D	D	D	D	D	E	B	B	E	C	B
d_A, Approach Delay [s/veh]	45.78			44.82			18.79			27.52		
Approach LOS	D			D			B			C		
d_I, Intersection Delay [s/veh]	28.28											
Intersection LOS	C											
Intersection V/C	0.595											

Other Modes

g_Walk,mi, Effective Walk Time [s]	20.0	19.0	15.0	18.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	9891.91	0.00
d_p, Pedestrian Delay [s]	39.27	40.10	43.51	40.94
I_p,int, Pedestrian LOS Score for Intersection	2.144	2.341	3.393	3.162
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	466	466	577	577
d_b, Bicycle Delay [s]	33.85	33.85	29.14	29.12
I_b,int, Bicycle LOS Score for Intersection	2.177	2.003	2.356	2.892
Bicycle LOS	B	B	B	C

Sequence

Ring 1	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Airport Rd / Gordonia Dr

Control Type: All-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 9.7
Level Of Service: A
Volume to Capacity (v/c): 0.346

Intersection Setup

Name	Airport Rd			Airport Rd						Gordonia Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			No		

Volumes

Name	Airport Rd			Airport Rd						Gordonia Dr		
Base Volume Input [veh/h]	0	139	13	35	157	0	0	0	0	46	0	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0500	1.0500	1.0500	1.0500	1.0000	1.0000	1.0000	1.0000	1.0500	1.0000	1.0500
In-Process Volume [veh/h]	0	48	0	0	27	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	0	0	0	0	9	24	0	34	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	194	14	37	192	9	24	0	34	48	0	57
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	54	4	10	53	3	7	0	9	13	0	16
Total Analysis Volume [veh/h]	14	216	16	41	213	10	27	0	38	53	0	63
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	765	763	710	718
Degree of Utilization, x	0.32	0.35	0.09	0.16

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.39	1.55	0.30	0.57
95th-Percentile Queue Length [ft]	34.81	38.73	7.53	14.35
Approach Delay [s/veh]	9.92	10.20	8.58	8.98
Approach LOS	A	B	A	A
Intersection Delay [s/veh]	9.74			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 4: Airport Rd / Desatoya Dr / N. Lompa Ln

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 14.1
Level Of Service: B
Volume to Capacity (v/c): 0.142

Intersection Setup

Name	Airport Rd		Airport Rd		Desatoya Dr	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Airport Rd		Airport Rd		Desatoya Dr	
Base Volume Input [veh/h]	119	23	15	188	54	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	48	0	0	27	0	0
Site-Generated Trips [veh/h]	13	0	0	34	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	186	24	16	258	57	35
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	7	5	76	17	10
Total Analysis Volume [veh/h]	219	28	19	304	67	41
Pedestrian Volume [ped/h]	0		0		1	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.14	0.05
d_M, Delay for Movement [s/veh]	0.00	0.00	7.76	0.00	14.13	10.98
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.04	0.00	0.71	0.71
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.09	0.00	17.64	17.64
d_A, Approach Delay [s/veh]	0.00		0.46		12.93	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.28					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 6: Airport Rd / Butti Way

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 15.9
Level Of Service: C
Volume to Capacity (v/c): 0.225

Intersection Setup

Name	Airport Rd		Airport Rd		Butti Way	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Airport Rd		Airport Rd		Butti Way	
Base Volume Input [veh/h]	123	10	17	225	61	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	3.00	3.00	3.00	3.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	23	4	8	19	13	25
Site-Generated Trips [veh/h]	13	0	0	34	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	165	15	26	289	77	45
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	5	8	90	24	14
Total Analysis Volume [veh/h]	206	19	33	361	96	56
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.23	0.07
d_M, Delay for Movement [s/veh]	0.00	0.00	7.71	0.00	15.89	9.70
Movement LOS	A	A	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.07	0.00	0.86	0.22
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.87	0.00	21.38	5.47
d_A, Approach Delay [s/veh]	0.00		0.65		13.61	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	3.01					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: 5th St / Airport Rd

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 45.2
Level Of Service: E
Volume to Capacity (v/c): 0.636

Intersection Setup

Name	Airport Rd		5th St		5th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	150.00	125.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

Volumes

Name	Airport Rd		5th St		5th St	
Base Volume Input [veh/h]	93	193	51	193	343	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	14	18	17	74	51	10
Site-Generated Trips [veh/h]	10	24	9	0	0	4
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	122	245	80	277	411	100
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	72	24	81	121	29
Total Analysis Volume [veh/h]	144	288	94	326	484	118
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.64	0.53	0.10	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	45.16	18.94	9.06	0.00	0.00	0.00
Movement LOS	E	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	3.83	3.10	0.32	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	95.66	77.57	7.93	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	27.68		2.03		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	8.81					
Intersection LOS	E					

Intersection Level Of Service Report**Intersection 1: US 50 / N. Lompa Ln**

Control Type: Signalized
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 25.7
Level Of Service: C
Volume to Capacity (v/c): 0.567

Intersection Setup

Name	N. Lompa Ln			N. Lompa Ln			US 50			US 50		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	125.00	100.00	100.00	125.00	100.00	100.00	150.00	100.00	100.00	200.00	100.00	150.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	300.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N. Lompa Ln			N. Lompa Ln			US 50			US 50		
Base Volume Input [veh/h]	143	25	39	61	44	84	99	1522	225	35	1343	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.1000	1.0500	1.0500	1.1000	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	100	0	0	116	0
Site-Generated Trips [veh/h]	23	0	0	0	0	0	0	0	40	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	12	0	0	26	0	0	83	0	0	22
Total Hourly Volume [veh/h]	173	26	29	64	46	62	104	1774	193	37	1593	52
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	47	7	8	17	12	17	28	477	52	10	428	14
Total Analysis Volume [veh/h]	186	28	31	69	49	67	112	1908	208	40	1713	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			1			1			0		
v_di, Inbound Pedestrian Volume crossing major street	0			1			1			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			2			0			2		
v_ci, Inbound Pedestrian Volume crossing minor street	0			2			0			2		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			1			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	14.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	0	5	0	0	5	0	5	10	0	5	10	0
Maximum Green [s]	0	25	0	0	25	0	20	40	0	20	40	0
Amber [s]	0.0	4.4	0.0	0.0	4.4	0.0	3.9	4.8	0.0	3.9	4.8	0.0
All red [s]	0.0	3.3	0.0	0.0	3.3	0.0	3.1	1.0	0.0	2.7	1.0	0.0
Split [s]	0	44	0	0	44	0	26	60	0	26	60	0
Vehicle Extension [s]	0.0	2.2	0.0	0.0	2.2	0.0	2.0	2.5	0.0	2.0	2.5	0.0
Walk [s]	0	11	0	0	11	0	0	9	0	0	7	0
Pedestrian Clearance [s]	0	25	0	0	25	0	0	16	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	5.7	0.0	0.0	5.7	0.0	5.0	3.8	0.0	4.6	3.8	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	7.70	7.70	7.70	7.70	7.00	5.80	5.80	6.60	5.80	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	5.70	5.70	5.70	5.70	5.00	3.80	3.80	4.60	3.80	3.80
g_i, Effective Green Time [s]	30	30	30	30	10	76	76	4	70	70
g / C, Green / Cycle	0.23	0.23	0.23	0.23	0.08	0.59	0.59	0.03	0.54	0.54
(v / s)_i Volume / Saturation Flow Rate	0.14	0.03	0.05	0.07	0.06	0.39	0.40	0.02	0.32	0.33
s, saturation flow rate [veh/h]	1284	1725	1354	1708	1795	3589	1780	1795	3589	1850
c, Capacity [veh/h]	262	399	313	395	136	2099	1041	53	1921	990
d1, Uniform Delay [s]	53.47	39.78	44.94	41.22	59.20	18.41	18.66	62.63	20.80	20.83
k, delay calibration	0.06	0.06	0.06	0.06	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.91	0.09	0.19	0.22	4.61	1.72	3.63	7.99	1.44	2.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.71	0.15	0.22	0.29	0.82	0.67	0.68	0.76	0.61	0.61
d, Delay for Lane Group [s/veh]	55.38	39.88	45.13	41.44	63.81	20.12	22.29	70.62	22.23	23.62
Lane Group LOS	E	D	D	D	E	C	C	E	C	C
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.15	1.55	1.95	3.15	3.73	13.66	14.56	1.41	11.78	12.57
50th-Percentile Queue Length [ft/ln]	153.85	38.63	48.79	78.79	93.37	341.52	363.97	35.13	294.43	314.36
95th-Percentile Queue Length [veh/ln]	10.22	2.78	3.51	5.67	6.72	19.72	20.82	2.53	17.41	18.39
95th-Percentile Queue Length [ft/ln]	255.56	69.53	87.82	141.82	168.06	493.06	520.41	63.23	435.14	459.75

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	55.38	39.88	39.88	45.13	41.44	41.44	63.81	20.69	22.29	70.62	22.68	23.62
Movement LOS	E	D	D	D	D	D	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	51.65			42.82			23.01			23.77		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	25.71											
Intersection LOS	C											
Intersection V/C	0.567											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	11.0	15.0	15.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	1611.81	4296.02	0.00
d_p, Pedestrian Delay [s]	52.65	54.47	50.87	50.87
I_p,int, Pedestrian LOS Score for Intersection	2.146	2.111	3.670	3.543
Crosswalk LOS	B	B	D	D
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	558	558	834	834
d_b, Bicycle Delay [s]	33.77	33.77	22.11	22.11
I_b,int, Bicycle LOS Score for Intersection	1.984	1.908	2.831	2.567
Bicycle LOS	A	A	C	B

Sequence

Ring 1	3	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: US 50 / Airport Rd

Control Type: Signalized
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 37.3
Level Of Service: D
Volume to Capacity (v/c): 0.575

Intersection Setup

Name	Airport Rd			Airport Rd			US 50			US 50		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	250.00	100.00	150.00	150.00	100.00	100.00	250.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Airport Rd			Airport Rd			US 50			US 50		
Base Volume Input [veh/h]	167	126	25	95	116	127	166	1241	206	28	1043	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.1000	1.0500	1.0500	1.1000	1.0500
In-Process Volume [veh/h]	31	0	25	0	0	0	0	49	44	36	81	0
Site-Generated Trips [veh/h]	0	3	12	0	5	0	0	0	0	20	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	19	0	0	69	0	0	78	0	0	27
Total Hourly Volume [veh/h]	206	135	44	100	127	64	174	1414	182	85	1228	24
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	36	12	26	33	17	46	372	48	22	323	6
Total Analysis Volume [veh/h]	217	142	46	105	134	67	183	1488	192	89	1293	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	1			1			0			1		
v_di, Inbound Pedestrian Volume crossing major street	1			0			1			1		
v_co, Outbound Pedestrian Volume crossing minor street	3			1			2			1		
v_ci, Inbound Pedestrian Volume crossing minor street	2			1			3			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			1			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	20	25	0	20	25	0	20	40	0	20	40	0
Amber [s]	3.3	4.3	0.0	3.1	4.3	0.0	3.9	4.8	0.0	4.0	4.8	0.0
All red [s]	2.9	2.9	0.0	2.6	2.9	0.0	3.4	1.0	0.0	3.6	1.0	0.0
Split [s]	18	33	0	18	33	0	21	58	0	21	58	0
Vehicle Extension [s]	1.5	1.5	0.0	1.5	1.5	0.0	1.0	2.2	0.0	1.0	2.2	0.0
Walk [s]	0	14	0	0	11	0	0	16	0	0	15	0
Pedestrian Clearance [s]	0	12	0	0	15	0	0	26	0	0	11	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.2	5.2	0.0	3.7	5.2	0.0	5.3	3.8	0.0	5.6	3.8	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	Yes		No	Yes	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	6.70	7.20	6.45	7.20	7.20	7.30	5.80	5.80	7.60	5.80	5.80
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	5.20	0.00	5.20	5.20	5.30	3.80	3.80	5.60	3.80	3.80
g_i, Effective Green Time [s]	37	25	38	25	25	14	65	65	8	60	60
g / C, Green / Cycle	0.28	0.19	0.29	0.19	0.19	0.11	0.50	0.50	0.06	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.15	0.10	0.07	0.07	0.04	0.10	0.41	0.12	0.05	0.36	0.02
s, saturation flow rate [veh/h]	1424	1805	1437	1885	1579	1795	3589	1594	1795	3589	1599
c, Capacity [veh/h]	342	344	311	359	301	190	1800	800	112	1653	736
d1, Uniform Delay [s]	48.17	47.54	47.82	45.86	44.46	57.88	27.58	18.34	60.14	29.58	19.22
k, delay calibration	0.17	0.04	0.04	0.04	0.04	0.06	0.50	0.50	0.04	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.02	0.50	0.23	0.24	0.14	15.84	4.50	0.71	4.76	3.77	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.55	0.34	0.37	0.22	0.96	0.83	0.24	0.80	0.78	0.03
d, Delay for Lane Group [s/veh]	51.19	48.05	48.05	46.10	44.60	73.72	32.08	19.05	64.90	33.34	19.31
Lane Group LOS	D	D	D	D	D	E	C	B	E	C	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.00	5.62	2.54	3.79	1.84	6.69	19.44	3.30	2.99	16.93	0.42
50th-Percentile Queue Length [ft/ln]	150.12	140.58	63.44	94.78	45.94	167.27	486.02	82.53	74.65	423.33	10.53
95th-Percentile Queue Length [veh/ln]	10.02	9.51	4.57	6.82	3.31	10.93	26.67	5.94	5.37	23.68	0.76
95th-Percentile Queue Length [ft/ln]	250.58	237.80	114.19	170.61	82.70	273.33	666.80	148.55	134.37	592.04	18.96

Movement, Approach, & Intersection Results

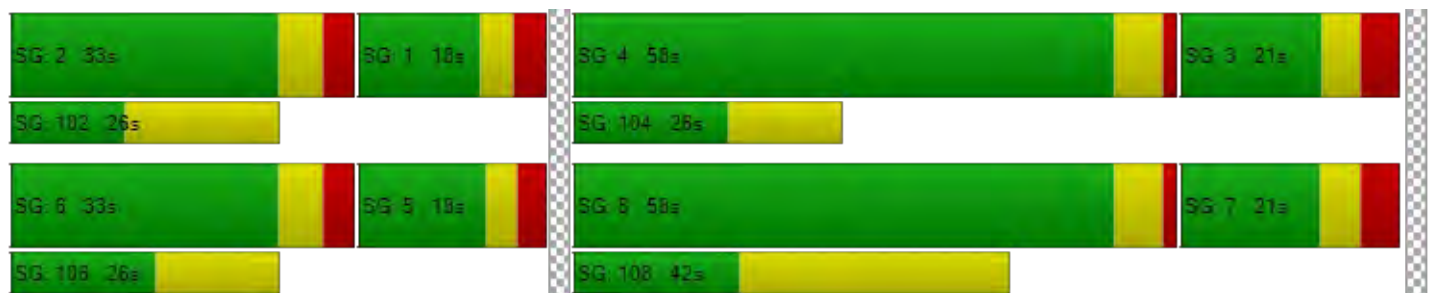
d_M, Delay for Movement [s/veh]	51.19	48.05	48.05	48.05	46.10	44.60	73.72	32.08	19.05	64.90	33.34	19.31
Movement LOS	D	D	D	D	D	D	E	C	B	E	C	B
d_A, Approach Delay [s/veh]	49.73			46.44			34.83			35.09		
Approach LOS	D			D			C			D		
d_I, Intersection Delay [s/veh]	37.33											
Intersection LOS	D											
Intersection V/C	0.575											

Other Modes

g_Walk,mi, Effective Walk Time [s]	20.0	19.0	15.0	18.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	1924.82	6533.68	7701.43	5787.43
d_p, Pedestrian Delay [s]	46.54	47.39	50.87	48.25
I_p,int, Pedestrian LOS Score for Intersection	2.227	2.455	3.697	3.390
Crosswalk LOS	B	B	D	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	397	397	803	803
d_b, Bicycle Delay [s]	41.76	41.78	23.28	23.28
I_b,int, Bicycle LOS Score for Intersection	2.259	2.178	3.161	2.743
Bicycle LOS	B	B	C	B

Sequence

Ring 1	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Airport Rd / Gordonia Dr

Control Type: All-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 10.0
Level Of Service: A
Volume to Capacity (v/c): 0.396

Intersection Setup

Name	Airport Rd			Airport Rd						Gordonia Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	+			+			+			+		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			No		

Volumes

Name	Airport Rd			Airport Rd						Gordonia Dr		
Base Volume Input [veh/h]	0	169	27	28	167	0	0	0	0	3	0	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	1.00	2.00	1.00
Growth Factor	1.0000	1.0500	1.0500	1.0500	1.0500	1.0000	1.0000	1.0000	1.0000	1.0500	1.0000	1.0500
In-Process Volume [veh/h]	0	56	0	0	80	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	35	0	0	0	0	25	15	0	21	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	233	28	29	255	25	15	0	21	3	0	23
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	61	7	8	67	7	4	0	6	1	0	6
Total Analysis Volume [veh/h]	37	245	29	31	268	26	16	0	22	3	0	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	818	821	704	739
Degree of Utilization, x	0.38	0.40	0.05	0.04

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.79	1.91	0.17	0.11
95th-Percentile Queue Length [ft]	44.74	47.76	4.27	2.84
Approach Delay [s/veh]	10.07	10.24	8.41	8.05
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	9.98			
Intersection LOS	A			

Intersection Level Of Service Report
Intersection 4: Airport Rd / Desatoya Dr / N. Lompa Ln

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 14.8
Level Of Service: B
Volume to Capacity (v/c): 0.055

Intersection Setup

Name	Airport Rd		Airport Rd		Desatoya Dr	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	50.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Airport Rd		Airport Rd		Desatoya Dr	
Base Volume Input [veh/h]	169	26	51	119	19	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	56	0	0	80	0	0
Site-Generated Trips [veh/h]	35	0	0	21	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	268	27	54	226	20	28
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	74	7	15	62	5	8
Total Analysis Volume [veh/h]	295	30	59	248	22	31
Pedestrian Volume [ped/h]	0		0		2	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.05	0.00	0.06	0.04
d_M, Delay for Movement [s/veh]	0.00	0.00	8.06	0.00	14.75	10.65
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.15	0.00	0.32	0.32
95th-Percentile Queue Length [ft/ln]	0.00	0.00	3.76	0.00	8.08	8.08
d_A, Approach Delay [s/veh]	0.00		1.55		12.36	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	1.65					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 6: Airport Rd / Butti Way

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 13.9
Level Of Service: B
Volume to Capacity (v/c): 0.090

Intersection Setup

Name	Airport Rd		Airport Rd		Butti Way	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Airport Rd		Airport Rd		Butti Way	
Base Volume Input [veh/h]	158	31	6	132	27	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	40	13	26	54	8	16
Site-Generated Trips [veh/h]	35	0	0	21	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	241	46	32	214	36	55
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	67	13	9	59	10	15
Total Analysis Volume [veh/h]	268	51	36	238	40	61
Pedestrian Volume [ped/h]	0		0		5	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.03	0.00	0.09	0.08
d_M, Delay for Movement [s/veh]	0.00	0.00	7.88	0.00	13.92	10.32
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.09	0.00	0.30	0.27
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.16	0.00	7.39	6.74
d_A, Approach Delay [s/veh]	0.00		1.04		11.75	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.12					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 7: 5th St / Airport Rd

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 49.7
Level Of Service: E
Volume to Capacity (v/c): 0.510

Intersection Setup

Name	Airport Rd		5th St		5th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	150.00	125.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

Volumes

Name	Airport Rd		5th St		5th St	
Base Volume Input [veh/h]	54	105	146	292	183	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	5	57	45	26	32	8
Site-Generated Trips [veh/h]	6	15	25	0	0	10
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	68	182	223	333	224	63
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	20	54	66	98	66	19
Total Analysis Volume [veh/h]	80	214	262	392	264	74
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.51	0.29	0.21	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	49.69	11.85	8.75	0.00	0.00	0.00
Movement LOS	E	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	2.48	1.20	0.81	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	62.04	30.04	20.35	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	22.15		3.51		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	6.85					
Intersection LOS	E					

Appendix E

Future Plus Project

LOS Calculations



Intersection Level Of Service Report**Intersection 1: US 50 / N. Lompa Ln**

Control Type: Signalized
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 28.6
Level Of Service: C
Volume to Capacity (v/c): 0.613

Intersection Setup

Name	N. Lompa Ln			N. Lompa Ln			US 50			US 50		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	125.00	100.00	100.00	125.00	100.00	100.00	150.00	100.00	100.00	200.00	100.00	150.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	300.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N. Lompa Ln			N. Lompa Ln			US 50			US 50		
Base Volume Input [veh/h]	164	37	20	46	35	114	35	743	118	14	1591	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.1000	1.0500	1.0500	1.1000	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	99	0	0	64	0
Site-Generated Trips [veh/h]	74	0	0	0	0	0	0	0	26	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	6	0	0	36	0	0	45	0	0	11
Total Hourly Volume [veh/h]	246	39	15	48	37	84	37	916	105	15	1814	24
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	66	10	4	13	10	23	10	246	28	4	488	6
Total Analysis Volume [veh/h]	265	42	16	52	40	90	40	985	113	16	1951	26
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			0			0		
v_di, Inbound Pedestrian Volume crossing major street	0			0			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			1			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	66.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	0	5	0	0	5	0	5	10	0	5	10	0
Maximum Green [s]	0	25	0	0	25	0	20	40	0	20	40	0
Amber [s]	0.0	4.4	0.0	0.0	4.4	0.0	3.9	4.8	0.0	3.9	4.8	0.0
All red [s]	0.0	3.3	0.0	0.0	3.3	0.0	3.1	1.0	0.0	2.7	1.0	0.0
Split [s]	0	44	0	0	44	0	17	45	0	26	54	0
Vehicle Extension [s]	0.0	2.2	0.0	0.0	2.2	0.0	2.0	2.5	0.0	2.0	2.5	0.0
Walk [s]	0	11	0	0	11	0	0	9	0	0	7	0
Pedestrian Clearance [s]	0	16	0	0	16	0	0	16	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	5.7	0.0	0.0	5.7	0.0	5.0	3.8	0.0	4.6	3.8	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	7.70	7.70	7.70	7.70	7.00	5.80	5.80	6.60	5.80	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	5.70	5.70	5.70	5.70	5.00	3.80	3.80	4.60	3.80	3.80
g_i, Effective Green Time [s]	36	36	36	36	4	57	57	2	55	55
g / C, Green / Cycle	0.31	0.31	0.31	0.31	0.03	0.50	0.50	0.02	0.48	0.48
(v / s)_i Volume / Saturation Flow Rate	0.22	0.03	0.04	0.08	0.02	0.21	0.21	0.01	0.37	0.37
s, saturation flow rate [veh/h]	1230	1740	1312	1626	1738	3475	1731	1738	3475	1813
c, Capacity [veh/h]	346	544	413	509	55	1719	856	31	1658	865
d1, Uniform Delay [s]	43.41	28.08	32.18	29.50	55.18	18.60	18.61	55.99	25.09	25.10
k, delay calibration	0.14	0.06	0.06	0.06	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.50	0.05	0.07	0.14	6.66	0.78	1.56	4.98	3.78	7.04
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.77	0.11	0.13	0.26	0.73	0.43	0.43	0.52	0.78	0.78
d, Delay for Lane Group [s/veh]	47.91	28.13	32.25	29.65	61.84	19.38	20.17	60.97	28.86	32.14
Lane Group LOS	D	C	C	C	E	B	C	E	C	C
Critical Lane Group	Yes	No	No	No	Yes	No	No	No	No	Yes
50th-Percentile Queue Length [veh/ln]	7.85	1.17	1.13	2.75	1.22	6.01	6.19	0.49	14.46	15.90
50th-Percentile Queue Length [ft/ln]	196.14	29.14	28.34	68.71	30.56	150.20	154.74	12.29	361.57	397.39
95th-Percentile Queue Length [veh/ln]	12.44	2.10	2.04	4.95	2.20	10.03	10.27	0.89	20.70	22.43
95th-Percentile Queue Length [ft/ln]	310.98	52.45	51.01	123.68	55.00	250.70	256.74	22.13	517.50	560.85

Movement, Approach, & Intersection Results

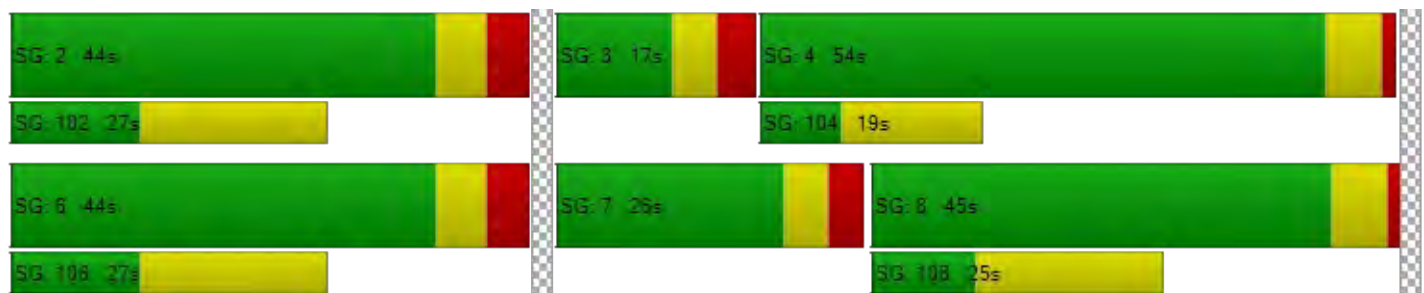
d_M, Delay for Movement [s/veh]	47.91	28.13	28.13	32.25	29.65	29.65	61.84	19.58	20.17	60.97	29.96	32.14
Movement LOS	D	C	C	C	C	C	E	B	C	E	C	C
d_A, Approach Delay [s/veh]	44.36			30.39			21.13			30.24		
Approach LOS	D			C			C			C		
d_I, Intersection Delay [s/veh]	28.65											
Intersection LOS	C											
Intersection V/C	0.613											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	11.0	15.0	15.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	7840.31	0.00	0.00
d_p, Pedestrian Delay [s]	45.23	47.02	43.47	43.47
I_p,int, Pedestrian LOS Score for Intersection	2.106	2.094	3.635	3.332
Crosswalk LOS	B	B	D	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	631	631	682	838
d_b, Bicycle Delay [s]	26.92	26.92	24.98	19.40
I_b,int, Bicycle LOS Score for Intersection	2.102	1.919	2.210	2.662
Bicycle LOS	B	A	B	B

Sequence

Ring 1	-	2	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	-	6	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: US 50 / Airport Rd

Control Type: Signalized
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 28.9
Level Of Service: C
Volume to Capacity (v/c): 0.587

Intersection Setup

Name	Airport Rd			Airport Rd			US 50			US 50		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	250.00	100.00	150.00	150.00	100.00	100.00	250.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Airport Rd			Airport Rd			US 50			US 50		
Base Volume Input [veh/h]	167	84	16	44	100	98	38	616	97	16	1286	36
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.1000	1.0500	1.0500	1.1000	1.0500
In-Process Volume [veh/h]	26	0	22	0	0	0	0	75	15	12	31	0
Site-Generated Trips [veh/h]	0	10	38	0	3	0	0	0	0	13	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	23	0	0	54	0	0	61	0	0	20
Total Hourly Volume [veh/h]	201	98	54	46	108	49	40	753	56	42	1446	18
Peak Hour Factor	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400	0.9400
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	53	26	14	12	29	13	11	200	15	11	385	5
Total Analysis Volume [veh/h]	214	104	57	49	115	52	43	801	60	45	1538	19
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			0			1			0		
v_di, Inbound Pedestrian Volume crossing major street	0			1			0			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ci, Inbound Pedestrian Volume crossing minor street	0			0			0			0		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			1			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	115
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	45.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lead	-	-	Lead	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	20	25	0	20	25	0	20	40	0	20	40	0
Amber [s]	3.3	4.3	0.0	3.1	4.3	0.0	3.9	4.8	0.0	4.0	4.8	0.0
All red [s]	2.9	2.9	0.0	2.6	2.9	0.0	3.4	1.0	0.0	3.6	1.0	0.0
Split [s]	18	34	0	18	34	0	24	39	0	24	39	0
Vehicle Extension [s]	1.5	1.5	0.0	1.5	1.5	0.0	1.0	2.2	0.0	1.0	2.2	0.0
Walk [s]	0	14	0	0	11	0	0	16	0	0	15	0
Pedestrian Clearance [s]	0	13	0	0	16	0	0	17	0	0	11	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.2	5.2	0.0	3.7	5.2	0.0	5.3	3.8	0.0	5.6	3.8	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	Yes		No	Yes	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	115	115	115	115	115	115	115	115	115	115	115
L, Total Lost Time per Cycle [s]	6.70	7.20	6.45	7.20	7.20	7.30	5.80	5.80	7.60	5.80	5.80
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	5.20	0.00	5.20	5.20	5.30	3.80	3.80	5.60	3.80	3.80
g_i, Effective Green Time [s]	31	17	31	17	17	4	61	61	4	61	61
g / C, Green / Cycle	0.27	0.15	0.27	0.15	0.15	0.03	0.53	0.53	0.03	0.53	0.53
(v / s)_i Volume / Saturation Flow Rate	0.15	0.09	0.03	0.06	0.03	0.02	0.23	0.04	0.03	0.45	0.01
s, saturation flow rate [veh/h]	1462	1704	1470	1810	1535	1724	3446	1507	1724	3446	1538
c, Capacity [veh/h]	333	248	312	264	224	58	1822	797	59	1833	818
d1, Uniform Delay [s]	42.52	46.44	41.22	44.87	43.49	55.13	16.66	13.30	55.12	22.77	12.77
k, delay calibration	0.09	0.04	0.04	0.04	0.04	0.04	0.50	0.50	0.04	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	1.80	1.07	0.09	0.42	0.20	6.74	0.77	0.18	7.26	4.80	0.05
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.64	0.65	0.16	0.44	0.23	0.74	0.44	0.08	0.76	0.84	0.02
d, Delay for Lane Group [s/veh]	44.33	47.51	41.31	45.29	43.68	61.87	17.43	13.49	62.38	27.57	12.82
Lane Group LOS	D	D	D	D	D	E	B	B	E	C	B
Critical Lane Group	Yes	No	No	Yes	No	Yes	No	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	5.24	4.46	1.02	3.00	1.31	1.31	6.20	0.76	1.38	17.05	0.23
50th-Percentile Queue Length [ft/ln]	130.99	111.38	25.62	75.00	32.83	32.86	154.91	18.97	34.54	426.19	5.78
95th-Percentile Queue Length [veh/ln]	8.99	7.92	1.84	5.40	2.36	2.37	10.28	1.37	2.49	23.82	0.42
95th-Percentile Queue Length [ft/ln]	224.84	197.92	46.11	134.99	59.10	59.14	256.96	34.14	62.17	595.47	10.40

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	44.33	47.51	47.51	41.31	45.29	43.68	61.87	17.43	13.49	62.38	27.57	12.82
Movement LOS	D	D	D	D	D	D	E	B	B	E	C	B
d_A, Approach Delay [s/veh]	45.70			44.00			19.28			28.37		
Approach LOS	D			D			B			C		
d_I, Intersection Delay [s/veh]	28.91											
Intersection LOS	C											
Intersection V/C	0.587											

Other Modes

g_Walk,mi, Effective Walk Time [s]	20.0	19.0	15.0	18.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	9736.95	0.00
d_p, Pedestrian Delay [s]	39.27	40.10	43.51	40.94
I_p,int, Pedestrian LOS Score for Intersection	2.161	2.343	3.413	3.169
Crosswalk LOS	B	B	C	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	466	466	577	577
d_b, Bicycle Delay [s]	33.85	33.85	29.14	29.12
I_b,int, Bicycle LOS Score for Intersection	2.216	2.005	2.356	2.898
Bicycle LOS	B	B	B	C

Sequence

Ring 1	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Airport Rd / Gordonia Dr

Control Type: All-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 10.0
Level Of Service: B
Volume to Capacity (v/c): 0.360

Intersection Setup

Name	Airport Rd			Airport Rd						Gordonia Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			No		

Volumes

Name	Airport Rd			Airport Rd						Gordonia Dr		
Base Volume Input [veh/h]	0	139	13	35	157	0	0	0	0	46	0	54
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0500	1.0500	1.0500	1.0500	1.0000	1.0000	1.0000	1.0000	1.0500	1.0000	1.0500
In-Process Volume [veh/h]	0	48	0	0	27	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	13	24	0	0	7	9	24	0	34	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	13	218	14	37	199	9	24	0	34	48	0	57
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	4	61	4	10	55	3	7	0	9	13	0	16
Total Analysis Volume [veh/h]	14	242	16	41	221	10	27	0	38	53	0	63
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings**Lanes**

Capacity per Entry Lane [veh/h]	761	756	698	706
Degree of Utilization, x	0.36	0.36	0.09	0.16

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.63	1.64	0.31	0.59
95th-Percentile Queue Length [ft]	40.63	41.02	7.67	14.64
Approach Delay [s/veh]	10.34	10.41	8.69	9.11
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	10.02			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 4: Airport Rd / Desatoya Dr / N. Lompa Ln

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 16.7
Level Of Service: C
Volume to Capacity (v/c): 0.177

Intersection Setup

Name	Airport Rd			Airport Rd			N. Lompa Ln			Desatoya Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	50.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Airport Rd			Airport Rd			N. Lompa Ln			Desatoya Dr		
Base Volume Input [veh/h]	0	119	23	15	188	0	0	0	0	54	0	33
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	48	0	0	27	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	8	18	0	0	36	5	19	0	25	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	8	191	24	16	260	5	19	0	25	57	0	35
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	56	7	5	76	1	6	0	7	17	0	10
Total Analysis Volume [veh/h]	9	225	28	19	306	6	22	0	29	67	0	41
Pedestrian Volume [ped/h]	0			0			0			1		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.01	0.00	0.00	0.06	0.00	0.04	0.18	0.00	0.05
d_M, Delay for Movement [s/veh]	7.89	0.00	0.00	7.78	0.00	0.00	15.28	14.29	10.11	16.72	16.19	11.73
Movement LOS	A	A	A	A	A	A	C	B	B	C	C	B
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.02	0.04	0.00	0.00	0.19	0.12	0.12	0.87	0.87	0.87
95th-Percentile Queue Length [ft/ln]	0.54	0.54	0.54	1.10	0.00	0.00	4.69	3.08	3.08	21.73	21.73	21.73
d_A, Approach Delay [s/veh]	0.27			0.45			12.34			14.83		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	3.26											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 5: Airport Rd / South Project Access

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 13.6
Level Of Service: B
Volume to Capacity (v/c): 0.014

Intersection Setup

Name	Airport Rd		Airport Rd		South Project Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Airport Rd		Airport Rd		South Project Access	
Base Volume Input [veh/h]	0	142	242	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	48	27	0	0	0
Site-Generated Trips [veh/h]	2	21	59	2	5	7
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	218	340	2	5	7
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	64	100	1	1	2
Total Analysis Volume [veh/h]	2	256	400	2	6	8
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	8.12	0.00	0.00	0.00	13.62	10.73
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.01	0.01	0.00	0.00	0.08	0.08
95th-Percentile Queue Length [ft/ln]	0.13	0.13	0.00	0.00	2.03	2.03
d_A, Approach Delay [s/veh]	0.06		0.00		11.97	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.27					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 6: Airport Rd / Butti Way

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 17.0
Level Of Service: C
Volume to Capacity (v/c): 0.242

Intersection Setup

Name	Airport Rd		Airport Rd		Butti Way	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Airport Rd		Airport Rd		Butti Way	
Base Volume Input [veh/h]	123	10	17	225	61	19
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	3.00	3.00	3.00	3.00	3.00	3.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	23	4	8	19	13	25
Site-Generated Trips [veh/h]	23	0	0	66	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	175	15	26	321	77	45
Peak Hour Factor	0.8000	0.8000	0.8000	0.8000	0.8000	0.8000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	55	5	8	100	24	14
Total Analysis Volume [veh/h]	219	19	33	401	96	56
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.02	0.00	0.24	0.07
d_M, Delay for Movement [s/veh]	0.00	0.00	7.74	0.00	16.96	9.79
Movement LOS	A	A	A	A	C	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.08	0.00	0.94	0.22
95th-Percentile Queue Length [ft/ln]	0.00	0.00	1.89	0.00	23.38	5.57
d_A, Approach Delay [s/veh]	0.00		0.59		14.31	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.95					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: 5th St / Airport Rd

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 51.6
Level Of Service: F
Volume to Capacity (v/c): 0.690

Intersection Setup

Name	Airport Rd		5th St		5th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	150.00	125.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

Volumes

Name	Airport Rd		5th St		5th St	
Base Volume Input [veh/h]	93	193	51	193	343	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	11	21	17	74	51	10
Site-Generated Trips [veh/h]	19	47	16	0	0	7
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	128	271	87	277	411	103
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	80	26	81	121	30
Total Analysis Volume [veh/h]	151	319	102	326	484	121
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.69	0.59	0.10	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	51.56	20.80	9.11	0.00	0.00	0.00
Movement LOS	F	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	4.40	3.80	0.35	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	109.93	94.96	8.71	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	30.68		2.17		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	10.21					
Intersection LOS	F					

Intersection Level Of Service Report**Intersection 1: US 50 / N. Lompa Ln**

Control Type: Signalized
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 28.1
Level Of Service: C
Volume to Capacity (v/c): 0.593

Intersection Setup

Name	N. Lompa Ln			N. Lompa Ln			US 50			US 50		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	0	1	0	0	1	0	1
Entry Pocket Length [ft]	125.00	100.00	100.00	125.00	100.00	100.00	150.00	100.00	100.00	200.00	100.00	150.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	1
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	300.00
Speed [mph]	25.00			25.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	N. Lompa Ln			N. Lompa Ln			US 50			US 50		
Base Volume Input [veh/h]	143	25	39	61	44	84	99	1522	225	35	1343	70
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.1000	1.0500	1.0500	1.1000	1.0500
In-Process Volume [veh/h]	0	0	0	0	0	0	0	100	0	0	116	0
Site-Generated Trips [veh/h]	45	0	0	0	0	0	0	0	79	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	12	0	0	26	0	0	95	0	0	22
Total Hourly Volume [veh/h]	195	26	29	64	46	62	104	1774	220	37	1593	52
Peak Hour Factor	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300	0.9300
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	52	7	8	17	12	17	28	477	59	10	428	14
Total Analysis Volume [veh/h]	210	28	31	69	49	67	112	1908	237	40	1713	56
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	0			1			1			0		
v_di, Inbound Pedestrian Volume crossing major street	0			1			1			0		
v_co, Outbound Pedestrian Volume crossing minor street	0			2			0			2		
v_ci, Inbound Pedestrian Volume crossing minor street	0			2			0			2		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			1			1		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	14.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	Permis	Permis	Permis	Permis	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	0	6	0	0	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	-	-	-	-	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	0	5	0	0	5	0	5	10	0	5	10	0
Maximum Green [s]	0	25	0	0	25	0	20	40	0	20	40	0
Amber [s]	0.0	4.4	0.0	0.0	4.4	0.0	3.9	4.8	0.0	3.9	4.8	0.0
All red [s]	0.0	3.3	0.0	0.0	3.3	0.0	3.1	1.0	0.0	2.7	1.0	0.0
Split [s]	0	44	0	0	44	0	26	60	0	26	60	0
Vehicle Extension [s]	0.0	2.2	0.0	0.0	2.2	0.0	2.0	2.5	0.0	2.0	2.5	0.0
Walk [s]	0	11	0	0	11	0	0	9	0	0	7	0
Pedestrian Clearance [s]	0	25	0	0	25	0	0	16	0	0	12	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	0.0	2.0	0.0	0.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	0.0	5.7	0.0	0.0	5.7	0.0	5.0	3.8	0.0	4.6	3.8	0.0
Minimum Recall		No			No		No	No		No	No	
Maximum Recall		No			No		No	Yes		No	Yes	
Pedestrian Recall		No			No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	L	C	C	L	C	C
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	7.70	7.70	7.70	7.70	7.00	5.80	5.80	6.60	5.80	5.80
l1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	5.70	5.70	5.70	5.70	5.00	3.80	3.80	4.60	3.80	3.80
g_i, Effective Green Time [s]	33	33	33	33	10	73	73	4	66	66
g / C, Green / Cycle	0.26	0.26	0.26	0.26	0.08	0.56	0.56	0.03	0.51	0.51
(v / s)_i Volume / Saturation Flow Rate	0.16	0.03	0.05	0.07	0.06	0.40	0.41	0.02	0.32	0.33
s, saturation flow rate [veh/h]	1284	1725	1354	1708	1795	3589	1768	1795	3589	1850
c, Capacity [veh/h]	284	440	335	436	136	2012	991	53	1835	946
d1, Uniform Delay [s]	52.45	37.33	43.10	38.68	59.18	20.81	21.15	62.58	22.99	23.03
k, delay calibration	0.06	0.06	0.06	0.06	0.04	0.50	0.50	0.04	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.04	0.07	0.16	0.17	4.63	2.14	4.64	7.72	1.69	3.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.74	0.13	0.21	0.27	0.82	0.71	0.73	0.75	0.64	0.64
d, Delay for Lane Group [s/veh]	54.49	37.40	43.26	38.85	63.81	22.95	25.79	70.30	24.68	26.32
Lane Group LOS	D	D	D	D	E	C	C	E	C	C
Critical Lane Group	Yes	No	No	No	No	No	Yes	Yes	No	No
50th-Percentile Queue Length [veh/ln]	6.94	1.49	1.90	3.04	3.73	15.14	16.20	1.40	12.60	13.47
50th-Percentile Queue Length [ft/ln]	173.50	37.23	47.60	75.91	93.37	378.61	404.97	35.04	314.91	336.72
95th-Percentile Queue Length [veh/ln]	11.26	2.68	3.43	5.47	6.72	21.53	22.80	2.52	18.42	19.49
95th-Percentile Queue Length [ft/ln]	281.51	67.01	85.68	136.63	168.07	538.16	569.99	63.08	460.42	487.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	54.49	37.40	37.40	43.26	38.85	38.85	63.81	23.67	25.79	70.30	25.21	26.32
Movement LOS	D	D	D	D	D	D	E	C	C	E	C	C
d_A, Approach Delay [s/veh]	50.74			40.50			25.89			26.24		
Approach LOS	D			D			C			C		
d_I, Intersection Delay [s/veh]	28.10											
Intersection LOS	C											
Intersection V/C	0.593											

Other Modes

g_Walk,mi, Effective Walk Time [s]	13.0	11.0	15.0	15.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	1612.14	4198.31	0.00
d_p, Pedestrian Delay [s]	52.64	54.45	50.85	50.85
I_p,int, Pedestrian LOS Score for Intersection	2.164	2.111	3.729	3.543
Crosswalk LOS	B	B	D	D
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	559	559	834	834
d_b, Bicycle Delay [s]	33.76	33.76	22.10	22.10
I_b,int, Bicycle LOS Score for Intersection	2.023	1.908	2.853	2.567
Bicycle LOS	B	A	C	B

Sequence

Ring 1	3	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	7	8	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 2: US 50 / Airport Rd

Control Type: Signalized
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 38.7
Level Of Service: D
Volume to Capacity (v/c): 0.594

Intersection Setup

Name	Airport Rd			Airport Rd			US 50			US 50		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	1	0	1	1	0	1	1	0	1
Entry Pocket Length [ft]	150.00	100.00	100.00	250.00	100.00	150.00	150.00	100.00	100.00	250.00	100.00	175.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			35.00			45.00			45.00		
Grade [%]	0.00			0.00			0.00			0.00		
Curb Present	No			No			No			No		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Airport Rd			Airport Rd			US 50			US 50		
Base Volume Input [veh/h]	167	126	25	95	116	127	166	1241	206	28	1043	49
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.1000	1.0500	1.0500	1.1000	1.0500
In-Process Volume [veh/h]	31	0	25	0	0	0	0	49	44	36	81	0
Site-Generated Trips [veh/h]	0	6	24	0	10	0	0	0	0	40	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	23	0	0	69	0	0	78	0	0	27
Total Hourly Volume [veh/h]	206	138	52	100	132	64	174	1414	182	105	1228	24
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	54	36	14	26	35	17	46	372	48	28	323	6
Total Analysis Volume [veh/h]	217	145	55	105	139	67	183	1488	192	111	1293	25
Presence of On-Street Parking	No		No	No		No	No		No	No		No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing major street	1			1			0			1		
v_di, Inbound Pedestrian Volume crossing major street	1			0			1			1		
v_co, Outbound Pedestrian Volume crossing minor street	3			1			2			1		
v_ci, Inbound Pedestrian Volume crossing minor street	2			1			3			1		
v_ab, Corner Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			1			0			0		

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	130
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	25.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	0.00

Phasing & Timing

Control Type	ProtPer	Permis	Permis	ProtPer	Permis	Permis	Protect	Permis	Permis	Protect	Permis	Permis
Signal Group	1	6	0	5	2	0	3	8	0	7	4	0
Auxiliary Signal Groups												
Lead / Lag	Lag	-	-	Lag	-	-	Lag	-	-	Lag	-	-
Minimum Green [s]	5	5	0	5	5	0	5	10	0	5	10	0
Maximum Green [s]	20	25	0	20	25	0	20	40	0	20	40	0
Amber [s]	3.3	4.3	0.0	3.1	4.3	0.0	3.9	4.8	0.0	4.0	4.8	0.0
All red [s]	2.9	2.9	0.0	2.6	2.9	0.0	3.4	1.0	0.0	3.6	1.0	0.0
Split [s]	18	33	0	18	33	0	21	58	0	21	58	0
Vehicle Extension [s]	1.5	1.5	0.0	1.5	1.5	0.0	1.0	2.2	0.0	1.0	2.2	0.0
Walk [s]	0	14	0	0	11	0	0	16	0	0	15	0
Pedestrian Clearance [s]	0	12	0	0	15	0	0	26	0	0	11	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No			No			No			No	
I1, Start-Up Lost Time [s]	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	4.2	5.2	0.0	3.7	5.2	0.0	5.3	3.8	0.0	5.6	3.8	0.0
Minimum Recall	No	No		No	No		No	No		No	No	
Maximum Recall	No	No		No	No		No	Yes		No	Yes	
Pedestrian Recall	No	No		No	No		No	No		No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

Pedestrian Signal Group	0
Pedestrian Walk [s]	0
Pedestrian Clearance [s]	0

Lane Group Calculations

Lane Group	L	C	L	C	R	L	C	R	L	C	R
C, Cycle Length [s]	130	130	130	130	130	130	130	130	130	130	130
L, Total Lost Time per Cycle [s]	6.70	7.20	6.45	7.20	7.20	7.30	5.80	5.80	7.60	5.80	5.80
I1_p, Permitted Start-Up Lost Time [s]	2.00	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
I2, Clearance Lost Time [s]	0.00	5.20	0.00	5.20	5.20	5.30	3.80	3.80	5.60	3.80	3.80
g_i, Effective Green Time [s]	37	25	38	25	25	14	63	63	10	60	60
g / C, Green / Cycle	0.29	0.19	0.29	0.19	0.19	0.11	0.49	0.49	0.08	0.46	0.46
(v / s)_i Volume / Saturation Flow Rate	0.15	0.11	0.07	0.07	0.04	0.10	0.41	0.12	0.06	0.36	0.02
s, saturation flow rate [veh/h]	1418	1796	1427	1885	1579	1795	3589	1594	1795	3589	1599
c, Capacity [veh/h]	342	347	306	364	305	190	1743	774	135	1643	732
d1, Uniform Delay [s]	48.14	47.60	48.25	45.68	44.16	57.88	29.36	19.53	59.23	29.88	19.42
k, delay calibration	0.17	0.04	0.04	0.04	0.04	0.06	0.50	0.50	0.04	0.50	0.50
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.06	0.56	0.25	0.24	0.13	15.84	5.55	0.76	4.57	3.89	0.09
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.63	0.58	0.34	0.38	0.22	0.96	0.85	0.25	0.82	0.79	0.03
d, Delay for Lane Group [s/veh]	51.21	48.16	48.50	45.92	44.29	73.72	34.91	20.29	63.80	33.77	19.50
Lane Group LOS	D	D	D	D	D	E	C	C	E	C	B
Critical Lane Group	No	Yes	Yes	No	No	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	5.98	6.01	2.53	3.93	1.83	6.69	20.39	3.43	3.70	17.06	0.42
50th-Percentile Queue Length [ft/ln]	149.60	150.28	63.18	98.23	45.76	167.27	509.69	85.83	92.54	426.38	10.60
95th-Percentile Queue Length [veh/ln]	10.00	10.03	4.55	7.07	3.30	10.93	27.79	6.18	6.66	23.83	0.76
95th-Percentile Queue Length [ft/ln]	249.90	250.80	113.73	176.81	82.38	273.33	694.82	154.50	166.57	595.70	19.08

Movement, Approach, & Intersection Results

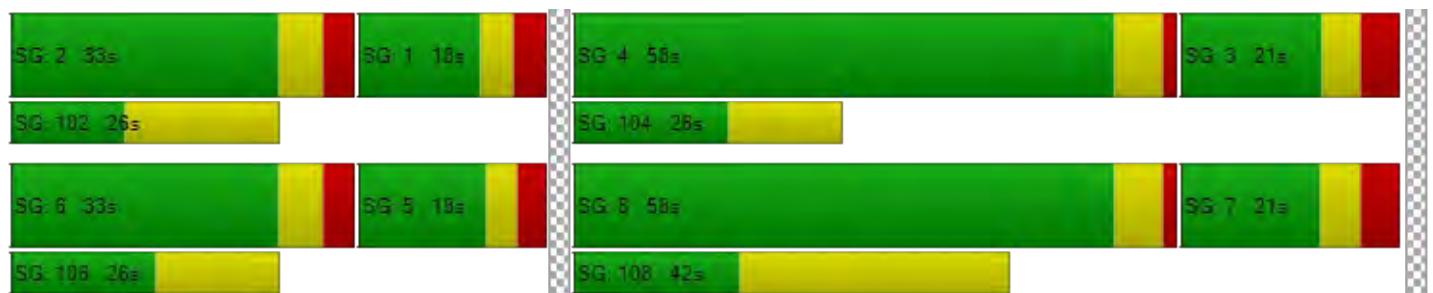
d_M, Delay for Movement [s/veh]	51.21	48.16	48.16	48.50	45.92	44.29	73.72	34.91	20.29	63.80	33.77	19.50
Movement LOS	D	D	D	D	D	D	E	C	C	E	C	B
d_A, Approach Delay [s/veh]	49.75			46.44			37.22			35.85		
Approach LOS	D			D			D			D		
d_I, Intersection Delay [s/veh]	38.74											
Intersection LOS	D											
Intersection V/C	0.594											

Other Modes

g_Walk,mi, Effective Walk Time [s]	20.0	19.0	15.0	18.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	1924.82	6533.68	7699.53	5749.02
d_p, Pedestrian Delay [s]	46.54	47.39	50.87	48.25
I_p,int, Pedestrian LOS Score for Intersection	2.244	2.457	3.697	3.399
Crosswalk LOS	B	B	D	C
s_b, Saturation Flow Rate of the bicycle lane [bicycles/h]	2000	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	397	397	803	803
d_b, Bicycle Delay [s]	41.76	41.78	23.28	23.28
I_b,int, Bicycle LOS Score for Intersection	2.286	2.187	3.161	2.761
Bicycle LOS	B	B	C	C

Sequence

Ring 1	2	1	3	4	-	-	-	-	-	-	-	-	-	-	-	-
Ring 2	6	5	7	8	-	-	-	-	-	-	-	-	-	-	-	-
Ring 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ring 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Intersection Level Of Service Report
Intersection 3: Airport Rd / Gordonia Dr

Control Type: All-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 10.4
Level Of Service: B
Volume to Capacity (v/c): 0.432

Intersection Setup

Name	Airport Rd			Airport Rd						Gordonia Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			30.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			No			Yes			No		

Volumes

Name	Airport Rd			Airport Rd						Gordonia Dr		
Base Volume Input [veh/h]	0	169	27	28	167	0	0	0	0	3	0	22
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	1.00	2.00	1.00
Growth Factor	1.0000	1.0500	1.0500	1.0500	1.0500	1.0000	1.0000	1.0000	1.0000	1.0500	1.0000	1.0500
In-Process Volume [veh/h]	0	56	0	0	80	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	35	15	0	0	25	25	15	0	21	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	248	28	29	280	25	15	0	21	3	0	23
Peak Hour Factor	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	65	7	8	74	7	4	0	6	1	0	6
Total Analysis Volume [veh/h]	37	261	29	31	295	26	16	0	22	3	0	24
Pedestrian Volume [ped/h]	0			0			0			0		

Intersection Settings

Lanes

Capacity per Entry Lane [veh/h]	811	816	691	725
Degree of Utilization, x	0.40	0.43	0.06	0.04

Movement, Approach, & Intersection Results

95th-Percentile Queue Length [veh]	1.96	2.20	0.17	0.12
95th-Percentile Queue Length [ft]	49.03	54.88	4.36	2.90
Approach Delay [s/veh]	10.40	10.72	8.52	8.16
Approach LOS	B	B	A	A
Intersection Delay [s/veh]	10.38			
Intersection LOS	B			

Intersection Level Of Service Report
Intersection 4: Airport Rd / Desatoya Dr / N. Lompa Ln

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 18.3
Level Of Service: C
Volume to Capacity (v/c): 0.075

Intersection Setup

Name	Airport Rd			Airport Rd			N. Lompa Ln			Desatoya Dr		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	1	0	0	1	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	50.00	100.00	100.00	200.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00			25.00			25.00			25.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Airport Rd			Airport Rd			N. Lompa Ln			Desatoya Dr		
Base Volume Input [veh/h]	0	169	26	51	119	0	0	0	0	19	0	27
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	56	0	0	80	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	27	38	0	0	27	19	12	0	16	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	27	271	27	54	232	19	12	0	16	20	0	28
Peak Hour Factor	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100	0.9100
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	74	7	15	64	5	3	0	4	5	0	8
Total Analysis Volume [veh/h]	30	298	30	59	255	21	13	0	18	22	0	31
Pedestrian Volume [ped/h]	0			0			0			2		

Intersection Settings

Priority Scheme	Free	Free	Stop	Stop
Flared Lane			No	No
Storage Area [veh]	0	0	0	0
Two-Stage Gap Acceptance			No	No
Number of Storage Spaces in Median	0	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.00	0.05	0.00	0.00	0.05	0.00	0.02	0.07	0.00	0.04
d_M, Delay for Movement [s/veh]	7.85	0.00	0.00	8.07	0.00	0.00	18.15	16.90	9.75	18.30	17.78	11.02
Movement LOS	A	A	A	A	A	A	C	C	A	C	C	B
95th-Percentile Queue Length [veh/ln]	0.07	0.07	0.07	0.15	0.00	0.00	0.14	0.07	0.07	0.40	0.40	0.40
95th-Percentile Queue Length [ft/ln]	1.78	1.78	1.78	3.77	0.00	0.00	3.55	1.78	1.78	9.91	9.91	9.91
d_A, Approach Delay [s/veh]	0.66			1.42			13.27			14.04		
Approach LOS	A			A			B			B		
d_I, Intersection Delay [s/veh]	2.40											
Intersection LOS	C											

Intersection Level Of Service Report
Intersection 5: Airport Rd / South Project Access

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 13.7
Level Of Service: B
Volume to Capacity (v/c): 0.007

Intersection Setup

Name	Airport Rd		Airport Rd		South Project Access	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	25.00		25.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Airport Rd		Airport Rd		South Project Access	
Base Volume Input [veh/h]	0	195	138	0	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	0	56	80	0	0	0
Site-Generated Trips [veh/h]	7	62	37	6	3	5
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	7	323	262	6	3	5
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	90	73	2	1	1
Total Analysis Volume [veh/h]	8	359	291	7	3	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.01	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	7.87	0.00	0.00	0.00	13.68	9.93
Movement LOS	A	A	A	A	B	A
95th-Percentile Queue Length [veh/ln]	0.02	0.02	0.00	0.00	0.05	0.05
95th-Percentile Queue Length [ft/ln]	0.48	0.48	0.00	0.00	1.16	1.16
d_A, Approach Delay [s/veh]	0.17		0.00		11.18	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	0.24					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 6: Airport Rd / Butti Way

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 14.8
Level Of Service: B
Volume to Capacity (v/c): 0.098

Intersection Setup

Name	Airport Rd		Airport Rd		Butti Way	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		35.00		25.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Airport Rd		Airport Rd		Butti Way	
Base Volume Input [veh/h]	158	31	6	132	27	37
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	40	13	26	54	8	16
Site-Generated Trips [veh/h]	69	0	0	42	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	275	46	32	235	36	55
Peak Hour Factor	0.9000	0.9000	0.9000	0.9000	0.9000	0.9000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	76	13	9	65	10	15
Total Analysis Volume [veh/h]	306	51	36	261	40	61
Pedestrian Volume [ped/h]	0		0		5	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.03	0.00	0.10	0.09
d_M, Delay for Movement [s/veh]	0.00	0.00	7.98	0.00	14.77	10.61
Movement LOS	A	A	A	A	B	B
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.09	0.00	0.32	0.28
95th-Percentile Queue Length [ft/ln]	0.00	0.00	2.23	0.00	8.09	7.11
d_A, Approach Delay [s/veh]	0.00		0.97		12.26	
Approach LOS	A		A		B	
d_I, Intersection Delay [s/veh]	2.02					
Intersection LOS	B					

Intersection Level Of Service Report
Intersection 7: 5th St / Airport Rd

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 66.9
Level Of Service: F
Volume to Capacity (v/c): 0.627

Intersection Setup

Name	Airport Rd		5th St		5th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	150.00	125.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

Volumes

Name	Airport Rd		5th St		5th St	
Base Volume Input [veh/h]	54	105	146	292	183	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	5	57	45	26	32	8
Site-Generated Trips [veh/h]	12	30	49	0	0	20
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	197	247	333	224	73
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	58	73	98	66	21
Total Analysis Volume [veh/h]	87	232	291	392	264	86
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	1	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.63	0.32	0.24	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	66.91	12.17	8.92	0.00	0.00	0.00
Movement LOS	F	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	3.33	1.36	0.94	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	83.27	34.00	23.58	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	27.10		3.80		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	8.31					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 7: 5th St / Airport Rd

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 20.8
Level Of Service: C
Volume to Capacity (v/c): 0.590

Intersection Setup

Name	Airport Rd		5th St		5th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	150.00	125.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

Volumes

Name	Airport Rd		5th St		5th St	
Base Volume Input [veh/h]	93	193	51	193	343	82
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	1.00	1.00	1.00	1.00	1.00	1.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	11	21	17	74	51	10
Site-Generated Trips [veh/h]	19	47	16	0	0	7
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	128	271	87	277	411	103
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	38	80	26	81	121	30
Total Analysis Volume [veh/h]	151	319	102	326	484	121
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.36	0.59	0.10	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	18.31	20.80	9.11	0.00	0.00	0.00
Movement LOS	C	C	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.61	3.80	0.35	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	40.19	94.96	8.71	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	20.00		2.17		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	6.87					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 7: 5th St / Airport Rd

Control Type: Two-way stop
Analysis Method: HCM 6th Edition
Analysis Period: 15 minutes

Delay (sec / veh): 25.8
Level Of Service: D
Volume to Capacity (v/c): 0.337

Intersection Setup

Name	Airport Rd		5th St		5th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	150.00	125.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	35.00		40.00		40.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		No	

Volumes

Name	Airport Rd		5th St		5th St	
Base Volume Input [veh/h]	54	105	146	292	183	43
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0500	1.0500	1.0500	1.0500	1.0500	1.0500
In-Process Volume [veh/h]	5	57	45	26	32	8
Site-Generated Trips [veh/h]	12	30	49	0	0	20
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	74	197	247	333	224	73
Peak Hour Factor	0.8500	0.8500	0.8500	0.8500	0.8500	0.8500
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	22	58	73	98	66	21
Total Analysis Volume [veh/h]	87	232	291	392	264	86
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.34	0.32	0.24	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	25.85	12.17	8.92	0.00	0.00	0.00
Movement LOS	D	B	A	A	A	A
95th-Percentile Queue Length [veh/ln]	1.43	1.36	0.94	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	35.69	34.00	23.58	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	15.90		3.80		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	5.67					
Intersection LOS	D					

Appendix F

NDOT Turn Lane Warrants





Chapter Four: Design Standards and Specifications

Table 4-12: Left-Turn Lane Warrants at Unsignalized Intersections, Two-Lane Roadways in Urban Areas

Turning Volume ¹ (vph)	Minimum Directional Volume in the Through Lane ² (vphpl)		
	≤ 30 mph	35 to 40 mph	≥ 45 mph
< 5	Not Required	May be Required	May be Required
5	510	450	330
10	390	330	210
15	320	250	150
20	270	200	120
25	230	160	100
30	200	130	Required
35	170	110	Required
40	150	Required	Required
45	130	Required	Required
≥ 46	Required	Required	Required

Notes:

Turn lane is warranted if the design year volumes are equal to or greater than the volumes provided above. Posted speed (mph) of the roadway should be used in the warrant analysis.

¹ Use linear interpolation for turning volumes between 5 and 45 vph.

² The directional volume is the volume in the same direction as served by the auxiliary lane. The directional volume in the through lane includes through vehicles and turning vehicles.



Chapter Four: Design Standards and Specifications

Table 4-16: Right-Turn Lane Warrants at Unsignalized Intersections, Two-Lane Roadways in Urban Areas

Turning Volume ¹ (vph)	Minimum Directional Volume in the Through Lane ² (vphpl)		
	≤ 30 mph	35 to 40 mph	≥ 45 mph
< 5	Not Required	May be Required	May be Required
5	1,080	610	360
10	700	400	240
15	500	280	170
20	380	210	140
25	300	180	120
30	250	160	110
35	220	150	100
40	200	140	Required
45	190	Required	Required
≥ 46	Required	Required	Required

Notes:

Turn lane is warranted if the design year volumes are equal to or greater than the volumes provided above. Posted speed (mph) of the roadway should be used in the warrant analysis.

¹ Use linear interpolation for turning volumes between 5 and 45 vph.

² The directional volume is the volume in the same direction as served by the auxiliary lane. The directional volume in the through lane includes through vehicles and turning vehicles.



Manhard™

CONSULTING LTD

PRELIMINARY SEWER REPORT

FOR

Lompa Ranch Apartments

CARSON CITY, NEVADA

PREPARED FOR:

Tanamera Construction LLC
5560 Longley Lane, Suite 200
Reno, NV 89511

PREPARED BY:

Manhard Consulting Ltd.
241 Ridge Street, Suite 400
Reno, Nevada 89501



10-4-22

Project: TANUCNV01

Date: October 2022

Table of Contents

1	INTRODUCTION	1
2	PROPOSED ALIGNMENT AND QUANTITY OF SERVICE	1
3	CONCLUSION	2

Figures

FIGURE 1 – PROJECT LOCATION

FIGURE 2 – PROPOSED SEWER DISPLAY

Appendices

APPENDIX A - FLOWMASTER OUTPUT DATA

1 INTRODUCTION

1.1 Purpose of Analysis

This report represents a preliminary analysis of the proposed sanitary sewer system for the Lompa Ranch Apartments project. The purpose of this analysis is to establish peak flow rates for the subject property.

1.2 Project Location and Description

The proposed Lompa Ranch Apartments project is approximately 23.95 acres in size and located in the eastern portion of Carson City and is southeast of the interstate 580 and highway 50 intersection, west of Airport Road and directly South of North Lompa Lane. The proposed project site is situated within the South 1/2 of the Southwest 1/4 of Section 16, Township 15 North, and Range 20 East of the Mount Diablo Meridian (refer to Figure 1, Project Location). The project site is within the existing parcel 010-741-02 and 010-741-03. The process of acreage reversion has started which will remove a lot line. New APN's will be administered after the reversion.

Figure 2, *Proposed Sewer Display*, illustrates the location and orientation of the project and its proposed buildings and roadway locations.

1.3 Project Description

The Lompa Ranch Apartments project is a proposed apartment complex which consists of 306 multi-family residential units. The project site is currently zoned a mix of Multi-Family Apartments SPA (MFA-SPA) and Single-Family 6,000 sf SPA (SF6-SPA) with a Master Plan designation of High Density Residential (HDR) and Medium Density Residential (MDR).

2 PROPOSED ALIGNMENT AND QUANTITY OF SERVICE

2.1 Project Wastewater Collection System

Sewage flow from the Lompa Ranch Apartments project will be conveyed via 3 separate on site sewer networks consisting of new private 8" diameter PVC SDR-35 sewer mains that ultimately discharge into an existing 18" concrete sanitary sewer main network that routes flow to the south. The north site sewer network consists of apartment buildings, a clubhouse, and a pool area that ultimately discharge into the existing system. Building #6 is separate from the proposed sewer main and will discharge directly into the existing main. The south site sewer networks consist of two separate sewer main networks. The first sewer network northeast of building #9 includes 4 buildings that ultimately discharge into the existing system. The second sewer network northeast of building #11 also consists of 4 buildings that ultimately discharge into the existing system. The proposed sizes and locations of the sanitary sewers can be found on the *Proposed Sewer Display*, which is included in this report.

2.2 Estimated Peak Sewage Flows

For this analysis, a value of 140 gallons per day per unit was applied to determine average daily flow. The project consists of 306 units. A peaking factor of 2.5 is then applied to the daily average flow to compute the peak flow used in the design of the sanitary sewer. To determine the flow for the clubhouse and pool the number of fixture units were estimated. The fixture values were then multiplied by a factor of 15 gallons per day per fixture unit. Complete peak flow calculations for the Lompa Ranch project are included within this report. The following table summarizes the results of the calculations of the peak daily flows for the residential subdivision:

Land Use	Units	GPD/ Unit	Peaking Factor	Peak Flow (gpd)	Peak Flow (cfs)
Apartments	306	140	2.5	107,100	0.166
Clubhouse				2,220	0.003
Pool				1,230	0.002
			Total	110,550	0.171

2.3 Proposed Sewer Mains

At this time, there is not enough available information to determine velocities or pipe capacities therefore this report provides the peak flows generated by these improvements. The information provided states that an existing 18" concrete sewer main running through the property is approximately 60% full (d/D). To determine the increase in flow from the on-site to the existing 18" main, the existing pipe was recreated in flow master. From there, flow values were added based on the flows determined in this report. The output data determined that the onsite flows increase the existing 18" pipe from 60% to about 62% full. Reference full output data in Appendix A.

3 CONCLUSION

The information provided of the existing 18" pipe, along with peak flows generated by the improvements, has determined that the 8" sanitary sewer mains proposed within the development will increase the existing 18" concrete pipe from 60% to about 62% full. Calculations for peak flows were determined using average daily flows, number of units, and estimated fixture units. Future analysis will need to be provided to determine velocity and capacity of the proposed 8" sanitary sewer.

SANITARY SEWER CALCULATIONS FOR LOMPA RANCH APARTMENTS

The following calculations were performed based on the following:

140 gal/day/unit
148 fixtures for the Clubhouse
82 fixtures for the pool

The site will consist of 306 units; therefore, the following equations are used:

Average flow = num. of units * gpd/unit

Average flow = $306 * 140 = 42,840 \text{ gpd} = 0.066 \text{ cfs}$

Peak flow = Average flow * peaking factor

Peaking Factor = $(18 + P^{1/2}) / (4 + P^{1/2})$ where P = population in thousands (i.e. dwelling units x 3.5 divided by 1,000). Maximum peaking factor is 2.5.

Calculated peaking factor = 2.5

Peak flow = $42,840 * 2.5 = 107,100 \text{ gpd} = 0.166 \text{ cfs}$

It is estimated that there is 15 gallons per day per fixture unit; therefore, the following equations are used:

Average flow = num. of fixtures * 15 gpd/fixture unit

Average flow = $230 * 15 = 3,450 \text{ gpd} = .005 \text{ cfs}$

The design shall be for the peak flow; therefore, the sum of the calculated flows determines the design flow to be 0.171 cfs.



© 2015 MANHARD CONSULTING, LTD. ALL RIGHTS RESERVED



241 Ridge Street, Suite 400, Reno, NV 89501 ph:775.748.3500 fx:775.748.3520 manhard.com
 Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
 Construction Managers • Environmental Scientists • Landscape Architects • Planners

LOMPA RANCH APARTMENTS

CARSON CITY, NEVADA

PROJECT LOCATION

PROJ. MGR.: TJS
 DRAWN BY: AST
 DATE: SEP 2022
 SCALE: N.T.S.

SHEET

1 OF **2**

TANCCNV01

APPENDIX A

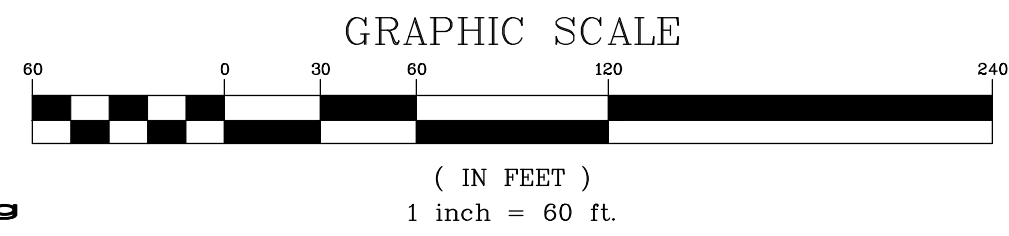
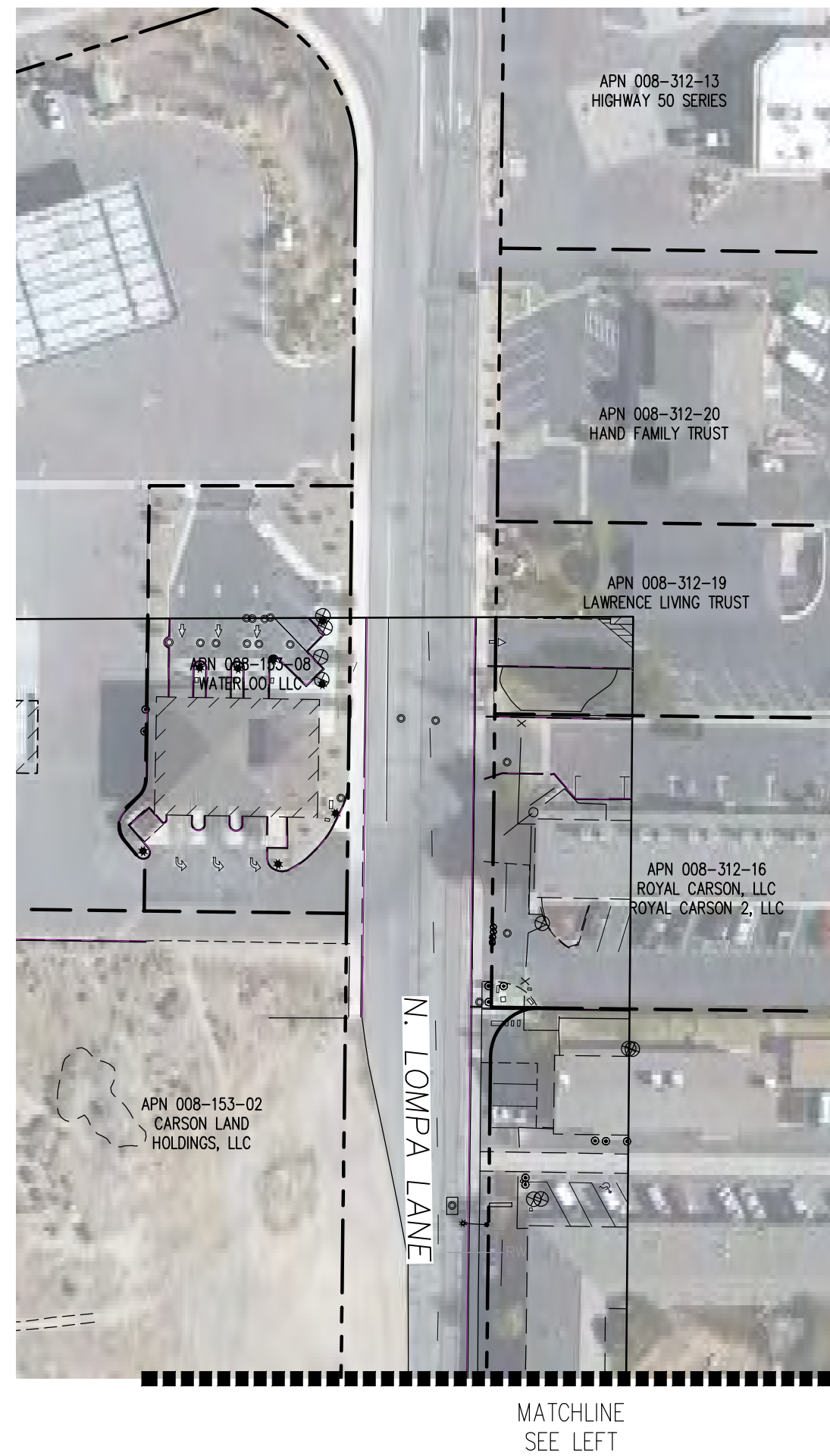
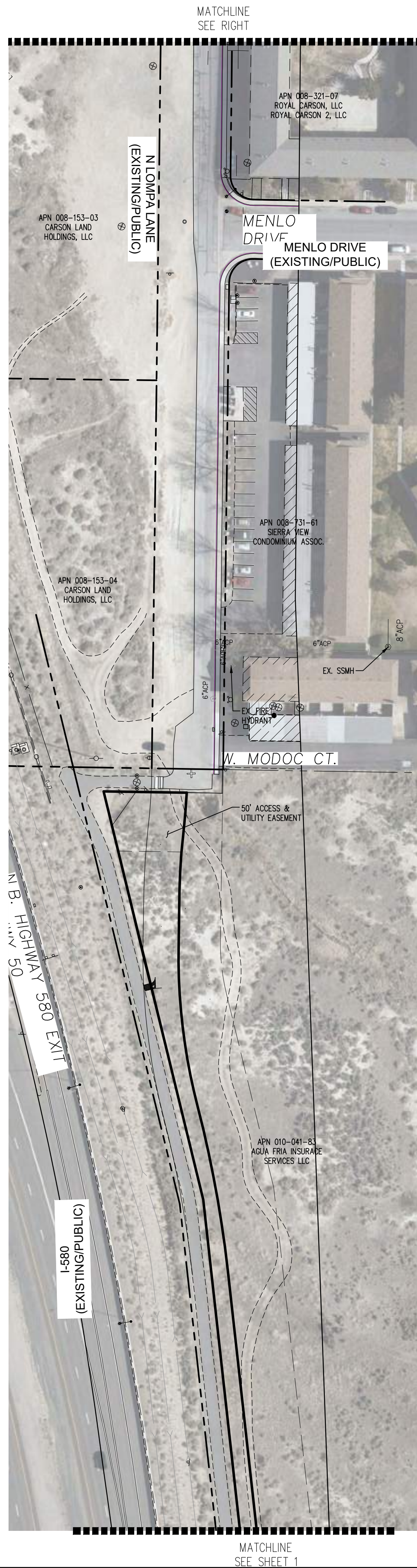
FlowMaster Flow Data

Worksheet for Ex. 18" Pipe at 60% full

Project Description	
Friction Method	Manning
	Formula
Solve For	Discharge
Input Data	
Roughness Coefficient	0.013
Channel Slope	0.002 ft/ft
Normal Depth	10.8 in
Diameter	18.0 in
Results	
Discharge	2,039,724 gal/day
Flow Area	1.1 ft ²
Wetted Perimeter	2.7 ft
Hydraulic Radius	5.0 in
Top Width	1.47 ft
Critical Depth	8.1 in
Percent Full	60.0 %
Critical Slope	0.005 ft/ft
Velocity	2.85 ft/s
Velocity Head	0.13 ft
Specific Energy	1.03 ft
Froude Number	0.579
Maximum Discharge	3,265,871 gal/day
Discharge Full	3,036,026 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	0.0 %
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	10.8 in
Critical Depth	8.1 in
Channel Slope	0.002 ft/ft
Critical Slope	0.005 ft/ft

Worksheet for Ex. 18" Pipe with proposed peak flows added

Project Description	
Friction Method	Manning
	Formula
Solve For	Normal Depth
Input Data	
Roughness Coefficient	0.013
Channel Slope	0.002 ft/ft
Diameter	18.0 in
Discharge	2,150,274 gal/day
Results	
Normal Depth	11.2 in
Flow Area	1.2 ft ²
Wetted Perimeter	2.7 ft
Hydraulic Radius	5.1 in
Top Width	1.46 ft
Critical Depth	8.3 in
Percent Full	62.1 %
Critical Slope	0.005 ft/ft
Velocity	2.88 ft/s
Velocity Head	0.13 ft
Specific Energy	1.06 ft
Froude Number	0.571
Maximum Discharge	3,265,871 gal/day
Discharge Full	3,036,026 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	0.0 %
Downstream Velocity	0.00 ft/s
Upstream Velocity	0.00 ft/s
Normal Depth	11.2 in
Critical Depth	8.3 in
Channel Slope	0.002 ft/ft
Critical Slope	0.005 ft/ft

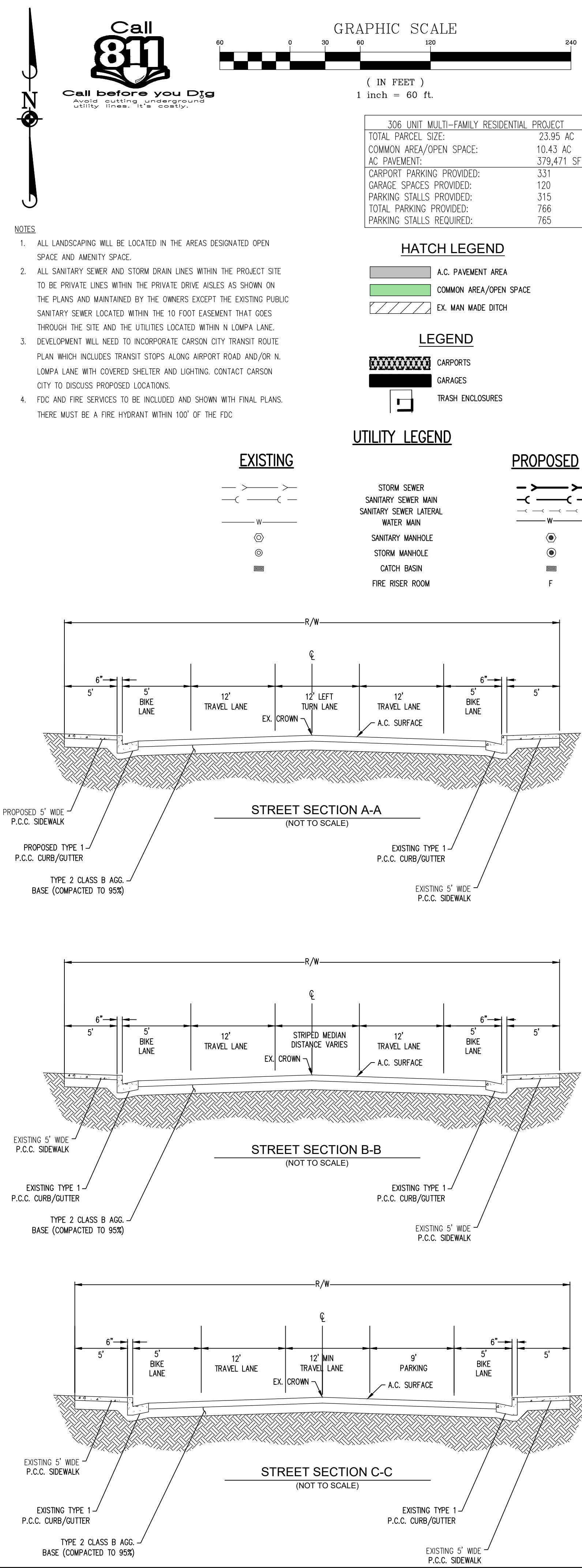
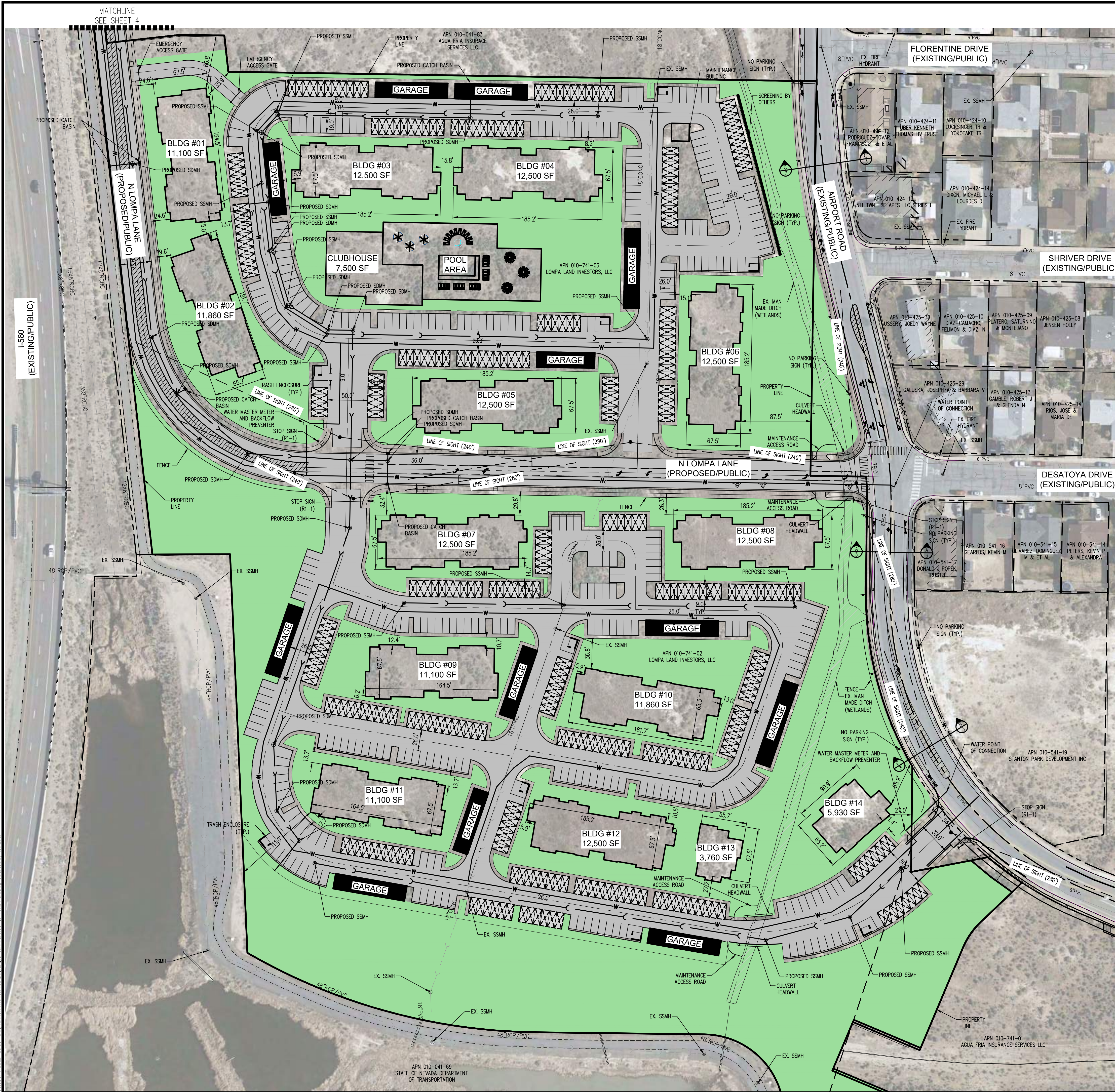
[illegible]

LOMPA RANCH
CARSON CITY, NEVADA
EXISTING SITE LAYOUT



PROJ. MGR.: TJS
PROJ. ASSOC.: AFG
DRAWN BY: AFG
DATE: OCT 2022
SCALE: AS SHOWN

SHEET
2 OF **8**
TANCCNV01
© 2022 ALL RIGHTS RESERVED



Manhard CONSULTING LTD.

241 Ridge Street, Suite 400, Reno, NV 89501
ph: 775-748-8800 fax: 775-748-8800
Civil Engineers • Surveyors • Water Resources Engineers • Wetland & Watershed Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

LOMPA RANCH

CARSON CITY, NEVADA

SITE PLAN

PROJ. MGR.: TJS

PROJ. ASSOC.: AFG

DRAWN BY: AFG

DATE: OCT 2022

SCALE: AS SHOWN

SHEET 3 OF 8

TANCONVOI

TRAVIS J. SULEZICH

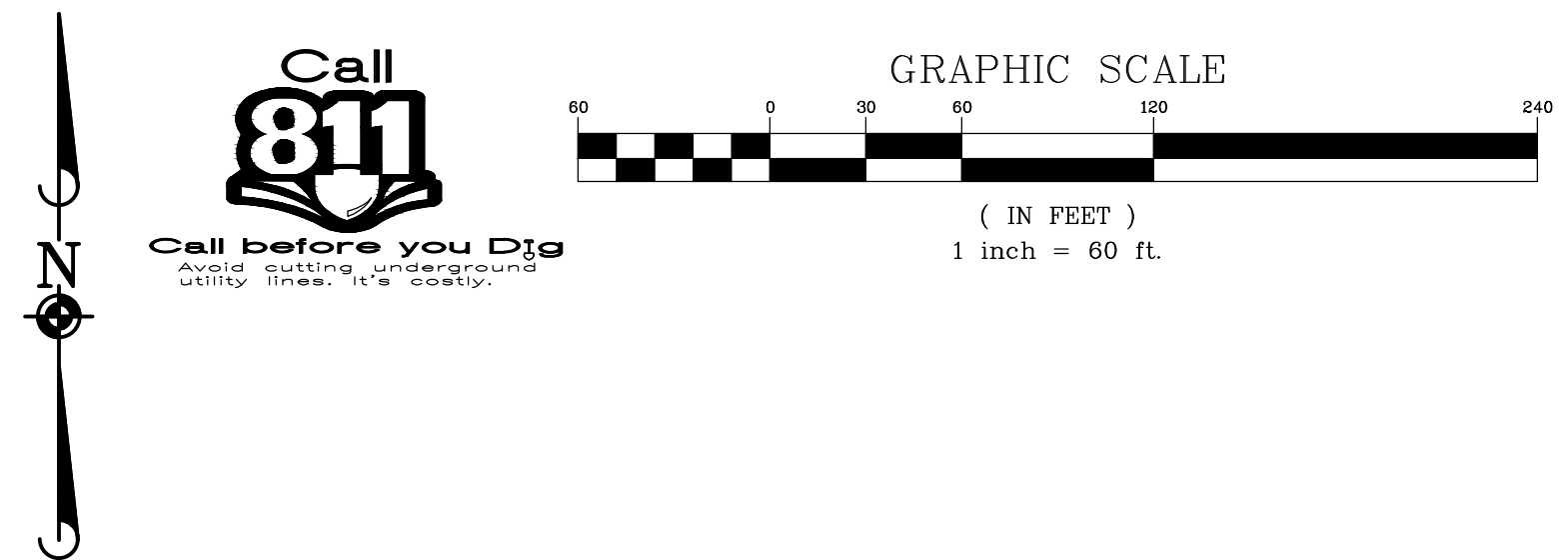
Civil Engineer

Exp 6-30-24

NEC 24960

10/4/22

PENDING AGENCY APPROVAL



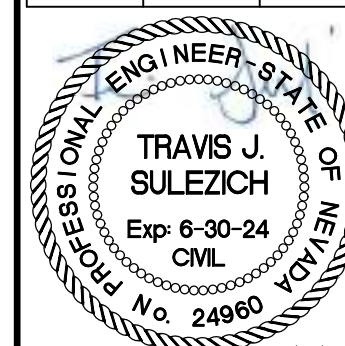
1. ALL LANDSCAPING WILL BE LOCATED IN THE AREAS DESIGNATED OPEN SPACE AND AMENITY SPACE.
2. ALL SANTARY SEWER AND STORM DRAIN LINES WITHIN THE PROJECT SITE TO BE PRIVATE LINES UNDER THE PRIVATE DRIVE ASILES AS SHOWN ON THE PLANS AND MAINTAINED BY THE OWNERS EXCEPT THE EXISTING PUBLIC SANTARY SEWER LOCATED WITHIN THE 10 FOOT EASEMENT THAT GOES THROUGH THE SITE AND THE UTILITIES LOCATED WITHIN N LOMPA LAINE.
3. DEVELOPMENT WILL NEED TO INCORPORATE CARSON CITY TRANSIT ROUTE PLAN WHICH INCLUDES TRANSIT STOPS ALONG AIRPORT ROAD AND/OR N LOMPA LAINE WITH COVERED SHELTER AND LIGHTING. CONTACT CARSON CITY TO DISCUSS PROPOSED LOCATIONS.
4. FDC AND FIRE SERVICES TO BE INCLUDED AND SHOWN WITH FINAL PLANS. THERE MUST BE A FIRE HYDRANT WITHIN 100' OF THE FDC

 A.C. PAVEMENT AREA

TYPE 2 CLASS B AGG.
BASE (COMPACTED TO 95%)

EXISTING TYPE 1
P.C.C. CURB/GUTTER

EXISTING 5' WIDE
P.C.C. SIDEWALK



PROJ. MGR.:	TJS
PROJ. ASSOC.:	AFG
DRAWN BY:	---
DATE:	OCT 2022
SCALE:	AS SHOWN

SHEET
4 OF **8**
TANCCNV01
© 2002 ALL RIGHTS RESERVED

LOMPA RANCH
CARSON CITY, NEVADA
SITE PLAN

PROJ. MGR.:	<u>TJS</u>
PROJ. ASSOC.:	<u>AFG</u>
DRAWN BY:	<u>---</u>
DATE:	<u>OCT 2022</u>
SCALE:	<u>AS SHOWN</u>

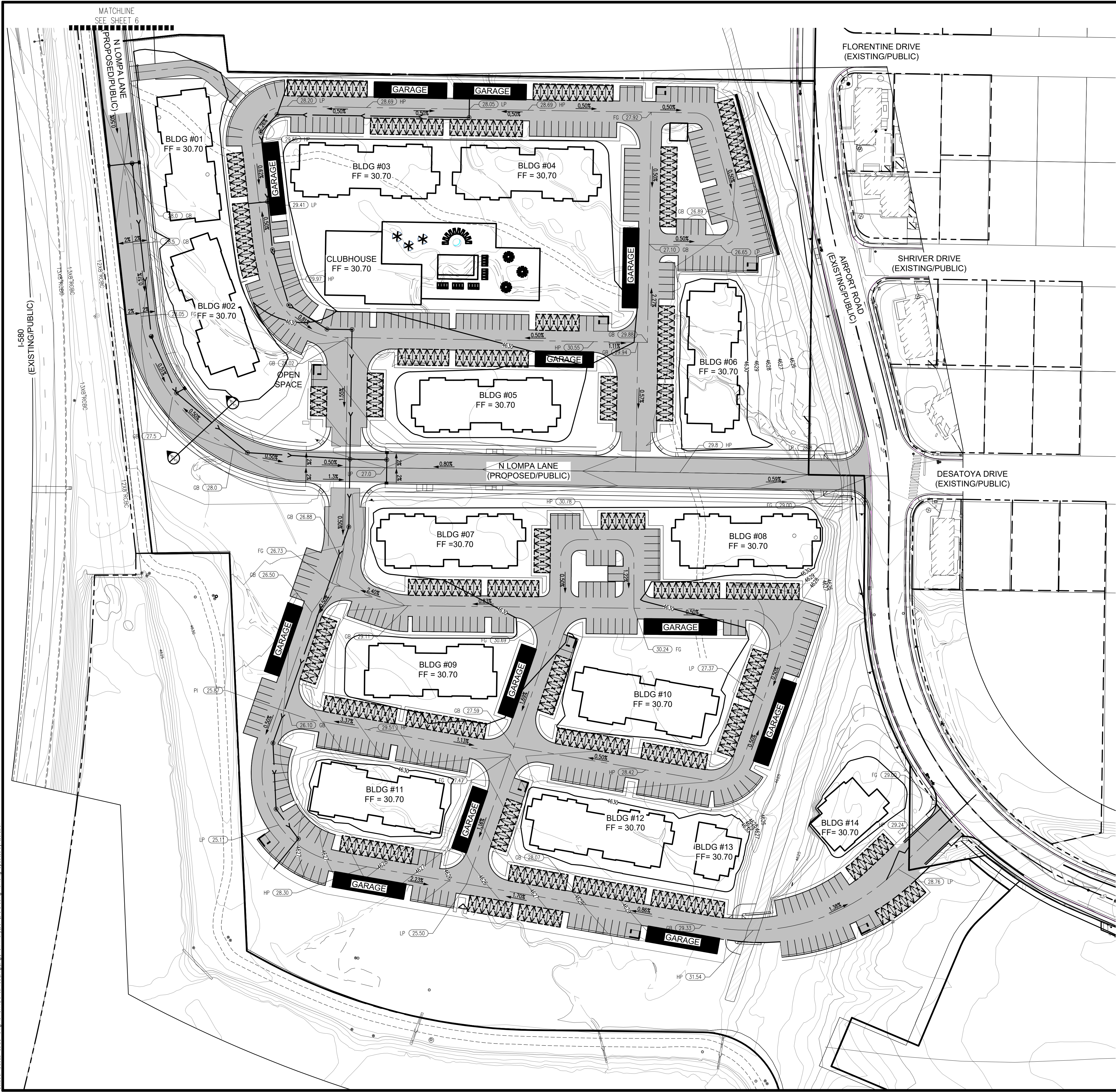
SHEET

4
OF
8

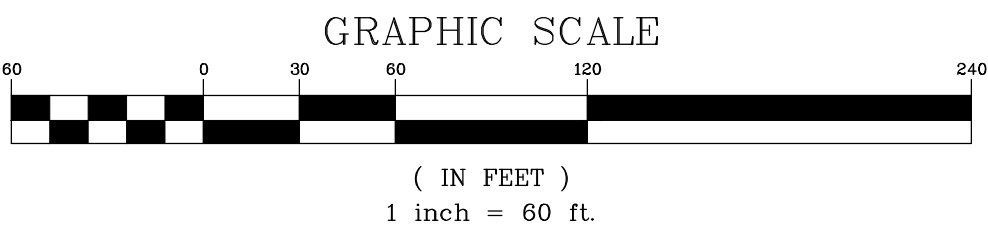
TANCCNV01

PENDING AGENCY APPROVAL

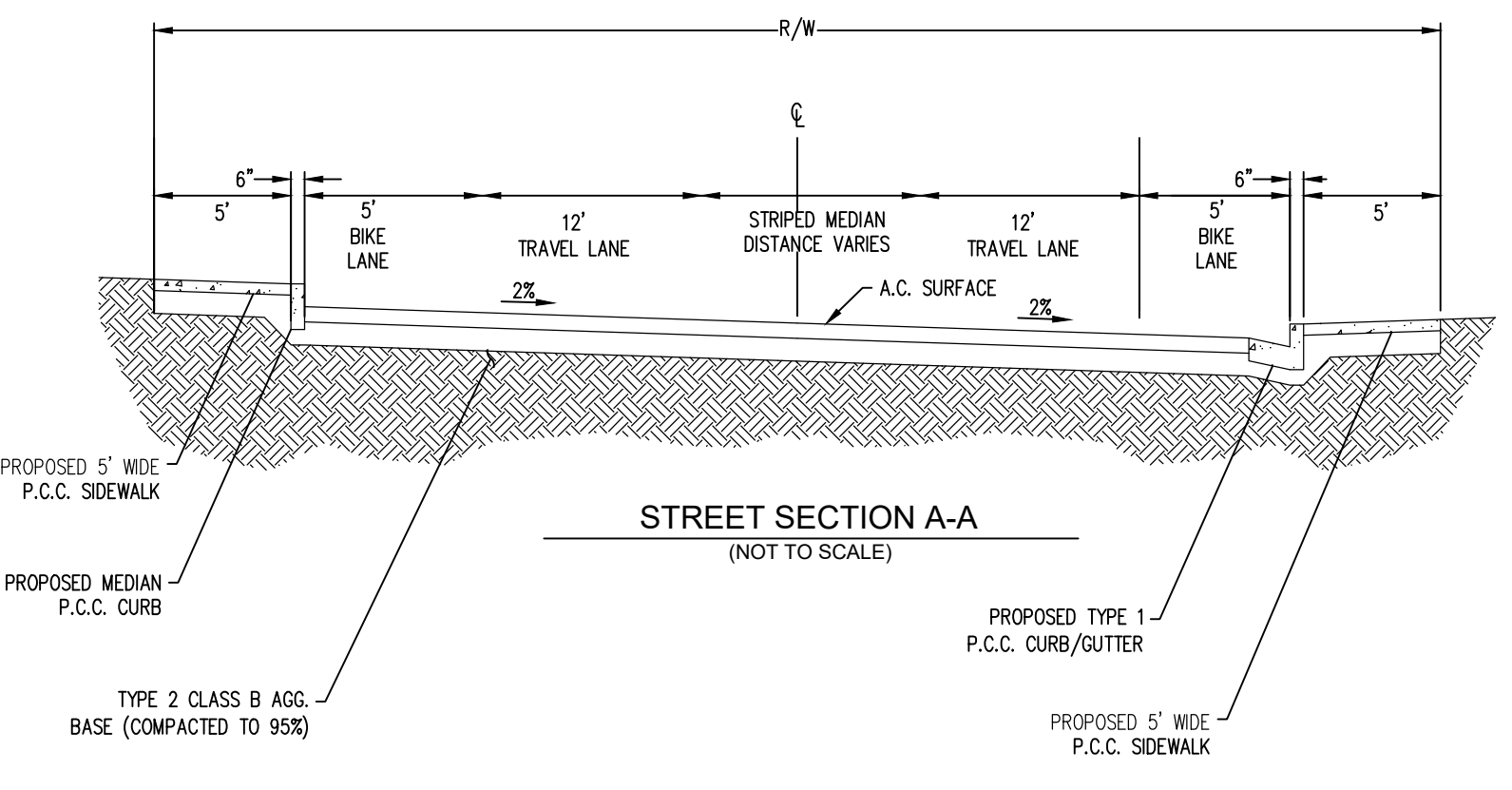
October 4, 2022 - 15:53 Dwg Name: P:\Tanccon\03\Draw\Grading\Preliminary\3\UP\5-6 Grading Plan.dwg, Updated By: tulsatich



Call
811
Call before you Dig
Avoid existing underground utility lines. It's safety.



EXISTING		PROPOSED
	STORM SEWER	
	STORM MANHOLE	
	CATCH BASIN	
	YARD DRAIN	
	TOP OF CURB ELEVATION	
	EDGE OF PAVEMENT ELEVATION	
	TOP OF WALL ELEVATION	
	FINISH GRADE ELEVATION	
	GRADE BREAK ELEVATION	
	FLOWLINE ELEVATION	
	SLOPE BREAK	
	X:1 SLOPE ARROW	
	MAJOR CONTOUR	
	MINOR CONTOUR	
	CONTOUR LABEL	
	TOP/TOE OF SLOPE	



DRAWN BY

CHECK BY

DATE

REVISIONS

Manhard

CONSULTING LTD.

241 Ridge Street, Suite 400, Reno, NV 89501 ph:775-748-8801 fx:775-748-8850 manhard.com
Civil Engineers • Surveyors • Water Resources Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

LOMPA RANCH

CARSON CITY, NEVADA

GRADING PLAN

TRAVIS J. SULEZICH

CIVIL

Exp: 6-30-24

No. 24980

04/22

PROJ. MGR.: TJS

PROJ. ASSOC.: AFG

DRAWN BY: ---

DATE: OCT. 2022

SCALE: AS SHOWN

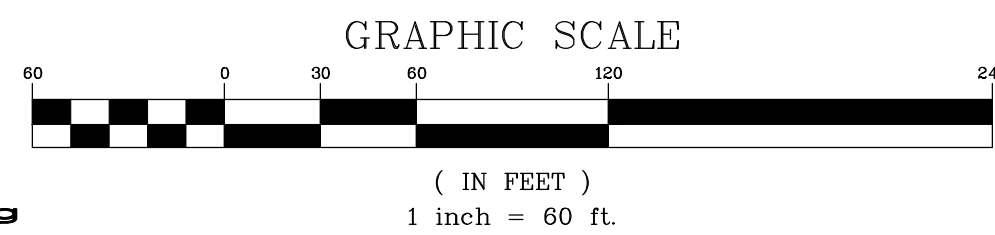
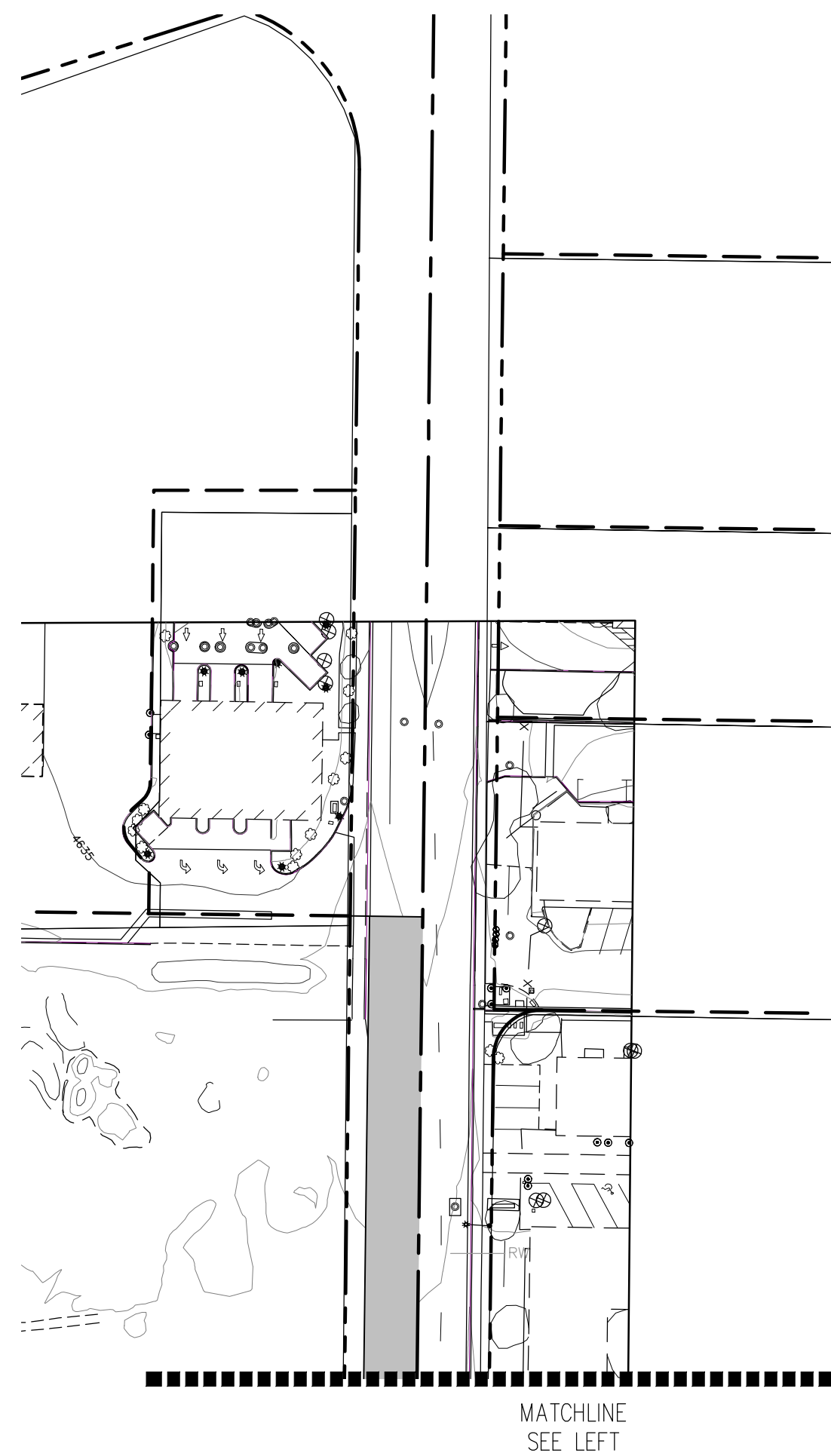
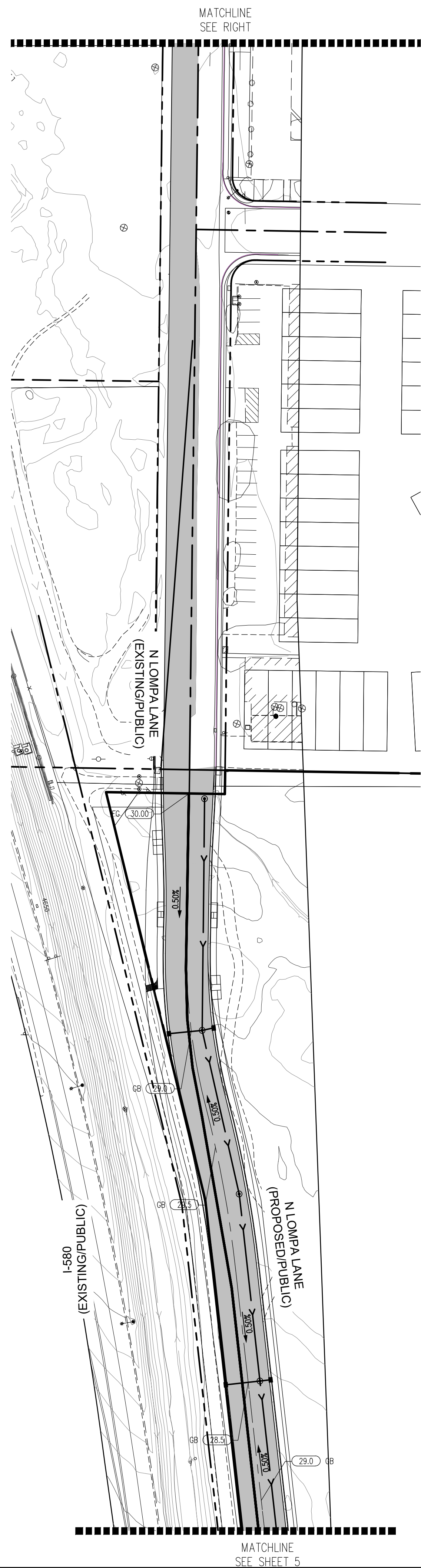
SHEET

5 OF 8

TANCNOV01

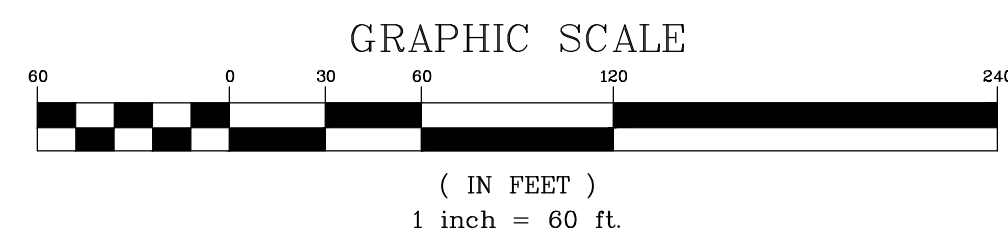
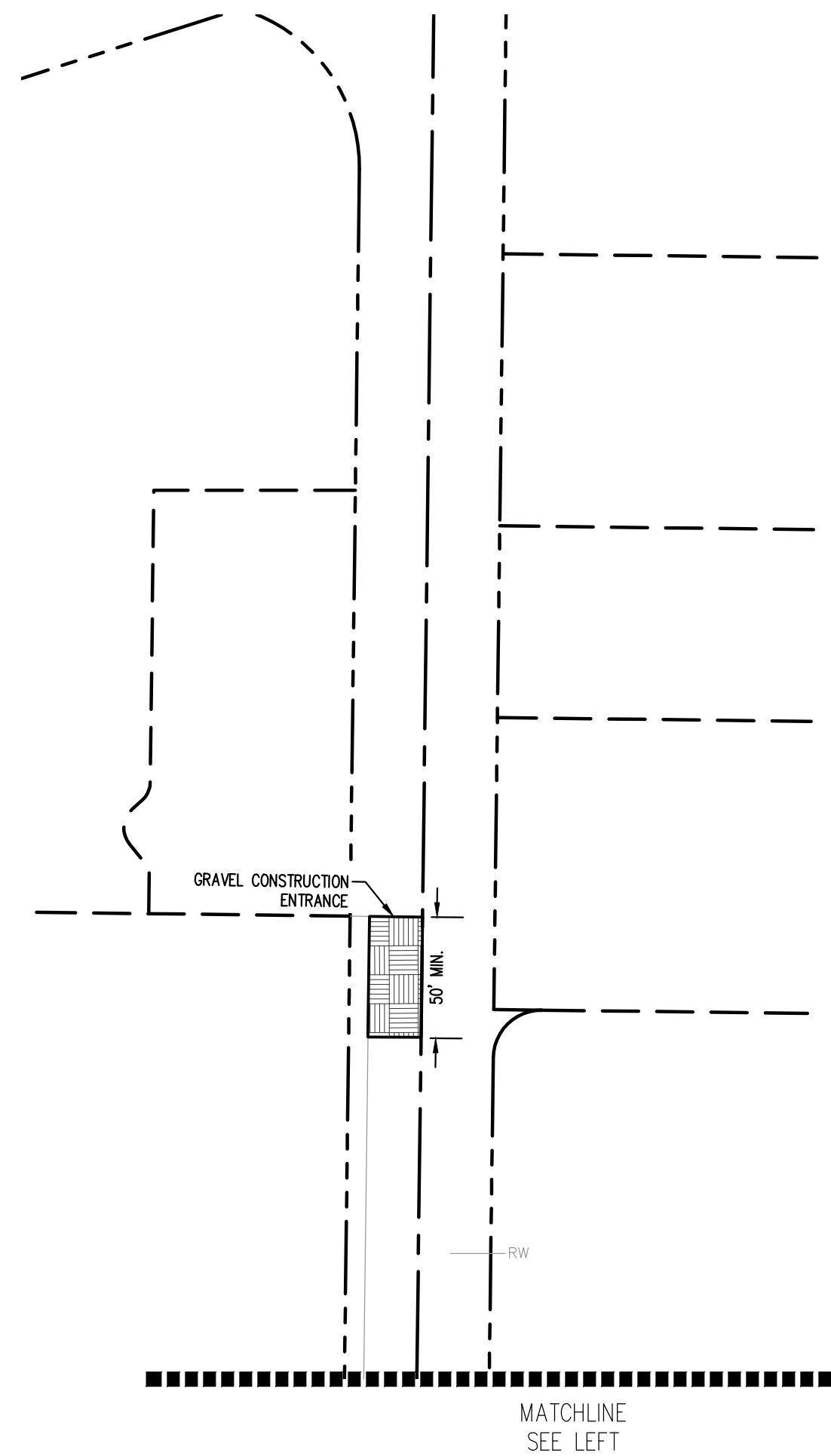
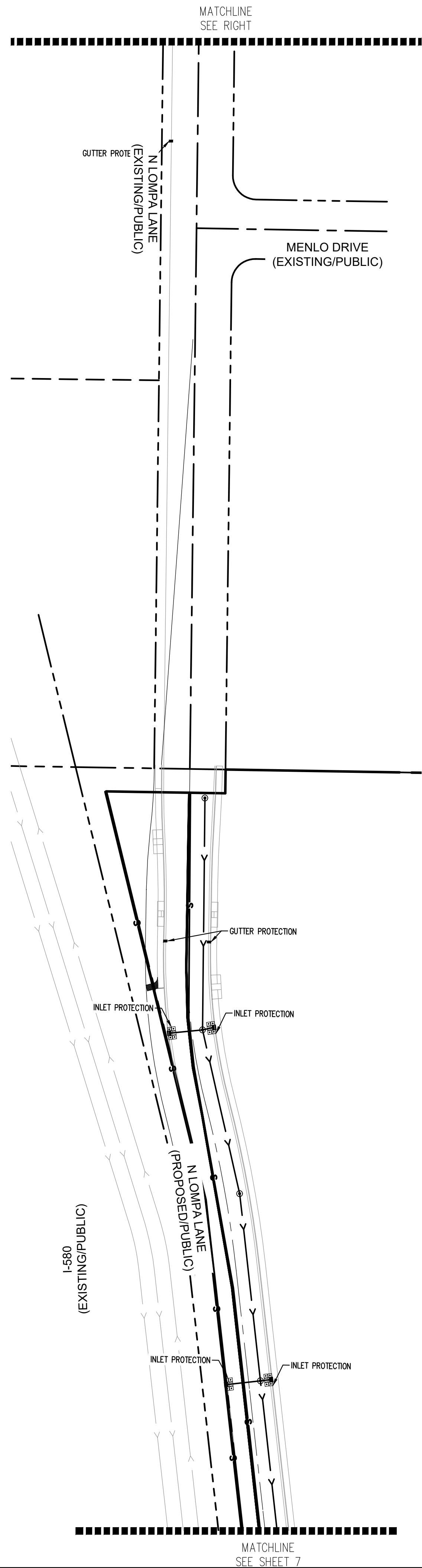
© 2022 - ALL RIGHTS RESERVED

PENDING AGENCY APPROVAL



GRADING NOTES

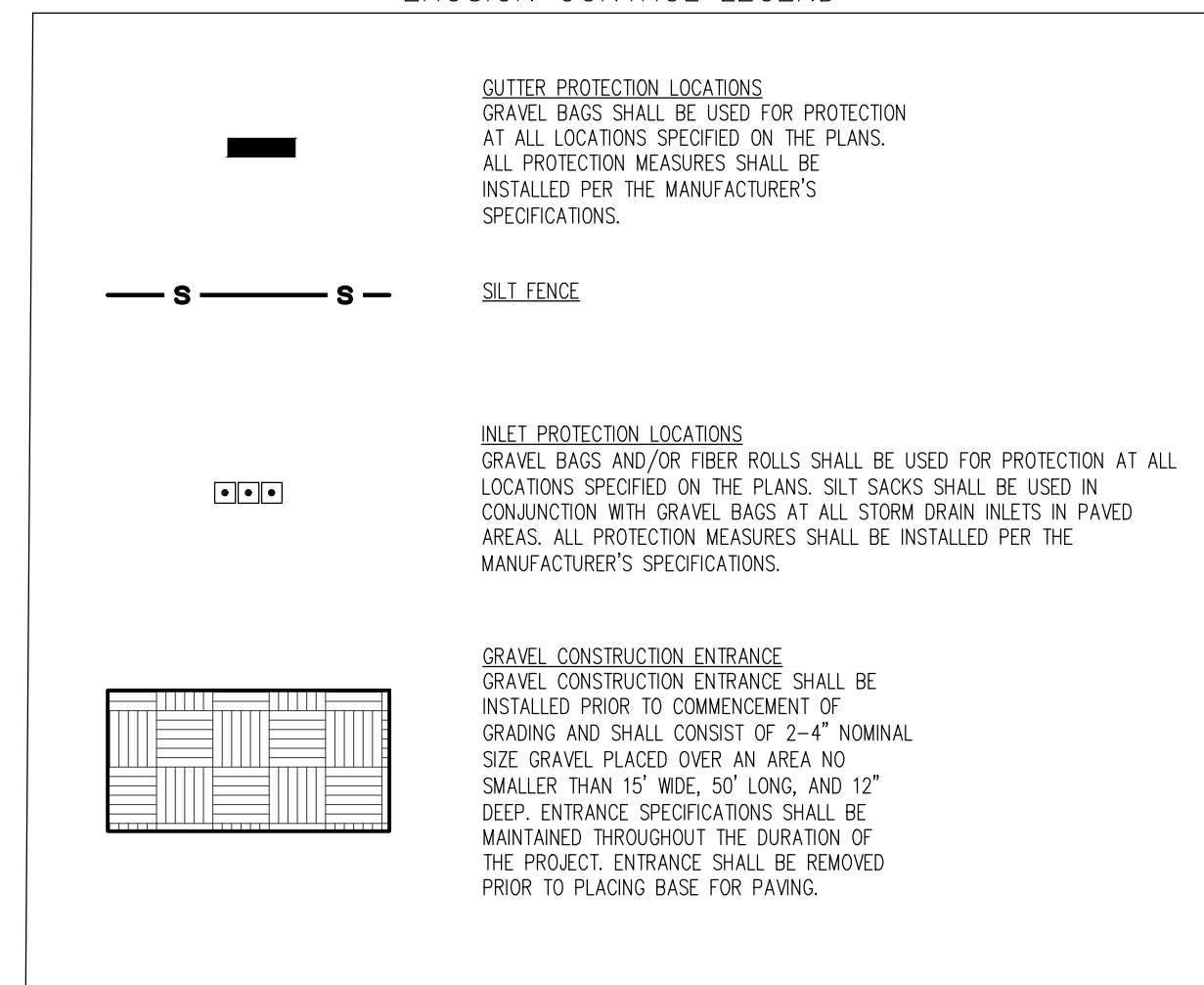
1. FOR NORTH LOMPA LANE, SAWCUT CLEAN LINE TO MATCH EXISTING GRADE FOR NEW AC PAVEMENT. GRADING FOR NEW AC PAVEMENT TO BE DESIGNED AT FINAL DESIGN. FULL STREET RECONSTRUCTION MAY BE REQUIRED TO ACCOMMODATE GRADES.



EROSION CONTROL NOTES

1. TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES TO BE CONSTRUCTED PRIOR TO OR CONCURRENT WITH ANY GRADING ACTIVITY.
2. INSTALL AND MAINTAIN SLOPE EROSION CONTROL STRUCTURES AT EXISTING STORM DRAIN INLETS RECEIVING RUNOFF FROM THE CONSTRUCTION SITE.
3. EQUIPMENT AND VEHICLES SHALL NOT TRAVEL BEYOND THE LIMITS OF GRADING TO PREVENT TRACKING OF DIRT INTO TRAVEL WAY.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE PLACEMENT OF TEMPORARY SEDIMENT AND EROSION CONTROL DEVICES. THE LAYOUT SHOWN ON THESE PLANS ARE INTENDED AS GENERAL GUIDELINE ONLY.
5. TEMPORARY BMP'S SHALL COMPLY WITH THE TRACKEEC MODIFIED CONSTRUCTION SITE BEST MANAGEMENT PRACTICES HANDBOOK - FEBRUARY 2015 UPDATE.
6. CONTRACTOR SHALL ENSURE THAT ACCESS TO AREAS NOT UNDER CONSTRUCTION IS MAINTAINED AT ALL TIMES.

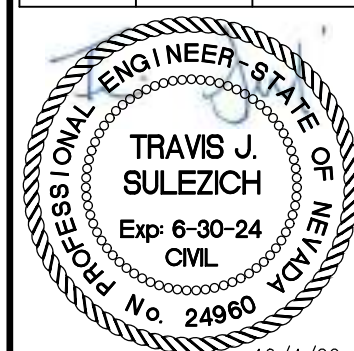
EROSION CONTROL LEGEND

[illegible]

LOMPA RANCH

CARSON CITY, NEVADA

EROSION CONTROL PLAN



10/4/22

PROJ. MGR.:	<u>TJS</u>
PROJ. ASSOC.:	<u>AFG</u>
DRAWN BY:	<u>---</u>
DATE:	<u>OCT 2022</u>
SCALE:	<u>AS SHOWN</u>

SHEET
8 OF 8
TANCCNV01
© 2022 ALL RIGHTS RESERVED

PENDING AGENCY APPROVAL

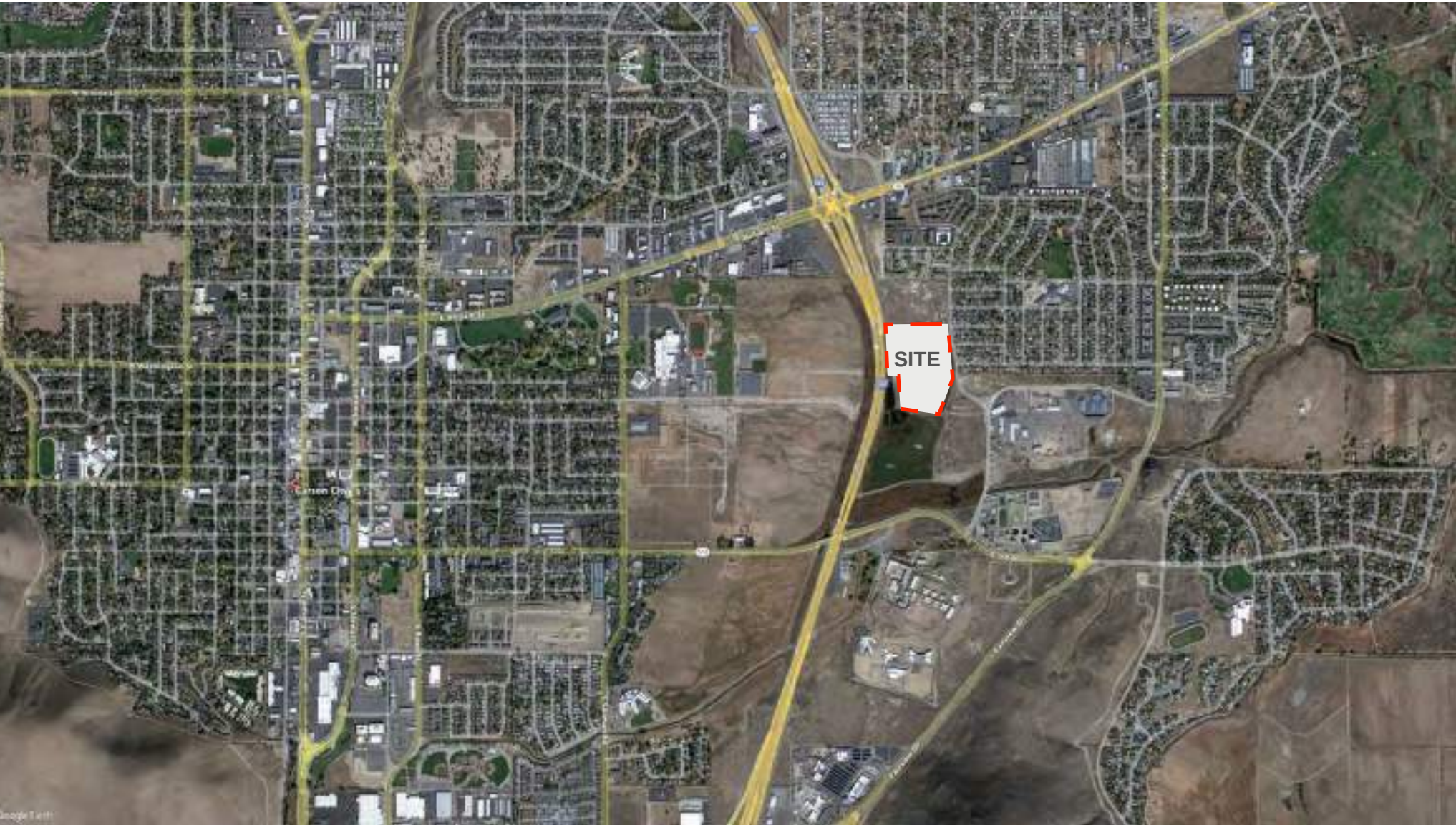
LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA



CARSON CITY, NEVADA
08.25.2022 | MPR SUBMITTAL

VICINITY MAP



SITE MAP



PROJECT TEAM

OWNER/BUILDER:
TANAMERA CONSTRUCTION, LLC
5560 LONGLEY LANE SUITE 200
RENO, NEVADA 89511
CONTACT: KREG ROWE
PHONE: 775.850.4200
EMAIL: KROWE@TCNEV.COM

CIVIL ENGINEER:(UNDER SEPARATE COVER)
MANHARD CONSULTING
241 RIDGE STREET SUITE 400
RENO, NEVADA 89501
CONTACT: KAREN E. DOWNS
PHONE: 775.321.6538
EMAIL: KDOWN@MANHARD.COM

LANDSCAPE ARCHITECT:(UNDER SEPARATE COVER)
LA STUDIO
1552 C STREET
SPARKS, NEVADA 89431
CONTACT: TBD
PHONE: TBD
EMAIL: TBD

ARCHITECT:
JEFFREY DEMURE + ASSOCIATES
ARCHITECTS PLANNING, INC.
5905 GRANITE LAKE DRIVE, SUITE 140
GRANITE BAY, CALIFORNIA 95746
CONTACT: SEAN RICHARDSON
PHONE: 916.783.3700
EMAIL: SRICHARDSON@JDAARCH.COM

SHEET INDEX

A0	COVER SHEET
A2.1	SCHEMATIC UNIT PLANS UNITS 1 + 2
A2.2	SCHEMATIC UNIT PLANS UNITS 3 + 4
A3.1	SCHEMATIC BUILDING PLANS BUILDING A - FIRST FLOOR
A3.2	SCHEMATIC BUILDING PLANS BUILDING A - SECOND FLOOR
A3.3	SCHEMATIC BUILDING PLANS BUILDING A - THIRD FLOOR
A3.4	SCHEMATIC BUILDING PLANS BUILDING B - FIRST FLOOR
A3.5	SCHEMATIC BUILDING PLANS BUILDING B - SECOND FLOOR
A3.6	SCHEMATIC BUILDING PLANS BUILDING B - THIRD FLOOR
A3.7	SCHEMATIC BUILDING PLANS BUILDING C - FIRST FLOOR
A3.8	SCHEMATIC BUILDING PLANS BUILDING C - SECOND FLOOR
A3.9	SCHEMATIC BUILDING PLANS BUILDING C - THIRD FLOOR
A3.10	SCHEMATIC BUILDING PLANS BUILDING D - FIRST FLOOR
A3.11	SCHEMATIC BUILDING PLANS BUILDING D - SECOND FLOOR
A3.12	SCHEMATIC BUILDING PLANS BUILDING D - THIRD FLOOR
A3.13	SCHEMATIC BUILDING PLANS BUILDING E - FIRST FLOOR
A3.14	SCHEMATIC BUILDING PLANS BUILDING E - SECOND FLOOR
A3.15	SCHEMATIC BUILDING PLANS BUILDING E - THIRD FLOOR
A4.1	SCHEMATIC BUILDING ELEVATIONS BUILDING A FRONT + REAR
A4.2	SCHEMATIC BUILDING ELEVATIONS BUILDING A RIGHT + LEFT
A4.3	SCHEMATIC BUILDING PERSPECTIVES BUILDING A
A4.4	SCHEMATIC BUILDING ELEVATIONS BUILDING B FRONT + REAR
A4.5	SCHEMATIC BUILDING ELEVATIONS BUILDING B RIGHT + LEFT
A4.6	SCHEMATIC BUILDING PERSPECTIVES BUILDING B
A4.7	SCHEMATIC BUILDING ELEVATIONS BUILDING C FRONT + REAR
A4.8	SCHEMATIC BUILDING ELEVATIONS BUILDING C RIGHT + LEFT
A4.9	SCHEMATIC BUILDING PERSPECTIVES BUILDING C
A4.10	SCHEMATIC BUILDING ELEVATIONS BUILDING D FRONT + REAR
A4.10	SCHEMATIC BUILDING ELEVATIONS BUILDING D RIGHT + LEFT
A4.12	SCHEMATIC BUILDING PERSPECTIVES BUILDING D
A4.13	SCHEMATIC BUILDING ELEVATIONS BUILDING E FRONT + REAR
A4.14	SCHEMATIC BUILDING ELEVATIONS BUILDING E RIGHT + LEFT
A4.15	SCHEMATIC BUILDING PERSPECTIVES BUILDING E

SHEET INDEX

A5.1	SCHEMATIC BUILDING PLANS CLUBHOUSE
A5.2	SCHEMATIC BUILDING ELEVATIONS CLUBHOUSE FRONT + REAR
A5.3	SCHEMATIC BUILDING ELEVATIONS CLUBHOUSE RIGHT + LEFT
A6.1	SCHEMATIC BUILDING PLANS + ELEVATIONS 10-BAY GARAGE
A6.2	SCHEMATIC BUILDING PLANS + ELEVATIONS 10-BAY ADA GARAGE
A7.1	SCHEMATIC BUILDING PLANS + ELEVATIONS POOL HOUSE
A8.1	SCHEMATIC BUILDING PLANS + ELEVATIONS MAINTENANCE
A9.1	COLOR + MATERIALS SELECTIONS

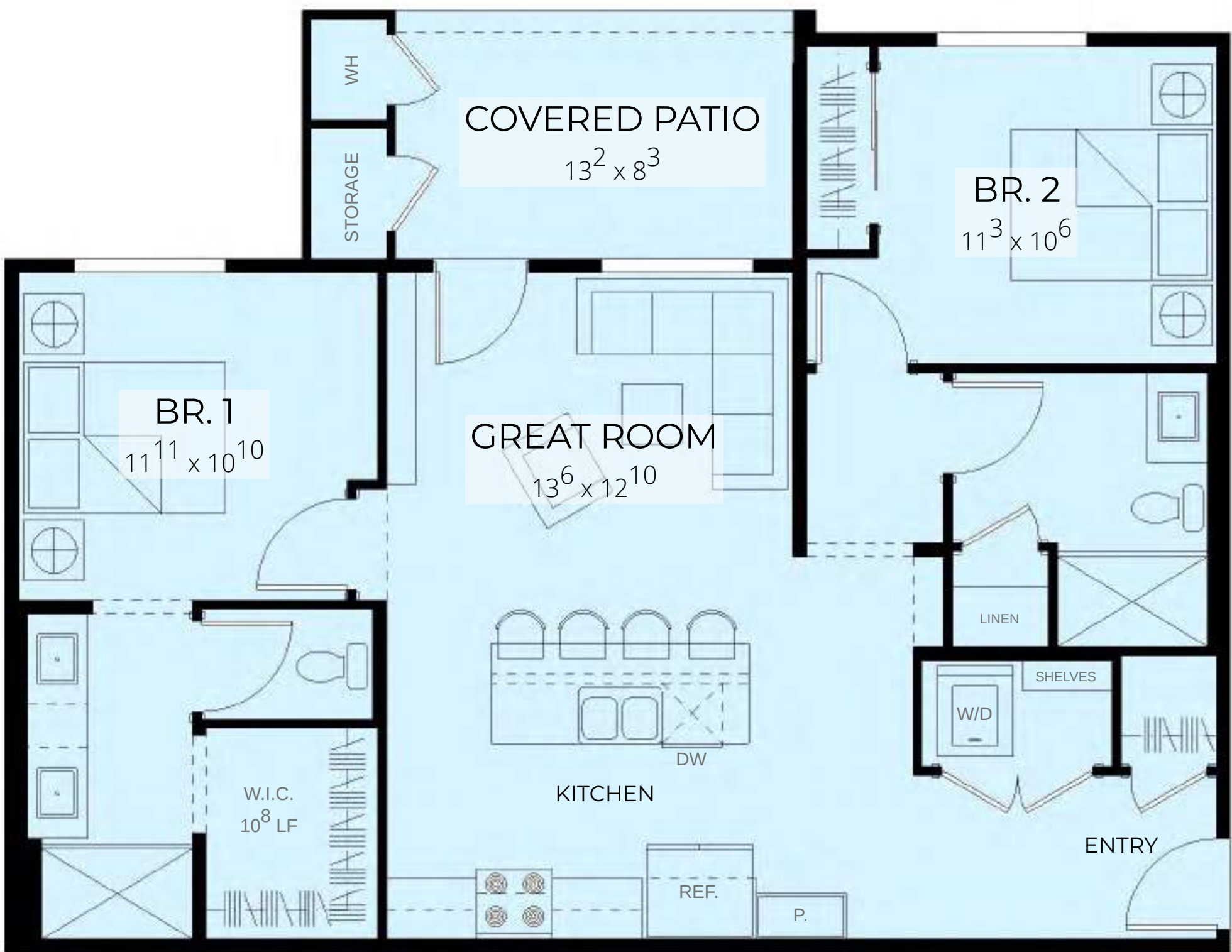
\\names\laren\09\Phase02\PROJECT\TANAHBAH\22034-2035\LOMPA RANCH APARTMENTS AND CLUBHOUSE\01 DESIGN\2 WORKING FILES\02 LAYOUT\01 SD\2034_A2 UNIT PLANS_3002.dwg



UNIT 1.1 | 850 SF



UNIT 1.0 ACCESSIBLE | 850 SF

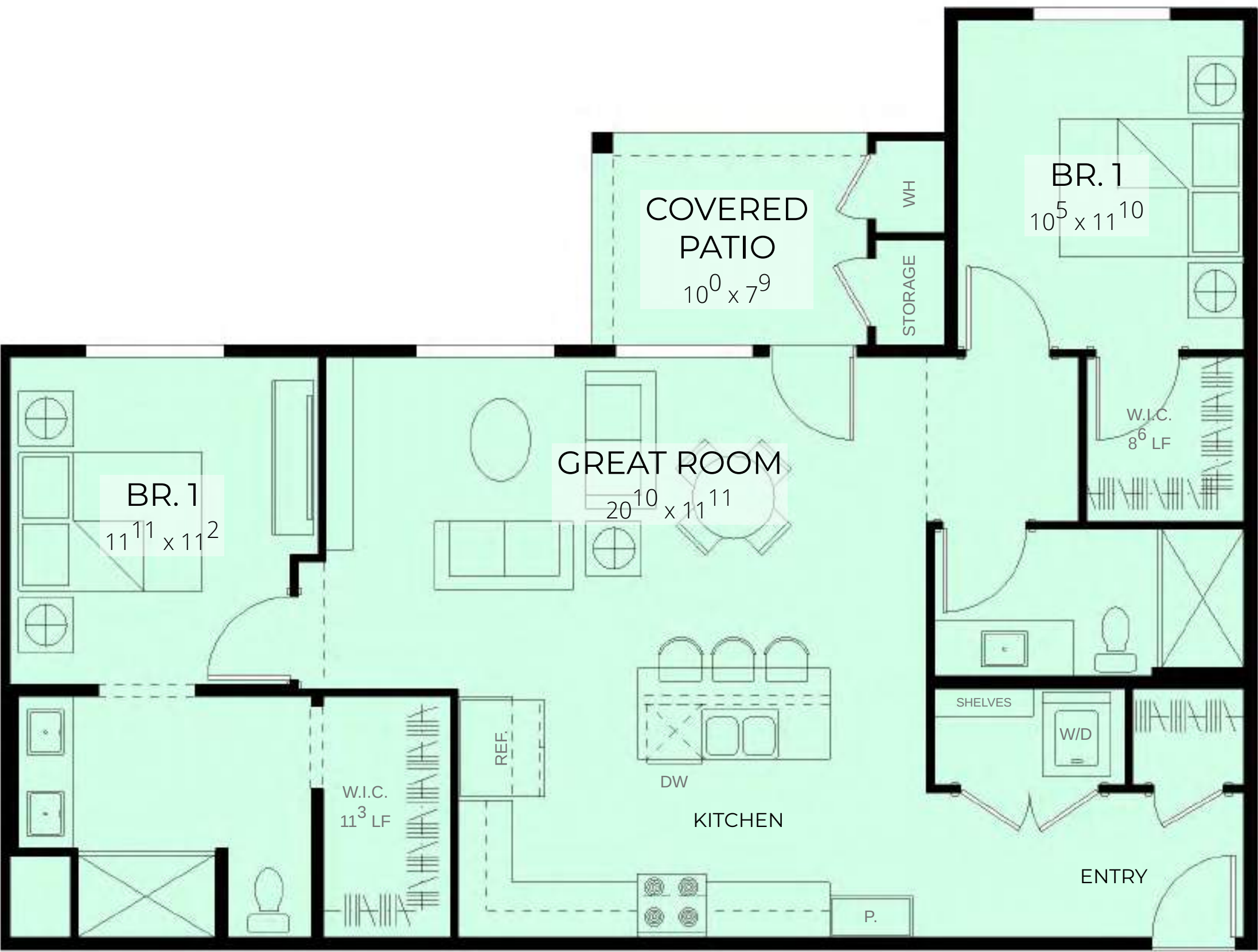


UNIT 2.1 | 1,036 SF

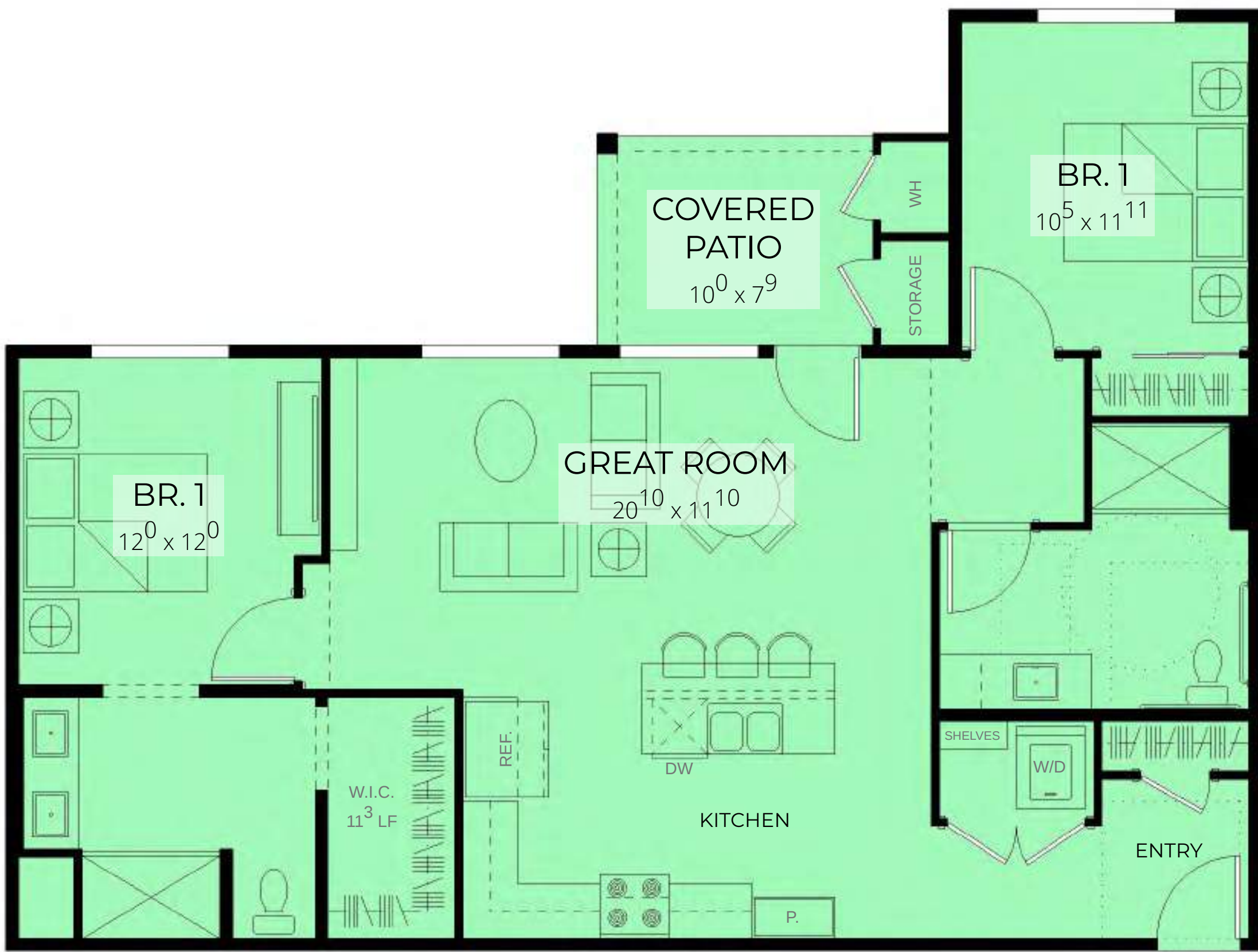


UNIT 2.0 ACCESSIBLE | 1,036 SF

Volume: 04 Unit Plans
Project: LOMPA RANCH EAST APARTMENTS
Date: 07.11.2022
Unit: 3.1
Floor: 3
Level: 3
Unit Type: 1-BED
Unit Size: 1,131 SF
Unit Color: #90EE90
Unit Label: UNIT 3.1 | 1,131 SF
Unit Notes: UNIT 3.1 | 1,131 SF
Unit Details: UNIT 3.1 | 1,131 SF
Unit Features: UNIT 3.1 | 1,131 SF
Unit Amenities: UNIT 3.1 | 1,131 SF
Unit Layout: UNIT 3.1 | 1,131 SF
Unit Dimensions: UNIT 3.1 | 1,131 SF
Unit Area: UNIT 3.1 | 1,131 SF
Unit Volume: UNIT 3.1 | 1,131 SF
Unit Weight: UNIT 3.1 | 1,131 SF
Unit Length: UNIT 3.1 | 1,131 SF
Unit Width: UNIT 3.1 | 1,131 SF
Unit Height: UNIT 3.1 | 1,131 SF
Unit Depth: UNIT 3.1 | 1,131 SF
Unit Surface Area: UNIT 3.1 | 1,131 SF
Unit Perimeter: UNIT 3.1 | 1,131 SF
Unit Circumference: UNIT 3.1 | 1,131 SF
Unit Area Moment of Inertia: UNIT 3.1 | 1,131 SF
Unit Polar Moment of Inertia: UNIT 3.1 | 1,131 SF
Unit Radius of Gyration: UNIT 3.1 | 1,131 SF
Unit Section Modulus: UNIT 3.1 | 1,131 SF
Unit Moment of Inertia: UNIT 3.1 | 1,131 SF
Unit Torsion Constant: UNIT 3.1 | 1,131 SF
Unit Warping Constant: UNIT 3.1 | 1,131 SF
Unit Stiffness: UNIT 3.1 | 1,131 SF
Unit Strength: UNIT 3.1 | 1,131 SF
Unit Capacity: UNIT 3.1 | 1,131 SF
Unit Performance: UNIT 3.1 | 1,131 SF
Unit Reliability: UNIT 3.1 | 1,131 SF
Unit Durability: UNIT 3.1 | 1,131 SF
Unit Maintainability: UNIT 3.1 | 1,131 SF
Unit Repairability: UNIT 3.1 | 1,131 SF
Unit Replaceability: UNIT 3.1 | 1,131 SF
Unit Upgradability: UNIT 3.1 | 1,131 SF
Unit Adaptability: UNIT 3.1 | 1,131 SF
Unit Flexibility: UNIT 3.1 | 1,131 SF
Unit Scalability: UNIT 3.1 | 1,131 SF
Unit Portability: UNIT 3.1 | 1,131 SF
Unit Transferability: UNIT 3.1 | 1,131 SF
Unit Interoperability: UNIT 3.1 | 1,131 SF
Unit Compatibility: UNIT 3.1 | 1,131 SF
Unit Coherence: UNIT 3.1 | 1,131 SF
Unit Consistency: UNIT 3.1 | 1,131 SF
Unit Integrity: UNIT 3.1 | 1,131 SF
Unit Validity: UNIT 3.1 | 1,131 SF
Unit Soundness: UNIT 3.1 | 1,131 SF
Unit Feasibility: UNIT 3.1 | 1,131 SF
Unit Viability: UNIT 3.1 | 1,131 SF
Unit Profitability: UNIT 3.1 | 1,131 SF
Unit Sustainability: UNIT 3.1 | 1,131 SF
Unit Resilience: UNIT 3.1 | 1,131 SF
Unit Robustness: UNIT 3.1 | 1,131 SF
Unit Reliability: UNIT 3.1 | 1,131 SF
Unit Availability: UNIT 3.1 | 1,131 SF
Unit Usability: UNIT 3.1 | 1,131 SF
Unit Accessibility: UNIT 3.1 | 1,131 SF
Unit Inclusion: UNIT 3.1 | 1,131 SF
Unit Exclusion: UNIT 3.1 | 1,131 SF
Unit Participation: UNIT 3.1 | 1,131 SF
Unit Collaboration: UNIT 3.1 | 1,131 SF
Unit Cooperation: UNIT 3.1 | 1,131 SF
Unit Assistance: UNIT 3.1 | 1,131 SF
Unit Support: UNIT 3.1 | 1,131 SF
Unit Help: UNIT 3.1 | 1,131 SF
Unit Aid: UNIT 3.1 | 1,131 SF
Unit Service: UNIT 3.1 | 1,131 SF
Unit Care: UNIT 3.1 | 1,131 SF
Unit Protection: UNIT 3.1 | 1,131 SF
Unit Preservation: UNIT 3.1 | 1,131 SF
Unit Maintenance: UNIT 3.1 | 1,131 SF
Unit Repair: UNIT 3.1 | 1,131 SF
Unit Replacement: UNIT 3.1 | 1,131 SF
Unit Upgrade: UNIT 3.1 | 1,131 SF
Unit Adaptation: UNIT 3.1 | 1,131 SF
Unit Transformation: UNIT 3.1 | 1,131 SF
Unit Conversion: UNIT 3.1 | 1,131 SF
Unit Translation: UNIT 3.1 | 1,131 SF
Unit Transference: UNIT 3.1 | 1,131 SF
Unit Transferability: UNIT 3.1 | 1,131 SF
Unit Interoperability: UNIT 3.1 | 1,131 SF
Unit Compatibility: UNIT 3.1 | 1,131 SF
Unit Coherence: UNIT 3.1 | 1,131 SF
Unit Consistency: UNIT 3.1 | 1,131 SF
Unit Integrity: UNIT 3.1 | 1,131 SF
Unit Validity: UNIT 3.1 | 1,131 SF
Unit Soundness: UNIT 3.1 | 1,131 SF
Unit Feasibility: UNIT 3.1 | 1,131 SF
Unit Viability: UNIT 3.1 | 1,131 SF
Unit Profitability: UNIT 3.1 | 1,131 SF
Unit Sustainability: UNIT 3.1 | 1,131 SF
Unit Resilience: UNIT 3.1 | 1,131 SF
Unit Robustness: UNIT 3.1 | 1,131 SF
Unit Reliability: UNIT 3.1 | 1,131 SF
Unit Availability: UNIT 3.1 | 1,131 SF
Unit Usability: UNIT 3.1 | 1,131 SF
Unit Accessibility: UNIT 3.1 | 1,131 SF
Unit Inclusion: UNIT 3.1 | 1,131 SF
Unit Exclusion: UNIT 3.1 | 1,131 SF
Unit Participation: UNIT 3.1 | 1,131 SF
Unit Collaboration: UNIT 3.1 | 1,131 SF
Unit Cooperation: UNIT 3.1 | 1,131 SF
Unit Assistance: UNIT 3.1 | 1,131 SF
Unit Support: UNIT 3.1 | 1,131 SF
Unit Help: UNIT 3.1 | 1,131 SF
Unit Aid: UNIT 3.1 | 1,131 SF
Unit Service: UNIT 3.1 | 1,131 SF
Unit Care: UNIT 3.1 | 1,131 SF
Unit Protection: UNIT 3.1 | 1,131 SF
Unit Preservation: UNIT 3.1 | 1,131 SF
Unit Maintenance: UNIT 3.1 | 1,131 SF
Unit Repair: UNIT 3.1 | 1,131 SF
Unit Replacement: UNIT 3.1 | 1,131 SF
Unit Upgrade: UNIT 3.1 | 1,131 SF
Unit Adaptation: UNIT 3.1 | 1,131 SF
Unit Transformation: UNIT 3.1 | 1,131 SF
Unit Conversion: UNIT 3.1 | 1,131 SF
Unit Translation: UNIT 3.1 | 1,131 SF
Unit Transference: UNIT 3.1 | 1,131 SF



UNIT 3.1 | 1,131 SF



UNIT 3.0 ACCESSIBLE | 1,131 SF



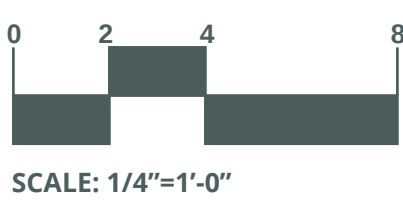
UNIT 4.1 | 1,225 SF



UNIT 4.0 ACCESSIBLE | 1,225 SF

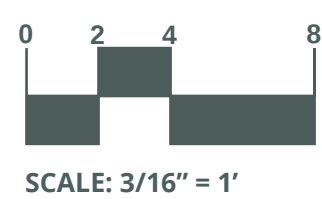
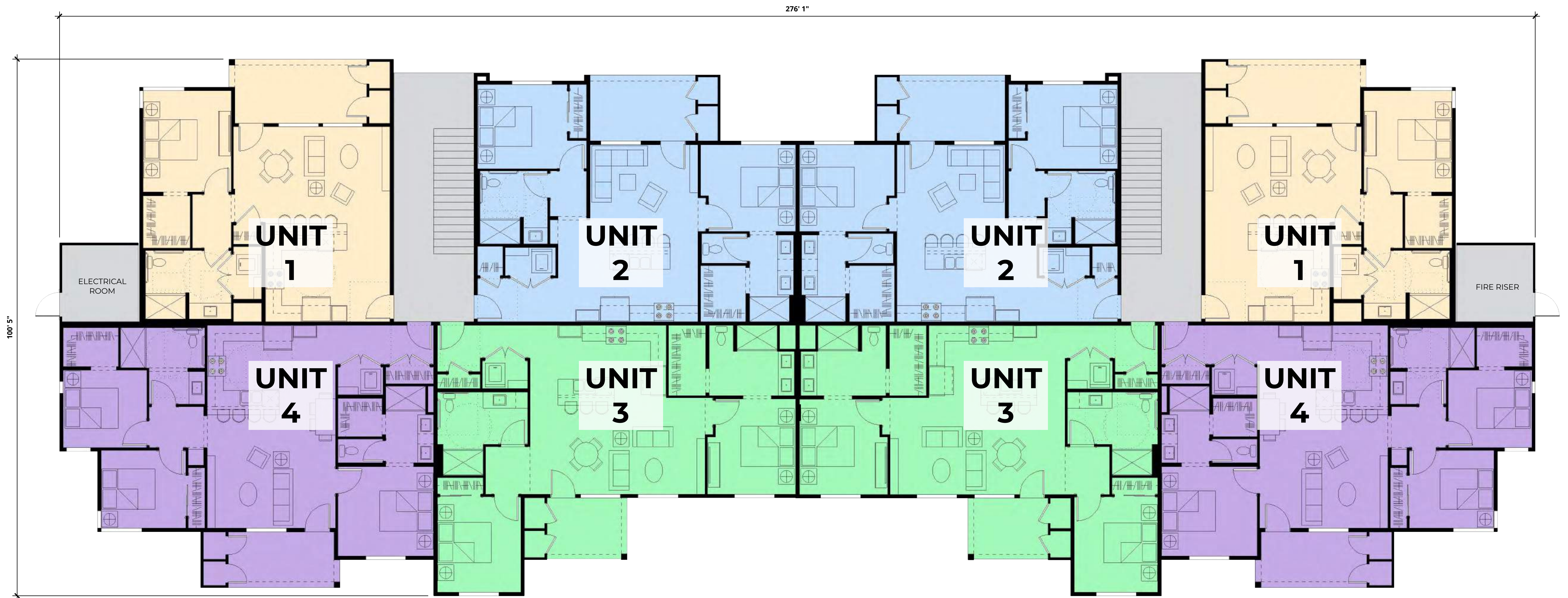
07.11.2022 | MPR SUBMITTAL

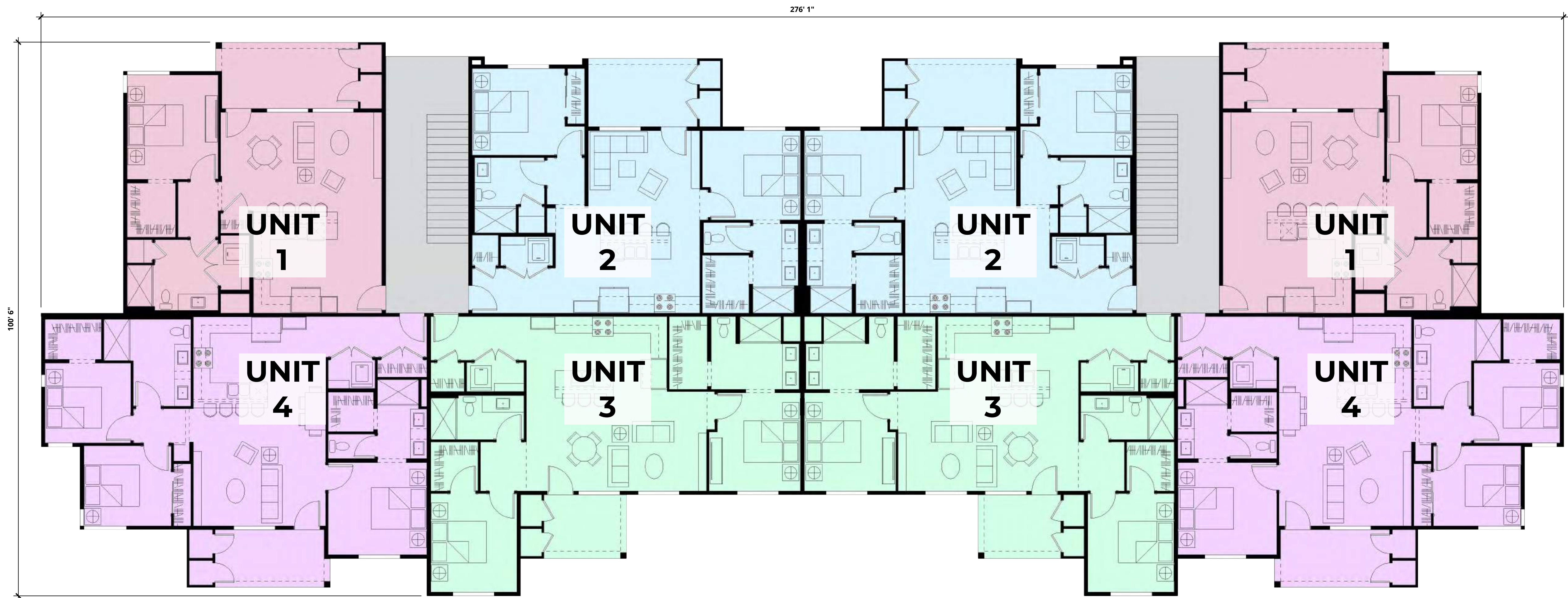
SCHEMATIC UNIT PLANS | UNITS 3 & 4

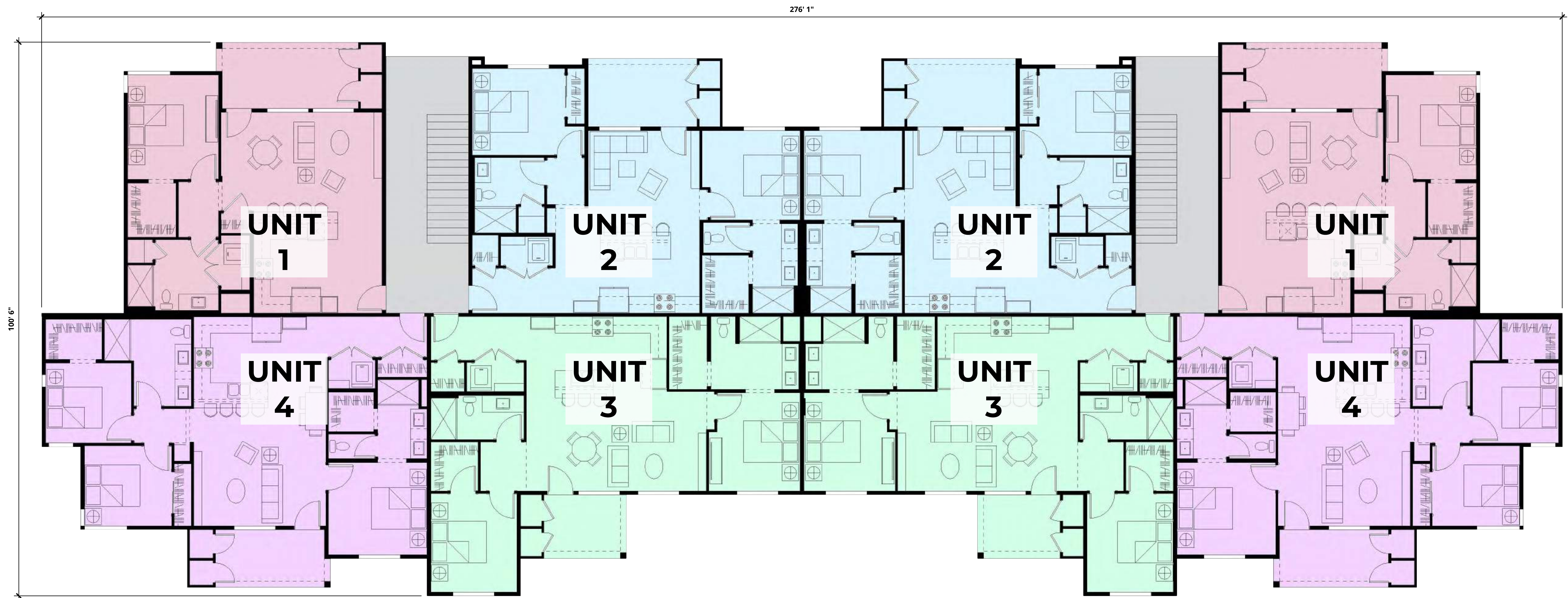


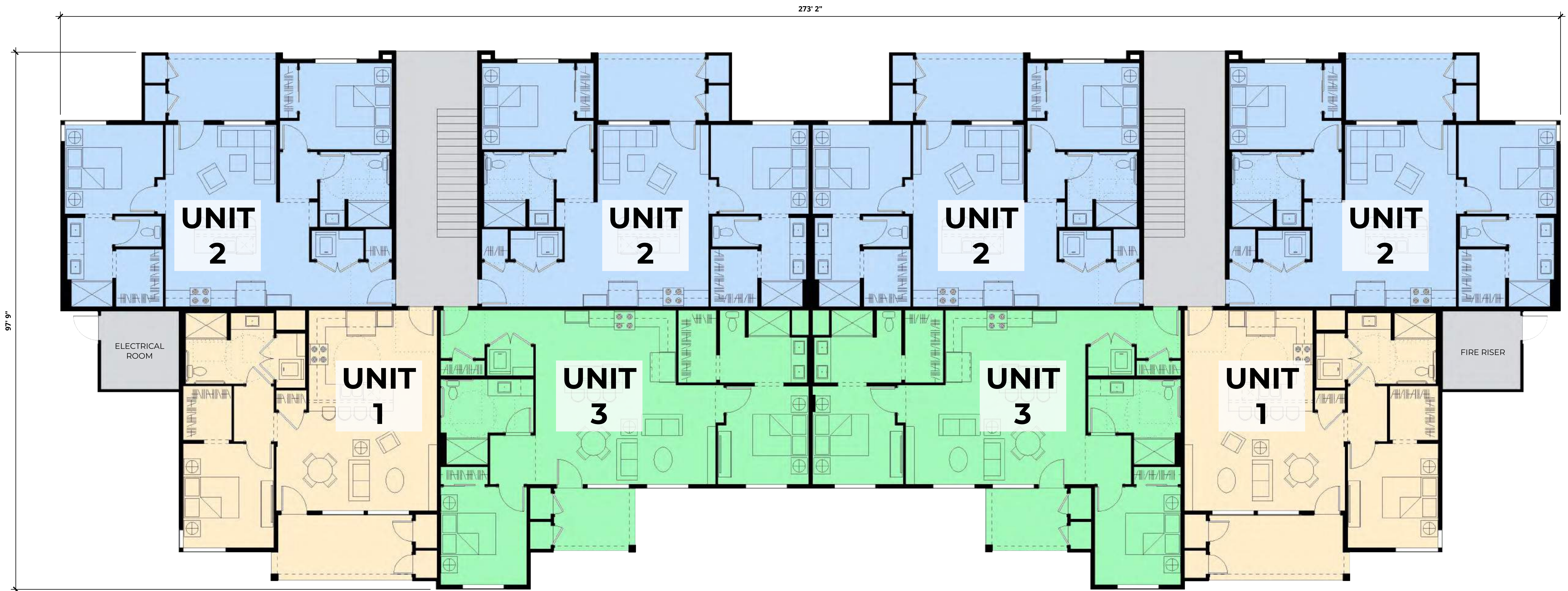
JD+A JOB NUMBER: 22034
DATE: 07.11.2022

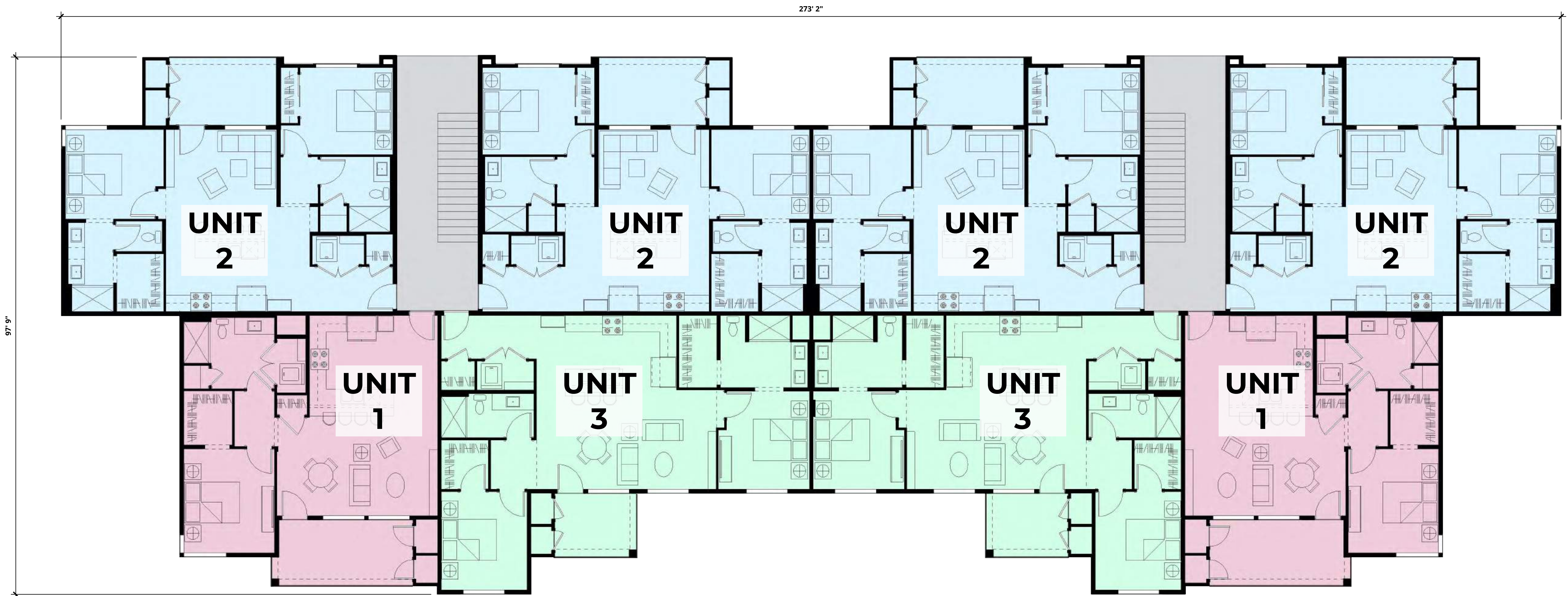
A2.2

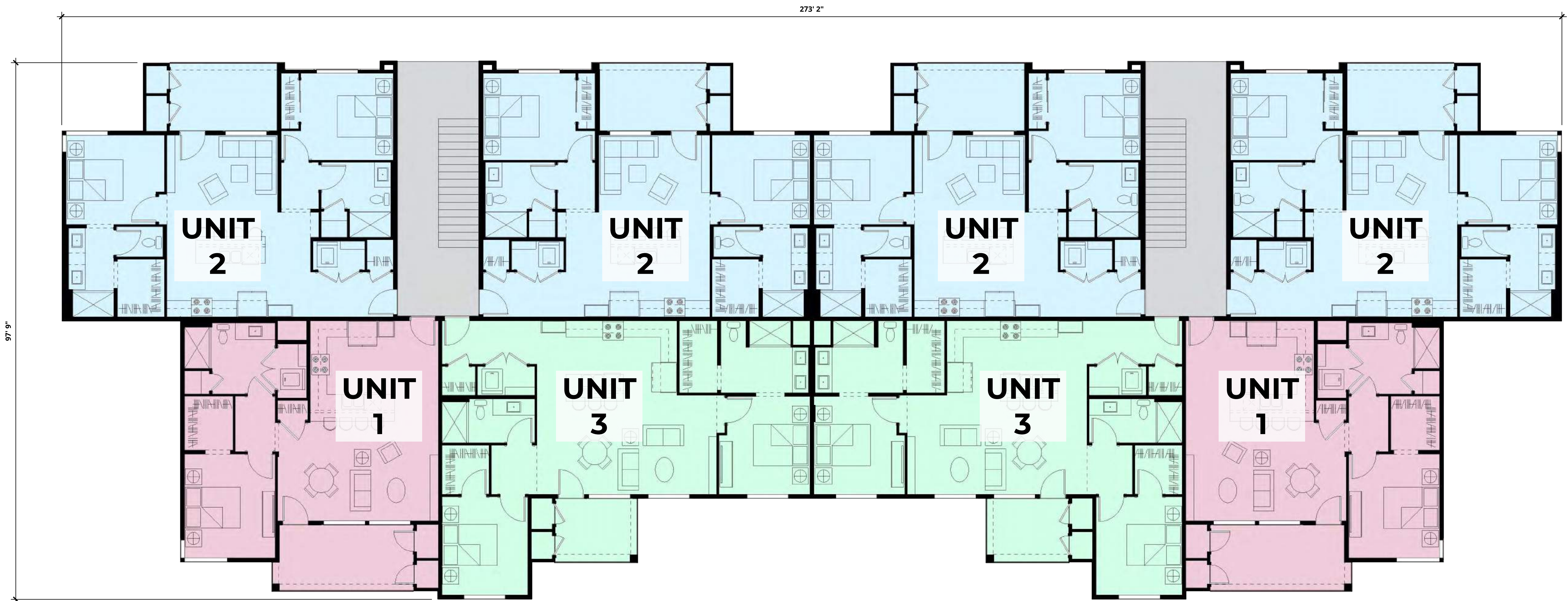


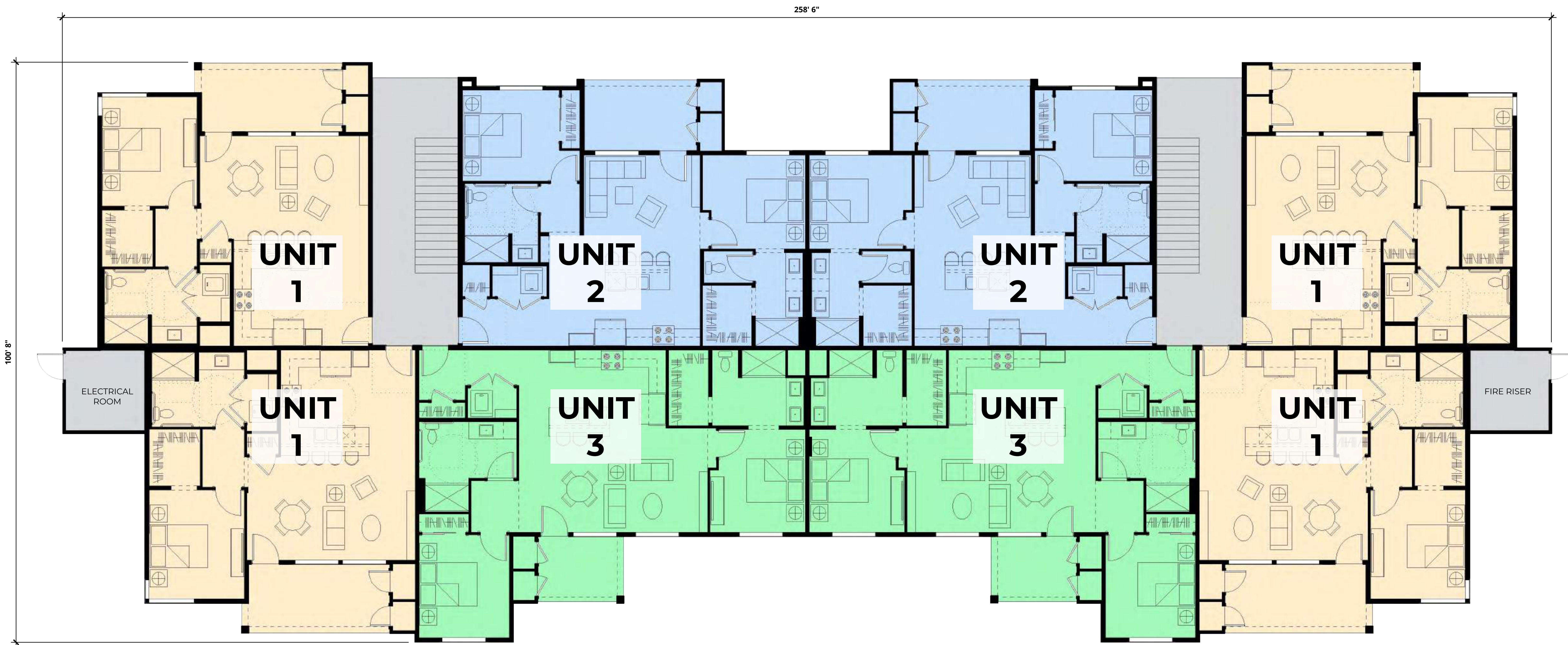


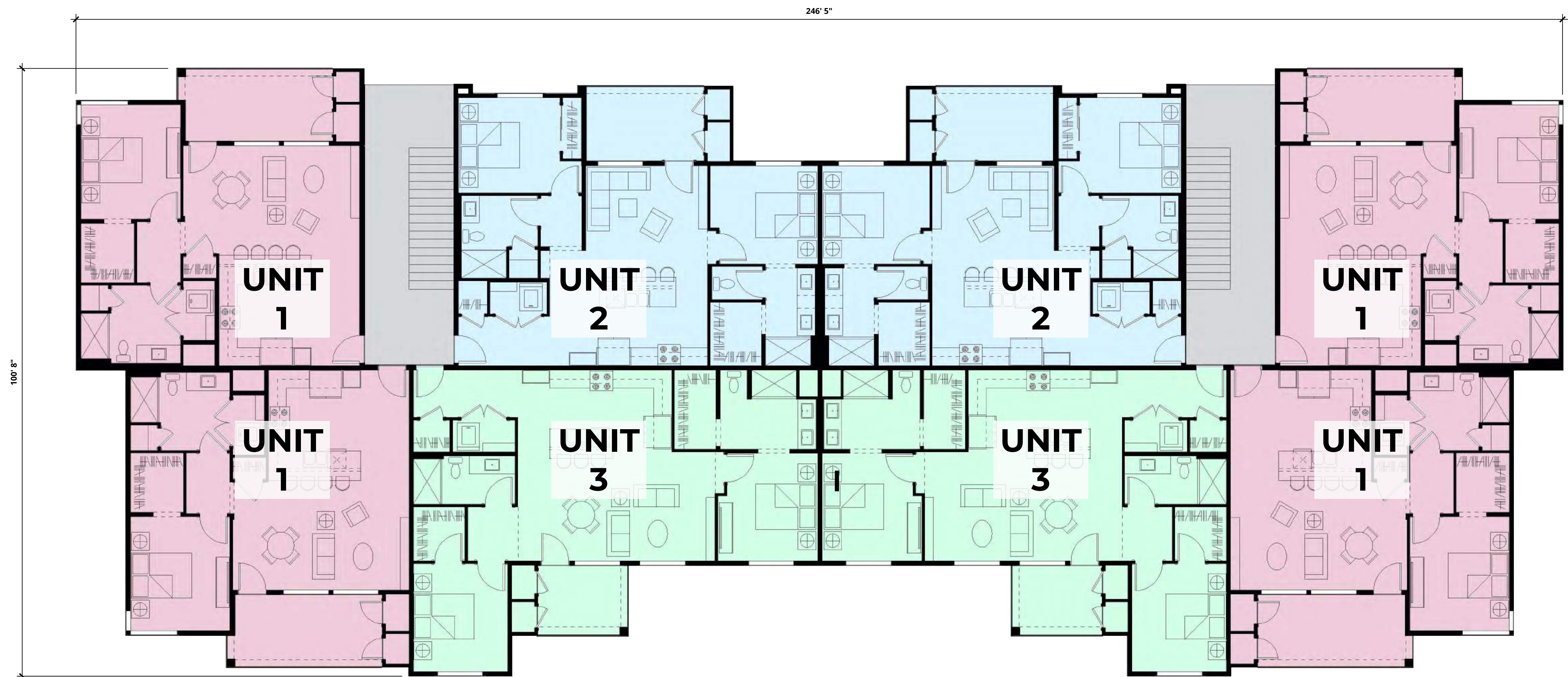


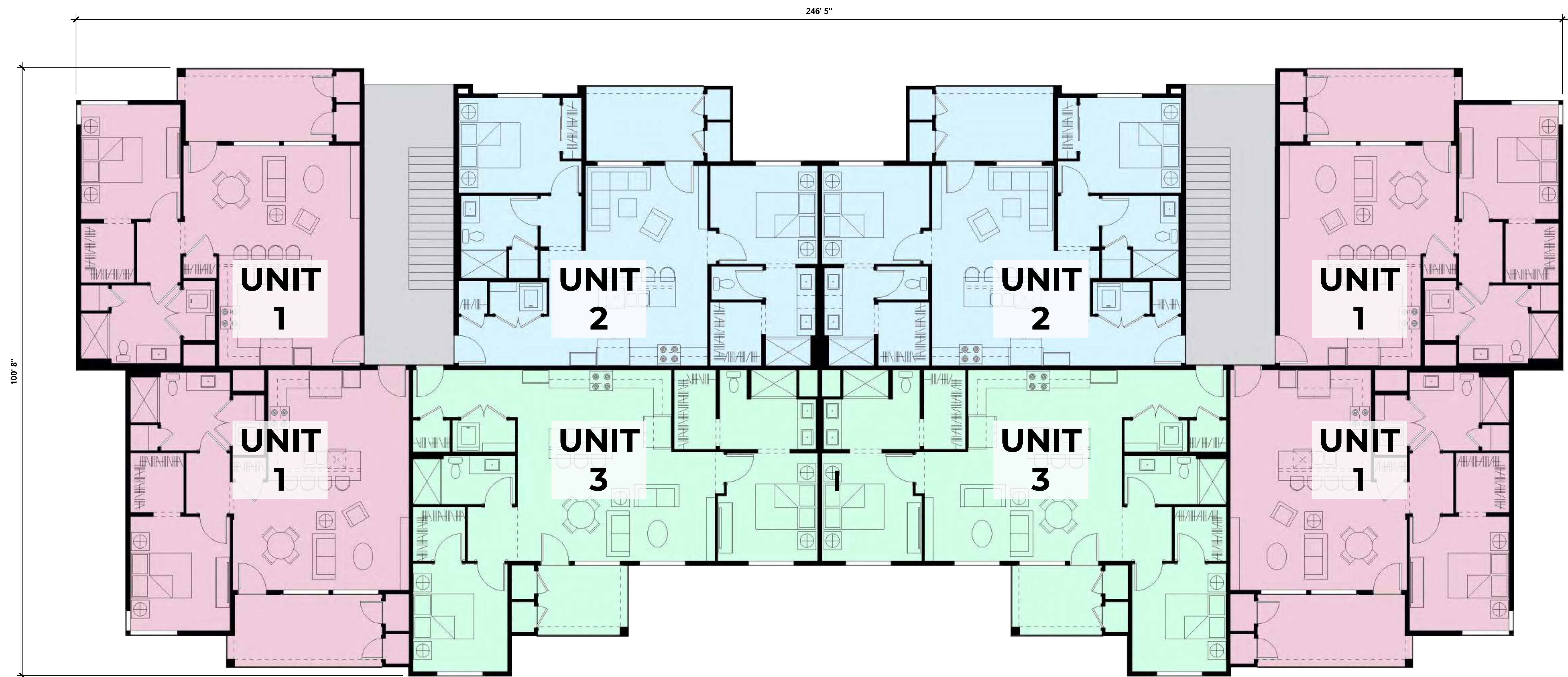


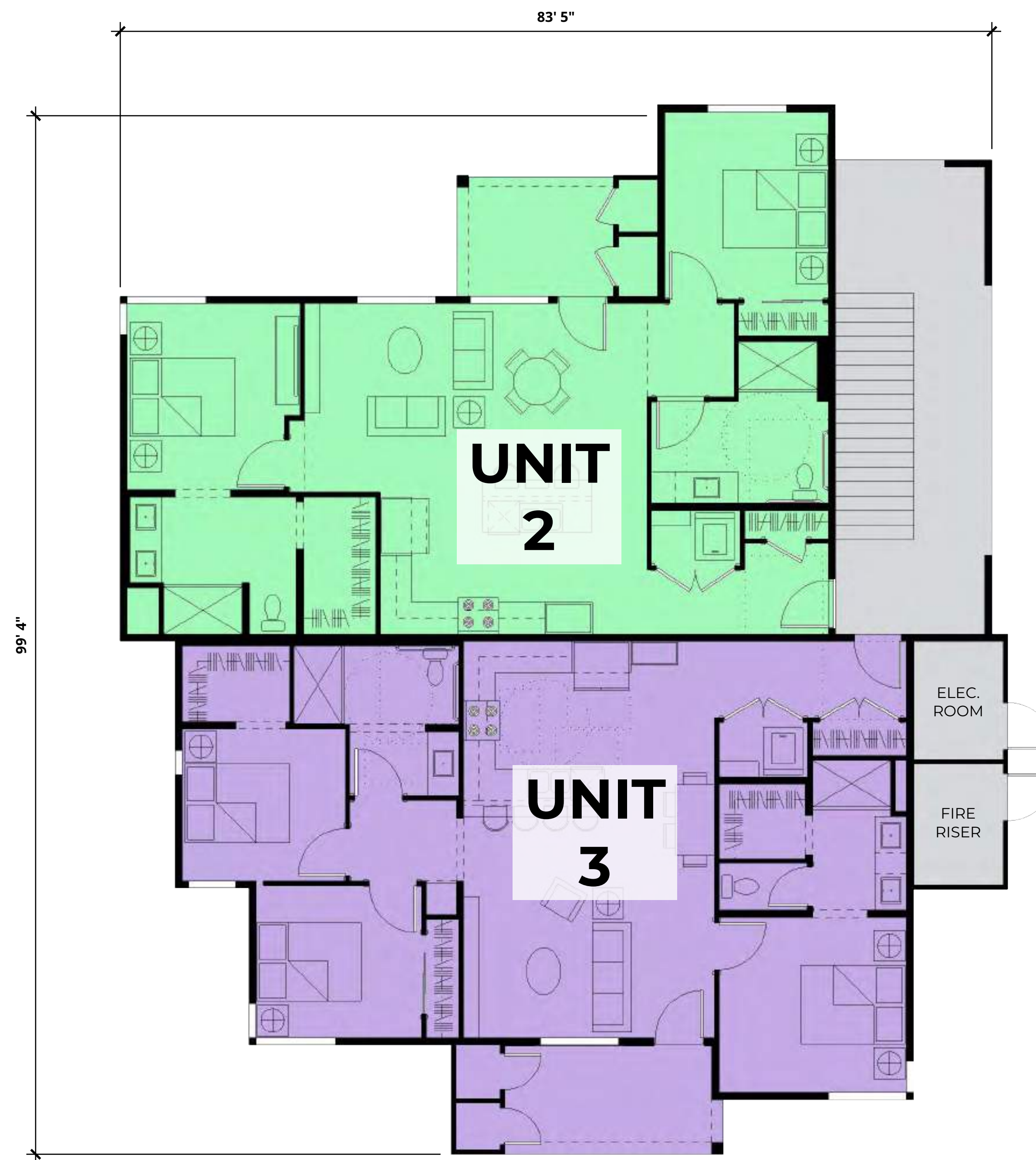


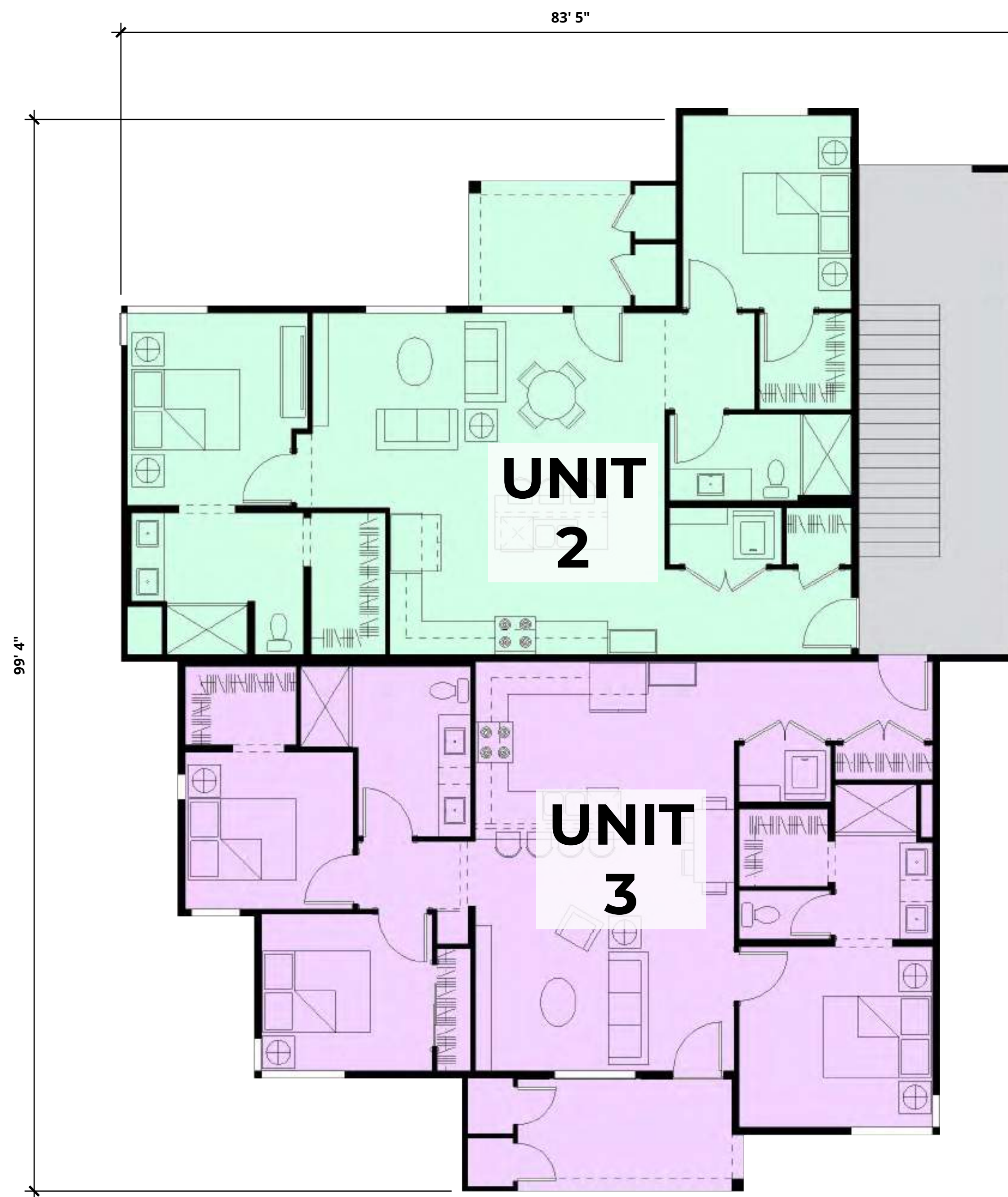




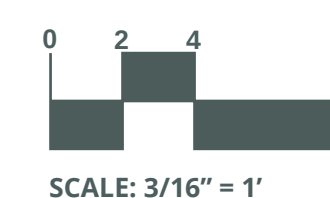








SCHEMATIC BUILDING PLANS | BUILDING D | SECOND FLOOR



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A3.11

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM

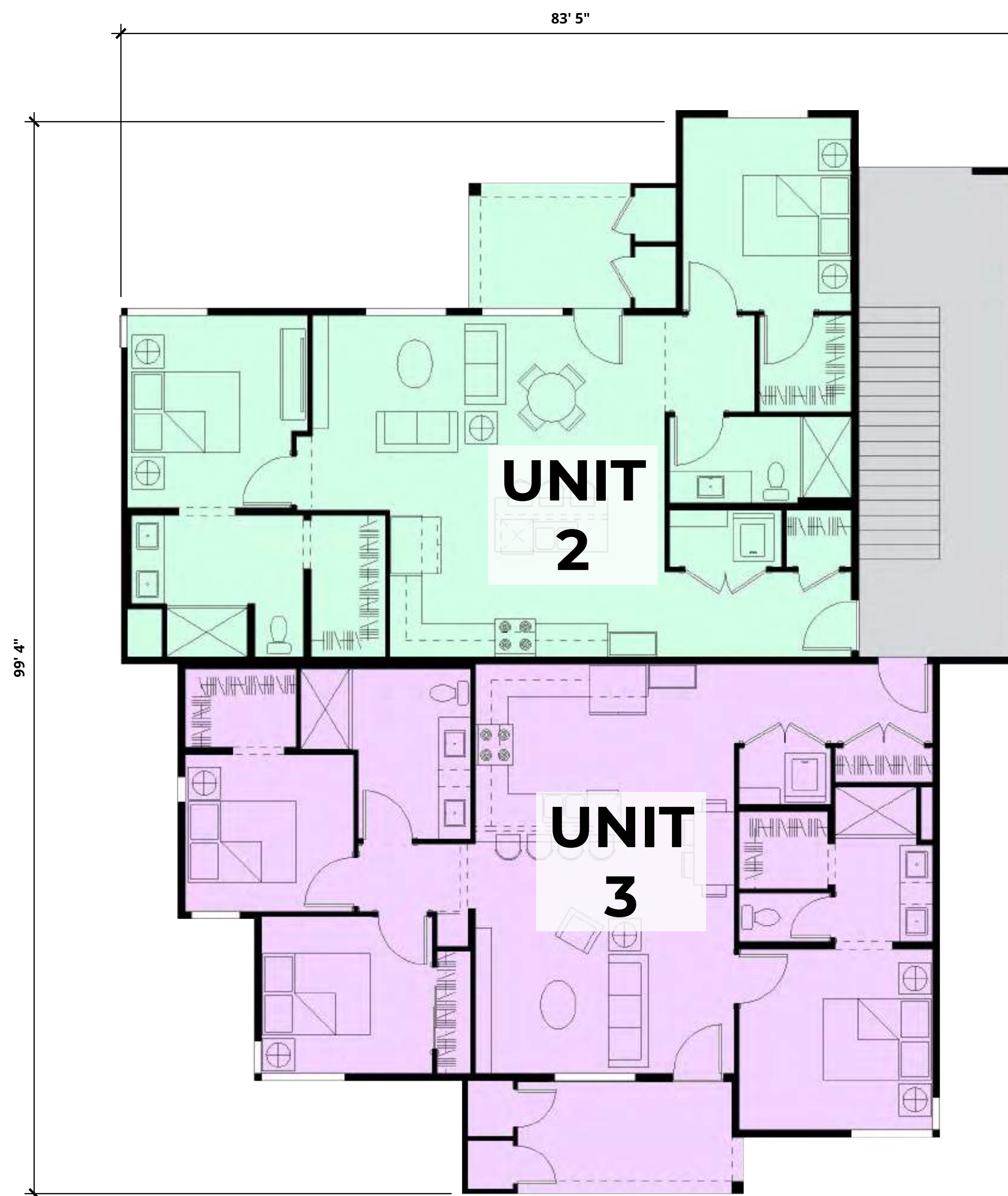
07.11.2022 | MPR SUBMITTAL



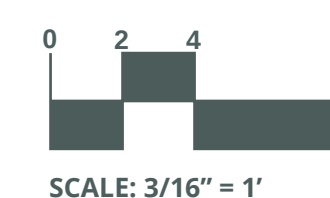
LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.



SCHEMATIC BUILDING PLANS | BUILDING D | THIRD FLOOR



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A3.12

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM

07.11.2022 | MPR SUBMITTAL

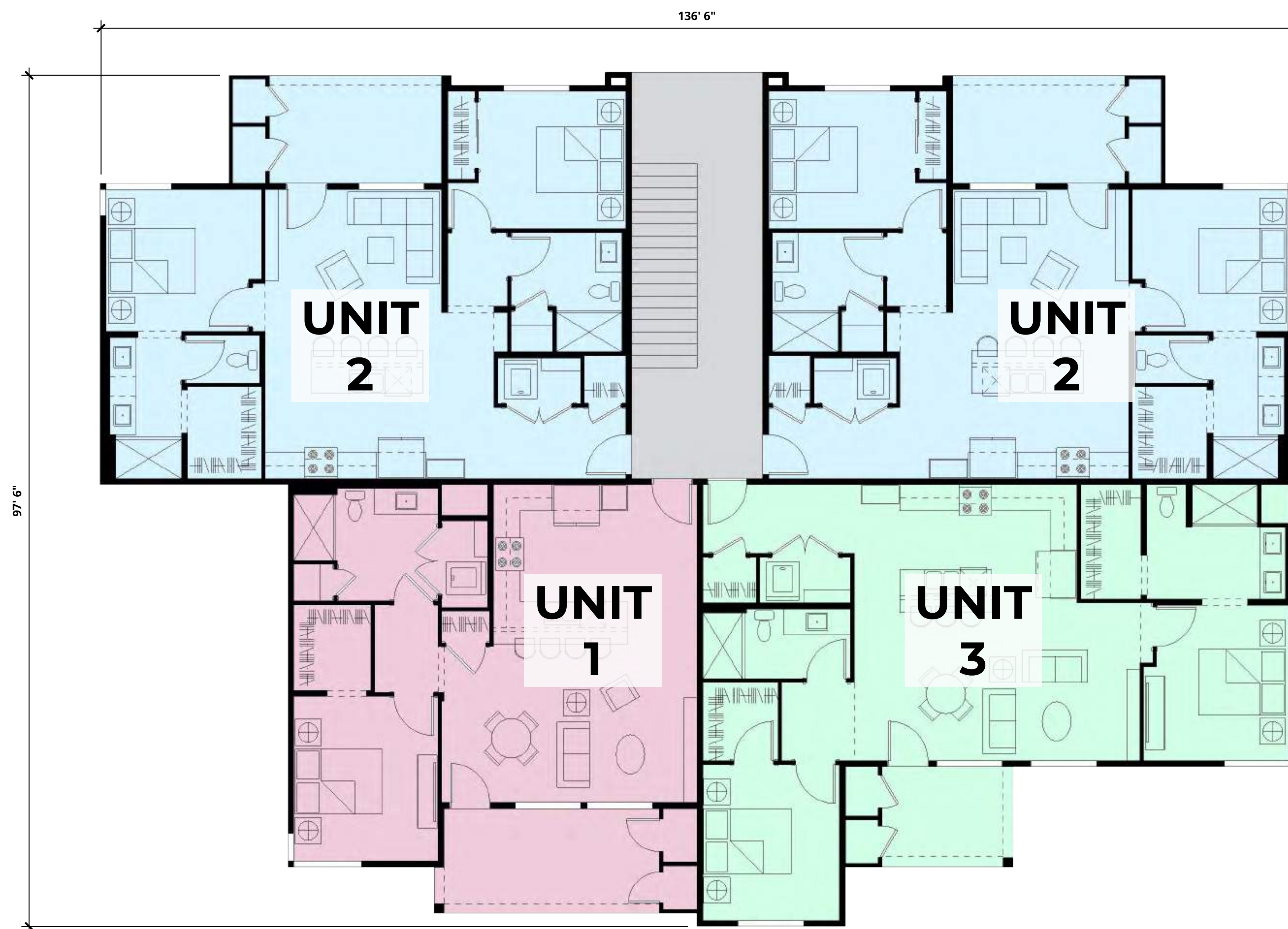


LOMPA RANCH EAST APARTMENTS

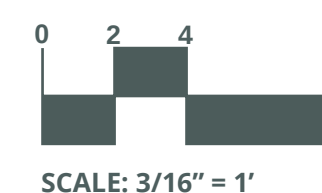
CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.





SCHEMATIC BUILDING PLANS | BUILDING E | SECOND FLOOR



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A3.14

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM

07.11.2022 | MPR SUBMITTAL



LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

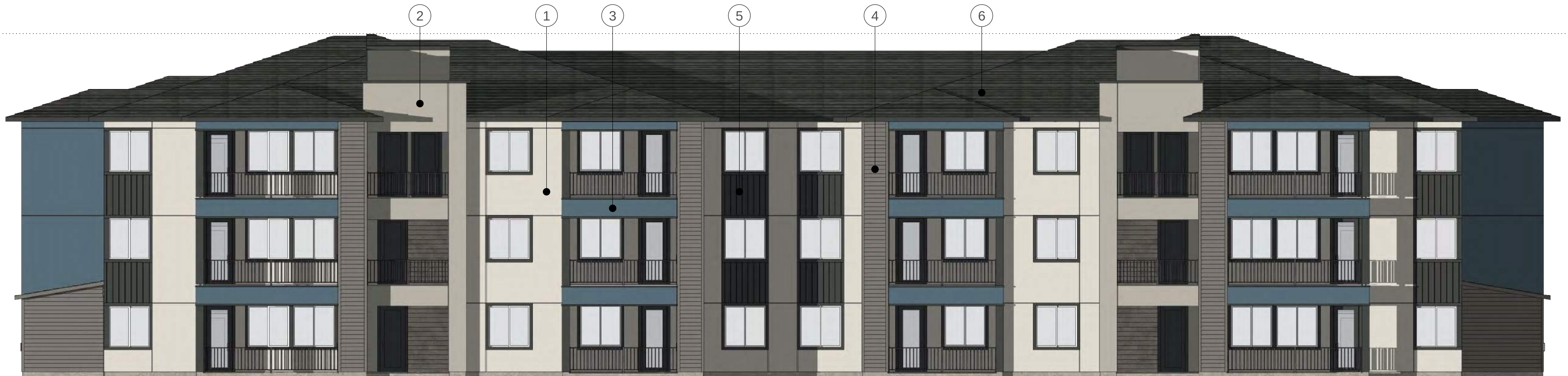


40'-11" A.F.F.
TOP OF RIDGE



REAR ELEVATION

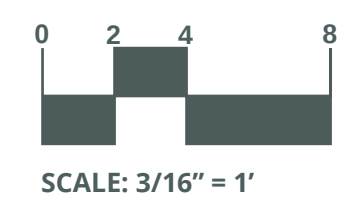
40'-11" A.F.F.
TOP OF RIDGE



FRONT ELEVATION

- 1 SW 7029 AGREEABLE GRAY STUCCO BODY #1
- 2 SW 7017 DORIAN GRAY ACCENT STUCCO #2
- 3 SW 0032 NEEDLEPOINT NAVY ACCENT STUCCO #5
- 4 SW 7019 GAUNTLET GRAY HORIZONTAL SIDING 6" LAP
- 5 SW 7069 IRON ORE FASCIA, TRIM, DOORS, VERTICAL SIDING 8" PLANK, + RAILINGS
- 6 WESTLAKE ROYAL ROOFING SAXONY SLATE 900 CHARCOAL BLEND FLAT TILE ROOF

SCHEMATIC ELEVATIONS | BUILDING A | FRONT + REAR



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A4.1

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM

07.11.2022 | MPR SUBMITTAL



LOMPA RANCH EAST APARTMENTS

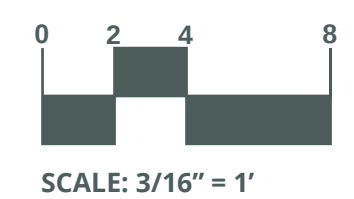
CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.



- | | | | | | |
|---|--|---|---|---|--|
| | | | | | |
| 1 SW 7029
AGREEABLE GRAY
STUCCO BODY #1 | 2 SW 7017
DORIAN GRAY
ACCENT STUCCO #2 | 3 SW 0032
NEEDLEPOINT NAVY
ACCENT STUCCO #5 | 4 SW 7019
GAUNTLET GRAY
HORIZONTAL SIDING
6" LAP | 5 SW 7069
IRON ORE
FASCIA, TRIM, DOORS, VERTICAL
SIDING 8" PLANK, + RAILINGS | 6 WESTLAKE ROYAL ROOFING
SAXONY SLATE 900
CHARCOAL BLEND
FLAT TILE ROOF |

SCHEMATIC ELEVATIONS | BUILDING A | RIGHT + LEFT



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A4.2

07.11.2022 | MPR SUBMITTAL



LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM



REAR PERSPECTIVE



FRONT PERSPECTIVE

40'-10" A.F.F.
TOP OF RIDGE



REAR ELEVATION

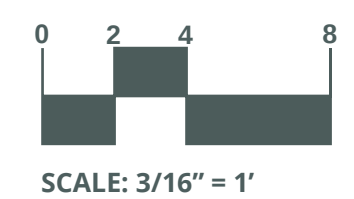
40'-10" A.F.F.
TOP OF RIDGE



FRONT ELEVATION

- | | | | | | |
|--|---|---|---|---|---|
|  |  |  |  |  |  |
| 1 SW 7029
AGREEABLE GRAY
STUCCO BODY #1 | 2 SW 7017
DORIAN GRAY
ACCENT STUCCO #2 | 3 SW 2803
ROOKWOOD TERRA COTTA
ACCENT STUCCO #4 | 4 SW 7019
GAUNTLET GRAY
HORIZONTAL SIDING
6" LAP | 5 SW 7069
IRON ORE
FASCIA, TRIM, DOORS, VERTICAL
SIDING 8" PLANK, + RAILINGS | 6 WESTLAKE ROYAL ROOFING
SAXONY SLATE 900
CHARCOAL BLEND
FLAT TILE ROOF |

SCHEMATIC ELEVATIONS | BUILDING B | FRONT + REAR



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A4.4

07.11.2022 | MPR SUBMITTAL



LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM



- 

1 SW 7029
AGREEABLE GRAY
STUCCO BODY #1
- 

2 SW 7017
DORIAN GRAY
ACCENT STUCCO #2
- 

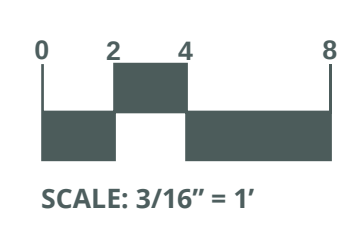
3 SW 2803
ROOKWOOD TERRA COTTA
ACCENT STUCCO #4
- 

4 SW 7019
GAUNTLET GRAY
HORIZONTAL SIDING
6" LAP
- 

5 SW 7069
IRON ORE
FASCIA, TRIM, DOORS, VERTICAL
SIDING 8" PLANK, + RAILINGS
- 

6 WESTLAKE ROYAL ROOFING
SAXONY SLATE 900
CHARCOAL BLEND
FLAT TILE ROOF

SCHEMATIC ELEVATIONS | BUILDING B | RIGHT + LEFT



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A4.5

07.11.2022 | MPR SUBMITTAL



LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM



REAR PERSPECTIVE



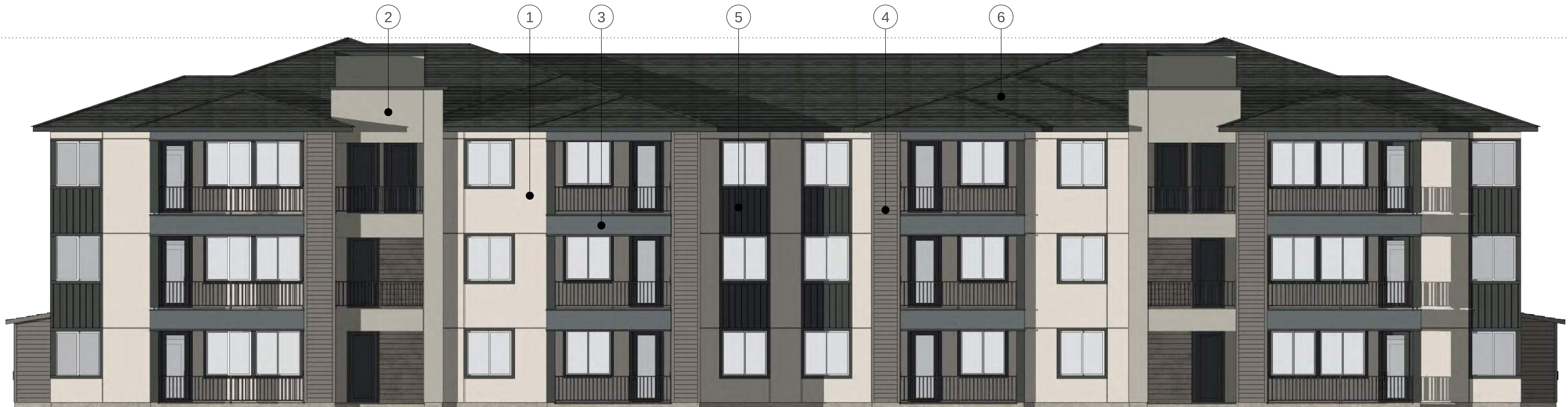
FRONT PERSPECTIVE

40'-10" A.F.F.
TOP OF RIDGE



REAR ELEVATION

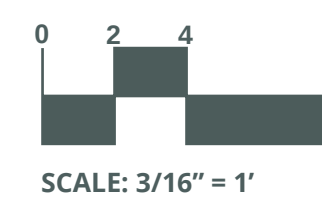
40'-10" A.F.F.
TOP OF RIDGE



FRONT ELEVATION

- | | | | | | |
|--|---|---|---|---|---|
|  |  |  |  |  |  |
| 1 SW 7029
AGREEABLE GRAY
STUCCO BODY #1 | 2 SW 7017
DORIAN GRAY
ACCENT STUCCO #2 | 3 SW 2848
ROYCROFT PEWTER
ACCENT STUCCO #3 | 4 SW 7019
GAUNTLET GRAY
HORIZONTAL SIDING
6" LAP | 5 SW 7069
IRON ORE
FASCIA, TRIM, DOORS, VERTICAL
SIDING 8" PLANK, + RAILINGS | 6 WESTLAKE ROYAL ROOFING
SAXONY SLATE 900
CHARCOAL BLEND
FLAT TILE ROOF |

SCHEMATIC ELEVATIONS | BUILDING C | FRONT + REAR



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A4.7

07.11.2022 | MPR SUBMITTAL

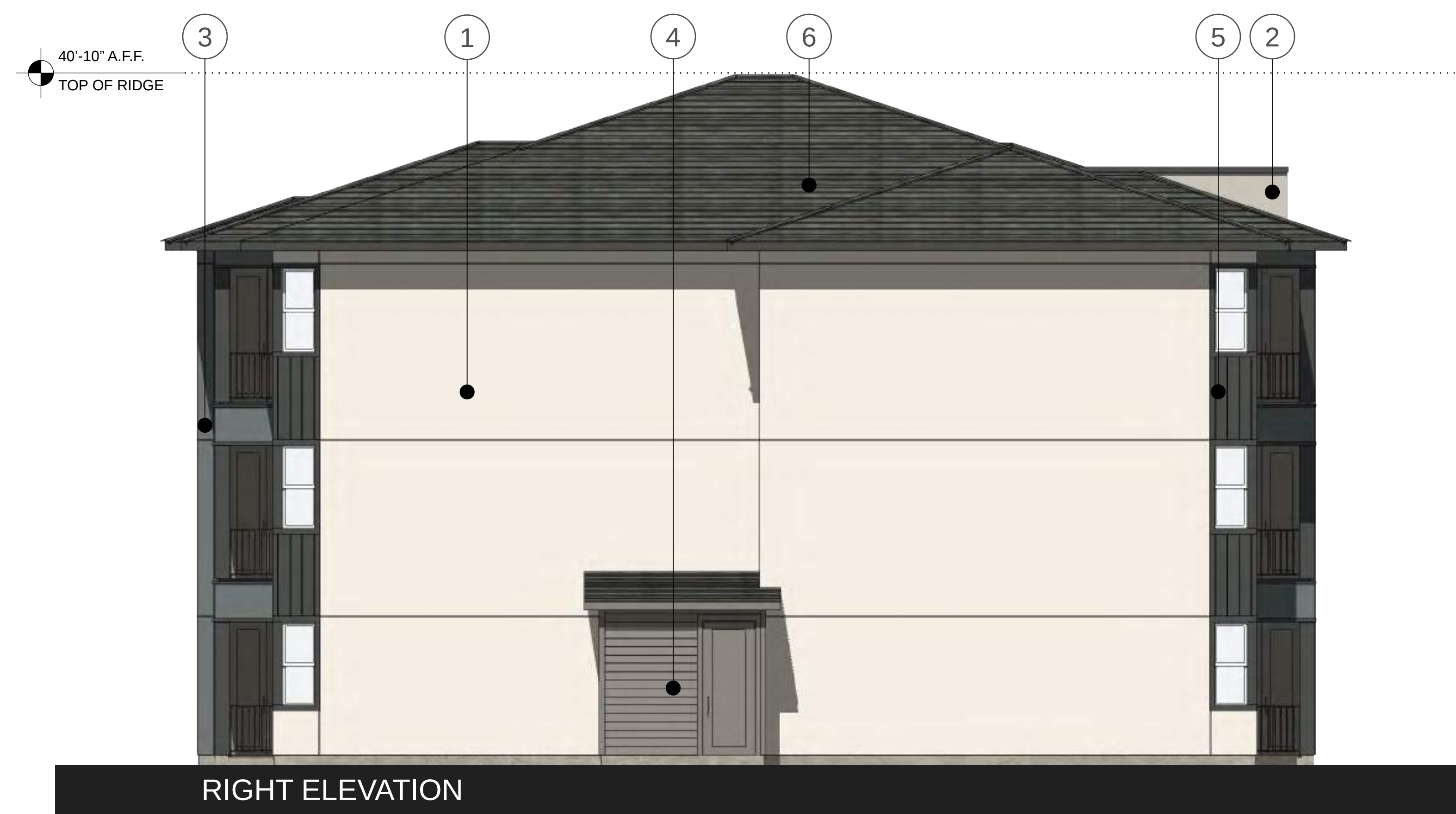


LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

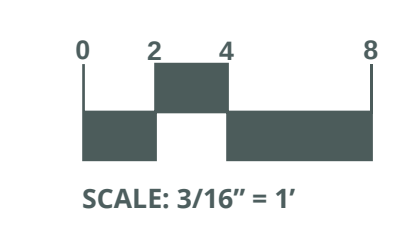
© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM



- | | | | | | |
|---|--|--|---|---|--|
| | | | | | |
| 1 SW 7029
AGREEABLE GRAY
STUCCO BODY #1 | 2 SW 7017
DORIAN GRAY
ACCENT STUCCO #2 | 3 SW 2848
ROYCROFT PEWTER
ACCENT STUCCO #3 | 4 SW 7019
GAUNTLET GRAY
HORIZONTAL SIDING
6" LAP | 5 SW 7069
IRON ORE
FASCIA, TRIM, DOORS, VERTICAL
SIDING 8" PLANK, + RAILINGS | 6 WESTLAKE ROYAL ROOFING
SAXONY SLATE 900
CHARCOAL BLEND
FLAT TILE ROOF |

SCHEMATIC ELEVATIONS | BUILDING C | RIGHT + LEFT



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A4.8

07.11.2022 | MPR SUBMITTAL



LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM

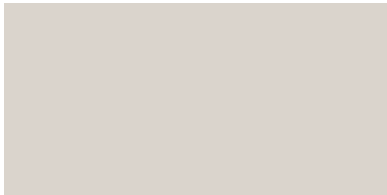
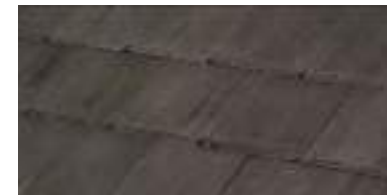


REAR PERSPECTIVE



FRONT PERSPECTIVE



- | | | | | |
|--|---|---|---|---|
|  |  |  |  |  |
| 1 SW 7029
ACREEABLE GRAY
STUCCO BODY #1 | 2 SW 2848
ROYCROFT PEWTER
ACCENT STUCCO #3 | 3 SW 7019
GAUNTLET GRAY
HORIZONTAL SIDING
6" LAP | 4 SW 7069
IRON ORE
FASCIA, TRIM, DOORS, VERTICAL
SIDING 8" PLANK, + RAILINGS | 5 WESTLAKE ROYAL ROOFING
SAXONY SLATE 900
CHARCOAL BLEND
FLAT TILE ROOF |

SCHEMATIC ELEVATIONS | BUILDING D | FRONT + REAR



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A4.10

07.11.2022 | MPR SUBMITTAL

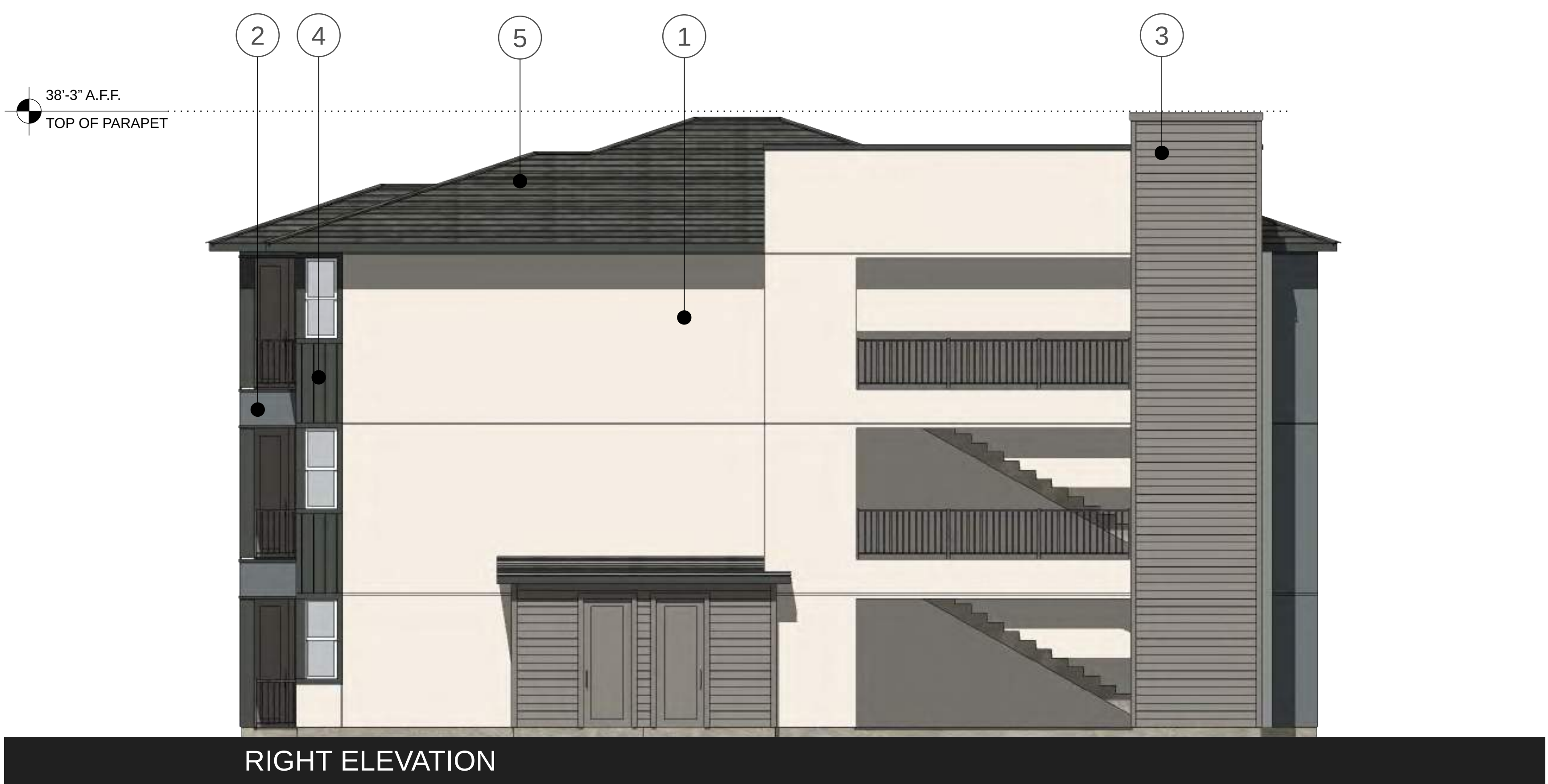


LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM



- | | | | | |
|---|--|---|---|--|
| | | | | |
| 1 SW 7029
AGREEABLE GRAY
STUCCO BODY #1 | 2 SW 2848
ROYCROFT PEWTER
ACCENT STUCCO #3 | 3 SW 7019
GAUNTLET GRAY
HORIZONTAL SIDING
6" LAP | 4 SW 7069
IRON ORE
FASCIA, TRIM, DOORS, VERTICAL
SIDING 8" PLANK, + RAILINGS | 5 WESTLAKE ROYAL ROOFING
SAXONY SLATE 900
CHARCOAL BLEND
FLAT TILE ROOF |

07.11.2022 | MPR SUBMITTAL

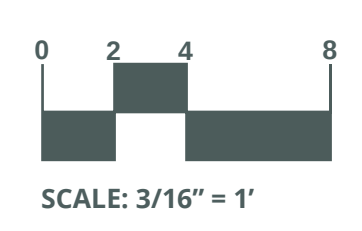


LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

SCHEMATIC ELEVATIONS | BUILDING D | RIGHT + LEFT



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A4.11

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM



REAR PERSPECTIVE



FRONT PERSPECTIVE

SCHEMATIC PERPSECTIVES | BUILDING D



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A4.12

07.11.2022 | MPR SUBMITTAL

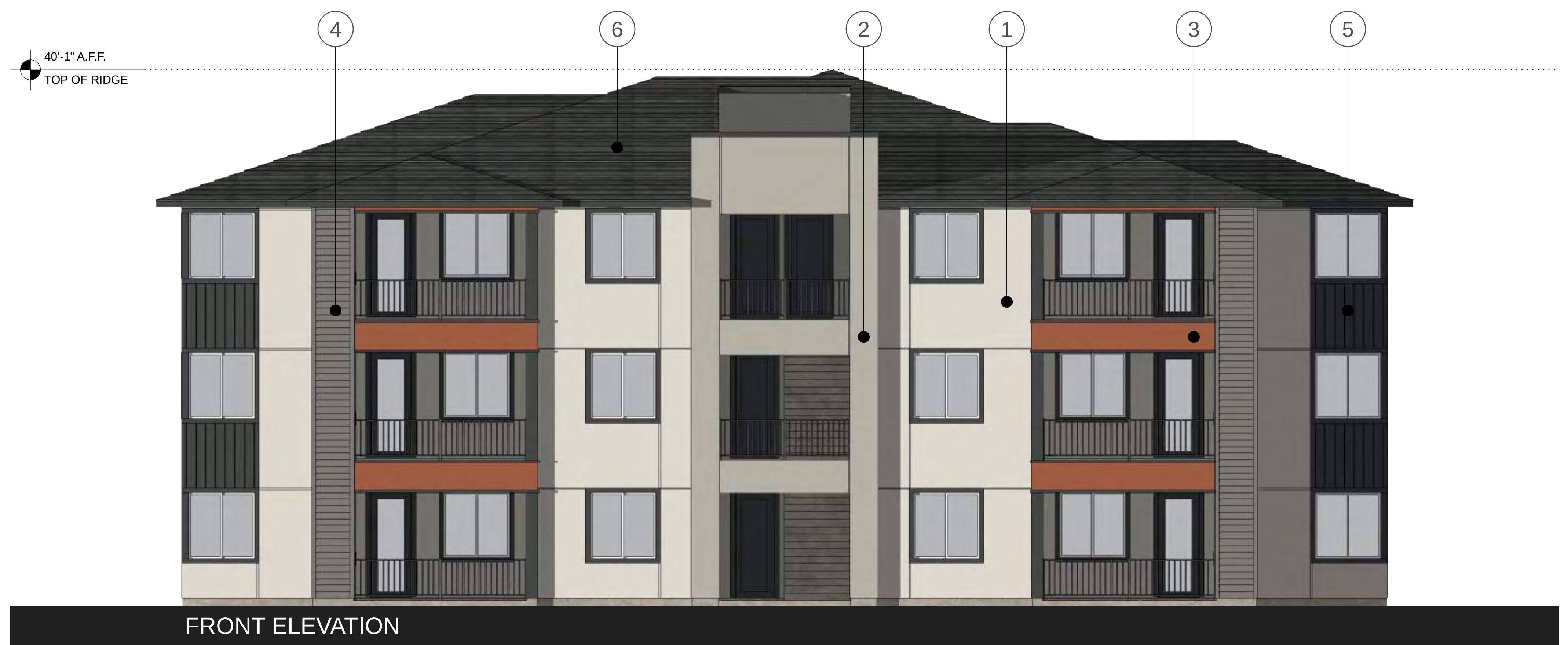


LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM



- 

1 SW 7029
AGGREEABLE GRAY
STUCCO BODY #1
- 

2 SW 7017
DORIAN GRAY
ACCENT STUCCO #2
- 

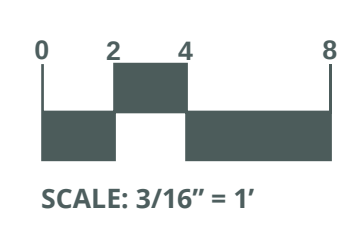
3 SW 2803
ROOKWOOD TERRA COTTA
ACCENT STUCCO #4
- 

4 SW 7019
GAUNTLET GRAY
HORIZONTAL SIDING
6" LAP
- 

5 SW 7069
IRON ORE
FASCIA, TRIM, DOORS, VERTICAL
SIDING 8" PLANK, + RAILINGS
- 

6 WESTLAKE ROYAL ROOFING
SAXONY SLATE 900
CHARCOAL BLEND
FLAT TILE ROOF

SCHEMATIC ELEVATIONS | BUILDING E | FRONT + REAR



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A4.13

07.11.2022 | MPR SUBMITTAL



LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM



- 

1 SW 7029
AGREEABLE GRAY
STUCCO BODY #1
- 

2 SW 7017
DORIAN GRAY
ACCENT STUCCO #2
- 

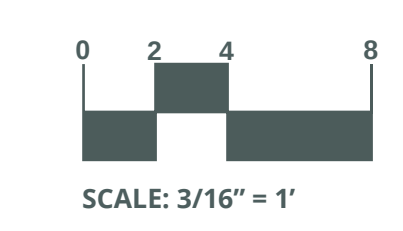
3 SW 2803
ROOKWOOD TERRA COTTA
ACCENT STUCCO #4
- 

4 SW 7019
GAUNTLET GRAY
HORIZONTAL SIDING
6" LAP
- 

5 SW 7069
IRON ORE
FASCIA, TRIM, DOORS, VERTICAL
SIDING 8" PLANK, + RAILINGS
- 

6 WESTLAKE ROYAL ROOFING
SAXONY SLATE 900
CHARCOAL BLEND
FLAT TILE ROOF

SCHEMATIC ELEVATIONS | BUILDING E | RIGHT + LEFT



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A4.14

07.11.2022 | MPR SUBMITTAL



LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM

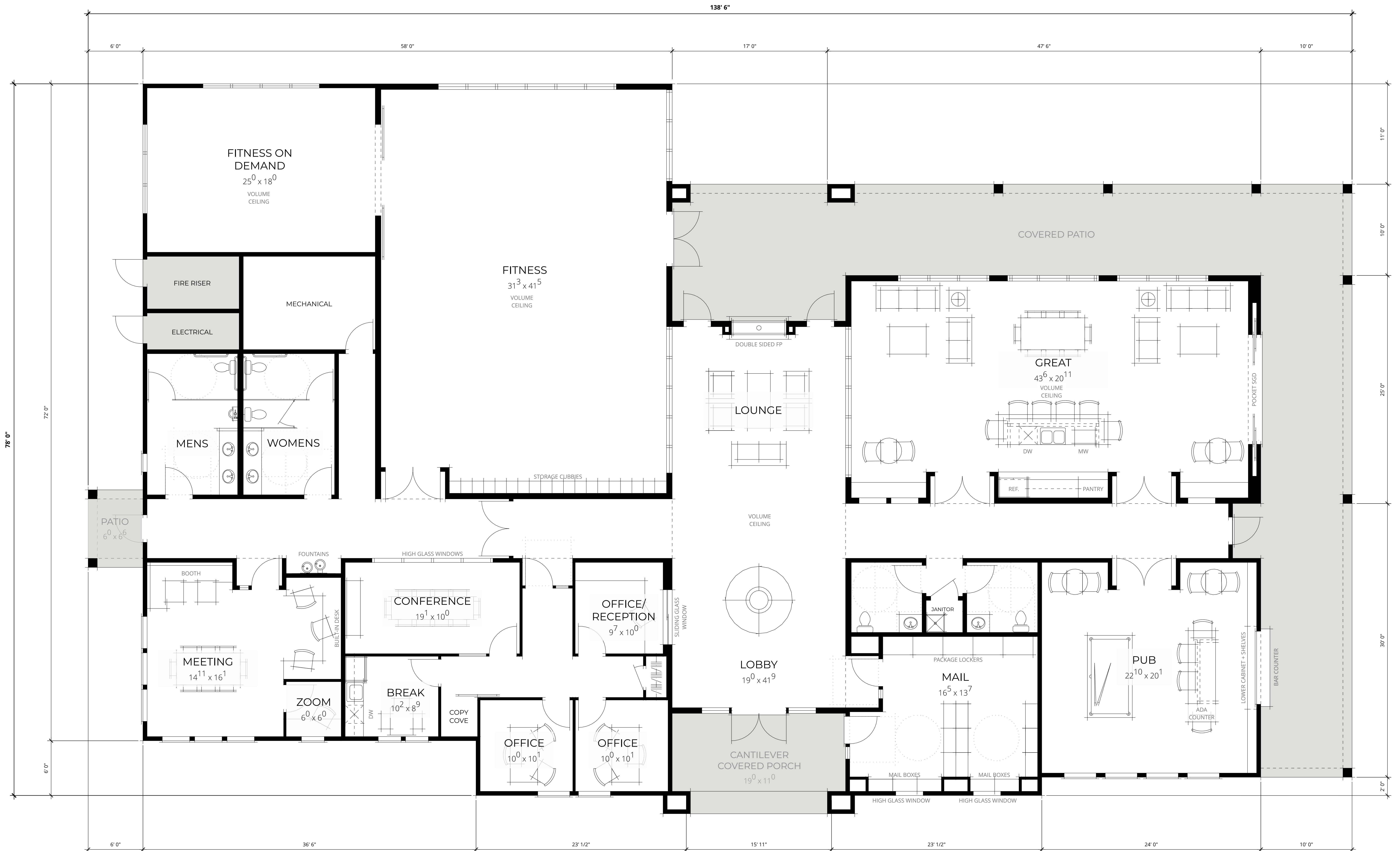


REAR PERSPECTIVE



FRONT PERSPECTIVE

\\naumes\jdaarch\02 PROJECTS\TANNER\22034-22035 LOMPA RANCH APARTMENTS AND CLUBHOUSE\SECTION WORKING FILES\02 LAYOUT\01 SD\22034_A5 CLUBHOUSE_204.rvt



07.11.2022 | MPR SUBMITTAL



LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

CLUBHOUSE | FLOOR PLAN | 7,540 SF

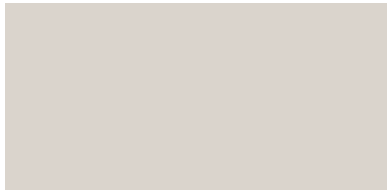


JD+A JOB NUMBER: 22035
DATE: 07.11.2022

A5.1

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA, 95748 | 916.783.3700 | WWW.JDAARCH.COM



- 

1 SW 7029
AGREEABLE GRAY
STUCCO BODY #1
- 

2 SW 7019
GAUNTLET GRAY
HORIZONTAL SIDING
6" LAP
- 

3 SW 7069
IRON ORE
FASCIA + TRIM
- 

4 CULTURED STONE
HEWN STONE | TULUS
STONE VENEER
- 

5 BRIDGERSTEEL
BURNISHED SLATE
STANDING SEAM METAL ROOF
- 

6 WESTLAKE ROYAL ROOFING
SAXONY SLATE 900
CHARCOAL BLEND
FLAT TILE ROOF

07.11.2022 | MPR SUBMITTAL

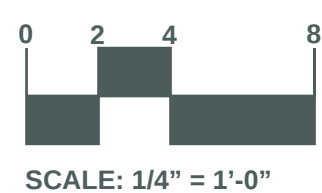


LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

CLUBHOUSE | ELEVATIONS | FRONT + REAR



JD+A JOB NUMBER: 22035
DATE: 07.11.2022

A5.2

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA, 95740 | 916.783.3700 | WWW.JDAARCH.COM



- | | | | | | |
|---|---|--|--|---|--|
| | | | | | |
| 1 SW 7029
AGREEABLE GRAY
STUCCO BODY #1 | 2 SW 7019
GAUNTLET GRAY
HORIZONTAL SIDING
6" LAP | 3 SW 7069
IRON ORE
FASCIA + TRIM | 4 CULTURED STONE
HEWN STONE TULUS
STONE VENEER | 5 BRIDGERSTEEL
BURNISHED SLATE
STANDING SEAM METAL ROOF | 6 WESTLAKE ROYAL ROOFING
SAXONY SLATE 900
CHARCOAL BLEND
FLAT TILE ROOF |

07.11.2022 | MPR SUBMITTAL

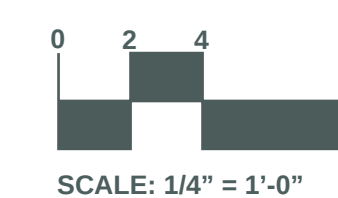


LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

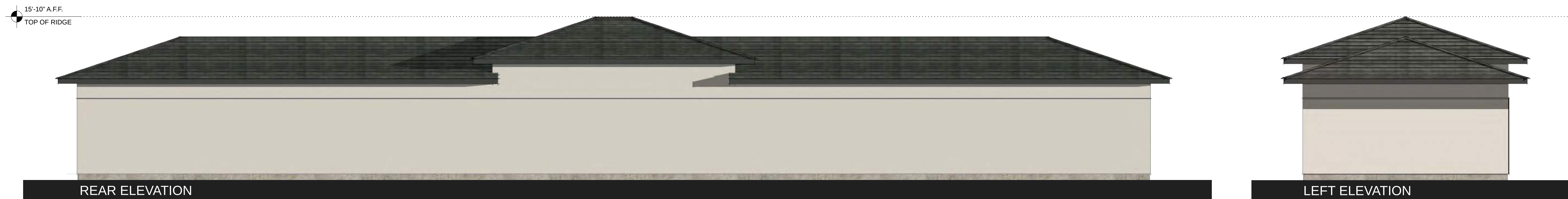
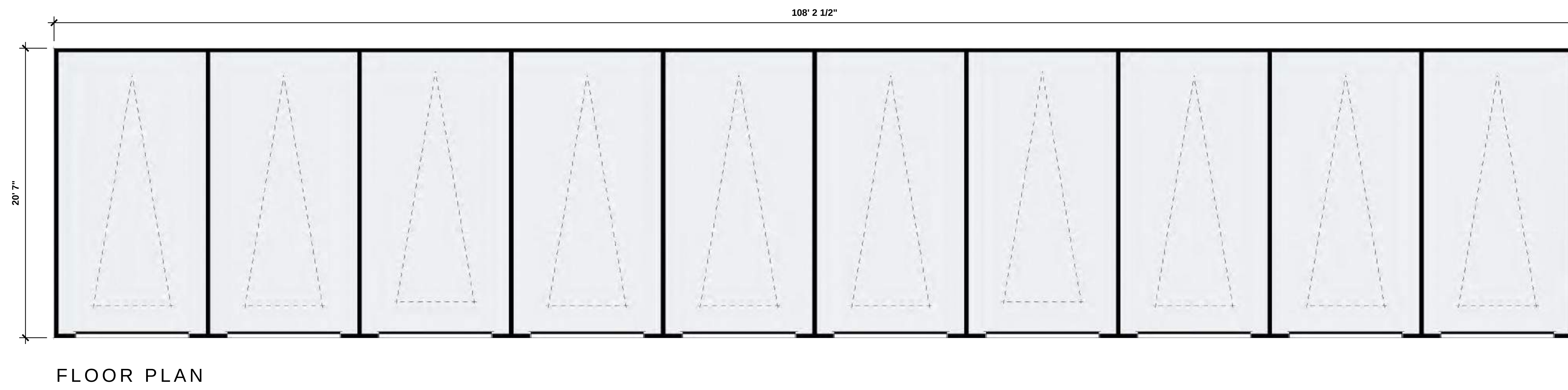
CLUBHOUSE | ELEVATIONS | RIGHT + LEFT



JD+A JOB NUMBER: 22035
DATE: 07.11.2022

A5.3

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA, 95748 | 916.783.3700 | WWW.JDAARCH.COM



- 1 SW 7029
AGREEABLE GRAY
STUCCO BODY #1
- 2 SW 7069
IRON ORE
FASCIA, TRIM, DOOR, +
GARAGE
- 3 WESTLAKE ROYAL ROOFING
SAXONY SLATE 900
CHARCOAL BLEND
FLAT TILE ROOF

07.11.2022 | MPR SUBMITTAL

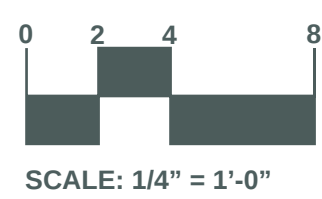


LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

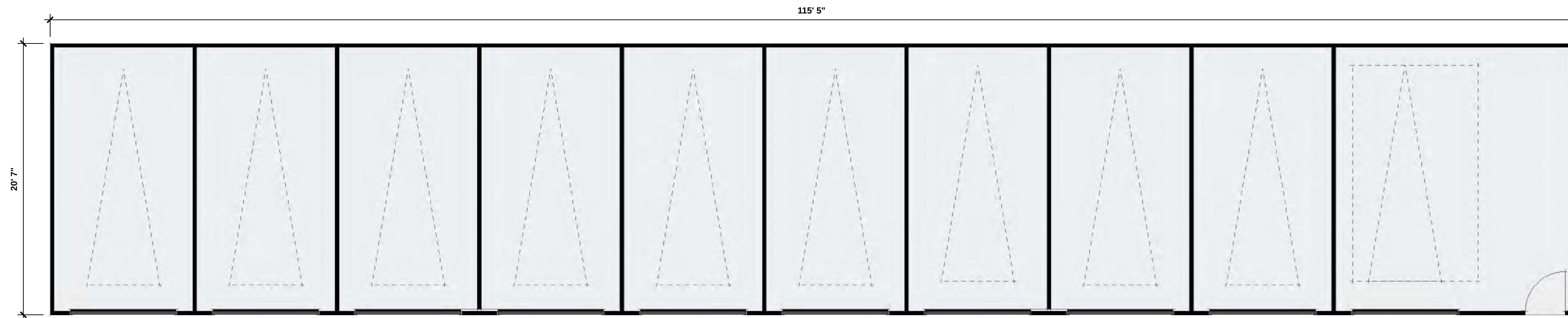
SCHEMATIC BUILDING PLANS + ELEVATIONS | 10-BAY GARAGE



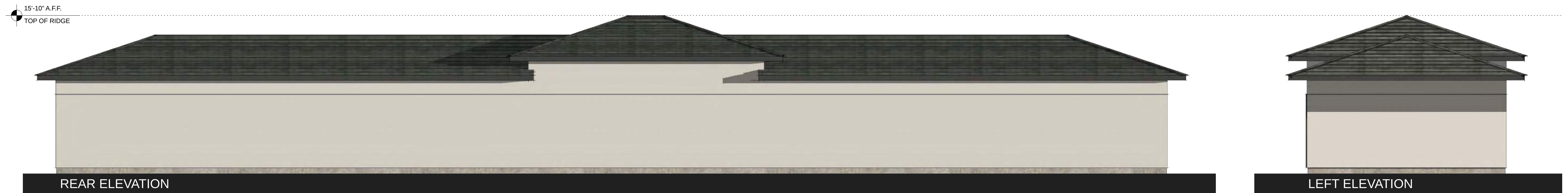
JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A6.1

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA, 95740 | 916.783.3700 | WWW.JDAARCH.COM



FLOOR PLAN



- 1 SW 7029 AGREEABLE GRAY STUCCO BODY #1
- 2 SW 7069 IRON ORE FASCIA, TRIM, DOOR, + GARAGE
- 3 WESTLAKE ROYAL ROOFING SAXONY SLATE 900 CHARCOAL BLEND FLAT TILE ROOF

07.11.2022 | MPR SUBMITTAL

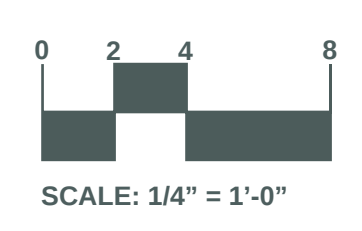


LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

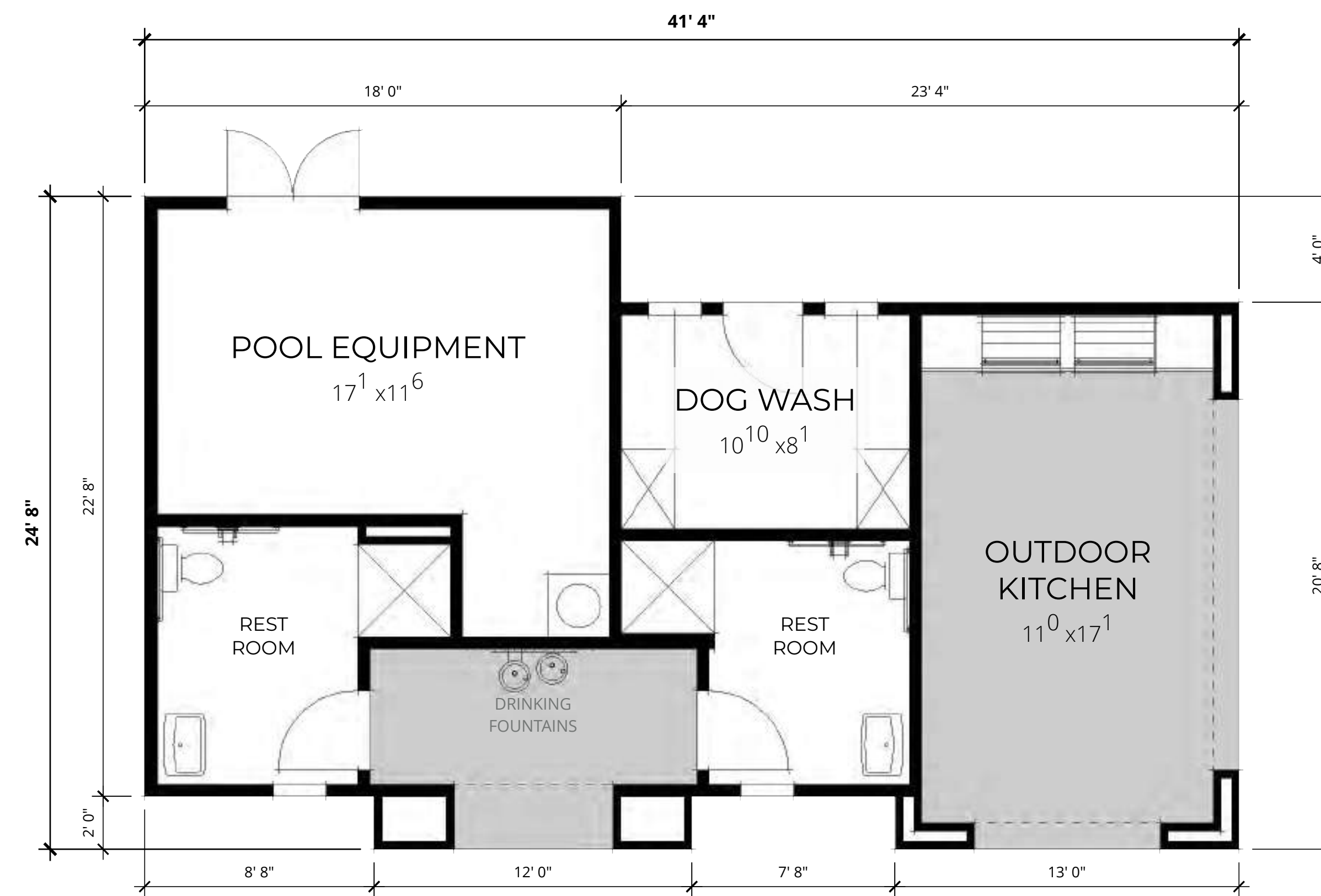
SCHEMATIC BUILDING PLANS + ELEVATIONS | 10-BAY ADA GARAGE



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A6.2

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA, 95740 | 916.783.3700 | WWW.JDAARCH.COM



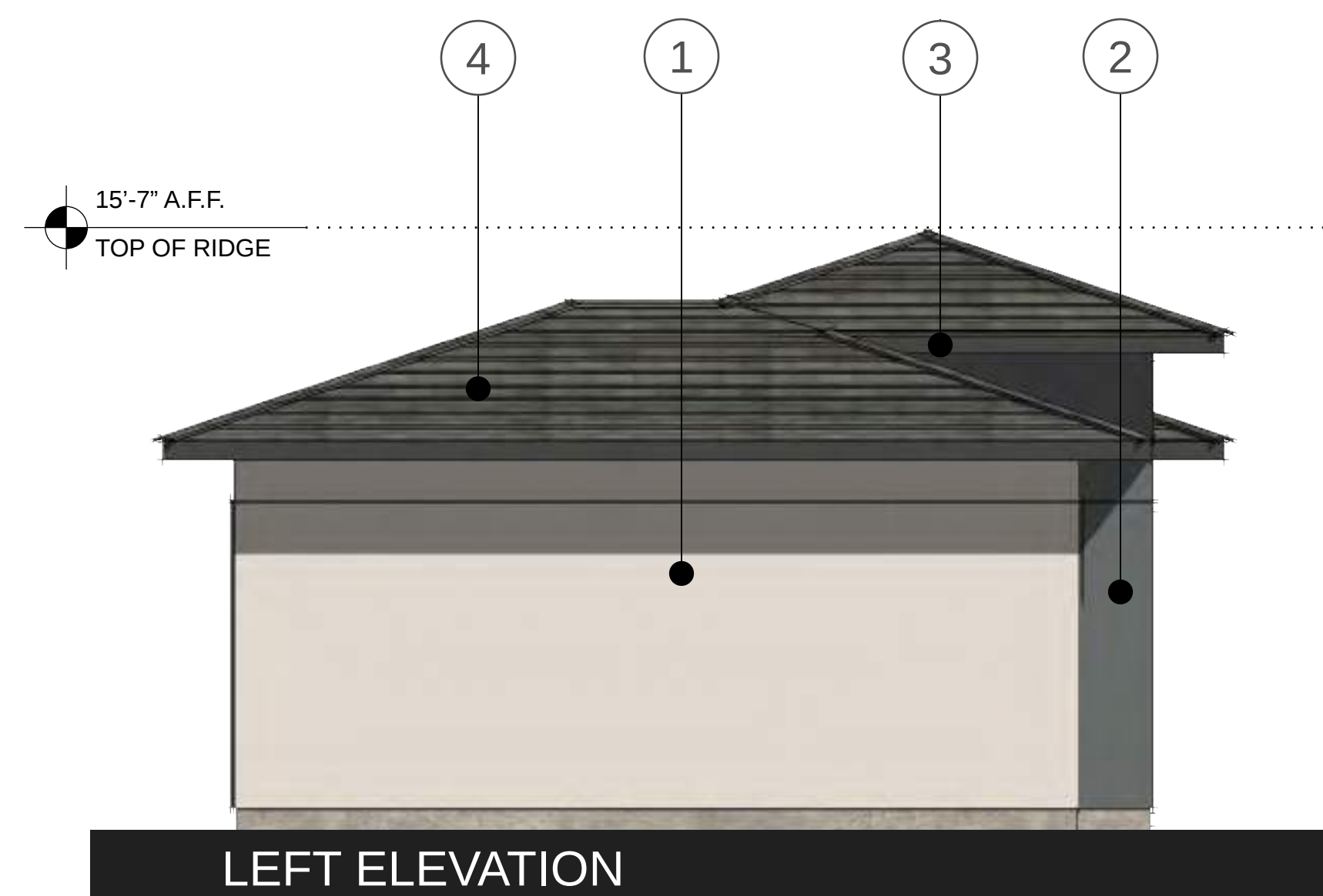
FLOOR PLAN



RIGHT ELEVATION



FRONT ELEVATION



LEFT ELEVATION



REAR ELEVATION

- 1 SW 7029 AGREEABLE GRAY STUCCO BODY #1
- 2 SW 2848 ROYCROFT PEWTER ACCENT STUCCO #3
- 3 SW 7069 IRON ORE FASCIA, TRIM, DOORS, + VERTICAL SIDING 8" PLANK
- 4 WESTLAKE ROYAL ROOFING SAXONY SLATE 300 CHARCOAL BLEND FLAT TILE ROOF

SCHEMATIC FLOOR PLANS + ELEVATIONS | POOL HOUSE

SCALE: 1/4" = 1'-0"



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A7.1

07.11.2022 | MPR SUBMITTAL

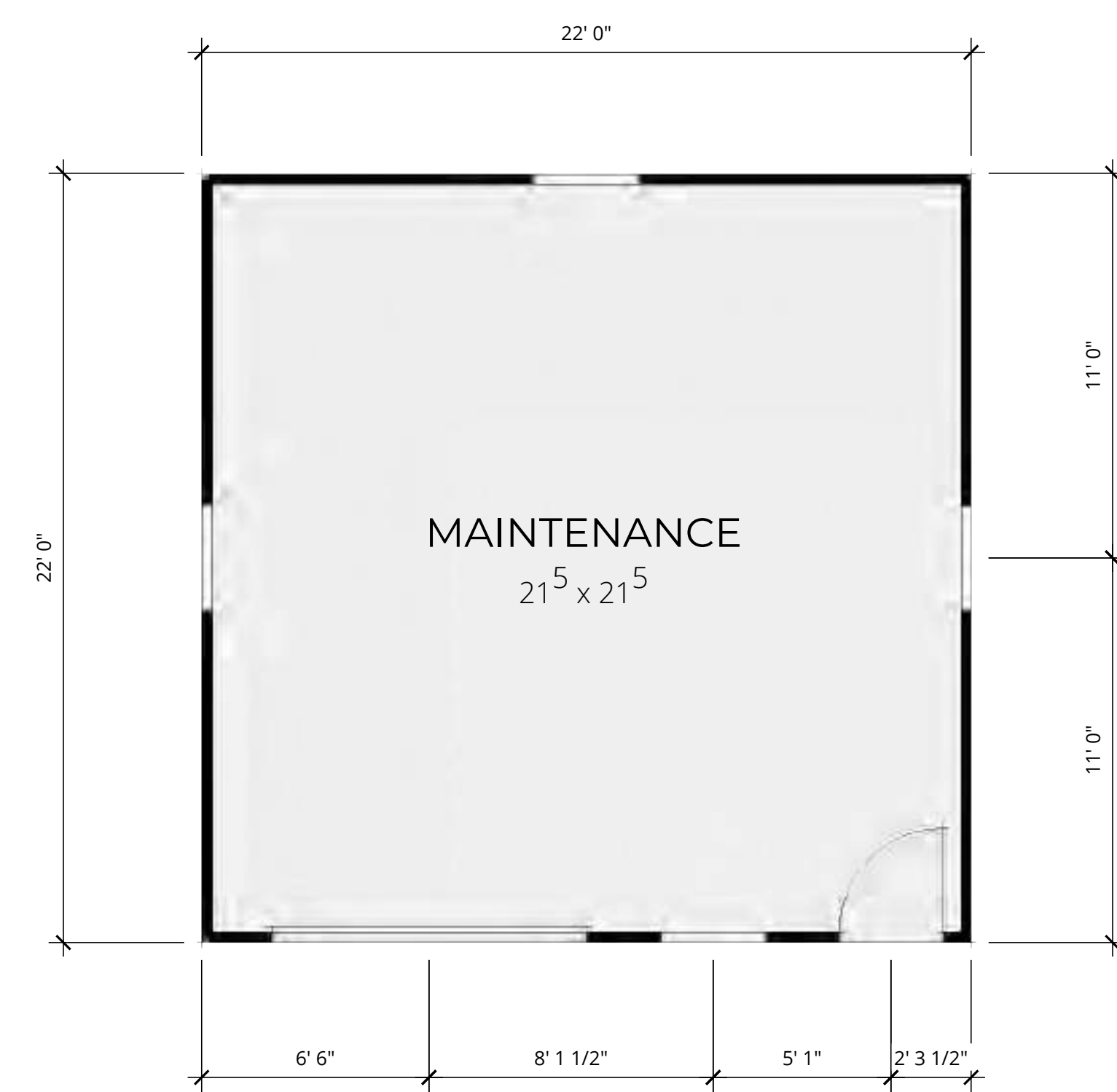


LOMPA RANCH EAST APARTMENTS

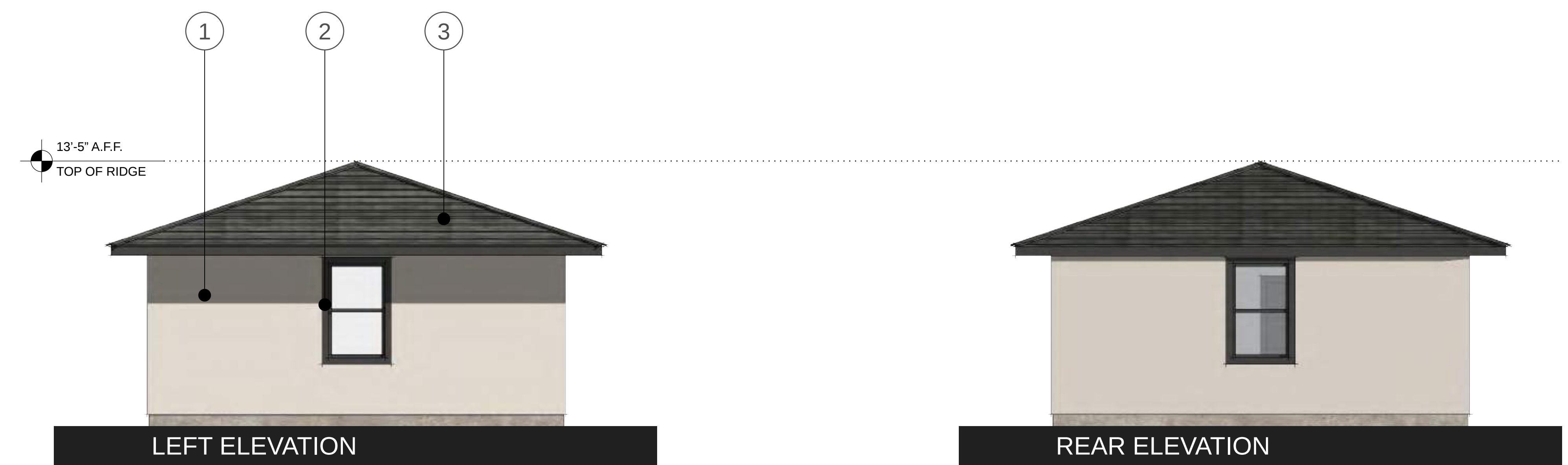
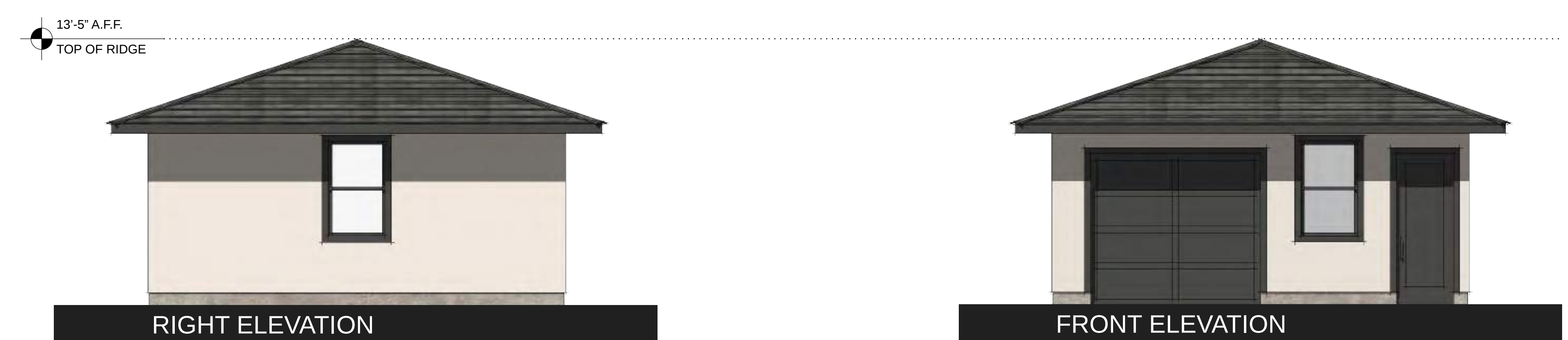
CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA, 95748 | 916.783.3700 | WWW.JDAARCH.COM

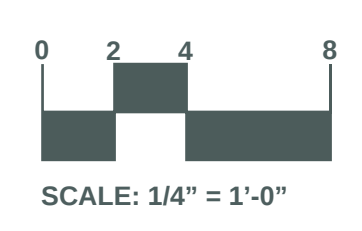


FLOOR PLAN



- 1 SW 7029 AGREEABLE GRAY STUCCO BODY #1
- 2 SW 7069 IRON ORE FASCIA, TRIM, DOOR, + GARAGE
- 3 WESTLAKE ROYAL ROOFING SAXONY SLATE 900 CHARCOAL BLEND FLAT TILE ROOF

SCHEMATIC FLOOR PLANS + ELEVATIONS | MAINTENANCE



07.11.2022 | MPR SUBMITTAL



LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A8.1

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA, 95748 | 916.783.3700 | WWW.JDAARCH.COM



LOMPA RANCH EAST APARTMENTS

CARSON CITY, NEVADA

© 2004 - 2021 JEFFREY DEMURE + ASSOCIATES ARCHITECTS PLANNERS, INC.

COLORS + MATERIALS



JD+A JOB NUMBER: 22034
DATE: 07.11.2022

A9.1

5905 GRANITE LAKE DRIVE | SUITE 140 | GRANITE BAY | CALIFORNIA 95746 | 916.783.3700 | WWW.JDAARCH.COM