APPENDIX A

Air Quality and Greenhouse Gas Outputs

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Fresno State Student Union Project
Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	80.00	1000sqft	3.50	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	499.66	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Revised default CO2 intensity to match PG&E's 2016 Power Content Label of 33%

Land Use - Assumed "Junior College" land use since "University" does not include square foot size metric. Proposed building = 80,000 gross square feet

Construction Phase - Adjusted construction schedule to match information provided by Fresno State

Trips and VMT - Default construction vehicle trips

Demolition - Debris tonnage based on CalEEMod factor of 0.046 tons/sf for buildings and CalRecycle factor of 2,400 lbs asphalt or concrete debris/yd3

Grading - Default grading area and soils balanced on site

Vehicle Trips - No net increase in traffic trips

Energy Use - Default energy intensity assumed

Water And Wastewater - Indoor water adjusted to match information provided by Fresno State. Outdoor water use left as default.

Solid Waste - Solid waste defaults assumed

Construction Off-road Equipment Mitigation - Comply with SJVAPCD Rule 8021 : watering project site twice daily

Energy Mitigation - Project would exceed Title 24 energy efficiency by at least 20% and would install high efficiency exterior lighting

Stationary Sources - Emergency Generators and Fire Pumps - Emergency Generator: 400 kV (430 hp), testing up to 1 hours per day and 50 hours per year

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	5.00	6.00
tblConstructionPhase	NumDays	8.00	9.00
tblConstructionPhase	NumDays	230.00	253.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDays	18.00	20.00
tblLandUse	LotAcreage	1.84	3.50
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	430.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	1.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	0.00
tblWater	IndoorWaterUseRate	3,923,922.60	2,000,000.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2719	2.5280	2.0287	3.7600e-003	0.1310	0.1332	0.2643	0.0564	0.1248	0.1812	0.0000	329.2889	329.2889	0.0739	0.0000	331.1374
2021	0.6441	0.7981	0.7744	1.4100e-003	0.0149	0.0410	0.0558	4.0200e-003	0.0385	0.0425	0.0000	123.3536	123.3536	0.0269	0.0000	124.0258
Maximum	**0.6441**	**2.5280**	**2.0287**	**3.7600e-003**	**0.1310**	**0.1332**	**0.2643**	**0.0564**	**0.1248**	**0.1812**	**0.0000**	**329.2889**	**329.2889**	**0.0739**	**0.0000**	**331.1374**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.2719	2.5280	2.0287	3.7600e-003	0.0787	0.1332	0.2119	0.0307	0.1248	0.1556	0.0000	329.2886	329.2886	0.0739	0.0000	331.1371
2021	0.6441	0.7981	0.7744	1.4100e-003	0.0149	0.0410	0.0558	4.0200e-003	0.0385	0.0425	0.0000	123.3535	123.3535	0.0269	0.0000	124.0257
Maximum	**0.6441**	**2.5280**	**2.0287**	**3.7600e-003**	**0.0787**	**0.1332**	**0.2119**	**0.0307**	**0.1248**	**0.1556**	**0.0000**	**329.2886**	**329.2886**	**0.0739**	**0.0000**	**331.1371**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**35.91**	**0.00**	**16.37**	**42.52**	**0.00**	**11.48**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	3-2-2020	6-1-2020	1.0148	1.0148
2	6-2-2020	9-1-2020	0.7622	0.7622
3	9-2-2020	12-1-2020	0.7544	0.7544
4	12-2-2020	3-1-2021	0.7002	0.7002
5	3-2-2021	6-1-2021	0.9267	0.9267
6	6-2-2021	9-1-2021	0.0615	0.0615
		Highest	1.0148	1.0148

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3681	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4300e-003	1.4300e-003	0.0000	0.0000	1.5200e-003
Energy	9.5300e-003	0.0866	0.0728	5.2000e-004		6.5800e-003	6.5800e-003		6.5800e-003	6.5800e-003	0.0000	301.3646	301.3646	0.0138	4.2200e-003	302.9664
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Stationary	0.0176	0.0493	0.0450	8.0000e-005		2.6000e-003	2.6000e-003		2.6000e-003	2.6000e-003	0.0000	8.1871	8.1871	1.1500e-003	0.0000	8.2158
Waste						0.0000	0.0000		0.0000	0.0000	21.1111	0.0000	21.1111	1.2476	0.0000	52.3018
Water						0.0000	0.0000		0.0000	0.0000	0.6345	7.3212	7.9557	0.0656	1.6300e-003	10.0804
Total	**0.3953**	**0.1360**	**0.1185**	**6.0000e-004**	**0.0000**	**9.1800e-003**	**9.1800e-003**	**0.0000**	**9.1800e-003**	**9.1800e-003**	**21.7456**	**316.8744**	**338.6200**	**1.3282**	**5.8500e-003**	**373.5659**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.3681	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4300e-003	1.4300e-003	0.0000	0.0000	1.5200e-003
Energy	7.7400e-003	0.0704	0.0591	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003	0.0000	230.6680	230.6680	0.0104	3.2500e-003	231.8981
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Stationary	0.0176	0.0493	0.0450	8.0000e-005		2.6000e-003	2.6000e-003		2.6000e-003	2.6000e-003	0.0000	8.1871	8.1871	1.1500e-003	0.0000	8.2158
Waste						0.0000	0.0000		0.0000	0.0000	21.1111	0.0000	21.1111	1.2476	0.0000	52.3018
Water						0.0000	0.0000		0.0000	0.0000	0.6345	7.3212	7.9557	0.0656	1.6300e-003	10.0804
Total	**0.3935**	**0.1197**	**0.1048**	**5.0000e-004**	**0.0000**	**7.9500e-003**	**7.9500e-003**	**0.0000**	**7.9500e-003**	**7.9500e-003**	**21.7456**	**246.1778**	**267.9234**	**1.3248**	**4.8800e-003**	**302.4975**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.45**	**11.97**	**11.54**	**16.67**	**0.00**	**13.40**	**13.40**	**0.00**	**13.40**	**13.40**	**0.00**	**22.31**	**20.88**	**0.26**	**16.58**	**19.02**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/2/2020	3/31/2020	5	22	
2	Site Preparation	Site Preparation	4/1/2020	4/8/2020	5	6	
3	Grading	Grading	4/9/2020	4/21/2020	5	9	
4	Building Construction	Building Construction	4/22/2020	4/9/2021	5	253	
5	Paving	Paving	4/10/2021	5/7/2021	5	20	
6	Architectural Coating	Architectural Coating	5/8/2021	6/4/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 120,000; Non-Residential Outdoor: 40,000; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74

Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	107.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	34.00	13.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0116	0.0000	0.0116	1.7500e-003	0.0000	1.7500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0364	0.3652	0.2393	4.3000e-004		0.0183	0.0183		0.0170	0.0170	0.0000	37.3985	37.3985	0.0106	0.0000	37.6624

Total	**0.0364**	**0.3652**	**0.2393**	**4.3000e-004**	**0.0116**	**0.0183**	**0.0298**	**1.7500e-003**	**0.0170**	**0.0187**	**0.0000**	**37.3985**	**37.3985**	**0.0106**	**0.0000**	**37.6624**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.3000e-004	0.0151	2.0200e-003	4.0000e-005	9.1000e-004	5.0000e-005	9.7000e-004	2.5000e-004	5.0000e-005	3.0000e-004	0.0000	4.0749	4.0749	3.6000e-004	0.0000	4.0838
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.1000e-004	4.5000e-004	4.5900e-003	1.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1417	1.1417	3.0000e-005	0.0000	1.1425
Total	**1.1400e-003**	**0.0155**	**6.6100e-003**	**5.0000e-005**	**2.2300e-003**	**6.0000e-005**	**2.3000e-003**	**6.0000e-004**	**6.0000e-005**	**6.6000e-004**	**0.0000**	**5.2166**	**5.2166**	**3.9000e-004**	**0.0000**	**5.2263**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.2100e-003	0.0000	5.2100e-003	7.9000e-004	0.0000	7.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0364	0.3652	0.2393	4.3000e-004		0.0183	0.0183		0.0170	0.0170	0.0000	37.3984	37.3984	0.0106	0.0000	37.6624
Total	**0.0364**	**0.3652**	**0.2393**	**4.3000e-004**	**5.2100e-003**	**0.0183**	**0.0235**	**7.9000e-004**	**0.0170**	**0.0178**	**0.0000**	**37.3984**	**37.3984**	**0.0106**	**0.0000**	**37.6624**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.3000e-004	0.0151	2.0200e-003	4.0000e-005	9.1000e-004	5.0000e-005	9.7000e-004	2.5000e-004	5.0000e-005	3.0000e-004	0.0000	4.0749	4.0749	3.6000e-004	0.0000	4.0838
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.1000e-004	4.5000e-004	4.5900e-003	1.0000e-005	1.3200e-003	1.0000e-005	1.3300e-003	3.5000e-004	1.0000e-005	3.6000e-004	0.0000	1.1417	1.1417	3.0000e-005	0.0000	1.1425
Total	**1.1400e-003**	**0.0155**	**6.6100e-003**	**5.0000e-005**	**2.2300e-003**	**6.0000e-005**	**2.3000e-003**	**6.0000e-004**	**6.0000e-005**	**6.6000e-004**	**0.0000**	**5.2166**	**5.2166**	**3.9000e-004**	**0.0000**	**5.2263**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0542	0.0000	0.0542	0.0298	0.0000	0.0298	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0122	0.1273	0.0645	1.1000e-004		6.5900e-003	6.5900e-003		6.0600e-003	6.0600e-003	0.0000	10.0292	10.0292	3.2400e-003	0.0000	10.1103
Total	**0.0122**	**0.1273**	**0.0645**	**1.1000e-004**	**0.0542**	**6.5900e-003**	**0.0608**	**0.0298**	**6.0600e-003**	**0.0359**	**0.0000**	**10.0292**	**10.0292**	**3.2400e-003**	**0.0000**	**10.1103**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Worker	2.3000e-004	1.5000e-004	1.5000e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3737	0.3737	1.0000e-005	0.0000	0.3739
Total	**2.3000e-004**	**1.5000e-004**	**1.5000e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.3000e-004**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3737**	**0.3737**	**1.0000e-005**	**0.0000**	**0.3739**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0244	0.0000	0.0244	0.0134	0.0000	0.0134	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0122	0.1273	0.0645	1.1000e-004		6.5900e-003	6.5900e-003		6.0600e-003	6.0600e-003	0.0000	10.0292	10.0292	3.2400e-003	0.0000	10.1103
Total	**0.0122**	**0.1273**	**0.0645**	**1.1000e-004**	**0.0244**	**6.5900e-003**	**0.0310**	**0.0134**	**6.0600e-003**	**0.0195**	**0.0000**	**10.0292**	**10.0292**	**3.2400e-003**	**0.0000**	**10.1103**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.5000e-004	1.5000e-003	0.0000	4.3000e-004	0.0000	4.3000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	0.3737	0.3737	1.0000e-005	0.0000	0.3739
Total	**2.3000e-004**	**1.5000e-004**	**1.5000e-003**	**0.0000**	**4.3000e-004**	**0.0000**	**4.3000e-004**	**1.1000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3737**	**0.3737**	**1.0000e-005**	**0.0000**	**0.3739**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0295	0.0000	0.0295	0.0152	0.0000	0.0152	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0109	0.1187	0.0722	1.3000e-004		5.7300e-003	5.7300e-003		5.2700e-003	5.2700e-003	0.0000	11.7264	11.7264	3.7900e-003	0.0000	11.8213
Total	**0.0109**	**0.1187**	**0.0722**	**1.3000e-004**	**0.0295**	**5.7300e-003**	**0.0352**	**0.0152**	**5.2700e-003**	**0.0204**	**0.0000**	**11.7264**	**11.7264**	**3.7900e-003**	**0.0000**	**11.8213**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	1.8000e-004	1.8800e-003	1.0000e-005	5.4000e-004	0.0000	5.4000e-004	1.4000e-004	0.0000	1.5000e-004	0.0000	0.4671	0.4671	1.0000e-005	0.0000	0.4674
Total	**2.9000e-004**	**1.8000e-004**	**1.8800e-003**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**5.4000e-004**	**1.4000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4671**	**0.4671**	**1.0000e-005**	**0.0000**	**0.4674**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0133	0.0000	0.0133	6.8200e-003	0.0000	6.8200e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0109	0.1187	0.0722	1.3000e-004		5.7300e-003	5.7300e-003		5.2700e-003	5.2700e-003	0.0000	11.7264	11.7264	3.7900e-003	0.0000	11.8212
Total	**0.0109**	**0.1187**	**0.0722**	**1.3000e-004**	**0.0133**	**5.7300e-003**	**0.0190**	**6.8200e-003**	**5.2700e-003**	**0.0121**	**0.0000**	**11.7264**	**11.7264**	**3.7900e-003**	**0.0000**	**11.8212**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	1.8000e-004	1.8800e-003	1.0000e-005	5.4000e-004	0.0000	5.4000e-004	1.4000e-004	0.0000	1.5000e-004	0.0000	0.4671	0.4671	1.0000e-005	0.0000	0.4674
Total	**2.9000e-004**	**1.8000e-004**	**1.8800e-003**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**5.4000e-004**	**1.4000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4671**	**0.4671**	**1.0000e-005**	**0.0000**	**0.4674**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1929	1.7459	1.5332	2.4500e-003		0.1017	0.1017		0.0956	0.0956	0.0000	210.7651	210.7651	0.0514	0.0000	212.0506
Total	**0.1929**	**1.7459**	**1.5332**	**2.4500e-003**		**0.1017**	**0.1017**		**0.0956**	**0.0956**	**0.0000**	**210.7651**	**210.7651**	**0.0514**	**0.0000**	**212.0506**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4200e-003	0.1466	0.0234	3.4000e-004	7.8400e-003	7.8000e-004	8.6200e-003	2.2600e-003	7.4000e-004	3.0100e-003	0.0000	31.9038	31.9038	3.9400e-003	0.0000	32.0024
Worker	0.0134	8.4700e-003	0.0860	2.4000e-004	0.0247	1.6000e-004	0.0249	6.5700e-003	1.5000e-004	6.7200e-003	0.0000	21.4086	21.4086	5.7000e-004	0.0000	21.4229
Total	**0.0178**	**0.1551**	**0.1094**	**5.8000e-004**	**0.0326**	**9.4000e-004**	**0.0335**	**8.8300e-003**	**8.9000e-004**	**9.7300e-003**	**0.0000**	**53.3124**	**53.3124**	**4.5100e-003**	**0.0000**	**53.4253**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1929	1.7459	1.5332	2.4500e-003		0.1017	0.1017		0.0956	0.0956	0.0000	210.7648	210.7648	0.0514	0.0000	212.0503
Total	**0.1929**	**1.7459**	**1.5332**	**2.4500e-003**		**0.1017**	**0.1017**		**0.0956**	**0.0956**	**0.0000**	**210.7648**	**210.7648**	**0.0514**	**0.0000**	**212.0503**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	4.4200e-003	0.1466	0.0234	3.4000e-004	7.8400e-003	7.8000e-004	8.6200e-003	2.2600e-003	7.4000e-004	3.0100e-003	0.0000	31.9038	31.9038	3.9400e-003	0.0000	32.0024
Worker	0.0134	8.4700e-003	0.0860	2.4000e-004	0.0247	1.6000e-004	0.0249	6.5700e-003	1.5000e-004	6.7200e-003	0.0000	21.4086	21.4086	5.7000e-004	0.0000	21.4229
Total	**0.0178**	**0.1551**	**0.1094**	**5.8000e-004**	**0.0326**	**9.4000e-004**	**0.0335**	**8.8300e-003**	**8.9000e-004**	**9.7300e-003**	**0.0000**	**53.3124**	**53.3124**	**4.5100e-003**	**0.0000**	**53.4253**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0675	0.6188	0.5884	9.6000e-004		0.0340	0.0340		0.0320	0.0320	0.0000	82.2312	82.2312	0.0198	0.0000	82.7272
Total	**0.0675**	**0.6188**	**0.5884**	**9.6000e-004**		**0.0340**	**0.0340**		**0.0320**	**0.0320**	**0.0000**	**82.2312**	**82.2312**	**0.0198**	**0.0000**	**82.7272**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3900e-003	0.0520	7.9100e-003	1.3000e-004	3.0600e-003	1.4000e-004	3.2000e-003	8.8000e-004	1.3000e-004	1.0200e-003	0.0000	12.3288	12.3288	1.4900e-003	0.0000	12.3660
Worker	4.8100e-003	2.9400e-003	0.0304	9.0000e-005	9.6500e-003	6.0000e-005	9.7100e-003	2.5600e-003	6.0000e-005	2.6200e-003	0.0000	8.0655	8.0655	2.0000e-004	0.0000	8.0705
Total	**6.2000e-003**	**0.0549**	**0.0384**	**2.2000e-004**	**0.0127**	**2.0000e-004**	**0.0129**	**3.4400e-003**	**1.9000e-004**	**3.6400e-003**	**0.0000**	**20.3943**	**20.3943**	**1.6900e-003**	**0.0000**	**20.4365**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0675	0.6188	0.5884	9.6000e-004		0.0340	0.0340		0.0320	0.0320	0.0000	82.2311	82.2311	0.0198	0.0000	82.7271
Total	**0.0675**	**0.6188**	**0.5884**	**9.6000e-004**		**0.0340**	**0.0340**		**0.0320**	**0.0320**	**0.0000**	**82.2311**	**82.2311**	**0.0198**	**0.0000**	**82.7271**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3900e-003	0.0520	7.9100e-003	1.3000e-004	3.0600e-003	1.4000e-004	3.2000e-003	8.8000e-004	1.3000e-004	1.0200e-003	0.0000	12.3288	12.3288	1.4900e-003	0.0000	12.3660
Worker	4.8100e-003	2.9400e-003	0.0304	9.0000e-005	9.6500e-003	6.0000e-005	9.7100e-003	2.5600e-003	6.0000e-005	2.6200e-003	0.0000	8.0655	8.0655	2.0000e-004	0.0000	8.0705
Total	**6.2000e-003**	**0.0549**	**0.0384**	**2.2000e-004**	**0.0127**	**2.0000e-004**	**0.0129**	**3.4400e-003**	**1.9000e-004**	**3.6400e-003**	**0.0000**	**20.3943**	**20.3943**	**1.6900e-003**	**0.0000**	**20.4365**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1084	0.1226	1.9000e-004		5.7900e-003	5.7900e-003		5.3400e-003	5.3400e-003	0.0000	16.3706	16.3706	5.1400e-003	0.0000	16.4992

Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1084**	**0.1226**	**1.9000e-004**		**5.7900e-003**	**5.7900e-003**		**5.3400e-003**	**5.3400e-003**	**0.0000**	**16.3706**	**16.3706**	**5.1400e-003**	**0.0000**	**16.4992**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-004	4.9000e-004	5.0400e-003	1.0000e-005	1.6000e-003	1.0000e-005	1.6100e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3365	1.3365	3.0000e-005	0.0000	1.3373
Total	**8.0000e-004**	**4.9000e-004**	**5.0400e-003**	**1.0000e-005**	**1.6000e-003**	**1.0000e-005**	**1.6100e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.3365**	**1.3365**	**3.0000e-005**	**0.0000**	**1.3373**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1084	0.1226	1.9000e-004		5.7900e-003	5.7900e-003		5.3400e-003	5.3400e-003	0.0000	16.3706	16.3706	5.1400e-003	0.0000	16.4992
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1084**	**0.1226**	**1.9000e-004**		**5.7900e-003**	**5.7900e-003**		**5.3400e-003**	**5.3400e-003**	**0.0000**	**16.3706**	**16.3706**	**5.1400e-003**	**0.0000**	**16.4992**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-004	4.9000e-004	5.0400e-003	1.0000e-005	1.6000e-003	1.0000e-005	1.6100e-003	4.2000e-004	1.0000e-005	4.3000e-004	0.0000	1.3365	1.3365	3.0000e-005	0.0000	1.3373
Total	**8.0000e-004**	**4.9000e-004**	**5.0400e-003**	**1.0000e-005**	**1.6000e-003**	**1.0000e-005**	**1.6100e-003**	**4.2000e-004**	**1.0000e-005**	**4.3000e-004**	**0.0000**	**1.3365**	**1.3365**	**3.0000e-005**	**0.0000**	**1.3373**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5562					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**0.5584**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.7000e-004	1.7700e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4678	0.4678	1.0000e-005	0.0000	0.4681
Total	**2.8000e-004**	**1.7000e-004**	**1.7700e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**5.6000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4678**	**0.4678**	**1.0000e-005**	**0.0000**	**0.4681**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5562					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**0.5584**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	1.7000e-004	1.7700e-003	1.0000e-005	5.6000e-004	0.0000	5.6000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.4678	0.4678	1.0000e-005	0.0000	0.4681
Total	**2.8000e-004**	**1.7000e-004**	**1.7700e-003**	**1.0000e-005**	**5.6000e-004**	**0.0000**	**5.6000e-004**	**1.5000e-004**	**0.0000**	**1.5000e-004**	**0.0000**	**0.4678**	**0.4678**	**1.0000e-005**	**0.0000**	**0.4681**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.492212	0.031147	0.169820	0.116157	0.015815	0.004502	0.033398	0.126328	0.002363	0.001519	0.005062	0.001083	0.000594

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	154.0803	154.0803	8.9400e-003	1.8500e-003	154.8552
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	207.0601	207.0601	0.0120	2.4900e-003	208.1015
NaturalGas Mitigated	7.7400e-003	0.0704	0.0591	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003	0.0000	76.5877	76.5877	1.4700e-003	1.4000e-003	77.0429
NaturalGas Unmitigated	9.5300e-003	0.0866	0.0728	5.2000e-004		6.5800e-003	6.5800e-003		6.5800e-003	6.5800e-003	0.0000	94.3045	94.3045	1.8100e-003	1.7300e-003	94.8649

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	1.7672e+006	9.5300e-003	0.0866	0.0728	5.2000e-004		6.5800e-003	6.5800e-003		6.5800e-003	6.5800e-003	0.0000	94.3045	94.3045	1.8100e-003	1.7300e-003	94.8649
Total		**9.5300e-003**	**0.0866**	**0.0728**	**5.2000e-004**		**6.5800e-003**	**6.5800e-003**		**6.5800e-003**	**6.5800e-003**	**0.0000**	**94.3045**	**94.3045**	**1.8100e-003**	**1.7300e-003**	**94.8649**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	1.4352e+006	7.7400e-003	0.0704	0.0591	4.2000e-004		5.3500e-003	5.3500e-003		5.3500e-003	5.3500e-003	0.0000	76.5877	76.5877	1.4700e-003	1.4000e-003	77.0429
Total		**7.7400e-003**	**0.0704**	**0.0591**	**4.2000e-004**		**5.3500e-003**	**5.3500e-003**		**5.3500e-003**	**5.3500e-003**	**0.0000**	**76.5877**	**76.5877**	**1.4700e-003**	**1.4000e-003**	**77.0429**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	913600	207.0601	0.0120	2.4900e-003	208.1015
Total		**207.0601**	**0.0120**	**2.4900e-003**	**208.1015**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	679840	154.0803	8.9400e-003	1.8500e-003	154.8552
Total		**154.0803**	**8.9400e-003**	**1.8500e-003**	**154.8552**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3681	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4300e-003	1.4300e-003	0.0000	0.0000	1.5200e-003
Unmitigated	0.3681	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4300e-003	1.4300e-003	0.0000	0.0000	1.5200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0556					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3124					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4300e-003	1.4300e-003	0.0000	0.0000	1.5200e-003
Total	**0.3681**	**1.0000e-005**	**7.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4300e-003**	**1.4300e-003**	**0.0000**	**0.0000**	**1.5200e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0556					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.3124					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	7.4000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4300e-003	1.4300e-003	0.0000	0.0000	1.5200e-003
Total	**0.3681**	**1.0000e-005**	**7.4000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4300e-003**	**1.4300e-003**	**0.0000**	**0.0000**	**1.5200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7.9557	0.0656	1.6300e-003	10.0804
Unmitigated	7.9557	0.0656	1.6300e-003	10.0804

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Junior College (2Yr)	2 / 6.13742	7.9557	0.0656	1.6300e-003	10.0804
Total		**7.9557**	**0.0656**	**1.6300e-003**	**10.0804**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	2 / 6.13742	7.9557	0.0656	1.6300e-003	10.0804
Total		**7.9557**	**0.0656**	**1.6300e-003**	**10.0804**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	21.1111	1.2476	0.0000	52.3018
Unmitigated	21.1111	1.2476	0.0000	52.3018

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	104	21.1111	1.2476	0.0000	52.3018
Total		**21.1111**	**1.2476**	**0.0000**	**52.3018**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	104	21.1111	1.2476	0.0000	52.3018
Total		**21.1111**	**1.2476**	**0.0000**	**52.3018**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	50	430	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel	0.0176	0.0493	0.0450	8.0000e-005		2.6000e-003	2.6000e-003		2.6000e-003	2.6000e-003	0.0000	8.1871	8.1871	1.1500e-003	0.0000	8.2158
Total	**0.0176**	**0.0493**	**0.0450**	**8.0000e-005**		**2.6000e-003**	**2.6000e-003**		**2.6000e-003**	**2.6000e-003**	**0.0000**	**8.1871**	**8.1871**	**1.1500e-003**	**0.0000**	**8.2158**

11.0 Vegetation

Fresno State Student Union Project
Fresno County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	80.00	1000sqft	3.50	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	499.66	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Revised default CO2 intensity to match PG&E's 2016 Power Content Label of 33%

Land Use - Assumed "Junior College" land use since "University" does not include square foot size metric. Proposed building = 80,000 gross square feet

Construction Phase - Adjusted construction schedule to match information provided by Fresno State

Trips and VMT - Default construction vehicle trips

Demolition - Debris tonnage based on CalEEMod factor of 0.046 tons/sf for buildings and CalRecycle factor of 2,400 lbs asphalt or concrete debris/yd3

Grading - Default grading area and soils balanced on site

Vehicle Trips - No net increase in traffic trips

Energy Use - Default energy intensity assumed

Water And Wastewater - Indoor water adjusted to match information provided by Fresno State. Outdoor water use left as default.

Solid Waste - Solid waste defaults assumed

Construction Off-road Equipment Mitigation - Comply with SJVAPCD Rule 8021 : watering project site twice daily

Energy Mitigation - Project would exceed Title 24 energy efficiency by at least 20% and would install high efficiency exterior lighting

Stationary Sources - Emergency Generators and Fire Pumps - Emergency Generator: 400 kV (430 hp), testing up to 1 hours per day and 50 hours per year

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	5.00	6.00
tblConstructionPhase	NumDays	8.00	9.00
tblConstructionPhase	NumDays	230.00	253.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDays	18.00	20.00
tblLandUse	LotAcreage	1.84	3.50
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	430.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	1.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	0.00
tblWater	IndoorWaterUseRate	3,923,922.60	2,000,000.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.1649	42.4632	22.4099	0.0440	18.2141	2.1983	20.4125	9.9699	2.0225	11.9924	0.0000	4,285.2373	4,285.2373	1.1959	0.0000	4,312.6213
2021	55.8706	18.9557	17.7746	0.0334	0.3674	0.9642	1.3316	0.0994	0.9065	1.0060	0.0000	3,215.9448	3,215.9448	0.6666	0.0000	3,232.6089
Maximum	**55.8706**	**42.4632**	**22.4099**	**0.0440**	**18.2141**	**2.1983**	**20.4125**	**9.9699**	**2.0225**	**11.9924**	**0.0000**	**4,285.2373**	**4,285.2373**	**1.1959**	**0.0000**	**4,312.6213**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.1649	42.4632	22.4099	0.0440	8.2777	2.1983	10.4760	4.5080	2.0225	6.5305	0.0000	4,285.2373	4,285.2373	1.1959	0.0000	4,312.6213
2021	55.8706	18.9557	17.7746	0.0334	0.3674	0.9642	1.3316	0.0994	0.9065	1.0060	0.0000	3,215.9448	3,215.9448	0.6666	0.0000	3,232.6089
Maximum	**55.8706**	**42.4632**	**22.4099**	**0.0440**	**8.2777**	**2.1983**	**10.4760**	**4.5080**	**2.0225**	**6.5305**	**0.0000**	**4,285.2373**	**4,285.2373**	**1.1959**	**0.0000**	**4,312.6213**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**53.47**	**0.00**	**45.70**	**54.24**	**0.00**	**42.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0175	7.0000e-005	8.1800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0175	0.0175	5.0000e-005		0.0187
Energy	0.0522	0.4747	0.3987	2.8500e-003		0.0361	0.0361		0.0361	0.0361		569.6052	569.6052	0.0109	0.0104	572.9900
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Stationary	0.7057	1.9723	1.7993	3.3900e-003		0.1038	0.1038		0.1038	0.1038		360.9911	360.9911	0.0506		362.2564
Total	**2.7754**	**2.4470**	**2.2062**	**6.2400e-003**	**0.0000**	**0.1399**	**0.1399**	**0.0000**	**0.1399**	**0.1399**		**930.6137**	**930.6137**	**0.0616**	**0.0104**	**935.2651**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0175	7.0000e-005	8.1800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0175	0.0175	5.0000e-005		0.0187
Energy	0.0424	0.3855	0.3238	2.3100e-003		0.0293	0.0293		0.0293	0.0293		462.5947	462.5947	8.8700e-003	8.4800e-003	465.3437
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Stationary	0.7057	1.9723	1.7993	3.3900e-003		0.1038	0.1038		0.1038	0.1038		360.9911	360.9911	0.0506		362.2564
Total	**2.7656**	**2.3579**	**2.1313**	**5.7000e-003**	**0.0000**	**0.1331**	**0.1331**	**0.0000**	**0.1331**	**0.1331**		**823.6033**	**823.6033**	**0.0595**	**8.4800e-003**	**827.6187**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.35**	**3.64**	**3.40**	**8.65**	**0.00**	**4.84**	**4.84**	**0.00**	**4.84**	**4.84**	**0.00**	**11.50**	**11.50**	**3.33**	**18.77**	**11.51**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/2/2020	3/31/2020	5	22	
2	Site Preparation	Site Preparation	4/1/2020	4/8/2020	5	6	
3	Grading	Grading	4/9/2020	4/21/2020	5	9	
4	Building Construction	Building Construction	4/22/2020	4/9/2021	5	253	
5	Paving	Paving	4/10/2021	5/7/2021	5	20	
6	Architectural Coating	Architectural Coating	5/8/2021	6/4/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 120,000; Non-Residential Outdoor: 40,000; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	107.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	34.00	13.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0524	0.0000	1.0524	0.1594	0.0000	0.1594			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**1.0524**	**1.6587**	**2.7111**	**0.1594**	**1.5419**	**1.7012**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0383	1.3369	0.1743	3.9300e-003	0.0852	4.6700e-003	0.0898	0.0234	4.4700e-003	0.0278		412.0584	412.0584	0.0340		412.9088
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0737	0.0383	0.4824	1.2600e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		125.4740	125.4740	3.4000e-003		125.5589
Total	**0.1120**	**1.3751**	**0.6567**	**5.1900e-003**	**0.2084**	**5.4400e-003**	**0.2138**	**0.0560**	**5.1800e-003**	**0.0612**		**537.5324**	**537.5324**	**0.0374**		**538.4677**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4736	0.0000	0.4736	0.0717	0.0000	0.0717			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.4736**	**1.6587**	**2.1323**	**0.0717**	**1.5419**	**1.6136**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	lb/day										lb/day					
Hauling	0.0383	1.3369	0.1743	3.9300e-003	0.0852	4.6700e-003	0.0898	0.0234	4.4700e-003	0.0278		412.0584	412.0584	0.0340		412.9088
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0737	0.0383	0.4824	1.2600e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		125.4740	125.4740	3.4000e-003		125.5589
Total	**0.1120**	**1.3751**	**0.6567**	**5.1900e-003**	**0.2084**	**5.4400e-003**	**0.2138**	**0.0560**	**5.1800e-003**	**0.0612**		**537.5324**	**537.5324**	**0.0374**		**538.4677**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0884	0.0459	0.5789	1.5100e-003	0.1479	9.3000e-004	0.1488	0.0392	8.5000e-004	0.0401		150.5688	150.5688	4.0800e-003		150.6707

Total	**0.0884**	**0.0459**	**0.5789**	**1.5100e-003**	**0.1479**	**9.3000e-004**	**0.1488**	**0.0392**	**8.5000e-004**	**0.0401**		**150.5688**	**150.5688**	**4.0800e-003**		**150.6707**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**8.1298**	**2.1974**	**10.3272**	**4.4688**	**2.0216**	**6.4904**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0884	0.0459	0.5789	1.5100e-003	0.1479	9.3000e-004	0.1488	0.0392	8.5000e-004	0.0401		150.5688	150.5688	4.0800e-003		150.6707
Total	**0.0884**	**0.0459**	**0.5789**	**1.5100e-003**	**0.1479**	**9.3000e-004**	**0.1488**	**0.0392**	**8.5000e-004**	**0.0401**		**150.5688**	**150.5688**	**4.0800e-003**		**150.6707**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.5523**	**1.2734**	**7.8258**	**3.3675**	**1.1716**	**4.5390**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0737	0.0383	0.4824	1.2600e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		125.4740	125.4740	3.4000e-003		125.5589
Total	**0.0737**	**0.0383**	**0.4824**	**1.2600e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**125.4740**	**125.4740**	**3.4000e-003**		**125.5589**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106

Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**2.9486**	**1.2734**	**4.2220**	**1.5154**	**1.1716**	**2.6869**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0737	0.0383	0.4824	1.2600e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		125.4740	125.4740	3.4000e-003		125.5589
Total	**0.0737**	**0.0383**	**0.4824**	**1.2600e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**125.4740**	**125.4740**	**3.4000e-003**		**125.5589**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0478	1.5888	0.2381	3.7400e-003	0.0881	8.4700e-003	0.0966	0.0254	8.1000e-003	0.0335		391.6048	391.6048	0.0452		392.7355
Worker	0.1670	0.0867	1.0934	2.8600e-003	0.2793	1.7500e-003	0.2811	0.0741	1.6100e-003	0.0757		284.4077	284.4077	7.7000e-003		284.6002
Total	**0.2148**	**1.6756**	**1.3315**	**6.6000e-003**	**0.3674**	**0.0102**	**0.3776**	**0.0994**	**9.7100e-003**	**0.1092**		**676.0125**	**676.0125**	**0.0529**		**677.3357**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0478	1.5888	0.2381	3.7400e-003	0.0881	8.4700e-003	0.0966	0.0254	8.1000e-003	0.0335		391.6048	391.6048	0.0452		392.7355

Worker	0.1670	0.0867	1.0934	2.8600e-003	0.2793	1.7500e-003	0.2811	0.0741	1.6100e-003	0.0757		284.4077	284.4077	7.7000e-003		284.6002
Total	**0.2148**	**1.6756**	**1.3315**	**6.6000e-003**	**0.3674**	**0.0102**	**0.3776**	**0.0994**	**9.7100e-003**	**0.1092**		**676.0125**	**676.0125**	**0.0529**		**677.3357**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0386	1.4464	0.2053	3.7000e-003	0.0881	3.8600e-003	0.0920	0.0254	3.7000e-003	0.0291		387.9251	387.9251	0.0437		389.0176
Worker	0.1542	0.0772	0.9940	2.7600e-003	0.2793	1.6900e-003	0.2810	0.0741	1.5600e-003	0.0756		274.6557	274.6557	6.8500e-003		274.8271
Total	**0.1927**	**1.5236**	**1.1994**	**6.4600e-003**	**0.3674**	**5.5500e-003**	**0.3729**	**0.0994**	**5.2600e-003**	**0.1047**		**662.5809**	**662.5809**	**0.0506**		**663.8446**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0386	1.4464	0.2053	3.7000e-003	0.0881	3.8600e-003	0.0920	0.0254	3.7000e-003	0.0291		387.9251	387.9251	0.0437		389.0176
Worker	0.1542	0.0772	0.9940	2.7600e-003	0.2793	1.6900e-003	0.2810	0.0741	1.5600e-003	0.0756		274.6557	274.6557	6.8500e-003		274.8271
Total	**0.1927**	**1.5236**	**1.1994**	**6.4600e-003**	**0.3674**	**5.5500e-003**	**0.3729**	**0.0994**	**5.2600e-003**	**0.1047**		**662.5809**	**662.5809**	**0.0506**		**663.8446**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342		1,804.5523	1,804.5523	0.5670		1,818.7270

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0940**	**10.8399**	**12.2603**	**0.0189**		**0.5788**	**0.5788**		**0.5342**	**0.5342**		**1,804.5523**	**1,804.5523**	**0.5670**		**1,818.7270**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0907	0.0454	0.5847	1.6200e-003	0.1643	1.0000e-003	0.1653	0.0436	9.2000e-004	0.0445		161.5622	161.5622	4.0300e-003		161.6630
Total	**0.0907**	**0.0454**	**0.5847**	**1.6200e-003**	**0.1643**	**1.0000e-003**	**0.1653**	**0.0436**	**9.2000e-004**	**0.0445**		**161.5622**	**161.5622**	**4.0300e-003**		**161.6630**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342	0.0000	1,804.5523	1,804.5523	0.5670		1,818.7270
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0940**	**10.8399**	**12.2603**	**0.0189**		**0.5788**	**0.5788**		**0.5342**	**0.5342**	**0.0000**	**1,804.5523**	**1,804.5523**	**0.5670**		**1,818.7270**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0907	0.0454	0.5847	1.6200e-003	0.1643	1.0000e-003	0.1653	0.0436	9.2000e-004	0.0445		161.5622	161.5622	4.0300e-003		161.6630
Total	**0.0907**	**0.0454**	**0.5847**	**1.6200e-003**	**0.1643**	**1.0000e-003**	**0.1653**	**0.0436**	**9.2000e-004**	**0.0445**		**161.5622**	**161.5622**	**4.0300e-003**		**161.6630**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	55.6200					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**55.8389**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0317	0.0159	0.2047	5.7000e-004	0.0575	3.5000e-004	0.0579	0.0153	3.2000e-004	0.0156		56.5468	56.5468	1.4100e-003		56.5820
Total	**0.0317**	**0.0159**	**0.2047**	**5.7000e-004**	**0.0575**	**3.5000e-004**	**0.0579**	**0.0153**	**3.2000e-004**	**0.0156**		**56.5468**	**56.5468**	**1.4100e-003**		**56.5820**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	55.6200					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**55.8389**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0317	0.0159	0.2047	5.7000e-004	0.0575	3.5000e-004	0.0579	0.0153	3.2000e-004	0.0156		56.5468	56.5468	1.4100e-003		56.5820
Total	**0.0317**	**0.0159**	**0.2047**	**5.7000e-004**	**0.0575**	**3.5000e-004**	**0.0579**	**0.0153**	**3.2000e-004**	**0.0156**		**56.5468**	**56.5468**	**1.4100e-003**		**56.5820**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.492212	0.031147	0.169820	0.116157	0.015815	0.004502	0.033398	0.126328	0.002363	0.001519	0.005062	0.001083	0.000594

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0424	0.3855	0.3238	2.3100e-003		0.0293	0.0293		0.0293	0.0293		462.5947	462.5947	8.8700e-003	8.4800e-003	465.3437
NaturalGas Unmitigated	0.0522	0.4747	0.3987	2.8500e-003		0.0361	0.0361		0.0361	0.0361		569.6052	569.6052	0.0109	0.0104	572.9900

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4841.64	0.0522	0.4747	0.3987	2.8500e-003		0.0361	0.0361		0.0361	0.0361		569.6052	569.6052	0.0109	0.0104	572.9900
Total		**0.0522**	**0.4747**	**0.3987**	**2.8500e-003**		**0.0361**	**0.0361**		**0.0361**	**0.0361**		**569.6052**	**569.6052**	**0.0109**	**0.0104**	**572.9900**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	3.93205	0.0424	0.3855	0.3238	2.3100e-003		0.0293	0.0293		0.0293	0.0293		462.5947	462.5947	8.8700e-003	8.4800e-003	465.3437
Total		**0.0424**	**0.3855**	**0.3238**	**2.3100e-003**		**0.0293**	**0.0293**		**0.0293**	**0.0293**		**462.5947**	**462.5947**	**8.8700e-003**	**8.4800e-003**	**465.3437**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0175	7.0000e-005	8.1800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0175	0.0175	5.0000e-005		0.0187
Unmitigated	2.0175	7.0000e-005	8.1800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0175	0.0175	5.0000e-005		0.0187

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3048					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	1.7120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.6000e-004	7.0000e-005	8.1800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0175	0.0175	5.0000e-005		0.0187
Total	**2.0175**	**7.0000e-005**	**8.1800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0175**	**0.0175**	**5.0000e-005**		**0.0187**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3048					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.6000e-004	7.0000e-005	8.1800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0175	0.0175	5.0000e-005		0.0187
Total	**2.0175**	**7.0000e-005**	**8.1800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0175**	**0.0175**	**5.0000e-005**		**0.0187**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	50	430	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel	0.7057	1.9723	1.7993	3.3900e-003		0.1038	0.1038		0.1038	0.1038		360.9911	360.9911	0.0506		362.2564
Total	**0.7057**	**1.9723**	**1.7993**	**3.3900e-003**		**0.1038**	**0.1038**		**0.1038**	**0.1038**		**360.9911**	**360.9911**	**0.0506**		**362.2564**

11.0 Vegetation

Fresno State Student Union Project - Fresno County, Winter

Fresno State Student Union Project

Fresno County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	80.00	1000sqft	3.50	80,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	499.66	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Revised default CO2 intensity to match PG&E's 2016 Power Content Label of 33%

Land Use - Assumed "Junior College" land use since "University" does not include square foot size metric. Proposed building = 80,000 gross square feet

Construction Phase - Adjusted construction schedule to match information provided by Fresno State

Trips and VMT - Default construction vehicle trips

Demolition - Debris tonnage based on CalEEMod factor of 0.046 tons/sf for buildings and CalRecycle factor of 2,400 lbs asphalt or concrete debris/yd3

Grading - Default grading area and soils balanced on site

Vehicle Trips - No net increase in traffic trips

Energy Use - Default energy intensity assumed

Water And Wastewater - Indoor water adjusted to match information provided by Fresno State. Outdoor water use left as default.

Solid Waste - Solid waste defaults assumed

Construction Off-road Equipment Mitigation - Comply with SJVAPCD Rule 8021 : watering project site twice daily

Energy Mitigation - Project would exceed Title 24 energy efficiency by at least 20% and would install high efficiency exterior lighting

Stationary Sources - Emergency Generators and Fire Pumps - Emergency Generator: 400 kV (430 hp), testing up to 1 hours per day and 50 hours per year

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	22.00
tblConstructionPhase	NumDays	5.00	6.00
tblConstructionPhase	NumDays	8.00	9.00
tblConstructionPhase	NumDays	230.00	253.00
tblConstructionPhase	NumDays	18.00	20.00
tblConstructionPhase	NumDays	18.00	20.00
tblLandUse	LotAcreage	1.84	3.50
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	430.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	1.00
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	0.00
tblWater	IndoorWaterUseRate	3,923,922.60	2,000,000.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.1585	42.4713	22.3614	0.0438	18.2141	2.1983	20.4125	9.9699	2.0225	11.9924	0.0000	4,260.8893	4,260.8893	1.1954	0.0000	4,288.3726
2021	55.8684	18.9814	17.6651	0.0329	0.3674	0.9643	1.3317	0.0994	0.9067	1.0061	0.0000	3,169.8572	3,169.8572	0.6717	0.0000	3,186.6484
Maximum	**55.8684**	**42.4713**	**22.3614**	**0.0438**	**18.2141**	**2.1983**	**20.4125**	**9.9699**	**2.0225**	**11.9924**	**0.0000**	**4,260.8893**	**4,260.8893**	**1.1954**	**0.0000**	**4,288.3726**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.1585	42.4713	22.3614	0.0438	8.2777	2.1983	10.4760	4.5080	2.0225	6.5305	0.0000	4,260.8893	4,260.8893	1.1954	0.0000	4,288.3726
2021	55.8684	18.9814	17.6651	0.0329	0.3674	0.9643	1.3317	0.0994	0.9067	1.0061	0.0000	3,169.8572	3,169.8572	0.6717	0.0000	3,186.6484
Maximum	**55.8684**	**42.4713**	**22.3614**	**0.0438**	**8.2777**	**2.1983**	**10.4760**	**4.5080**	**2.0225**	**6.5305**	**0.0000**	**4,260.8893**	**4,260.8893**	**1.1954**	**0.0000**	**4,288.3726**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**53.47**	**0.00**	**45.70**	**54.24**	**0.00**	**42.02**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0175	7.0000e-005	8.1800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0175	0.0175	5.0000e-005		0.0187
Energy	0.0522	0.4747	0.3987	2.8500e-003		0.0361	0.0361		0.0361	0.0361		569.6052	569.6052	0.0109	0.0104	572.9900
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Stationary	0.7057	1.9723	1.7993	3.3900e-003		0.1038	0.1038		0.1038	0.1038		360.9911	360.9911	0.0506		362.2564
Total	**2.7754**	**2.4470**	**2.2062**	**6.2400e-003**	**0.0000**	**0.1399**	**0.1399**	**0.0000**	**0.1399**	**0.1399**		**930.6137**	**930.6137**	**0.0616**	**0.0104**	**935.2651**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.0175	7.0000e-005	8.1800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0175	0.0175	5.0000e-005		0.0187
Energy	0.0424	0.3855	0.3238	2.3100e-003		0.0293	0.0293		0.0293	0.0293		462.5947	462.5947	8.8700e-003	8.4800e-003	465.3437
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Stationary	0.7057	1.9723	1.7993	3.3900e-003		0.1038	0.1038		0.1038	0.1038		360.9911	360.9911	0.0506		362.2564
Total	**2.7656**	**2.3579**	**2.1313**	**5.7000e-003**	**0.0000**	**0.1331**	**0.1331**	**0.0000**	**0.1331**	**0.1331**		**823.6033**	**823.6033**	**0.0595**	**8.4800e-003**	**827.6187**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.35**	**3.64**	**3.40**	**8.65**	**0.00**	**4.84**	**4.84**	**0.00**	**4.84**	**4.84**	**0.00**	**11.50**	**11.50**	**3.33**	**18.77**	**11.51**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	3/2/2020	3/31/2020	5	22	
2	Site Preparation	Site Preparation	4/1/2020	4/8/2020	5	6	
3	Grading	Grading	4/9/2020	4/21/2020	5	9	
4	Building Construction	Building Construction	4/22/2020	4/9/2021	5	253	
5	Paving	Paving	4/10/2021	5/7/2021	5	20	
6	Architectural Coating	Architectural Coating	5/8/2021	6/4/2021	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4.5

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 120,000; Non-Residential Outdoor: 40,000; Striped Parking

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37

Building Construction	Welders	1	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	107.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	34.00	13.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	7.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0524	0.0000	1.0524	0.1594	0.0000	0.1594			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419		3,747.7049	3,747.7049	1.0580		3,774.1536

Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**1.0524**	**1.6587**	**2.7111**	**0.1594**	**1.5419**	**1.7012**		**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0396	1.3739	0.1974	3.8400e-003	0.0852	4.7600e-003	0.0899	0.0234	4.5600e-003	0.0279		403.2186	403.2186	0.0384		404.1784
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0450	0.4108	1.1000e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		109.9658	109.9658	2.9900e-003		110.0406
Total	**0.1079**	**1.4189**	**0.6082**	**4.9400e-003**	**0.2084**	**5.5300e-003**	**0.2139**	**0.0560**	**5.2700e-003**	**0.0613**		**513.1844**	**513.1844**	**0.0414**		**514.2190**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4736	0.0000	0.4736	0.0717	0.0000	0.0717			0.0000			0.0000
Off-Road	3.3121	33.2010	21.7532	0.0388		1.6587	1.6587		1.5419	1.5419	0.0000	3,747.7049	3,747.7049	1.0580		3,774.1536
Total	**3.3121**	**33.2010**	**21.7532**	**0.0388**	**0.4736**	**1.6587**	**2.1323**	**0.0717**	**1.5419**	**1.6136**	**0.0000**	**3,747.7049**	**3,747.7049**	**1.0580**		**3,774.1536**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0396	1.3739	0.1974	3.8400e-003	0.0852	4.7600e-003	0.0899	0.0234	4.5600e-003	0.0279		403.2186	403.2186	0.0384		404.1784
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0450	0.4108	1.1000e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		109.9658	109.9658	2.9900e-003		110.0406
Total	**0.1079**	**1.4189**	**0.6082**	**4.9400e-003**	**0.2084**	**5.5300e-003**	**0.2139**	**0.0560**	**5.2700e-003**	**0.0613**		**513.1844**	**513.1844**	**0.0414**		**514.2190**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216		3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**18.0663**	**2.1974**	**20.2637**	**9.9307**	**2.0216**	**11.9523**		**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Worker	0.0820	0.0540	0.4930	1.3300e-003	0.1479	9.3000e-004	0.1488	0.0392	8.5000e-004	0.0401		131.9590	131.9590	3.5900e-003		132.0487
Total	**0.0820**	**0.0540**	**0.4930**	**1.3300e-003**	**0.1479**	**9.3000e-004**	**0.1488**	**0.0392**	**8.5000e-004**	**0.0401**		**131.9590**	**131.9590**	**3.5900e-003**		**132.0487**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.0765	42.4173	21.5136	0.0380		2.1974	2.1974		2.0216	2.0216	0.0000	3,685.1016	3,685.1016	1.1918		3,714.8975
Total	**4.0765**	**42.4173**	**21.5136**	**0.0380**	**8.1298**	**2.1974**	**10.3272**	**4.4688**	**2.0216**	**6.4904**	**0.0000**	**3,685.1016**	**3,685.1016**	**1.1918**		**3,714.8975**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0820	0.0540	0.4930	1.3300e-003	0.1479	9.3000e-004	0.1488	0.0392	8.5000e-004	0.0401		131.9590	131.9590	3.5900e-003		132.0487
Total	**0.0820**	**0.0540**	**0.4930**	**1.3300e-003**	**0.1479**	**9.3000e-004**	**0.1488**	**0.0392**	**8.5000e-004**	**0.0401**		**131.9590**	**131.9590**	**3.5900e-003**		**132.0487**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716		2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**6.5523**	**1.2734**	**7.8258**	**3.3675**	**1.1716**	**4.5390**		**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0450	0.4108	1.1000e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		109.9658	109.9658	2.9900e-003		110.0406
Total	**0.0683**	**0.0450**	**0.4108**	**1.1000e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**109.9658**	**109.9658**	**2.9900e-003**		**110.0406**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000

Off-Road	2.4288	26.3859	16.0530	0.0297		1.2734	1.2734		1.1716	1.1716	0.0000	2,872.4851	2,872.4851	0.9290		2,895.7106
Total	**2.4288**	**26.3859**	**16.0530**	**0.0297**	**2.9486**	**1.2734**	**4.2220**	**1.5154**	**1.1716**	**2.6869**	**0.0000**	**2,872.4851**	**2,872.4851**	**0.9290**		**2,895.7106**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0450	0.4108	1.1000e-003	0.1232	7.7000e-004	0.1240	0.0327	7.1000e-004	0.0334		109.9658	109.9658	2.9900e-003		110.0406
Total	**0.0683**	**0.0450**	**0.4108**	**1.1000e-003**	**0.1232**	**7.7000e-004**	**0.1240**	**0.0327**	**7.1000e-004**	**0.0334**		**109.9658**	**109.9658**	**2.9900e-003**		**110.0406**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0500	1.6072	0.2830	3.6200e-003	0.0881	8.6500e-003	0.0967	0.0254	8.2800e-003	0.0336		379.3601	379.3601	0.0512		380.6412
Worker	0.1549	0.1020	0.9313	2.5000e-003	0.2793	1.7500e-003	0.2811	0.0741	1.6100e-003	0.0757		249.2558	249.2558	6.7800e-003		249.4254
Total	**0.2049**	**1.7091**	**1.2143**	**6.1200e-003**	**0.3674**	**0.0104**	**0.3778**	**0.0994**	**9.8900e-003**	**0.1093**		**628.6159**	**628.6159**	**0.0580**		**630.0666**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0500	1.6072	0.2830	3.6200e-003	0.0881	8.6500e-003	0.0967	0.0254	8.2800e-003	0.0336		379.3601	379.3601	0.0512		380.6412
Worker	0.1549	0.1020	0.9313	2.5000e-003	0.2793	1.7500e-003	0.2811	0.0741	1.6100e-003	0.0757		249.2558	249.2558	6.7800e-003		249.4254
Total	**0.2049**	**1.7091**	**1.2143**	**6.1200e-003**	**0.3674**	**0.0104**	**0.3778**	**0.0994**	**9.8900e-003**	**0.1093**		**628.6159**	**628.6159**	**0.0580**		**630.0666**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0406	1.4586	0.2466	3.5900e-003	0.0881	4.0200e-003	0.0921	0.0254	3.8400e-003	0.0292		375.7768	375.7768	0.0496		377.0169
Worker	0.1431	0.0907	0.8433	2.4200e-003	0.2793	1.6900e-003	0.2810	0.0741	1.5600e-003	0.0756		240.7166	240.7166	6.0300e-003		240.8672
Total	**0.1837**	**1.5493**	**1.0899**	**6.0100e-003**	**0.3674**	**5.7100e-003**	**0.3731**	**0.0994**	**5.4000e-003**	**0.1049**		**616.4933**	**616.4933**	**0.0556**		**617.8842**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0406	1.4586	0.2466	3.5900e-003	0.0881	4.0200e-003	0.0921	0.0254	3.8400e-003	0.0292		375.7768	375.7768	0.0496		377.0169
Worker	0.1431	0.0907	0.8433	2.4200e-003	0.2793	1.6900e-003	0.2810	0.0741	1.5600e-003	0.0756		240.7166	240.7166	6.0300e-003		240.8672
Total	**0.1837**	**1.5493**	**1.0899**	**6.0100e-003**	**0.3674**	**5.7100e-003**	**0.3731**	**0.0994**	**5.4000e-003**	**0.1049**		**616.4933**	**616.4933**	**0.0556**		**617.8842**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342		1,804.5523	1,804.5523	0.5670		1,818.7270

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0940**	**10.8399**	**12.2603**	**0.0189**		**0.5788**	**0.5788**		**0.5342**	**0.5342**		**1,804.5523**	**1,804.5523**	**0.5670**		**1,818.7270**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0842	0.0534	0.4961	1.4200e-003	0.1643	1.0000e-003	0.1653	0.0436	9.2000e-004	0.0445		141.5980	141.5980	3.5500e-003		141.6866
Total	**0.0842**	**0.0534**	**0.4961**	**1.4200e-003**	**0.1643**	**1.0000e-003**	**0.1653**	**0.0436**	**9.2000e-004**	**0.0445**		**141.5980**	**141.5980**	**3.5500e-003**		**141.6866**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0940	10.8399	12.2603	0.0189		0.5788	0.5788		0.5342	0.5342	0.0000	1,804.5523	1,804.5523	0.5670		1,818.7270
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0940**	**10.8399**	**12.2603**	**0.0189**		**0.5788**	**0.5788**		**0.5342**	**0.5342**	**0.0000**	**1,804.5523**	**1,804.5523**	**0.5670**		**1,818.7270**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0842	0.0534	0.4961	1.4200e-003	0.1643	1.0000e-003	0.1653	0.0436	9.2000e-004	0.0445		141.5980	141.5980	3.5500e-003		141.6866
Total	**0.0842**	**0.0534**	**0.4961**	**1.4200e-003**	**0.1643**	**1.0000e-003**	**0.1653**	**0.0436**	**9.2000e-004**	**0.0445**		**141.5980**	**141.5980**	**3.5500e-003**		**141.6866**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	55.6200					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**55.8389**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0295	0.0187	0.1736	5.0000e-004	0.0575	3.5000e-004	0.0579	0.0153	3.2000e-004	0.0156		49.5593	49.5593	1.2400e-003		49.5903
Total	**0.0295**	**0.0187**	**0.1736**	**5.0000e-004**	**0.0575**	**3.5000e-004**	**0.0579**	**0.0153**	**3.2000e-004**	**0.0156**		**49.5593**	**49.5593**	**1.2400e-003**		**49.5903**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	55.6200					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**55.8389**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0295	0.0187	0.1736	5.0000e-004	0.0575	3.5000e-004	0.0579	0.0153	3.2000e-004	0.0156		49.5593	49.5593	1.2400e-003		49.5903
Total	**0.0295**	**0.0187**	**0.1736**	**5.0000e-004**	**0.0575**	**3.5000e-004**	**0.0579**	**0.0153**	**3.2000e-004**	**0.0156**		**49.5593**	**49.5593**	**1.2400e-003**		**49.5903**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.492212	0.031147	0.169820	0.116157	0.015815	0.004502	0.033398	0.126328	0.002363	0.001519	0.005062	0.001083	0.000594

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0424	0.3855	0.3238	2.3100e-003		0.0293	0.0293		0.0293	0.0293		462.5947	462.5947	8.8700e-003	8.4800e-003	465.3437
NaturalGas Unmitigated	0.0522	0.4747	0.3987	2.8500e-003		0.0361	0.0361		0.0361	0.0361		569.6052	569.6052	0.0109	0.0104	572.9900

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	4841.64	0.0522	0.4747	0.3987	2.8500e-003		0.0361	0.0361		0.0361	0.0361		569.6052	569.6052	0.0109	0.0104	572.9900
Total		**0.0522**	**0.4747**	**0.3987**	**2.8500e-003**		**0.0361**	**0.0361**		**0.0361**	**0.0361**		**569.6052**	**569.6052**	**0.0109**	**0.0104**	**572.9900**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	3.93205	0.0424	0.3855	0.3238	2.3100e-003		0.0293	0.0293		0.0293	0.0293		462.5947	462.5947	8.8700e-003	8.4800e-003	465.3437
Total		**0.0424**	**0.3855**	**0.3238**	**2.3100e-003**		**0.0293**	**0.0293**		**0.0293**	**0.0293**		**462.5947**	**462.5947**	**8.8700e-003**	**8.4800e-003**	**465.3437**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0175	7.0000e-005	8.1800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0175	0.0175	5.0000e-005		0.0187
Unmitigated	2.0175	7.0000e-005	8.1800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0175	0.0175	5.0000e-005		0.0187

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3048					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	1.7120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.6000e-004	7.0000e-005	8.1800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0175	0.0175	5.0000e-005		0.0187
Total	**2.0175**	**7.0000e-005**	**8.1800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0175**	**0.0175**	**5.0000e-005**		**0.0187**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3048					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.7120					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.6000e-004	7.0000e-005	8.1800e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005		0.0175	0.0175	5.0000e-005		0.0187
Total	**2.0175**	**7.0000e-005**	**8.1800e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**		**0.0175**	**0.0175**	**5.0000e-005**		**0.0187**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	1	50	430	0.73	Diesel

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel	0.7057	1.9723	1.7993	3.3900e-003		0.1038	0.1038		0.1038	0.1038		360.9911	360.9911	0.0506		362.2564
Total	**0.7057**	**1.9723**	**1.7993**	**3.3900e-003**		**0.1038**	**0.1038**		**0.1038**	**0.1038**		**360.9911**	**360.9911**	**0.0506**		**362.2564**

11.0 Vegetation

CalEEMod Version: CalEEMod.2016.3.2

Date: 11/29/2018 4:33 PM

Fresno State Student Union Project

Fresno County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demolition	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grading	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	1	No Change	0.00
Cement and Mortar Mixers	Diesel	No Change	0	2	No Change	0.00
Concrete/Industrial Saws	Diesel	No Change	0	1	No Change	0.00
Cranes	Diesel	No Change	0	1	No Change	0.00
Excavators	Diesel	No Change	0	4	No Change	0.00
Forklifts	Diesel	No Change	0	3	No Change	0.00
Generator Sets	Diesel	No Change	0	1	No Change	0.00

Graders	Diesel	No Change	0	1	No Change	0.00
Pavers	Diesel	No Change	0	1	No Change	0.00
Paving Equipment	Diesel	No Change	0	2	No Change	0.00
Rollers	Diesel	No Change	0	2	No Change	0.00
Rubber Tired Dozers	Diesel	No Change	0	6	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	No Change	0	11	No Change	0.00
Welders	Diesel	No Change	0	1	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	2.19000E-003	1.52700E-002	1.81800E-002	3.00000E-005	9.40000E-004	9.40000E-004	0.00000E+000	2.55325E+000	2.55325E+000	1.80000E-004	0.00000E+000	2.55763E+000
Cement and Mortar Mixers	8.80000E-004	5.52000E-003	4.63000E-003	1.00000E-005	2.10000E-004	2.10000E-004	0.00000E+000	6.87410E-001	6.87410E-001	7.00000E-005	0.00000E+000	6.89200E-001
Concrete/Industrial Saws	4.60000E-003	3.62800E-002	4.05500E-002	7.00000E-005	2.18000E-003	2.18000E-003	0.00000E+000	5.91422E+000	5.91422E+000	3.70000E-004	0.00000E+000	5.92359E+000
Cranes	4.89300E-002	5.79930E-001	2.30030E-001	6.40000E-004	2.38100E-002	2.19100E-002	0.00000E+000	5.61089E+001	5.61089E+001	1.81500E-002	0.00000E+000	5.65625E+001
Excavators	9.19000E-003	9.04700E-002	1.22540E-001	1.90000E-004	4.38000E-003	4.03000E-003	0.00000E+000	1.70137E+001	1.70137E+001	5.50000E-003	0.00000E+000	1.71513E+001
Forklifts	5.30900E-002	4.79800E-001	4.46590E-001	5.80000E-004	3.53000E-002	3.24800E-002	0.00000E+000	5.09636E+001	5.09636E+001	1.64800E-002	0.00000E+000	5.13756E+001
Generator Sets	4.90000E-002	4.28950E-001	4.68010E-001	8.30000E-004	2.38100E-002	2.38100E-002	0.00000E+000	7.14987E+001	7.14987E+001	3.92000E-003	0.00000E+000	7.15967E+001
Graders	2.14000E-003	2.84600E-002	8.17000E-003	3.00000E-005	9.10000E-004	8.40000E-004	0.00000E+000	2.62379E+000	2.62379E+000	8.50000E-004	0.00000E+000	2.64501E+000
Pavers	2.46000E-003	2.59500E-002	2.90500E-002	5.00000E-005	1.25000E-003	1.15000E-003	0.00000E+000	4.12824E+000	4.12824E+000	1.34000E-003	0.00000E+000	4.16162E+000
Paving Equipment	2.88000E-003	2.91000E-002	3.81200E-002	6.00000E-005	1.44000E-003	1.32000E-003	0.00000E+000	5.36766E+000	5.36766E+000	1.74000E-003	0.00000E+000	5.41106E+000
Rollers	2.84000E-003	2.88600E-002	2.82100E-002	4.00000E-005	1.76000E-003	1.62000E-003	0.00000E+000	3.45758E+000	3.45758E+000	1.12000E-003	0.00000E+000	3.48554E+000
Rubber Tired Dozers	3.83200E-002	4.02290E-001	1.46670E-001	3.00000E-004	1.97000E-002	1.81300E-002	0.00000E+000	2.66446E+001	2.66446E+001	8.62000E-003	0.00000E+000	2.68601E+001
Tractors/Loaders/Backhoes	7.47100E-002	7.52170E-001	8.35920E-001	1.14000E-003	4.67300E-002	4.29900E-002	0.00000E+000	1.00303E+002	1.00303E+002	3.24400E-002	0.00000E+000	1.01114E+002
Welders	4.18700E-002	1.96560E-001	2.21820E-001	3.20000E-004	1.05400E-002	1.05400E-002	0.00000E+000	2.38099E+001	2.38099E+001	3.40000E-003	0.00000E+000	2.38950E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					

Air Compressors	2.19000E-003	1.52700E-002	1.81800E-002	3.00000E-005	9.40000E-004	9.40000E-004	0.00000E+000	2.55325E+000	2.55325E+000	1.80000E-004	0.00000E+000	2.55763E+000
Cement and Mortar Mixers	8.80000E-004	5.52000E-003	4.63000E-003	1.00000E-005	2.10000E-004	2.10000E-004	0.00000E+000	6.87410E-001	6.87410E-001	7.00000E-005	0.00000E+000	6.89200E-001
Concrete/Industrial Saws	4.60000E-003	3.62800E-002	4.05500E-002	7.00000E-005	2.18000E-003	2.18000E-003	0.00000E+000	5.91421E+000	5.91421E+000	3.70000E-004	0.00000E+000	5.92358E+000
Cranes	4.89300E-002	5.79930E-001	2.30030E-001	6.40000E-004	2.38100E-002	2.19100E-002	0.00000E+000	5.61088E+001	5.61088E+001	1.81500E-002	0.00000E+000	5.65625E+001
Excavators	9.19000E-003	9.04700E-002	1.22540E-001	1.90000E-004	4.38000E-003	4.03000E-003	0.00000E+000	1.70137E+001	1.70137E+001	5.50000E-003	0.00000E+000	1.71513E+001
Forklifts	5.30900E-002	4.79790E-001	4.46590E-001	5.80000E-004	3.53000E-002	3.24800E-002	0.00000E+000	5.09635E+001	5.09635E+001	1.64800E-002	0.00000E+000	5.13756E+001
Generator Sets	4.90000E-002	4.28950E-001	4.68010E-001	8.30000E-004	2.38100E-002	2.38100E-002	0.00000E+000	7.14987E+001	7.14987E+001	3.92000E-003	0.00000E+000	7.15967E+001
Graders	2.14000E-003	2.84600E-002	8.17000E-003	3.00000E-005	9.10000E-004	8.40000E-004	0.00000E+000	2.62379E+000	2.62379E+000	8.50000E-004	0.00000E+000	2.64500E+000
Pavers	2.46000E-003	2.59500E-002	2.90500E-002	5.00000E-005	1.25000E-003	1.15000E-003	0.00000E+000	4.12824E+000	4.12824E+000	1.34000E-003	0.00000E+000	4.16162E+000
Paving Equipment	2.88000E-003	2.91000E-002	3.81200E-002	6.00000E-005	1.44000E-003	1.32000E-003	0.00000E+000	5.36766E+000	5.36766E+000	1.74000E-003	0.00000E+000	5.41106E+000
Rollers	2.84000E-003	2.88600E-002	2.82100E-002	4.00000E-005	1.76000E-003	1.62000E-003	0.00000E+000	3.45758E+000	3.45758E+000	1.12000E-003	0.00000E+000	3.48554E+000
Rubber Tired Dozers	3.83200E-002	4.02290E-001	1.46670E-001	3.00000E-004	1.97000E-002	1.81300E-002	0.00000E+000	2.66446E+001	2.66446E+001	8.62000E-003	0.00000E+000	2.68600E+001
Tractors/Loaders/Backhoes	7.47100E-002	7.52170E-001	8.35920E-001	1.14000E-003	4.67300E-002	4.29900E-002	0.00000E+000	1.00303E+002	1.00303E+002	3.24400E-002	0.00000E+000	1.01114E+002
Welders	4.18700E-002	1.96560E-001	2.21820E-001	3.20000E-004	1.05400E-002	1.05400E-002	0.00000E+000	2.38099E+001	2.38099E+001	3.40000E-003	0.00000E+000	2.38949E+001

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Concrete/Industrial Saws	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.69084E-006	1.69084E-006	0.00000E+000	0.00000E+000	1.68817E-006
Cranes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.06935E-006	1.06935E-006	0.00000E+000	0.00000E+000	1.06077E-006
Excavators	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.17552E-006	1.17552E-006	0.00000E+000	0.00000E+000	1.16609E-006
Forklifts	0.00000E+000	2.08420E-005	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.17731E-006	1.17731E-006	0.00000E+000	0.00000E+000	1.16787E-006
Generator Sets	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.11890E-006	1.11890E-006	0.00000E+000	0.00000E+000	1.11737E-006
Graders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	3.78070E-006
Pavers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Paving Equipment	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Rollers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Rubber Tired Dozers	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.12593E-006	1.12593E-006	0.00000E+000	0.00000E+000	1.11690E-006
Tractors/Loaders/Backhoes	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19638E-006	1.19638E-006	0.00000E+000	0.00000E+000	1.18678E-006
Welders	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.25998E-006	1.25998E-006	0.00000E+000	0.00000E+000	8.36997E-007

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
No	Replace Ground Cover of Area Disturbed	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Water Exposed Area	PM10 Reduction	55.00	PM2.5 Reduction	55.00	Frequency (per day)	2.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.05	0.01	0.05	0.01	0.00	0.00
Demolition	Fugitive Dust	0.01	0.00	0.01	0.00	0.55	0.55
Demolition	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Grading	Fugitive Dust	0.03	0.02	0.01	0.01	0.55	0.55
Grading	Roads	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Paving	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Site Preparation	Fugitive Dust	0.05	0.03	0.02	0.01	0.55	0.55
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	25.59	25.59	25.62	25.70	25.59
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	18.78	18.79	18.79	19.23	18.69	18.69	0.00	18.79	18.79	18.78	19.08	18.79
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			

No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	150.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	150.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	20.00	
Yes	Install High Efficiency Lighting	40.00	
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services	
Percent Reduction in Waste Disposed	

Fresno State Student Union Project - Existing Keats Building Operations

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	7.40	1000sqft	0.17	7,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	499.66	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Modeling operations of the existing Keats Building only. Revised default CO2 intensity to match PG&E's 2016 Power Content Label of 33% renewables

Land Use - Assumed "Junior College" land use since "University" does not include square foot size metric. Existing Keats Building = 7,400 square feet

Construction Phase - Modeling operations only

Off-road Equipment - Modeling operations only

Trips and VMT - Modeling operations only

Architectural Coating - Modeling operations only

Vehicle Trips - No net increase in traffic trips

Consumer Products - Default

Area Coating - Default

Landscape Equipment - Default

Energy Use - Selected "Using Historical Data" to represent 2005 Title 24 standards, which is conservative since the existing Keats Building was constructed pre-2005

Water And Wastewater - Indoor water/wastewater assumed to be 200,000 gallons per year, based on Project Description.

Solid Waste - Default

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	3,700.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	11,100.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblTripsAndVMT	WorkerTripNumber	1.00	0.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	0.00
tblWater	IndoorWaterUseRate	362,962.84	200,000.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2017	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0341	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Energy	1.0500e-003	9.5500e-003	8.0300e-003	6.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	33.1604	33.1604	1.5200e-003	4.6000e-004	33.3367
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	1.9528	0.0000	1.9528	0.1154	0.0000	4.8379
Water						0.0000	0.0000		0.0000	0.0000	0.0635	0.6956	0.7591	6.5600e-003	1.6000e-004	0.9713
Total	**0.0351**	**9.5500e-003**	**8.1000e-003**	**6.0000e-005**	**0.0000**	**7.3000e-004**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**7.3000e-004**	**2.0162**	**33.8561**	**35.8724**	**0.1235**	**6.2000e-004**	**39.1461**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0341	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Energy	1.0500e-003	9.5500e-003	8.0300e-003	6.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	33.1604	33.1604	1.5200e-003	4.6000e-004	33.3367
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	1.9528	0.0000	1.9528	0.1154	0.0000	4.8379
Water						0.0000	0.0000		0.0000	0.0000	0.0635	0.6956	0.7591	6.5600e-003	1.6000e-004	0.9713
Total	**0.0351**	**9.5500e-003**	**8.1000e-003**	**6.0000e-005**	**0.0000**	**7.3000e-004**	**7.3000e-004**	**0.0000**	**7.3000e-004**	**7.3000e-004**	**2.0162**	**33.8561**	**35.8724**	**0.1235**	**6.2000e-004**	**39.1461**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	11/5/2017	11/10/2017	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	0.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.468366	0.035190	0.167801	0.140631	0.021453	0.005613	0.031137	0.118174	0.002382	0.001847	0.005495	0.001155	0.000758

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	22.7589	22.7589	1.3200e-003	2.7000e-004	22.8734
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	22.7589	22.7589	1.3200e-003	2.7000e-004	22.8734
NaturalGas Mitigated	1.0500e-003	9.5500e-003	8.0300e-003	6.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	10.4015	10.4015	2.0000e-004	1.9000e-004	10.4633
NaturalGas Unmitigated	1.0500e-003	9.5500e-003	8.0300e-003	6.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	10.4015	10.4015	2.0000e-004	1.9000e-004	10.4633

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	194916	1.0500e-003	9.5500e-003	8.0300e-003	6.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	10.4015	10.4015	2.0000e-004	1.9000e-004	10.4633
Total		**1.0500e-003**	**9.5500e-003**	**8.0300e-003**	**6.0000e-005**		**7.3000e-004**	**7.3000e-004**		**7.3000e-004**	**7.3000e-004**	**0.0000**	**10.4015**	**10.4015**	**2.0000e-004**	**1.9000e-004**	**10.4633**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Junior College (2Yr)	194916	1.0500e-003	9.5500e-003	8.0300e-003	6.0000e-005		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	10.4015	10.4015	2.0000e-004	1.9000e-004	10.4633
Total		**1.0500e-003**	**9.5500e-003**	**8.0300e-003**	**6.0000e-005**		**7.3000e-004**	**7.3000e-004**		**7.3000e-004**	**7.3000e-004**	**0.0000**	**10.4015**	**10.4015**	**2.0000e-004**	**1.9000e-004**	**10.4633**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	100418	22.7589	1.3200e-003	2.7000e-004	22.8734
Total		**22.7589**	**1.3200e-003**	**2.7000e-004**	**22.8734**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Junior College (2Yr)	100418	22.7589	1.3200e-003	2.7000e-004	22.8734
Total		**22.7589**	**1.3200e-003**	**2.7000e-004**	**22.8734**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0341	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Unmitigated	0.0341	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0289					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Total	**0.0341**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.3000e-004**	**1.3000e-004**	**0.0000**	**0.0000**	**1.4000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	5.1400e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0289					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Total	**0.0341**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.3000e-004**	**1.3000e-004**	**0.0000**	**0.0000**	**1.4000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e

Category	MT/yr			
Mitigated	0.7591	6.5600e-003	1.6000e-004	0.9713
Unmitigated	0.7591	6.5600e-003	1.6000e-004	0.9713

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	0.2 / 0.567711	0.7591	6.5600e-003	1.6000e-004	0.9713
Total		**0.7591**	**6.5600e-003**	**1.6000e-004**	**0.9713**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Junior College (2Yr)	0.2 / 0.567711	0.7591	6.5600e-003	1.6000e-004	0.9713
Total		**0.7591**	**6.5600e-003**	**1.6000e-004**	**0.9713**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.9528	0.1154	0.0000	4.8379
Unmitigated	1.9528	0.1154	0.0000	4.8379

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Junior College (2Yr)	9.62	1.9528	0.1154	0.0000	4.8379
Total		**1.9528**	**0.1154**	**0.0000**	**4.8379**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Junior College (2Yr)	9.62	1.9528	0.1154	0.0000	4.8379
Total		**1.9528**	**0.1154**	**0.0000**	**4.8379**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Fresno State Student Union Project - Existing Keats Building Operations

Fresno County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	7.40	1000sqft	0.17	7,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	499.66	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Modeling operations of the existing Keats Building only. Revised default CO2 intensity to match PG&E's 2016 Power Content Label of 33% renewables

Land Use - Assumed "Junior College" land use since "University" does not include square foot size metric. Existing Keats Building = 7,400 square feet

Construction Phase - Modeling operations only

Off-road Equipment - Modeling operations only

Trips and VMT - Modeling operations only

Architectural Coating - Modeling operations only

Vehicle Trips - No net increase in traffic trips

Consumer Products - Default

Area Coating - Default

Landscape Equipment - Default

Energy Use - Selected "Using Historical Data" to represent 2005 Title 24 standards, which is conservative since the existing Keats Building was constructed pre-2005

Water And Wastewater - Indoor water/wastewater assumed to be 200,000 gallons per year, based on Project Description.

Solid Waste - Default

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	3,700.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	11,100.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblTripsAndVMT	WorkerTripNumber	1.00	0.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	0.00
tblWater	IndoorWaterUseRate	362,962.84	200,000.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1866	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7300e-003
Energy	5.7600e-003	0.0524	0.0440	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003		62.8255	62.8255	1.2000e-003	1.1500e-003	63.1988
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1924**	**0.0524**	**0.0448**	**3.1000e-004**	**0.0000**	**3.9800e-003**	**3.9800e-003**	**0.0000**	**3.9800e-003**	**3.9800e-003**		**62.8271**	**62.8271**	**1.2000e-003**	**1.1500e-003**	**63.2005**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1866	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7300e-003
Energy	5.7600e-003	0.0524	0.0440	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003		62.8255	62.8255	1.2000e-003	1.1500e-003	63.1988
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1924**	**0.0524**	**0.0448**	**3.1000e-004**	**0.0000**	**3.9800e-003**	**3.9800e-003**	**0.0000**	**3.9800e-003**	**3.9800e-003**		**62.8271**	**62.8271**	**1.2000e-003**	**1.1500e-003**	**63.2005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	11/5/2017	11/10/2017	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	0.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		

Total	0.00	0.00	0.00			

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.468366	0.035190	0.167801	0.140631	0.021453	0.005613	0.031137	0.118174	0.002382	0.001847	0.005495	0.001155	0.000758

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.7600e-003	0.0524	0.0440	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003		62.8255	62.8255	1.2000e-003	1.1500e-003	63.1988
NaturalGas Unmitigated	5.7600e-003	0.0524	0.0440	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003		62.8255	62.8255	1.2000e-003	1.1500e-003	63.1988

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	534.016	5.7600e-003	0.0524	0.0440	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003		62.8255	62.8255	1.2000e-003	1.1500e-003	63.1988
Total		**5.7600e-003**	**0.0524**	**0.0440**	**3.1000e-004**		**3.9800e-003**	**3.9800e-003**		**3.9800e-003**	**3.9800e-003**		**62.8255**	**62.8255**	**1.2000e-003**	**1.1500e-003**	**63.1988**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	0.534016	5.7600e-003	0.0524	0.0440	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003		62.8255	62.8255	1.2000e-003	1.1500e-003	63.1988
Total		**5.7600e-003**	**0.0524**	**0.0440**	**3.1000e-004**		**3.9800e-003**	**3.9800e-003**		**3.9800e-003**	**3.9800e-003**		**62.8255**	**62.8255**	**1.2000e-003**	**1.1500e-003**	**63.1988**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1866	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7300e-003
Unmitigated	0.1866	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1584					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.0000e-005	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7300e-003
Total	**0.1866**	**1.0000e-005**	**7.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6200e-003**	**1.6200e-003**	**0.0000**		**1.7300e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1584					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.0000e-005	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7300e-003
Total	**0.1866**	**1.0000e-005**	**7.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6200e-003**	**1.6200e-003**	**0.0000**		**1.7300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Fresno State Student Union Project - Existing Keats Building Operations

Fresno County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Junior College (2Yr)	7.40	1000sqft	0.17	7,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2018
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	499.66	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Modeling operations of the existing Keats Building only. Revised default CO2 intensity to match PG&E's 2016 Power Content Label of 33% renewables

Land Use - Assumed "Junior College" land use since "University" does not include square foot size metric. Existing Keats Building = 7,400 square feet

Construction Phase - Modeling operations only

Off-road Equipment - Modeling operations only

Trips and VMT - Modeling operations only

Architectural Coating - Modeling operations only

Vehicle Trips - No net increase in traffic trips

Consumer Products - Default

Area Coating - Default

Landscape Equipment - Default

Energy Use - Selected "Using Historical Data" to represent 2005 Title 24 standards, which is conservative since the existing Keats Building was constructed pre-2005

Water And Wastewater - Indoor water/wastewater assumed to be 200,000 gallons per year, based on Project Description.

Solid Waste - Default

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	3,700.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	11,100.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	499.66
tblTripsAndVMT	WorkerTripNumber	1.00	0.00
tblVehicleTrips	ST_TR	11.23	0.00
tblVehicleTrips	SU_TR	1.21	0.00
tblVehicleTrips	WD_TR	27.49	0.00
tblWater	IndoorWaterUseRate	362,962.84	200,000.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2017	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1866	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7300e-003
Energy	5.7600e-003	0.0524	0.0440	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003		62.8255	62.8255	1.2000e-003	1.1500e-003	63.1988
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1924**	**0.0524**	**0.0448**	**3.1000e-004**	**0.0000**	**3.9800e-003**	**3.9800e-003**	**0.0000**	**3.9800e-003**	**3.9800e-003**		**62.8271**	**62.8271**	**1.2000e-003**	**1.1500e-003**	**63.2005**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1866	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7300e-003
Energy	5.7600e-003	0.0524	0.0440	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003		62.8255	62.8255	1.2000e-003	1.1500e-003	63.1988
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1924**	**0.0524**	**0.0448**	**3.1000e-004**	**0.0000**	**3.9800e-003**	**3.9800e-003**	**0.0000**	**3.9800e-003**	**3.9800e-003**		**62.8271**	**62.8271**	**1.2000e-003**	**1.1500e-003**	**63.2005**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	11/5/2017	11/10/2017	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	0	0.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Junior College (2Yr)	0.00	0.00	0.00		

Total	0.00	0.00	0.00			

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Junior College (2Yr)	9.50	7.30	7.30	6.40	88.60	5.00	92	7	1

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Junior College (2Yr)	0.468366	0.035190	0.167801	0.140631	0.021453	0.005613	0.031137	0.118174	0.002382	0.001847	0.005495	0.001155	0.000758

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.7600e-003	0.0524	0.0440	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003		62.8255	62.8255	1.2000e-003	1.1500e-003	63.1988
NaturalGas Unmitigated	5.7600e-003	0.0524	0.0440	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003		62.8255	62.8255	1.2000e-003	1.1500e-003	63.1988

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	534.016	5.7600e-003	0.0524	0.0440	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003		62.8255	62.8255	1.2000e-003	1.1500e-003	63.1988
Total		**5.7600e-003**	**0.0524**	**0.0440**	**3.1000e-004**		**3.9800e-003**	**3.9800e-003**		**3.9800e-003**	**3.9800e-003**		**62.8255**	**62.8255**	**1.2000e-003**	**1.1500e-003**	**63.1988**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Junior College (2Yr)	0.534016	5.7600e-003	0.0524	0.0440	3.1000e-004		3.9800e-003	3.9800e-003		3.9800e-003	3.9800e-003		62.8255	62.8255	1.2000e-003	1.1500e-003	63.1988
Total		**5.7600e-003**	**0.0524**	**0.0440**	**3.1000e-004**		**3.9800e-003**	**3.9800e-003**		**3.9800e-003**	**3.9800e-003**		**62.8255**	**62.8255**	**1.2000e-003**	**1.1500e-003**	**63.1988**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1866	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7300e-003
Unmitigated	0.1866	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1584					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.0000e-005	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7300e-003
Total	**0.1866**	**1.0000e-005**	**7.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6200e-003**	**1.6200e-003**	**0.0000**		**1.7300e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0282					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1584					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.0000e-005	1.0000e-005	7.7000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.6200e-003	1.6200e-003	0.0000		1.7300e-003
Total	**0.1866**	**1.0000e-005**	**7.7000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.6200e-003**	**1.6200e-003**	**0.0000**		**1.7300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Version: CalEEMod.2016.3.2

Date: 11/21/2018 5:01 PM

Fresno State Student Union Project - Existing Keats Building Operations

Fresno County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	No Change	0	0	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												

Air Compressors	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction		PM2.5 Reduction			
No	Replace Ground Cover of Area Disturbed	PM10 Reduction		PM2.5 Reduction			
No	Water Exposed Area	PM10 Reduction		PM2.5 Reduction		Frequency (per day)	
No	Unpaved Road Mitigation	Moisture Content %		Vehicle Speed (mph)	0.00		
No	Clean Paved Road	% PM Reduction	0.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.00	0.00	0.00	0.00	0.00	0.00

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			

	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				
	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	150.00
No	Use Low VOC Paint (Residential Exterior)	150.00
No	Use Low VOC Paint (Non-residential Interior)	150.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	
No	% Electric Leafblower	

No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services	
Percent Reduction in Waste Disposed	

APPENDIX B

Special-Status Wildlife and Plant Species Potential to Occur

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Special-Status Wildlife and Plant Species with Known or Potential Occurrence in the Vicinity of the Fresno State Student Union Project in Fresno County, California

Scientific Name	Common Name	Status (Federal/State/ Other(CNPS))	Habitat	Potential to Occur
Amphibians				
Ambystoma californiense	California tiger salamander	FT/ST, WL	Annual grassland, valley–foothill hardwood, and valley–foothill riparian habitats; vernal pools, other ephemeral pools, and (uncommonly) along stream courses and man-made pools if predatory fishes are absent	**Not expected to occur.** The site is located within a documented occurrence for this species; however, this occurrence was originally noted in 1936 and the site has since been developed. This occurrence is believed to be extirpated (CDFW 2018). There is no suitable aquatic breeding or adjacent upland habitat present.
Spea hammondii	western spadefoot	None/SSC	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	**Not expected to occur.** No suitable aquatic breeding or adjacent upland habitat present.
Reptiles				
Actinemys marmorata	western pond turtle	None/SSC	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	**Not expected to occur.** No suitable aquatic habitat with adjacent upland habitat present.
Anniella pulchra	northern California legless lizard	None/SSC	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse habitat and sandy or loose, loamy soils	**Not expected to occur**. The site is within a documented occurrence of this species; however, this occurrence was documented in the late 1800's and the site has since been developed (CDFW 2018). No suitable dune, scrub, or woodland habitat with loose soils present.

Scientific Name	Common Name	Status (Federal/State/ Other(CNPS))	Habitat	Potential to Occur
Arizona elegans occidentalis	California glossy snake	None/SSC	Commonly occurs in desert regions throughout southern California. Prefers open sandy areas with scattered brush. Also found in rocky areas.	**Not expected to occur**. The site is within a documented occurrence for this species; however, the occurrence was last noted in 1893 and the site has since been developed (CDFW 2018). This occurrence is likely extirpated. No suitable open sandy or rocky areas present.
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	**Not expected to occur**. The site is within a documented occurrence for this species; however, the occurrence was last noted in 1893 and the site has since been developed. This occurrence is believed to be extirpated (CDFW 2018). There is no suitable sandy soils or habitat present.
Birds				
Agelaius tricolor (nesting colony)	tricolored blackbird	BCC/PSE, SSC	Nests near freshwater, emergent wetland with cattails or tules, but also in Himalayan blackberrry; forages in grasslands, woodland, and agriculture	**Not expected to occur**. The site is located within a documented occurrence for this species; however, this occurrence was originally noted in 1975 and the site has since been developed (CDFW 2018). No suitable wetland, woodland, or riparian habitat present.
Athene cunicularia (burrow sites & some wintering sites)	burrowing owl	BCC/SSC	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	**Not expected to occur**. No suitable grassland, agriculture, or open scrub habitat present.

Special-Status Wildlife and Plant Species with Known or Potential Occurrence in the Vicinity of the Fresno State Student Union Project in Fresno County, California

Scientific Name	Common Name	Status (Federal/State/ Other(CNPS))	Habitat	Potential to Occur
Buteo swainsoni (nesting)	Swainson's hawk	BCC/ST	Nests in open woodland and savanna, riparian, and in isolated large trees; forages in nearby grasslands and agricultural areas such as wheat and alfalfa fields and pasture	**Not expected to occur**. The site is located within a documented occurrence for this species; however, this occurrence was originally noted in 1956 and the site has since been developed (CDFW 2018). There are no suitable trees or adjacent foraging habitat present.
Coccyzus americanus occidentalis (nesting)	western yellow-billed cuckoo	FT, BCC/SE	Nests in dense, wide riparian woodlands and forest with well-developed understories	**Not expected to occur**. No suitable riparian woodland or forest habitat present.
Eremophila alpestris actia	California horned lark	None/WL	Nests and forages in grasslands, disturbed lands, agriculture, and beaches; nests in alpine fell fields of the Sierra Nevada	**Not expected to occur.** No suitable open grassland or agricultural habitat present.
Phalacrocorax auritus (nesting colony)	double-crested cormorant	None/WL	Nests in riparian trees near ponds, lakes, artificial impoundments, slow-moving rivers, lagoons, estuaries, and open coastlines; winter habitat includes lakes, rivers, and coastal areas	**Not expected to occur.** No suitable riparian or coastal nesting habitat present.
Vireo bellii pusillus (nesting)	least Bell's vireo	FE/SE	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	**Not expected to occur**. No suitable riparian or shrubland habitat present.
Fishes				
Mylopharodon conocephalus	hardhead	None/SSC	Low- to mid-elevation streams in the Sacramento–San Joaquin drainage; also present in the Russian River	**Not expected to occur**. No suitable aquatic habitat present.

Special-Status Wildlife and Plant Species with Known or Potential Occurrence in the Vicinity of the Fresno State Student Union Project in Fresno County, California

Scientific Name	Common Name	Status (Federal/State/ Other(CNPS))	Habitat	Potential to Occur
Mammals				
Antrozous pallidus	pallid bat	None/SSC	Grasslands, shrublands, woodlands, forests; most common in open, dry habitats with rocky outcrops for roosting, but also roosts in man-made structures and trees	**Not expected to occur**. No woodland, forest, or rocky roosting habitat present. Unlikely to utilize buildings and trees onsite due to the developed nature and high level of anthropogenic disturbance in the area.
Dipodomys nitratoides exilis	Fresno kangaroo rat	FE/SE	Alkali sink/open grassland habitats; sands and saline sandy soils in chenopod scrub	**Not expected to occur**. No open grassland or scrub habitat with sandy soils present.
Euderma maculatum	spotted bat	None/SSC	Foothills, mountains, desert regions of southern California, including arid deserts, grasslands, and mixed-conifer forests; roosts in rock crevices and cliffs; feeds over water and along washes	**Not expected to occur**. No suitable rock crevice or cliff roosting habitat present.
Eumops perotis californicus	western mastiff bat	None/SSC	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	**Not expected to occur**. No suitable forest, woodland, or cliff roosting habitat present.
Lasiurus cinereus	hoary bat	None/None	Forest, woodland riparian, and wetland habitats; also juniper scrub, riparian forest, and desert scrub in arid areas; roosts in tree foliage and sometimes cavities, such as woodpecker holes	**Not expected to occur**. No suitable woodland, forest, or riparian roost habitat present.
Perognathus inornatus	San Joaquin pocket mouse	None/None	Open grassland and scrub areas on fine-textured soils	**Not expected to occur.** No suitable open grassland or scrub with fine-textured soils present.

Special-Status Wildlife and Plant Species with Known or Potential Occurrence in the Vicinity of the Fresno State Student Union Project in Fresno County, California

Scientific Name	Common Name	Status (Federal/State/ Other(CNPS))	Habitat	Potential to Occur
Taxidea taxus	American badger	None/SSC	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	**Not expected to occur**. No suitable open habitat suitable for burrow or hunting present.
Vulpes macrotis mutica	San Joaquin kit fox	FE/ST	Grasslands and scrublands, including those that have been modified; oak woodland, alkali sink scrubland, vernal pool, and alkali meadow	**Not expected to occur**. No suitable open habitat suitable for burrow or hunting present.
Invertebrates				
Branchinecta lynchi	vernal pool fairy shrimp	FT/None	Vernal pools, seasonally ponded areas within vernal swales, and ephemeral freshwater habitats	**Not expected to occur.** No suitable vernal pool or seasonal wetland habitat present.
Desmocerus californicus dimorphus	valley elderberry longhorn beetle	FT/None	Occurs only in the Central Valley of California, in association with blue elderberry (*Sambucus nigra* ssp. *caerulea*)	**Not expected to occur.** No suitable elderberry shrub habitat present.
Plants				
Calycadenia hooveri	Hoover's calycadenia	None/None/1B.3	Cismontane woodland, Valley and foothill grassland; rocky/annual herb/July–Sep/210–985	**Not expected to occur**. No suitable woodland or rocky grassland habitat present.
Castilleja campestris var. *succulenta*	succulent owl's-clover	FT/SE/1B.2	Vernal pools (often acidic)/annual herb (hemiparasitic)/(Mar)Apr–May/160–2,460	**Not expected to occur**. No suitable vernal pool habitat present.
Caulanthus californicus	California jewelflower	FE/SE/1B.1	Chenopod scrub, Pinyon and juniper woodland, Valley and foothill grassland; sandy/annual herb/Feb–May/200–3,280	**Not expected to occur**. The site is within a documented occurrence of this species; however, this occurrence was documented in the late 1800's and the site has since been developed (CDFW 2018). This occurrence has been extirpated. No suitable scrub, woodland, or sandy grassland habitat present.

Special-Status Wildlife and Plant Species with Known or Potential Occurrence in the Vicinity of the Fresno State Student Union Project in Fresno County, California

Scientific Name	Common Name	Status (Federal/State/ Other(CNPS))	Habitat	Potential to Occur
Downingia pusilla	dwarf downingia	None/None/2B.2	Valley and foothill grassland (mesic), Vernal pools/annual herb/Mar–May/0–1,460	**Not expected to occur**. No suitable mesic grassland or vernal pool habitat present.
Eryngium spinosepalum	spiny-sepaled button-celery	None/None/1B.2	Valley and foothill grassland, Vernal pools/annual / perennial herb/Apr–June/260–3,200	**Not expected to occur**. No suitable mesic grassland or vernal pool habitat present.
Imperata brevifolia	California satintail	None/None/2B.1	Chaparral, Coastal scrub, Mojavean desert scrub, Meadows and seeps (often alkali), Riparian scrub; mesic/perennial rhizomatous herb/Sep–May/0–3,985	**Not expected to occur**. The site is within a documented occurrence of this species; however, this occurrence was documented in the late 1800's and the site has since been developed (CDFW 2018). No suitable chaparral, scrub, meadow/seep, or riparian habitat present.
Lagophylla dichotoma	forked hare-leaf	None/None/1B.1	Cismontane woodland, Valley and foothill grassland; Sometimes clay/annual herb/Apr–May/145–1,100	**Not expected to occur**. No suitable grassland or woodland habitat present.
Leptosiphon serrulatus	Madera leptosiphon	None/None/1B.2	Cismontane woodland, Lower montane coniferous forest/annual herb/Apr–May/980–4,265	**Not expected to occur.** The site is located within a documented occurrence for this species; however, this occurrence was originally documented in 1922, prior to development of the site (CDFW 2018). It is likely that this occurrence is extirpated. There is no suitable woodland or forest habitat present.
Orcuttia inaequalis	San Joaquin Valley Orcutt grass	FT/SE/1B.1	Vernal pools/annual herb/Apr–Sep/30–2,475	**Not expected to occur**. No suitable vernal pool habitat present.

Special-Status Wildlife and Plant Species with Known or Potential Occurrence in the Vicinity of the Fresno State Student Union Project in Fresno County, California

Scientific Name	Common Name	Status (Federal/State/ Other(CNPS))	Habitat	Potential to Occur
Orcuttia pilosa	hairy Orcutt grass	FE/SE/1B.1	Vernal pools/annual herb/May–Sep/150–655	**Not expected to occur**. No suitable vernal pool habitat present.
Pseudobahia bahiifolia	Hartweg's golden sunburst	FE/SE/1B.1	Cismontane woodland, Valley and foothill grassland; clay, often acidic/annual herb/Mar–Apr/45–490	**Not expected to occur**. No suitable woodland or grassland habitat present.
Pseudobahia peirsonii	San Joaquin adobe sunburst	FT/SE/1B.1	Cismontane woodland, Valley and foothill grassland; adobe clay/annual herb/Feb–Apr/295–2,625	**Not expected to occur**. No suitable woodland or grassland habitat present.
Sagittaria sanfordii	Sanford's arrowhead	None/None/1B.2	Marshes and swamps (assorted shallow freshwater)/perennial rhizomatous herb (emergent)/May–Oct(Nov)/0–2,135	**Not expected to occur**. A documented occurrence of this species was documented in 1986 approximately 1.2 miles northeast of the site (CDFW 2018). No suitable marsh or swamp habitat present.
Tropidocarpum capparideum	caper-fruited tropidocarpum	None/None/1B.1	Valley and foothill grassland (alkaline hills)/annual herb/Mar–Apr/0–1,495	**Not expected to occur**. The site is within a documented occurrence of this species; however, this occurrence was noted in 1930 and the site has since been developed (CDFW 2018). There is no suitable alkaline grassland habitat present.
Tuctoria greenei	Greene's tuctoria	FE/SR/1B.1	Vernal pools/annual herb/May–July(Sep)/95–3,510	**Not expected to occur.** No suitable vernal pool habitat present.

Sources:

California Native Plant Society (CNPS). 2018. Inventory of Rare and Endangered Plants (online edition, v8-03 0.39). California Native Plant Society. Sacramento, CA. Accessed on January 3, 2018.

CDFW (California Department of Fish and Wildlife). 2018. California Natural Diversity Data Base. "Special Animals List." California Natural Diversity Database. CDFW, Biogeographic Data Branch. July 2018. https://www.wildlife.ca.gov/Data/CNDDB/Plants-and-Animals.

CDFW (California Department of Fish and Wildlife). 2018. California Natural Diversity Database (CNDDB). RareFind, Version 5. (Commercial Subscription). Sacramento, California: CDFW, Biogeographic Data Branch. http://www.dfg.ca.gov/biogeodata/ cnddb/mapsanddata.asp.

Special-Status Wildlife and Plant Species with Known or Potential Occurrence in the Vicinity of the Fresno State Student Union Project in Fresno County, California

Status Legend:

Federal

FE: Federally listed as endangered
FT: Federally listed as threatened
FC: Federal Candidate for listing
DL: Delisted
BCC: Bird of Conservation Concern

State

SE: State listed as endangered
ST: State listed as threatened
PSE: Proposed State Endangered
SR: State Rare
SSC: State Species of Special Concern
FP: State Fully Protected Species
WL: Watch List Species

Other (California Native Plant Society (CNPS)

CRPR (California Rare Plant Rank) 1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere
CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere
CRPR 2A: Plants Presumed Extirpated in California, But More Common Elsewhere
CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

.1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
.3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

APPENDIX C

Cultural Resources Technical Report

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CULTURAL RESOURCES TECHNICAL REPORT FOR THE KEATS BUILDING AND THE AMPHITHEATER

California State University, Fresno

PREPARED FOR:

CALIFORNIA STATE UNIVERSITY, FRESNO
2351 E. Barstow Avenue
Fresno, California 93740
Contact: Tinnah Medina, Associate Vice President for Facilities Management

PREPARED BY:

Fallin Steffen, MPS, Nicole Frank, MSHP, William Burns, MSc, RPA, and Samantha Murray, MA

DUDEK
725 Front Street, Suite 400
Santa Cruz, California 95060

DECEMBER 2018

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EXECUTIVE SUMMARY

Dudek was retained to complete a Cultural Resource Technical Report for demolition of the Keats Building and the Amphitheater located on the California State University, Fresno Campus in the City of Fresno, Fresno County, California. This study involved completion of a California Historical Resources Information Systems (CHRIS) records search of the project site and a one-half-mile radius, Native American group coordination, a pedestrian survey of the project site by a qualified architectural historian, building development and archival research, development of an appropriate historic context for the project site, and recordation and evaluation of the Keats Building (1956) and adjacent Amphitheater (1963) for historical significance and integrity.

The proposed project would involve demolition of the existing 7,500-gross-square-foot (GSF) Keats building and Amphitheater to make room for the development of a new, 80,000-GSF Student Union building containing lounge spaces, meeting rooms for student organizations and clubs, campus retail services, and office spaces. This report includes an evaluation of the Keats Building and Amphitheater for the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Historical Landmarks (CHL) and City of Fresno Local Register of Historic Resources to satisfy requirements of the California Environmental Quality Act (CEQA) and California Public Resources Code 5024 and 5024.5 for state-owned properties.

As a result of the background research, field survey, and property significance evaluation, the Keats Building and the Amphitheater appear not eligible for the NRHP, CRHR, CHL or local designation, due to a lack of significant historical associations, architectural merit, and compromised integrity. This property is also not considered an historical resource for the purposes CEQA.

The CHRIS records search indicates that no archaeological or historic built environment resources have been previously recorded within the proposed project site. Intensive pedestrian survey failed to identify any archaeological resources. The Native American Heritage Commission (NAHC) search of the Sacred Lands File failed to indicate the presence of Native American resources. In consideration of the severity of past disturbance to native soils, the topographic setting, and the negative inventory results, the likelihood of encountering unanticipated significant subsurface archaeological deposits or features is considered low. The Project as currently designed will not impact any potentially significant archaeological resources, and will have a less-than-significant impact on historical resources under CEQA.

1 INTRODUCTION

Dudek was retained by California State University (CSU), Fresno to complete a Cultural Resource Technical Report for demolition of the Keats Building and the Amphitheater located on the CSU, Fresno Campus in the City of Fresno, Fresno County, California. This study involved completion of a California Historical Resources Information Systems (CHRIS) records search of the project site and a one-half-mile radius, Native American group coordination, a pedestrian survey of the project site by a qualified architectural historian, building development and archival research, development of an appropriate historic context for the project site, and recordation and evaluation of the Keats Building (1956) and adjacent Amphitheater (1963) for historical significance and integrity. These two resources were for evaluated for the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), California Historical Landmarks (CHL) and City of Fresno Local Register of Historic Resources to satisfy requirements of both the California Environmental Quality Act (CEQA) and California Public Resources Code 5024 and 5024.5 for state-owned properties.

This study was conducted in accordance with Section 15064.5(a)(2)-(3) of the California Environmental Quality Act (CEQA) Guidelines and California Public Resources Code (PRC) Sections 5024 and 5024.5. Fresno State is required to provide notification and submit documentation to the State Historic Preservation Officer (SHPO) for any project having the potential to affect state-owned historical resources on or eligible for inclusion in the Master List.

1.1 Project Location and Description

The proposed project site (Project) is located on the Fresno State campus in the City of Fresno, California. The Fresno State campus is located near the intersection of State Route 168 (SR-168) and Shaw Avenue. Major streets surrounding the campus include Shaw Avenue, North Cedar Avenue, East Barstow Avenue, and North Chestnut Avenue (Figure 1, Project Location).

The Project involves construction of a new, 80,000-GSF Student Union building located on N. Jackson Avenue, between Keats Avenue and San Ramon Avenue, within the main Fresno State campus. The Project proposes the demolition and replacement of the existing Keats Building and Amphitheater (Figure 2, Resources within the Project Site) with a new Student Union building, which will not exceed 70 feet in height-the same maximum height as the Henry Madden Library building located approximately 300 feet to the west of the site. The New Student Union will provide up to 63,000 assignable square feet for lounge space, meeting rooms for student organizations and clubs, campus retail services, and office space.

Keats Building

The Keats Building is located southwest of the geographic center of campus between the University Center to the west, the Fountain to the north, the Speech Arts building to the east, and the Amphitheater to the

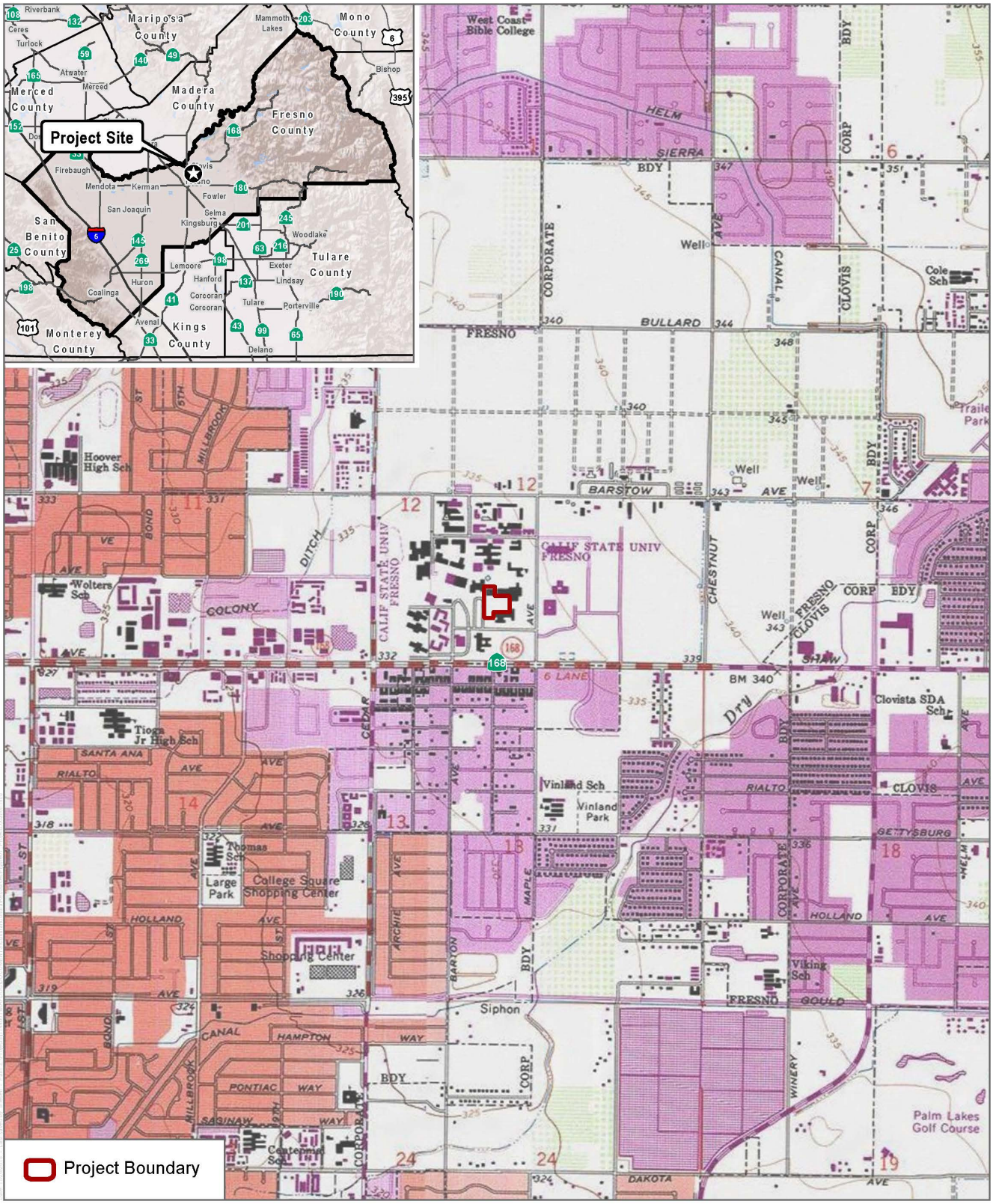
South. The geocoordinates are latitude 36.811705°, longitude -119.747768° and plot within the Clovis, California 7.5' USGS Quadrangle Map.

Amphitheater

The Amphitheater is located southwest of the geographic center of campus between Parking Lot 31 to the west, the Keats and Speech Arts buildings to the north, and the Music Building to the east and to the South. The geocoordinates are latitude 36.811135°, longitude -119.746879° and plot within the Clovis, California 7.5' USGS Quadrangle Map.

1.2 Project Personnel

The fieldwork, associated property evaluation, and preparation of the technical report and DPR523 forms was completed by Dudek Architectural Historian Fallin Steffen, MPS, with contributions by Nicole Frank, MSHP. It was reviewed for quality assurance/quality control by Dudek Principle Architectural Historian Samantha Murray, MA. The CHRIS Records Search, Native American Coordination, and archaeological fieldwork were completed by Dudek archaeologists William Burns, MSc, RPA and Sarah Brewer, BA. Mr. Burns also prepared the archaeological portions of the technical report. Ms. Steffen, Ms. Frank and Ms. Murray meet the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) for architectural history. Mr. Burns and Ms. Brewer meet the Secretary of the Interior's Professional Qualification Standards (36 CFR Part 61) for archaeology. Preparer's qualifications are located in Appendix C.



SOURCE: USGS 7.5 Minute Series Clovis Quadrangle
Township 13S / Range 20E / Section 12

DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Cultural Resources Technical Report for the Keats Building and the Amphitheatre

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SOURCE: Bing Maps 2018

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FIGURE 2

Resources within the Project Site

Cultural Resources Technical Report for the Keats Building and the Amphitheatre

1.3 Regulatory Setting

Federal

While there is no federal nexus for this project, the subject property was evaluated in consideration of the National Register of Historic Places (NRHP) designation criteria and integrity requirements to comply with PRC Sections 5024 and 5024.5.

National Register of Historic Places

The NRHP is the United States' official list of districts, sites, buildings, structures, and objects worthy of preservation. Overseen by the National Park Service (NPS), under the U.S. Department of the Interior, the NRHP was authorized under the National Historic Preservation Act (NHPA), as amended. Its listings encompass all National Historic Landmarks, as well as historic areas administered by NPS.

NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation's history and heritage. Its criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the NRHP. For a property to be listed in or determined eligible for listing, it must be demonstrated to possess integrity and to meet at least one of the following criteria:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

A. That are associated with events that have made a significant contribution to the broad patterns of our history; or

B. That are associated with the lives of persons significant in our past; or

C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. That have yielded, or may be likely to yield, information important in prehistory or history.

Integrity is defined in NRHP guidance, *How to Apply the National Register Criteria*, as "the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity" (NPS 1990). NRHP guidance further asserts that properties be completed at least 50 years ago to be considered for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be "exceptionally important" (criteria consideration G) to be considered for listing.

A historic property is defined as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the NRHP criteria" (36 CFR Sections 800.16(i)(1)).

Effects on historic properties under Section 106 of the NHPA are defined in the assessment of adverse effects in 36 CFR Sections 800.5(a)(1):

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance, or be cumulative.

Adverse effects on historic properties are clearly defined and include, but are not limited to:

(i) Physical destruction of or damage to all or part of the property;

(ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR Part 68) and applicable guidelines;

(iii) Removal of the property from its historic location;

(iv) Change of the character of the property's use or of physical features within the property's setting that contributes to its historic significance;

(v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;

(vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and

(vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance (36 CFR 800.5 (2)).

To comply with Section 106, the criteria of adverse effect are applied to historic properties, if any exist in the project Area of Potential Effect (APE), pursuant to 36 CFR Sections 800.5(a)(1). If no historic properties are identified in the APE, a finding of "no historic properties affected" will be made for the proposed project. If there are historic properties in the APE, application of the criteria of adverse effect will result in project-related findings of either "no adverse effect" or of "adverse effect," as described above. A finding of no adverse effect may be appropriate when the undertaking's effects do not meet the thresholds in criteria of adverse effect 36 CFR Sections 800.5(a)(1), in certain cases when the undertaking is modified to avoid or lessen effects, or if conditions were imposed to ensure review of rehabilitation plans for conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties (codified in 36 CFR Part 68).

If adverse effects findings were expected to result from the proposed project, mitigation would be required, as feasible, and resolution of those adverse effects by consultation may occur to avoid, minimize, or mitigate adverse effects on historic properties pursuant to 36 CFR Part 800.6(a).

State

California Register of Historical Resources

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California." (PRC section 5020.1(j).) In 1992, the California legislature established the CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change." (PRC section 5024.1(a).) The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP), enumerated below. According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

(1) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

(2) Is associated with the lives of persons important in our past.

(3) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

(4) Has yielded, or may be likely to yield, information important in prehistory or history.

In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than fifty years

old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see Cal. Code Regs., tit. 14, section 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

California Environmental Quality Act

As described further below, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- PRC section 21083.2(g) defines "unique archaeological resource."
- PRC section 21084.1 and CEQA Guidelines section 15064.5(a) defines "historical resources." In addition, CEQA Guidelines section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource;" it also defines the circumstances when a project would materially impair the significance of an historical resource.
- PRC section 21074(a) defines "tribal cultural resources."
- PRC section 5097.98 and CEQA Guidelines section 15064.5(e): Set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- PRC sections 21083.2(b)-(c) and CEQA Guidelines section 15126.4: Provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures; preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource." (PRC section 21084.1; CEQA Guidelines section 15064.5(b).) If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA. (PRC section 21084.1; CEQA Guidelines section 15064.5(a).) The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption. (PRC section 21084.1; CEQA Guidelines section 15064.5(a).)

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." (CEQA Guidelines section 15064.5(b)(1); PR Code section 5020.1(q).) In turn, the significance of an historical resource is materially impaired when a project:

(1) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or

(2) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the PRC or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(3) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

(CEQA Guidelines section 15064.5(b)(2).) Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any "historical resources," then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2[a], [b], and [c]).

Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Impacts to non-unique archaeological resources are generally not considered a significant environmental impact (PRC section 21083.2(a); CEQA Guidelines section 15064.5(c)(4).) However, if a non-unique archaeological resource qualifies as tribal cultural resource (PRC 21074(c); 21083.2(h)), further consideration of significant impacts is required.

CEQA Guidelines section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in PRC section 5097.98.

PRC Sections 5024 and 5024.5

PRC Sections 5024 and 5024.5 provide the following guidance:

- 5024 (a–h): Describes the process of inventorying and evaluating state-owned historical resources in consultation with the SHPO.
- 5024.5 (a–g): Describes the process of identifying adverse effects and development of alternatives and mitigation for state-owned historical resources in consultation with, and as determined by, the SHPO.

Review of Projects Affecting State-Owned Historical Resources

Under PRC Sections 5024(f) and 5024.5, state agencies must provide notification and submit documentation to the SHPO early in the planning process for any project having the potential to affect state-owned historical resources on or eligible for inclusion in the Master List (buildings, structures, landscapes, archaeological sites, and other nonstructural resources). Under PRC Section 5024(f), state agencies request the SHPO's comments on the project.

Under PRC Section 5024.5, it is the SHPO's responsibility to comment on the project and to determine if it may cause an adverse effect (PRC Section 5024.5), defined as a substantial adverse change in the significance of a historical resource (PRC Section 5020.1(q)). In this case, historical resources are defined as resources eligible for or listed in the NRHP and/or resources registered for or eligible for registering as a CHL (Messinger 2013).

California Health and Safety Code

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code section 7050.5 requires that if human remains are discovered in any place other than a dedicated

cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (section 7050.5b). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the California Native American Heritage Commission (NAHC) within 24 hours (section 7050.5c). The NAHC will notify the Most Likely Descendant. With the permission of the landowner, the Most Likely Descendant may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the Most Likely Descendant by the NAHC. The Most Likely Descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

Local

City of Fresno Historic Preservation Ordinance

Article 16 of the City of Fresno Code of Ordinance outlines the type of resource that the Historic Preservation Commission may designate, as well as the criteria by which they should be evaluated. The code identifies historic resources as "any building, structure, object or site that has been in existence more than fifty years and possesses integrity of location, design, setting, materials, workmanship, feeling and association, and: is associated with events that have made a significant contribution to the broad patterns of our history, or is associated with the lives of persons significant in our past, or embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master or possesses high artistic values; or has yielded, or may be likely to yield, important information in prehistory or history; and has been designated as such by the Council pursuant to the provisions of this article. (City of Fresno Code of Ordinances, Chapter 16 SEC. 12-1603 (o) - Definitions (Added Ord. 99-50, §§ 1, 2, 9-9-99))."

Section. 12-1607. - Designation Criteria.

The commission shall use the following criteria when deciding whether to designate property or properties as a historic resource:

(a) Historic Resources: Any building, structure, object or site may be designated as an Historic Resource if it is found by the Commission and Council to meet the following criteria:

(1) It has been in existence more than fifty years and it possesses integrity of location, design, setting, materials, workmanship, feeling and association, and:

(i) It is associated with events that have made a significant contribution to the broad patterns of our history; or

(ii) It is associated with the lives of persons significant in our past; or

(iii) It embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master, or possesses high artistic values; or

(iv) It has yielded or may be likely to yield, information important in prehistory or history.

(2) It has been in existence less than fifty years, it meets the criteria of subdivision (1) of subsection (a) of this section and is of exceptional importance within the appropriate historical context, local, state or national.

(b) Local Historic Districts: Any finite group of resources (buildings, structures, objects or sites) may be designated as a Local Historic District if it meets the definition set forth in Section 12-1602(s) of this article, its designation is consented to by the majority of the property owners within the Local Historic District, at least fifty percent of the resources within the proposed Local Historic District are fifty years of age or older, and it is found by the Commission and Council to meet one or more of the following criteria:

(1) It exemplifies or reflects special elements of the city's cultural, social, economic, political, aesthetic, engineering, or architectural heritage, or

(2) It is identified with a person or group that contributed significantly to the culture and development of the city, or

(3) It embodies distinctive characteristics of a style, type, period or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship, or

(4) Structures within the area exemplify a particular architectural style or way of life important to the city, or

(5) The area is related to a designated historic resource or district in such a way that its preservation is essential to the integrity of the designated resource or Local Historic District, or

(6) The area has potential for yielding information of archaeological interest.

(c) National Register Historic Districts: The nomination of any finite group of resources (buildings, structures, objects or sites), including any Local Historic District, to the National Register of Historic Places as a National Register Historic District may be recommended under this article if it meets the definition set forth in Section 12-1602(u) of this article, meets the criteria set forth in subsection (a) of this section, and if the nomination is supported by more than fifty percent of the property owners within the proposed National Register Historic District.

(d) Heritage Properties: Any building, structure, object or site may be designated as a Heritage Property if it is found by the Commission to be worthy of preservation because of its historical, architectural or aesthetic merit.

(e) Contributors to Historic Districts: Any building, structure, object or site may be designated as Contributor to a Local Historic District or a proposed National Register Historic District if it contributes to the significance of the specific Historic District under the criteria set forth above in this section.

(Added Ord. 99-50, §§ 1, 2, 9-9-99)

2 PROJECT CONTEXT

2.1 Environmental Context

Average annual temperatures in the area range between 32 and 102 degrees Fahrenheit. The region is characterized by hot dry summers and wet winters with annual average precipitation of 6 to 10 inches, though may reach 20 inches in wetter years (Johnson, Dawson, and Haslam 1993, Munz 1970).

The land within this area has been farmed and grazed repeatedly, changing the character of the local vegetation. It is in an area that would be characterized naturally as Valley Grassland. The natural vegetation in the area would be bunch grasses such as needlegrass (*Stipa pulchra), S. cernua,* bluegrass *(Poa scabrella),* and poverty threeawn *(Aristida divaricate)*. Grazing and farming have replaced these species with annual species of *Bromus, Festuca,* and *Avena* (Munz 1970).

While the natural landscape of San Joaquin Valley has been modified drastically, native common mammals would have included mule deer (*Odocoileus* sp.), pronghorn (*Antilocapra* sp.), kit fox (*Vulpes macrotis)*, gray fox (*Urocyon cinereoargenteus*), mountain lion (*Puma concolor*) squirrel (*Sciurus* sp.), striped skunk (*Mephitis mephitis*), cottontail rabbit (*Sylvilagus* sp.), black-tailed jackrabbit (*Lepus californicus*), raccoon (*Procyon lotor*), among others. Birds include red-tailed hawk (*Buteo jamaicensis*), white tailed kite (*Elanus leucurus*), American Kestrel (*Falco sparverius),* burrowing owls (*Athene cunicularia)* California quail (*Callipepla californica*), wild turkey (*Meleagris gallopavo*), woodpecker (*Melanerpes*), owl (*Megascops*), turkey vulture (*Cathartes aura*), warbler, and others. Additional animals include a variety of reptiles and amphibians, as well as insects (Schoenherr 1992).

2.2 Prehistoric Context

The below prehistoric context is culturally relevant and has been taken primarily from the *Cultural Resource Inventory and Evaluation of Yokohl Ranch, Tulare County, California* (Hale, Giacinto, and Hanten 2016), with the exception of the Ethnohistoric Northern Valley Yokut section.

Chronology

The following general background of the prehistory of the region includes the southern central San Joaquin Valley. In general, as pointed out by Chatters and Fogerty (2004:4), the archaeology and prehistory of the San Joaquin Valley are not well understood. In addition, much of the archaeological material from the valley area has not been found in context, having been scavenged from the surface and placed in private collections. Early and widespread agricultural use of the valley floor has destroyed much of the bottomland archaeology, and siltation has most likely buried many resources well below the surface sediments. On the valley floor, in the Tulare Lake vicinity, fluted projectile points were found at the Witt Site (Fenenga 1993; Riddell and Olsen 1969), suggesting possible Clovis occupation in the region earlier than 11,000 years ago, during the Pleistocene. Other evidence for Early Holocene occupation around valley lakes has been recovered from Buena Vista Lake (Fredrickson and Grossman 1977; Sutton 1997).

More than two decades ago, a general chronological framework was provided by Moratto (1984) that encompasses the southern San Joaquin Valley as well as the central and southern Sierra Nevada foothills. Since then, numerous additional studies have provided data to supplement and refine this framework (see below for examples). Building on this previous research, the following chronology contains four general time frames with associated periods, dates, and marker traits: Paleoindian (Paleoindian Period), Early Archaic (Early Period), Middle Archaic (Middle Period), and Late Archaic (Late Period). A description of each of these periods is presented below.

Paleoindian Period (ca. 12,000 to 9000 BP)

There is ample evidence of human habitation in the southern San Joaquin Valley dating to approximately 12,000 years ago, although this does not appear to be true in the central and southern Sierra Nevada. While few sites of Paleoindian age have been identified in the San Joaquin Valley, occupation is known to date to at least 11,000 years ago (e.g., Fenenga 1993; Fredrickson and Grossman 1977; Riddell and Olsen 1969; Siefkin 1999; Wallace 1991; Wallace and Riddell 1988). Most of the evidence for a Paleoindian presence in the valley has been limited to surface finds of fluted projectile points (see below), that are typically regarded by North American archaeologists as late Pleistocene early Holocene time markers.

As noted above, the evidence for a Paleoindian occupation in the San Joaquin Valley has been in the form of numerous fluted, concave base (Clovis or "Clovis-like") projectile points, along with other artifacts presumed to be Paleoindian in age (e.g., "humpies" and crescents; see Fredrickson and Grossman 1977; Sampson 1991). Such artifacts have been collected from surface contexts in several locations, most notably from the southern shoreline of Tulare Lake southeast of Mendota. Unfortunately, most of these discoveries have been made by amateur collectors, many of whom were collecting illegally, so virtually no provenance has been provided for these artifacts. This has resulted in an enormous and irretrievable loss of data for understanding the Paleoindian Period in this region.

One of the most significant Paleoindian locations in this region is the Witt Site (KIN-32) on the southwest shore of Tulare Lake, which contained fluted projectile points, scrapers, crescents, and Lake Mojave series points (Moratto 1984:81-82). The Witt Site, at an elevation of 192 feet, signifies a "major lake level for a considerable span of time" (Riddell and Olsen 1969:121). Subsequent archaeological investigations conducted by Fenenga (1993) in the early 1990s near the Witt Site resulted in the recovery of additional fluted projectile points, as well as later types, indicating sustained occupation of the Tulare Lake Basin dating from the Paleoindian Period to contact (also see Gardner et al. 1995; Jennings et al. 1994; Manifold et al. 1995; Tidmore et al. 1994), with the possible exception of a postulated hiatus during the Late Period (see below).

Early Period (ca. 9000 to 6000 BP)

Evidence for the Early Period in the San Joaquin Valley and the southern and central western slopes of the Sierra Nevada is meager. During this period, however, it is believed that human subsistence was based largely on the hunting of large game and fishing (Sutton 1997:12). Grinding implements, such as mortars, pestles,

millingstones, and handstones, appear infrequently during this time in the archaeological record. Other types of artifacts in these assemblages include hand-molded baked clay net weights, Olivella and Haliotis shell beads and ornaments, charmstones, and stemmed projectile points. Bone artifacts are uncommon. Burials are typically fully extended, oriented to the west, and generally have associated artifacts (e.g., quartz crystals). Cremations are rare (Moratto 1984:181–182; Sutton 1997:12).

Two sites that are important for a better understanding of the Early Period on the western slopes of the Sierra Nevada are Skyrocket (CAL-629/930; Bieling et al. 1996; La Jeunesse and Pryor 1998) and Clarks Flat (CAL-342; Milliken et al. 1997; Peak and Crew 1990). The Skyrocket site contained eight components spanning the time between 9400 and 7000 BP, as evidenced by the radiocarbon dates and artifact assemblage (e.g., fluted, stemmed, and Pinto points). La Jeunesse et al. (2004) viewed the Skyrocket site as transitional from Paleoindian to Archaic times, and interestingly, contained some of the earliest evidence of mortar and pestle use in California. The Clarks Flat site produced the earliest radiocarbon date of the two sites at 9,570 ± 150 radiocarbon years before present (RCYBP; Milliken et al. 1997:22) and also contained stemmed points. Despite the evidence from these two sites, however, Delacorte (2001:14) observed that "both the structure and age of early Holocene occupation in the Sierra Nevada and adjacent portions of California have yet to be well defined."

Middle Period (ca. 6000 to 3000 BP)

After about 6,000 years ago, the climate became generally warmer, and there appears to have been fairly substantial use of upland and foothill environments in the central Sierra Nevada during the Middle Period. This time period is characterized by a more generalized subsistence pattern (Moratto 1984:183; Sutton 1997:12). While hunting, fowling, and fishing continue to be the focus of subsistence activities, an increased emphasis on seed processing (particularly acorns) is evident. Artifacts include Olivella and Haliotis beads and other ornaments, distinctive spindle-shaped charmstones, cobble mortars, chisel-ended pestles, and large projectile points (inferring use of the atlatl) (Moratto 1984:183; Sutton 1997:12). Bone tools, such as awls, fish spear tips, saws, and flakers may be evidence of generalized subsistence, but preservation bias (i.e., the lack of these perishable tools in earlier components) may have affected the archaeological record. Burials are tightly flexed and have few associated artifacts. At the same time, there is a slight increase in the number of cremations. Evidence of violent death appears in the burial assemblage, as indicated by disarticulated skeletons with embedded weapon points (Moratto 1984:183).

Wedel's (1941) excavations at Buena Vista Lake, considerably southeast of Mendota, represent the most comprehensive cultural studies in the southern San Joaquin Valley; Middle Period assemblages are the most significant components at the various sites he investigated. Interestingly, many of the artifacts are comparable to those found in the Delta and Santa Barbara Channel regions (Siefkin 1999:56; Wedel 1941:147–151), suggesting possible widespread interaction spheres. It is interesting to note that a human finger bone from KIN-80 on the southwestern shore of Tulare Lake was radiocarbon dated to 4,360 ± 70 RCYBP, representing the only radiocarbon date on human bone in the Tulare Lake Basin and providing

additional direct evidence for occupation in the San Joaquin Valley during the Early Period (Gardner et al. 2005).

Late Period (ca. 3000 to 150 BP)

The Late Period has been postulated to represent the occupation of the ethnographic Yokuts (e.g., Kroeber 1925; Gayton 1948; Latta 1977; Spier 1978a, 1978b; Wallace 1978), although this presumption is based on assemblage composition and must be conditioned by the recognition that artifacts cannot be equated with culture. This is especially true since it is increasingly understood that the high diversity of identified tribes in California may have been a relatively late phenomenon associated with the development of an individualized currency economy (Bettinger 2015).

The Late Period is divided into four phases with associated marker traits: (1) the Early Late Period (3000 to 1500 BP, intensification of acorns, large corner-notched points (Elko series); (2) Late Period Phase 1 (1500 to 700 BP), introduction of bow and arrow, Rose Spring series arrow points, acorn-based economies, extensive trade; (3) Late Period Phase 2 (700 to 300 BP), large middens, Desert series arrow points (Desert Side-notched and Cottonwood types); and (4) Late Period Phase 3 (300 to 150 BP), ethnographic groups, historic trade goods.

During the Late Period in general, subsistence began to focus on the processing of acorns and other costly to process plant foods, with a proportionate decrease in the contribution of hunting, fowling, and fishing (Moratto 1984:183; Sutton 1997:12). Typical artifacts of this period include Olivella beads, Haliotis ornaments, stone beads and cylinders, clamshell disk beads, tubular smoking pipes of schist and steatite, arrow shaft straighteners, flat-bottomed mortars, cylindrical pestles, and small side-notched projectile points for use with the bow and arrow. Burials are often in flexed positions and cremation is more common than during the Middle Period (Moratto 1984:183).

The Late Period is the best represented time period in the San Joaquin Valley. In the adjacent Buena Vista Lake Basin, however, there appears to be a brief hiatus at approximately 2,000 BP, after which time there appears to have been greater activity around lakeshore sites (Hartzell 1992:304–305). Subsequent deteriorating environmental conditions may have resulted in diminished occupation (Hartzell 1992:312; also see Sutton 1997; but for alternative views, see Fenenga [1993] and Siefkin [1999]).

2.3 Ethnohistoric (post-AD 1750) – Northern Valley Yokut

The region surrounding the Project area would have been at the southern extend of Northern Valley Yokut tribal territory during the ethnohistoric period (Wallace 1978). This group inhabited the San Joaquin River watershed and its tributaries extending from Calaveras River in the north to approximately the large bend of the San Joaquin River eastward near Mendota. The lower San Joaquin River meanders through the territory making bends, sloughs, and marshes full of tule reeds as it meanders. Farther from the rivers and marshes, the valley floor would have been dry and sparely vegetated (Wallace 1978, Kroeber 1925).

Northern Valley Yokut habitation areas were most commonly situated in close proximity to the San Joaquin River and its major tributaries, more often on the east side of the river (Kroeber 1925). West of the river populations were much sparser and concentrated in the foothills on minor waterways. This focus on waterways can also be seen in their dietary resources which included various fish, waterfowl, antelope, elk, acorns, tule roots, and various seeds. In particular, and in contrast to their San Joaquin Valley Yokut neighbors, salmon was an abundant food during the fall spawning and in springtime. The focus on fishing is also seen in the material culture consisting of net sinkers and harpoons, likely used from rafts constructed from tule reed bundles (Wallace 1978).

Traditional village were perched on top of low mounds on or near riverbanks. Northern Valley Yokut dwellings were constructed of tule reed woven mats places over a pole frame oval or round structure. They were usually 25 to 40 feet in diameter and would belong to a single family (Wallace 1978). This is in contrast to the larger multi-family dwellings erected sometimes by the Southern Yokuts. In addition to dwellings, earth covered ceremonial sweat lodges were constructed. There was a high level of sedentism due to abundant riverine resources, though there were times of seasonal disbandment for harvesting wild plant resources such as acorns and seeds (Gayton 1948; Kroeber 1925).

The Northern Valley Yokuts saw sharp and devastating decline from disease and relocation to coastal missions nearly immediately after Spanish contact (Osbourne 1992). This only increased with the large influx of cattle ranching and Anglos Americans after the gold rush (Osbourne 1992, Cook 1976).

2.4 Historic Context

The following historic context addresses relevant themes concerning the history of the project site. It begins with the historical development of the Fresno area, starting first with the Spanish period, followed by the Mexican and American settlement periods, a discussion concerning the development of the California State University Fresno campus, and concluding with the history of the subject buildings.

Spanish Period (1769–1821)

In an effort to prevent the establishment of English and Russian colonies in northern Alta California, Don Gaspar de Portolá, the Governor of Baja, embarked on a voyage in 1769 to establish military and religious control over the area in present-day southern California. This overland expedition by Portolá marks the beginning of California's Historic period, occurring just after King Carlos III of Spain installed the Franciscan Order to direct religious colonization in assigned territories of the Americas. With a band of 64 soldiers, missionaries, Baja (lower) California Native Americans, and Mexican civilians, Portolá established the Presidio of San Diego, a fortified military outpost, as the first Spanish settlement in Alta California. In July of 1769, Padre-Presidente Franciscan Fr. Junípero Serra, founded Mission San Diego de Alcalá at Presidio Hill, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823 (Kyle 2002; Lehmann 2000; Koch 1973).

Following the establishment of the Mission San Diego de Alcalá, several exploratory expeditions set out for the central valley during the subsequent exploration of present-day California by the Spanish. The party led by Don Pedro Fages in 1772, and another expedition led by Father Francisco Garces in 1776 both returned with accounts of an arid, nearly inhabitable central valley region peppered with clusters of oak trees and grasslands (Clough 1985). Following such accounts, Spanish occupation of California during the next 30 years remained largely concentrated to the coastal areas, where plentiful Native American populations and resources easily supported the growing Spanish Alta California settlements (Clough 1985).

Efforts to explore and settle the inland areas of the territory were revived again in the early nineteenth century. Lieutenant Gabriel Moraga was one of several such expeditions, and he set out with a small party in 1805 to investigate the central valley. While the exact reason for his investigation is unknown, it is thought to have been to establish the feasibility of extending the Mission system into interior California region (Hoover 1966; Clough 1985). Moraga is credited with the first recorded, non-native contact with two important rivers in the area and their subsequent naming after the saint whose Holy Feast fell upon that day: the Rio de los Santos Reyes (River of the Holy Kings, known today as the Kings River) on January 6th 1805, and the Rio San Joaquin (River of Saint Joachim) on March 20, 1805 (Clough 1985; Kyle 2002). Although Moraga would return to the central valley area in 1806, and the region was further investigated by subsequent exploration missions, no permanent settlements were established during this period (Kyle 2002).

Mexican Period (1821–1848)

After more than a decade of intermittent rebellion and warfare, New Spain (Mexico and the California territory) won independence from Spain in 1821. The extremely polarized political environment placed emphasis on a movement away from Spanish oversight and customs. As a result, expeditions to the interior areas of California changed during the Mexican period. Spanish-era Padres no longer accompanied the Mexican exploration parties as they set out to reconnoiter California, effectively arresting the growth of the California Mission system through stagnation and secularization (Clough 1985). Instead of populating interior California through the Mission system, extensive land grants were established in the interior during the Mexican Period, to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. In present-day Fresno County, 48,800-acres dubbed Rancho Laguna de Tache, was granted to Manuel de Jesus Castro in 1843 by Governor Joseph Manuel Micheltorena, and later confirmed by Governor Pío de Jesús Pico in1846 (Clough 1985). Citing issues with hostile Native Americans in the area, Castro was unable to establish any kind of homestead on the Rancho, effectively failing to comply with the occupation requirements of Mexican colonization laws (Clough 1985).

As no missions or secular settlements were established in the Fresno area of the central valley during the Spanish period of occupation, a small Mexican-era colony called Pueblo de las Juntas is credited with being the first permanent, non-native settlement in the area (Kyle 2002). Located at the historical meeting point of the San Joaquin River and the Fresno Slough (Hoover 1966), the Pueblo became famous as a hideout for fugitives and absconders from the Spanish-settlements to the west (Clough 1985). The area surrounding the

slough was thickly populated by Ash trees, called 'Fresno' in Spanish, effectively introducing the name still used to describe the area today.

Motivated by the lucrative fur trade, Americans made their way into Mexican California as early as the 1820s (Clough 1985). The first American to reach Fresno County was a young trapper named Jedediah Strong Smith and his party of 18 men. Following a brief detention at Mission San Gabriel by Mexican authorities, Smith arrived in the present-day Fresno county area in early 1827 and found the region to be extremely profitable for trapping beaver and otter (Clough 1985). Smith's party continued north, eventually making their way to present-day Vancouver, Washington where they sold the pelts they had collected to the Hudson's Bay Company for a sizable profit. The sale of these pelts alerted the British company of the fine quality of furs in the California, prompting the Hudson's Bay Company to send out multiple parties of trappers to the region between 1827 and 1846 (Kyle 2002).

As outsiders became aware of the rich California landscape, other American adventurers filtered through the area, and subsequently made their way to the present-day Fresno region. The accounts recorded by these explorers offer early descriptions of the central valley and Sierra foothills area just prior to its incorporation into the United States. Notably, these accounts describe the widespread grasslands, healthy rivers, extensive wetlands and what was then the largest standing body of fresh water west of the Mississippi, Tulare Lake (Fresno Historical Society 2018). The accounts also describe the noticeable decline of the Native American population due to disease brought into the area by white explorers (Kyle 2002).

American Period in Fresno (after 1848)

The Mexican–American War ended with the Treaty of Guadalupe Hidalgo in 1848, ushering California into its American Period. California officially became a state with the Compromise of 1850, which also designated Utah, New Mexico and Arizona as U.S. territories. Fresno was not included as one of the original 27 counties designated in 1850 in California, but rather, among the 16 counties formed by the subdivision of these 27 between 1850 and 1860. The U.S. Government and the new State of California recognized the ownership of lands distributed under the Mexican Land Grants of the previous several decades, including Rancho Laguna de Tache in Fresno (Clough 1985).

Just prior to statehood, the discovery of Gold in California in 1848 triggered a massive migration of people seeking gold and prosperity into the rural, interior counties throughout California. Approximately 40,000 people entered California though the San Francisco Harbor in 1849 (Morgan 2018). It is unclear when exactly miners arrived in present-day Fresno County, but French journalist Etienne Durbec recorded the first written description of two mining camps, Oro Grosso (*course gold*) and Oro Fino (*fine gold*) in operation in the area in 1850, suggesting that miners were in the area by 1849 (Clough 1985).

Around 1850, a rough stage coach road at the foot of the Sierra Nevada Mountains between Stockton and Los Angeles was completed, allowing greater mobility to the area (Clough 1985). The vast wetlands, rivers and tributaries however, were subject to sudden and frequent floods. For this reason, the road included an

upper and lower detour to reach the safety of bridge/ferry crossing points established by private opportunists seeking to capitalize on increased traffic.

As people poured into the area, communities and trading posts materialized in the mining areas surrounding the Fresno, San Joaquin and Chowchilla Rivers. By August 1852, the *San Francisco Daily Herald* reported that "There are about a thousand miners on the San Joaquin [River] at present, who are, as a general thing, averaging moderate wages…On the Frenso [River], where the bars can be worked, men earn from $10 to $16 a day […]" (*San Francisco Daily Herald*, August 8, 1852 as quoted in Clough 1985; 54).

The local Native American population was vehemently resistant to the sudden and explosive intrusion of foreigners, and responded with violent attacks on the burgeoning settlements and mining camps. The U.S. Government sent soldiers to respond to the ongoing conflicts, and Fort Miller (originally Camp Barbour, then Camp Miller) was established in 1851 as a result of this effort. The first school in present-day Fresno County was established in the hospital at Fort Miller in 1860 (Kyle 2002).

Another important settlement, Millerton, renamed as such from Rootville after the proximate Miller Fort, was established in 1851 on the south bank of the San Joaquin River following the discovery of gold there (Kyle 2002). Millerton emerged as an important locale and when Fresno County was organized in 1856, it became the seat of County government (OHP 2018).

Although Tulare and Merced Counties were formed in 1852 and 1855 (respectively) from portions of the original mammoth Merced County, residents of Millerton and nearby settlements still found it difficult to travel across the dangerous terrain to the county seats to conduct business (FCGWP 2016). As a result, Fresno County was organized from a combination of Mariposa, Merced, and Tulare County territory in April of 1856.

Following the establishment of Fresno County, a small city called Fresno was established on the south branch of the San Joaquin River in 1858. This strategic location for Fresno City was chosen because of its proximity to the river, allowing for easy steamboat and barge access, as well as its position on both the Butterfield Overland Mail route and the projected transcontinental telegraph line. Despite these promising prospects, the City of Fresno was all but abandoned by the close of the American Civil War in 1865 (Kyle 2002). The name 'Fresno', however, was not deserted. The ensuing decade would see it applied to a new community to the east, "…one that had much less promise, but as it turned out, a far greater future (Kyle 2005; 'Fresno City')."

The Central Pacific Railroad (now the Southern Pacific Railroad) began construction of a rail line in the San Joaquin Valley late in 1869 as part of the transcontinental railroad effort. Directors of the project identified the need for a town to be laid out near the center of the valley as a major stop along the route. The director of Central Pacific Railroad, Leland Stanford, visited the A.Y. Easterby Ranch on a prospecting tour of the area in 1871. The A.Y. Easterby Ranch was a section of land that received irrigation waters form the Kings River through an innovative canal system designed by Moses Church (GHAFC 2010). He was so impressed by the success of the wheat field he encountered on the Ranch and its opposition to the otherwise austere, surrounding prairie-lands, that he chose it for the site of the future city (Clough 1985).

The Contract and Finance Company, the Central Pacific's real estate subsidiary, quickly purchased 4,480-acres of land to the west of the Ranch that Stanford had visited and near to the projected rail line route. Several months later, the rail construction reached the newly purchased land, finished a rail bridge across the San Joaquin, and built followed by turning tables and a depot. The town was surveyed into 320- by 400-foot blocks with 25- by 150-foot lots that were offered for sale starting in June, 1872. The town of Fresno advanced quickly from this point. By November 1872, "Fresno had four hotels and restaurants, three saloons, three livery stables, two stores and one or two houses, with many railroad workers living in tents (Clough 1985; 121)."

By 1873, regular rail service was in operation between Fresno other cities in California and the Eastern United States. As it became clear that Fresno was growing rapidly, a dialog began about moving the County seat from Millerton to Fresno. An election followed in 1874, naming Fresno the new County seat, accelerating the growth of the young town as residents from Millerton moved to Fresno and established businesses there. An 1874 informal census "…counted four general stores, two fruit stores, one drugstore, three hotels, two restaurants, two livery stables, six saloons, two law offices, two physicians, one tinsmith, one saddle shop, two butcher shops, three blacksmiths, one tailor, the *Expositor,* and twenty-five private residences (Clough 1985; 122)."

The coming of the railroad in 1872 and the passing of the February 4, 1874 California Legislative Act, known as the "no-fence law", signaled an economic shift to farming from cattle grazing, which had been the predominate industry of the San Joaquin Valley to date (Ludeke 1980). In addition, efforts to irrigate the Valley, such as the canals innovated by Moses Church, were expanded by entrepreneurs such as Henry Miller into large-scale projects following the introduction of the Central Pacific route through Fresno. Their efforts into projects like the San Joaquin Canal made the cultivation of this extremely arid area possible, and by 1887, the county had a system of canals in place that could service 610,000-acres of farm land (Kyle 2002). Agriculture quickly emerged as a powerhouse industry in Fresno, and to date, claims a spot as one of the nation's leading grape, fig, raisin, and cotton production regions (Kyles 2002).

Early Development of Education in Fresno

As the town of Fresno ballooned in the early 1870's, there became an urgent need to develop schools. There were approximately 80 school-aged children living in Fresno by 1872. The first school district was formed early in 1873, and even with a block of donated land from the Central Pacific on which to build a school, the bond measure to fund the project failed. After a reorganization of the district in 1874, a $4,000 bond measure passed and Fresno constructed its first, 50-student school house by January of 1875. Being too small to house the existing number of school-age children in Fresno, the new school facilities reached full capacity by 1878, and it quickly became clear that expanded school facilities would be necessary. With approval from the State Legislature, the Fresno School District issued an additional $15,000 in bonds that went towards the construction of a new, 400-student facility called the Central School, which opened in 1879. This building was colloquially referred to as the "White" or as the "Hawthorne" (Clough 1985).

The Central School reached capacity by 1885, and only offered a handful of secondary school subjects for students (Clough 1985; FHAA 2018). The need for an additional facility arose and by 1889, Fresno High School was organized as the first secondary school in Fresno County. After several moves between buildings, the 400-student capacity Fresno High School opened at its current location in September of 1896. The new brick building with its characteristic central clock detail cost $53,000 to construct and featured a library, a gymnasium, a lecture hall with theatre, and a chemistry lab (FHAA 2018).

The Fresno High School building would be the founding site of two more important educational institutions in not only Fresno history, but also State history. The Fresno Junior College, the oldest two-year college in California history, was established in 1910 on the campus shared Fresno High School campus. Fresno State Normal School (renamed Fresno State Teachers College in 1921, then Fresno State College in 1935, then California State University Fresno in 1972) also began on the Fresno High School campus in 1911 as an accreditation school for young teachers (Kyle 2002; FHAA 2018).

Historical Overview of California State University, Fresno

The State Normal School system was a State-accredited teacher training program overseen by the State Division of Education. Fresno State Normal School was the fifth such school established under this system, following the formation of institutions in San Jose (1862), Chico (1887), San Diego (1897) and San Francisco (1899) (CSU NoDate).

After operating out of the Fresno High School building for two years, the Fresno State Normal School moved to a new campus on University Avenue in 1913. Plans for the construction of an Administration Building were soon underway in the new location. The Lombard-style brick Administration building was designed by State architect George MacDougall and was completed in 1916. It housed a library, an auditorium, offices and classroom space (Seacrest 2011).

In 1921, the State of California renamed all State Normal Schools to "Teachers Colleges." Also during this year, the Fresno State Teachers College graduated from a two-year to a four-year institution, and was authorized to grant Bachelors of Arts degrees in Teaching (Fresno State 2018a). Social Sciences classes were added to the curriculum at this time, followed by engineering courses in 1922, and Agriculture and Biology courses in 1925 (Seacrest 2011; Fresno State 2018b).

As a result of these new disciplines being added to the curriculum at Fresno State Teachers College, the name of the School was officially shortened to Fresno State College in 1934. The student body and the curriculum began to show signs of growth beyond the limits of the relatively small 1913 campus. For example, the campus lacked the space for a hands-on training facility for the Agriculture and Biology courses. The Millbrook Farm, a site located approximately three miles southwest of the present campus site, was rented to serve as a self-sustaining, vocational agriculture and farming classroom in 1937 (Seacrest 2011; Fresno State 2018b). The Millbrook Farm proved to be an extremely successful venture, and in the first year alone, the farm produced $7,000 worth of agricultural product (Seacrest 2011). The Millbrook Farm expanded quickly to cover 132-

acres of farmland located on several sites, none of which was actually owned by Fresno State College (Seacrest 2011).

World War II and mandatory food rationing efforts amplified the need for the Fresno State Agriculture and Biology program, as domestic agronomic production was essential to victory abroad. Courses in food processing techniques, canning and victory garden care were offered by the College to the public during this time (Seacrest 2011).

By the close of the war, a permanent site for the vocational farming enterprise was still yet to be purchased. In 1946, the Fresno State Foundation purchased a 320-acre portion of the William Helm Estate, located at Shaw and Cedar Avenues, in hopes that it could become the new college farm. However, the following year in 1947, Hammer Field, a former Army Air Corps base in Fresno stood vacant after the close of the war, and was also identified as a suitable location for the new farm, and was purchased by Fresno State. Farming activities relocated there from Millbrook Farm between 1947 and 1954. Also during this time, the Six Counties Agricultural Advisory Committee, an advisory committee formed to identify land for permanent use by farming programs at colleges, began purchasing farm parcels north of the Millbrook Farm site (Seacrest 2011; Fresno State 2018b).

After determining that further expansion of the 1913 University Avenue campus would be cost prohibitive, the Fresno State Administration set its sights on a new campus site altogether which would allow the college enough space for future expansion. The College focused on the portion of the Helm Estate purchased in 1946, as well as the parcels in this area purchased by the Six Counties Agricultural Advisory Committee, and through the consolidation of these lands, the heart of the present-day Campus of Fresno State was formed. This new campus would allow for the occupational farm site to exist alongside the remainder of Fresno State College (Seacrest 2011).

Ground was broken on the new campus in 1950, overseen by Governor Earl Warren. An article appeared in the Fresno Bee The Republican in November 1951 which stated, "The new Fresno State College campus at Shaw and Cedar Avenues is being constructed on an expandable plan which will permit the addition of buildings to accommodate 5,000 students by 1960…It is now estimated that the completed project will cost between $15,000,000 and $20,000,000 to be financed over a period of approximately 10 years (FBR 1951)."

The majority of the core campus buildings were completed in the period between 1953 and 1960; the College Laboratory School, Music Building, and Agricultural Mechanics Building in 1953; Administration Building, Men's Gymnasium and Industrial Arts Building in 1954; McLane Hall, Education-Psychology Building and Library in 1955; Campus Agricultural Laboratory (farm), Women's Gymnasium, Cafeteria, and College Bookstore in 1956; Engineering Building, Business Building, and official campus dedication in 1958; Baker Hoffman and Graves Residence Halls in 1959; and the Social Sciences Building and Speech Arts Building in 1960 (Seacrest 2011).

By 1961, the college became a charter member of the California State University and College System. Building and development continued on campus throughout the 1960s, and in 1972 the college became known as California State University, Fresno. Currently, the main campus contains 388-acres, and 1,011-acres of farm land (Fresno State 2018c).

Keats Building (1956)

The building known today as the Keats Building opened in March, 1956 as the Fresno State College Bookstore. The building was designed by Civil Engineer, Hugh B. Brewster. Its original design included 6,000 square feet of space for use as retail and display, offices, and receiving and storage. The building was completed for under $100,000, owning in part to the reuse of fixtures and bookcases salvaged from the Student Union on the University Avenue campus. An extension to the building, also designed by Hugh B. Brewer, was added to the rear of the building in 1959 to allow for added storage space (Seacrest 2011; Brewster 1956; Brewster 1959).

When a new, three-story campus bookstore was completed in 1970, it rendered the original bookstore obsolete. It was at this time that the building was renamed the Keats Building, after a street located to the south of the building, Keats Avenue (Seacrest 2011; Special Collections Research Center 2018).

Amphitheater (1963)

The Amphitheater was completed in the spring of 1963 as a space to hold commencement ceremonies and other general assembly activities. It was formally dedicated during the school's second annual President's Convocation on April 25th, 1963. The 30-foot by 50-foot stage and the 5,000-person, outdoor graded Amphitheater facility were designed by the Fresno State College, and completed by grounds and maintenance staff personnel (FSC 1963; FBR 1963a; FBR 1963b).

3 BACKGROUND RESEARCH

3.1 CHRIS Records Search

Dudek requested a CHRIS records search from the Southern San Joaquin Valley Information Center (SSJVIC), which houses cultural resources records for Fresno County. Dudek received the results on October 10, 2018. The search included any previously recorded cultural resources and investigations within a one half-mile radius of the subject property. The CHRIS search also included a review of the NRHP, the CRHR, the California Points of Historical Interest list, the California Inventory of Historic Resources, the California Historical Landmarks list, historical maps including rancho plat maps, and local inventories. The results of this records search are provided in Confidential Appendix D of this report.

Previously Conducted Cultural Resources Studies within ½-Mile of the Project Site

No previously recorded cultural resources were identified within the project site. However, 10 previously conducted studies were identified within the 0.5-mile record search buffer (Table 1).

Table 1. Previously Conducted Cultural Resources Studies Within ½ Mile of Project Site

SSJVIC Report No.	Title of Study	Date	Author(s)
FR-00762	60 Acres for California State University, Fresno New Stadium Location	1975	Varner, Dudley M.
FR-01913	Cultural Resources Assessment for Pacific Bell Wireless Site CV-542-05	1999	Gerry, Robert A.
FR-01960	Section 106 Review of the Proposed Bechtel Corporation and AT&T Wireless Services Project "CSUF," Located at the CSUF Campus on Barstow Avenue, Fresno, Fresno County, California	2002	Moore, Holly D. and Wilkins, Brett
FR-02014	Record Search and Site Visit for Cingular Telecommunications Facility Candidate CV-762-04 (Super 8 Motel), 2655 East Shaw Avenue, Fresno, Fresno County, California	2003	Dice, Michael
FR-02063	Request for SHPO Review of FCC Undertaking (Bullard/CA-1455A)	2004	Billat, Scott
FR-02161	New Tower Submission Packet, FCC Form 620 for Bullard, CA-1455F	2006	Billat, Lorna
FR-02427	Results of Architectural History Survey for Verizon Cellular Communications Tower Site	2011	Pecora, Meredith
FR-02510	Cultural Resources Investigation for AT&T Mobility CV0554 "Fresno State Pump House" 5241 N. Maple Ave., Fresno City and County, California 93720	2012	Losee, Carolyn

Table 1. Previously Conducted Cultural Resources Studies Within ½ Mile of Project Site

SSJVIC Report No.	Title of Study	Date	Author(s)
FR-02559	Cultural Resources Records Search and Site Visit Results for T-Mobile West, LLC Candidate SC08542A (Cal State Fresno), 2255 East Barstow Avenue, Fresno, Fresno County, California	2012	Peterson, Cher L. and Crawford, Kathleen A.
FR-02578	Cultural Resources Investigation for AT&T Mobility CN2713 "Willow Ave and Gettysburg Ave." 2655 East Shaw Avenue, Fresno City and County, California	2013	Losee, Carolyn

Previously Recorded Cultural Resources within ½-Mile of the Project Site

No previously recorded cultural resources were identified within the project site as a result of the records search. Three (3) previously recorded resources (Table 2) were identified within 0.5-mile of the project site. The closest resource to the project area is P-10-000514 (a prehistoric groundstone site), located 350 feet southwest of the project site.

Table 2. Previously Recorded Cultural Resources Within ½ Mile of the Project Site

Primary Number	Trinomial	Resource Name/Description	Recorded By/Year	NRHP/CRHR Eligibility Status	Proximity to Project Site
P-10-000514	CA-FRE-000514	Prehistoric: AP16 (Other), several handstones and grinding stones	Not Provided	7: Not Evaluated	Outside
P-10-005995	None	Historic: HP11 (Engineering Structure), California State University, Fresno Water Tower	2010 (URS Corp.)	7: Not Evaluated	Outside
P-10-006151	None	Historic: HP8 (Industrial Building), California State University, Fresno Pump House	2012 (Dana E. Supernowicz, Historic Resource Associates)	7: Not Evaluated	Outside

3.2 Native American Correspondence

The NAHC was contacted by Dudek on October 17, 2018 to request a search of the Sacred Lands File for the proposed project site and a one half-mile surrounding area. The NAHC responded on October 30, 2018 indicating that the search failed to identify any Native American resources in the vicinity of the project or surrounding search area. The NAHC also provided a list of individuals and organizations to contact that may have additional information. Letters were sent to each of the contacts to request information on resources in

the area on November 30, 2018. To date, no responses have been received. Any responses will be forwarded to the lead agency.

All NAHC and tribal correspondence documents are included in Appendix A. Fresno State is responsible for notification and consultation with geographically affiliated tribes concerning tribal cultural resources for the purposes of Assembly Bill 52 (AB 52). All correspondence and any subsequent consultation pertaining to AB 52 are on file with Fresno State.

3.3 Building Development Research

Fresno State Special Collections

Dudek reviewed multiple files of paperwork and photographs pertaining to the Keats Building, the Amphitheater and the overall development of Fresno State. The files contained multiple newspaper articles, campus maps, photographs, letters, and campus reports that were used in the preparation of this report.

Fresno Historical Society

Dudek contacted the Fresno Historical Society on October 30th, 2018, requesting any information regarding the subject buildings. Katy Hogue reviewed the Fresno Historical Society archives and stated that she did not have any information regarding the property.

Guide to Historic Architecture in Fresno, California

Dudek contacted Kevin Enns-Rempel of Guide to Historic Architecture in Fresno, California, via email and inquired about the subject buildings on the Fresno State Campus. Mr. Enns-Rempel responded that neither building is listed on a local, State or National register and that the repository therefore held no further information pertaining to the buildings.

Historical Newspaper Review

Dudek reviewed historical newspapers from Fresno in an effort to understand the development of the subject property and the two subject buildings. These documents were essential in establishing a history of the property and were used in the preparation of this report.

Historical Aerial Photograph and Topographic Map Review

Historic aerial photographs of the project site were available from National Environmental Title Research, LLC. (NETR) for the years 1962, 1972, 1998, 2002, 2005, 2009, 2010, 2012, and 2014 and from the University of California, Santa Barbara (UCSB) FrameFinder Maps for the years 1936, 1957, 1961, and 1965. The earliest available aerial photograph is from 1936, and showed the site dominated by open farmlands. There were few buildings located in the surrounding area beyond small farmhouses and outbuildings. The 1957 aerial photograph indicates that development had increased in the area with the subdivision of several plots of

farmland into planned residential developments. Fresno State had begun construction of multiple large-scale campus buildings, including the University Center building and the Keats building. Development around the site continued in 1961 and 1962 when apartment houses were constructed south of the campus, and the site for the Amphitheater was beginning to be developed. The 1965 and 1972 aerials show a continuation of the loss of farmland in replacement of planned residential developments. By the 1965 photograph, the Amphitheater building and lawn had been developed and in the 1972 aerial, the University Student Union building had been constructed, as well as multiple campus buildings to the north. By 1998, development around and on the campus erupted, with the majority of the surrounding farmland erased by residences and development of the Sierra Freeway. In the 2002, 2005, 2009, and 2010 aerials there was little change on the campus and the surrounding areas except for the construction of the Sierra Freeway. In the 2014 aerial, several new small-scale campus buildings were constructed, while the surrounding area remained dominated by planned residential developments and several plots of open farmland to Fresno State's north and northeast (NETR 2018; UCSB 2018).

4 FIELD SURVEY

Dudek Architectural Historian Fallin Steffen MPS, conducted a pedestrian survey of the project site on October 26, 2018. The survey entailed walking all portions of the exterior of the property and documenting the buildings with notes and photographs, specifically noting character-defining features, spatial relationships, observed alterations, and examining any historic landscape features on the property. The project site includes a single-story, masonry building (Keats) and a graded, outdoor Amphitheater in the south-central section of a fully developed college campus. The survey entailed walking all sides of the Keats building and Amphitheater, as well as the surrounding campus.

Dudek documented the subject property using field notes, digital photography, and close-scale field maps. Photographs of the project site were taken with a Nikon COOLPIX B500 digital camera with 16 megapixels and 40x optical zoom. All field notes, photographs, and records related to the current study are on file at Dudek's Santa Cruz, California, office.

In addition, Dudek archaeologist William Burns conducted a pedestrian survey of the project site on November 7, 2018. All fieldwork was performed using standard archaeological procedures and techniques that meet the Secretary of the Interior's standards and guidelines for cultural resources inventory and evaluation (48 FR 44720–44726). The Project APE was subject to a 100% survey with transects spaced no more than 15 meters apart. A series of overview photographs was taken to document the current conditions of the APE. Location-specific photographs were taken using an Apple iPad equipped with 8-megapixel resolution and georeferenced PDF maps of the project site. Evidence for buried cultural deposits was opportunistically sought through inspection of any natural or artificial erosion exposures and the spoils from rodent burrows. No archaeological resources were observed during the survey.

4.1 Description of Surveyed Resources

Keats Building

The Keats Building is a one-story, modest Contemporary style, educational building. The building is rectangular in plan and sits on a concrete slab foundation. The building is constructed of reinforced basalite concrete masonry units (CMU) in a stack bond pattern. The masonry and structural components are painted, as are the window frames and several exterior doors. The shallow pitch of the side-gabled, white rock composition roof is supported by exposed, angle-cut, laminated wood beams which help to accentuate and defines the long, low, structural form of the building. The distinct bays of the building are differentiated by their juxtaposition of materials, such as a wall of floor-to-ceiling, metal framed windows beside a flush, CMU wall. Overall, without much decoration or ornament, the building relies only on these distinct bays to emphasize the horizontal massing of the building. Window types on the building vary and include both original, fixed, metal frame picture windows with a horizontal lite above two larger, vertical lites, as well as

non-original, fixed, square metal windows. Door styles also vary throughout the building, from single hollow metal doors to double full-lite automatic doors.

When the existing building is compared to the 1956 architectural drawings, it becomes evident that several alterations have occurred over the years. The most significant change to the building is a 1,500-sq. ft. extension added to the south elevation in 1959. Alterations to fenestration include the addition of windows, alteration of openings, insertion of doors, and replacement of doors. Other alterations include painting of the originally exposed exterior concrete block. Additional observations regarding alterations to the building are included following the elevation descriptions, below.

North (Main) Elevation

The main elevation (Figure 3) of the Keats Building faces north towards the fountain and features two unequally-sized masonry bays flanking a recessed entryway with an exposed pea gravel aggregate terrace. The left side masonry bay features two, side-by-side metal framed, fixed windows comprised of a narrow horizontal lite above a square lite above a projecting concrete sill.

Moving around the corner, an original metal frame full-lite door with an inoperable transom above fills the span created by the recessed entryway. The entryway area itself contains two, full-lite, metal framed, bi-part, Besam brand, automatic sliding doors with fixed sidelights. A curtain wall of fixed metal framed windows, composed of a narrow, horizontal lite above a tall vertical stretches across recessed entryway, framing in the automatic door and demarcating the entryway from the remaining masonry construction on this façade. Vertical wood siding fills the space between the windows and the enclosed eaves in this section only.

The remaining masonry bay on the right side of this elevation features a low, built-in planter box stretching the length of the bay. It is constructed of the same basalite CMU as the building and is topped with a flat concrete cap. This section of the elevation contains two, fixed square windows and a simple letter signage affixed to the right top corner of the façade, reading 'Keats Building'.

Figure 3. North (Main) Elevation, view to southwest, DSCN2275

West Elevation

Moving around the building to the right, the west elevation (Figure 4) is comprised of two sections; a wide CMU section complete with a sampling of original and non-original windows and doors of various shapes and sizes; and the recessed area created by the 1959 addition to the south face of the building. Fenestration on the original section appears as follows (left to right): a pair of non-original grouped windows with reflective glass set in a metal frame; a metal utility housing box; another pair of non-original grouped windows with reflective glass in a metal frame; a full-lite metal framed door with a blue canopy and reflective glass; two louvered vents above two more louvered vents; a single hollow metal door; a two-sided metal frame casement window with an operable left side and a projecting concrete sill; another two-sided metal frame casement window with an operable right side and a projecting concrete sill. The 1959 recessed section of the building includes a single, hollow metal door beside two stacked square windows forming a side-lite, all encompassed in the same metal surround.

Figure 4. West Elevation, view to east, DSCN2277

South Elevation

The majority of the south elevation (Figure 5) is comprised of the 1959 addition to the building, except for the right-most, recessed section belonging to the original design. As such, the laminated beams across this façade differ in shape slightly from those visible on the north façade, and the width of the fascia board differs slightly. Fenestration across this elevation is relatively simple and includes a pair of non-original grouped windows with reflective glass set in a metal frame; a tall side-lite window beside a single, hollow metal door in a shared metal frame; a fixed square window; another fixed square window.

Figure 5. South (Rear) Elevation, view to north, DSCN2171

East Elevation

The east elevation (Figure 6) exhibits signs of both the 1959 addition, evidenced by the uninterrupted masonry section, and the original 1956 symmetrical section. The windows on this elevation are all original windows, which have been augmented with a reflective film on the glass, including: a pair of casement windows, each featuring a narrow, horizontal lite above two lites within a metal frame. The outermost lite of each of the lower sections of these windows is an operable casement window; a group of three windows with a horizontal lite above two vertical lites. The central window is completely fixed, while the flanking windows feature operable casement windows in their outermost, lower sections; another set of two casement windows, each featuring a narrow, horizontal lite above two lites within a metal frame. The outermost lite of each of the lower sections of these windows is an operable casement window.

Figure 6. East Elevation, view to southwest, DSCN2201

Identified Alterations:

The following exterior alterations were either confirmed by University building records or identified visually during the pedestrian property survey. Unless otherwise noted, no information pertaining to the exact dates of these alterations is available:

- 1959: 1,500-sq.ft. southern addition
- Addition of an automatic sliding door system on main elevation entry
- Addition of two fixed square windows on the main elevation
- "BOOKSTORE" signage located on the upper left-hand corner of the right-side broad masonry wall on the main elevation moved to the right side of wall and now reads "KEATS BUILDING"
- Addition of four windows and two doors to the west elevation
- New gutter system on north and south elevations
- Painting of the original exposed CMU and aluminum fascia surface

Amphitheater

The subject property is a one-story, open concrete platform Amphitheater, covered by a metal canopy roof. The Amphitheater seating area consists of a graded, grass field delineated by concrete dividers forming equally spaced rectangular sections. When the existing stage building is compared to the 1963 architectural drawings, and contemporary photos, it becomes clear that several alterations and expansions of this resource have occurred over time. General alterations include the expansion of the stage size from the original 30-ft by 50-foot design, replacement of stage decking with concrete, the addition of a metal canopy over the stage in 1980, augmentation of supports and stairs with concrete, and the addition of metal stair railings and metal barricades along the front of the stage.

The Amphitheater is approached from the west by a concrete walkway leading to a set of seven, low-rise steps. Flanking the main entry approach are two concrete planters that follow the hill's slope upwards, with a wooden board with metal letters spelling out "AMPHITHEATER" on both. Spanning the walkway between both planters is a non-original metal frame arbor with light posts behind it at either end (Figure 7).

Figure 7. Entry Approach, view to east, DSCN2214

The entry stairs lead to a graded, open grass field outlined by a grid of concrete. The field is divided by four concrete walkways that run east to west, angled inwards in the direction of the Amphitheater platform stage. The lawn is further divided by twenty-three thin concrete delineators running north to south, creating a series of twenty-four grass sections for seating up to 5,000 people (Figure 8).

Figure 8. Lawn, view to southwest, DSCN2207

The Amphitheater is raised approximately five feet from the lawn seating area and is approached by a concrete walkway running north to south. Centered along the walkway, the front of the Amphitheater's stage features a smooth concrete battered wall flanked on either side by a set of seven steps with simple, removable, metal pipe handrails set into a hill (Figure 9).

Figure 9. Main Elevation of Stage, view to east, DSCN2245

At stage level, the flooring consists of a poured in place concrete platform that is rectangular in shape and accessed by a single step, with a series of simple metal pipe barricades along the front (western) end. A five-sided polygonal shaped corrugated meatal canopy covers the majority of the stage and extends out several feet beyond its front. The canopy is held up by four rectangular metal posts, the front two posts feature additional metal cross arm supports with a five-sided metal frame above which mirrors the shape of the roof. The frame supports the metal truss roofing system which consists of criss-crossing, thin metal members attached to the corrugated metal roof (Figure 10). At the rear (eastern) end of the roof is a small square opening cut into the corrugated metal. The back of the concrete stage leads to a concrete walkway which runs north to south and provides access to the platform from the driveway to the north and the walkway to the south.

Figure 10. Side View of Truss System, view to northeast, DSCN2206

Identified Alterations:

The following exterior alterations were identified visually during the pedestrian property survey. Unless otherwise noted, no information pertaining to the exact dates of these alterations is available:

- 1980: Original stage has been demolished and a new, expanded concrete stage with a trapezoidal roof structure built in its place
- A metal trellis structure added to the concrete planter boxes present at the entrance to the Amphitheater

5 SIGNIFICANCE EVALUATIONS

The following provides an evaluation of the Keats Building (1956) and the Amphitheater (1963) located in the central-southwestern area of the Fresno State campus, in consideration of NRHP, CRHR, CHL and City of Fresno designation criteria and integrity requirements. The full set of Department of Parks and Recreation Series 523 Forms (DPR forms) for each building is provided in Appendix B.

5.1 NRHP/CRHR Statement of Significance

Keats Building

Criterion A/1: That are associated with events that have made a significant contribution to the broad patterns of our history.

Archival research did not find any associations with events that have made a significant contribution to the broad patterns of local or regional history. The Keats Building was designed by Civil engineer Hugh B. Brewster as the first campus bookstore in 1956, in the midst of the Fresno State College era. It was neither the first, last, nor only building constructed during this time on the new campus, nor was it the first, last or only building constructed during the period in the Contemporary style on campus. While Fresno State played an important role in shaping the City of Fresno, the Keats Building was not the cause of that influence, but rather the effect of the increasing numbers of individuals seeking higher degrees in the Fresno area. This eventually led to the development of the new Fresno State College campus, of which the subject building is a part. While a Bookstore is arguably a very significant campus building, the economical size of the Keats Building's design caused almost immediate issues from a functional use standpoint, and as such, a new campus bookstore was designed to replace it in 1970. The construction of this new Bookstore relieved the Keats Building from its originally intended function only 14 years after its completion, severing the building's connection to the early development phase of the new campus. Therefore, due to a lack of identified significant associations with events important to history, the subject property does not appear eligible under NRHP/CRHR Criterion A/1.

Criterion B/2: That are associated with the lives of persons significant in our past.

Archival research did not indicate any associations with persons important to the nation's or state's past. Therefore, the subject property is recommended not eligible under NRHP/CRHR Criterion B/2.

Criterion C/3: That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

The Keats Building was designed in the Contemporary style by a local Fresno Civil Engineer named in Hugh B. Brewster in 1956. The building still embodies a number of its modest Contemporary style characteristics,

such as exposed roof beams beneath wide eaves, a low pitched gabled roof, recessed entryway and broad, uninterrupted wall surface. However, the building was subjected to a number of substantial exterior alterations over the years, including insertion of windows and doors, replacement of original exterior doors, painting over the exposed concrete block walls, and the 1,500-sq. ft. addition onto the southern end in 1959. The Keats Building does not possess high artistic values, particularly in comparison to other Contemporary style buildings in the area. It is also not the work of a master architect. Therefore, the subject property is recommended not eligible under NRHP/CRHR Criterion C/3.

Criterion D/4: That have yielded, or may be likely to yield, information important in prehistory or history.

There is no evidence to suggest that this property has the potential to yield information important to state or local history. Therefore, the property is recommended not eligible under NRHP/CRHR Criterion D/4.

Amphitheater

Criterion A/1: That are associated with events that have made a significant contribution to the broad patterns of our history.

Archival research did not find any associations with events that have made a significant contribution to the broad patterns of local or regional history. The Amphitheater was not completed during the initial 1953 to 1960 construction period of the new Fresno State campus. It was completed in 1963 in the midst of the Fresno State College era, but was neither the first, last, nor only building constructed during this time. The Amphitheater was originally designed as a venue for College commencement ceremonies which are now held at the Bulldog Stadium on campus to allow for increased numbers of attendees. Therefore, the Amphitheater no longer serves its original function on Fresno State campus. Due to a lack of identified significant associations with events important to history, the subject property does not appear eligible under NRHP/CRHR Criterion A/1.

Criterion B/2: That are associated with the lives of persons significant in our past.

Archival research did not indicate any associations with persons important to the nation's or state's past. Therefore, the subject property is recommended not eligible under NRHP/CRHR Criterion B/2.

Criterion C/3: That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

The Amphitheater embodies a few characteristics of a traditional amphitheater, including the *cuneis*, or the wedge shaped seating areas created by horizontal walkways called *diazoma,* but due to significant alterations and expansion campaigns, the Amphitheater stage, no longer resembles the 30-ft by 50-ft simple platform stage that was completed as part of the original design in 1963. The current structure measures approximately

90-ft across the front of the large, trapezoidal concrete platform, while the trussed, corrugated metal roof measure roughly 54-ft long by 13-ft wide. The subject property was designed by Fresno State College and constructed by employees of Fresno State College's Grounds and Maintenance staff, and is therefore not the work of a known master architect. The Amphitheater does not possess high artistic values, and has been significantly altered since its initial construction period. Therefore, the subject property is recommended not eligible under NRHP/CRHR Criterion C/3.

Criterion D/4: That have yielded, or may be likely to yield, information important in prehistory or history.

There is no evidence to suggest that this property has the potential to yield information important to state or local history. Therefore, the property is recommended not eligible under NRHP/CRHR Criterion D/4.

5.2 California Historic Landmark Statement of Significance

Keats Building

In consideration of the subject property's history and requisite integrity, Dudek finds the property not eligible for designation as a CHL based on the following significance evaluation and in consideration of state eligibility criteria:

The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).

The subject property is a modest, utilitarian example of the Contemporary style of architecture designed by Civil Engineer Hugh B. Brewster and completed in 1956. Other examples of Contemporary style architecture exist in the area, including other campus buildings such as the Laboratory School Building (1953) and the Speech Arts Building (1960). As such, the subject property does not represent the first, last, only, or most significant building of its type. Therefore, the subject property is recommended not eligible for listing as a CHL under this criterion.

Associated with an individual or group having a profound influence on the history of California.

Although Fresno State played an important role in shaping the City of Fresno and its environs, the subject property was not the cause of that influence, but rather the effect. The increasing numbers of individuals seeking higher degrees led to the development of the CSU system, of which the Fresno campus is a part. Therefore, the subject property did not have a profound influence on the history of California. As such, the subject property is recommended not eligible for listing as a CHL under this criterion.

A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder.

The Keats building represents a modest, one-story, utilitarian design in the Contemporary style, an architectural style that characterizes other buildings in the area constructed during the 1950s and 1960s. Archival research identified the architect as Civil Engineer Hugh B. Brewster, a relatively unknown and now obscure architect, and the design does not display aesthetics characteristic of those espoused by pioneering architects or designers working in Fresno at the time. Therefore, the subject property is recommended not eligible for listing as a CHL under this criterion.

Amphitheater

In consideration of the subject property's history and requisite integrity, Dudek finds the property not eligible for designation as a CHL based on the following significance evaluation and in consideration of state eligibility criteria:

The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).

The Amphitheater is a modest, utilitarian example of amphitheater architecture designed by Fresno State College and completed in 1963 by FSC Grounds and Maintenance staff. While it is the only such resource on campus, successive expansion campaigns have altered the stage beyond recognition, leaving only the graded grass field component of the resource intact. As such, the subject property is no longer representative of the first, last, only, or most significant building of its type. Therefore, the subject property is recommended not eligible for listing as a CHL under this criterion.

Associated with an individual or group having a profound influence on the history of California.

Although Fresno State played an important role in shaping the City of Fresno and its environs, the subject property was not the cause of that influence, but rather the effect. The increasing numbers of individuals seeking higher degrees led to the development of the CSU system, of which the Fresno campus is a part. Therefore, the subject property did not have a profound influence on the history of California. As such, the subject property is recommended not eligible for listing as a CHL under this criterion.

A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder.

The Amphitheater represents a modest interpretation of an architectural type which dates back to Ancient Greek times. The simplicity of the design is characteristic of modern, simplistic design trends during the 1950s and 1960s, emphasizing clean lines. Archival research did not identify the individual architect, but rather the

Fresno State College as the designer and the Grounds and Maintenance staff as the construction crew. The design does not display aesthetics characteristic of those espoused by pioneering architects or designers working in Fresno at the time. Therefore, the subject property is recommended not eligible for listing as a CHL under this criterion.

5.3 City of Fresno Statement of Significance

Keats Building

For the reasons explained in the NRHP and CRHR evaluation section above, the Keats Building does not appear eligible for the City of Fresno Local Register of Historic Resources.

Amphitheater

For the reasons explained in the NRHP and CRHR evaluation section above, the Amphitheater does not appear eligible for the City of Fresno Local Register of Historic Resources.

5.4 Integrity

Integrity is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance, and the historical resource's ability to convey that significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity. Similar stipulations apply to listing in the CRHR, but the threshold is lower, particularly if the site has potential to yield significant scientific or historic information. The evaluation of integrity is sometimes a subjective judgment, but is must always be grounded in an understanding of a property's physical features and how they relate to its significance. Within the concept of integrity, seven aspects or qualities that, in various combinations, define integrity: location, design, setting, materials, workmanship, feeling, and association (NPS 1990). To retain historic integrity, a property will generally possess several, if not most, of the aspects. The retention of specific aspects of integrity is paramount for a property to convey its significance.

Keats Building

Location: The building is sited on the original location of construction in its original orientation at the center of campus, therefore, the subject property maintains integrity in relation to its location.

Design: The building was subjected to several alterations over time that have significantly compromised its integrity of design, most notably the 1,500-sq.ft. onto the southern elevation and the addition of windows and doors throughout the building. Therefore, the building no longer maintains integrity of design.

Setting: The Keats Building remains in its original intended educational setting on the Campus of Fresno State. However, due to subsequent development on campus since it construction in 1956, it no longer

maintains its spatial relationship with the surrounding buildings, and is now dwarfed by new, adjacent buildings, such as the Music Building. Furthermore, the area surrounding the Campus is more urbanized, with many of the agricultural fields that once surrounded it now developed. Therefore, the property does not maintain integrity of setting.

Materials: The addition onto the south end of the property, which did not maintain all the same design components as the original building, numerous alterations to fenestration size, type, and location, as well as painting of the exposed exterior concrete and aluminum negatively impact the integrity of the original materials and methods. Therefore, the building does not maintain integrity of materials.

Workmanship: Similar to the issue with materials, the physical evidence of craftsmen's skills in constructing the original building was compromised by the addition to the south end, painting of the exterior, and numerous alterations to the fenestration size, type, and location. Therefore, the building no longer retains its integrity of workmanship.

Feeling: The addition to the southern end, painting of the exterior, and numerous alterations to the fenestration size, type, and location negatively impacted the building's ability to convey the aesthetic and historic sense that clearly identified the building as an example of Contemporary-style architecture. Therefore, the property no longer retains its integrity of feeling.

Association: The building's association with other campus buildings constructed during the 1950s, 1960s, and early 1970s, as well as the campus and area as a whole, was markedly impacted by the numerous alterations to the subject property. Furthermore, the construction of a new bookstore rendered the Keats Building unable to perform its historic function as the campus bookstore. Therefore, the building no longer retains its integrity of association.

In summary, the Keats Building retains integrity of location, but no longer retains integrity of setting, design, materials, workmanship, feeling, and association. Consequently, the property does not maintain enough integrity to warrant listing in the NRHP, CRHR, CHL, or in the City of Fresno Local Register of Historic Resources.

Amphitheater

Location: The building is sited on the original location of construction in its original orientation. However, the construction of the new Music Building behind the Amphitheater Stage has adversely altered the intended view of the location. Therefore, the subject property has diminished integrity in relation to its location.

Design: The Amphitheater was subjected to several alterations and expansions of the stage area over time that have resulted in the current stage failing to resemble the historic design whatsoever. This has significantly compromised its integrity of design. Therefore, the building does not maintain integrity of design.

Setting: The Amphitheater remains in its original intended setting on the Campus of Fresno State. However, due to subsequent development on campus since it construction in 1963, it no longer maintains its spatial relationship with the surrounding buildings, and is now dwarfed by new, adjacent buildings, such as the Music Building. Furthermore, the area surrounding the Campus is more urbanized, with many of the agricultural fields that once surrounded it now developed. Therefore, the property does not maintain integrity of setting.

Materials: The demolition of the original stage and the subsequent replacement with a larger, modern concrete stage with a modern truss roofing system has negatively impacted the integrity of the original materials and methods of construction. Therefore, the building does not maintain integrity of materials.

Workmanship: Similar to the issue with materials, the physical evidence of craftsmen's skills in constructing the original Amphitheater was compromised by the demolition of the original stage. Therefore, the building no longer retains its integrity of workmanship.

Feeling: The addition of a new stage that is comparatively oversized in relation to the Amphitheater, has negatively impacted the building's ability to convey the aesthetic and historic sense that clearly identified the building as an example of an outdoor, graded amphitheater, which would typically have a stage of relative size and height. Furthermore, the very modern nature of the stage alterations noted above negate the original building's ability to visually and aesthetically correlate with other contemporary campus buildings. Therefore, the property no longer retains its integrity of feeling.

Association: The building's association with other campus buildings constructed during the 1960s and early 1970s, as well as the campus and area as a whole, was markedly impacted by the numerous alterations to the subject property. Therefore, the building no longer retains its integrity of association.

In summary, the Amphitheater retains diminished integrity of location, but no longer retains integrity of setting, design, materials, workmanship, feeling, and association. Consequently, the property does not maintain enough integrity to warrant listing on the NRHP, CRHR, CHL, or in the City of Fresno Local Register of Historic Resources.

6 FINDINGS

The project site contains two built-environment resources: the Keats Building (1956) and the Amphitheater (1963) located in the central southwestern section of the Fresno State campus. The buildings were evaluated for NRHP, CRHR, CHL and Local City of Fresno designation criteria, and were also assessed for integrity. As a result of the evaluation, the Keats Building and the Amphitheater were found not eligible under all designation criteria and integrity requirements due to a lack of historical associations, architectural merit and compromised integrity. As such, the subject properties are not considered historical resources under CEQA. Therefore, the proposed demolition of the Keats Building and the Amphitheater would result in a less-than-significant impact to historical resources under CEQA. Further the proposed project would not adversely affect any state-owned historical resources on the Master List (SHPO concurrence on this finding is pending).

6.1 Summary and Management Recommendations

Based on the negative results of the CHRIS records search, intensive pedestrian survey, and NAHC correspondence, no additional cultural mitigation is recommended. The proposed project site has been substantially disturbed. In consideration of the severity of past disturbance to native soils, the topographic setting, and the negative inventory results, the likelihood of encountering unanticipated significant subsurface archaeological deposits or features is considered low. The project, as currently designed, will not impact known archaeological resources, and will not result in a significant effect to cultural resources.

No additional management recommendations have been identified for the built environment resources; however, standard protection measures for unanticipated discoveries of cultural resources and human remains during construction activities are provided below.

Unanticipated Discovery of Archaeological Resources or Human Remains

There is a low potential that construction activities could result in the inadvertent discovery of cultural resources, including archaeological resources and human remains. If such activities affect a significant cultural resource, the impact could be potentially significant. Mitigation Measures CULT-1 and CULT-2 are recommended to be implemented to ensure that impacts related to inadvertent discovery of cultural resources would be reduced to less than significant.

> **Mitigation Measure CULT-1:** Fresno State shall include a standard inadvertent discovery clause in every construction contract for the Project, which requires that in the event that an archaeological resource is discovered during construction (whether or not an archaeologist is present), all soil disturbing work within 100 feet of the find shall cease until a qualified archaeologist can evaluate the find and make a recommendation for how to proceed. For an archaeological resource that is encountered during construction, the campus shall:

- Retain a qualified archaeologist to determine whether the resource has potential to qualify as a historical resource or a unique archaeological resource as outlined in the California Environmental Quality Act (CEQA)(PRC 21083.2).

- If the resource has potential to be a historical resource or a unique archaeological resource, the qualified archaeologist, in consultation with Fresno State, shall prepare a research design and archaeological evaluation plan to assess whether the resource should be considered significant under CEQA criteria.

- If the resource is determined significant, in consultation with Fresno State, a qualified archaeologist will prepare a data recovery plan for retrieving data relevant to the site's significance. The data recovery plan shall be implemented prior to, or during site development (with a 100 foot buffer around the resource). The archaeologist shall also perform appropriate technical analyses, prepare a full written report and file it with the Southern San Joaquin Valley Information Center, and provide for the permanent curation of recovered materials.

Mitigation Measure CULT-2: Should human remains be discovered at any time, work will halt in that area and procedures set forth in the California Public Resources Code (Section 5097.98) and State Health and Safety Code (Section 7050.5) will be followed, beginning with notification to Fresno State and the County Coroner. If Native American remains are present, the County Coroner will contact the Native American Heritage Commission to designate a Most Likely Descendent, who will arrange for the dignified disposition and treatment of the remains.

7 BIBLIOGRAPHY

Bettinger, R. L. 2015. "Orderly Anarchy: Sociopolitical Evolution in Aboriginal California." University of California Press, Oakland.

Bieling, D.G., R.M. LaJeunesse, and J.H. Pryor. 1996. "Skyrocket: A Central Sierran Paleoindian Archaic Transition Site." *Current Research in the Pleistocene* 13:4–6.

Brewster, Hugh B. 1956. "Fresno State College Bookstore." As-built plans. Courtesy of Facilities Management, Fresno State.

Brewster, Hugh B. 1959. "Fresno State College Bookstore Addition." As-built plans. Courtesy of Facilities Management, Fresno State.

CAPR (California Department of Parks and Recreation). 2018. "American Indian Basketry." https://www.parks.ca.gov/?page_id=24166. Accessed November 1, 2018.

Chatters, J.C. and J.A. Fogerty. 2004. *Archaeological Test Excavations, Kaweah River Basin Investigation, Tulare Lakebed Mitigation Area, Corcoran Site, Kings County, California.* Prepared by TetraTech FW Inc. Report on file at U.S. Army Corps of Engineers, Sacramento.

Clough, Charles W. 1985. *Fresno County-The Pioneer Years: From the Beginning to 1900.* Fresno, California: Panorama West Books.

Cook, S. F. 1976. *The Conflict between the California Indian and White Civilization.* University of California Press: Berkeley, California.

CSU (The California State University). No Date. "History." https://www2.calstate.edu/csu-system/about-the-csu/Pages/history.aspx. Accessed November 12, 2018.

Fresno State (California State University Fresno). 2018a. "Kremen School of Education & Human Development: History." https://www.fresnostate.edu/kremen/about/history.html. Accessed November 12, 2018.

Fresno State (California State University Fresno). 2018b. "Animal Sciences and Agricultural Education: Farm History." http://www.fresnostate.edu/jcast/asae/about-us/farm-history.html. Accessed November 12, 2018.

Fresno State (California State University Fresno). 2018c. "Fast Facts About Fresno State." https://www.fresnostate.edu/home/about/fastfacts.html. Accessed November 13, 2018.

Delacorte, M.G. 2001. *Phase II Test Excavations of Three Prehistoric Sites (CA-SJO-93, CA-SJO-264, CA-SJO-265) Along State Route 88, San Joaquin County, California.* Prepared for the California Department of Transportation, District 10, Stockton.

FBR (The Fresno Bee The Republican). 1951. "Fresno State Maps Long Range building Plan." November 17, 1951; p. 9. https://www.newspapers.com/image/25747440. Accessed October 29, 2018.

FBR (The Fresno Bee The Republican). 1963a. "FSC Amphitheater Will Be Dedicated April 25th." April 7, 1963; p. 25. https://www.newspapers.com/image/25792081. Accessed October 25, 2018.

FBR (The Fresno Bee The Republican). 1963b. "Students are Urged to Plan Lives Boldly." April 24, 1963; p. 30. https://www.newspapers.com/image/25809791. Accessed October 25, 2018.

FCGWP (The Fresno County CAGenWeb Project). 2016. "Fresno County Historical Information." http://www.cagenweb.com/fresno/history.html. Accessed November 9, 2018.

Fenenga G.L. 1993. "Test Excavations at the Witt Site (CA-KIN-32)." In *Contributions to Tulare Lake Archaeology II, Finding the Evidence: The Quest for Tulare Lake's Archaeological Past*, edited by W.J. Wallace and F.A. Riddell, 25–38. Tulare Lake Archaeological Research Group, Redondo Beach.

FHAA (Fresno High Alumni Association). 2018. "History of Fresno High." https://www.fresno highalumni.com/about-us/history-of-fresno-high. Accessed November 12, 2018.

Fredrickson, D.A. and J.W. Grossman. 1977. "A San Dieguito Component at Buena Vista Lake, California." *The Journal of California Anthropology* 4(2):173–190.Gayton, A.H. 1948. "Yokuts and Western Mono Ethnography. I: Tulare Lake, Southern Valley, and Central Foothill Yokuts." *Anthropological Records* 10:1. Berkeley, California: University of California Press.

Fresno Historical Society. 2018. "Description of the San Joaquin Valley." https://www.valleyhistory.org/ index.php?id=42 Accessed October 30, 2018.

FSC (Fresno State College) Department of Buildings and Grounds. 1961. "Amphitheater: Stage Details." Courtesy of Facilities Management, Fresno State.

Gardner, J., K. Pinney, H. Switalski, and A. Mitchell. 1995. *Preliminary Archaeological Investigations at the Van Den Enden Site, Tulare Lake, California.* Report on file at the Southern San Joaquin Valley Historical Resources Information Center, California State University, Bakersfield.

Gardner, J.K., R.M. Negrini, M.Q. Sutton, P.E. Wigand, and R.M. Yohe II. 2005. "A Middle Holocene Radiocarbon Date and the Geologic Context of Human Occupation in the Tulare Lake Basin of California." *Journal of California and Great Basin Anthropology* 25(2):226–234.

Gayton, A.H. 1948. "Yokuts and Western Mono Ethnography. I: Tulare Lake, Southern Valley, and Central Foothill Yokuts." *Anthropological Records* 10:1. Berkeley, California: University of California Press.

GHAFC (A Guide to Historic Architecture in Fresno, California). 2010. "Southern Pacific Railroad Depot." http://historicfresno.org/nrhp/sprr.htm. Accessed November 9, 2018.

Hale, Micah J., Giacinto, Adam, and Nicholas Hanten. 2016. *Cultural Resources Inventory and Evaluation Yokohl Ranch, Tulare County, California.* Prepared for the Yokohl Ranch Company, LLC by Dudek.

Hartzell, L.L. 1992. "Hunter-gatherer Adaptive Strategies and Lacustrine Environments in the Buena Vista Lake Basin, Kern County, California." PhD diss., University of California, Davis.

Hoover, Mildred Brooke, Hero Eugene Rensch, and Ethel Grace Rensch. 1966. *Historic Spots in California.* Third Edition. Stanford, California: Stanford University Press.

Jennings, W., J. Lawson, M.R Iriart, and B.T. Woods. 1994. *Flooterville: Test Excavations at a Late Pleistocene Site at Tulare Lake.* Report on file at the Southern San Joaquin Valley Historical Resources Information Center, California State University, Bakersfield.

Johnson, Stephen, Dawson, Robert, and Gerald Haslam. 1993. *The Great Central Valley: California's Heartland.* University of California Press: Berkeley, California.

Koch, Margaret. 1973. *Santa Cruz County: Parade of the Past.* Fresno, California: Valley Publishers.

Kroeber, A. 1925. *Handbook of the Indians of California.* Washington D.C.: Smithsonian Institution.

Kyle, Douglas E. 2002. *Historic Spots in California.* 5th ed. Stanford, California: Stanford University Press.

La Jeunesse, R.M. and J. M. Pryor. 1996. 'Skyrocket Appendices." University of California: Fresno.

La Jeunesse, R.M., J.H. Pryor, and W.A. Dodd Jr. 2004. "Battered Implements and Milling Slab Rejuvenation from a Paleoindian/Archaic Transition Site." *Current Research in the Pleistocene* 21:55–57.

Latta, F.F. 1977. *Handbook of Yokuts Indians.* Santa Cruz, California: Bear State Books.

Lehmann, Susan. 2000. "Fully Developed Context Statement for the City of Santa Cruz." City of Santa Cruz.

Ludeke, John. 1980. "The No Fence Law of 1874: Victory for San Joaquin Valley Farmers." *California History,* Vol. 59, No. 2 (Summer, 1980), pp. 98-115. http://www.jstor.org/stable/25157972. Accessed November 9, 2018.

Manifold, D., P. Manifold, and G. Reza. 1995. *Archaeological Investigations at the Corral Site, Tulare Lake, California.* Report on file at the Southern San Joaquin Valley Historical Resources Information Center, California State University, Bakersfield.

Milliken, R., W. Bloomer, S. Stratton, J. Nelson, D. Furlong, D.C. Young, E. Wohlgemuth, J. Costello, P. Mikkelsen, T. Carpenter, and D. Jones. 1997. *The Taylors Bar Site (CA-CAL-1180/H): Archaeological and Ethnohistoric Investigations in Calaveras County, California*. Far Western Anthropological Research Group, Inc., Davis. Prepared for Calaveras County Water District, San Andreas, California.

Moratto, Michael J. 1984. *California Archaeology*. San Diego: Academic Press.

Morgan, Neil and Gregory Lewis McNamee. 2018. "California." https://www.britannica.com/place/California-state/History. Accessed November 11, 2018.

Munz, Phillip A. 1970. *A California Flora.* University of California Press, Los Angeles, California.

NETR (National Environmental Title Research, LLC). 2018. Historic aerial photographs: 1962, 1972, 1998, 2002, 2005, 2009, 2010, 2012, and 2014 https://www.historicaerials.com/viewer# Accessed November 14, 2018.

OHP (California Office of Historic Preservation). 2018. "Fort Miller." http://ohp.parks.ca.gov/ListedResources/Detail/584. Accessed November 8, 2018.

Osborne, Richard H. 1992. "An Ethnographic Overview of the Southern Valley Yokuts." In *Kern County Archaeological Society Journal.* Vol. 3, pages 36-65.

Peak, Ann S. and Harvey L. Crew. 1990. *An Archaeological Data Recovery Project at CA-CAL-S342, Clarks Flat, Calaveras County, California. Cultural Resources Studies, North Fork, Stanislaus River Hydroelectric Development Project, Volume II, Part I.* Peak and Associates, Sacramento.

Riddell, F.A., and W.H. Olsen. 1969. "An Early Man Site in the San Joaquin Valley, California." *American Antiquity* 34(2): 121–130.

Sampson, M. 1991. "A Distinctive Flaked-Stone Tool Type From Tulare Lake Basin." In *Contributions to Tulare Lake Archaeology I: Background to a Study of Tulare Lake's Archaeological Past*, edited by W.J. Wallace and F.A. Riddell, 53–60. Tulare Lake Archaeological Research Group, Redondo Beach.

Schoenherr, Allen A. 1992. *A Natural History of California.* University of California Press, Los Angeles, California.

Seacrest Jr., William B. and Lanny Larson. 2011. *A Century of Excellence 1911-2011*. St. Louis, Missouri: Reedy Press.

Siefkin, N. 1999. "Archaeology of the Redtfeldt Mound (CA-KIN-66), Tulare Basin, California." Master's thesis, California State University, Bakersfield.

Special Collections Research Center. 2018. "New Campus: Keats." Campus Planning Collection. California State University, Fresno.

Spier, R.F.G. 1978a. "Foothill Yokuts." In *California*, edited by R.F. Heizer, 471–484. *Handbook of North American Indians*, edited by W.C. Sturtevant. Washington, D.C.: Smithsonian Institution.

Spier, R.F.G. 1978b. "Monache." In *California*, edited by R.F. Heizer, 426–436. *Handbook of North American Indians,* edited by W.C. Sturtevant. Washington, D.C.: Smithsonian Institution.

Sutton, M.Q. 1997. "A Background for Archaeological Investigations at Buena Vista Lake, Southern San Joaquin Valley." *Kern County Archaeological Society Journal* 8:3–21.

Tidmore, R., J. Pritchard, S. Tisler, and D. Schuldies. 1994. *Preliminary Archaeological Investigations at the EWE-20 Site, Tulare Lake, California.* Report on file at the Southern San Joaquin Valley Historical Resources Information Center, California State University, Bakersfield.Wallace, William J.. 1978. "Northern Valley Yokuts." In *California*, edited by R.F. Heizer, 462–470. *Handbook of North American Indians*, edited by W.C. Sturtevant. Washington, D.C.: Smithsonian Institution.

UCSB (University of California, Santa Barbra). 2018. Historical Aerial Photographs: 1936, 1957, 1961, and 1967. Map & Imagery Laboratory (MIL) UCSB Library, Electronic Resource, http://mil.library.ucsb.edu/ap_indexes/FrameFinder. Accessed November 14, 2018.

Wallace, W.J.. 1978. "Northern Valley Yokuts." In *California*, edited by R.F. Heizer, 462–470. *Handbook of North American Indians,* edited by W.C. Sturtevant. Washington, D.C.: Smithsonian Institution.

Wallace, W.J. 1991. "Tulare Lake's Archaeological Past." In *Contributions to Tulare Lake Archaeology I: Background to a Study of Tulare Lake's Archaeological Past*, edited by W.J. Wallace and F.A. Riddell, 23–33. Tulare Lake Archaeological Research Group, Redondo Beach, California.

Wallace, W.J. and F.A. Riddell, eds. 1988. "Archaeological Background of Tulare Lake, California." In *Early Occupation in Far Western North America: The Clovis-Archaic Interface*, edited by J.A. Willig, C.M. Aikens, and J.L. Fagan, 87–101. Nevada State Museum Anthropological Papers No. 21, Carson City, Nevada.

Wedel, W.R. 1941. "Archeological Investigations at Buena Vista Lake, Kern County, California." *Bureau of American Ethnology Bulletin 130.*

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APPENDIX A

Tribal Outreach

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission
1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Project: 11446: Fresno State New Student Union

County: Santa Clara

USGS Quadrangle Name: Clovis

Township: 13S **Range:** 20E **Section(s):** 12

Company/Firm/Agency: Dudek

Street Address: 725 Front Street, Suite 400

City: Santa Cruz **Zip:** 95060

Phone: 831 226-9472

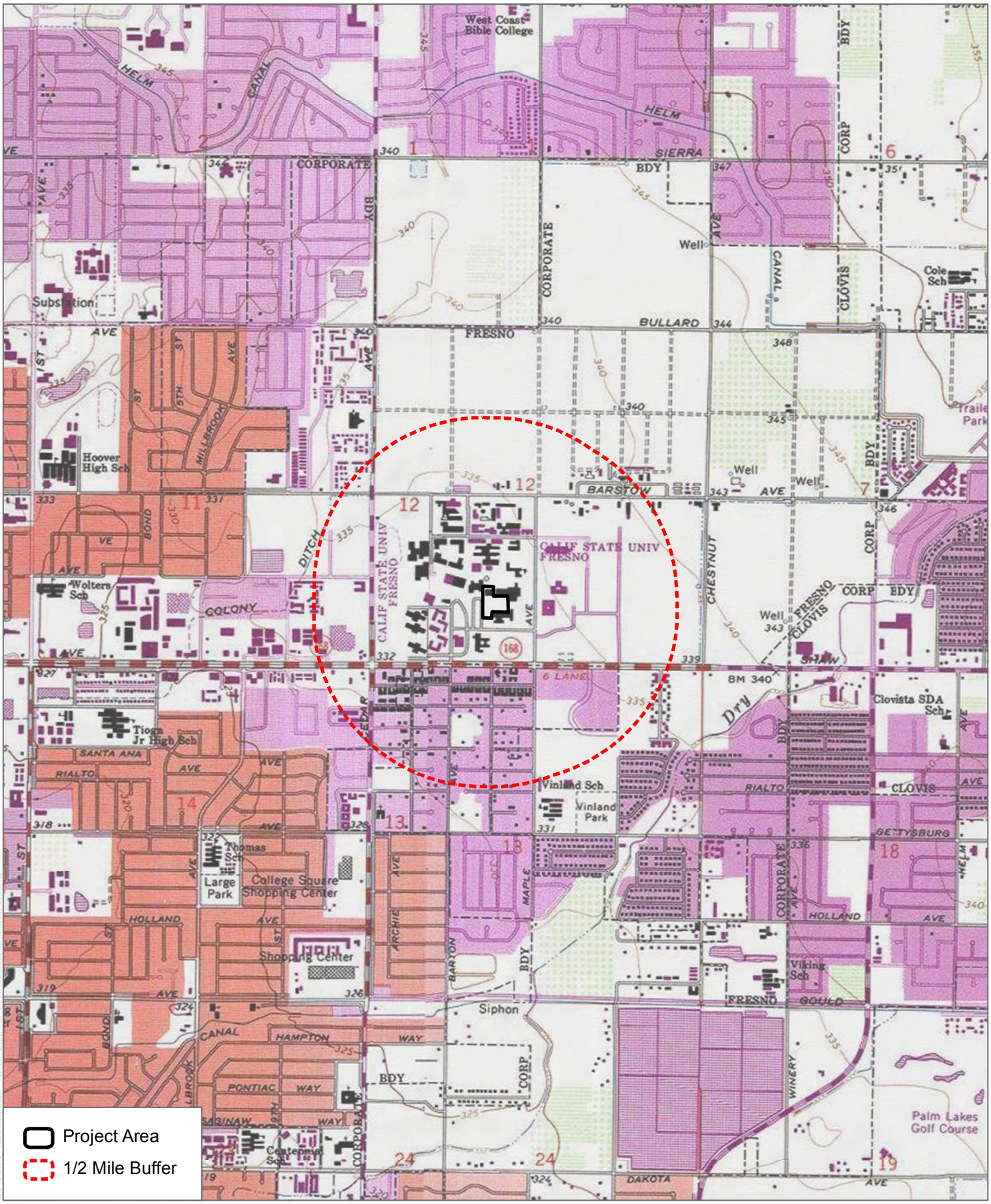
Fax:

Email: sbrewer@dudek.com

Project Description:

CSU Fresno proposes the construction of a new student union building.

Dudek is requesting a NAHC search of the Sacred Lands Files or other Native American cultural resources that may fall within the proposed project location or surrounding half-mile buffer. Please provide a Contact List with all Native American tribal representatives that may have traditional interests in the project location or surrounding area.



SOURCE: USGS Topo 7.5 Minute Series Clovis Quadrangle
Township 13S / Range 20E / Sections 12

DUDEK

0 1,000 2,000 Feet
0 285 570 Meters
1:24,000

FIGURE 1

Records Search

Fresno State Student Union Project

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710

October 30, 2018

Sarah Brewer
Dudek

Sent by Email: sbrewer@dudek.com
Number of Pages: 2

RE: 11446-Fresno State Student Union, Clovis, Fresno County

Dear Ms. Brewer:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results**. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.**

I suggest you contact all of those listed, if they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. **By contacting all those on the list, your organization will be better able to respond to claims of failure to consult**. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: Sharaya.Souza@nahc.ca.gov.

Sincerely,

Sharaya Souza
Staff Services Analyst
(916) 573-0168

Native American Heritage Commission
Native American Contacts List
10/30/2018

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Elizabeth D. Kipp, Chairperson
PO. Box 337 37387 Auberry Mission Rd.
Auberry ,CA 93602
lkipp@bsrnation.com
(559) 374-0066
(559) 374-0055
Western Mono

Cold Springs Rancheria
Carol Bill, Chairperson
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Tollhouse ,CA 93667
(559) 855-5043
(559) 855-4445 Fax
Mono

Dumna Wo-Wah Tribal Goverment
Robert Ledger SR., Chairperson
2191 West Pico Ave.
Fresno ,CA 93705
ledgerrobert@ymail.com
(559) 540-6346
Dumna/Foothill Yokuts
Mono

Dunlap Band of Mono Indians
Benjamin Charley Jr., Tribal Chair
P.O. Box 14
Dunlap ,CA 93621
ben.charley@yahoo.com
(760) 258-5244
Mono

Dunlap Band of Mono Indians
Dick Charley, Tribal Secretary
5509 E. McKenzie Avenue
Fresno ,CA 93727
dcharley2016@gmail.com
(559) 554-5433
Mono

Kings River Choinumni Farm Tribe
Stan Alec
3515 East Fedora Avenue
Fresno ,CA 93726
(559) 647-3227 Cell
Foothill Yokuts
Choinumni

North Fork Mono Tribe
Ron Goode, Chairperson
13396 Tollhouse Road
Clovis ,CA 93619
rwgoode911@hotmail.com
(559) 299-3729 Home
(559) 355-1774 - cell
Mono

Santa Rosa Rancheria Tachi Yokut Tribe
Rueben Barrios Sr., Chairperson
P.O. Box 8
Lemoore ,CA 93245
(559) 924-1278
(559) 924-3583 Fax
Tache
Tachi
Yokut

Table Mountain Rancheria
Leanne Walker-Grant, Chairperson
P.O. Box 410
Friant ,CA 93626
(559) 822-2587
(559) 822-2693 Fax
Yokuts

Table Mountain Rancheria
Bob Pennell, Cultural Resources Director
P.O. Box 410
Friant ,CA 93626
rpennell@tmr.org
(559) 325-0351
(559) 325-0394 Fax
Yokuts

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code,Section 5097.94 of the Public Resources Code, or Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American Tribes for the proposed:
11446-Fresno State Student Union, Clovis, Fresno County.

Native American Heritage Commission
Native American Contacts List
10/30/2018

Traditional Choinumni Tribe
David Alvarez, Chairperson
2415 E. Houston Avenue
Fresno ,CA 93720
dave@davealvarez.com
(559) 217-0396 Cell

Choinumni

Traditional Choinumni Tribe
Rick Osborne, Cultural Resources
2415 E. Houston Avenue
Fresno ,CA 93720
(559) 324-8764
lemek@att.net

Choinumni

Wuksache Indian Tribe/Eshom Valley Band
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct.
Salinas ,CA 93906
kwood8934@aol.com
(831) 443-9702

Foothill Yokuts
Mono
Wuksache

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This list is only applicable for contacting local Native American Tribes for the proposed:
11446-Fresno State Student Union, Clovis, Fresno County.

DUDEK

725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.3500 F 831.600.3501

November 27, 2018 PN 11446

Mr. Stan Alec
Kings River Choinumni Farm Tribe
3515 East Fedroa Avenue
Fresno, CA 93726

Subject: ***California State University, Fresno New Student Union Project, City of Fresno, California- Native American Outreach***

Dear Mr. Alec:

We have been retained by California State University, Fresno (Fresno State) to complete a cultural resources investigation for construction of a proposed student union, in compliance with the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA), and relevant local municipal guidelines and regulations.

The project would result in the construction of a new, 70-foot-tall, 80,000-gross-square-foot (GSF) Student Union building with 63,000 assignable square feet (ASF). The Project would also include demolition of the existing 7,400-GSF Keats building, as well as the amphitheater and stage on the Project site. The total site area disturbed for the Project would be approximately 3.5 acres. The attached map shows the location of the proposed project area with a one-half-mile buffer (Figure 1). The objectives of the Project are as follows:

- Provide additional, centrally located student life and support spaces on campus to serve the needs of over 24,000 students, 270 clubs, student government, and other social organizations.

- Improve connectivity of student life functions and accessibility of amenities.

- Create a focal point on the campus that integrates faculty and students of all levels, promotes socialization and community and functions as a hub of student life and activity.

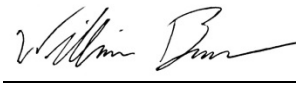
- Use sustainable design principles and ensure that new construction achieves at least Leadership in Energy and Environmental Design (LEED) Platinum or equivalent performance and energy efficiency beyond Title 24 requirements.

We have submitted and reviewed the results of search of the Sacred Lands Inventory on file with the Native American Heritage Commission (NAHC). The NAHC Sacred Lands Inventory search resulted in negative findings. However, the NAHC provided us your contact as someone who may have information regarding known or previously unrecorded cultural resources or sacred sites in the project vicinity.

We are reaching out to local Native American representatives and tribes to facilitate consultation on behalf of Fresno State as part of the Section 106 consultation process with a request for any information relating to Native American resources in the vicinity of the proposed project. Any information you provide will remain confidential and be used for planning purposes for this project only. If you are not comfortable describing the specific resource, we can document it as an "environmentally sensitive area."

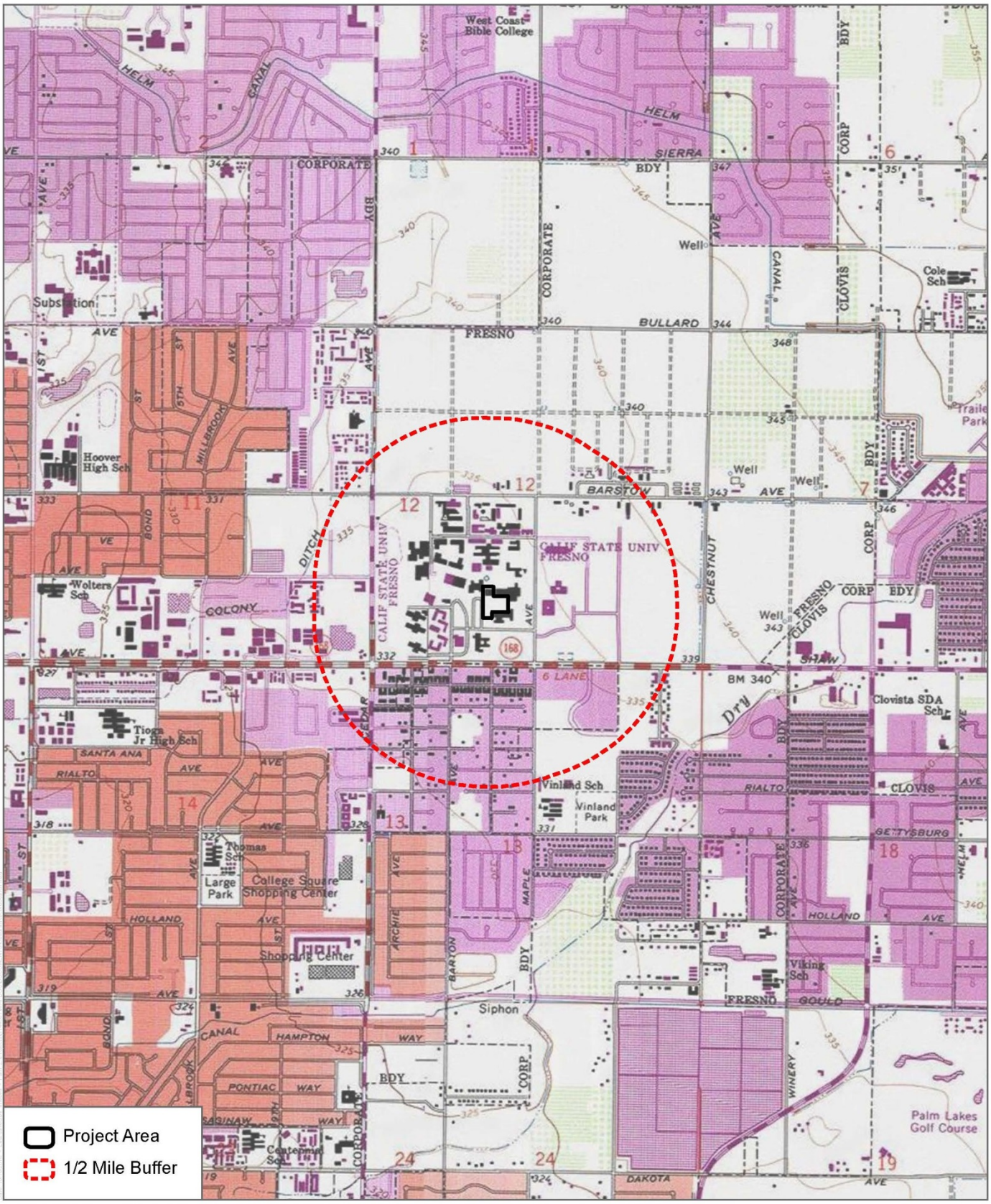
You may respond by mail, e-mail, telephone, or in person. You may also visit our office to review our research files. We expect your response within 14 days of receiving this letter. If you have any questions or comments, you can reach me by telephone at (760) 334-1156, or by e-mail at wburns@dudek.com. Thank you for your assistance with this project.

Sincerely,



William Burns, MSc., RPA
Archaeologist
DUDEK
1630 San Pablo Avenue, Suite 300
Oakland, California 94612
T: 760.334.1156
wburns@dudek.com

Attachment: Figure 1. Project Location Map



SOURCE: USGS Topo 7.5 Minute Series Clovis Quadrangle
Township 13S / Range 20E / Sections 12

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FIGURE 1

Records Search

Fresno State Student Union Project

DUDEK

725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.3500 F 831.600.3501

November 27, 2018 PN 11446

Mr. David Alvarez, Chairperson
Traditional Choinumni Tribe
2415 E. Houston Avenue
Fresno, CA 93720

Subject: ***California State University, Fresno New Student Union Project, City of Fresno, California- Native American Outreach***

Dear Mr. Alvarez:

We have been retained by California State University, Fresno (Fresno State) to complete a cultural resources investigation for construction of a proposed student union, in compliance with the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA), and relevant local municipal guidelines and regulations.

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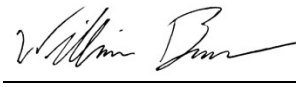

William Burns, MSc., RPA
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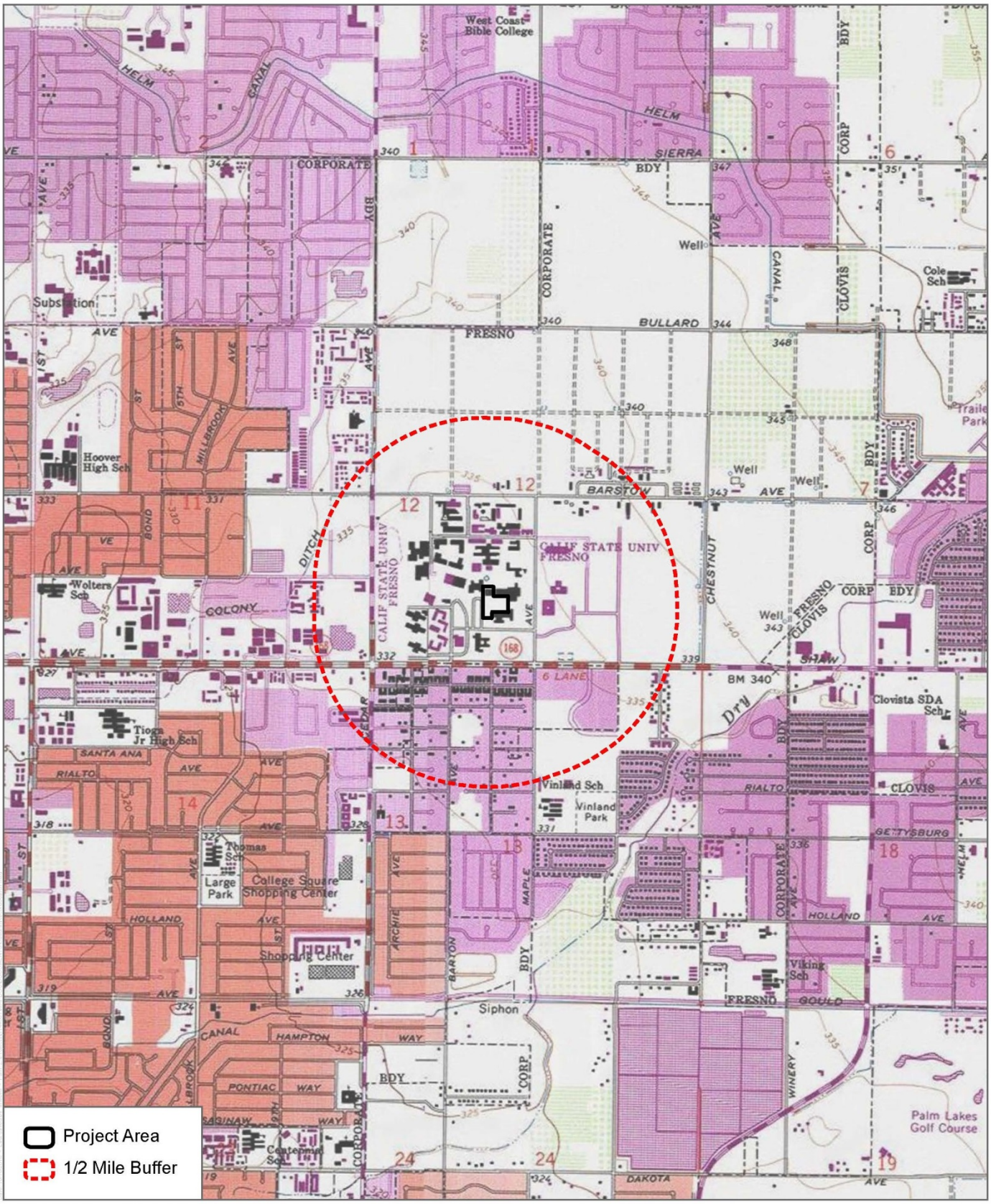

SOURCE: USGS Topo 7.5 Minute Series Clovis Quadrangle
Township 13S / Range 20E / Sections 12

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FIGURE 1

Records Search

Fresno State Student Union Project

DUDEK

725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.3500 F 831.600.3501

November 27, 2018 PN 11446

Mr. Rueben Barrios, Chairperson
Santa Rosa Rancheria Tachi Yokut Tribe
PO Box 8
Lemoore, CA 93245

Subject: ***California State University, Fresno New Student Union Project, City of Fresno, California- Native American Outreach***

Dear Mr. Barrios:

We have been retained by California State University, Fresno (Fresno State) to complete a cultural resources investigation for construction of a proposed student union, in compliance with the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA), and relevant local municipal guidelines and regulations.

The project would result in the construction of a new, 70-foot-tall, 80,000-gross-square-foot (GSF) Student Union building with 63,000 assignable square feet (ASF). The Project would also include demolition of the existing 7,400-GSF Keats building, as well as the amphitheater and stage on the Project site. The total site area disturbed for the Project would be approximately 3.5 acres. The attached map shows the location of the proposed project area with a one-half-mile buffer (Figure 1). The objectives of the Project are as follows:

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We have submitted and reviewed the results of search of the Sacred Lands Inventory on file with the Native American Heritage Commission (NAHC). The NAHC Sacred Lands Inventory search resulted in negative findings. However, the NAHC provided us your contact as someone who may have information regarding known or previously unrecorded cultural resources or sacred sites in the project vicinity.

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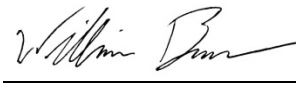
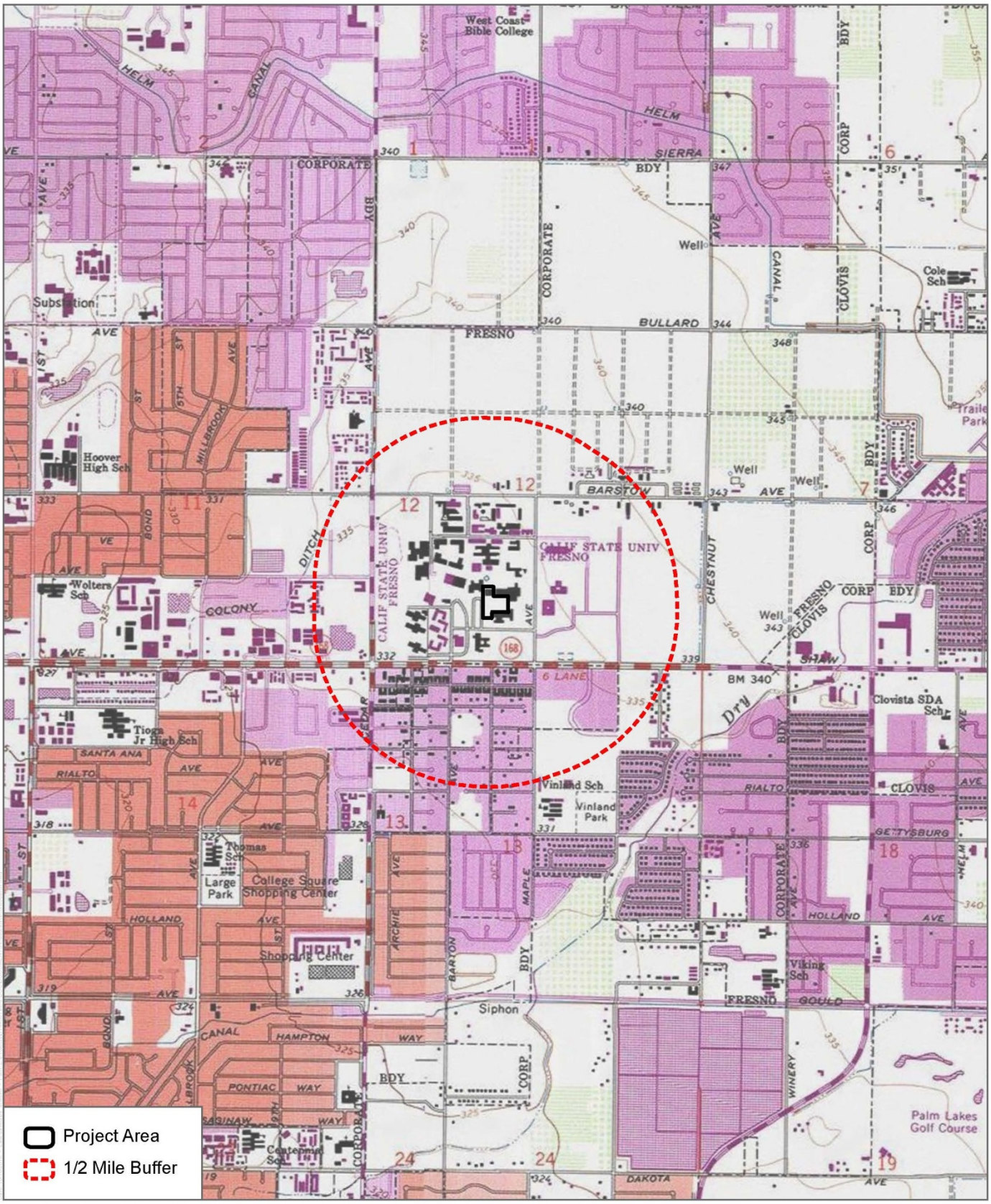
You may respond by mail, e-mail, telephone, or in person. You may also visit our office to review our research files. We expect your response within 14 days of receiving this letter. If you have any questions or comments, you can reach me by telephone at (760) 334-1156, or by e-mail at wburns@dudek.com. Thank you for your assistance with this project.

Sincerely,



William Burns, MSc., RPA
Archaeologist
DUDEK
1630 San Pablo Avenue, Suite 300
Oakland, California 94612
T: 760.334.1156
wburns@dudek.com

Attachment: Figure 1. Project Location Map



SOURCE: USGS Topo 7.5 Minute Series Clovis Quadrangle
Township 13S / Range 20E / Sections 12

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FIGURE 1

Records Search

Fresno State Student Union Project

DUDEK

725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.3500 F 831.600.3501

November 27, 2018 PN 11446

Ms. Carol Bill, Chairperson
Cold Springs Rancheria
PO Box 209
Tollhouse, CA 93667

Subject: ***California State University, Fresno New Student Union Project, City of Fresno, California- Native American Outreach***

Dear Ms. Bill:

We have been retained by California State University, Fresno (Fresno State) to complete a cultural resources investigation for construction of a proposed student union, in compliance with the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA), and relevant local municipal guidelines and regulations.

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- Improve connectivity of student life functions and accessibility of amenities.

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- Use sustainable design principles and ensure that new construction achieves at least Leadership in Energy and Environmental Design (LEED) Platinum or equivalent performance and energy efficiency beyond Title 24 requirements.

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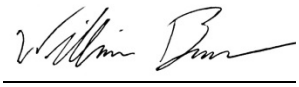
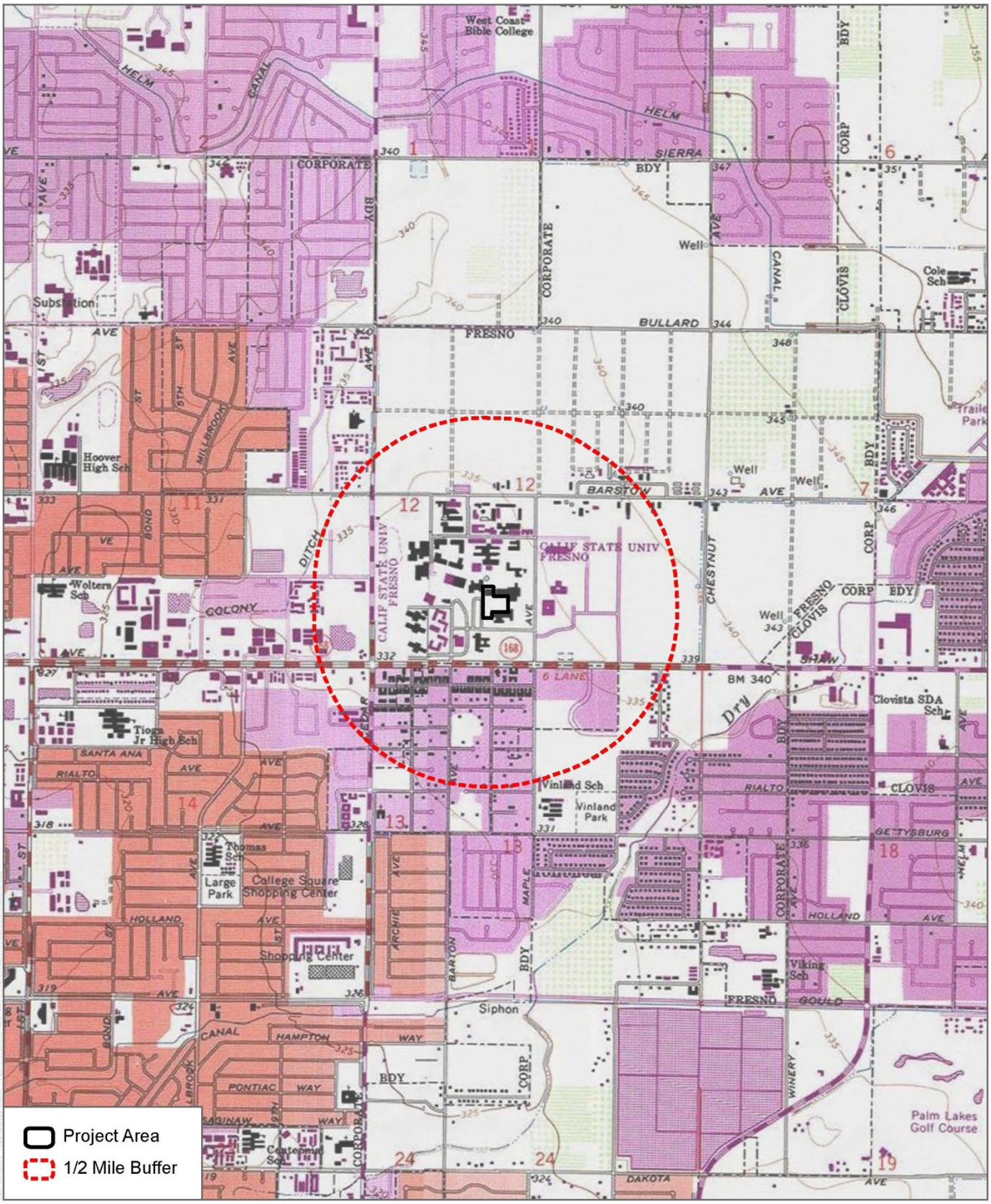
You may respond by mail, e-mail, telephone, or in person. You may also visit our office to review our research files. We expect your response within 14 days of receiving this letter. If you have any questions or comments, you can reach me by telephone at (760) 334-1156, or by e-mail at wburns@dudek.com. Thank you for your assistance with this project.

Sincerely,



William Burns, MSc., RPA
Archaeologist
DUDEK
1630 San Pablo Avenue, Suite 300
Oakland, California 94612
T: 760.334.1156
wburns@dudek.com

Attachment: Figure 1. Project Location Map



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Township 13S / Range 20E / Sections 12

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FIGURE 1

Records Search

Fresno State Student Union Project

DUDEK

725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.3500 F 831.600.3501

November 27, 2018 PN 11446

Mr. Benjamin Charley, Tribal Chair
Dunlap Band of Mono Indians
PO Box 14
Dunlap, CA 93621

Subject: ***California State University, Fresno New Student Union Project, City of Fresno, California- Native American Outreach***

Dear Mr. Charley:

We have been retained by California State University, Fresno (Fresno State) to complete a cultural resources investigation for construction of a proposed student union, in compliance with the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA), and relevant local municipal guidelines and regulations.

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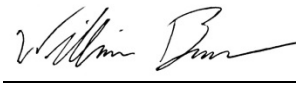

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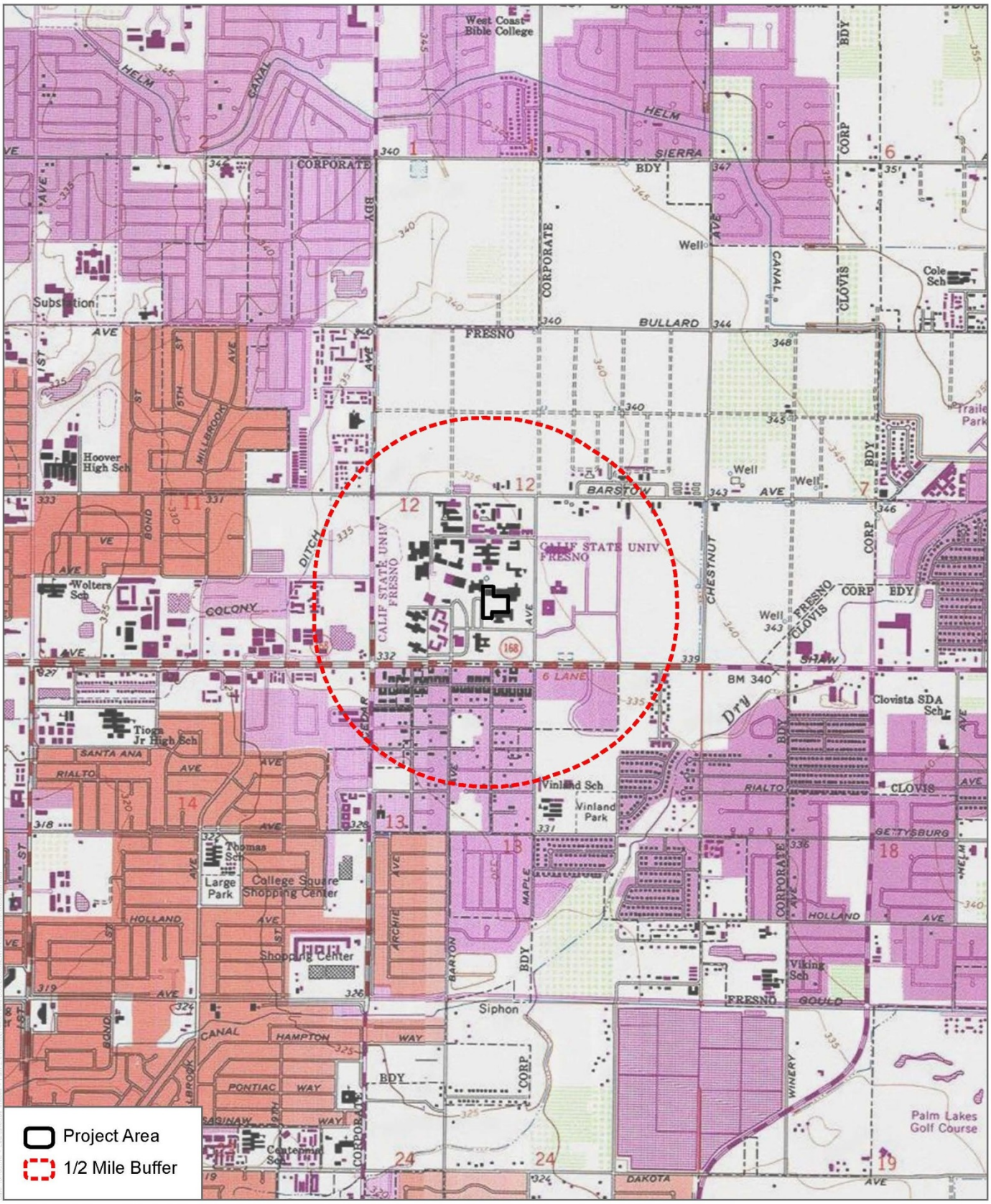

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FIGURE 1

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Fresno State Student Union Project

DUDEK

725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.3500 F 831.600.3501

November 27, 2018 PN 11446

Mr. Dick Charley, Tribal Secretary
Dunlap Band of Mono Indians
5509 E. McKenzie Avenue
Fresno, CA 93727

Subject: ***California State University, Fresno New Student Union Project, City of Fresno, California- Native American Outreach***

Dear Mr. Charley:

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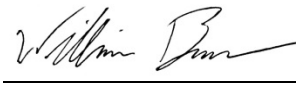

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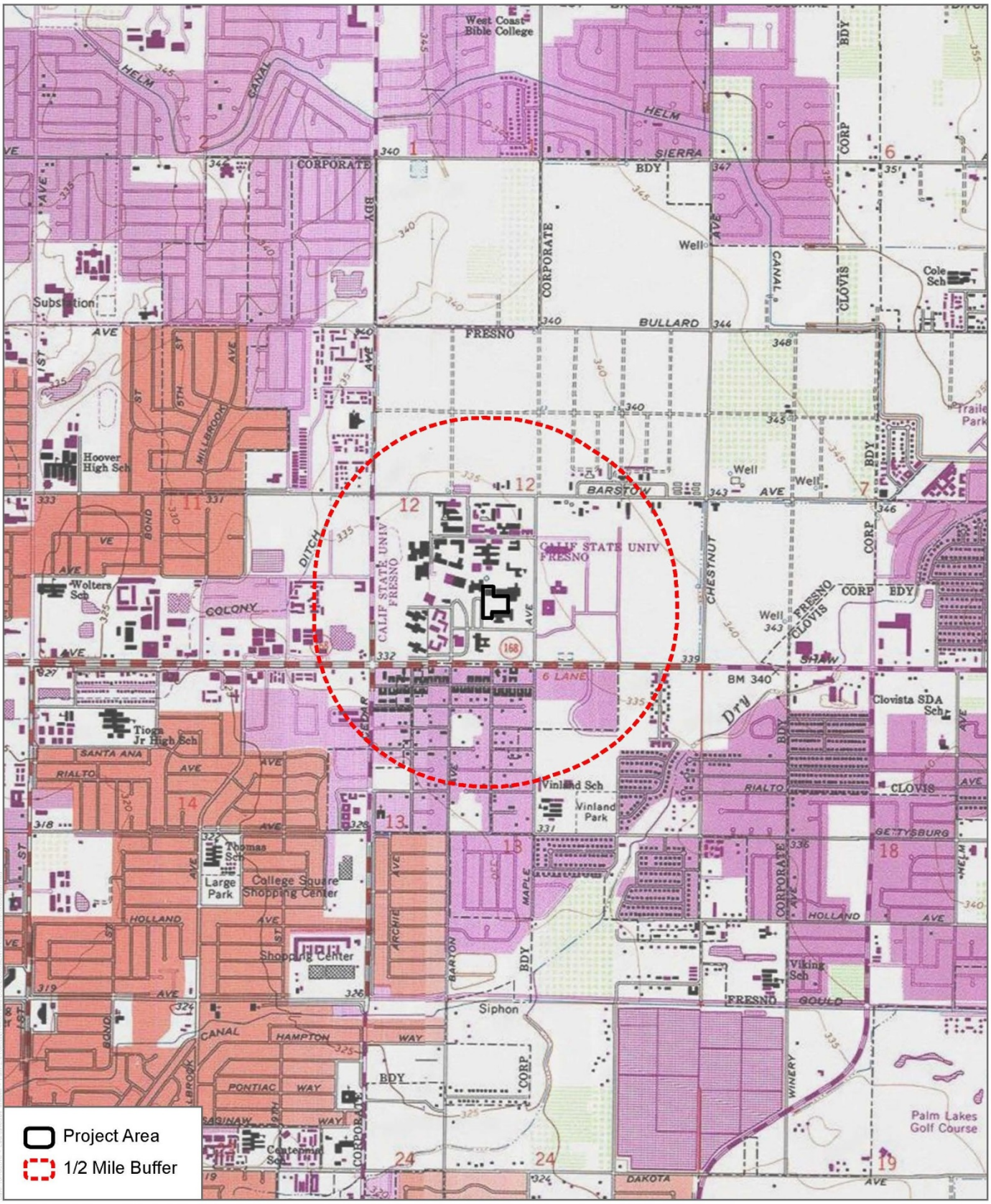

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Township 13S / Range 20E / Sections 12

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FIGURE 1

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Fresno State Student Union Project

DUDEK

725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.3500 F 831.600.3501

November 27, 2018 PN 11446

Mr. Ron Goode, Chairperson
North Fork Mono Tribe
13396 Tollhouse Road
Clovis, CA 93619

Subject: ***California State University, Fresno New Student Union Project, City of Fresno, California- Native American Outreach***

Dear Mr. Goode:

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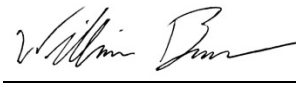

William Burns, MSc., RPA
Archaeologist
DUDEK
1630 San Pablo Avenue, Suite 300
Oakland, California 94612
T: 760.334.1156
wburns@dudek.com

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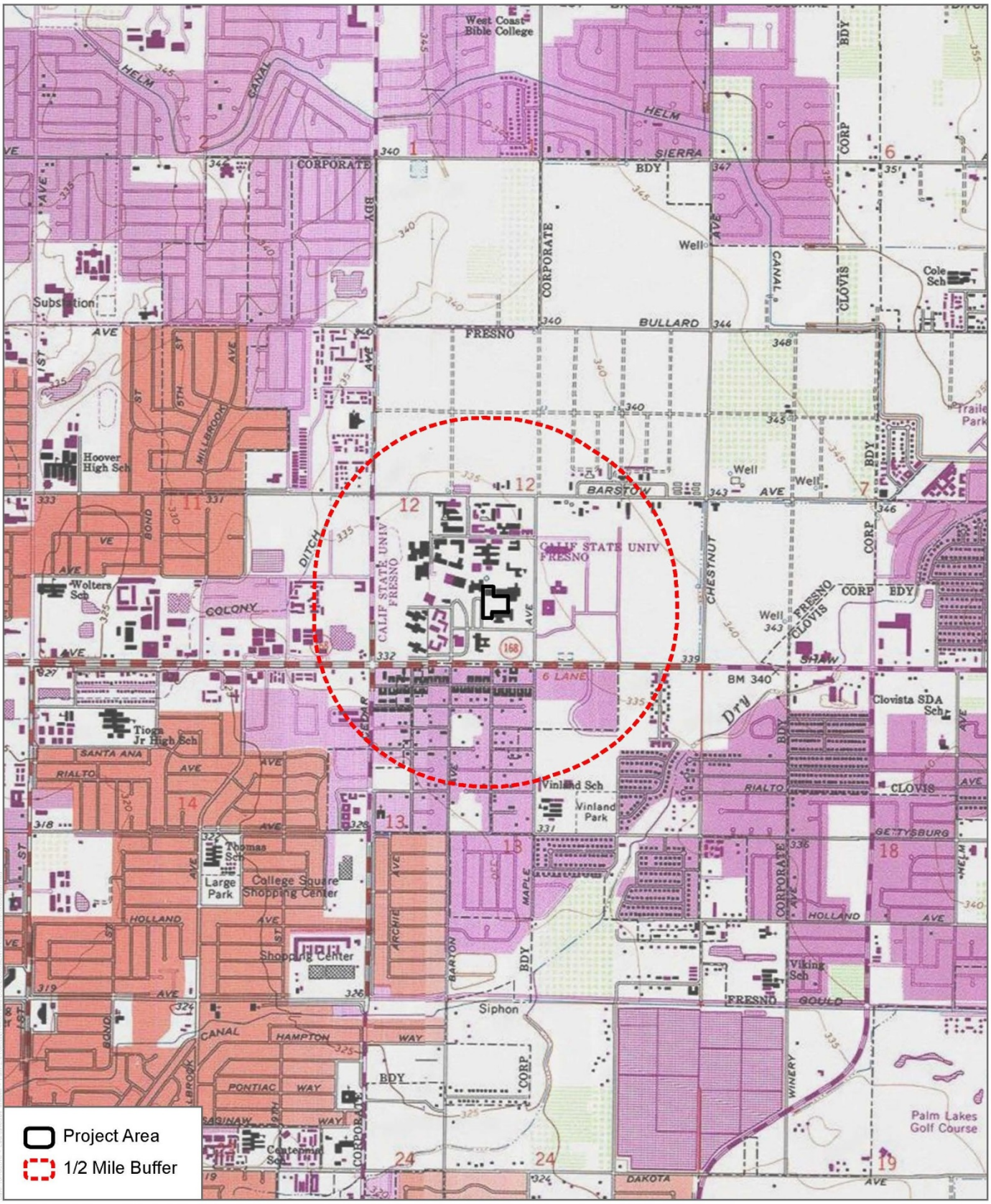

SOURCE: USGS Topo 7.5 Minute Series Clovis Quadrangle
Township 13S / Range 20E / Sections 12

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FIGURE 1

Records Search

Fresno State Student Union Project

DUDEK

725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.3500 F 831.600.3501

November 27, 2018 PN 11446

Ms. Elizabeth Kipp, Chairperson
Big Sandy Rancheria of Western Mono Indians
PO Box 337, 37387 Auberry Mission Road
Auberry, CA 93602

Subject: ***California State University, Fresno New Student Union Project, City of Fresno, California- Native American Outreach***

Dear Ms. Kipp:

We have been retained by California State University, Fresno (Fresno State) to complete a cultural resources investigation for construction of a proposed student union, in compliance with the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA), and relevant local municipal guidelines and regulations.

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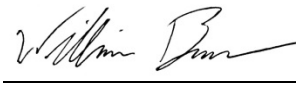

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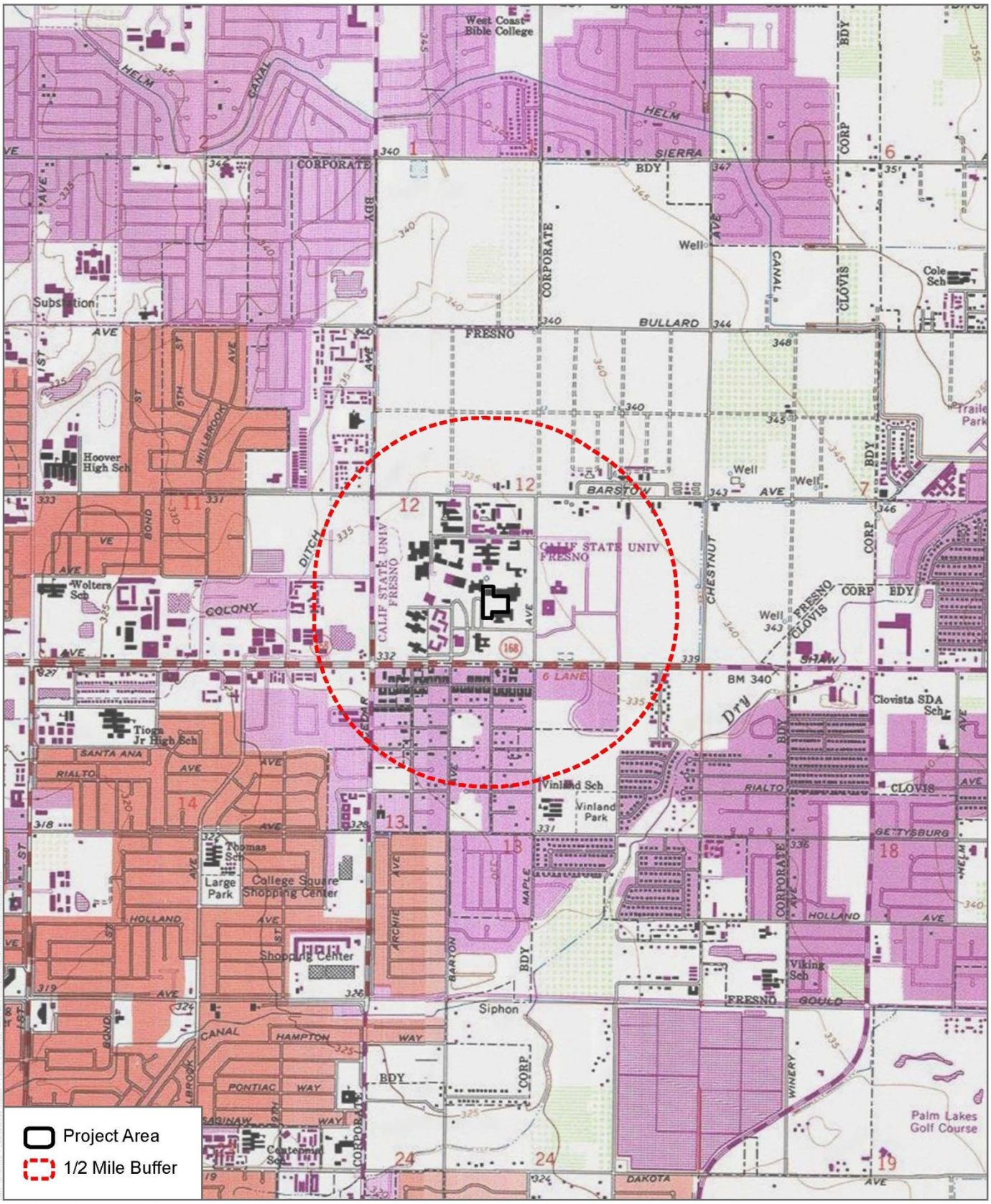

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SANTA CRUZ, CALIFORNIA 95060
T 831.600.3500 F 831.600.3501

November 27, 2018 PN 11446

Mr. Robert Ledger, Chairperson
Dumna Wo-Wah Tribal Government
2191 West Pico Avenue
Fresno, CA 93705

Subject: ***California State University, Fresno New Student Union Project, City of Fresno, California- Native American Outreach***

Dear Mr. Ledger:

We have been retained by California State University, Fresno (Fresno State) to complete a cultural resources investigation for construction of a proposed student union, in compliance with the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA), and relevant local municipal guidelines and regulations.

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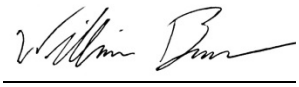

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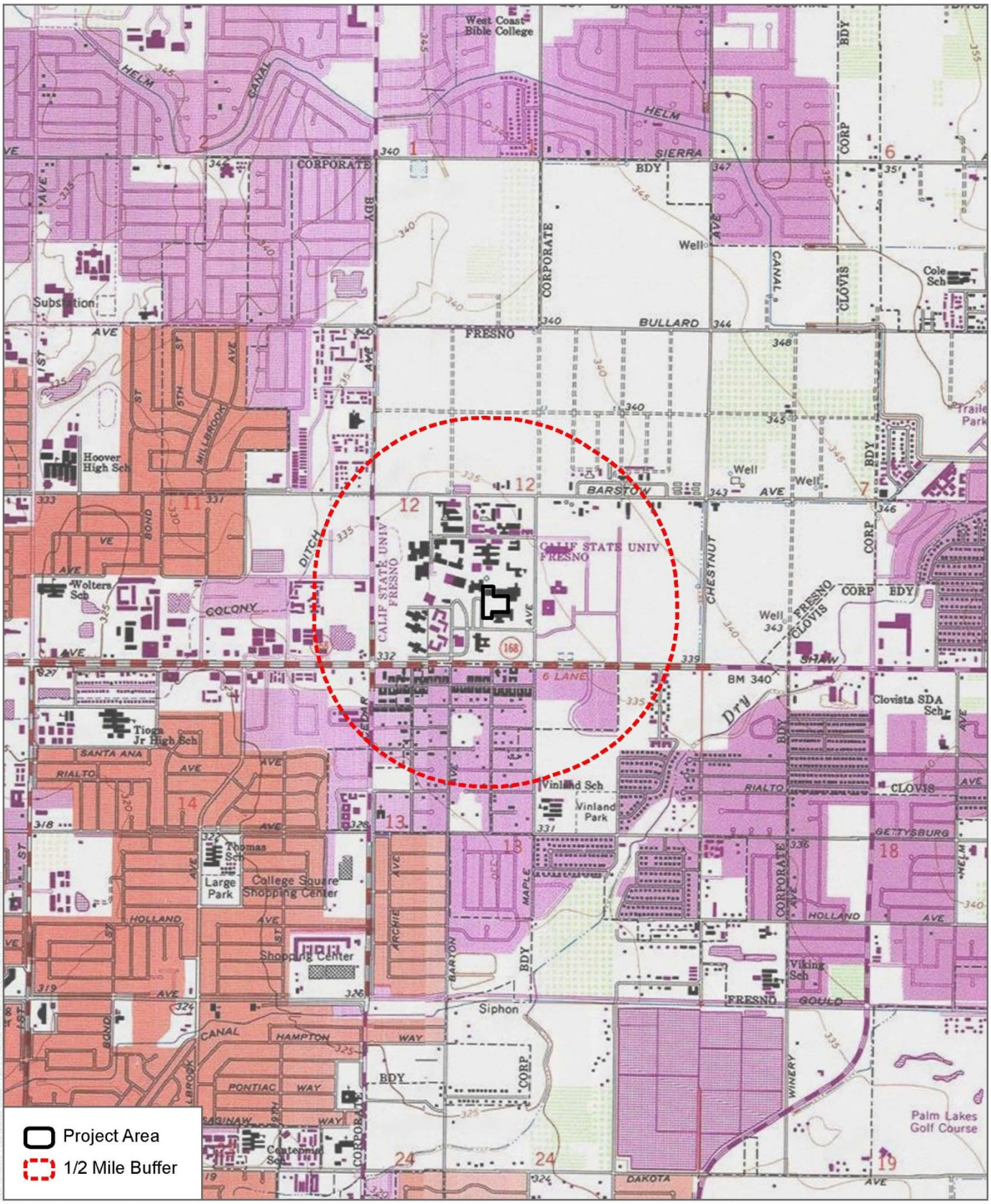

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725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.3500 F 831.600.3501

November 27, 2018 PN 11446

Mr. Rick Osborne, Cultural Resources
Traditional Choinumni Tribe
2415 E. Houston Avenue
Fresno, CA 93720

Subject: ***California State University, Fresno New Student Union Project, City of Fresno, California- Native American Outreach***

Dear Mr. Osborne:

We have been retained by California State University, Fresno (Fresno State) to complete a cultural resources investigation for construction of a proposed student union, in compliance with the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA), and relevant local municipal guidelines and regulations.

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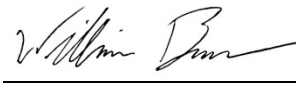

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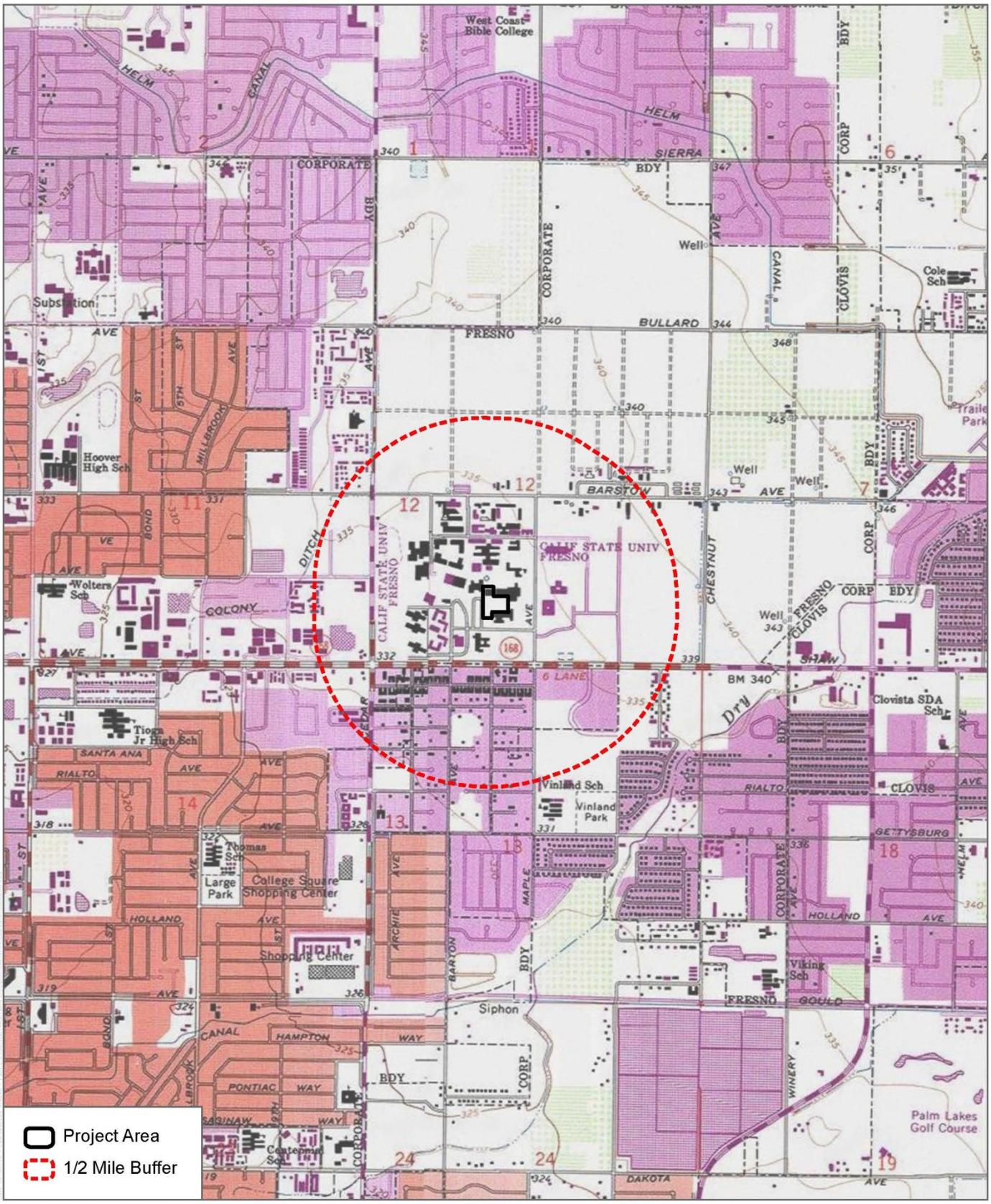

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725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.3500 F 831.600.3501

November 27, 2018 PN 11446

Mr. Bob Pennell, Cultural Resources Director
Table Mountain Rancheria
PO Box 410
Friant, CA 93626

Subject: ***California State University, Fresno New Student Union Project, City of Fresno, California- Native American Outreach***

Dear Mr. Pennell:

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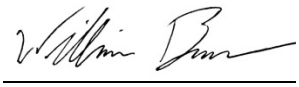

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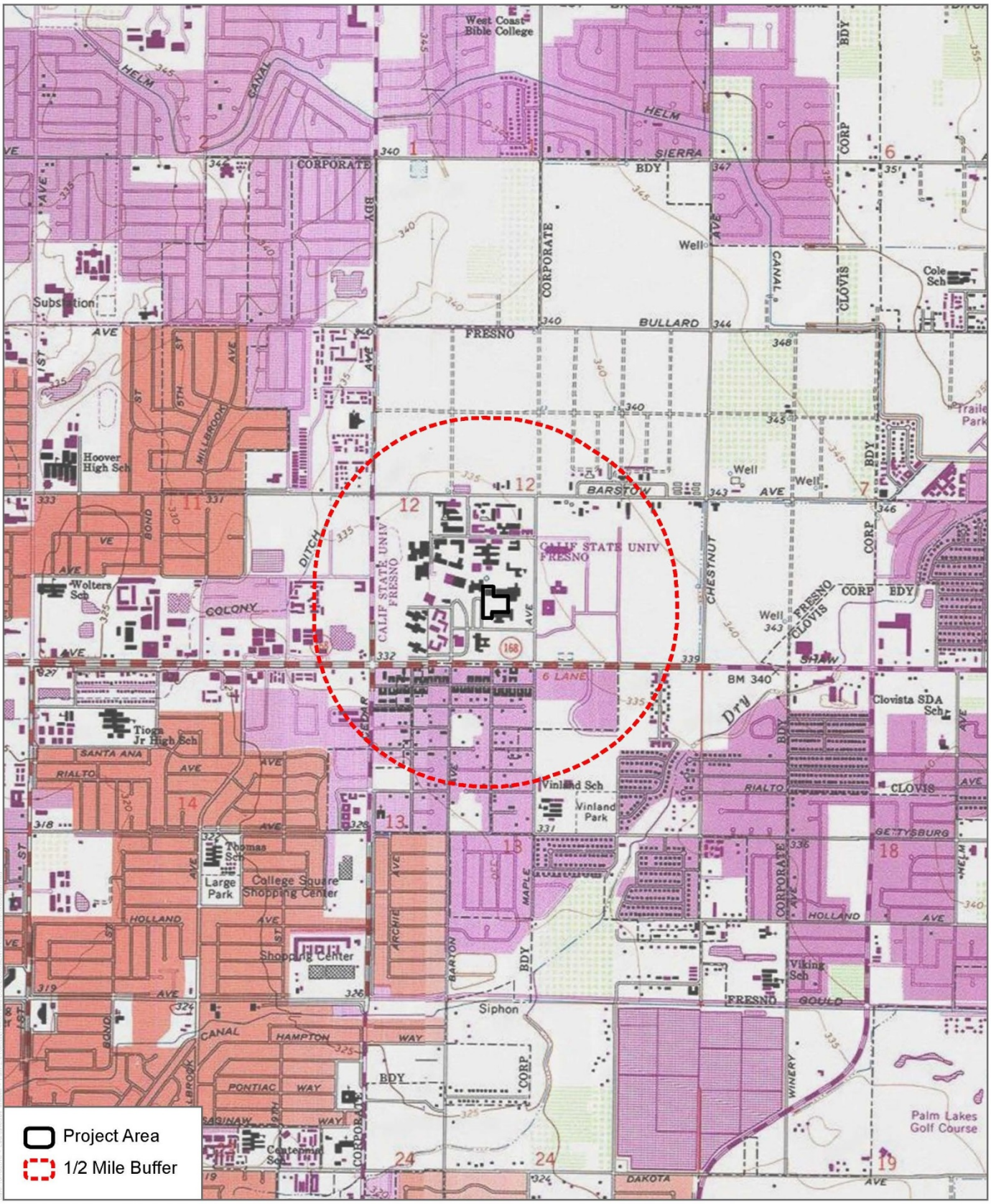

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Fresno State Student Union Project

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725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.3500 F 831.600.3501

November 27, 2018 PN 11446

Ms. Leanne Walker-Grant, Chairperson
Table Mountain Rancheria
PO Box 410
Friant, CA 93626

Subject: ***California State University, Fresno New Student Union Project, City of Fresno, California- Native American Outreach***

Dear Ms. Walker-Grant:

We have been retained by California State University, Fresno (Fresno State) to complete a cultural resources investigation for construction of a proposed student union, in compliance with the California Environmental Quality Act (CEQA), Section 106 of the National Historic Preservation Act (NHPA), and relevant local municipal guidelines and regulations.

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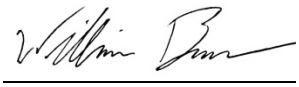

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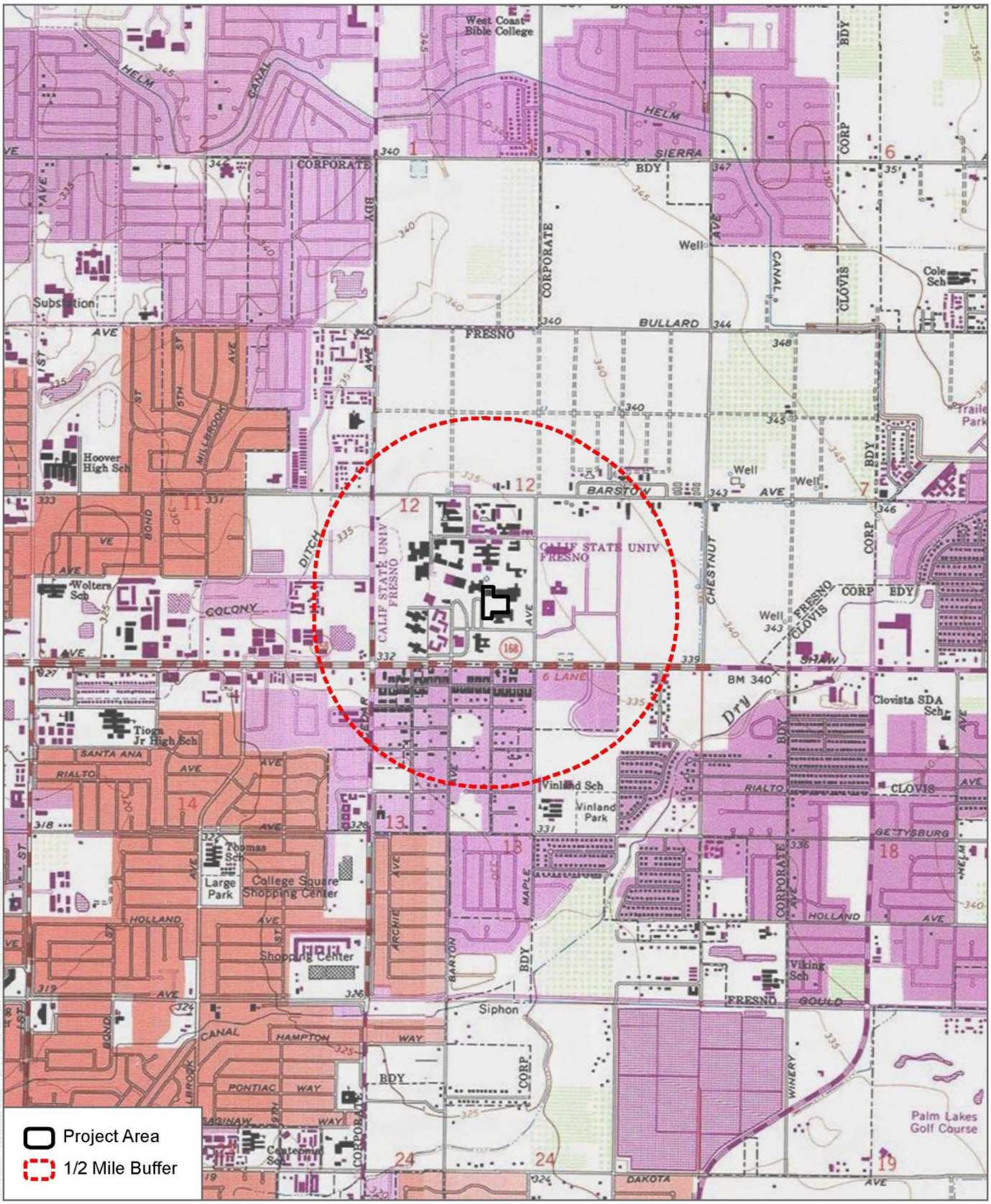

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725 FRONT STREET, SUITE 400
SANTA CRUZ, CALIFORNIA 95060
T 831.600.3500 F 831.600.3501

November 27, 2018 PN 11446

Mr. Kenneth Woodrow, Charperson
Wuksache Indian Tribe/ Eshom Valley Band
1179 Rock Haven Ct.
Salinas, CA 93906

Subject: ***California State University, Fresno New Student Union Project, City of Fresno, California- Native American Outreach***

Dear Mr. Woodrow:

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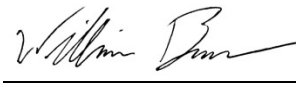

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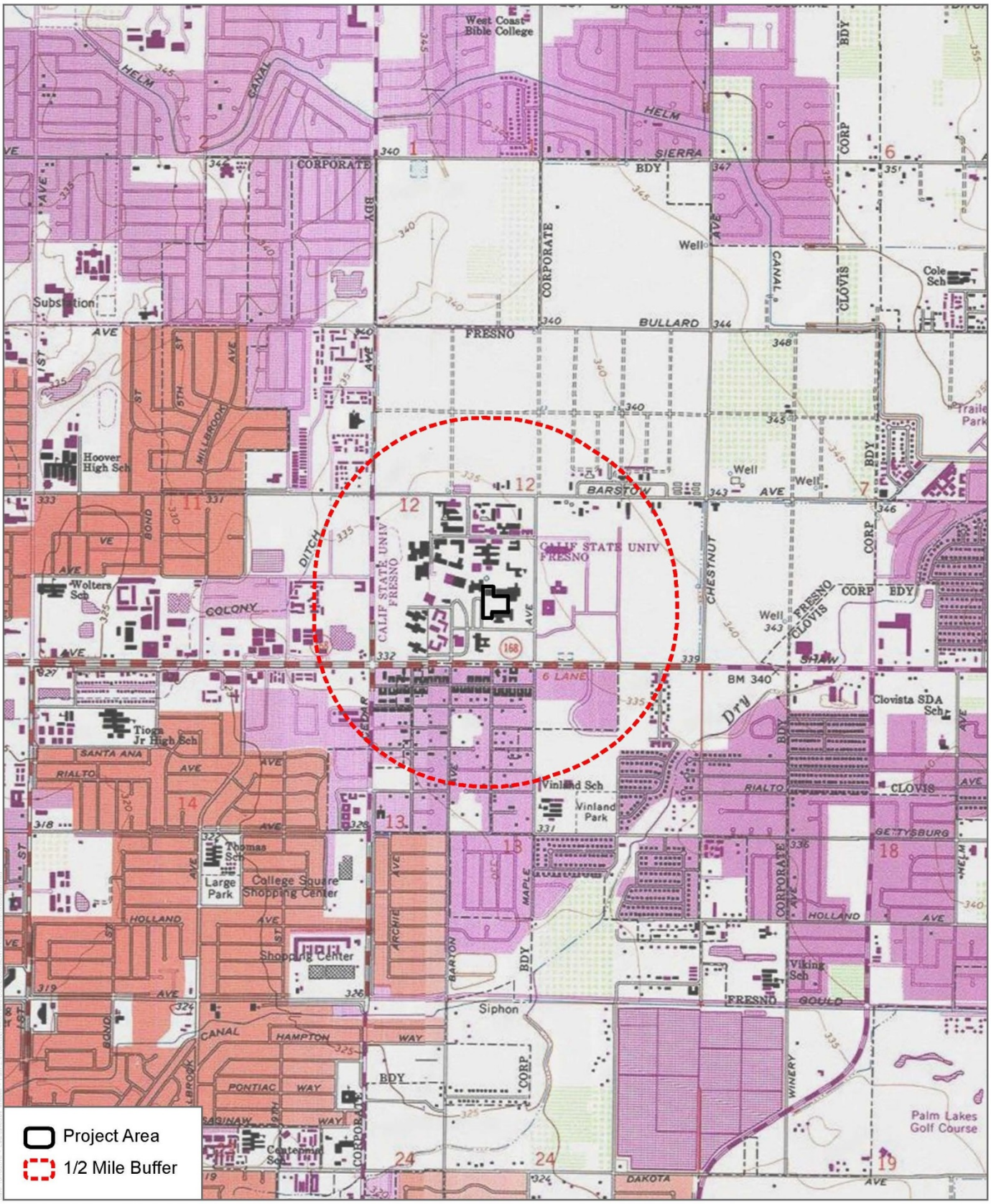

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FIGURE 1

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Fresno State Student Union Project

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SANTA CRUZ, CALIFORNIA 95060
T 831.600.3500 F 831.600.3501

APPENDIX B

DPR forms for the Keats Building and the Amphitheater

State of California ♘ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code | Reviewer | Date

Page 1 **of** 12 ***Resource Name or #:** (Assigned by recorder) Keats Building
P1. Other Identifier: Keats Building

*P2. **Location:** ☐ **Not for Publication** ■ **Unrestricted**
- ***a. County** Fresno **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
- ***b. USGS 7.5' Quad** Clovis, CA **Date** 1964 (1982 ed.) **T** 13S; **R** 20E ; ☐ **of** ☐ **of Sec** 12; Mount Diablo **B.M.**
- c. Address 5241 N Maple Avenue City Fresno Zip 93740
- d. UTM: (Give more than one for large and/or linear resources) Zone 11S, 254894 mE/ 4077513 mN
- e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate)

The Keats Building is located southwest of the geographic center of campus between the University Center to the west, the Fountain to the north, the Speech Arts building to the east, and the Amphitheater to the South.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The Keats Building is a one-story, modest Contemporary style, educational building. The building is rectangular in plan and sits on a concrete slab foundation. The building is constructed of reinforced basalite concrete masonry units (CMU) in a stack bond pattern.

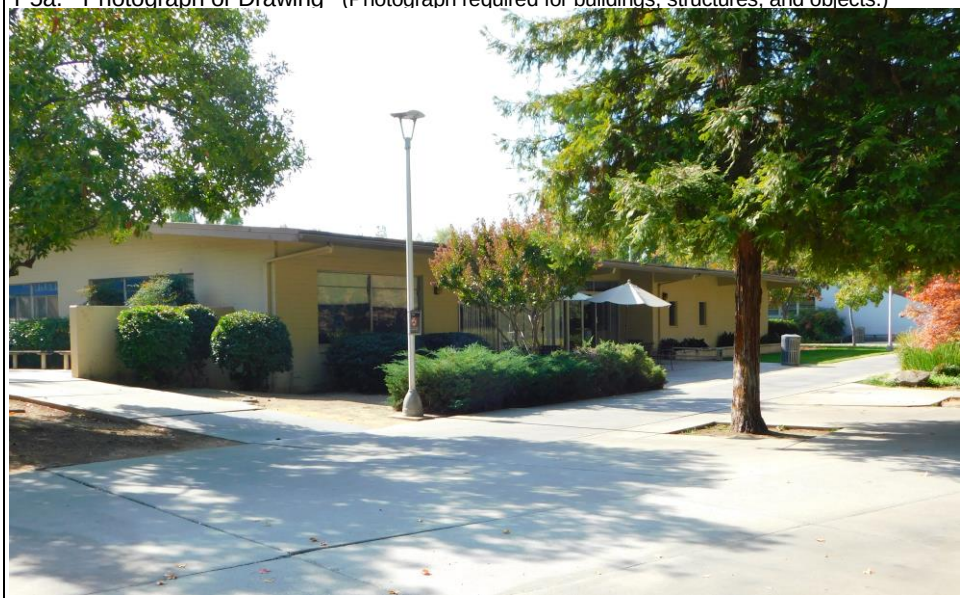
See Continuation Sheet

***P3b. Resource Attributes:** (List attributes and codes) HP15: Educational Building

***P4. Resources Present:** ■ Building ☐ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: (view, date, accession #) View Looking Southeast, 10/26/2018, Photo #DSCN2232

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)



***P6. Date Constructed/Age and Source:** ■ Historic ☐ Prehistoric ☐ Both
1956/ Special Collections Research Center, CSU Fresno

***P7. Owner and Address:**
California State University, Fresno
5241 N Maple Ave, Fresno CA 93740

***P8. Recorded by:** (Name, affiliation, and address) Fallin Steffen, Dudek
725 Front Street, Suite 400
Santa Cruz, CA 95060

***P9. Date Recorded:** 10/26/2018

***P10. Survey Type:** (Describe)
Pedestrian

***P11. Report Citation**: (Cite survey report and other sources, or enter "none.")
Steffen, Fallin, William Burns, Nicole Frank, Sarah Brewer & Samantha Murray. Cultural Resources Technical Report for the Keats Building and the Amphitheater. 2018.

***Attachments:** ☐NONE ■Location Map ■Continuation Sheet ■Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List):

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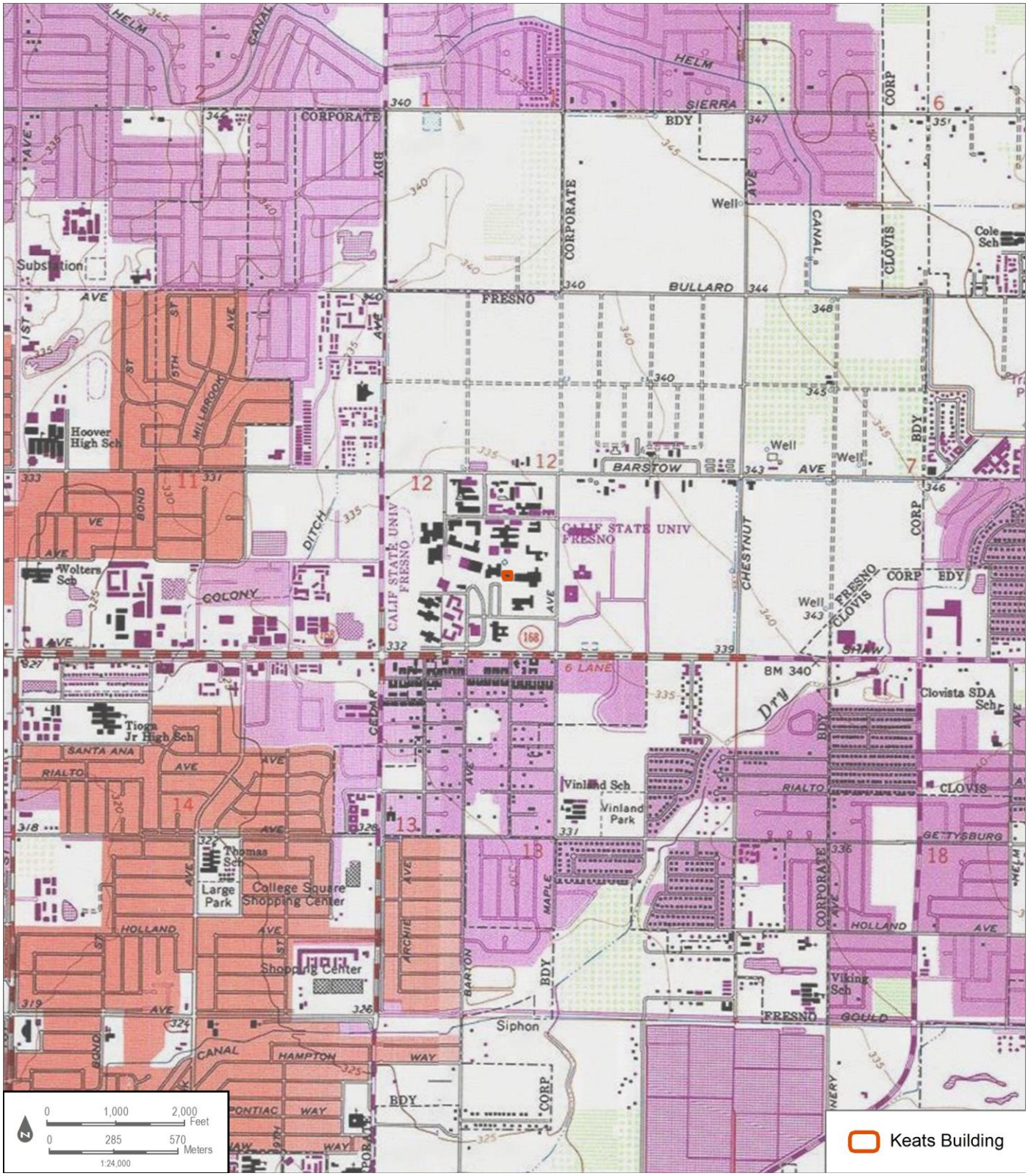
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

Page 2 **of** 12 ***Resource Name or #** (Assigned by recorder) Keats Building
***Map Name:** USGS Clovis Quadrangle ***Scale:** 1:24 000 ***Date of map:** 1982



State of California ♿ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

Primary #
HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** (Assigned by recorder) Keats Building ***NRHP Status Code** 6Z
Page 3 **of** 12

B1. Historic Name: Bookstore
B2. Common Name: Keats Building
B3. Original Use: Campus Bookstore B4. Present Use: Administrative Offices
***B5. Architectural Style:** Contemporary
***B6. Construction History:** (Construction date, alterations, and date of alterations)

The building known today as the Keats Building opened in March, 1956 as the Fresno State College Bookstore. The building was designed by Civil Engineer, Hugh B. Brewster. Its original design included 6,000 square feet of space for use as retail and display, offices, and receiving and storage. The building was completed for under $100,000. owning in part to the reuse of fixtures and bookcases salvaged from the Student Union on the University Avenue campus. An extension designed by Hugh B. Brewer, was added to the rear of the building in 1959.
The following alterations were either confirmed by University building records or identified visually during the pedestrian property survey. Unless otherwise noted, no information pertaining to the exact dates of these alterations is available: Addition of an automatic sliding door system on main elevation entry; addition of two fixed square windows on the main elevation, "BOOKSTORE" signage originally located on the upper left-hand corner of the right-side broad masonry wall on the main elevation moved to the right side of wall and now reads "KEATS BUILDING"; addition of four windows and two doors to the west elevation; new gutter system on north and south elevations; and painting of the original exposed CMU and aluminum fascia surfaces.

***B7. Moved?** ■**No** □**Yes** □**Unknown** **Date:** **Original Location:**
***B8. Related Features:** None.

B9a. Architect: Hugh B. Brewster b. Builder: Unknown
***B10. Significance: Theme** N/A **Area** N/A

Period of Significance N/A **Property Type** N/A **Applicable Criteria** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

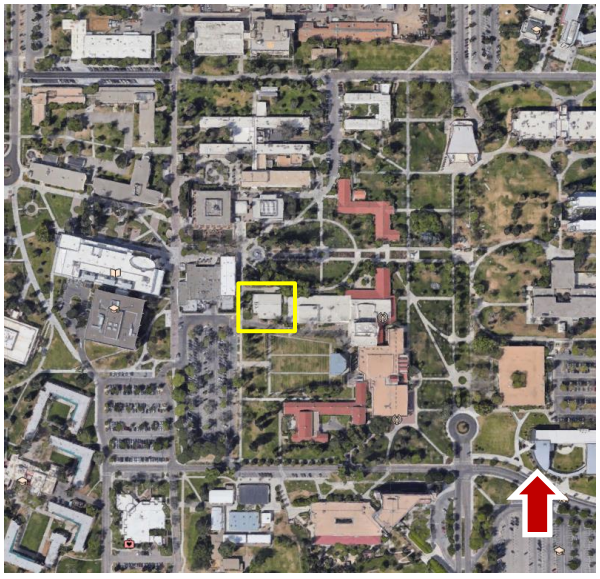
See Continuation Sheet

B11. Additional Resource Attributes: (List attributes and codes)
***B12. References: See Continuation Sheet**

B13. Remarks:

***B14. Evaluator:** Fallin Steffen, MPS.
***Date of Evaluation:** 10/26/2018.

(This space reserved for official comments.)



***P3a. Description:**

The masonry and structural components are painted, as are the window frames and several exterior doors. The shallow pitch of the side-gabled, white rock composition roof is supported by exposed, angle-cut, laminated wood beams which help to accentuate and defines the long, low, structural form of the building. The distinct bays of the building are differentiated by their juxtaposition of materials, such as a wall of floor-to-ceiling, metal framed windows beside a flush, CMU wall. Overall, without much decoration or ornament, the building relies only on these distinct bays to emphasize the horizontal massing of the building. Window types on the building vary and include both original, fixed, metal frame picture windows with a horizontal lite above two larger, vertical lites, as well as non-original, fixed, square metal windows. Door styles also vary throughout the building, from single hollow metal doors to double full-lite automatic doors.

When the existing building is compared to the 1956 architectural drawings, it becomes evident that several alterations have occurred over the years. The most significant change to the building is a 1,500-sq. ft. extension added to the south elevation in 1959. Alterations to fenestration include the addition of windows, alteration of openings, insertion of doors, and replacement of doors. Other alterations include painting of the originally exposed exterior concrete block. Additional observations regarding alterations to the building are included following the elevation descriptions, below.

North (Main) Elevation

The main elevation (Figure 3) of the Keats Building faces north towards the fountain and features two unequally-sized masonry bays flanking a recessed entryway with an exposed pea gravel aggregate terrace. The left side masonry bay features two, side-by-side metal framed, fixed windows comprised of a narrow horizontal lite above a square lite above a projecting concrete sill.

Moving around the corner, an original metal frame full-lite door with an inoperable transom above fills the span created by the recessed entryway. The entryway area itself contains two, full-lite, metal framed, bi-part, Besam brand, automatic sliding doors with fixed sidelights. A curtain wall of fixed metal framed windows, composed of a narrow, horizontal lite above a tall vertical stretches across recessed entryway, framing in the automatic door and demarcating the entryway from the remaining masonry construction on this façade. Vertical wood siding fills the space between the windows and the enclosed eaves in this section only. The remaining masonry bay on the right side of this elevation features a low, built-in planter box stretching the length of the bay. It is constructed of the same basalite CMU as the building and is topped with a flat concrete cap. This section of the elevation contains two, fixed square windows and a simple letter signage affixed to the right top corner of the façade, reading 'Keats Building'.

West Elevation

Moving around the building to the right, the west elevation (Figure 4) is comprised of two sections; a wide CMU section complete with a sampling of original and non-original windows and doors of various shapes and sizes; and the recessed area created by the 1959 addition to the south face of the building. Fenestration on the original section appears as follows (left to right): a pair of non-original grouped windows with reflective glass set in a metal frame; a metal utility housing box; another pair of non-original grouped windows with reflective glass in a metal frame; a full-lite metal framed door with a blue canopy and reflective glass; two louvered vents above two more louvered vents; a single hollow metal door; a two-sided metal frame casement window with an operable left side and a projecting concrete sill; another two-sided metal frame casement window with an operable right side and a projecting concrete sill. The 1959 recessed section of the building includes a single, hollow metal door beside two stacked square windows forming a side-lite, all encompassed in the same metal surround.

South Elevation

The majority of the south elevation (Figure 5) is comprised of the 1959 addition to the building, except for the right-most, recessed section belonging to the original design. As such, the laminated beams across this façade differ in shape slightly from those visible on

the north façade, and the width of the fascia board differs slightly. Fenestration across this elevation is relatively simple and includes a pair of non-original grouped windows with reflective glass set in a metal frame; a tall side-lite window beside a single, hollow metal door in a shared metal frame; a fixed square window; another fixed square window.

East Elevation

The east elevation (Figure 6) exhibits signs of both the 1959 addition, evidenced by the uninterrupted masonry section, and the original 1956 symmetrical section. The windows on this elevation are all original windows, which have been augmented with a reflective film on the glass, including: a pair of casement windows, each featuring a narrow, horizontal lite above two lites within a metal frame. The outermost lite of each of the lower sections of these windows is an operable casement window; a group of three windows with a horizontal lite above two vertical lites. The central window is completely fixed, while the flanking windows feature operable casement windows in their outermost, lower sections; another set of two casement windows, each featuring a narrow, horizontal lite above two lites within a metal frame. The outermost lite of each of the lower sections of these windows is an operable casement window.

North (Main) Elevation, view to southwest, DSCN2275

West Elevation, view to east, DSCN2277

South (Rear) Elevation, view to north, DSCN2171

East Elevation, view to southwest, DSCN2201

***B10.Significance:**

Early Development of Education in Fresno

As the town of Fresno ballooned in the early 1870's, there became an urgent need to develop schools. There were approximately 80 school-aged children living in Fresno by 1872. The first school district was formed early in 1873, and even with a block of donated land from the Central Pacific on which to build a school, the bond measure to fund the project failed. After a reorganization of the district in 1874, a $4,000 bond measure passed and Fresno constructed its first, 50-student school house by January of 1875. Being too small to house the existing number of school-age children in Fresno, the new school facilities reached full capacity by 1878, and it quickly became clear that expanded school facilities would be necessary. With approval from the State Legislature, the Fresno School District issued an additional $15,000 in bonds that went towards the construction of a new, 400-student facility called the Central School, which opened in 1879. This building was colloquially referred to as the "White" or as the "Hawthorne" (Clough 1985).

The Central School reached capacity by 1885, and only offered a handful of secondary school subjects for students (Clough 1985; FHAA 2018). The need for an additional facility arose and by 1889, Fresno High School was organized as the first secondary school in Fresno County. After several moves between buildings, the 400-student capacity Fresno High School opened at its current location in September of 1896. The new brick building with its characteristic central clock detail cost $53,000 to construct and featured a library, a gymnasium, a lecture hall with theatre, and a chemistry lab (FHAA 2018).

The Fresno High School building would be the founding site of two more important educational institutions in not only Fresno history, but also State history. The Fresno Junior College, the oldest two-year college in California history, was established in 1910 on the campus shared Fresno High School campus. Fresno State Normal School (renamed Fresno State Teachers College in 1921, then Fresno State College in 1935, then California State University Fresno in 1972) also began on the Fresno High School campus in 1911 as an accreditation school for young teachers (Kyle 2002; FHAA 2018).

Historical Overview of California State University, Fresno

The State Normal School system was a State-accredited teacher training program overseen by the State Division of Education. Fresno State Normal School was the fifth such school established under this system, following the formation of institutions in San Jose (1862), Chico (1887), San Diego (1897) and San Francisco (1899) (CSU NoDate).

After operating out of the Fresno High School building for two years, the Fresno State Normal School moved to a new campus on University Avenue in 1913. Plans for the construction of an Administration Building were soon underway in the new location. The Lombard-style brick Administration building was designed by State architect George MacDougall and was completed in 1916. It housed a library, an auditorium, offices and classroom space (Seacrest 2011).

In 1921, the State of California renamed all State Normal Schools to "Teachers Colleges." Also during this year, the Fresno State Teachers College graduated from a two-year to a four-year institution, and was authorized to grant Bachelors of Arts degrees in Teaching (CSU Fresno 2018a). Social Sciences classes were added to the curriculum at this time, followed by engineering courses in 1922, and Agriculture and Biology courses in 1925 (Seacrest 2011; CSU Fresno 2018b).

As a result of these new disciplines being added to the curriculum at Fresno State Teachers College, the name of the School was officially shortened to Fresno State College in 1934. The student body and the curriculum began to show signs of growth beyond the limits of the relatively small 1913 campus. For example, the campus lacked the space for a hands-on training facility for the Agriculture and Biology courses. The Millbrook Farm, a site located approximately three miles southwest of the present campus site, was rented to serve as a self-sustaining, vocational agriculture and farming classroom in 1937 (Seacrest 2011; CSU Fresno 2018b). The Millbrook Farm proved to be an extremely successful venture, and in the first year alone, the farm produced $7,000 worth of agricultural product (Seacrest 2011). The Millbrook Farm expanded quickly to cover 132-acres of farmland located on several sites, none of which was actually owned by Fresno State College (Seacrest 2011).

World War II and mandatory food rationing efforts amplified the need for the Fresno State Agriculture and Biology program, as domestic agronomic production was essential to victory abroad. Courses in food processing techniques, canning and victory garden care were offered by the College to the public during this time (Seacrest 2011).

By the close of the war, a permanent site for the vocational farming enterprise was still yet to be purchased. In 1946, the Fresno State Foundation purchased a 320-acre portion of the William Helm Estate, located at Shaw and Cedar Avenues, in hopes that it could become the new college farm. However, the following year in 1947, Hammer Field, a former Army Air Corps base in Fresno stood vacant after the close of the war, and was also identified as a suitable location for the new farm, and was purchased by Fresno State. Farming activities relocated there from Millbrook Farm between 1947 and 1954. Also during this time, the Six Counties Agricultural Advisory Committee, an advisory committee formed to identify land for permanent use by farming programs at colleges, began purchasing farm parcels north of the Millbrook Farm site (Seacrest 2011; CSU Fresno 2018b).

After determining that further expansion of the 1913 University Avenue campus would be cost prohibitive, the Fresno State Administration set its sights on a new campus site altogether which would allow the college enough space for future expansion. The College focused on the portion of the Helm Estate purchased in 1946, as well as the parcels in this area purchased by the Six Counties Agricultural Advisory Committee, and through the consolidation of these lands, the heart of the present-day Campus of CSU Fresno was formed. This new campus would allow for the occupational farm site to exist alongside the remainder of Fresno State College (Seacrest 2011).

Ground was broken on the new campus in 1950, overseen by Governor Earl Warren. An article appeared in the Fresno Bee The Republican in November 1951 which stated, "The new Fresno State College campus at Shaw and Cedar Avenues is being constructed on an expandable plan which will permit the addition of buildings to accommodate 5,000 students by 1960…It is now estimated that the completed project will cost between $15,000,000 and $20,000,000 to be financed over a period of approximately 10 years (FBR 1951)."

The majority of the core campus buildings were completed in the period between 1953 and 1960; the College Laboratory School, Music Building, and Agricultural Mechanics Building in 1953;

Administration Building, Men's Gymnasium and Industrial Arts Building in 1954; McLane Hall, Education-Psychology Building and Library in 1955; Campus Agricultural Laboratory (farm), Women's Gymnasium, Cafeteria, and College Bookstore in 1956; Engineering Building, Business Building, and official campus dedication in 1958; Baker Hoffman and Graves Residence Halls in 1959; and the Social Sciences Building and Speech Arts Building in 1960 (Seacrest 2011). By 1961, the college became a charter member of the California State University and College System. Building and development continued on campus throughout the 1960s, and in 1972 the college became known as California State University, Fresno. Currently, the main campus contains 388-acres, and 1,011-acres of farm land (CSU Fresno 2018c).

Keats Building (1956)

The building known today as the Keats Building opened in March, 1956 as the Fresno State College Bookstore. The building was designed by Civil Engineer, Hugh B. Brewster. Its original design included 6,000 square feet of space for use as retail and display, offices, and receiving and storage. The building was completed for under $100,000, owning in part to the reuse of fixtures and bookcases salvaged from the Student Union on the University Avenue campus. An extension to the building, also designed by Hugh B. Brewer, was added to the rear of the building in 1959 to allow for added storage space (Seacrest 2011; Brewster 1956; Brewster 1959).

When a new, three-story campus bookstore was completed in 1970, it rendered the original bookstore obsolete. It was at this time that the building was renamed the Keats Building, after a street located to the south of the building, Keats Avenue. The Keats Building is the only building on campus named after a street, and not a person (Seacrest 2011; Special Collections Research Center 2018).

Criterion A/1: That are associated with events that have made a significant contribution to the broad patterns of our history.

Archival research did not find any associations with events that have made a significant contribution to the broad patterns of local or regional history. The Keats Building was designed by Civil engineer Hugh B. Brewster as the first campus bookstore in 1956, in the midst of the Fresno State College era. It was neither the first, last, nor only building constructed during this time on the new campus, nor was it the first, last or only building constructed during the period in the Contemporary style on campus. While CSU Fresno played an important role in shaping the City of Fresno, the Keats Building was not the cause of that influence, but rather the effect of the increasing numbers of individuals seeking higher degrees in the Fresno area. This eventually led to the development of the new Fresno State College campus, of which the subject building is a part. While a Bookstore is arguably a very significant campus building, the economical size of the Keats Building's design caused almost immediate issues from a functional use standpoint, and as such, a new campus bookstore was designed to replace it in 1970. The construction of this new Bookstore relieved the Keats Building from its originally intended function only 14 years after its completion, severing the building's connection to the early development phase of the new campus. Therefore, due to a lack of identified significant associations with events important to history, the subject property does not appear eligible under NRHP/CRHR Criterion A/1.

Criterion B/2: That are associated with the lives of persons significant in our past.

Archival research did not indicate any associations with persons important to the nation's or state's past. Therefore, the subject property is recommended not eligible under NRHP/CRHR Criterion B/2.

Criterion C/3: That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

The Keats Building was designed in the Contemporary style by a local Fresno Civil Engineer named in Hugh B. Brewster in 1956. The building still embodies a number of its modest Contemporary style characteristics, such as exposed roof beams beneath wide eaves, a low pitched gabled roof, recessed entryway and broad, uninterrupted wall surface. However, the building was subjected to a number of substantial exterior alterations over the years,

including insertion of windows and doors, replacement of original exterior doors, painting over the exposed concrete block walls, and the 1,500-sq. ft. addition onto the southern end in 1959. The Keats Building does not possess high artistic values, particularly in comparison to other Contemporary style buildings in the area. It is also not the work of a master architect. Therefore, the subject property is recommended not eligible under NRHP/CRHR Criterion C/3.

Criterion D/4: That have yielded, or may be likely to yield, information important in prehistory or history.

There is no evidence to suggest that this property has the potential to yield information important to state or local history. Therefore, the property is recommended not eligible under NRHP/CRHR Criterion D/4.

In consideration of the subject property's history and requisite integrity, Dudek finds the property not eligible for designation as a CHL based on the following significance evaluation and in consideration of state eligibility criteria:

The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).

The subject property is a modest, utilitarian example of the Contemporary style of architecture designed by Civil Engineer Hugh B. Brewster and completed in 1956. Other examples of Contemporary style architecture exist in the area, including other campus buildings such as the Laboratory School Building (1953) and the Speech Arts Building (1960). As such, the subject property does not represent the first, last, only, or most significant building of its type. Therefore, the subject property is recommended not eligible for listing as a CHL under this criterion.

Associated with an individual or group having a profound influence on the history of California.

Although CSU Fresno played an important role in shaping the City of Fresno and its environs, the subject property was not the cause of that influence, but rather the effect. The increasing numbers of individuals seeking higher degrees led to the development of the CSU system, of which the Fresno campus is a part. Therefore, the subject property did not have a profound influence on the history of California. As such, the subject property is recommended not eligible for listing as a CHL under this criterion.

A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder.

The Keats building represents a modest, one-story, utilitarian design in the Contemporary style, an architectural style that characterizes other buildings in the area constructed during the 1950s and 1960s. Archival research identified the architect as Civil Engineer Hugh B. Brewster, a relatively unknown and now obscure architect, and the design does not display aesthetics characteristic of those espoused by pioneering architects or designers working in Fresno at the time. Therefore, the subject property is recommended not eligible for listing as a CHL under this criterion.

Local:

For the reasons explained in the NRHP and CRHR evaluation section above, the Keats Building does not appear eligible for the City of Fresno Local Register of Historic Resources.

Integrity:

Integrity is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance, and the historical resource's ability to convey that significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity. Similar stipulations apply to listing in the CRHR, but the threshold is lower, particularly if the site has potential to yield significant scientific or historic information. The evaluation of integrity is sometimes a subjective judgment, but is must always be grounded in an understanding of a property's physical features and how they relate

to its significance. Within the concept of integrity, seven aspects or qualities that, in various combinations, define integrity: location, design, setting, materials, workmanship, feeling, and association (NPS 1990). To retain historic integrity, a property will generally possess several, if not most, of the aspects. The retention of specific aspects of integrity is paramount for a property to convey its significance.

Location: The building is sited on the original location of construction in its original orientation at the center of campus, therefore, the subject property maintains integrity in relation to its location.
Design: The building was subjected to several alterations over time that have significantly compromised its integrity of design, most notably the 1,500-sq.ft. onto the southern elevation and the addition of windows and doors throughout the building. Therefore, the building no longer maintains integrity of design.
Setting: The Keats Building remains in its original intended educational setting on the Campus of CSU Fresno. However, due to subsequent development on campus since it construction in 1956, it no longer maintains its spatial relationship with the surrounding buildings, and is now dwarfed by new, adjacent buildings, such as the Music Building. Furthermore, the area surrounding the Campus is more urbanized, with many of the agricultural fields that once surrounded it now developed. Therefore, the property does not maintain integrity of setting.
Materials: The addition onto the south end of the property, which did not maintain all the same design components as the original building, numerous alterations to fenestration size, type, and location, as well as painting of the exposed exterior concrete and aluminum negatively impact the integrity of the original materials and methods. Therefore, the building does not maintain integrity of materials.
Workmanship: Similar to the issue with materials, the physical evidence of craftsmen's skills in constructing the original building was compromised by the addition to the south end, painting of the exterior, and numerous alterations to the fenestration size, type, and location. Therefore, the building no longer retains its integrity of workmanship.
Feeling: The addition to the southern end, painting of the exterior, and numerous alterations to the fenestration size, type, and location negatively impacted the building's ability to convey the aesthetic and historic sense that clearly identified the building as an example of Contemporary-style architecture. Therefore, the property no longer retains its integrity of feeling.
Association: The building's association with other campus buildings constructed during the 1950s, 1960s, and early 1970s, as well as the campus and area as a whole, was markedly impacted by the numerous alterations to the subject property. Furthermore, the construction of a new bookstore rendered the Keats Building unable to perform its historic function as the campus bookstore. Therefore, the building no longer retains its integrity of association.
In summary, the Keats Building retains integrity of location, but no longer retains integrity of setting, design, materials, workmanship, feeling, and association. Consequently, the property does not maintain enough integrity to warrant listing in the NRHP, CRHR, CHL, or in the City of Fresno Local Register of Historic Resources.

***B12. References:**

Brewster, Hugh B. 1956. "Fresno State College Bookstore." As-built plans. Courtesy of Facilities Management, CSU Fresno.

Brewster, Hugh B. 1959. "Fresno State College Bookstore Addition." As-built plans. Courtesy of Facilities Management, CSU Fresno.

Clough, Charles W. 1985. *Fresno County-The Pioneer Years: From the Beginning to 1900.* Fresno, California: Panorama West Books.

CSU (The California State University). No Date. "History." https://www2.calstate.edu/csu-system/about-the-csu/Pages/history.aspx. Accessed November 12, 2018.

CSU Fresno (California State University Fresno). 2018a. "Kremen School of Education & Human Development: History." https://www.fresnostate.edu/kremen/about/history.html. Accessed November 12, 2018.

CSU Fresno (California State University Fresno). 2018b. "Animal Sciences and Agricultural Education: Farm History." http://www.fresnostate.edu/jcast/asae/about-us/farm-history.html. Accessed November 12, 2018.

CSU Fresno (California State University Fresno). 2018c. "Fast Facts About Fresno State." https://www.fresnostate.edu/home/about/fastfacts.html. Accessed November 13, 2018.

FBR (The Fresno Bee The Republican). 1951. "Fresno State Maps Long Range building Plan." November 17, 1951; p. 9. https://www.newspapers.com/image/25747440. Accessed October 29, 2018.

FBR (The Fresno Bee The Republican). 1963b. "Students are Urged to Plan Lives Boldly." April 24, 1963; p. 30. https://www.newspapers.com/image/25809791. Accessed October 25, 2018.

FCGWP (The Fresno County CAGenWeb Project). 2016. "Fresno County Historical Information." http://www.cagenweb.com/fresno/history.html. Accessed November 9, 2018.

FHAA (Fresno High Alumni Association). 2018. "History of Fresno High." https://www.fresnohighalumni.com/about-us/history-of-fresno-high. Accessed November 12, 2018.

Seacrest Jr., William B. and Lanny Larson. 2011. *A Century of Excellence 1911-2011*. St. Louis, Missouri: Reedy Press.

Special Collections Research Center. 2018. "New Campus: Keats." Campus Planning Collection. California State University, Fresno.

State of California ♿ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code 6Z

Other Listings
Review Code | Reviewer | Date

Page 1 **of** 11 ***Resource Name or #:** (Assigned by recorder) Amphitheater
P1. Other Identifier: Amphitheater

*P2. **Location:** ☐ **Not for Publication** ■ **Unrestricted**
- ***a. County** Fresno **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
- ***b. USGS 7.5' Quad** Clovis, CA **Date** 1964 (1982 ed.) **T** 13S ; **R** 20E; ___ ☐ **of** ☐ **of Sec** 12; Mount Diablo **B.M.**
- c. Address 5241 N Maple Avenue City Fresno Zip 93740
- d. UTM: (Give more than one for large and/or linear resources) Zone 11S, 254967 mE/ 4077444 mN
- e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate)

The Amphitheater is located southwest of the geographic center of campus between Parking Lot 31 to the west, the Keats and Speech Arts buildings to the north, and the Music Building to the east and to the South.

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The subject property is a one-story, open concrete platform Amphitheater, covered by a metal canopy roof. The Amphitheater seating area consists of a graded, grass field delineated by concrete dividers forming equally spaced rectangular sections.

See Continuation Sheet

***P3b. Resource Attributes:** (List attributes and codes) HP39: Other - Amphitheater
***P4. Resources Present:** ☐ Building ■ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

P5b. Description of Photo: (view, date, accession #) View Looking Northeast, 10/26/2018, Photo #DSCN2209

***P6. Date Constructed/Age and Source:** ■ Historic ☐ Prehistoric ☐ Both
1963/ Special Collections Research Center, CSU Fresno

***P7. Owner and Address:**
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***P9. Date Recorded:** 10/26/2018
***P10. Survey Type:** (Describe) Pedestrian

***P11. Report Citation**: (Cite survey report and other sources, or enter "none.")
Steffen, Fallin, William Burns, Nicole Frank, Sarah Brewer & Samantha Murray. Cultural Resources Technical Report for the Keats Building and the Amphitheater. 2018.

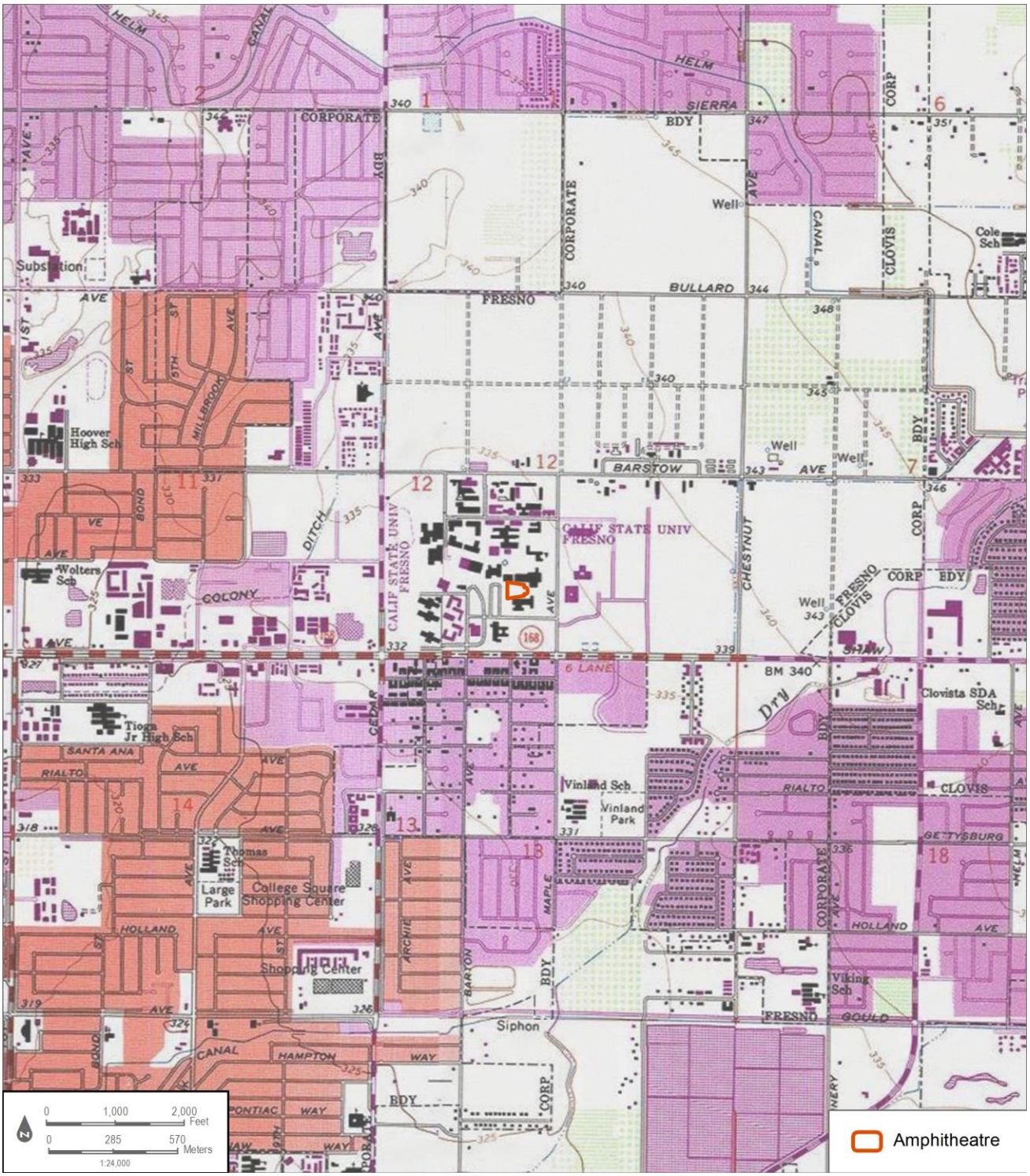
***Attachments:** ☐NONE ■Location Map ■Continuation Sheet ■Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐ Other (List): _____

State of California ♘ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI#
Trinomial

Page 2 **of** 11 ***Resource Name or #** (Assigned by recorder) Amphitheater
***Map Name:** USGS Clovis Quadrangle ***Scale:** 1:24,000 ***Date of map:** 1982



BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** (Assigned by recorder) Amphitheater ***NRHP Status Code** 6Z

B1. Historic Name: Amphitheater
B2. Common Name: Amphitheater
B3. Original Use: Amphitheater B4. Present Use: Amphitheater
***B5. Architectural Style:** Amphitheater
***B6. Construction History:** (Construction date, alterations, and date of alterations)

The Amphitheater was completed in the spring of 1963 as a space to hold commencement ceremonies and other general assembly activities. The 30-foot by 50-foot stage and the 5,000-person, outdoor graded Amphitheater facility were designed by the Fresno State College, and completed by grounds and maintenance staff personnel.

The following exterior alterations were identified visually during the pedestrian property survey. Unless otherwise noted, no information pertaining to the exact dates of these alterations is available: Original stage demolished in 1980 and a new, expanded concrete stage with a trapezoidal roof structure built in its place; and a metal trellis structure added to the concrete planter boxes present at the entrance to the Amphitheater.

***B7. Moved?** ■No ☐Yes ☐Unknown **Date:** _____ **Original Location:** _____
***B8. Related Features:** None.

B9a. Architect: Fresno State College b. Builder: Fresno State College Grounds and Maintenance
***B10. Significance: Theme** N/A **Area** N/A

Period of Significance N/A **Property Type** N/A **Applicable Criteria** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

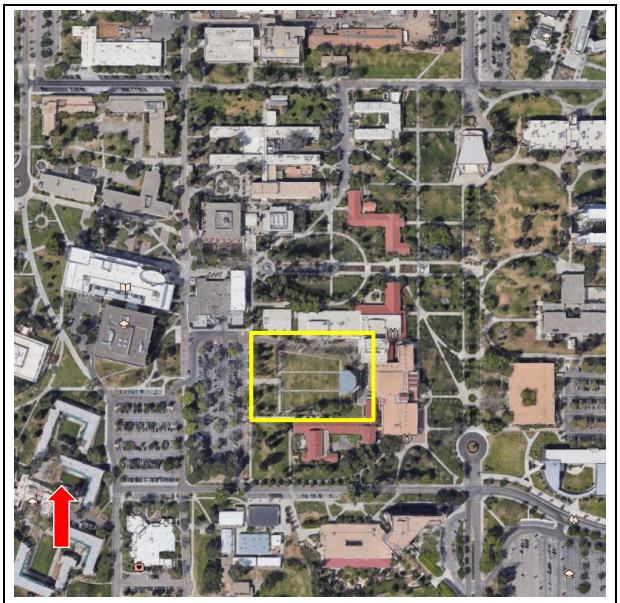
See Continuation Sheet

B11. Additional Resource Attributes: (List attributes and codes) _____
***B12. References:**

See Continuation Sheet

B13. Remarks:

***B14. Evaluator:** Fallin Steffen, MPS.
***Date of Evaluation:** 10/ 26/ 2018.



(This space reserved for official comments.)

***P3a. Description:**

When the existing stage building is compared to the 1963 architectural drawings, and contemporary photos, it becomes clear that several alterations and expansions of this resource have occurred over time. General alterations include the expansion of the stage size from the original 30-ft by 50-foot design, replacement of stage decking with concrete, the addition of a metal canopy over the stage in 1980, augmentation of supports and stairs with concrete, and the addition of metal stair railings and metal barricades along the front of the stage.
The Amphitheater is approached from the west by a concrete walkway leading to a set of seven, low-rise steps. Flanking the main entry approach are two concrete planters that follow the hill's slope upwards, with a wooden board with metal letters spelling out "AMPHITHEATER" on both. Spanning the walkway between both planters is a non-original metal frame arbor with light posts behind it at either end.
The entry stairs lead to a graded, open grass field outlined by a grid of concrete. The field is divided by four concrete walkways that run east to west, angled inwards in the direction of the Amphitheater platform stage. The lawn is further divided by twenty-three thin concrete delineators running north to south, creating a series of twenty-four grass sections for seating up to 5,000 people.
The Amphitheater is raised approximately five feet from the lawn seating area and is approached by a concrete walkway running north to south. Centered along the walkway, the front of the Amphitheater's stage features a smooth concrete battered wall flanked on either side by a set of seven steps with simple, removable, metal pipe handrails set into a hill.
At stage level, the flooring consists of a poured in place concrete platform that is rectangular in shape and accessed by a single step, with a series of simple metal pipe barricades along the front (western) end. A five-sided polygonal shaped corrugated meatal canopy covers the majority of the stage and extends out several feet beyond its front. The canopy is held up by four rectangular metal posts, the front two posts feature additional metal cross arm supports with a five-sided metal frame above which mirrors the shape of the roof. The frame supports the metal truss roofing system which consists of criss-crossing, thin metal members attached to the corrugated metal roof. At the rear (eastern) end of the roof is a small square opening cut into the corrugated metal. The back of the concrete stage leads to a concrete walkway which runs north to south and provides access to the platform from the driveway to the north and the walkway to the south.

Entry Approach, view to east, DSCN2214

Lawn, view to southwest, DSCN2207

Main Elevation of Stage, view to east, DSCN2245

Side View of Truss System, view to northeast, DSCN2206

***B10. Significance:**

Early Development of Education in Fresno

As the town of Fresno ballooned in the early 1870's, there became an urgent need to develop schools. There were approximately 80 school-aged children living in Fresno by 1872. The first school district was formed early in 1873, and even with a block of donated land from the Central Pacific on which to build a school, the bond measure to fund the project failed. After a reorganization of the district in 1874, a $4,000 bond measure passed and Fresno constructed its first, 50-student school house by January of 1875. Being too small to house the existing number of school-age children in Fresno, the new school facilities reached full capacity by 1878, and it quickly became clear that expanded school facilities would be necessary. With approval from the State Legislature, the Fresno School District issued an additional $15,000 in bonds that went towards the construction of a new, 400-student facility called the Central School, which opened in 1879. This building was colloquially referred to as the "White" or as the "Hawthorne" (Clough 1985).

The Central School reached capacity by 1885, and only offered a handful of secondary school subjects for students (Clough 1985; FHAA 2018). The need for an additional facility arose and by 1889, Fresno High School was organized as the first secondary school in Fresno County. After several moves between buildings, the 400-student capacity Fresno High School opened at its current location in September of 1896. The new brick building with its characteristic central clock detail cost $53,000 to construct and featured a library, a gymnasium, a lecture hall with theatre, and a chemistry lab (FHAA 2018).

The Fresno High School building would be the founding site of two more important educational institutions in not only Fresno history, but also State history. The Fresno Junior College, the oldest two-year college in California history, was established in 1910 on the campus shared Fresno High School campus. Fresno State Normal School (renamed Fresno State Teachers College in 1921, then Fresno State College in 1935, then California State University Fresno in 1972) also began on the Fresno High School campus in 1911 as an accreditation school for young teachers (Kyle 2002; FHAA 2018).

Historical Overview of California State University, Fresno

The State Normal School system was a State-accredited teacher training program overseen by the State Division of Education. Fresno State Normal School was the fifth such school established under this system, following the formation of institutions in San Jose (1862), Chico (1887), San Diego (1897) and San Francisco (1899) (CSU NoDate).

After operating out of the Fresno High School building for two years, the Fresno State Normal School moved to a new campus on University Avenue in 1913. Plans for the construction of an Administration Building were soon underway in the new location. The Lombard-style brick Administration building was designed by State architect George MacDougall and was completed in 1916. It housed a library, an auditorium, offices and classroom space (Seacrest 2011). In 1921, the State of California renamed all State Normal Schools to "Teachers Colleges." Also during this year, the Fresno State Teachers College graduated from a two-year to a four-year institution, and was authorized to grant Bachelors of Arts degrees in Teaching (CSU Fresno 2018a). Social Sciences classes were added to the curriculum at this time, followed by engineering courses in 1922, and Agriculture and Biology courses in 1925 (Seacrest 2011; CSU Fresno 2018b).

As a result of these new disciplines being added to the curriculum at Fresno State Teachers College, the name of the School was officially shortened to Fresno State College in 1934. The student body and the curriculum began to show signs of growth beyond the limits of the relatively small 1913 campus. For example, the campus lacked the space for a hands-on training facility for the Agriculture and Biology courses. The Millbrook Farm, a site located approximately three miles southwest of the present campus site, was rented to serve as a self-sustaining, vocational agriculture and farming classroom in 1937 (Seacrest 2011; CSU Fresno 2018b). The Millbrook Farm proved to be an extremely successful venture, and in the first year alone, the farm produced $7,000 worth of agricultural product (Seacrest 2011). The Millbrook Farm expanded quickly to cover 132-acres of farmland located on several sites, none of which was actually owned by Fresno State College (Seacrest 2011).

World War II and mandatory food rationing efforts amplified the need for the Fresno State Agriculture and Biology program, as domestic agronomic production was essential to victory abroad. Courses in food processing techniques, canning and victory garden care were offered by the College to the public during this time (Seacrest 2011).

By the close of the war, a permanent site for the vocational farming enterprise was still yet to be purchased. In 1946, the Fresno State Foundation purchased a 320-acre portion of the William Helm Estate, located at Shaw and Cedar Avenues, in hopes that it could become the new college farm. However, the following year in 1947, Hammer Field, a former Army Air Corps base in Fresno stood vacant after the close of the war, and was also identified as a suitable location for the new farm, and was purchased by Fresno State. Farming activities relocated there from Millbrook Farm between 1947 and 1954. Also during this time, the Six Counties Agricultural Advisory Committee, an advisory committee formed to identify land for permanent use by farming programs at colleges, began purchasing farm parcels north of the Millbrook Farm site (Seacrest 2011; CSU Fresno 2018b).

After determining that further expansion of the 1913 University Avenue campus would be cost prohibitive, the Fresno State Administration set its sights on a new campus site altogether which would allow the college enough space for future expansion. The College focused on the portion of the Helm Estate purchased in 1946, as well as the parcels in this area purchased by the Six Counties Agricultural Advisory Committee, and through the consolidation of these lands, the heart of the present-day Campus of CSU Fresno was formed. This new campus would allow for the occupational farm site to exist alongside the remainder of Fresno State College (Seacrest 2011).

Ground was broken on the new campus in 1950, overseen by Governor Earl Warren. An article appeared in the Fresno Bee The Republican in November 1951 which stated, "The new Fresno State College campus at Shaw and Cedar Avenues is being constructed on an expandable plan which will permit the addition of buildings to accommodate 5,000 students by 1960…It is now estimated that the completed project will cost between $15,000,000 and $20,000,000 to be financed over a period of approximately 10 years (FBR 1951)."

The majority of the core campus buildings were completed in the period between 1953 and 1960; the College Laboratory School, Music Building, and Agricultural Mechanics Building in 1953;

Administration Building, Men's Gymnasium and Industrial Arts Building in 1954; McLane Hall, Education-Psychology Building and Library in 1955; Campus Agricultural Laboratory (farm), Women's Gymnasium, Cafeteria, and College Bookstore in 1956; Engineering Building, Business Building, and official campus dedication in 1958; Baker Hoffman and Graves Residence Halls in 1959; and the Social Sciences Building and Speech Arts Building in 1960 (Seacrest 2011). By 1961, the college became a charter member of the California State University and College System. Building and development continued on campus throughout the 1960s, and in 1972 the college became known as California State University, Fresno. Currently, the main campus contains 388-acres, and 1,011-acres of farm land (CSU Fresno 2018c).

The Amphitheater was completed in the spring of 1963 as a space to hold commencement ceremonies and other general assembly activities. It was formally dedicated during the school's second annual President's Convocation on April 25th, 1963. The 30-foot by 50-foot stage and the 5,000-person, outdoor graded Amphitheater facility were designed by the Fresno State College, and completed by grounds and maintenance staff personnel (FSC 1963; FBR 1963a; FBR 1963b).

NRHP/CRHR:

Criterion A/1: That are associated with events that have made a significant contribution to the broad patterns of our history.

Archival research did not find any associations with events that have made a significant contribution to the broad patterns of local or regional history. The Amphitheater was not completed during the initial 1953 to 1960 construction period of the new Fresno State campus. It was completed in 1963 in the midst of the Fresno State College era, but was neither the first, last, nor only building constructed during this time. The Amphitheater was originally designed as a venue for College commencement ceremonies which are now held at the Bulldog Stadium on campus to allow for increased numbers of attendees. Therefore, the Amphitheater no longer serves its original function on CSU Fresno campus. Due to a lack of identified significant associations with events important to history, the subject property does not appear eligible under NRHP/CRHR Criterion A/1.

Criterion B/2: That are associated with the lives of persons significant in our past.

Archival research did not indicate any associations with persons important to the nation's or state's past. Therefore, the subject property is recommended not eligible under NRHP/CRHR Criterion B/2.

Criterion C/3: That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction.

The Amphitheater embodies a few characteristics of a traditional amphitheater, including the *cuneis*, or the wedge shaped seating areas created by horizontal walkways called *diazoma,* but due to significant alterations and expansion campaigns, the Amphitheater stage, no longer resembles the 30-ft by 50-ft simple platform stage that was completed as part of the original design in 1963. The current structure measures approximately 90-ft across the front of the large, trapezoidal concrete platform, while the trussed, corrugated metal roof measure roughly 54-ft long by 13-ft wide. The subject property was designed by Fresno State College and constructed by employees of Fresno State College's Grounds and Maintenance staff, and is therefore not the work of a known master architect. The Amphitheater does not possess high artistic values, and has been significantly altered since its initial construction period. Therefore, the subject property is recommended not eligible under NRHP/CRHR Criterion C/3.

Criterion D/4: That have yielded, or may be likely to yield, information important in prehistory or history.

There is no evidence to suggest that this property has the potential to yield information important to state or local history. Therefore, the property is recommended not eligible under NRHP/CRHR Criterion D/4.

In consideration of the subject property's history and requisite integrity, Dudek finds the

property not eligible for designation as a CHL based on the following significance evaluation and in consideration of state eligibility criteria:

The first, last, only, or most significant of its type in the state or within a large geographic region (Northern, Central, or Southern California).

The subject property is a modest, utilitarian example of the Contemporary style of architecture designed by Civil Engineer Hugh B. Brewster and completed in 1956. Other examples of Contemporary style architecture exist in the area, including other campus buildings such as the Laboratory School Building (1953) and the Speech Arts Building (1960). As such, the subject property does not represent the first, last, only, or most significant building of its type. Therefore, the subject property is recommended not eligible for listing as a CHL under this criterion.

Associated with an individual or group having a profound influence on the history of California.

Although CSU Fresno played an important role in shaping the City of Fresno and its environs, the subject property was not the cause of that influence, but rather the effect. The increasing numbers of individuals seeking higher degrees led to the development of the CSU system, of which the Fresno campus is a part. Therefore, the subject property did not have a profound influence on the history of California. As such, the subject property is recommended not eligible for listing as a CHL under this criterion.

A prototype of, or an outstanding example of, a period, style, architectural movement or construction or is one of the more notable works or the best surviving work in a region of a pioneer architect, designer or master builder.

The Keats building represents a modest, one-story, utilitarian design in the Contemporary style, an architectural style that characterizes other buildings in the area constructed during the 1950s and 1960s. Archival research identified the architect as Civil Engineer Hugh B. Brewster, a relatively unknown and now obscure architect, and the design does not display aesthetics characteristic of those espoused by pioneering architects or designers working in Fresno at the time. Therefore, the subject property is recommended not eligible for listing as a CHL under this criterion.

Local:

For the reasons explained in the NRHP and CRHR evaluation section above, the Amphitheater does not appear eligible for the City of Fresno Local Register of Historic Resources.

Integrity:

Integrity is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance, and the historical resource's ability to convey that significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity. Similar stipulations apply to listing in the CRHR, but the threshold is lower, particularly if the site has potential to yield significant scientific or historic information. The evaluation of integrity is sometimes a subjective judgment, but is must always be grounded in an understanding of a property's physical features and how they relate to its significance. Within the concept of integrity, seven aspects or qualities that, in various combinations, define integrity: location, design, setting, materials, workmanship, feeling, and association (NPS 1990). To retain historic integrity, a property will generally possess several, if not most, of the aspects. The retention of specific aspects of integrity is paramount for a property to convey its significance.

Location: The building is sited on the original location of construction in its original orientation. However, the construction of the new Music Building behind the Amphitheater Stage has adversely altered the intended view of the location. Therefore, the subject property has diminished integrity in relation to its location.

Design: The Amphitheater was subjected to several alterations and expansions of the stage area over time that have resulted in the current stage failing to resemble the historic design whatsoever. This has significantly compromised its integrity of design. Therefore, the

building does not maintain integrity of design.

Setting: The Amphitheater remains in its original intended setting on the Campus of CSU Fresno. However, due to subsequent development on campus since it construction in 1963, it no longer maintains its spatial relationship with the surrounding buildings, and is now dwarfed by new, adjacent buildings, such as the Music Building. Furthermore, the area surrounding the Campus is more urbanized, with many of the agricultural fields that once surrounded it now developed. Therefore, the property does not maintain integrity of setting.

Materials: The demolition of the original stage and the subsequent replacement with a larger, modern concrete stage with a modern truss roofing system has negatively impacted the integrity of the original materials and methods of construction. Therefore, the building does not maintain integrity of materials.

Workmanship: Similar to the issue with materials, the physical evidence of craftsmen's skills in constructing the original Amphitheater was compromised by the demolition of the original stage. Therefore, the building no longer retains its integrity of workmanship.

Feeling: The addition of a new stage that is comparatively oversized in relation to the Amphitheater, has negatively impacted the building's ability to convey the aesthetic and historic sense that clearly identified the building as an example of an outdoor, graded amphitheater, which would typically have a stage of relative size and height. Furthermore, the very modern nature of the stage alterations noted above negate the original building's ability to visually and aesthetically correlate with other contemporary campus buildings. Therefore, the property no longer retains its integrity of feeling.

Association: The building's association with other campus buildings constructed during the 1960s and early 1970s, as well as the campus and area as a whole, was markedly impacted by the numerous alterations to the subject property. Therefore, the building no longer retains its integrity of association.

In summary, the Amphitheater retains diminished integrity of location, but no longer retains integrity of setting, design, materials, workmanship, feeling, and association. Consequently, the property does not maintain enough integrity to warrant listing on the NRHP, CRHR, CHL, or in the City of Fresno Local Register of Historic Resources.

***B12. References:**

CSU (The California State University). No Date. "History." https://www2.calstate.edu/csu-system/about-the-csu/Pages/history.aspx. Accessed November 12, 2018.

CSU Fresno (California State University Fresno). 2018a. "Kremen School of Education & Human Development: History." https://www.fresnostate.edu/kremen/about/history.html. Accessed November 12, 2018.

CSU Fresno (California State University Fresno). 2018b. "Animal Sciences and Agricultural Education: Farm History." http://www.fresnostate.edu/jcast/asae/about-us/farm-history.html. Accessed November 12, 2018.

CSU Fresno (California State University Fresno). 2018c. "Fast Facts About Fresno State." https://www.fresnostate.edu/home/about/fastfacts.html. Accessed November 13, 2018.

FBR (The Fresno Bee The Republican). 1951. "Fresno State Maps Long Range building Plan." November 17, 1951; p. 9. https://www.newspapers.com/image/25747440. Accessed October 29, 2018.

FBR (The Fresno Bee The Republican). 1963a. "FSC Amphitheater Will Be Dedicated April 25th." April 7, 1963; p. 25. https://www.newspapers.com/image/25792081. Accessed October 25, 2018.

FBR (The Fresno Bee The Republican). 1963b. "Students are Urged to Plan Lives Boldly." April 24, 1963; p. 30. https://www.newspapers.com/image/25809791. Accessed October 25, 2018.

FHAA (Fresno High Alumni Association). 2018. "History of Fresno High." https://www.fresnohighalumni.com/about-us/history-of-fresno-high. Accessed November 12, 2018.

Seacrest Jr., William B. and Lanny Larson. 2011. *A Century of Excellence 1911-2011*. St. Louis, Missouri: Reedy Press.

APPENDIX C

Preparer's Qualifications

Fallin Elizabeth Steffen, MPS

Architectural Historian

Fallin Elizabeth Steffen is an Architectural Historian with over three years of experience in building survey, evaluation, documentation, materials analysis, restoration and conservation in California & Louisiana. She served as a Commissioner on the Santa Cruz City Historic Preservation Commission and has participated in Archeological fieldwork in the Bay Area. She meets the Secretary of the Interior's Professional Qualification Standards for Architectural History.

Education

Tulane University, New Orleans, LA
Masters of Preservation Studies
2015

University of California, Santa Cruz, CA
B.A. History of Art & Visual Culture,
Emphasis in Religion
2010

Project Experience

California State University, Fresno, New Student Union, Fresno, California. 2018. (In Progress)
As architectural historian, Ms. Steffen surveyed the Keats building and adjacent Amphitheatre on the CSU Fresno campus, evaluated the two buildings and authored the Historic Resource Evaluation Report.

City of Gilroy Historic Resource Inventory Update. Gilroy, California. 2018. (In Progress)
As assistant field manager, Ms. Steffen co-led and participated in a City-wide architectural survey of over 3,400 buildings in Gilroy. Additionally, Ms. Steffen researched and is a co-author of a Historic Context Statement for the City of Gilroy.

California State University, San Francisco Master Plan Update EIR, San Francisco, California. 2018. (In Progress)
Acting as architectural Historian, Ms. Steffen participated in a survey of CSU San Francisco's entire campus and conducted archival research in order to prepare an appropriate historic context.

North 16th Street Streetscape Project, Sacramento, California. 2018. (In Progress)
As architectural Historian, Ms. Steffen surveyed buildings along a 12-block stretch of 16th Street and evaluated the buildings using California Department of Transportation criteria.

Historical Resource Significance Evaluation for 50-56 Seaport Drive, Vallejo, California. November 2018.
As architectural historian, Ms. Steffen surveyed the building, co-authored an appropriate historic context, and evaluated the built features of the site in the Historic Resource Evaluation Report.

Historic Resource Evaluation Report for 970-992 17th Avenue, Santa Cruz, California. September 2018.
As architectural historian, Ms. Steffen surveyed the buildings onsite, authored an appropriate historic context, and evaluated the built features of the site in the Historic Resource Evaluation Report.

Historic Documentation Report for Barn Located at 2907 East Lake Avenue, Watsonville, California. August 2018.
As architectural historian, Ms. Steffen evaluated the built features of the site and co-authored the Cultural Resources Report.

Reconnaissance Level Survey Report, Honolulu, Hawaii. July 2018.
As architectural historian, Ms. Steffen evaluated the built features of the site and co-authored the Cultural Resources Report.

Newel Creek Dam Project, Santa Cruz, California. July 2018.

As architectural historian, Ms. Steffen evaluated the built features of the site and co-authored the Cultural Resources Report.

Supplemental Report for Santa Monica City Yards, Santa Monica, California. May 2018.
Ms. Steffen collated research and assisted in the composition of the Historic Evaluation Report.

Haciendas III Housing Project, Salinas, California. April 2018.
As architectural historian, Ms. Steffen conducted preliminary archival research and created a documentary research table detailing the history of the site. Ms. Steffen also assisted with the archaeological fieldwork and co-authored the final Archaeological Monitoring and Data Recovery Report.

Silva Ranch Barn, Aptos, California. March 2018.
Ms. Steffen served as architectural historian to record the current condition of the barn, historic integrity and eligibility for inclusion on Santa Cruz County's register of historic resources.

South City Car Wash, South San Francisco, California. November 2017.
As architectural historian, Ms. Steffen conducted an evaluation survey of the South City Car Wash located at 988 El Camino Real in South San Francisco to record its current condition, remaining level of historic integrity and eligibility for the National, State and local register of historic resources.

26317 Scenic Road, Carmel-by-the-Sea, California. November 2017.
Ms. Steffen assisted in sub-surface auger testing to determine the presence of archaeologically sensitive material and the preparation of the accompanying report.

Graves Residence, Carmel Valley, California. November 2017.
As architectural historian, Ms. Steffen conducted a Phase One evaluation to determine if the residence maintained historic integrity.

Graduate Student Housing Project, San Jose, California. October 2017.
As architectural historian, Ms. Steffen conducted preliminary archival research and created a documentary research table detailing the history of the site. Ms. Steffen also assisted with the archaeological fieldwork component of the project.

Valpey Apartments Historic Resource Protection Plan, San Jose, California. Summer 2017.
As architectural historian, Ms. Steffen conducted archival research, documented and authored the Historic Resource Protection Plan (HRPP) to aid in the conservation of the 1930's Valpey Apartment building during the construction of a six-story complex on several adjacent lots. Additionally, she implemented a Cultural Resource Training curriculum highlighting damage mitigation methods and conducted on-going monitoring and submitted routine monitoring reports to the City of San Jose City Historic Preservation Officer.

Tuchen Residence, Pebble Beach, California. June 2017.
Ms. Steffen assisted in sub-surface auger testing to determine the presence of archaeologically sensitive material and the preparation of the accompanying report.

Mid Pen Housing Project, Monterey, California. May 2017
Ms. Steffen assisted in sub-surface auger testing to determine the presence of archaeologically sensitive material and the preparation of the accompanying report.

Pico Blanco Scout Camp, Big Sur, California. December 2016.
Conducted a site survey of the Pico Blanco Scout Camp in Big Sur, CA to confirm the existence of built features, documented and evaluate their current condition.

Historic Preservation Commission, Santa Cruz, California. 2016 - 2018.
Appointed by the City Council, Ms. Steffen served on the seven-person commission reviewing plans for upcoming residential, commercial and municipal projects that involve historic properties in Santa Cruz.

Historic Wallpaper Conservation, New Orleans, Louisiana. 2016.

As conservator, Ms. Steffen led a small team in creating a treatment plan and the conservation of a series of 19th century wallpaper fragments for housing and display in the Historic New Orleans Collection.

Historic Window Restoration & Glazing Compound Study, New Orleans, Louisiana. 2015.
As conservator, Ms. Steffen led the same small team on a project about the viability of glazing compounds in New Orleans weather and the restoration of six 19th century wooden, double-hung windows.

Preservation Planning Study of the Former Marine Hospital Campus, New Orleans, Louisiana. 2015.
As conservator, Ms. Steffen worked as part of a team conducting paint & materials analysis on two buildings and the historic perimeter wall to better understand the development of the buildings.

Publications

Steffen, Fallin E. 2015. "Micro-Places & Preservation: Studying the Fields Associated with Material Culture in the Architectural Microhabitat". Graduate Practicum. December 2015.

Nicole Frank, MSHP

Architectural Historian

Nicole Frank is an architectural historian with 2 years' professional experience as an architectural historian conducting historic research, writing landmark designations, performing conditions assessments and working hands-on in building restoration projects throughout the United States. Ms. Frank also has governmental experience with the City of San Francisco's Planning Department and the City of Chicago's Landmark Designations Department. She meets the Secretary of the Interior's Professional Qualification Standards for Architectural History.

Relevant Previous Experience

Edwardian Flats Historic Context Statement, San Francisco Planning Department, San Francisco, California During the summer of 2018 was the sole writer and researcher to complete the Edwardian Flat typology context statement for the City of San Francisco.

- 80 page context statement to aid with citywide survey efforts

Cornice Restoration Project, Restoric LLC, Chicago. Illinois Served as field technician in residential cornice restoration, project approximately 6 weeks long.

- Est. date of building construction 1920

Draft National Register Nomination, The School of the Art Institute of Chicago, Chicago, Illinois Acted as sole researcher and writer for draft NRHP nomination of the Jacques Building on Michigan Ave in Chicago.

Recent Past Cook County Survey Data Clean Up, Landmarks Illinois, Chicago, IL Served as architectural historian. Conducted archival research, documented demolished buildings within survey, and generated a list of missing survey information.

- 3,756 properties in 98 municipalities individually reviewed
- 131 buildings identified as demolished since their survey date
- 25 missing architects and builders added to database

Paint and Finishes Analysis, Frances Willard House Museum and Archive, Evanston, Illinois Served as conservator. Worked with a team to determine original paint colors and finishes that correlate with room's period of significance.

Historic American Building Survey, The School of the Art Institute of Chicago, Illinois Served as teachers assistant and illustrator of measured drawings for several sites including All Saints Episcopal Church, the Havlicek Monument, the Fountain of the Great Lakes, and the Chicago Loop Synagogue.

Education

The School of the Art Institute of Chicago, MS
Historic Preservation, 2018

The College of Charleston, BA, Historic Preservation and Art History, 2016

Publications

Frank, Nicole. 2018. "Mid-Century Glass Block: The Colored Patterned and Textured Era." Graduate Thesis. September 2018.

Presentations

"Mid-Century Glass Block: The Colored Patterned and Textured Era." 2018. Presented at the Association for Preservation Technology (APT) Annual Conference. Buffalo, New York

"Mid-Century Glass Block." 2018. Presented at the APT Western Great Lakes Chapter and DOCOMOMO US/Chicago 2018 Symposium: Preservation Challenges of Modernist Structures. Chicago, Illinois

William Burns, RPA

Project Archaeologist

William Burns is an archaeologist with over 10 years' experience in cultural resource management. He is highly knowledgeable about the California Environmental Quality Act, the National Environmental Policy Act, the Native American Graves Protection and Repatriation Act, and the National Historic Preservation Act, particularly the Section 106 process. Mr. Burns evaluates buildings and districts for archaeological sensitivity and possible inclusion on the National Register of Historic Places. He assesses project and building plans for archaeological sensitivity and reviews archaeological reports on the state government regulatory end of the process.

EDUCATION

MSc, Coastal and Marine Archaeology, 2010, University of York, Department of Archaeology, York, United Kingdom

BA, Anthropology, Minor in Mathematics, 2004, University of Massachusetts at Amherst, Massachusetts

CERTIFICATIONS

Register of Professional Archaeologists (RPA)

Master Diver (National Association of Underwater Instructors)

OSHA HAZWOPER (40-hour)

Basic First Aid/BBP (American Heart Association)

Adult CPR/AED (American Heart Association)

Mr. Burns possesses expertise about Pre-contact archaeological sites, paleocoastline reconstruction, and artifact identification and analysis. He applies this expertise to archaeological report writing and editing for Section 106 projects. He also serves on field crews and as a supervisor on archaeological projects, overseeing surveys, site examinations, data recoveries, and artifact database creation and maintenance. For precise site mapping, Mr. Burns uses GPS devices, primarily Trimble GEO XH, ArcGIS, and Maptitude.

Project Experience

Hunter Subdivision Project, St Helena, CA. Conducted records search, preformed pedestrian survey and extended Phase 1 testing, and prepared cultural resources report for residential subdivision project.

Daylight Solar Project, Kings County, CA. Conducted records search, preformed pedestrian survey, and prepared cultural resources report for solar farm project.

Tres Amigos Solar Project, Los Banos, CA. Conducted records search, preformed pedestrian survey, and prepared cultural resources report for solar farm project.

North 16th Street Streetscape, Sacramento, CA. Prepared cultural resources report for street revitalization project.

Wheeler North Reef Restoration Project, San Clemente, CA. Performed cultural survey, conducted records search and prepared tribal cultural resources report for underwater reef restoration project.

Delano Field DMV Office, Delano, CA. Performed cultural survey, conducted records search and prepared cultural resources report for state office project.

Auburn Interfaith Food Closet Project, Placer County, CA. Conducted records search and prepared cultural and paleontological resources report for commercial development project.

University of California, Davis Emerson Hall Replacement Project, Davis, CA. Conducted records search for university development project.

Tres Amigos Solar Project, Merced County, CA. Performed cultural survey, conducted records search and prepared cultural resources report for solar farm project.

Proxima Solar Energy Center Project, Stanislaus County, CA. Performed cultural and paleontological survey, conducted records search and prepared cultural and paleontological resources report for solar farm project.

South Lake Solar and Energy Project, Fresno County, CA. Performed cultural and paleontological survey, conducted records search and prepared cultural and paleontological resources report for solar farm project.

Gonzaga Ridge Wind Farm, Merced County, CA. Conducted records search and prepared cultural resources report for wind farm project.

Marin Country Club Steam Restoration Project, Novato, CA. Conducted records search and prepared cultural resources report for stream restoration project.

North Natomas Aquatic Center Project, Sacramento, CA. Conducted records search and prepared cultural resources report for community center project.

Lakeville Highway Dock Project, Petaluma, CA. Conducted records search and assisted in cultural resources report preparation for dock construction project.

Press Democrat Project, Rohnert Park, CA. Conducted records search for cultural resources report for commercial development.

Orchard Creek Apartments, Rocklin, CA. Conducted field survey, prepared cultural resources report for housing development.

Los Angeles Department of Water and Power, Bishop, CA. Conducted cultural monitoring of power line clearing.

California High-Speed Rail Project, Construction Package 2-3, Fresno to Bakersfield, Dragados / Flatiron Joint Venture, Fresno, Kings, Counties of Tulare and Kern, California. Conducted field survey, organize and manage cultural, tribal, and paleontological monitors, prepared cultural resources survey reports and monthly summaries.

Edwards Air Force Base Solar Project, Terra-Gen, Kern County, California. Conducted records search for large solar project.

Little Bear Solar Project, First Solar, Inc., Mendota, California. Conducted field survey, prepared cultural resources report for solar energy development.

Siskiyou Hall Project, California State University, Chico, Butte County, California. Prepared cultural resources report for campus construction project.

McCown Minor Land Division Project, Davenport Construction, Placer County, California. Prepared cultural resources report for land division project.

Castilleja School Project, City of Palo Alto, California. Prepared cultural resources report for school improvements.

Roberts' Ranch Project, City of Vacaville, California. Conducted field survey for residential development.

Bellevue 7 Ranch Project, Ryder Homes of California, Inc., City of Santa Rosa, California. Conducted field survey, prepared cultural resources report for residential development.

Rohnert Park Water Tank Project, City of Rohnert Park, California. Conducted extended phase I field survey, prepared cultural resources report for water tank construction.

Peach Tree Solar Project, Sunworks, Inc., Yuba County, California. Conducted field survey, performed records search, prepared cultural resources report for solar installation at country club.

River Bluff Lower Terrace Project, O'Dell Engineering., City of Ceres, California. Conducted field survey, prepared cultural resources report for city park improvements.

El Dorado Irrigation District Flume Replacements, El Dorado Irrigation District, El Dorado County, California. Conducted field survey, prepared site forms, prepared cultural resources report for flume replacements and canal improvements.

Las Gallinas Valley Sanitary District Secondary Treatment Upgrade Project, Las Gallinas Valley Sanitary District, Marin County, California. Conducted field survey, prepared cultural resources report for water treatment plant improvements.

Auburn Riparian Vegetation Management Project, Auburn Area Recreation and Parks District, City of Auburn, California. Conducted field survey, prepared site forms, prepared cultural resources report for vegetation management recreation areas.

Arden Gateway Project, Fulcrum Property, Placer County, California. Prepared cultural resources report for commercial and residential development.

California Boulevard Roundabouts Project, Caltrans, City of Napa, California. Conducted extended phase I field survey, monitored geotechnical borings.

University Village Housing Project, City of Merced, Merced, California. Conducted field survey, prepared cultural resources report for housing development.

Yokohl Ranch Housing Development Project, The Yokohl Ranch Company LLC, Tulare County, California. Conducted field survey, performed site evaluation for large housing development.

Aera Energy Cultural Resources Inventory, Aera Energy LLC, Kern County, California. Conducted field survey, performed site evaluation, prepared cultural resources report for inventory existing cultural resources present for planning purposes.

Aera Energy Waterline Installation Project, Aera Energy LLC, Kern County, California. Conducted field survey, performed site evaluation, prepared cultural resources report for proposed waterline

installation.

Granite Construction Clovis Site Development, Granite Development LLC, Clovis, California. Conducted field survey, prepared cultural resources report for business development.

Little Lake Line B Town Drain System Construction Project, Riverside County Flood Control and Water Conservation District, Riverside County, California. Served as cultural and paleontological monitor.

Parking Structure Project, Academy of Our Lady of Peace, San Diego, California. Provided artifact analysis and report preparation.

Yorba Avenue Warehouse Project, Pacific Industrial Inc., Long Beach, California. Prepared a cultural resources letter report based on a records search and field survey for construction of a warehouse and office facility with parking lots and retention basins.

Proctor Valley Village 14 and Preserve Project, County of San Diego, California. Conducted field survey and site evaluation, prepared cultural resources report, and provided artifact analysis for a component of the Otay Ranch master-planned community.

Vista Canyon Ranch Sewer Line Project, Vista Canyon Ranch LLC, City of Santa Clarita, California. Provided field survey, site evaluation, and artifact analysis for a mixed-use residential and commercial development.

Rancho Cucamonga Northeastern Sphere Annexation Area, Sargeant Town Planning, Rancho Cucamonga, California. Conducted field survey and site evaluation of a potential annexation area.

Southern California Edison Bishop Service Center, Elements Architecture, Inc, City of Bishop, California. Conducted field survey and site evaluation, analyzed artifacts, and prepared report for construction of an electrical line service center facility.

Palm Avenue Distribution Center, IDS Real Estate Group, San Bernardino, California. Conducted field survey and site evaluation, and assisted with preparation of a cultural and paleontological resources monitoring report for warehouse/distribution center construction.

Newhall Homestead South Project, Newhall Land and Farming Company, Los Angeles County, California. Participated in intensive-level field survey of a 2,535 project site for a residential and commercial development.

Five Lagunas, Merlone Geier Management LLC, Laguna Hills, California. Completed a records survey for redevelopment of a mall property.

8777 Washington Boulevard Project, Guild GC (VCN LP), Culver City, California. Conducted a field survey and building evaluation for a commercial building remodel of a two-story, mixed-use building.

San Onofre to Pulgas Double Track, PGH Wong Engineering, San Diego County, California. Analyzed artifacts and prepared report for a railroad construction project.

Relevant Previous Experience

Archaeologist, Duke Cultural Resource Management, Rancho Santa Margarita, California. Participated in archaeological monitoring in Riverside County.

Co-owner and Principal Invesitgator, Archaeological Response Consultants. Prepared and wrote reports for archaeological projects.

Field Director/Crew Chief, Tetratech Inc., Pittsburgh, Pennsylvania. Supervised archaeological field crews (up to 25 people); managed archaeological projects for pipeline/energy projects; coordinated/contacted monitors, landowners, and land agents; and wrote site summaries. Supervised archaeological field crew of 20 on a multi-state gas pipeline survey (Pennsylvania Pipeline Project, Sunoco).

Field Supervisor, Public Archaeology Laboratory, Pawtucket, Rhode Island. Supervised archaeological field crews of up to 20 people. Assessed archaeological sensitivity and prepared archaeological technical reports.

Archaeologist, Public Archaeology Laboratory, Pawtucket, Rhode Island. Performed archaeological field work.

Rhode Island Marine Archaeology Project, Newport Rhode Island. Created an artifact analysis/tracking database.

Archaeological Field Supervisor, University of Massachusetts, Archaeological Services, Amherst, Massachusetts. Performed archaeological field work, mapped and laid in units, and supervised six-member crew. Projects included:

- Turner Falls Airport, Massachusetts—Field worker and lithic analyst for Paleo-Indian camp.
- Cohasset Roundhouse, Massachusetts—Monitored machine excavated nineteenth century railroad roundhouse.
- Tappan Zee Bridge Replacement, Hudson River, New York—Surveyed and mapped nineteenth century coal barge.

Technical Services Division Assistant, Massachusetts Historical Commission, Boston, Massachusetts. Reviewed projects for historic assessment and archaeological sensitivity. Processed archaeological reports and managed report collection. Processed archaeological site forms for State Inventory. Communicated with public and various agencies about Commission policies. General clerical work.

Lab Assistant, Rhode Island Marine Archaeology Project, Newport, Rhode Island. Analyzed and conserved artifacts.

Artifact Curations Assistant/Analyst, Massachusetts Historical Commission, Boston, Massachusetts. Identified and analyzed pre-contact and historic artifacts for the Southwest Corridor and Central Artery Massachusetts Department of Transportation projects in and around Boston. Installed museum exhibits at the Massachusetts Historical Commission Museum.

Vice President and Board Member, The James Cook Foundation, Newport, Rhode Island. Oversee annual meeting. Attend fundraising workshops given by Rhode Island Foundation Seminar. The foundation

is dedicated to the preservation of James Cook's shipwrecks in Rhode Island.

Pre-contact Analyst, Historic Artifact Analyst, University of Massachusetts Archaeological Services, Amherst, Massachusetts. Analyzed primarily lithics, aboriginal ceramics, historic bottles and ceramics.

Volunteer, Hadley Historical Society, Hadley, Massachusetts. Identified and recorded Pre-contact artifacts.

Student, University of Massachusetts Archaeological Services, Amherst, Massachusetts. Cleaned historic and Pre-contact artifacts, data entry, photo labeling.

Student, University of Massachusetts Field School & Lab, Amherst, Massachusetts. Participated in Phase II excavation of W.E.B. DuBois boyhood homesite. Cleaned and identified historic artifacts, data entry, photo labeling, site map creation w/ AutoCad, ceramics research.

Volunteer, Rhode Island Marine Archaeology Project, Newport, Rhode Island. Summer/Fall 2003 – Present. As field worker, assisted with mapping and excavation of eighteenth century Revolutionary War British shipwrecks. Contributed to artifact identification and conservation in the lab.

Rhode Island Marine Archaeology Project. As instructor, taught techniques for mapping underwater archaeological sites.

Publications and Conference Presentations

Burns, William and Adam Giacinto. 2018. *Cultural Resources Inventory Report: Tres Amigos Solar Project*. Dudek and Associates #10857, Los Banos, California.

Burns, William. 2018. *Archaeological Survey Report for the North 16th Street Streetscape, City of Sacramento, California*. Dudek and Associates #10392, Sacramento, California.

Giacinto, Adam, Burns, William, Brady, Ryan, and Micah J. Hale. 2018. *Cultural Resources Inventory Report for the Gonzaga Ridge Wind Repowering Project, Merced County, California*. Dudek and Associates #10506, Merced County, California.

Burns, William. 2018. *Underwater Cultural Resources Investigation Report for the Wheeler North Reef Expansion Project, City of San Clemente, California*. Dudek and Associates #10831, San Clemente, California.

Burns, William, Sarah Siren, Michael Williams and Adam Giacinto. 2018. *Cultural and Paleontological Resources Inventory Report for the South Lake Solar Energy Project, Fresno County, California*. Dudek and Associates #9755, Fresno County, California.

Burns, William. 2018. *Cultural Resources Letter Report for the North Natomas Aquatics and Community Center Project, City of Sacramento, California*. Dudek and Associates #10626, Sacramento, California.

Burns, William. 2018. *Cultural Resources Inventory Report for the Orchard Creek Apartments Project, City of Rocklin, California – Negative Findings.* Dudek and Associates #10696, Rocklin, California.

Burns, William, Jennifer DeAlba, Michael Williams and Adam Giacinto. 2018. *Cultural and Paleontological Resources Inventory Report for the Auburn Interfaith Food Closet Project, Placer County, California.* Dudek and Associates #11099, Placer County, California.

Burns, William and Angela Pham. 2018. *Cultural Resources Letter Report for the Delano DMV Field Office Replacement Project, City of Delano, California*. Dudek and Associates #9002, Delano, California.

Burns, William and Adam Giacinto. 2018. *Cultural Resources Inventory Report for the Tres Amigos Solar Project, Merced County, California.* Dudek and Associates #10857, Merced County, California.

Giacinto, Adam and William Burns. 2018. *Cultural Resources Inventory Report for the Marin Country Club Stream Restoration Project, Novato, California.* Dudek and Associates #8569, Novato, California.

Giacinto, Adam, Angela Pham and William Burns. 2018. *Cultural Resources Inventory for the 6500 Lakeville Highway Dock Project, Sonoma County, California.* Dudek and Associates #10673, Sonoma County, California.

Dotter, Kara, Sarah Corder, William Burns, and Adam Giacinto. 2017. *Historical Resources Technical Report for Siskiyou Hall, California State University, Chico Campus.* Dudek and Associates #10174, Encinitas, California.

Burns, William and Adam Giacinto. 2017. *Cultural Resources Inventory Report for the River Bluff Lower Terrace River, City of Ceres, California.* Dudek and Associates #10083, Encinitas, California.

Burns, William, Kara Dotter, and Adam Giacinto. 2017. *Cultural Resources Inventory Report for the Bellevue 7 Ranch Project, City of Santa Rosa, California.* Dudek and Associates #9931, Encinitas, California.

Corder, Sarah, Samantha Murray, William Burns, and Adam Giacinto. 2017. *Cultural Resources Study for the Castilleja School Project, City of Palo Alto, Santa Clara County, California.* Dudek and Associates #10056, Encinitas, California.

Giacinto, Adam and William Burns. 2017. *Cultural and Paleontological Resources Inventory for the McCown Minor Land Division Project, Placer County, California*. Dudek and Associates #9985, Encinitas, California.

Giacinto, Adam, William Burns, and Micah Hale. 2017. *Cultural Resources Inventory Report for the 2017 Flume Replacement Project, El Dorado County, California.* Dudek and Associates #8858, Encinitas, California.

Burns, William, Micah Hale, and Adam Giacinto. 2016. *Cultural Resources Inventory Report for the Peach Tree Solar Project, Yuba County, California.* Dudek and Associates #10037, Encinitas, California.

DeCarlo, Matthew, William Burns, and Adam Giacinto. 2016. *Cultural Resources Inventory Report for the Auburn Area Recreation and Parks District's Riparian Vegetation Management Project, Placer County*. Dudek and Associates #9798, Encinitas, California.

Burns, William. 2016. *Cultural Resources Report for the Proposed Las Gallinas Sanitary District - Secondary Treatment Upgrade Project, Marin County*. Dudek and Associates #9279, Encinitas, California.

Burns, William. 2016. *Cultural Resources Letter Report for the Arden Gateway Project, City of Sacramento, California*. Dudek and Associates #9805, Encinitas, California.

Giacinto, Adam, William Burns, and Angela Pham. 2016. *Cultural Resources Inventory and Extended Phase I Report for the Rohnert Park Water Tank Project, Sonoma County*. Dudek and Associates #9810, Encinitas, California.

Burns, William and Brad Comeau. 2015. *Negative Cultural Resources Report for the Yorba Avenue Commerce Center, Chino, California*. Dudek and Associates #9105, Encinitas, California.

Comeau, Brad, William Burns, and Micah Hale. 2015. *Cultural Resources Monitoring Report for the SCE Bishop Service Center Project, Inyo County, California*. Dudek and Associates #8392, Encinitas, California.

Comeau, Brad, William Burns, and Micah Hale. 2015. *Cultural Resources Monitoring Report for the Palm Avenue Commerce Center, San Bernardino, California*. Dudek and Associates #8830, Encinitas, California.

Comeau, Brad, William Burns, and Micah Hale. 2015. *Cultural Resources Monitoring Report for the LOSSAN San Onofre to Pulgas Double Track Project, San Diego County, California*. Dudek and Associates #6518, Encinitas, California.

Comeau, Brad, Scott Wolf, Adriane Dorrler, and William Burns. 2015. *Cultural Monitoring and Site Evaluation for the Academy of Our Lady of Peace Parking Lot, San Diego, California*. Dudek and Associates #8407, Encinitas, California.

Wolf, Scott, Brad Comeau, William Burns, and Micha Hale. 2015. *Cultural Resources Report for the Proctor Valley Village 14 & Preserve Project, San Diego County, California*. Dudek and Associates #8447, Encinitas, California.

Burns, W. and H. Hebster. 2014. *Intensive (Locational) Survey of Long Pond Wastewater Treatment Plant, Falmouth, Massachusetts*. Public Archaeology Laboratory Report, Pawtucket, Rhode Island.

Burns, W. and A. Leveillee. 2014. *Site Examination of New London Quartzite Quarry, Warwick, Rhode Island*. Public Archaeology Laboratory Report. Pawtucket, Rhode Island.

Burns, W. and A. Leveillee. 2014. *Intensive (Locational) Survey of Narragansett Longhouse Trail Improvements*. Charlestown, Rhode Island. Public Archaeology Laboratory Report, Pawtucket, Rhode Island.

Burns, W. 2010. "Getting Their Bearings: A Comparative Study of the First Seafarers in Australasia and the Aegean Sea." Master's thesis; University of York, United Kingdom.

Burns, W. 2010. "Quartz Clues: What Lithics Can Reveal About Migration Routes in Scandinavia." Paper presented at the Eighth Annual Mesolithic in Europe Conference, Santander, Spain.

Burns, W., A.E. Lewis, E.L. Bell, and T. Hollis, eds. 2009. "Bibliography of Archaeological Survey and Mitigation Reports: Massachusetts. 2009." 2006-2007 Annual Supplement. Massachusetts Historical Commission, Boston, Massachusetts.

Burns, W., R. Paynter, K. Lynch, B. Comeau, T. Ostrowski, R. Morales, M. Garber, E. Norris, and Q. Lewis. 2005. "The Burghardts of Great Barrington: The View from the W.E.B. DuBois Boyhood Homesite." Paper presented to the Society for Post-Medieval Archaeology and Society for Historical Archaeology Joint Meeting, York, United Kingdom.

Burns, W. 2004. "Newport's Infamous Slaver Wreck." Paper presented at the 44th Annual Northeastern Anthropological Association Conference, Dartmouth College, Hanover, New Hampshire.

Burns, W. 2004. "Investigations of Reputed Slave Ship, The Gem." Bachelor's thesis; University of Massachusetts, Amherst, United States.

Samantha Murray, MA

Historic Built Environment Lead/Senior Architectural Historian

Samantha Murray is a senior architectural historian with 12 years' professional experience in in all elements of cultural resources management, including project management, intensive-level field investigations, architectural history studies, and historical significance evaluations in consideration of the California Register of Historical Resources (CRHR), the National Register of Historic Places (NRHP), and local-level evaluation criteria. Ms. Murray has conducted hundreds of historical resource evaluations and developed detailed historic context statements for a multitude of property types and architectural styles, including private residential, commercial, industrial, educational, medical, ranching, mining, airport, and cemetery properties, as well as a variety of engineering structures and objects. She has also provided expertise on numerous projects requiring conformance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*.

Education

California State University, Los Angeles
MA, Anthropology, 2013

California State University, Northridge
BA, Anthropology, 2003

Professional Affiliations

California Preservation Foundation

Society of Architectural Historians

National Trust for Historic Preservation

Registered Professional Archaeologist

Ms. Murray meets the Secretary of the Interior's Professional Qualification Standards for both Architectural History and Archaeology. She is experienced managing multidisciplinary projects in the lines of transportation, transmission and generation, federal land management, land development, state and local government, and the private sector. She has experience preparing environmental compliance documentation in support of projects that fall under the California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA), and Sections 106 and 110 of the National Historic Preservation Act (NHPA). She also prepared numerous Historic Resources Evaluation Reports (HRERs) and Historic Property Survey Reports (HPSRs) for the California Department of Transportation (Caltrans).

Dudek Project Experience (2014–2017)

Historical Evaluation of 3877 El Camino Real, City of Palo Alto, Santa Clara County, California (2017). Ms. Murray served as architectural historian, originally providing a peer review of another consultant's evaluation. The City then asked Dudek to re-do the original evaluation report. As part of this work Ms. Murray conducted additional archival research on the property and evaluated the building for historical significance in consideration of local, state, and national designation criteria and integrity requirements. The project proposes to demolish the existing building and develop new housing.

Hamilton Hospital Residential Care Facility Project, City of Novato, Marin County, California (2015). Ms. Murray served as architectural historian, prepared a cultural resources study, and assessed the proposed project's design plans for conformance with the Secretary of the Interior's Standards for the Treatment of Historic Properties. The project proposed to construct an addition and make alterations to an NRHP-listed district contributing property. With review from Ms. Murray, the project was able to demonstrate conformance with the Standards for Rehabilitation.

Edwards Air Force Base Historic Context and Survey, Multiple Counties, California (2013). Ms. Murray served as lead architectural historian and project manager for survey and evaluation of 17 buildings and structures located throughout the base, and preparation of a Cold War historic context statement, an analysis of property types, and registration requirements for all built environment resources on base. Client: JT3/CH2M Hill.

Metro Green Line to LAX Project (2013-2014). Ms. Murray served as project manager for a multi-disciplinary project that includes cultural resources, biology, and paleontology. The Los Angeles County Metropolitan Transportation Authority (Metro), Federal Transit Administration (FTA), Federal Aviation Administration (FAA) and Los Angeles World Airports (LAWA) have initiated an Alternatives Analysis (AA)/Draft EIS/Draft EIR for the Metro Green Line to Los Angeles International Airport (LAX) project. The AA/DEIS/DEIR is being prepared to comply with NEPA and CEQA. This study will examine potential connections between the planned Metro Crenshaw /LAX Transit Corridor Project's Aviation/Century Station and the LAX Central Terminal Area (CTA) located approximately one mile to the west. Client: Terry Hayes Associates.

Yosemite Avenue-Gardner Avenue to Hatch Road Annexation Project, City of Merced, Merced County, California (2017). Ms. Murray managed and reviewed the historic resource significance evaluation of a single-family residence/agricultural property within the proposed project site. The evaluation found the property not eligible under all NRHP and CRHR designation criteria. The project proposes to annex 70 acres from Merced County to the City of Merced and to construct and operate the University Village Merced Student Housing and Commercial component on an approximately 30-acre portion of the project site. No development is proposed on the remaining 40 acres.

Land Park Commercial Center EIR, City of Sacramento, Sacramento County, California (2016). Dudek was retained by Mo Capital to prepare a cultural resources study for the Land Park Commercial Center Project. Three resources over 45 years old within the project area required evaluation for historical significance. All properties were found ineligible for designation. Ms. Murray co-authored the cultural resources report.

CSU Chico College Park Demolition Project, Butte County, California (2017). Dudek was retained by California State University (CSU), Chico to complete a cultural resources study for a project that proposes demolition of 10 single-family residences near the CSU Chico campus in the City of Chico, Butte County, California. The study involved completion of a California Historical Information System (CHRIS) records search, outreach with the Native American Heritage Commission (NAHC) and local tribes/groups, a pedestrian survey of the project area for built-environment resources, and recordation and evaluation of 10 properties for historical significance. The significance evaluations included conducting archival and building development research for each property; outreach with local libraries, historical societies, and advocacy groups; and completion of a historic context. This study was conducted in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, and the project site was evaluated in consideration of CRHR and City of Chico Historic Resources Inventory eligibility and integrity requirements. Furthermore, as required under California Public Resources Code (PRC) Sections 5024 and 5024.5, CSU Chico is required to provide notification and submit documentation to the State Historic Preservation Officer (SHPO) for any project having the potential to affect state-owned historical resources on or eligible for inclusion in the Master List. In accordance with PRC Section 5024(a), all properties were also evaluated in consideration of the NRHP and California Historical Landmark (CHL) criteria and integrity requirements. All 10 properties evaluated for historical significance appear to be not eligible for inclusion in the NRHP, CRHR, CHL, or local register (6Z) due to a lack of significant historical associations and compromised integrity.

Kings Beach Elementary School Modernization Project, Tahoe Truckee Unified School District, Tahoe City, Placer County, California (2016). Ms. Murray served as architectural historian and co-author of the cultural resources study. The study involved evaluation of the existing school for NRHP, CRHR and local eligibility, conducting archival and building development research, a records search, and Native American coordination.

APPENDIX D

CONFIDENTIAL Records Search Results