APPENDICES
for
DRAFT SUPPLEMENTAL
ENVIRONMENTAL IMPACT REPORT

Indian Wells
Garden of Champions Tournament Center
and the
INDIAN WELLS TOWN CENTER PROJECT
(State Clearinghouse Number # 2006111097)

Prepared for: **CITY OF INDIAN WELLS**
Community Development Department
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August 15, 2007

APPENDIX A

Air Quality Report

Michael Brandman Associates

Environmental Services . Planning . Natural Resources Management

August 14, 2007

EPC Land Planning Consultants
Mr. Ernest Perea
5225 Canyon Crest Drive, Suite 71-325
Riverside, CA 92507

Subject: Brief Air Quality Analysis for the Indian Wells Town Center

Dear Mr. Perea:

The following is a brief air quality analysis for the Indian Wells Town Center (project). This analysis is limited in scope and only contains the following components: limited background air quality information; a quantification of air pollutant emissions from the project; a carbon monoxide hotspot analysis; and a determination of whether or not the project is consistent with the current Air Quality Management Plan.

Project Description

The project consists of approximately 125 acres of land located on the west side of Washington Street north and south of Miles Avenue in the northeast portion of the City of Indian Wells, Riverside County.

The project consists of the development of a maximum of 400,000 square feet of retail, restaurants, office, and a theater. The project also consists of a hotel, 65 residential units, and additional parking for the existing Indian Wells Tennis Garden.

Background Air Quality Information

Air pollutants are regulated at the national, state, and air basin level; each agency has a different degree of control. The United States Environmental Protection Agency (U.S. EPA) regulates at the national level. The California Air Resources Board (CARB) regulates at the state level. The SCAQMD regulates at the air basin level.

The U.S. EPA handles global, international, national, and interstate air pollution issues and policies. The U.S. EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans (SIP), provides research and guidance in air pollution programs, and sets National Ambient Air Quality Standards (NAAQS), also known as federal standards. There are NAAQS for six common air pollutants, called criteria air pollutants, which were identified resulting from provisions of the Clean Air Act of 1970. The six criteria pollutants are ozone, particulate matter (PM_{10} and $PM_{2.5}$), nitrogen dioxide, carbon monoxide (CO), lead, and sulfur dioxide. The NAAQS were set to protect the

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health of sensitive individuals; thus, the standards continue to change as more medical research is available regarding the health effects of the criteria pollutants.

CARB has overall responsibility for statewide air quality maintenance and air pollution prevention. The SIP for the State of California is administered by CARB. A SIP is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain NAAQS. CARB also administers California ambient air quality standards, or state standards, for the ten air pollutants designated in the California Clean Air Act. The ten state air pollutants are visibility reducing particulates, hydrogen sulfide, sulfates, vinyl chloride, and the six criteria pollutants.

The criteria pollutants and applicable CAAQS and NAAQS are displayed in Table 1. These standards establish the context for local air quality management plans. They are set to protect the health of sensitive individuals.

Table 1: Ambient Air Quality Standards

Air Pollutant	Averaging Time	California Standard	National Standard	Most Relevant Effects
Ozone	1 Hour	0.09 ppm	—	(a) Decrease of pulmonary function and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; (f) Property damage.
	8 Hour	0.070 ppm	0.08 ppm	
Carbon Monoxide (CO)	1 Hour	20 ppm	35 ppm	(a) Aggravation of angina pectoris (chest pain or discomfort) and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; (d) Possible increased risk to fetuses.
	8 Hour	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm*	—	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; (c) Contribution to atmospheric discoloration.
	Mean	0.030 ppm*	0.053 ppm	

Table 1: Ambient Air Quality Standards (Cont.)

Air Pollutant	Averaging Time	California Standard	National Standard	Most Relevant Effects
Sulfur Dioxide (SO_2)	1 Hour	0.25 ppm	—	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
	24 Hour	0.04 ppm	0.14 ppm	
	Mean	—	0.030 ppm	
Particulate Matter (PM_{10})	24 hour	50 $\mu g/m^3$	150 $\mu g/m^3$	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in the elderly.
	Mean	20 $\mu g/m^3$	—	
Particulate Matter ($PM_{2.5}$)	24 Hour	—	35 $\mu g/m^3$	
	Mean	12 $\mu g/m^3$	15 $\mu g/m^3$	
Sulfates	24 Hour	25 $\mu g/m^3$	—	(a) Decrease in ventilatory function; (b) Aggravation of asthmatic symptoms; (c) Aggravation of cardio-pulmonary disease; (d) Vegetation damage; (e) Degradation of visibility; (f) Property damage.
Lead	30-day	1.5 $\mu g/m^3$	—	(a) Learning disabilities; (b) Impairment of blood formation and nerve conduction.
	Quarter	—	1.5 $\mu g/m^3$	

Abbreviations:
ppm = parts per million (concentration) $\mu g/m^3$ = micrograms per cubic meter
Mean = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter

* The nitrogen dioxide ambient air quality standard was amended on February 22, 2007. These changes become effective after regulatory changes are submitted and approved by the Office of Administrative Law, expected in 2007.
Source: South Coast Air Quality Management District, 2007c. California Air Resources Board, Ambient Air Quality Standards, 2007b.

A brief description of the criteria pollutants and additional pollutants of concern are contained below.

- Carbon monoxide (CO): A colorless, odorless toxic gas produced by incomplete combustion of carbon-containing fuels (e.g., gasoline or diesel fuel). CO levels tend to be highest during the winter months, when the meteorological conditions favor the accumulation of the pollutants.
- Ozone: A photochemical oxidant that is formed when reactive organic gases and oxides of nitrogen (both byproducts of internal combustion engines) react in the presence of ultraviolet sunlight. Ozone is an energetic combination of three oxygen atoms that, when it comes into

contact with a surface, releases its force as chemical energy. When this happens to biological systems (i.e., the respiratory tract and plants), this energy can cause damage to sensitive tissues.

- Oxides of nitrogen (NOx): NOx is a mixture of nitric oxide and nitrogen dioxide in the atmosphere. Nitric oxide is formed as a byproduct of fuel combustion and quickly reacts with oxygen to form nitrogen dioxide. NOx emissions contribute to the formation of ozone and particulate matter. Nitrogen dioxide is the only form of NOx that exists at a level sufficient to cause public health concerns.
- Sulfur dioxide and sulfates: In California, sulfur is emitted during the combustion of petroleum-derived fuels (i.e., gasoline and diesel fuel) that contain sulfur. During combustion, sulfur is oxidized to sulfur dioxide (a colorless pungent gas). The sulfur dioxide is then converted to sulfate compounds in the atmosphere.
- Lead: Lead is a heavy metal that can accumulate in bone, soft tissue, and blood; can damage the kidneys, liver, and nervous system; and can result in learning disabilities, seizures, and death. Lead concentrations once exceeded the state and national air quality standards by a wide margin, but have not exceeded state or national air quality standards in the area for at least 10 years. Lead is no longer an additive in gasoline, which is the main reason the concentration of lead in the air is low.
- Suspended particulate matter (PM_{10} and $PM_{2.5}$): Particulate matter is a mixture of small particles that consists of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} refers to particulate matter that is 10 microns or less in diameter (1 micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter. Sources include road dust, diesel soot, erosion of soil, combustion particles (ashes and soot), and tire and brake abrasion.
- Volatile organic compounds (VOCs): VOCs are organic compounds that readily evaporate. Reactive organic gases (ROGs) consist of non-methane and oxygenated hydrocarbons. Although all VOCs are not necessarily ROGs, the terms are often interchanged. There are no state or national ambient air quality standards for VOCs; however, they are regulated because they are involved in chemical reactions that contribute to the formation of ozone. In addition, some hydrocarbon components classified as VOCs (i.e., benzene) are thought or known to be hazardous. Sources of VOCs include adhesives, solvents, paints, cooking, fuel, and combustion. VOCs can interfere with oxygen uptake and can cause coughing, sneezing, headaches, weakness, laryngitis, and bronchitis.
- Diesel particulate matter (DPM): Diesel exhaust is a mixture of many particles and gases that is produced when an engine burns diesel fuel. Many compounds found in diesel exhaust are carcinogenic. DPM includes the particles in diesel exhaust. Some of the health effects of DPM include eye, nose, and throat irritation as well as cough, nausea, and phlegm.
- Visibility reducing particles are suspended particulate matter. Visibility is the distance through the air that can be seen without the use of instrumental assistance. The 8-hour state standard is the extinction coefficient of 0.23 kilometers – visibility of ten miles or more due to particles when relative humidity is less than 70 percent. Visibility reducing particles are not assessed in this report; however, particulate matter is assessed.

- Vinyl chloride is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride is a known carcinogen. The 24-hour state standard for vinyl chloride is 0.01 ppm. The proposed project is not expected to generate or be exposed to vinyl chloride because proposed project uses do not utilize the chemical processes that create this pollutant. Therefore, it is not assessed in this report.
- Hydrogen sulfide is a flammable, colorless, poisonous gas that smells like rotten eggs. It can irritate the eyes and respiratory tract and cause symptoms like headache, nausea, vomiting, and cough. The 1-hour state standard for hydrogen sulfide is 0.03 ppm. Sources include the combustion of sulfur containing fuels (oil and coal) and organic matter that undergoes putrefaction. It is used in the production of heavy water for nuclear reactors, the manufacture of chemicals, in metallurgy, and as an analytical reagent. The proposed project is not expected to cause exposure to hydrogen sulfide because it will not generate hydrogen sulfide in any substantial quantity. Therefore, hydrogen sulfide is not assessed in this report.

The air pollution control agency for the Riverside County portion of the Salton Sea Air Basin (basin) is the SCAQMD. SCAQMD is responsible for controlling emissions primarily from stationary sources. SCAQMD maintains air quality monitoring stations throughout the basin. SCAQMD, in coordination with the Southern California Association of Governments, is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the basin. An AQMP is a plan prepared by an air pollution control district for a county or region designated as a nonattainment area for bringing the area into compliance with the requirements of the national and/or California ambient air quality standards. The term nonattainment area is used to refer to an air basin where one or more ambient air quality standards are exceeded.

The current AQMP for SCAQMD is the 2003 AQMP. The purpose of the 2003 AQMP is to set forth a comprehensive program that will lead the basin and those portions of the Salton Sea Air Basin under SCAQMD jurisdiction into compliance with all federal and state air quality planning requirements (SCAQMD 2003b).

The Final 2007 AQMP was adopted by the SCAQMD Governing Board on June 1, 2007. The new 2007 AQMP incorporates significant new emissions inventories, ambient measurements, scientific data, control strategies, and air quality modeling. The 2007 AQMP is designed to meet the state and federal Clean Air Act planning requirements and focuses on ozone and $PM_{2.5}$. The new 2007 AQMP for the basin has been adopted by SCAQMD, however it is pending EPA approval. Until the 2007 AQMP is formally adopted through the EPA, the older 2003 AQMP is still valid.

Thresholds

Regional significance thresholds have been established by SCAQMD specific to the Coachella Valley. Note that the regional construction and operational emissions thresholds are the same. Projects with construction or operation related emissions in excess of any of the thresholds presented in Table 2 are considered significant.

Table 2: SCAQMD Thresholds

Pollutant	Regional Construction (pounds per day)	Regional Operation (pounds per day)
Oxides of Nitrogen (NO_x)	100	100
Volatile Organic Compounds (VOC)	75	75
Particulate Matter (PM_{10})	150	150
Particulate Matter ($PM_{2.5}$)	55	55
Oxides of Sulfur (SO_x)	150	150
Carbon Monoxide (CO)	550	550
Regional thresholds from: South Coast Air Quality Management District, 2007		

Short-Term Emission Analysis

Short-term impacts will include fugitive dust and other particulate matter, as well as exhaust emissions generated by earthmoving activities and operation of grading equipment during site preparation. Construction emissions are caused by onsite or offsite activities. Onsite emissions principally consist of exhaust emissions (NO_x, SO_x, CO, VOC, PM_{10}, and $PM_{2.5}$) from heavy-duty construction equipment, motor vehicle operation, and fugitive dust (mainly PM_{10}) from disturbed soil. Offsite emissions are caused by motor vehicle exhaust from delivery vehicles, as well as worker traffic, but also include road dust (PM_{10}). Major construction-related activities include the following:

- Mass grading and fine grading;
- Trenching and excavation and earth moving for construction of utilities, both on and offsite;
- Building construction;
- Asphalt paving of access roads throughout the development; and
- Application of architectural coatings on exterior and interior surfaces.

Construction activities will be phased by grading, utility installation, paving and then building construction. Grading is anticipated to start in 2008 and be completed by 2009. Based on the quantities of cut and fill, it is estimated that approximately 485,000 cubic yards (cy) of material may be exported. The "low" level of detail to estimate fugitive dust was used, which assumed that the total onsite cut would be divided by the approximate number of work days (674000 cy / 124 days = 5435 cy/day). The URBEMIS defaults were used for the types and number of construction equipment. Unmitigated emissions during construction are displayed in Table 3.

Table 3: Short-Term Emissions (Unmitigated)

Construction Phase	Emissions (pounds per day)						
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Regional Threshold	75	100	550	150	150	55	None
2008 Construction Activity							
Mass Grading	21.09	230.20	101.65	0.16	965.06	209.20	24,072.41
Fine Grading	10.42	87.78	45.99	0	629.48	134.64	7,496.63
Trenching	2.37	20.19	9.68	0	1.01	0.92	1,839.12
Asphalt	13.47	67.82	30.21	0.05	3.96	3.52	7,112.06
Building	7.09	35.65	76.81	0.08	2.43	2.03	9,396.42
Max Daily Emissions	*21.09*	***230.20***	*101.65*	*0.16*	***965.06***	***209.20***	*24,072.41*
Significant Impact?	No	**Yes**	No	No	**Yes**	**Yes**	-
2009 Construction Activity							
Building	6.65	33.62	71.98	0.08	2.33	1.94	9,394.07
Architectural Coatings	157.64	0.15	2.48	0.00	0.02	0.01	274.05
Max Daily Emissions	***157.64***	*33.62*	*71.98*	*0.08*	*2.33*	*1.94*	*9,394.07*
Significant Impact?	**Yes**	No	No	No	No	No	-

Source: URBEMIS2007 model output, see attachments

None = There is no threshold for CO_2.

Note: Each of the above activities does not occur at the same time; therefore, the maximum daily emissions represent the maximum emissions that would occur in one day.

To reduce construction emissions, the following mitigation measures should be implemented:

AQ-1 Prior to construction of the project, the project proponent will comply with the requirements of South Coast Air Quality Management District Rule 403 to provide a Fugitive Dust Control Plan that will describe the application of standard best management practices to control dust during

construction. Best management practices shall include application of water on disturbed soils a minimum of two times per day, managing hauling road dust, covering haul vehicles, replanting disturbed areas as soon as practical, and restricting vehicle speeds on unpaved roads to 15 mph, applying soil stabilizers to inactive areas, and other measures, as deemed appropriate to the site, to control fugitive dust. In addition, during grading, no more than five acres should be graded per day. The Fugitive Dust Control Plan shall be submitted to the City of Indian Wells and SCAQMD for approval and be approved prior to construction.

AQ-2 Reduce the maximum acreage graded on any one day to 20 acres.

AQ-3 During project construction, onsite electrical hook ups shall be provided for electric construction tools including saws, drills and compressors, to eliminate the need for diesel powered electric generators.

AQ-4 During project construction, the developer shall require all contractors not to idle construction equipment onsite for more than 5 minutes.

The calculated mitigated construction emissions are listed below in Table 4. As shown in the table, emissions are below the significance thresholds for all pollutants except VOC and NO_X.

Table 4: Short-Term Emissions (Mitigated)

Construction Phase	Emissions (pounds per day)						
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Regional Threshold	75	100	550	150	150	55	None
2008 Construction Activity							
Mass Grading	21.09	230.20	101.65	0.16	139.38	36.76	24,072.41
Fine Grading	10.42	87.78	45.99	0.00	48.03	13.21	7,496.63
Trenching	2.37	20.19	9.68	0.00	1.01	0.92	1,839.12
Asphalt	13.47	67.82	30.21	0.05	3.96	3.52	7,112.06
Building	7.09	35.65	76.81	0.08	2.43	2.03	9,396.42
Max Daily Emissions	*21.09*	***230.20***	*101.65*	*0.16*	*139.38*	*36.76*	*24,072.41*
Significant Impact?	No	**Yes**	No	No	No	No	—

Table 4 (Cont.): Short-Term Emissions (Mitigated)

Construction Phase	Emissions (pounds per day)						
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
2009 Construction Activity							
Building	6.65	33.62	71.98	0.08	2.33	1.94	9,394.07
Architectural Coatings	157.64	0.15	2.48	0.00	0.02	0.01	274.05
Max Daily Emissions	***157.64***	*33.62*	*71.98*	*0.08*	*2.33*	*1.94*	*9,394.07*
Significant Impact?	**Yes**	No	No	No	No	No	-

None = There is no threshold for CO_2.
Note: Each of the above activities does not occur at the same time; therefore, the maximum daily emissions represent the maximum emissions that would occur in one day.
Source: URBEMIS2007 model output, see attachments

Long-Term Emissions Analysis

Operational, or long-term, emissions occur over the life of the project. Operational emissions include mobile and area source emissions. Area source emissions are from consumer products, heaters that consume natural gas, gasoline-powered landscape equipment, and architectural coatings (painting). Mobile emissions from motor vehicles are the largest single long-term source of air pollutants from the project.

The emissions analysis included the trip generation rates from Table 7 (W) of the Traffic Study prepared by Willdan, dated June 18, 2007. In addition, the Traffic Study's pass-by rate of 34% was applied to the Shopping Center portion of the project. The URBEMIS2007 v9.2 default pass-by rates were applied to the remaining land uses. MBA analyzed both winter and summer emissions for the project. It is estimated that the project will be operational by 2009.

As shown in Table 5, the project's operational emissions would exceed the SCAQMD's regional thresholds. The highest emission rate in pounds per day (lbs/day) for each pollutant is shown in Table 5. All emission rates are from winter except SO_2 and CO_2, which had higher rates in the summer.

Table 5: Operational Emissions (Unmitigated)

Source	Emissions (pounds per day)						
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Mobile (vehicle)	165.19	211.13	1,475.16	1.22	198.37	39.35	119,690.47

Table 5 Cont.: Operational Emissions (Unmitigated)

Source	Emissions (pounds per day)						
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Area	17.52	7.86	33.65	—	4.39	4.23	8,407.97
Total	***182.71***	***218.99***	***1,508.81***	*1.22*	*202.76*	*43.58*	*128,098.44*
Regional Threshold	75	100	550	150	150	55	None
Significant Impact?	**Yes**	**Yes**	**Yes**	No	No	No	—

Source: URBEMIS2007 model output, see attachments; winter emissions are shown for all pollutants except for SOx and CO2, where summer emissions are shown.

To reduce operational emissions, the following mitigation measures should be implemented:

AQ-5 A minimum of three Transportation Demand Management (TDM) measures shall be implemented. TDMs may include having showers and locker facilities for employees, providing at least one secure bike parking spot for every 20 vehicle parking spaces, providing preferential parking for carpool/vanpool vehicles, and installing kiosks with alternative transit information.

The calculated mitigated operational emissions are listed below in Table 6. As shown in the table, emissions are below the significance thresholds for SO_2, PM_{10} and $PM_{2.5}$. However, the project remains significant for VOC, NO_X, and CO.

Table 6: Operational Emissions (Mitigated)

Source	Emissions (pounds per day)						
	VOC	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$	CO_2
Mobile (vehicle)	160.44	204.94	1,431.84	1.19	192.55	38.19	116,173.01
Area	17.52	7.86	33.65	—	4.39	4.23	8,407.97
Total	***177.96***	***212.80***	***1,465.49***	*1.19*	*196.94*	*42.42*	*124,580.98*
Regional Threshold	75	100	550	150	150	55	None
Significant Impact?	**Yes**	**Yes**	**Yes**	No	No	No	—

Source: URBEMIS2007 model output, see attachments; winter emissions are shown for all pollutants except for SO_x and CO_2, where summer emissions are shown.

Carbon Monoxide Hotspot Analysis

A CO hot spot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards. Localized high levels of CO are associated with traffic congestion and idling or slow-moving vehicles. To provide a worst-case scenario, CO concentrations are estimated at project-impacted intersections, where the concentrations would be the greatest. Intersections with the highest potential for CO hotspots were selected based on their average delay, traffic volumes (obtained from the Traffic Report prepared for this project), and proximity to sensitive receptors. This analysis follows guidelines recommended by the CO Protocol (CALT 1997) and the SCAQMD. According to the CO Protocol, intersections with Level of Service (LOS) E or F require detailed analysis. In addition, intersections that operate under LOS D conditions in areas that experience meteorological conditions favorable to CO accumulation require a detailed analysis. The SCAQMD recommends that a local CO hotspot analysis be conducted if the intersection meets one of the following criteria: 1) the intersection is at LOS D or worse and where the project increases the volume to capacity ratio by 2 percent, or 2) the project decreases LOS at an intersection from C to D.

Using the CALINE4 model, potential CO hotspots were analyzed at the intersections listed in Table 8. These intersections were chosen because they operate at LOS D or worse. There were several inputs to the CALINE4 model. One input is the traffic volumes, which is from the project-specific Traffic Report (Willdan 2007). The traffic volumes with the project were used for the buildout scenario as well as emission factors generated using the EMFAC2007 model for the year 2009.

Project emissions may also be considered significant if a CO hotspot intersection analysis determines that project generated emissions cause a localized violation of the state CO 1-hour standard of 20 ppm, state CO 8-hour standard of 9 ppm, federal CO 1-hour standard of 35 ppm, or federal CO 8-hour standard of 9 ppm.

Table 7 displays the background levels of CO. As shown in Table 8, the estimated 1-hour and 8-hour average CO concentrations at build-out in combination with background concentrations are below the state and national ambient air quality standards. No CO hotspots are anticipated as a result of traffic-generated emissions by the proposed project in combination with other anticipated development in the area. Therefore, the mobile emissions of CO from the project are not anticipated to contribute substantially to an existing or projected air quality violation of CO.

Table 7: Background Levels of Carbon Monoxide

Carbon Monoxide Averaging Time and units	2004	2005	2006
1-hour, ppm	2.0	2.0	2.0
8-hour, ppm	1.0	0.8	1.0
Source: SCAQMD 2007b, Data is from Station Number 4137 (Source Receptor 30).			

Table 8: Carbon Monoxide Localized Concentrations

Intersection	1 Hour Estimated CO Concentration (ppm)*	8 Hour Estimated CO Concentration (ppm)**	Significant Impact?***
Washington Street at Fred Waring Drive	4.5	2.8	No
Washington Street at Miles Avenue	4.1	2.5	No
Washington Street at Highway 111	4.5	2.8	No
Washington Street at Avenue 48	5.1	3.2	No
Adams Street at Highway 111	4.0	2.4	No

* Caline4 output (see enclosures for model output) plus the 1 hour background concentration of 2 ppm (Table 7).
** The 8-hour project increment was calculated by multiplying the 1-hour Caline4 output by 0.7 (persistence factor), then adding the 8 hour background concentration of 1 ppm (from Table 7).
*** Comparison of the 1-hour concentration to the state standard of 20 ppm and the 8-hour concentration to the state/national standard of 9 ppm.

Air Quality Management Plan Consistency

As discussed above, the current AQMP for the area is the 2007 AQMP; however, the 2007 AQMP has only been approved by the SCAQMD. This assessment determines consistency with both the 2003 and the 2007 AQMP. The AQMP sets forth a comprehensive program that will lead the basin into compliance with all federal ambient air quality standards. This assessment will use the following two criteria for determining project consistency with the current AQMP:

1. Whether the project will contribute to air quality violations
2. Compliance with AQMP Control Measures

Air Quality Violations

According to the SCAQMD (1993), the project is consistent with the AQMP if the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP (SCAQMD 1993, Page 12-3). The project has the potential to cumulatively contribute to a violation of the air quality standards for ozone because it exceeds the VOC and NOx thresholds during construction and operation of the project. Therefore, the project does not meet the first indicator.

Compliance with AQMP Control Measures

The second criterion is compliance with the control measures in the AQMP. The AQMP contains a number of land use and transportation control measures including the following: the District's Stationary and Mobile Source Control Measures; State Control Measures proposed by CARB; and Transportation Control Measures provided by Southern California Association of Governments (SCAG) (SCAQMD

2003b, Page 4-3). CARB's strategy for reducing mobile source emissions include the following approaches: new engine standards; reduce emissions from in-use fleet, require clean fuels, support alternative fuels and reduce petroleum dependency, work with EPA to reduce emissions from national and state sources, and pursue long-term advanced technology measures (SCAQMD 2003b, Page 4-25). Transportation control measures provided by SCAG include those contained in the Regional Transportation Plans (RTP). The RTP has control measures to reduce emissions from on-road sources by incorporating strategies such as high occupancy vehicle interventions, transit, and information-based technology interventions (SCAQMD 2003b, Page 4-19). The measures implemented by CARB and SCAG effect the project indirectly by regulating the vehicles that the residents may use and regulating public transportation. The project indirectly will comply with the control measures set by CARB and SCAG.

The project will comply with all of the SCAQMD applicable rules and regulations. Therefore, the project complies with this criterion.

Summary

The analysis supports the following conclusions:

- The project exceeds the SCAQMD regional thresholds for VOC and NOx during construction after mitigation;
- The project exceeds the SCAQMD regional thresholds for VOC, NOx, and CO during operation after mitigation;
- The project will not result in a carbon dioxide hotspot at project impacted intersections; and
- The project is not consistent with the AQMP.

If you have any questions or concerns regarding this letter, please call me at 909-884-2255.

Sincerely,

Cori Wilson, Assistant Project Manager
Michael Brandman Associates
621 E. Carnegie Drive, Suite 100
San Bernardino, CA 92408

Enclosures: URBEMIS Output
Caline4 Output

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Contributing Staff

Chrystal Meier, Air Quality Analyst
Max Rees, Air Quality Analyst

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Urbemis 2007 Version 9.2.0

Combined Summer Emissions Reports (Pounds/Day)

File Name: S:\Client\2640\26400008\Air Quality\URBEMIS\Indian Wells Town Center_Construction.urb9

Project Name: Indian Wells Town Center Construction

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	21.09	230.20	107.02	0.16	954.39	10.67	965.06	199.38	9.82	209.20	24,072.41
2008 TOTALS (lbs/day mitigated)	21.09	230.20	107.02	0.16	128.71	10.67	139.38	26.95	9.82	36.76	24,072.41
2009 TOTALS (lbs/day unmitigated)	164.29	33.76	74.46	0.08	0.35	2.00	2.35	0.12	1.83	1.95	9,668.12
2009 TOTALS (lbs/day mitigated)	184.29	33.76	74.46	0.08	0.35	2.00	2.35	0.12	1.83	1.95	9,668.12

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 1/1/2008-6/20/2008 Number Active Days: 124	21.09		101.85		954.39	10.67		199.38		209.20	24,072.41
		230.20		0.16			965.06		9.82		
Mass Grading 01/01/2008-06/20/2008	21.09		101.65		954.39	10.67		199.38	9.82		24,072.41
		230.20		0.16			965.06			209.20	
Mass Grading Dust	0.00	0.00	0.00	0.00	953.83	0.00	953.83	199.20	0.00	199.20	0.00
Mass Grading Off Road Diesel	10.33	87.62	43.26	0.00	0.00	4.46	4.46	0.00	4.10	4.10	7,216.54
Mass Grading On Road Diesel	10.67	142.42	55.66	0.16	0.55	6.20	6.75	0.18	5.71	5.89	16,575.77
Mass Grading Worker Trips	0.09	0.17	2.73	0.00	0.01	0.01	0.02	0.00	0.01	0.01	280.09

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Time Slice 6/23/2008-8/1/2008 Number Active Days: 30	10.42		45.99		625.01	4.47		130.53		134.64	7,496.63
		87.78		0.00			629.48		4.11		
Fine Grading 06/23/2008-08/01/2008	10.42		45.99		625.01	4.47		130.53	4.11		7,496.63
		87.78		0.00			629.48			134.64	
Fine Grading Dust	0.00	0.00	0.00	0.00	625.00	0.00	625.00	130.53	0.00	130.53	0.00
Fine Grading Off Road Diesel	10.33	87.62	43.26	0.00	0.00	4.46	4.46	0.00	4.10	4.10	7,216.54
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.09	0.17	2.73	0.00	0.01	0.01	0.02	0.00	0.01	0.01	280.09
Time Slice 8/4/2008-8/15/2008 Number Active Days: 10	2.37		9.68		0.01	1.00		0.00		0.92	1,839.12
		20.19		0.00			1.01		0.92		
Trenching 08/04/2008-08/15/2008	2.37		9.68		0.01	1.00		0.00	0.92		1,839.12
		20.19		0.00			1.01			0.92	
Trenching Off Road Diesel	2.33	20.12	8.46	0.00	0.00	1.00	1.00	0.00	0.92	0.92	1,714.64
Trenching Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 8/18/2008-8/29/2008 Number Active Days: 10	20.56		107.02		0.53	5.85		0.18		5.56	16,508.48
		103.47		0.13			6.39		5.37		
Asphalt 08/18/2008-08/29/2008	13.47		30.21		0.20	3.76		0.06	3.46		7,112.06
		67.82		0.05			3.96			3.52	
Paving Off-Gas	6.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.21	18.89	9.61	0.00	0.00	1.63	1.63	0.00	1.50	1.50	1,272.41
Paving On Road Diesel	3.66	48.84	19.09	0.05	0.19	2.13	2.32	0.06	1.96	2.02	5,684.05
Paving Worker Trips	0.05	0.09	1.52	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61
Building 08/18/2008-04/24/2009	7.09		76.81		0.34	2.09		0.12	1.91		9,396.42
		35.65		0.08			2.43			2.03	
Building Off Road Diesel	4.23	19.62	12.39	0.00	0.00	1.39	1.39	0.00	1.28	1.28	1,746.33
Building Vendor Trips	1.07	12.71	9.95	0.02	0.07	0.56	0.63	0.02	0.51	0.54	2,057.97
Building Worker Trips	1.79	3.32	54.47	0.06	0.26	0.14	0.41	0.10	0.12	0.22	5,592.12

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Time Slice 9/1/2008-12/31/2008 Number Active Days: 88	7.09		76.81		0.34	2.09		0.12		2.03	9,396.42
		35.65		0.08			2.43		1.91		
Building 08/18/2008-04/24/2009	7.09		76.81		0.34	2.09		0.12	1.91		9,396.42
		35.65		0.08			2.43			2.03	
Building Off Road Diesel	4.23	19.62	12.39	0.00	0.00	1.39	1.39	0.00	1.26	1.28	1,746.33
Building Vendor Trips	1.07	12.71	9.95	0.02	0.07	0.56	0.63	0.02	0.51	0.54	2,057.97
Building Worker Trips	1.79	3.32	54.47	0.06	0.26	0.14	0.41	0.10	0.12	0.22	5,592.12
Time Slice 1/1/2009-1/30/2009 Number Active Days: 22	6.65		71.98		0.34	1.99		0.12		1.94	9,394.07
		33.62		0.08			2.33		1.82		
Building 08/18/2008-04/24/2009	6.65		71.98		0.34	1.99		0.12	1.82		9,394.07
		33.62		0.08			2.33			1.94	
Building Off Road Diesel	4.02	18.68	12.06	0.00	0.00	1.33	1.33	0.00	1.23	1.23	1,746.33
Building Vendor Trips	1.01	11.92	9.29	0.02	0.07	0.51	0.58	0.02	0.46	0.49	2,058.11
Building Worker Trips	1.63	3.03	50.63	0.06	0.26	0.15	0.42	0.10	0.13	0.22	5,589.63
Time Slice 2/2/2009-4/24/2009 Number Active Days: 60	164.29		74.46		0.35	2.00		0.12		1.95	9,668.12
		33.76		0.08			2.35		1.83		
Building 08/18/2008-04/24/2009	6.65		71.98		0.34	1.99		0.12	1.82		9,394.07
		33.62		0.08			2.33			1.94	
Building Off Road Diesel	4.02	18.68	12.06	0.00	0.00	1.33	1.33	0.00	1.23	1.23	1,746.33
Building Vendor Trips	1.01	11.92	9.29	0.02	0.07	0.51	0.58	0.02	0.46	0.49	2,058.11
Building Worker Trips	1.63	3.03	50.63	0.06	0.26	0.15	0.42	0.10	0.13	0.22	5,589.63
Coating 02/01/2009-05/22/2009	157.64		2.48		0.01	0.01		0.00	0.01		274.05
		0.15		0.00			0.02			0.01	
Architectural Coating	157.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.08	0.15	2.48	0.00	0.01	0.01	0.02	0.00	0.01	0.01	274.05
Time Slice 4/27/2009-5/22/2009 Number Active Days: 20	157.64		2.48		0.01	0.01		0.00		0.01	274.05
		0.15		0.00			0.02		0.01		
Coating 02/01/2009-05/22/2009	157.64		2.48		0.01	0.01		0.00	0.01		274.05
		0.15		0.00			0.02			0.01	
Architectural Coating	157.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.08	0.15	2.48	0.00	0.01	0.01	0.02	0.00	0.01	0.01	274.05

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Phase Assumptions

Phase: Fine Grading 6/23/2008 - 8/1/2008 - Default Fine Site Grading/Excavation Description
Total Acres Disturbed: 125
Maximum Daily Acreage Disturbed: 31.25
Fugitive Dust Level of Detail: Default
  20 lbs per acre-day
On Road Truck Travel (VMT): 0
Off-Road Equipment:
1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
2 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day
3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 1/1/2008 - 6/20/2008 - Default Mass Site Grading/Excavation Description
Total Acres Disturbed: 125
Maximum Daily Acreage Disturbed: 31.25
Fugitive Dust Level of Detail: Low
  Onsite Cut/Fill: 5435 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day
On Road Truck Travel (VMT): 3910.85
Off-Road Equipment:
1 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
2 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day
3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 8/4/2008 - 8/15/2008 - Default Trenching Description
Off-Road Equipment:
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

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Phase: Paving 8/18/2008 - 8/29/2008 - Default Paving Description
Acres to be Paved: 25
Off-Road Equipment:
1 Pavers (100 hp) operating at a 0.62 load factor for 8 hours per day
2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day
2 Rollers (95 hp) operating at a 0.56 load factor for 6 hours per day

Phase: Building Construction 8/18/2008 - 4/24/2009 - Default Building Construction Description
Off-Road Equipment:
1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day
2 Forklifts (145 hp) operating at a 0.3 load factor for 7 hours per day
1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 2/1/2009 - 5/22/2009 - Default Architectural Coating Description
Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100
Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50
Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250
Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 1/1/2008-6/20/2008 Number Active Days: 124	21.09		101.65		128.71	10.67		26.95		36.76	24,072.41
		230.20		0.16			139.38		9.82		
Mass Grading 01/01/2008-06/20/2008	21.09		101.65		128.71	10.67		26.95	9.82		24,072.41
		230.20		0.16			139.38			36.76	
Mass Grading Dust	0.00	0.00	0.00	0.00	128.15	0.00	128.15	26.76	0.00	26.76	0.00
Mass Grading Off Road Diesel	10.33	87.62	43.26	0.00	0.00	4.46	4.46	0.00	4.10	4.10	7,216.54
Mass Grading On Road Diesel	10.67	142.42	55.66	0.16	0.55	6.20	6.75	0.18	5.71	5.89	16,575.77
Mass Grading Worker Trips	0.09	0.17	2.73	0.00	0.01	0.01	0.02	0.00	0.01	0.01	280.09

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Time Slice 6/23/2008-8/1/2008 Number Active Days: 30	10.42		45.99		43.56	4.47		9.10		13.21	7,496.63
		87.78		0.00			48.03		4.11		
Fine Grading 06/23/2008-08/01/2008	10.42		45.99		43.56	4.47		9.10	4.11		7,496.63
		87.78		0.00			48.03			13.21	
Fine Grading Dust	0.00	0.00	0.00	0.00	43.54	0.00	43.54	9.09	0.00	9.09	0.00
Fine Grading Off Road Diesel	10.33	87.62	43.26	0.00	0.00	4.46	4.46	0.00	4.10	4.10	7,216.54
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.09	0.17	2.73	0.00	0.01	0.01	0.02	0.00	0.01	0.01	280.09
Time Slice 8/4/2008-8/15/2008 Number Active Days: 10	2.37		9.68		0.01	1.00		0.00		0.92	1,839.12
		20.19		0.00			1.01		0.92		
Trenching 08/04/2008-08/15/2008	2.37		9.68		0.01	1.00		0.00	0.92		1,839.12
		20.19		0.00			1.01			0.92	
Trenching Off Road Diesel	2.33	20.12	8.46	0.00	0.00	1.00	1.00	0.00	0.92	0.92	1,714.64
Trenching Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 8/18/2008-8/29/2008 Number Active Days: 10	20.56		107.02		0.53	5.85		0.18		5.56	16,508.48
		103.47		0.13			6.39		5.37		
Asphalt 08/18/2008-08/29/2008	13.47		30.21		0.20	3.76		0.06	3.46		7,112.06
		67.82		0.05			3.96			3.52	
Paving Off-Gas	6.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	3.21	18.89	9.61	0.00	0.00	1.63	1.63	0.00	1.50	1.50	1,272.41
Paving On Road Diesel	3.66	48.84	19.09	0.05	0.19	2.13	2.32	0.06	1.96	2.02	5,684.05
Paving Worker Trips	0.05	0.09	1.52	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61
Building 08/18/2008-04/24/2009	7.09		76.81		0.34	2.09		0.12	1.91		9,396.42
		35.65		0.08			2.43			2.03	
Building Off Road Diesel	4.23	19.62	12.39	0.00	0.00	1.39	1.39	0.00	1.28	1.28	1,746.33
Building Vendor Trips	1.07	12.71	9.95	0.02	0.07	0.56	0.63	0.02	0.51	0.54	2,057.97
Building Worker Trips	1.79	3.32	54.47	0.06	0.26	0.14	0.41	0.10	0.12	0.22	5,592.12

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Time Slice 9/1/2008-12/31/2008 Number Active Days: 88	7.09		76.81		0.34	2.09		0.12		2.03	9,396.42
		35.65		0.08			2.43		1.91		
Building 08/18/2008-04/24/2009	7.09		76.81		0.34	2.09		0.12	1.91		9,396.42
		35.65		0.08			2.43			2.03	
Building Off Road Diesel	4.23	19.62	12.39	0.00	0.00	1.39	1.39	0.00	1.28	1.28	1,746.33
Building Vendor Trips	1.07	12.71	9.95	0.02	0.07	0.56	0.63	0.02	0.51	0.54	2,057.97
Building Worker Trips	1.79	3.32	54.47	0.06	0.28	0.14	0.41	0.10	0.12	0.22	5,592.12
Time Slice 1/1/2009-1/30/2009 Number Active Days: 22	6.65		71.98		0.34	1.99		0.12		1.94	9,394.07
		33.62		0.08			2.33		1.82		
Building 08/18/2008-04/24/2009	6.65		71.98		0.34	1.99		0.12	1.82		9,394.07
		33.62		0.08			2.33			1.94	
Building Off Road Diesel	4.02	18.66	12.06	0.00	0.00	1.33	1.33	0.00	1.23	1.23	1,746.33
Building Vendor Trips	1.01	11.92	9.29	0.02	0.07	0.51	0.58	0.02	0.46	0.49	2,058.11
Building Worker Trips	1.63	3.03	50.63	0.06	0.26	0.15	0.42	0.10	0.13	0.22	5,589.63
Time Slice 2/2/2009-4/24/2009 Number Active Days: 60	164.29		74.46		0.35	2.00		0.12		1.95	9,668.12
		33.76		0.08			2.35		1.83		
Building 08/18/2008-04/24/2009	6.65		71.98		0.34	1.99		0.12	1.82		9,394.07
		33.62		0.08			2.33			1.94	
Building Off Road Diesel	4.02	18.66	12.06	0.00	0.00	1.33	1.33	0.00	1.23	1.23	1,746.33
Building Vendor Trips	1.01	11.92	9.29	0.02	0.07	0.51	0.58	0.02	0.46	0.49	2,056.11
Building Worker Trips	1.63	3.03	50.63	0.06	0.26	0.15	0.42	0.10	0.13	0.22	5,589.63
Coating 02/01/2009-05/22/2009	157.64		2.48		0.01	0.01		0.00	0.01		274.05
		0.15		0.00			0.02			0.01	
Architectural Coating	157.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.08	0.15	2.48	0.00	0.01	0.01	0.02	0.00	0.01	0.01	274.05
Time Slice 4/27/2009-5/22/2009 Number Active Days: 20	157.64		2.48		0.01	0.01		0.00		0.01	274.05
		0.15		0.00			0.02		0.01		
Coating 02/01/2009-05/22/2009	157.64		2.48		0.01	0.01		0.00	0.01		274.05
		0.15		0.00			0.02			0.01	
Architectural Coating	157.56	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.08	0.15	2.48	0.00	0.01	0.01	0.02	0.00	0.01	0.01	274.05

8/14/2007 04:43:44 PM

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 6/23/2008 - 8/1/2008 - Default Fine Site Grading/Excavation Description

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation raduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Mass Grading 1/1/2008 - 6/20/2008 - Default Mass Site Grading/Excavation Description

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigetion reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigetion reduces emissions by:

PM10: 55% PM25: 55%

For Soil Stablizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

8/14/2007 10:48:54 AM

Urbemis 2007 Version 9.2.0

Summary Report for Summer Emissions (Pounds/Day)

File Name: S:\Client\2640\26400008\Air Quality\Indian Wells Town Center_Operation.urb9

Project Name: Indian Wells Town Center

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	8.40	7.03	14.81	0.00	0.04	0.04	8,407.97

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	143.92	176.90	1,472.32	1.22	198.37	39.35	119,690.47
TOTALS (lbs/day, mitigated)	139.87	171.70	1,429.05	1.19	192.55	38.19	116,173.01
Percent Reduction	2.81	2.94	2.94	2.46	2.93	2.95	2.94

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	152.32	183.93	1,487.13	1.22	198.41	39.39	128,098.44

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

8/14/2007 10:49:04 AM

Urbemis 2007 Version 9.2.0

Detail Report for Summer Area Source Unmitigated Emissions (Pounds/Day)

File Name: S:\Client\2640\26400008\Air Quality\Indian Wells Town Center_Operation.urb9

Project Name: Indian Wells Town Center Operation

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.51	6.93	5.38	0.00	0.01	0.01	8,392.34
Hearth - No Summer Emissions							
Landscape	1.07	0.10	9.43	0.00	0.03	0.03	15.63
Consumer Products	3.33						
Architectural Coatings	3.49						
TOTALS (lbs/day, unmitigated)	8.40	7.03	14.81	0.00	0.04	0.04	8,407.97

Area Source Changes to Defaults

8/14/2007 10:49:10 AM

Urbemis 2007 Version 9.2.0

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: S:\Client\2640\26400008\Air Quality\Indian Wells Town Center_Operation.urb9

Project Name: Indian Wells Town Center Operation

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	6.39	8.23	70.90	0.06	9.56	1.90	5,782.43
Hotel	20.25	23.55	195.40	0.16	26.60	5.27	16,023.33
Regnl shop. center	69.69	77.58	646.26	0.52	83.59	16.61	50,733.49
Office park	9.67	12.58	107.36	0.09	14.64	2.90	8,835.94
Movie Theater	37.92	54.96	452.40	0.39	63.98	12.67	38,315.28
TOTALS (lbs/day, unmitigated)	143.92	176.90	1,472.32	1.22	198.37	39.35	119,690.47

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	25.00	9.57	dwelling units	65.00	622.05	5,502.03

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Hotel		8.17	rooms	300.00	2,451.00	15,315.71
Regnl shop. center		42.94	1000 sq ft	254.30	10,919.64	48,099.34
Office park		11.02	1000 sq ft	85.70	944.41	8,430.19
Movie Theater		67.63	1000 sq ft	65.65	4,439.91	36,851.36
					19,377.01	114,198.63

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.0	2.0	97.6	0.4
Light Truck < 3750 lbs	10.9	3.7	90.8	5.5
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	9.5	1.1	98.9	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	77.1	22.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	10.0	80.0	10.0

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Hotel				5.0	2.5	92.5
Regnl shop. center				2.0	1.0	97.0
Office park				48.0	24.0	28.0
Movie Theater				2.0	1.0	97.0

Operational Changes to Defaults

8/14/2007 10:49:16 AM

Urbemis 2007 Version 9.2.0

Detail Report for Summer Operational Mitigated Emissions (Pounds/Day)

File Name: S:\Client\2640\26400008\Air Quality\Indian Wells Town Center_Operation.urb9

Project Name: Indian Wells Town Center Operation

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Mitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	6.22	7.99	68.87	0.06	9.28	1.84	5,616.79
Hotel	19.73	22.86	189.66	0.16	25.82	5.12	15,552.85
Regnl shop. center	67.73	75.34	627.55	0.50	81.18	16.13	49,265.41
Office park	9.36	12.14	103.66	0.09	14.14	2.80	8,531.35
Movie Theater	36.83	53.37	439.31	0.38	62.13	12.30	37,206.61
TOTALS (lbs/day, mitigated)	139.87	171.70	1,429.05	1.19	192.55	38.19	116,173.01

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Temperature (F): 80 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Operational Mitigation Options Selected

Residential Mitigation Measures

Residential Mix of Uses Mitigation

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Operational Mitigation Options Selected

Residential Mitigation Measures

Percent Reduction In Trips is 0.86% (calculated as a % of 9.57 trips/day))

Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips

Inputs Selected:

The number of housing units within a 1/2 mile radius of the project, plus the number of residential units included in the project are 65.

The employment for the study area (within a 1/2 mile radius of the project) is 508.

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)))

Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Nonresidential Mitigation Measures

Non-Residential Mix of Uses Mitigation

Percent Reduction in Trips is 0.86%

Inputs Selected:

The number of housing units within a 1/2 mile radius of the project, plus the number of residential units included in the project are 65.

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Nonresidential Mitigation Measures

The employment for the study area (within a 1/2 mile radius of the project) is 508.

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Other Transportation Demand Measures Mitigation

---

Percent Reduction in Trips is 1%

Note that the above percent is applied ONLY to worker trips.

Inputs Selected:

The 'Secure Bike Parking' measure was selected

The 'Showers/Changing Facilities Provided' measure was selected

The 'Information provided on Transportation Alternatives' measure was selected

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	25.00	9.30	dwelling units	65.00	604.23	5,344.42
Hotel		7.94	rooms	300.00	2,380.79	14,866.09
Regnl shop. center		41.71	1000 sq ft	254.30	10,606.84	46,707.64
Office park		10.70	1000 sq ft	85.70	917.36	8,139.63

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Movie Theater		65.69	1000 sq ft	65.65	4,312.72	35,785.11
					18,821.94	110,842.89

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.0	2.0	97.6	0.4
Light Truck < 3750 lbs	10.9	3.7	90.8	5.5
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	9.5	1.1	98.9	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	77.1	22.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	10.0	80.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Hotel				5.0	2.5	92.5
Regnl shop. center				2.0	1.0	97.0
Office park				48.0	24.0	28.0
Movie Theater				2.0	1.0	97.0

Operational Changes to Defaults

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Urbemis 2007 Version 9.2.0

Summary Report for Winter Emissions (Pounds/Day)

File Name: S:\Client\2640\26400008\Air Quality\Indian Wells Town Center_Operation.urb9

Project Name: Indian Wells Town Center Operation

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	17.52	7.86	33.65	0.08	4.39	4.23	9,629.20

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	165.19	211.13	1,475.16	1.04	198.37	39.35	108,931.14
TOTALS (lbs/day, mitigated)	160.44	204.94	1,431.84	0.99	192.55	38.19	105,729.83
Percent Reduction	2.88	2.93	2.94	4.81	2.93	2.95	2.94

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	182.71	218.99	1,508.81	1.12	202.76	43.58	118,560.34

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

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Urbemis 2007 Version 9.2.0

Detail Report for Winter Area Source Unmitigated Emissions (Pounds/Day)

File Name: S:\Client\2640\26400008\Air Quality\Indian Wells Town Center_Operation.urb9

Project Name: Indian Wells Town Center Operation

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES (Winter Pounds Per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.51	6.93	5.38	0.00	0.01	0.01	8,392.34
Hearth	10.19	0.93	28.27	0.08	4.38	4.22	1,236.86
Landscaping - No Winter Emissions							
Consumer Products	3.33						
Architectural Coatings	3.49						
TOTALS (lbs/day, unmitigated)	17.52	7.86	33.65	0.08	4.39	4.23	9,629.20

Area Source Changes to Defaults

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Urbemis 2007 Version 9.2.0

Detail Report for Winter Operational Unmitigated Emissions (Pounds/Day)

File Name: S:\Client\2640\26400008\Air Quality\Indian Wells Town Center_Operation.urb9

Project Name: Indian Wells Town Center Operation

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Winter Pounds Per Day, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	7.00	9.84	69.55	0.05	9.56	1.90	5,264.05
Hotel	22.07	28.11	195.23	0.14	26.60	5.27	14,580.35
Regnl shop. center	81.87	92.45	658.83	0.44	83.59	16.61	46,201.76
Office park	10.71	15.04	105.04	0.08	14.64	2.90	8,041.68
Movie Theater	43.54	65.69	446.51	0.33	63.98	12.67	34,843.30
TOTALS (lbs/day, unmitigated)	165.19	211.13	1,475.16	1.04	198.37	39.35	108,931.14

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	25.00	9.57	dwelling units	65.00	622.05	5,502.03

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Hotel		8.17	rooms	300.00	2,451.00	15,315.71
Regnl shop. center		42.94	1000 sq ft	254.30	10,919.64	48,099.34
Office park		11.02	1000 sq ft	85.70	944.41	8,430.19
Movie Theater		67.63	1000 sq ft	65.65	4,439.91	36,851.36
					19,377.01	114,198.63

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.0	2.0	97.6	0.4
Light Truck < 3750 lbs	10.9	3.7	90.8	5.5
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	9.5	1.1	98.9	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	77.1	22.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	10.0	80.0	10.0

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Hotel				5.0	2.5	92.5
Regnl shop. center				2.0	1.0	97.0
Office park				48.0	24.0	28.0
Movie Theater				2.0	1.0	97.0

Operational Changes to Defaults

8/14/2007 10:49:39 AM

Urbemis 2007 Version 9.2.0

Detail Report for Winter Operational Mitigated Emissions (Pounds/Day)

File Name: S:\Client\2640\26400008\Air Quality\Indian Wells Town Center_Operation.urb9

Project Name: Indian Wells Town Center Operation

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Mitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	6.80	9.56	67.55	0.05	9.28	1.84	5,113.26
Hotel	21.46	27.29	189.50	0.13	25.82	5.12	14,152.22
Regnl shop. center	79.53	89.78	639.77	0.42	81.18	16.13	44,864.80
Office park	10.36	14.52	101.43	0.07	14.14	2.80	7,764.47
Movie Theater	42.29	63.79	433.59	0.32	62.13	12.30	33,835.08
TOTALS (lbs/day, mitigated)	160.44	204.94	1,431.84	0.99	192.55	38.19	105,729.83

Includes correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2009 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Operational Mitigation Options Selected

Residential Mitigation Measures

Residential Mix of Uses Mitigation

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Operational Mitigation Options Selected

Residential Mitigation Measures

Percent Reduction in Trips is 0.86% (calculated as a % of 9.57 trips/day))

Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips

Inputs Selected:

The number of housing units within a 1/2 mile radius of the project, plus the number of residential units included in the project are 65.

The employment for the study area (within a 1/2 mile radius of the project) is 508.

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2% (calculated as a % of 9.57 trips/day)))

Note that the above percent is applied to a baseline of 9.57 and that product is subtracted from the Unmitigated Trips

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Nonresidential Mitigation Measures

Non-Residential Mix of Uses Mitigation

Percent Reduction in Trips is 0.86%

Inputs Selected:

The number of housing units within a 1/2 mile radius of the project, plus the number of residential units included in the project are 65.

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Nonresidential Mitigation Measures

The employment for the study area (within a 1/2 mile radius of the project) is 508.

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 2%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was selected.

Non-Residential Other Transportation Demand Measures Mitigation

---

Percent Reduction in Trips is 1%

Note that the above percent is applied ONLY to worker trips.

Inputs Selected:

The 'Secure Bike Parking' measure was selected

The 'Showers/Changing Facilities Provided' measure was selected

The 'Information provided on Transportation Alternatives' measure was selected

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	25.00	9.30	dwelling units	65.00	604.23	5,344.42
Hotel		7.94	rooms	300.00	2,380.79	14,866.09
Regnl shop. center		41.71	1000 sq ft	254.30	10,606.84	46,707.64
Office park		10.70	1000 sq ft	85.70	917.36	8,139.63

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Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Movie Theater		65.69	1000 sq ft	65.65	4,312.72	35,785.11
					18,821.94	110,842.89

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.0	2.0	97.6	0.4
Light Truck < 3750 lbs	10.9	3.7	90.8	5.5
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	9.5	1.1	98.9	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	77.1	22.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	10.0	80.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6

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Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Hotel				5.0	2.5	92.5
Regnl shop. center				2.0	1.0	97.0
Office park				48.0	24.0	28.0
Movie Theater				2.0	1.0	97.0

Operational Changes to Defaults

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Washington at Fred Waring
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 1.0 M/S Z0= 100. CM ALT= 24. (M)
BRG= WORST CASE VD= .0 CM/S
CLAS= 7 (G) VS= .0 CM/S
MIXH= 1000. M AMB= .0 PPM
SIGTH= 5. DEGREES TEMP= 18.3 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	15	0	15	600	AG	1382	4.6	.0	17.9
B. NB Approach	15	600	15	756	AG	1016	7.9	.0	17.9
C. NB Depart	15	756	15	913	AG	1388	7.9	.0	17.9
D. NB External	15	913	15	1513	AG	1388	4.6	.0	17.9
E. NB Left	15	600	7	756	AG	366	7.9	.0	17.9
F. SB Left	0	913	7	756	AG	372	7.9	.0	17.9
G. SB External	0	1513	0	913	AG	2052	4.6	.0	17.9
H. SB Approach	0	913	0	756	AG	1680	7.9	.0	17.9
I. SB Depart	0	756	0	600	AG	2092	7.9	.0	17.9
J. SB External	0	600	0	0	AG	2092	4.6	.0	17.9
K. EB External	-750	750	-150	750	AG	1610	4.6	.0	15.7
L. EB Approach	-150	750	7	750	AG	1345	7.9	.0	15.7
M. EB Depart	7	750	165	750	AG	1324	7.9	.0	15.7
N. EB External	165	750	765	750	AG	1324	4.6	.0	15.7
O. WB External	765	763	165	763	AG	854	4.6	.0	15.7
P. WB Approach	165	763	7	763	AG	757	7.9	.0	15.7
Q. WB Depart	7	763	-150	763	AG	1094	7.9	.0	15.7
R. WB External	-150	763	-750	763	AG	1094	4.6	.0	15.7
S. EB Left	-150	750	7	756	AG	265	7.9	.0	15.7
T. WB Left	165	763	7	756	AG	97	7.9	.0	15.7

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-10	741	2.0
2. Receptor	25	741	2.0
3. Receptor	25	772	2.0
4. Receptor	-10	772	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	7.	2.4	.0	.0	.2	.2	.0	.2	.0	1.0
2. Receptor	277.	2.2	.0	.3	.0	.0	.0	.0	.0	.0
3. Receptor	263.	2.1	.0	.0	.4	.0	.0	.0	.0	.3
4. Receptor	173.	2.5	.2	.1	.0	.0	.0	.0	.0	.2

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.2	.0	.0	.4	.0	.0	.0	.0	.2	.0	.0	.0
2. Receptor	.4	.0	.0	.8	.2	.0	.0	.0	.2	.1	.1	.0
3. Receptor	.0	.0	.2	.2	.0	.0	.0	.1	.7	.0	.0	.0
4. Receptor	1.2	.0	.0	.2	.0	.0	.0	.0	.3	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Washington at Miles
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	24. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	18.3 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	15	0	15	600	AG	1473	4.6	.0	17.9
B. NB Approach	15	600	15	755	AG	1355	7.9	.0	17.9
C. NB Depart	15	755	15	911	AG	1439	7.9	.0	17.9
D. NB External	15	911	15	1511	AG	1439	4.6	.0	17.9
E. NB Left	15	600	7	755	AG	118	7.9	.0	17.9
F. SB Left	0	911	7	755	AG	299	7.9	.0	17.9
G. SB External	0	1511	0	911	AG	2116	4.6	.0	17.9
H. SB Approach	0	911	0	755	AG	1817	7.9	.0	17.9
I. SB Depart	0	755	0	600	AG	1968	7.9	.0	17.9
J. SB External	0	600	0	0	AG	1968	4.6	.0	17.9
K. EB External	-750	750	-150	750	AG	519	4.6	.0	13.5
L. EB Approach	-150	750	7	750	AG	388	7.9	.0	13.5
M. EB Depart	7	750	165	750	AG	764	7.9	.0	13.5
N. EB External	165	750	765	750	AG	764	4.6	.0	13.5
O. WB External	765	761	165	761	AG	373	4.6	.0	13.5
P. WB Approach	165	761	7	761	AG	271	7.9	.0	13.5
Q. WB Depart	7	761	-150	761	AG	310	7.9	.0	13.5
R. WB External	-150	761	-750	761	AG	310	4.6	.0	13.5
S. EB Left	-150	750	7	755	AG	131	7.9	.0	13.5
T. WB Left	165	761	7	755	AG	102	7.9	.0	13.5

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-10	742	2.0
2. Receptor	25	742	2.0
3. Receptor	25	769	2.0
4. Receptor	-10	769	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	7.	2.1	.0	.0	.2	.2	.0	.1	.0	1.1
2. Receptor	351.	1.9	.0	.1	.9	.0	.0	.1	.2	.3
3. Receptor	187.	1.8	.0	.8	.1	.0	.0	.0	.0	.0
4. Receptor	173.	2.0	.2	.2	.0	.0	.0	.0	.0	.2

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.1	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0
2. Receptor	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.0
3. Receptor	.2	.2	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0
4. Receptor	1.2	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Washington at Highway 111
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 1.0 M/S
BRG= WORST CASE
CLAS= 7 (G)
MIXH= 1000. M
SIGTH= 5. DEGREES
Z0= 100. CM
VD= .0 CM/S
VS= .0 CM/S
AMB= .0 PPM
TEMP= 18.3 DEGREE (C)
ALT= 24. (M)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	16	0	16	600	AG	1731	4.6	.0	18.6
B. NB Approach	16	600	16	759	AG	1159	7.9	.0	18.6
C. NB Depart	16	759	16	919	AG	1705	7.9	.0	18.6
D. NB External	16	919	16	1519	AG	1705	4.6	.0	18.6
E. NB Left	16	600	8	759	AG	572	7.9	.0	18.6
F. SB Left	0	919	8	759	AG	518	7.9	.0	18.6
G. SB External	0	1519	0	919	AG	1855	4.6	.0	18.6
H. SB Approach	0	919	0	759	AG	1337	7.9	.0	18.6
I. SB Depart	0	759	0	600	AG	2149	7.9	.0	18.6
J. SB External	0	600	0	0	AG	2149	4.6	.0	18.6
K. EB External	-750	750	-150	750	AG	2098	4.6	.0	21.8
L. EB Approach	-150	750	8	750	AG	1844	7.9	.0	21.8
M. EB Depart	8	750	166	750	AG	1761	7.9	.0	21.8
N. EB External	166	750	766	750	AG	1761	4.6	.0	21.8
O. WB External	766	769	166	769	AG	1362	4.6	.0	21.8
P. WB Approach	166	769	8	769	AG	1140	7.9	.0	21.8
Q. WB Depart	8	769	-150	769	AG	1431	7.9	.0	21.8
R. WB External	-150	769	-750	769	AG	1431	4.6	.0	21.8
S. EB Left	-150	750	8	759	AG	254	7.9	.0	21.8
T. WB Left	166	769	8	759	AG	222	7.9	.0	21.8

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-11	738	2.0
2. Receptor	26	738	2.0
3. Receptor	26	781	2.0
4. Receptor	-11	781	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	83.	2.4	.0	.2	.0	.0	.1	.0	.0	.0
2. Receptor	277.	2.5	.0	.3	.0	.0	.1	.0	.0	.0
3. Receptor	187.	2.4	.0	.7	.3	.0	.2	.0	.0	.0
4. Receptor	172.	2.5	.2	.2	.0	.0	.2	.0	.0	.2

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.6	.0	.0	.2	.9	.0	.2	.0	.0	.0	.0	.0
2. Receptor	.4	.0	.1	1.0	.2	.0	.0	.0	.0	.2	.1	.0
3. Receptor	.3	.2	.0	.0	.3	.0	.0	.3	.0	.0	.0	.0
4. Receptor	1.1	.0	.0	.3	.0	.0	.0	.0	.4	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Washington at Avenue 48
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	24. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	18.3 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	14	0	14	600	AG	2685	4.6	.0	16.6
B. NB Approach	14	600	14	756	AG	2685	7.9	.0	16.6
C. NB Depart	14	756	14	912	AG	2498	7.9	.0	16.6
D. NB External	14	912	14	1512	AG	2498	4.6	.0	16.6
E. NB Left	14	600	7	756	AG	0	7.9	.0	16.6
F. SB Left	0	912	7	756	AG	329	7.9	.0	16.6
G. SB External	0	1512	0	912	AG	2794	4.6	.0	16.6
H. SB Approach	0	912	0	756	AG	2465	7.9	.0	16.6
I. SB Depart	0	756	0	600	AG	3079	7.9	.0	16.6
J. SB External	0	600	0	0	AG	3079	4.6	.0	16.6
K. EB External	-750	750	-150	750	AG	0	4.6	.0	14.7
L. EB Approach	-150	750	7	750	AG	0	7.9	.0	14.7
M. EB Depart	7	750	164	750	AG	804	7.9	.0	14.7
N. EB External	164	750	764	750	AG	804	4.6	.0	14.7
O. WB External	764	762	164	762	AG	902	4.6	.0	14.7
P. WB Approach	164	762	7	762	AG	288	7.9	.0	14.7
Q. WB Depart	7	762	-150	762	AG	0	7.9	.0	14.7
R. WB External	-150	762	-750	762	AG	0	4.6	.0	14.7
S. EB Left	-150	750	7	756	AG	0	7.9	.0	14.7
T. WB Left	164	762	7	756	AG	614	7.9	.0	14.7

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-10	741	2.0
2. Receptor	23	741	2.0
3. Receptor	23	771	2.0
4. Receptor	-10	771	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	170.	2.5	.2	.4	.0	.0	.0	.0	.0	.0
2. Receptor	353.	3.1	.0	.4	1.5	.0	.0	.1	.3	.3
3. Receptor	187.	3.1	.0	1.6	.4	.0	.0	.0	.0	.0
4. Receptor	172.	2.5	.2	.4	.0	.0	.0	.0	.0	.2

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	1.9	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
2. Receptor	.0	.0	.0	.0	.2	.0	.0	.0	.0	.0	.0	.1
3. Receptor	.4	.3	.0	.0	.2	.0	.0	.0	.0	.0	.0	.1
4. Receptor	1.7	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Adams at Highway 111
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U=	1.0 M/S	Z0=	100. CM	ALT=	24. (M)
BRG=	WORST CASE	VD=	.0 CM/S		
CLAS=	7 (G)	VS=	.0 CM/S		
MIXH=	1000. M	AMB=	.0 PPM		
SIGTH=	5. DEGREES	TEMP=	18.3 DEGREE (C)		

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
A. NB External	12	0	12	600	AG	545	4.6	.0	14.9
B. NB Approach	12	600	12	759	AG	349	7.9	.0	14.9
C. NB Depart	12	759	12	918	AG	772	7.9	.0	14.9
D. NB External	12	918	12	1518	AG	772	4.6	.0	14.9
E. NB Left	12	600	6	759	AG	196	7.9	.0	14.9
F. SB Left	0	918	6	759	AG	317	7.9	.0	14.9
G. SB External	0	1518	0	918	AG	841	4.6	.0	14.9
H. SB Approach	0	918	0	759	AG	524	7.9	.0	14.9
I. SB Depart	0	759	0	600	AG	882	7.9	.0	14.9
J. SB External	0	600	0	0	AG	882	4.6	.0	14.9
K. EB External	-750	750	-150	750	AG	2071	4.6	.0	21.5
L. EB Approach	-150	750	6	750	AG	1812	7.9	.0	21.5
M. EB Depart	6	750	162	750	AG	1849	7.9	.0	21.5
N. EB External	162	750	762	750	AG	1849	4.6	.0	21.5
O. WB External	762	768	162	768	AG	1548	4.6	.0	21.5
P. WB Approach	162	768	6	768	AG	1375	7.9	.0	21.5
Q. WB Depart	6	768	-150	768	AG	1502	7.9	.0	21.5
R. WB External	-150	768	-750	768	AG	1502	4.6	.0	21.5
S. EB Left	-150	750	6	759	AG	259	7.9	.0	21.5
T. WB Left	162	768	6	759	AG	173	7.9	.0	21.5

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Receptor	-9	738	2.0
2. Receptor	21	738	2.0
3. Receptor	21	781	2.0
4. Receptor	-9	781	2.0

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) A	B	C	D	E	F	G	H
1. Receptor	83.	1.9	.0	.0	.0	.0	.0	.0	.0	.0
2. Receptor	277.	2.0	.0	.0	.0	.0	.0	.0	.0	.0
3. Receptor	259.	1.7	.0	.0	.2	.0	.0	.0	.0	.1
4. Receptor	100.	1.7	.0	.0	.1	.0	.0	.0	.0	.1

RECEPTOR	CONC/LINK (PPM) I	J	K	L	M	N	O	P	Q	R	S	T
1. Receptor	.2	.0	.0	.1	1.0	.1	.2	.1	.0	.0	.0	.0
2. Receptor	.2	.0	.1	1.0	.1	.0	.0	.0	.1	.2	.1	.0
3. Receptor	.0	.0	.1	.3	.0	.0	.0	.0	.8	.0	.0	.0
4. Receptor	.0	.0	.0	.0	.3	.2	.0	.7	.0	.0	.0	.0

APPENDIX B

Biology Report

Thomas Leslie Corporation

Biological and Cultural Investigations & Monitoring

Mr. Ernest Perea, Principal
EPC Land Planning, Inc.
5225 Canyon Crest Drive, Suite 71-325
Riverside, California 92507

February 13, 2007

SUBJECT: Results of a Biological Constraints Analysis (BCA) for the 98.4-acre City of Indian Wells Town Center Project Site (Project Site)

Dear Mr. Perea:

Thomas Leslie Corporation (TLC) is pleased to present the results of a BCA of the subject project site. The project site, located in the City of Indian Wells, California, is comprised of the following Assessor's Parcel Numbers (APNs): 604-040-036, -089, -090, -091 (easterly 6-acre portion), 633-360-018, -024, -026, -027 (existing *Tennis Garden Facility*; the undeveloped portions of the parcel) and -028 and -029 that are assessed in this BCA. Figure 1 illustrates the location of the parcels comprising the project site.

It is our understanding that the project proposed for development as "Town Center Specific Plan" includes 35.9 acres of mixed use consisting of retail, restaurants, offices, a 2,400-seat theater, a 267-room hotel, 65 single-family detached homes and 12.9 acres developed into 1,632 permanent parking spaces for use by the existing tennis complex.

The findings of the BCA, divided into *Pre-Field Survey* and onsite *Field Survey* sections, are provided in this report. The report includes the following elements: (I) a summary of the results of the BCA, (II) a description of the project site location, (III) purpose of the analysis, (IV) methodologies of pre-field investigations, (V) methodologies of the field investigations, (VI) results of pre-field investigations and (VII) results of the field investigations.

Note: The analysis did not include performance of focused plant or wildlife species surveys. It also does not include the results of a "formal" jurisdictional delineation. However, the BCA does specifically discuss jurisdictional elements (waters, wetlands and riparian habitat) and provides recommendations regarding the need for future biological and jurisdictional investigations.

I. SUMMARY OF BCA INVESTIGATIONS

Relation of the Project Site to the Coachella Valley Multiple Species Habitat Conservation Plan (CV-MSHCP) and Published Critical Habitat Maps:

- The entire project site is located ***outside*** any conservation area identified by the CV-MSHCP (CVAG, 2006). The closest proposed conservation area, the off-site *Santa Rosa and San Jacinto Mountains Conservation Area*, is located 1,400± feet (0.27± miles) south from the southern boundary of the project site. Therefore, construction of the project site will ***not*** conflict with the conservation goals of any CV-MSHCP identified conservation area.
- An analysis of federal designated and proposed critical habitat maps, showed that the project site is located ***outside*** any area identified as critical habitat for any plant or animal species listed as threatened or endangered, by the US Fish and Wildlife Service (FWS). Therefore, development of the project site will ***not*** interfere with the recovery of any federally listed threatened or endangered species.

42210 Roick Drive, Suite 11, Temecula, CA 92590-5523 Office (951) 719-1128 Fax (951) 719-3106

Habitat Types:

- The following two natural native plant habitat types (communities) were identified onsite: Creosote Bush/Desert Sand Verbena Series and Fourwing Saltbush Series. While the Desert Sand Verbena Series is identified as a California Natural Diversity Data Base (CNDDB) Community of Highest Inventory Priority (C.H.I.P.), the Fourwing Saltbush Series is not.
- Portions of some APNs, once naturally vegetated, have been previously highly disturbed and on February 6, 2007 the disturbed areas were either comprised of unvegetated sandy soils or supported only a sparse scatter of non-native weedy plant species or native plant species growing as weeds.
- The sparse vegetation of Whitewater River banks and bottom consisted of the common plant species found in Creosote Bush/Desert Sand Verbena Series and Fourwing Saltbush Series.
- Portions of the project site are occupied by what appeared to be a sod farm and existing Tennis Garden Facility and associated parking structures.
- Figure 5 illustrates the location of the non-native and native vegetation identified within the boundaries of the project site.

Sensitive Species:

- ***No*** records for listed threatened or endangered, or unlisted special-status plant species proposed for listing are documented onsite. ***None*** were field identified on February 6, 2007 by TLC biologists or during biological field surveys conducted on the project site on April 3 and 15 and June 11, 1998 (BTC, 1998a, b).
- The following sensitive wildlife species are recorded onsite by the CNDDB: (1) the Coachella Valley Fringe-toed Lizard (*Uma inornata*), a federally listed Threatened and State listed Endangered and (2) the Coachella Giant Sand-treader Cricket (***Macrobaenetes valgum***), an unlisted, target species of the ***Santa Rosa and San Jacinto Mountains Conservation Area*** located off-site south of the project site.
- The following unlisted, special-status California species of concern (CSC) wildlife species have been identified onsite: a solitary Burrowing Owl individual (TLC, 2007) and Coastal Western Whiptail (TLC, 2007; BTC, 1998a) and San Diego Black-tailed Jackrabbit individuals (TLC, 2007; BTC, 1998a). In addition, an Osprey was observed flying over the project site in 1998 (BTC, 1998a).

Additional Recommended Investigations:

Due to the presence of suitable habitat on the project site, and because the December 18, 2006 letter from the California Department of Fish and Game [CDFG] (CDFG, 2006) specifically requests them, performance of the following focused species-specific surveys are recommended in the naturally vegetated areas (see Figure 6). **Note**: Completion of the following surveys will address focused surveys recommended by the CDFG.

- **Spring 2007 Rare Plant Surveys**. Because ***no*** annual plants were flowering on February 6, 2007, it was not possible to determine the presence or absence of sensitive plant species potentially present on the project site. Therefore, based on an analysis of their flowering periods, two focused Rare Plant surveys, one mid-March and one mid-April are recommended to determine the presence or absence of the following eight plant species discussed on Table 1: two federally listed endangered species (Coachella Valley Milkvetch and Triple-ribbed Milkvetch) and six unlisted, special-status plants (Flat-seeded Spurge, Glandular Ditaxis, California Ditaxis, Slender Wooly-heads, Desert Spike-moss or Purple Stemodia).

- **2007 Wildlife Surveys.** One mid-March and one mid-April focused surveys will be conducted concurrently with the Rare Plant surveys to determine the presence or absence of the special-status reptile and bird species potentially present in the vicinity of the project site (see Table 2).
- **Focused Breeding Season (February 1-August 31) Burrowing Owl (BUOW) Surveys.** As recommended by the CDFG (CDFG, 2006), focused BUOW surveys will be conducted on the project site to determine how many occupied owl burrows will be impacted by development of the project site. The surveys will be conducted in accordance with BUOW survey protocols identified in the 1993 California Burrowing Owl Consortium guidelines (CBOC, 1993) and 1995 California Department of Fish and Game (CDFG) staff memo regarding the Burrowing Owl mitigation (CDFG, 1995). Note: Suitable BUOW habitat, potential BUOW burrows (rodent excavated ground burrows) and BUOW individuals and sign were present within the project boundaries on February 6, 2007 (see Figure 6).
- **Nesting Bird Survey**. Because trees and large shrubs of the project site provide potential nesting habitat for birds, if their removal will occur during bird nesting season (March 1 to September 15), a nesting bird survey should be conducted prior to cutting the trees/shrubs down. Nesting birds are protected by the federal Migratory Bird Treaty Act (MBTA, 1918). A list of the nesting birds protected by the MBTA is viewable online at http://www.fws.gov/migratorybirds/intrnltr/mbta/mbtintro.html.

  Conversely, a nesting bird study will ***not*** be necessary if tree/shrub removal occurs outside the bird nesting season: 16 September to 28 February.

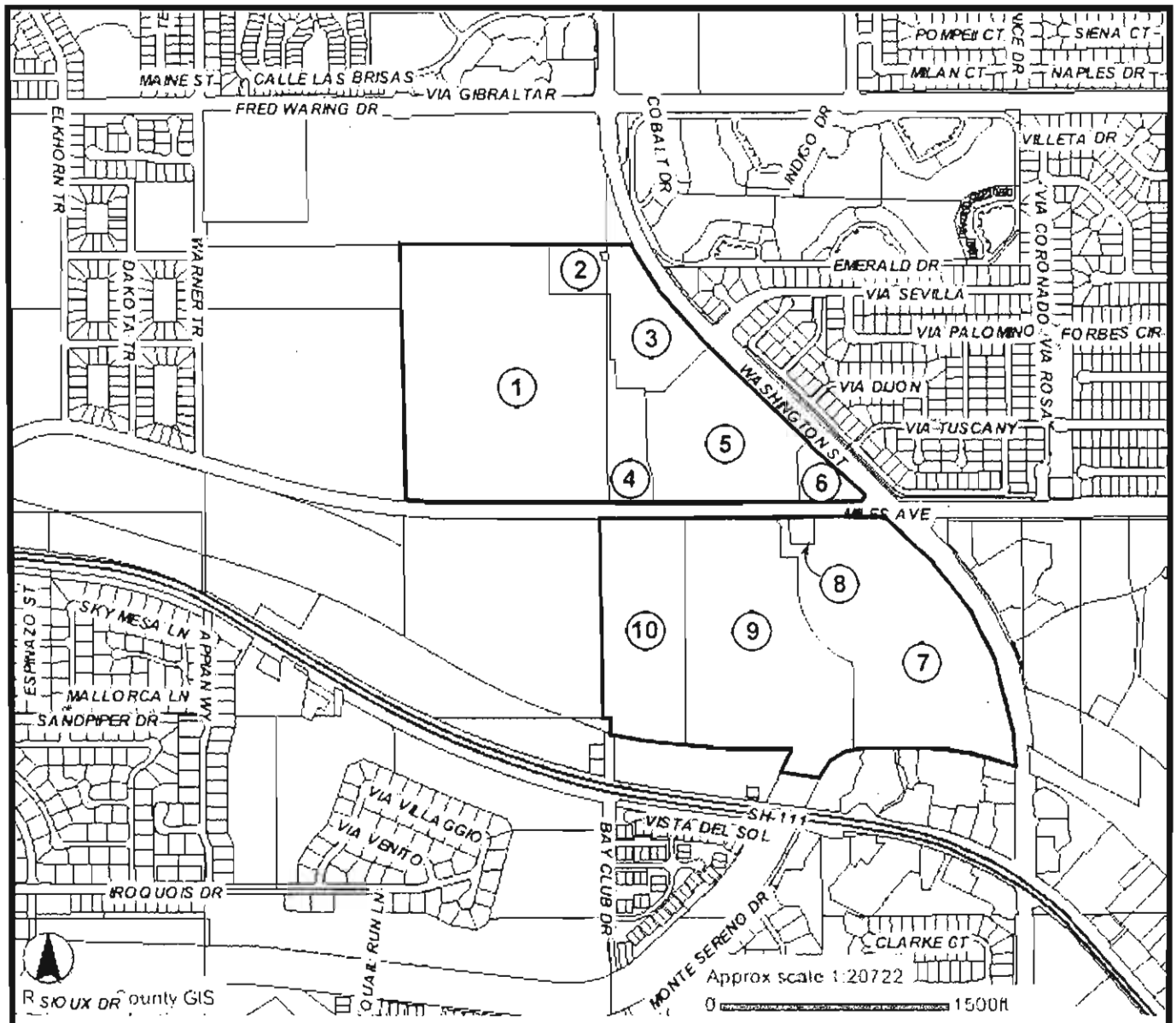
II. LOCATION OF THE PROJECT SITE

- **Figure 2** illustrates the boundaries of the project site on the 2007 Thomas Guide San Bernardino and Riverside Counties Street Guide and Directory, on map page 819, map coordinates E-7 and F-7 and on map page 849, map coordinates E-1, F-1 and G-1.
- **Figure 3** plots the boundaries of the project site in Section 24, Township 5 South, Range 6 East and Section 19, Township 5 South, Range 7 East of the 1959 (Photorevised 1980) La Quinta, California United States Geological Surveys (USGS) topographic quadrangle.

Interstate 10 (I-10) provides access to the project site. To reach the project site, exit I-10 at Washington Street and drive southerly 2.8± miles to Miles Avenue, which bisects the project site into the northern and southern portions. A number of paved and dirt roads/trails provide access to all portions of the project site.

III. PURPOSES OF THE ANALYSIS

The 2007 constraints analysis included (1) study of a current California Department of Fish and Game (CDFG) records search report and velum overlay for the La Quinta, Calif. USGS quadrangle to identify any sensitive biological elements (species or habitat) recorded onsite which could potentially constrain planning for, or development of the project site, (2) review of the final 2006 CV-MSHCP to determine the relation of the project site to the 2006 CV-MSHCP, (3) reading of the April 1998 *Biological Impact Report*, and June 1998 supplemental biological resources survey letter prepared by Bon Terra Consulting to obtain baseline biological data for use in performance of the 2007 BCA field survey, (4) analysis of the December 18, 2006 CDFG comments on the Notice of Preparation (NOP) for the Town Center Specific Plan (Indian Wells Tennis Garden) draft Environmental Impact Report (EIR) to develop responses to CDFG comments and recommendations and (5) performance of a single diurnal BCA level biological field survey conducted to (a) identify the presence of any sensitive biological or jurisdictional elements, and (b) ascertain the need to perform additional focused biological investigations within the boundaries of the project site.



1 = APN 633-360-027 (existing Tennis Garden);
2 = APN 633-360-028;
3 = APN 633-360-029;
4 = APN 633-360-026;
5 = APN 633-360-018;
6 = APN 633-360-024
7 = APN 604-040-089
8 = APN 604-040-036
9 = APN 604-040-090
10 = APN 604-040-091 (easterly 6 acre portion)

Map Source: Riverside County GIS

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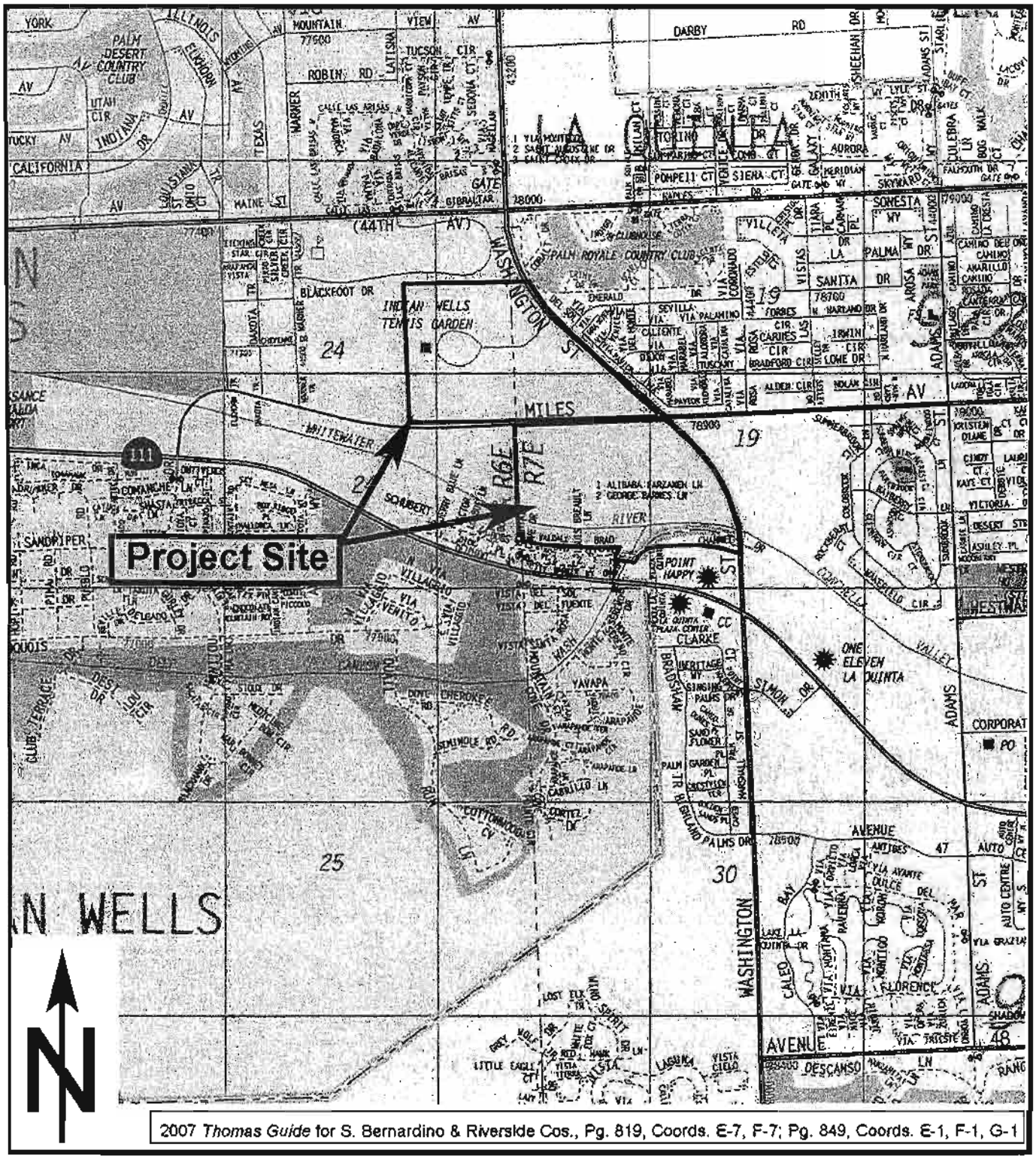
Figure 1

Parcel Map for APNs Comprising the Indian Wells Town Center Project Site



2007 *Thomas Guide* for S. Bernardino & Riverside Cos., Pg. 819, Coords. E-7, F-7; Pg. 849, Coords. E-1, F-1, G-1

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Figure 2

Location of Indian Wells Town Center Project Site

Illustrated on the Thomas Guide Map

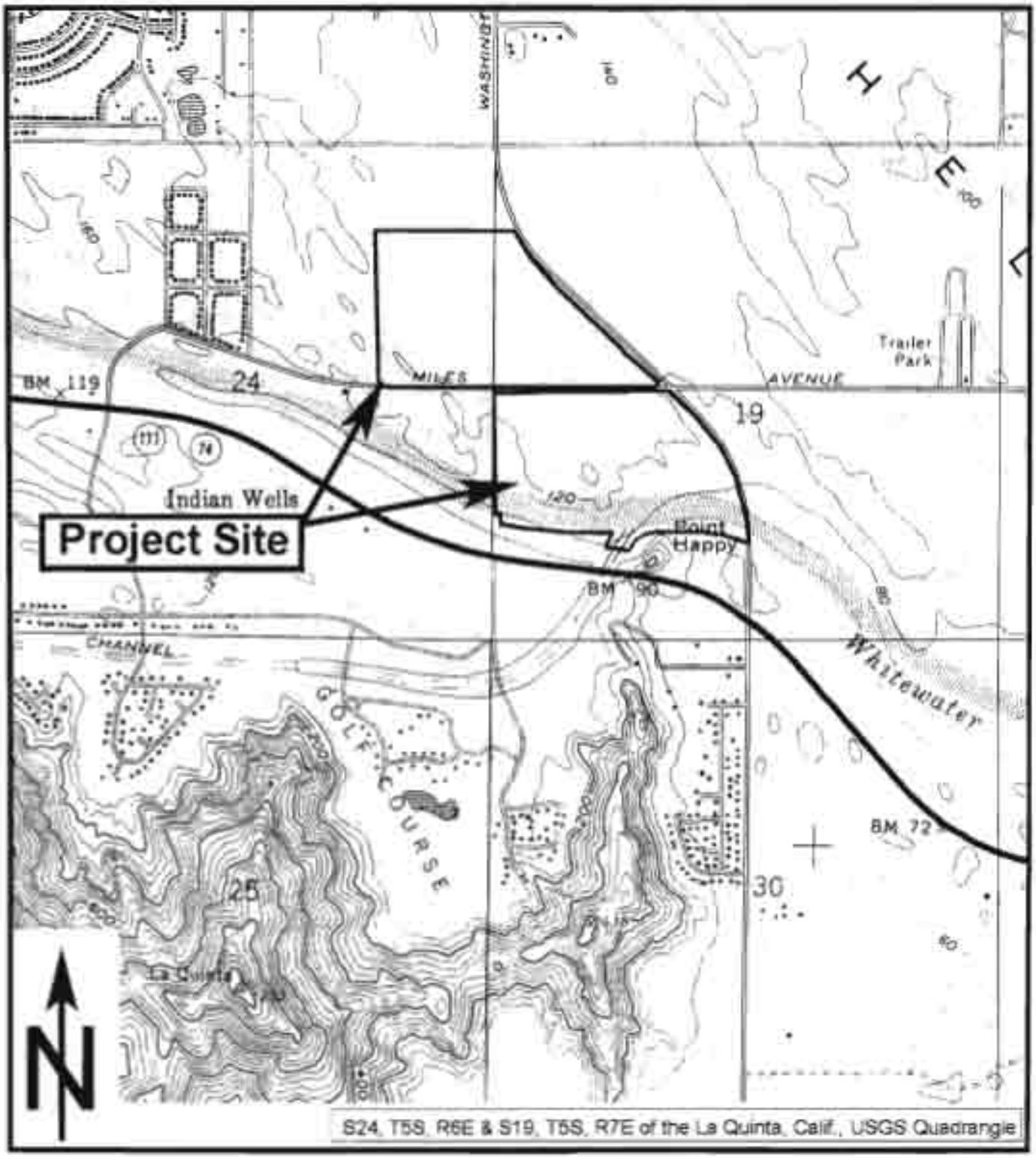

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Figure 3

Location of Indian Wells Town Center Project Site

Illustrated on a USGS Quadrangle Map

IV. PRE-FIELD SURVEY INVESTIGATIONS METHODOLOGY

The Pre-Field Survey analysis included reviews of records searches, maps and biological reports concerning the project site and the immediately surrounding vicinity to determine if any sensitive biological elements (species or habitat) are recorded or mapped on or could be expected to occur within the boundaries of the project site. Relevant information was used to develop recommendations regarding the need to perform additional species-specific focused field surveys and prepare this BCA report.

A. Coachella Valley MSHCP Analysis

The February 2006 CV-MSHCP (CV-MSHCP, 2006) was analyzed to determine: (1) if the project site is located inside any proposed Conservation Area, (2) if construction of the project would potentially conflict with the conservation goals of the CV-MSHCP, (3) if field investigations for listed threatened or endangered or unlisted special-status species are required or recommended by the CV-MSHCP within the project site boundaries, and (4) if developer fees will be required to fund implementation of the CV-MSHCP. The results of the CV-MSHCP analysis is provided in section VI.A. of this BCA report (see page 9).

B. Federal Critical Habitat Maps Analysis

The following federal critical habitat maps were reviewed to ascertain if development might be constrained by any habitat identified as essential for recovery of the following listed threatened or endangered plant and wildlife species:

- Coachella Valley Milk-Vetch Designated Critical Habitat (FWS, 2005a);
- Southwestern Willow Flycatcher Designated Critical Habitat (FWS, 2005b);
- Coachella Valley Fringe-Toed Lizard Designated Critical Habitat (FWS, 1980);
- Peninsular Bighorn Sheep Proposed Critical Habitat (FWS, 2000). **NOTE**: The 2001 designated critical habitat is being revised.

C. State Record Search

Current California Department of Fish and Game (CDFG) Natural Diversity Data Base (CNDDB) records search report, and velum overlay map, for the 1959 (Photorevised 1980) La Quinta, California, USGS topographic quadrangle (CDFG, 2007a, b), were analyzed to determine if any sensitive biological elements (species and habitats) are recorded on or in the vicinity of the project site. A copy of the CNDDB record search report is provided in Appendix D.

D. Aerial Photograph Analysis

A color aerial photograph obtained from Earth.Google.com was (a) reviewed to determine if any Wildlife Movement Corridors (WMC) might occur on the project site, and (b) used during the February 6, 2007, site visit to conduct a BCA level field survey of the entire project site and develop a biological resources map of the project site.

E. Biological Reports Previously Prepared for the Project Site

The *Biological Impact Report*, and subsequent *Findings of Supplemental Biological Resources Survey* letter prepared in 1998 by Bon Terra Consulting (BTC, 1998a, b), were reviewed to determine if any sensitive biological or jurisdictional elements were previously recorded on the project site. Relevant BTC data was incorporated into this BCA report.

V. FIELD SURVEYS INVESTIGATIONS METHODOLOGY

A single diurnal BCA-level field survey was performed within the boundaries of the project site on February 6, 2007, by TLC biologists Thomas Leslie (B.S.-M.S. Biology) and Nadya V. Leslie (M.S. Biology), to accomplish the following seven objectives.

A. Map the current habitat types present onsite as of February 6, 2007 and compare them to those mapped onsite by the *Natural Communities and Development Vegetation Map* of the CV-MSHCP (CV-MSHCP, Figure 3-1) and the *Biological Resources* map of the larger *Garden of Champions Tennis Facility Project* prepared in 1998 by Bon Terra (BTC, 1998a) that that included the current smaller Town Center Specific Plan (Indian Wells Tennis Garden).

B. Compile a list (inventory) of the predominant plant and wildlife species present and identifiable within the boundaries of the project site during the February 6, 2007, BCA field survey.

C. Determine the presence or absence of habitat potentially capable of supporting state and/or federally listed threatened or endangered, unlisted special-status plant and wildlife species and sensitive (rare) natural communities, and CV-MSHCP targeted species of the Santa Rosa and San Jacinto Mountains Conservation Area located 1,400± feet (0.27± miles) ***off-site*** south of the project site within the boundaries of the project site.

D. Search the project site for State or federally listed threatened or endangered species, unlisted special-status species, or Santa Rosa and San Jacinto Mountains Conservation Area targeted species and natural communities) present and identifiable at the time the February 6, 2007 BCA field survey was performed.

E. Determine if any identified Wildlife Movement Corridor (WMC) occurs within the boundaries of the project site.

F. Identify, and preliminarily evaluate the significance of potential impacts to existing onsite biological elements (species and habitat) related to development of the project site.

G. Ascertain (1) the presence or absence of jurisdictional elements within the boundaries of the project site, (2) the need to perform a "formal" wetland/jurisdictional waters delineation and (3) if state or federal regulatory approvals will be needed to authorize construction of the proposed project.

The "Results of the 2007 Field Survey Investigations" portion of this BCA is divided into seven sections (A-G) corresponding to these seven objectives.

VI. RESULTS OF THE 2007 PRE-FIELD SURVEY INVESTIGATIONS

A. Relationship of the Project Site to the CV-MSHCP

A-1. Proposed CV-MSHCP Conservation Areas

Figure 4-1 of the CV-MSHCP shows that the entire project site is located ***outside*** any CV-MSHCP conservation area. As Figure 4 illustrates, the nearest CV-MSHCP conservation area is off-site *Santa Rosa and San Jacinto Mountains Conservation Area*, 1,400± feet miles south of the project site.

A-2. Conservation Goals of the CV-MSHCP

Since the project site is located ***outside*** any Conservation Area of the CV-MSHCP, construction of the project site will ***not*** conflict with the conservation goals of the CV-MSHCP.

A-3. CV-MSHCP Required Surveys

Since the project site is located ***outside*** any Conservation Area of the CV-MSHCP, ***no*** CV-MSHCP required studies are specifically recommended or required for the project site. However, because ***no*** state or federal "take" permits for the 2006 CV-MSHCP have been issued, and because the CDFG December 18, 2006 NOP comments letter specifically recommends it, this BCA report addresses the presence or absence of "rare plants and rare natural communities," "sensitive fish, wildlife, reptile, and amphibian species" and "rare, threatened, and endangered species" within the boundaries of the project site (CDFG, 2006).

A-4. CV-MSHCP Required Developer Fees

As stated in the supplemental EIR being prepared for the project, "the City of Indian Wells approved the CV-MSHCP and is a "permittee under the plan. As such, the City requires developers to pay applicable mitigation fees."

B. Federal Critical Habitat Maps Analysis Results

An analysis of federal critical habitat maps showed that the project site is located ***outside*** any area identified as critical habitat for any federally listed species. Therefore, development of the project site will not impact the recovery of any federally listed threatened or endangered species.

C. State Record Search Results

A current CDFG CNDDB records search report, and velum overlay map for the 1959 (Photorevised 1980) La Quinta, California, USGS topographic quadrangle (CDFG, 2007a, b), were analyzed to determine if any sensitive biological elements (species and habitats) are recorded on or proximal to the project site.

C-1. Potential for Listed, or Unlisted Special-status, PLANT Species to Occur Onsite

During the analysis of the CNDDB records search report and velum overlay map for the La Quinta, Calif., USGS quadrangle, and a CV-MSHCP, it was determined that ***no*** listed or unlisted special-status plant species are recorded on the project site.

Table 1 lists the two listed and seven unlisted special-status plant species that are recorded within the La Quinta, Calif., USGS quadrangle, sensitive plant species known to occur within the adjacent *Santa Rosa and San Jacinto Mountains Conservation Area* of the CV-MSHCP (CV-MSHCP, Table 4-107) and plant species discussed in the 1998 *Biological Impact Report* (BTC, 1998a). Table 1 also indicates the presence or absence and the potential for these plant species to occur onsite based on the results of February 6, 2007 field survey and analysis and review of the CNDDB record search report and 1998 BTC reports.

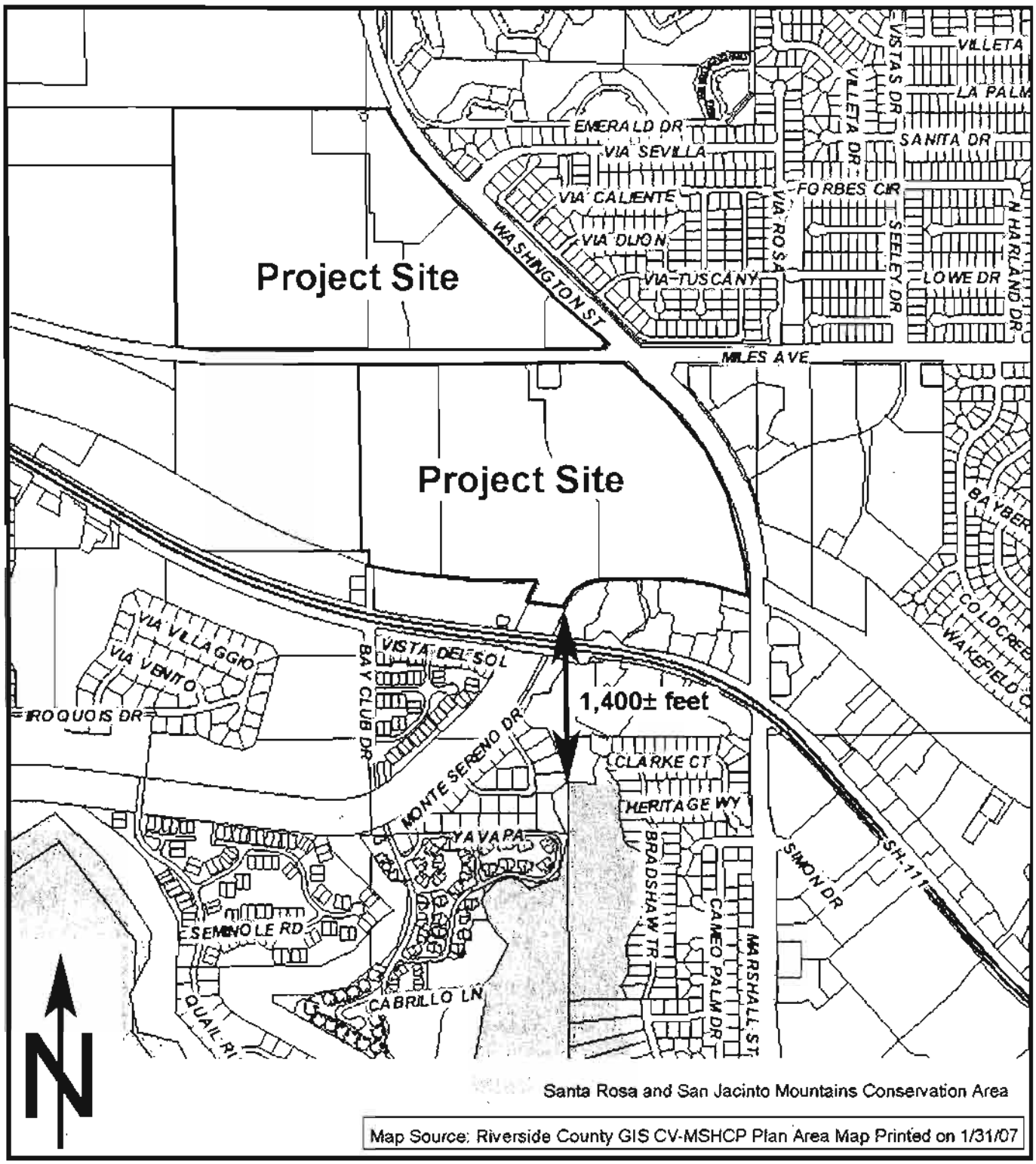

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Figure 4

Location of Indian Wells Town Center Project Site In Relation to the CV-MSHCP

Table 1: Sensitive Plant Species Recorded by the CNDDB and CV-MSHCP in the Vicinity of the Project Site

PLANT SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES	SURVEY PERIOD	PROTECTION STATUS*	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR ONSITE
A. LISTED PLANT SPECIES				
1. *Astragalus lentiginosus var. coachellae* Coachella Valley Milkvetch	Suitable habitat: Sandy flats, washes, outwash fans, sometimes on dunes, in Sonoran desert scrub, at elevations of 60 to 655 m (197-2,148 feet) above msl. Distribution: Riverside County. Nearest CNDDB location: 2.5± miles NW from the NW corner of APN 633-360-027 [Occurrence # 21] (CDFG, 2007a, b).	February-May	Fed: Endangered CA: None CNPS: List 1B.2 G5T2; S2.1 CV-MSHCP: "Covered species"	**Moderate Potential to Occur** onsite due to the presence of suitable habitat and proximal (= within a 5 mile radius of the project site) CNDDB occurrence records. This species was not observed onsite in 1998 (BTC, 1998a, b). Additional surveys recommended to determine the presence or absence of this species onsite.
2. *Astragalus tricarinatus* Triple-ribbed Milkvetch	Suitable habitat: Sandy or gravelly substrates in Joshua Tree woodland, Sonoran desert scrub, at elevations of 450 to 830 m (1,476-2,722 feet) above msl. Distribution: Riverside and San Bernardino Counties. Nearest CNDDB location: *No* records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	February-May	Fed: Endangered CA: None CNPS: List 1B.2 G1; S1.2 CV-MSHCP: "Covered species"	**Very Low Potential to Occur** onsite due to the presence of suitable habitat but lack of proximal CNDDB occurrence records from the entire La Quinta, Calif., USGS quadrangle. This species was not observed onsite in 1998 (BTC, 1998a, b). Additional surveys recommended to determine the presence or absence of this species onsite.
B. UNLISTED SPECIAL-STATUS PLANT SPECIES				
3. *Antirrhinum cyathiferum* Deep Canyon Snapdragon	Suitable habitat: Rocky sites in Sonoran desert scrub, at elevations of 50 to 300 m (164 to 928 feet) above msl. Distribution: Riverside County. Known in California only from the Deep Canyon area. Nearest CNDDB location: 5.6 ± miles SW from the SW corner of the onsite portion of APN 604-040-091 [Occurrence # 1] (CDFG, 2007a, b).	February-April	Fed: None CA: None CNPS: List 2.3 G4?; S1.3 CV-MSHCP: Not a "covered species"	**Not Expected to Occur** onsite due to the absence of suitable habitat and lack of proximal CNDDB occurrence records and because the project site is not in the Deep Canyon. This species was not observed onsite in 2007 (TLC) or in 1998 (BTC, 1998a, b). *No* additional surveys for this species are necessary.

* = See most current legal status, and meaning of listing codes, online at http://www.dfg.ca.gov/hcpb/species/lists.shtml. NOTE: The listing status/codes used to prepare Table 1 was derived from the January 2007 list (CDFG, 2007c). CV-MSHCP protected ("covered") status is listed Table 3-1 page 3-8.

Table 1 (continued):

PLANT SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES	SURVEY PERIOD	PROTECTION STATUS*	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR ONSITE
4. *Chamaesyce platysperma* Flat-seeded Spurge	Suitable habitat: Desert dunes in Sonoran desert scrub, at elevations of 65 to 100 m (213-328 feet) above msl. Distribution: Imperial, Riverside, Sam Bernardino and San Diego Counties. Nearest CNDDB location: *No* records within entire La Quinta, CA, USGS quad (CDFG, 2007a, b).	February-September	Fed: None CA: None CNPS: List 1B.2 G3; S1.2? CV-MSHCP: Not a "covered species"	**Very Low Potential to Occur** onsite due to the presence of suitable habitat but lack of proximal CNDDB occurrence records and because this species was not observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). Additional surveys recommended to determine the presence or absence of this species onsite.
5. *Ditaxis claryana* Glandular Ditaxis	Suitable habitat: Dry washes and rocky hillsides in Mojavean desert scrub and Sonoran desert scrub, at elevations of 0 to 465 m (0 to 1,525 feet) above msl. Distribution: Imperial, Riverside and San Bernardino Counties. Nearest CNDDB location: 1.2± miles SE from the SE corner of APN 604-040-089 [Occurrence # 5] (CDFG, 2007a, b).	October-March	Fed: None CA: None CNPS: List 2.2 G4G5; S1S2 CV-MSHCP: Not a "covered species"	**Moderate Potential to Occur** onsite due to the presence of suitable habitat and proximal CNDDB occurrence records. Additional surveys recommended to determine the presence or absence of this species onsite.
6. *Ditaxis serrata* var. *californica* California Ditaxis	Suitable habitat: Sandy washes and alluvial fans of the foothills and lower desert slopes in Sonoran desert scrub, at elevations of 30 to 1,000 m (98 to 3,280 feet) above msl. Distribution: Riverside and San Diego Counties. Nearest CNDDB location: 2.7± miles S from the S boundary of the project site [Occurrence # 5] (CDFG, 2007a, b).	March-December	Fed: None CA: None CNPS: List 3.2 G5T2?; S2.2 CV-MSHCP: Not a "covered species"	**Moderate Potential to Occur** onsite due to the presence of suitable habitat and proximal CNDDB occurrence records. This species was not observed onsite in 1998 (BTC, 1998a, b). Additional surveys recommended to determine the presence or absence of this species onsite.
7. *Nemacaulis denudata* var. *gracilis* Slender Wooly-heads	Suitable habitat: Coastal dunes, desert dunes in Sonoran desert scrub, at elevations of 50 to 400 m (164-1,312 feet) above msl. Distribution: Imperial, Riverside and San Diego Counties. Nearest CNDDB location: 0.4± miles SW from the SW corner of the onsite portion of APN 604-040-091 [Occurrence # 7; extirpated] (CDFG, 2007a, b).	March-May	Fed: None CA: None CNPS: List 2.2 G3G4T3?; S2S3 CV-MSHCP: Not a "covered species"	**Moderate Potential to Occur** onsite due to the presence of suitable habitat and proximal CNDDB occurrence records. This species was not observed onsite in 1998 (BTC, 1998a, b). Additional surveys recommended to determine the presence or absence of this species onsite.

Table 1 (continued):

PLANT SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES	SURVEY PERIOD	PROTECTION STATUS*	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR ONSITE
8. *Selaginella eremophila* Desert Spike-moss	Suitable habitat: Shaded sites on gravelly soils, in crevices or among rocks, in Sonoran desert scrub, at elevations of 200 to 900 m (656-2,952 feet). Distribution: Riverside and San Diego Counties. Nearest CNDDB location: 5.6± miles SW from the SW corner of the onsite portion of APN 604-040-091 [Occurrence # 20] (CDFG, 2007a, b).	N/A (non-flowering plant)	Fed: None CA: None CNPS: List 2.2 G4; S2.2? CV-MSHCP: Not a "covered species"	**Low Potential to Occur** onsite due to the presence of suitable habitat but absence of proximal CNDDB occurrence records. This species was not observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). Additional surveys recommended to determine the presence or absence of this species onsite.
9. *Stemodia durantifolia* Purple Stemodia	Suitable habitat: Sandy substrates in Sonoran desert scrub, at elevations of 180 to 300 m (590-984 feet). Distribution: Riverside and San Diego Counties. Nearest CNDDB location: 3.5± miles SW from the SW corner of the onsite portion of APN 604-040-091 [Occurrence # 14] (CDFG, 2007a, b).	January-December	Fed: None CA: None CNPS: List 2.1 G5; S2.1? CV-MSHCP: Not a "covered species"	**Moderate Potential to Occur** onsite due to the presence of suitable habitat and proximal CNDDB occurrence records. This species was not observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). Additional surveys recommended to determine the presence or absence of this species onsite.

C-2. Potential for Listed, or Unlisted Special-status WILDLIFE Species to Occur Onsite

During the analysis of the CNDDB records search report, and velum overlay map for the La Quinta, Calif., USGS quadrangle and a CV-MSHCP, it was determined that the following listed and unlisted special-status wildlife species have been recorded within the boundaries of the project site:

- Coachella Valley Fringe-toed Lizard (*Uma inornata*): federally listed Threatened, State listed Endangered;
- Coachella Giant Sand-treader Cricket (*Macrobaenetes valgum*): unlisted, a target species of the off-site *Santa Rosa and San Jacinto Mountains Conservation Area.*

Table 2 lists the six listed and 26 unlisted special-status wildlife species that are recorded within the La Quinta, Calif., USGS quadrangle, sensitive wildlife species known to occur within the adjacent *Santa Rosa and San Jacinto Mountains Conservation Area* of the CV-MSHCP (CV-MSHCP, Table 4-107) and wildlife species discussed in the 1998 *Biological Impact Report** (BTC, 1998a). Table 2 also indicates the presence or absence and potential for these wildlife species to occur onsite based on the results of February 6, 2007 field survey and analysis and review of the CNDDB record search report and 1998 BTC reports.

***NOTE** = Although, the Barn Owl (*Tyto alba*) was discussed in the 1998 *Biological Impact Report*, it is not discussed in this 2007 BCA because it is not currently listed as threatened or endangered and is not a state or federal species of concern.

C-3. Potential for Sensitive HABITAT Types to Occur Onsite

During the analysis of the CNDDB record search report, and velum overlay map for the La Quinta, Calif., USGS topographic quadrangle, it was determined that ***no*** sensitive habitat types are mapped on the project site by the CNDDB. However, there are records for the sensitive Desert Fan Palm Oasis Woodland within La Quinta, Calif., USGS topographic quadrangle (Occurrence # 50, 7.1± miles SW from the project site). In addition, the CV-MSHCP Figure 3-1 maps Stabilized Shielded Sand Fields, (which is the same as Sawyer and Keeler-Wolf's Desert Sand Verbena Series, CV-MSHCP, Page 10-36) on the portions of the project site. The presence or absence of these, or any sensitive habitat was "field checked" during the February 6, 2007 field survey.

D. Aerial Photograph Analysis

A recent color aerial photograph of the project site, obtained from Google Earth was: (a) reviewed to determine if any Wildlife Movement Corridors (WMC) might occur on the project site or in the immediate vicinity, and (b) used during the February 6, 2007 site visit to conduct a BCA level field survey of the entire project site and develop a biological resources map of the project site.

Finding:

- The analysis of the aerial photograph determined that Whitewater River in the southern portion of the project site could serve as a WMC. However, it appears that the northwest-southeast wildlife movement would be somewhat constrained by the presence of extensive existing/under construction urban development north and south of the river corridor, north-south bridge crossings, etc. Regardless, whatever wildlife movement presently occurs along the WMC would continue since development of the project site will not impact the Whitewater River corridor. Specifically, the supplemental EIR states:

- "The proposed project sets aside the Whitewater River channel and will have a buffer along the southeastern portion of the site along the river channel that is owned by the CVWD. This buffer is a condition of approval of the project." According to EPC Planning, the river and buffer will be comprised of approximately 30± acres of undeveloped open space (Perea, pers. comm., 2007).

- "The Whitewater River will not be disturbed by development."

The WMC finding was "field checked" during the February 6, 2007 BCA field survey.

E. Biological Reports Previously Prepared for the Project Site

The *Biological Impact Report* and subsequent *Findings of Supplemental Biological Resources Survey* prepared in 1998 by Bon Terra Consulting (BTC, 1998a, b) were reviewed to determine if any sensitive biological or jurisdictional elements were previously recorded on the project site. Relevant information from the 1998 biological reports was incorporated into this 2007 BCA report.

Findings:

- The habitat types observed by BTC onsite in 1998 included Fourwing Saltbush Series, Creosote Bush/Desert Sand Verbena Series and Disturbed Habitat.

- Although, suitable habitat was present for five sensitive (rare) plant species, ***none*** were identified onsite during April 1998 field surveys. **Notes**: (1) The April 1998 BTC field surveys were conducted during the flowering times of four of the five species potentially present onsite. (2) The only species not identifiable during the April 1998 survey was the October-March flowering Glandular Ditaxis.

- Suitable habitat was present for 16 sensitive wildlife species. However, only three unlisted special-status wildlife species were identified onsite during the April 1998 BTC field surveys: Coastal Western Whiptail, San Diego Black-tailed Jackrabbit and Osprey (flying over).

- According to BTC, the only significant impacts anticipated from development of the project site was (1) removal of Desert Sand Verbena Series habitat (a.k.a. Stabilized Shielded Sand Fields) and (2) loss of occupied Coachella Valley Fringe-toed Lizard (CVFTL) habitat.

  Note: As documented on Table 3-3 on page 3-12 and Table 3-1 on page 3-8 of the CV-MSHCP, both the habitat and CVFTL are "covered" by the 2006 CV-MSHCP. Therefore, once state and federal "take" permits are issued for the CV-MSHCP, the only mitigation necessary will be payment of the CVFTL habitat conservation fee and the CV-MSHCP mitigation fee to the City. Payment of the two fees will mitigate impacts to CVFTL occupied Desert Sand Verbena Series habitat to less than significant.

Table 2: Sensitive Wildlife Species Recorded by the CNDDB or CV-MSHCP in the Vicinity of the Project Site

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES	SURVEY PERIOD	PROTECTION STATUS*	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR ONSITE
A. LISTED WILDLIFE SPECIES				
1. *Cyprinodon macularis* Desert Pupfish	Suitable habitat: Desert ponds, springs, marshes and streams. Nearest CNDDB location: 4.2± miles SW from the SW corner of APN 633-360-027 [Occurrence # 24] (CDFG, 2007a, b).	Year-round	Fed: Endangered CA: Endangered CDFG: None G1; S1 CV-MSHCP: "Covered species"	**Not Expected to Occur** onsite due to the absence of suitable habitat. *No* additional surveys for this species are necessary.
2. *Gopherus (=Xerobates) agassizi* Desert Tortoise	Suitable habitat: Desert scrub, desert washes and Joshua tree habitats. Requires friable soil for burrow and nest construction. Nearest CNDDB location: *No* records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	March 25-May 31	Fed: Threatened CA: Threatened CDFG: None G4; S2 CV-MSHCP: "Covered species"	**Not Expected to Occur** onsite because the project site is surrounded by development on the N, E and S and by golf course on the west, because ***no*** Desert Tortoise individuals, sign or potential tortoise burrows were observed onsite in 2007 (TLC) or 1998 (BTC, 1998) and lack of proximal CNDDB records from the entire La Quinta, Calif., USGS quadrangle. *No* additional surveys for this CV-MSHCP "covered" species are necessary.
3. *Uma inornata* Coachella Valley Fringed-toed Lizard (CVFTL)	Suitable habitat: Sand dunes in Coachella Valley. Requires fine, loose, windblown sand, interspersed with hardpan and widely spaced desert shrubs. Nearest CNDDB location: Mapped onsite by 1975 Occurrence Nos. 13 and 174 (CDFG, 2007a, b).	Year-round	Fed: Threatened CA: Endangered CDFG: None G1Q; S1 CV-MSHCP: "Covered species"	**Assumed Present Onsite** because it is mapped onsite by the CNDDB. Since the project site is within the CVFTL habitat conservation fee area, any potential impacts will be mitigated by the payment of the CVFTL fee. In addition, once state and federal "take" permits are issued, the CVFTL is a "covered" species of the CV-MSHCP (*see* Table 3-1 on page 3-8).

* = See most current legal status, and meaning of listing codes, online at http://www.dfg.ca.gov/hcpb/species/lists.shtml. **Note**: The listing status/codes used to prepare Table 2 was derived from the February 2006 list (CDFG, 2006b). CV-MSHCP protected ("covered") status is listed Table 3-1 page 3-8.

Table 2 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES	SURVEY PERIOD	PROTECTION STATUS*	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR ONSITE
4. *Empidonax traillii extimus* Southwestern Willow Flycatcher	Suitable habitat: Riparian habitats along rivers, streams, or other wetlands, "where dense growths of willows (Salix sp.), Baccharis, arrowweed (Pluchea sp.), tamarisk (Tamarix sp.) or other plants are present, often with a scattered overstory of cottonwood (Populus sp.)". This species prefers "areas with surface water nearby" (Service, 1993). Nearest CNDDB location: *No* records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	May 15-July 17	Fed: Endangered State: Endangered CDFG: None G5T1T2; S1 CV-MSHCP: "Covered species"	**Not Expected to Occur** onsite due to the complete absence of suitable habitat from the project site and lack of proximal CNDDB records from the entire La Quinta, Calif., USGS quadrangle. *No* additional surveys for this species are necessary.
5. *Vireo bellii pusillus* Least Bell's Vireo	Suitable habitat: Willow-dominated riparian habitat with lush understory vegetation, that is high quality 5-10 year-old early succession stage. A low, dense shrub layer is considered essential for nesting, and a large degree of vertical stratification is preferred. Nearest CNDDB location: *No* records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	April 10- July 31	Fed: Endangered CA: Endangered CDFG: None G5T2; S2 CV-MSHCP: "Covered species"	**Not Expected to Occur** onsite due to the complete absence of suitable habitat from the project site. *No* additional surveys for this species are necessary.
6. *Ovis canadensis nelsoni* Peninsular Bighorn Sheep (PBS)	Suitable habitat: "Optimal habitat includes steep walled canyons and ridges bisected by rocky or sandy washes," open desert slopes below 4,000 feet elevation from San Gorgonio Pass south into Mexico (CDFG, 2007a). Nearest CNDDB location: 7.6± miles SW from the SW corner of the onsite portion of APN 604-040-091 [Occurrence # 6] (CDFG, 2007a, b).	Year-round	Fed: Endangered CA: Threatened CDFG: Fully Protected G4T3; S1 CV-MSHCP: "Covered species"	**Not Expected to Occur** onsite due to the complete absence of suitable habitat from the project site. This species was not observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). *No* additional surveys for this species are necessary.
B. UNLISTED SPECIAL-STATUS WILDLIFE SPECIES				
7. *Crotalus ruber ruber* Northern Red-diamond Rattlesnake	Suitable habitat: Rocky areas with dense vegetation in chaparral, woodland, grassland and desert areas from coastal San Diego County to the eastern slopes of the mountains. Needs rodent burrows, cracks in rocks or surface cover objects. Nearest CNDDB location: 6.9± miles SW from the SW corner of APN 633-360-027 [Occurrence # 56] (CDFG, 2007a, b).	Present year-round. Mostly active April-August	Fed: None CA: None CDFG: CSC G4T3T4; S2? CV-MSHCP: Not a "covered species"	**Not Expected to Occur** onsite due to the absence of suitable habitat and lack of proximal CNDDB occurrence records. This species was not observed onsite in 1998 (BTC, 1998a, b). *No* additional surveys for this species are necessary.

Table 2 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES	SURVEY PERIOD	PROTECTION STATUS*	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR ONSITE
8. *Phrynosoma mcallii* Flat-tailed Horned Lizard	Suitable habitat: Desert washes and desert flats in central Riverside, eastern San Diego and Imperial Counties. Requires fine sand, vegetation cover and food source (ants). Nearest CNDDB location: 1.6± miles SW from the SW corner of the onsite portion of APN 604-040-091 [Occurrence # 38] (CDFG, 2007a, b).	Year-round	Fed: Proposed Threatened CA: None CDFG: CSC G3; S2 CV-MSHCP: "Covered species"	**Moderate Potential to Occur** onsite due to the presence of suitable habitat and proximal CNDDB occurrence records. This species was not observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). Additional surveys, conducted concurrently with the mid-March and mid-April botanical surveys, are recommended to determine the presence or absence of this species onsite.
9. *Accipiter cooperi* Cooper's Hawk	Suitable habitat (nesting): Woodland, chiefly of open, interrupted or marginal type. Nests sites are mainly in riparian growths of deciduous trees, such as in canyon bottoms on river floodplains. Nearest CNDDB location: *No* records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	September-October	Fed: None CA: None CDFG: CSC G5; S3 CV-MSHCP: Not a "covered species"	***No* Potential to Nest Onsite** due to the complete absence of nesting habitat. ***Not* Expected to Forage Onsite due to the** lack of CNDDB records from the entire La Quinta, Calif., USGS quadrangle and because this species was not observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). *No* additional surveys for this species are necessary
10. *Accipiter striatus* Sharp-shinned Hawk	Suitable habitat: (Nesting) ponderosa pine, black oak, riparian deciduous, mixed conifer & Jeffrey pine habitats. Prefers riparian areas. North-facing slopes, with plucking perches are critical requirements. Nests usually within 275 ft of water. Nearest CNDDB location: *No* records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	Winter (October-April)	Fed: None CA: None CDFG: CSC G5; S3 CV-MSHCP: Not a "covered species"	***No* Potential to Nest Onsite** due to the complete absence of nesting habitat. **Not Expected to Forage Onsite due to the** lack of CNDDB records from the entire La Quinta, Calif., USGS quadrangle and because this species was not observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). *No* additional surveys for this species are necessary
11. *Aquila chrysaetos* Golden Eagle	Suitable habitat (nesting): Rolling foothills mountain areas, sage-juniper flats and deserts. Cliff-walled canyons and large trees in open areas provide nesting habitat. Nearest CNDDB location: *No* records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	Year-round	Fed: None CA: None CDFG: CSC G5; S3 CV-MSHCP: Not a "covered species"	**Not Expected to Forage or Nest Onsite due to the** lack of CNDDB records from the entire La Quinta, Calif., USGS quadrangle and because this species was not observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). *No* additional surveys for this species are necessary

Table 2 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES	SURVEY PERIOD	PROTECTION STATUS*	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR ONSITE
12. *Athene cunicularia* Burrowing Owl (BUOW)	Suitable habitat: Open desert areas, in fallow fields, along irrigation dikes and levees, where burrows (usually dug by ground squirrels) are available. Nearest CNDDB location: 2.6± miles NE from the NE corner of the project site [Occurrence # 856] (CDFG, 2007a, b).	Breeding Season: April 15-July 15	Fed: None CA: None CDFG: CSC G4; S2 CV-MSHCP: "Covered species"	**Present Onsite.** A solitary BUOW, suitable BUOW habitat and "fresh" BUOW sign was observed onsite on February 6, 2007 (*see* Figure 5 for general location; specific location will be provided to CDFG). As requested by the 2006 CDFG comments letter, focused BUOW surveys will be necessary to determine how the project site is being used by BUOW and to calculate mitigation for any occupied burrows that will be impacted by development of the project site.
13. *Buteo regalis* Ferruginous hawk	Suitable habitat: Open grasslands, sagebrush flats, desert scrub, low foothills and fringes of pinyon-juniper habitat. Nearest CNDDB location: *No* records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	Winter (November-March)	Fed: None CA: None CDFG: CSC G4; S3S4 CV-MSHCP: Not a "covered species"	**Not Expected to Occur Onsite due to the** lack of CNDDB records from the entire La Quinta, Calif., USGS quadrangle and because this species was not observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). *No* additional surveys for this species are necessary
14. *Circus cyaneus* Northern Harrier	Suitable habitat (nesting and foraging): Shrubby vegetation, usually at marsh edge; nest built in a large mound of sticks in wet areas; forages in grasslands. Nearest CNDDB location: *No* records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	Winter (November-March)	Fed: None CA: None CDFG: CSC G5; S3 CV-MSHCP: Not a "covered species"	**Not Expected to Forage or Nest Onsite** due to the complete absence of suitable nesting and foraging habitat, lack of CNDDB records from the entire La Quinta, Calif., USGS quadrangle and because this species was not observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). *No* additional surveys for this species are necessary.
15. *Dendroica petechia brewsteri* Yellow Warbler	Suitable habitat: Prefers wetlands and mature riparian woodlands dominated by cottonwoods, alders and willows; also uses well-watered second-growth woodlands and gardens. Nearest CNDDB location: *No* records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	Year-round	Fed: None CA: None CDFG: CSC G5T3?; S2 CV-MSHCP: "Covered species"	**Not Expected to Occur Onsite** due to the complete absence of suitable nesting and foraging habitat, lack of CNDDB records from the entire La Quinta, Calif., USGS quadrangle and because this species was not observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). *No* additional surveys for this species are necessary.

Table 2 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES	SURVEY PERIOD	PROTECTION STATUS*	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR ONSITE
16. *Falco mexicanus* Prairie Falcon	Suitable habitat: Breeding sites located on cliffs, forages far afield, usually over open habitats including desert scrub, grasslands, savannas, and croplands. Nests on dry, open terrain, either level or hilly. Nearest CNDDB location: Three occurrences in the La Quinta, Calif., USGS quadrangle; location information is not provided for this sensitive element (CDFG, 2007a, b).	Year-round	Fed: None CA: None CDFG: CSC G5; S3 CV-MSHCP: Not a "covered species"	**Very Low Potential to Forage Onsite** due to the presence of suitable foraging habitat but complete absence of breeding sites, because this species was not observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b) and presence of three CNDDB records in the La Quinta, Calif., USGS quadrangle. **Note**: The proximity of the three quadrangle locations for this species could not be determined from the publicly viewable CNDDB occurrence records. ***No*** additional surveys for this species are necessary.
17. *Icteria virens* Yellow-breasted Chat	Suitable habitat: Nests in low, dense riparian thickets, consisting of willow, blackberry, and wild grape. Forages and nests within 10' of the ground near watercourses. Nearest CNDDB location: ***No*** records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	Spring-summer (March-May)	Fed: None CA: None CDFG: CSC G5; S3 CV-MSHCP: "Covered species"	**Not Expected to Occur** onsite due to the absence of suitable nesting and foraging habitat, lack of CNDDB occurrence records from the entire La Quinta, Calif., USGS quadrangle and because this species was not observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). ***No*** additional surveys for this species are necessary
18. *Lanius ludovicianus* Loggerhead Shrike	Suitable habitat: Prefers open country for hunting, with perches for scanning. Nests in dense shrubs and brush in broken woodlands, savannah, pinyon-juniper, Joshua Tree and riparian woodlands, desert oases, scrub and ephemeral washes. Nearest CNDDB location: ***No*** records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	Year-round	Fed: None CA: None CDFG: CSC G4; S4 CV-MSHCP: Not a "covered species"	**Not expected to occur** onsite due to the absence of suitable nesting habitat, lack of CNDDB occurrence records from the entire La Quinta, Calif., USGS quadrangle and because this species was not observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). ***No*** additional surveys for this species are necessary.
19. *Piranga rubra* Summer Tanager	Suitable habitat: Nests in mature riparian groves cottonwoods and dominated by willows. Nearest CNDDB location: ***No*** records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	April-June	Fed: None CA: None CDFG: CSC G5; S2 CV-MSHCP: "Covered species"	**Not expected to occur** onsite due to the absence of suitable nesting and foraging habitat, lack of CNDDB occurrence records from the entire La Quinta, Calif., USGS quadrangle and because this species was not observed onsite in 1998 (BTC, 1998a, b). ***No*** additional surveys for this species are necessary

Table 2 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES	SURVEY PERIOD	PROTECTION STATUS*	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR ONSITE
20. *Polioptila melanura* Black-tailed Gnatcatcher	Suitable habitat: Desert wash with Mesquite, Palo Verde, Ironwood, Acacia. Absent from areas where Tamarisk is introduced. Nearest CNDDB location: 0.4± miles SW from the SW corner of APN 633-360-027 [Occurrence # 20] (CDFG, 2007a, b).	Year-round	Fed: None CA: None CDFG: None G5; S4 CV-MSHCP: Not a "covered species"	**May Potentially Occur** onsite due to the presence of suitable desert wash habitat in the southernmost part of the project site and proximal CNDDB occurrence records. However, this species was ***not*** observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). Additional surveys, conducted concurrently with the mid-March and mid-April botanical surveys, are recommended to determine the presence or absence of this species onsite.
21. *Pyrocephalus rubinus* Vermilion Flycatcher	Suitable habitat: Desert riparian adjacent to irrigated fields, ditches, pastures, other open, mesic areas; nests in Cottonwood, Willow, Mesquite and other large desert riparian trees. Nearest CNDDB location: 0.4± miles SW from the SW corner of APN 633-360-027 [Occurrence # 3] (CDFG, 2007a, b).	Year-round	Fed: None CA: None CDFG: CSC G5; S2S3 CV-MSHCP: Not a "covered species"	**Not Expected to Occur** onsite due to the complete absence of suitable nesting and foraging habitat. ***No*** additional surveys for this species are necessary.
22. *Toxostoma crissale* Crissal Thrasher	Suitable habitat: Dense vegetation along streams and washes, of desert riparian and desert washes habitat, in Mesquite, Ironwood, Catclaw Acacia, Arrowweed, Willow. Nearest CNDDB location: 0.4± miles SW from the SW corner of APN 633-360-027 [Occurrence # 17] (CDFG, 2007a, b).	Year-round	Fed: None CA: None CDFG: CSC G5; S3 CV-MSHCP: "Covered species"	**May Potentially Occur** onsite due to the presence of suitable nesting and foraging habitat. However, this species was ***not*** observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). Additional surveys, conducted concurrently with the mid-March and mid-April botanical surveys, are recommended to determine the presence or absence of this species onsite.
23. *Toxostoma lecontei* Le Conte's Thrasher	Suitable habitat: Open desert washes, desert scrub, alkali desert scrub and desert succulent scrub habitats. Commonly nests in a dense, spiny shrub or densely branched cactus, usually 2-8 feet above ground. Nearest CNDDB location: 0.4± miles SW from the SW corner of APN 633-360-027 [Occurrence # 25] (CDFG, 2007a, b).	Year-round	Fed: None CA: None CDFG: CSC G3; S3 CV-MSHCP: "Covered species"	**May Potentially Occur** onsite due to the presence of suitable nesting and foraging habitat. However, this species was ***not*** observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b). Additional surveys, conducted concurrently with the mid-March and mid-April botanical surveys, are recommended to determine the presence or absence of this species onsite.

Table 2 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES	SURVEY PERIOD	PROTECTION STATUS *	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR ONSITE
24. *Vireo vicinior* Gray Vireo	Suitable habitat: Arid, shrub-covered slopes in pinyon-juniper, juniper and chamise-red shank chaparral habitats on foothills and mesas, in areas formed by a continuous growth of twigs, 1-5 feet above ground. Nearest CNDDB location: *No* records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	Year-round	Fed: None CA: None CDFG: CSC G3; S3 CV-MSHCP: "Covered species"	**Not Expected to Occur** onsite due to the absence of suitable habitat and lack of CNDDB occurrence records from the entire La Quinta, Calif., USGS quadrangle. *No* additional surveys for this species are necessary.
25. *Chaetodipus fallax pallidus* Pallid San Diego Pocket Mouse	Suitable habitat: Sandy herbaceous areas, usually in association with rocks or coarse gravel, in desert wash, desert scrub, desert succulent scrub and pinyon-juniper habitats. Nearest CNDDB location: 5.9± miles SW from the SW corner of the onsite portion of APN 604-040-091 [Occurrence #3] (CDFG, 2007a, b).	Year-round	Fed: None CA: None CDFG: CSC G5T3; S3 CV-MSHCP: Not a "covered species"	**May Potentially Occur** onsite due to the presence of suitable habitat. *No* additional surveys for this unlisted species are recommended since small mammal live trapping studies are not necessary.
26. *Lasiurus xanthinus* Western Yellow Bat	Suitable habitat: Valley foothill and desert riparian, desert wash and palm oasis habitats; roosts in trees, particularly palms, forages over water and among trees. Nearest CNDDB location: 0.4± miles SW from the SW corner of APN 633-360-027 [Occurrence # 19] (CDFG, 2007a, b).	Year-round	Fed: None CA: None CDFG: None G5; S3 CV-MSHCP: "Covered species"	**Not Expected to Occur** onsite due to the complete absence of suitable foraging and roosting habitat. *No* additional surveys for this species are necessary.
27. *Perognathus longimembris bangsi* Palm Springs Pocket Mouse	Suitable habitat: Desert riparian, desert scrub, desert wash and sagebrush habitat; rarely found on rocky sites. Nearest CNDDB location: *No* records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	January-August, peak of activity March-May	Fed: None CA: None CDFG: CSC G5T2T3; S2S3 CV-MSHCP: "Covered species"	**May potentially occur** onsite due to the presence of suitable habitat. *No* additional surveys for this unlisted species are recommended since small mammal live trapping studies are not necessary.
28. *Spermophilus tereticaudus chlorus* Coachella Valley Round-tailed Ground squirrel	Suitable habitat: Sand dune habitats, often associated with mesquite hummocks and active sand field habitat. Restricted to the Coachella Valley. Nearest CNDDB location: 0.3± miles S from the SE corner of APN 604-040-089 [Occurrence # 12] (CDFG, 2007a, b).	Year-round	Fed: Candidate CA: None CDFG: CSC G5T1T2; S1S2 CV-MSHCP: "Covered species"	**May potentially occur** onsite due to the presence of suitable habitat. *No* additional surveys for this unlisted species are recommended since small mammal live trapping studies are not necessary.

Table 2 (continued):

WILDLIFE SPECIES	HABITAT AND DISTRIBUTION OF EACH SPECIES	SURVEY PERIOD	PROTECTION STATUS *	PRESENCE OR ABSENCE AND POTENTIAL TO OCCUR ONSITE
29. *Dinacoma caseyi* Casey's June Beetle	Suitable habitat: Sandy soils; found only in two small populations in a small area of Palm Springs. Nearest CNDDB location: ***None*** extant within the entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b). Occurrence # 4; once situated 0.5± miles SW from the SW corner of APN 633-360-027, is recorded as extirpated (CDFG, 2007a, b).	March-June	Fed: None CA: None CDFG: None G1; S1 CV-MSHCP: Not a "covered species"	**Not expected to occur** onsite due to the lack of extant CNDDB occurrence records from the entire La Quinta, Calif., USGS quadrangle. ***No*** additional surveys for this species are recommended.
30. *Macrobaenetes valgum* Coachella Giant Sand-treader Cricket	Suitable habitat: Active sand hummocks and dunes in the Coachella Valley. Population size is regulated by amount of annual rainfall. Nearest CNDDB location: Mapped onsite by the 1958 Occurrence #3 (CDFG, 2007a, b).	Year-round	Fed: None CA: None CDFG: None G1G2; S1S2 CV-MSHCP: "Covered species"	Assumed Present onsite since it is mapped onsite by the CNDDB. ***No*** additional surveys for this species are necessary since mitigation for unlisted species by development is not needed. In addition, it is a CV-MSHCP "covered" species.
31. *Oliarces clara* Cheeseweed Owlfly	Suitable habitat: Found under rocks or in flight over streams in the lower Colorado River drainage. *Larrea tridentata* is the suspected larval host. Nearest CNDDB location: 5.1± miles SW from the SW corner of APN 633-360-027 [Occurrence # 5] (CDFG, 2007a, b).	April-May	Fed: None CA: None CDFG: None G1G3; S1S3 CV-MSHCP: Not a "covered species"	**Not expected to occur** onsite because the project site is not in the Colorado River Drainage and the absence of suitable habitat. ***No*** additional surveys for this species are necessary.
32. *Stenopelmatus cahuilaensis* Coachella Valley Jerusalem Cricket	Suitable habitat: Sandy to somewhat gravelly sandy soils. Nearest CNDDB location: ***No*** records within entire La Quinta, Calif., USGS quadrangle (CDFG, 2007a, b).	Following winter and spring storms	Fed: None CA: None CDFG: None G1G2; S1S2 CV-MSHCP: "Covered species"	**Very Low Potential to Occur** onsite due to the presence of suitable habitat but absence of CNDDB records from the entire La Quinta, Calif., USGS quadrangle. ***No*** additional surveys for this unlisted species are necessary.

VII. RESULTS OF THE 2007 FIELD SURVEYS INVESTIGATIONS

Using the results of the Pre-Field Survey investigations, a single diurnal BCA field survey was performed within the boundaries of the project site on February 6, 2007 to: (1) "field check" the data obtained during the *Pre-Field Survey* investigations and (2) accomplish the seven objectives outlined in Section IV of this BCA (see page 8). A summary of the *Field Surveys* results is presented in the following seven sections.

A. Habitat Types Identified Onsite Compared to those Mapped by CV-MSHCP *Natural Communities and Development Vegetation Map* (CV-MSHCP Figure 3-1).

A-1. County Mapped Vegetation Types

As illustrated on Figure 3-1 of the CV-MSHCP, the vegetational types mapped within the boundaries of the project site include Stabilized Shielded Sand Fields (which is the same as Sawyer and Keeler-Wolf's Desert Sand Verbena Series, CV-MSHCP, Page 10-36) and Urban. Similarly, previous biological surveys of the project site (BTC, 1998a, b) identified Creosote Bush/Desert Sand Verbena Series and Fourwing Saltbush Series, and Disturbed habitat onsite.

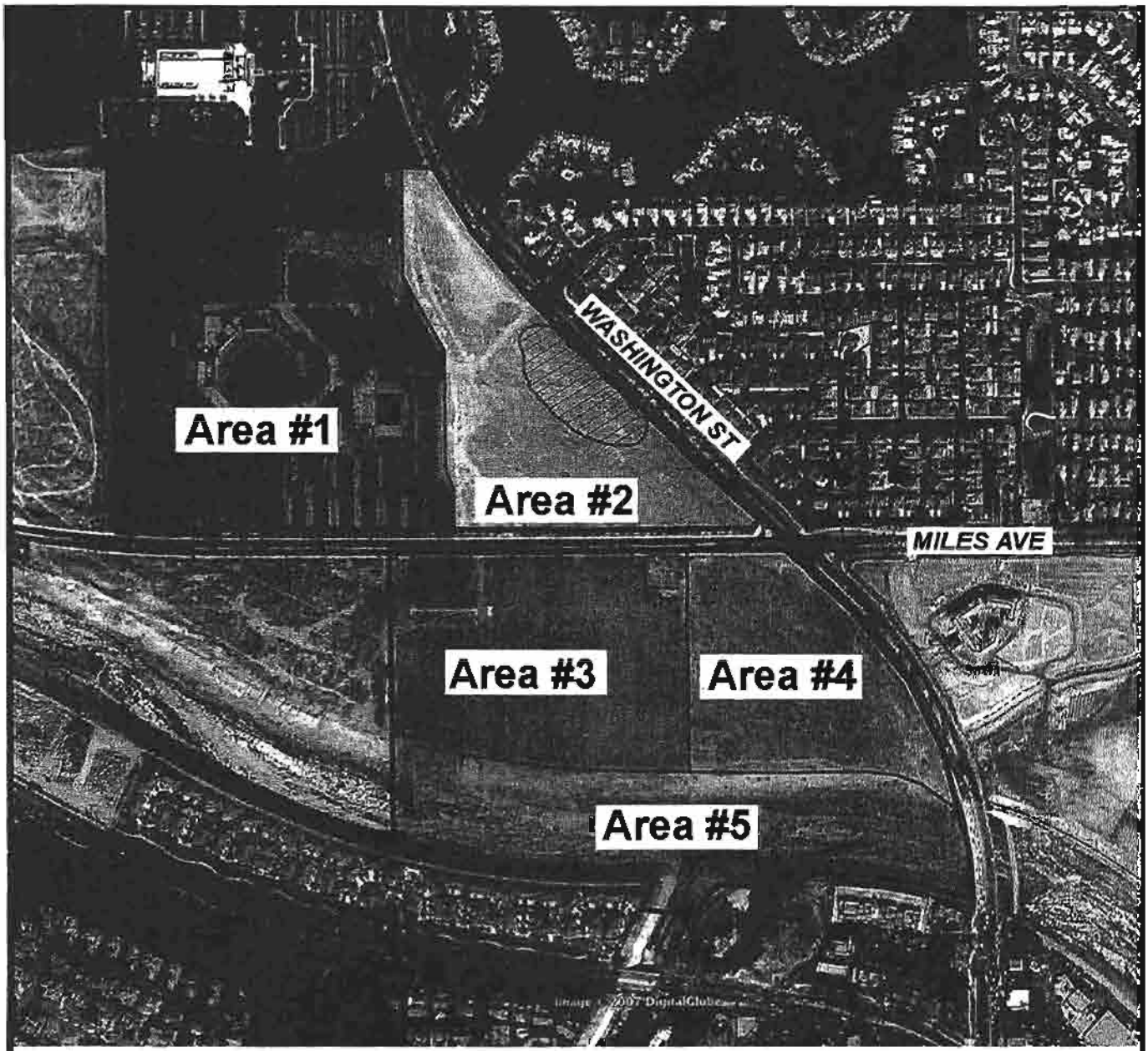
A-2. Habitat Types Actually Field Identified Onsite in 2007

As Photo Plate Nos. 1-6 and Figure 5 of this report document, the following five vegetation types were identified onsite on February 6, 2007.

Area #1: Existing Tennis Garden Facility: As **Photo Plate Nos. 1a** and **1b** document, ***no*** natural native habitat remains in Area # 1. Instead, the topographic surface of APNs 633-360-027 and -028 was comprised of non-native Bermuda Grass (*Cynodon dactylon*) and paved roadways and parking lots primarily bordered by irrigated locally common non-native landscaping groundcover, shrub, bush and tree plantings. The shrubs, trees and groundcover planted along paved roadways and parking lots included such locally common non-native landscape species as Acacia (*Acacia redolens*), Lantana (*Lantana camara* and *L. montevidensis*), Pyracantha (*Pyracantha coccinea*), Periwinkle (*Vinca minor*), Olive (*Olea europaea*) and Russian Olive (*Elaeagnus angustifolia*). ***No*** ground burrows, that could potentially serve as suitable Burrowing Owl (*Athene cunicularia*; BUOW) nest burrows, were observed in Area #1 on February 6, 2007. The absence of potential BUOW burrows will be confirmed during a focused burrow survey to be conducted concurrent with the first focused "peak of the breeding season" (April 15 and July 15) scheduled for mid-April 2007.

Area #2: Creosote Bush/Desert Sand Verbena series (CB/DSV): An open growth of CB/DSV habitat (a.k.a. Stabilized Shielded Sand Fields) vegetated the undisturbed portions of APNs 633-360-018 and -024 -029. **Photo Plate Nos. 2a** and **2b** provide representative views of Area # 2. As visible on Figure 5, during the February 6, 2007 BCA field survey, extensive portions of APN 633-360-029, formerly vegetated with CB/DSV habitat, were comprised of highly disturbed primarily unvegetated sandy soils transected by unpaved sandy vehicle trails. On February 6, 2007, the CB/DSV habitat of the project site was dominated by Creosote Bush (*Larrea tridentata*) and sparse scatter of Mediterranean Schismus (*Schismus barbatus*). In 1998 Sand Verbena (*Abronia villosa*) was also observed onsite (BTC, 1998a).

As Appendix A Photo Plate Nos. 3-1 and 3-2 show, on February 6, 2007, two BUOW occupied ground burrows were observed beneath the bases of two shrubs in APN 633-360-018. Furthermore, a BUOW individual was observed flying out of one of the ground burrows. In addition, significant quantities of fresh, distinctive and easily identifiable BUOW occupancy signs were observed around both BUOW occupied ground burrows including BUOW foot tracks, BUOW brown and white feathers, BUOW regurgitation pellets, BUOW excrement.



Area # 1: Existing Tennis Garden Facility with associated paved parking, landscaping and Bermuda Grass lawns
Area # 2: Creosote Bush/Desert Sand Verbena Series Natural Habitat (northern portions are disturbed - see Photo Plate Nos. 2a &2b)
Area # 3: Flood Control Structure and Bermuda Grass Sod Farm and associated structures (e.g., Water Tank)
Area # 4: Fourwing Saltbush Series Natural Habital (southwestern portion is disturbed - see Photo Plate No. 5b)
Area # 5: Whitewater River

Approximate location of Burrowing Owl occupied nests

Aerial Photograph Source: Earth.Google.com

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Figure 5
Biological Resources Map for the Indian Wells Town Center Project Site

Since a search of the bases of every shrub onsite on February 6, 2007 was outside the scope of the February 6, 2007 BCA field survey, it is possible that additional BUOW occupied ground burrows might be discovered within the project site boundaries during focused burrow and focused breeding season BUOW field surveys.

Need For Future Focused BUOW Surveys: As stated in Item 1.e. of the CDFG comments letter "if the project has the potential to impact the western burrowing owl *(Athene cunicularia)*, a California Species of Special Concern, the Department recommends that focused burrowing owl surveys be conducted on the project site to determine how many occupied owl burrows will be impacted."

Note: As confirmed by the CDFG (Nicol, 2006), if state and federal "take" permits had already been issued for the plan, BUOW surveys would not be required for the Indian Wells Town Center project site since it is ***outside*** any Conservation Area identified by the plan. However, until state and federal "take" permits are issued, BUOW surveys will "have to be completed and the project proponent has to get all permits and do the mitigation themselves" (Nicol, 2006).

According to the 1995 CDFG *Staff Report on Burrowing Owl Mitigation*, BUOW "nesting season survey[s] should be conducted between April 15 and July 15 (the peak of the breeding season)." The BUOW surveys would be conducted to determine (1) how many BUOW occupied burrows are present onsite and (2) how many of them will be impacted by the proposed development project. Therefore, focused BUOW surveys have been scheduled during the "peak of breeding season surveys" on 15 and 16 April and 20 and 21 April to address CDFG recommendation letter Item 1.e. Figure 6 illustrates the areas where the surveys will be conducted. The results of the focused BUOW surveys will be documented in a separate 2-5 pages long letter report to be submitted to the City.

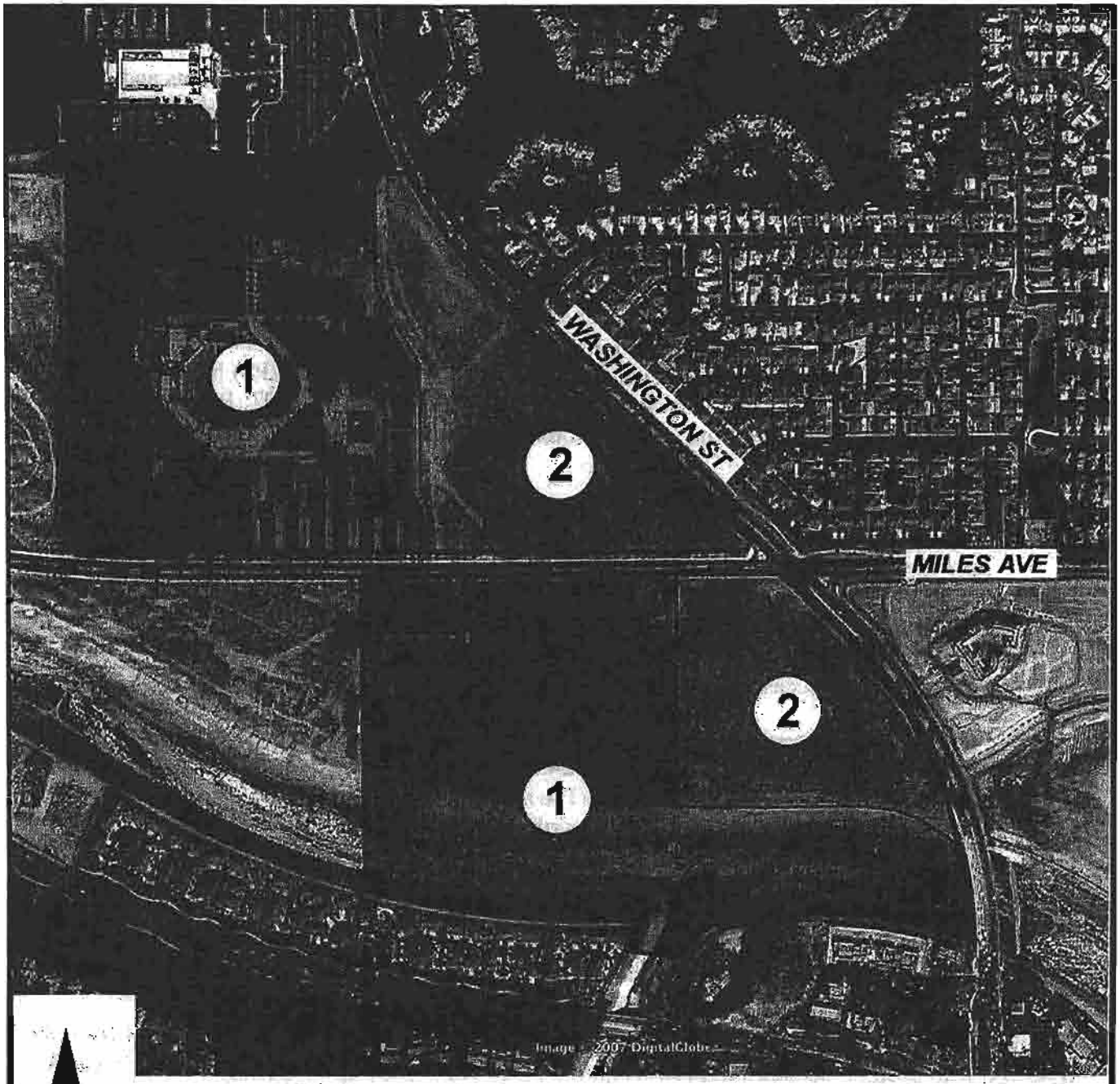
Notes:

- According to the California Burrowing Owl Consortium's (CBOC) 1993 *Burrowing Owl Survey Protocol and Mitigation Guidelines*, BUOW surveys yielding positive results, (i.e., owl sightings) outside the nesting season "would be adequate to determine presence of owls on site. However, results of these surveys may be inadequate for mitigation planning because the numbers of owls and their pattern of distribution may change during…nesting seasons." Therefore, without written pre-survey CDFG approval, conducting the BUOW focused surveys at any time other than the "peak of the breeding season" (April 15 and July 15) is not recommended.

- As illustrated on Figure 1 of the CBOC's *Survey Protocol and Mitigation Guidelines*, if "owl individuals or burrows" are observed during Phase I Habitat Assessment or Phase II Burrow surveys, Phase III Nesting Season Surveys are "required" (see) to "evaluate burrowing owl use of the project site" and develop mitigation measures (see page 6 of CBOC, 1993).

- The banks of the Whitewater River could be utilized as the mitigation site for any occupied BUOW burrows being impacted by development.

Need For Future Focused Rare Plant Surveys: On February 6, 2007, it was determined that the portions of Area #2 was naturally vegetated with CB/DSV habitat. This habitat types is known to provide suitable habitat for the sensitive plant species known to occur in these habitat types in the region surrounding the project site (see Tables 1 and 2 and Figure 6).



N

(1) Areas that will not need further surveys

(2) Areas that will need further focused plant and wildlife surveys

Aerial Photograph Source: Earth.Google.com

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Figure 6

Areas to be Surveyed on Indian Wells Town Center Project Site

As stated in Item 1.a. of the CDFG comments letter "a thorough assessment of rare plants and rare plant communities, following the Department's May 1984 Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities" is recommended. Since, the habitat types present onsite provide suitable habitat for the sensitive (rare) plant species of the region (*see* BCA Table 1), focused botanical surveys will be necessary to address CDFG recommendation letter Item 1.a. The CDFG's May 1984 *Guidelines for Assessing Impacts to rare Plants and Rare Natural Communities* states "field surveys should be conducted at the proper time of the year when rare, threatened, or endangered species are both evident and identifiable. Usually, this is when the plants are flowering."

Based on an analysis of the flowering periods, of the special-status rare plant species that might potentially occur on the project site, two separate focused Rare Plant surveys (RPS) have been scheduled to address CDFG recommendation letter Item 1.a.: RPS #1 on March 10, 2007; RPS #2 on April 15, 2007. The results of the two Rare Plant surveys would be documented in a separate 2-3 pages long letter report to be submitted to the City.

Note: If state and federal "take" permits had already been issued for the CV-MSHCP, "projects outside of the Conservation Areas won't have to do biological surveys for the covered species, they can rely on the Plan" (Nicol, 2006). However, until state and federal "take" permits are issued, botanical surveys will "have to be completed and the project proponent has to get all permits and do the mitigation themselves" (Nicol, 2006) if any of the Table 1 listed threatened or endangered plant species are identified onsite in March or April 2007. Mitigation should not be required for species not listed as threatened or endangered by CDFG or FWS.

Area #3: Flood Control Structure and Bermuda Grass Sod Farm: The northeastern portion of APN 604-040-091 was comprised of paved roadways and flood control structures. **Photo Plate Nos. 4a, 4b** and **5a** provide representative views of Area # 3. The remainder of APN 604-040-091, APN 604-040-036 and portions of APNs 604-040-090 and -089 north of the Whitewater River were covered by what appeared to be an irrigated non-native Bermuda Grass sod farm. ***No*** ground burrows, that could potentially serve as suitable BUOW nest burrows, were observed in Area #3 on February 6, 2007. The absence of potential BUOW burrows will be confirmed during a focused burrow survey to be conducted concurrent with the first focused "peak of the breeding season" (April 15 and July 15) scheduled for mid-April 2007.

Area # 4: Fourwing Saltbush (FS) Series habitat: The northerly portion of APN 604-040-089 is vegetated with open FS habitat. **Photo Plate Nos. 5a** and **5b** provide representative views of Area #4. On February 6, 2007, the FS habitat was dominated by native Fourwing Saltbush (*Atriplex canescens*) and Mediterranean Schismus. Although, ***no*** occupied BUOW nests were observed in Area # 4, due to the presence of potential nesting opportunities (numerous jackrabbit and rodent burrows), focused "peak of the breeding season" BUOW surveys will also need to be conducted within the boundaries of the Area #4 to address Item 1.e. of the CDFG comments letter.

In addition, because FS habitat provides suitable habitat for other sensitive plant and wildlife species potentially occurring in the vicinity of the project site, focused plant and wildlife surveys will also be necessary (*see* Tables 1 and 2) to address Item 1.a. of the CDFG comments letter.

Area # 5: Whitewater River: The Whitewater River passes through the southern portions of APNs 604-040-091, -090 and -089. **Photo Plate Nos. 6a** and **6b** provide representative views of Area # 5. The

sparse vegetation of river banks and bottom consisted of the common plant species found in Areas # 2 and 4. The supplemental EIR states "the Whitewater River will not be disturbed by development." Consequently, ***no*** further biological or jurisdictional investigations are recommended for Area #5.

Note: If necessary, the banks of the Whitewater River, and adjacent buffer zone described in the supplemental EIR being prepared for the project site, should be considered as the mitigation site for any occupied BUOW burrows being impacted by development.

B. Predominant Plant and Wildlife Species

B-1. Predominant Plant Species of the Project Site

The Appendix B Floral Compendium (FC) provides an inventory of the obvious plant species identified within the boundaries of the project site on February 6, 2007. The FC also includes plant species observed by Bon Terra Consulting in April and June 1998 (BTC, 1998a, b).

The FC was compiled to: (a) address Item 1.a. of the 2006 CDFG comments letter, (b) inventory the botanical resources observed/field identified onsite on February 6, 2007 and (c) determine the presence or absence of sensitive plant species identifiable, within the boundaries of the project site, at the time the February 6, 2007 field survey was performed. The FC does not include a list of "expected but not observed" species. Furthermore, it is not intended to be an all inclusive list because some species growing onsite may have been undetectable or overlooked during the February 6, 2007 field surveys because they were not obviously present, visible or identifiable (e.g., had not germinated, were not flowering, had not developed or had lost the morphological structures necessary for identification to species at this time of the year [early February], etc.).

An analysis of the FC showed the following:

- In total, 44 plant species were identified within the boundaries of the project site on February 6, 2007 and in 1998. It is likely that an additional annual plant species would be identified onsite during spring 2007 botanical surveys conducted in the more mesic months of March and April unless the ongoing drought continues unabated.

- As "X" in the first column of the FC show, 11 non-native plant species were identified within the boundaries of the project site.

- The plant species identified onsite are locally common species typically associated with Creosote Bush/Desert Sand Verbena series and Fourwing Saltbush Series habitat of the local vicinity.

- As documented by Column 4 of the FC, ***no*** listed threatened or endangered plant species, or unlisted special-status species, were identified during the February 6, 2007 surveys. ***None*** were identified in 1998 by the Bon Terra Consulting (BTC, 1998a, b).

B-2. Predominant Wildlife Species of the Project Site

The Appendix C Wildlife Compendium (WC) provides a preliminary inventory of the obvious wildlife species identified within the boundaries of the project site on February 6, 2007. The WC also includes wildlife species observed by Bon Terra Consulting in April and June 1998 (BTC, 1998a, b).

The WC was compiled to: (a) address Items 1.a., 1.b., 1.c., and 1.d. of the 2006 CDFG comments letter, (b) inventory the faunal resources observed/field identified onsite on February 6, 2007 and (c) determine the presence or absence of sensitive wildlife species identifiable within the boundaries of the project site

at the time the surveys were performed. The WC does not include a list of "expected but not observed" species. Furthermore, it is not intended to be an all inclusive list because some species utilizing the project site may have been undetectable or overlooked during the field surveys because they were not obviously present, visible or identifiable (e.g., were secreted in subterranean boroughs, are nocturnal, were foraging off-site during the surveys, etc.), or the presence of which requires detailed investigation in accordance with USFWS or CDFG survey protocols.

An analysis of the WC showed the following:

- 44 wildlife species were identified within the boundaries of the project site on February 6, 2007 and in 1998. It is highly likely that a significant number of additional wildlife species would be identified during focused spring 2007 wildlife field surveys.
- In general, wildlife species identified onsite were locally common species characteristically associated with Creosote Bush/Desert Sand Verbena series and Fourwing Saltbush Series habitat of the local vicinity.
- Individuals of the unlisted special-status Coastal Western Whiptail and San Diego Black-tailed Jackrabbit were observed onsite both in 2007 and 1998. In addition, an Osprey was seen flying overhead during 1998 survey (BTC, 1998a). None of these species are state or federally listed or proposed for listing and ***no*** significant impacts to them by development are anticipated. Therefore ***no*** mitigation will be required.
- A solitary owl, suitable BUOW habitat and BUOW sign was observed onsite on February 6, 2007 (*see* Figure 5 for general location; specific location will be provided to CDFG).***No*** other listed threatened or endangered, or unlisted special-status wildlife species, were identified onsite on February 6, 2007 or in 1998.

C. Determine the Presence or Absence of Habitat Potentially Capable of Supporting Sensitive Plant and Wildlife Species Onsite

As Tables 1 and 2 document, habitat capable of providing suitable habitat for special-status plant and wildlife species was identified onsite. Therefore, the additional focused species surveys listed on pages 3 and 4 are necessary to determine the presence or absence of sensitive species onsite and determine what mitigation measures would be necessary to mitigate significant development impacts to less than significant.

D. Search of the Project Site for Sensitive Species

D-1. Potential for Listed or Unlisted Special-status PLANT Species to Occur Within the Project site Boundaries

As discussed above, during Pre-Field Survey investigation it was determined that ***no*** listed or unlisted special-status plant species are recorded by the CNDDB on the project site (CDFG, 2007a, b).

Table 1 lists the two listed and seven unlisted special-status plant species that are recorded within the La Quinta, Calif., USGS quadrangle, sensitive plant species known to occur within the adjacent *Santa Rosa and San Jacinto Mountains Conservation Area* of the CV-MSHCP (CV-MSHCP, Table 4-107) and sensitive plant species discussed in the 1998 *Biological Impact Report* (BTC, 1998a). Table 1 also indicates the presence or absence and the potential for these plant species to occur onsite based on the results of February 6, 2007 field survey.

Findings:

- □ ***No*** listed threatened or endangered or unlisted special-status plant species are recorded onsite. ***None*** were identified in 2007 (TLC) or 1998 (BTC, 1998a).

- □ Because ***no*** annual flowering species were observed onsite on February 6, 2007, focused botanical surveys are needed to address Item 1.a. of the 2006 CDFG comments letter that the presence or absence of special-status species, such as the Coachella Valley Milkvetch, Triple-ribbed Milkvetch, Flat-seeded Spurge, Glandular Ditaxis, California Ditaxis, Slender Wooly-heads, Desert Spike-moss and Purple Stemodia, needs to be determined.

D-2. Potential for Listed or Unlisted Special-status WILDLIFE Species to Occur Within the Project Site Boundaries

Table 2 lists the six listed and 26 unlisted special-status wildlife species that are recorded within the La Quinta, Calif., USGS quadrangle, sensitive wildlife species known to occur within the adjacent *Santa Rosa and San Jacinto Mountains Conservation Area* of the CV-MSHCP (CV-MSHCP, Table 4-107) and wildlife species discussed in the 1998 *Biological Impact Report* (BTC, 1998a).

Findings:

- The following sensitive wildlife species are recorded onsite by the CNDDB: Coachella Valley Fringe-toed Lizard (*Uma inornata*; CVFTL): federally listed Threatened, State listed Endangered and Coachella Giant Sand-treader Cricket (*Macrobaenetes valgum*): unlisted, target species of the off-site *Santa Rosa and San Jacinto Mountains Conservation Area* located off-site south of the project site.

- The following unlisted special-status wildlife species ***have also been field identified onsite***: Burrowing Owl (TLC, 2007), Coastal Western Whiptail (TLC, 2007; BTC, 1998a), San Diego Black-tailed Jackrabbit (TLC, 2007; BTC, 1998a) and Osprey (flying over; BTC, 1998a).

- □ Although, marginally suitable Category III Desert Tortoise habitat was present within the portions of the project site, ***no*** further Desert Tortoise surveys are recommended for the following reasons:
  - The project site is ***not*** within the Desert Tortoise critical habitat.
  - ***No*** Desert Tortoise occurrences are recorded by CNDDB on the project site, in the vicinity or within entire La Quinta, Calif., USGS quadrangle.
  - The project site is surrounded by residential and commercial development on the north, east and south and a golf course is present less than a mile to the west of the project site.
  - ***No*** Desert Tortoise individuals or sign were observed onsite in 2007 (TLC) or 1998 (BTC, 1998a, b).
  - ***No potential*** Desert Tortoise burrows were field observed onsite on February 6, 2007. Similarly, ***none*** were observed onsite in 1998 (BTC, 1998a, b).

D-3. Potential for Sensitive HABITAT Types to Occur Onsite

As discussed above, CV-MSHCP Figure 3-1 maps Stabilized Shielded Sand Fields, (the same as Sawyer and Keeler-Wolf's Desert Sand Verbena Series, CV-MSHCP, Page 10-36) occur on the portions of the project site and is mapped onsite by the CNDDB.

Finding:

- As illustrated on Figure 5, Desert Sand Verbena Series habitat (a.k.a. Stabilized Shielded Sand Fields) habitat was identified onsite in the portions of Area # 2.

E. Field Inspection of the Potential Wildlife Movement Corridor (WMC) identified During Pre-Field Survey Investigations

The results of Pre-Field Survey investigations indicated that the Whitewater River potentially represents a WMC along which wildlife would move across the southern portion of the project site. Based on visual observations made during the February 6, 2007 field survey, it was determined that the Whitewater River does serve as a WMC. However, the northwest-southeast wildlife movement of wildlife is somewhat constrained by the presence of extensive existing/under construction urban development north and south of the river corridor, north-south bridge crossings, etc. Regardless, whatever wildlife movement presently occurs along the WMC would continue since development of the project site will not impact the Whitewater River corridor. Specifically, the supplemental EIR states

- "The proposed project sets aside the Whitewater River channel and will have a buffer along the southeastern portion of the site along the river channel that is owned by the CVWD. This buffer is a condition of approval of the project." According to EPC Planning, the river and buffer will be comprised of approximately 30± acres of undeveloped open space (Perea, pers. comm., 2007).

- "The Whitewater River will not be disturbed by development."

F. Summary of Potential Impacts to Existing Onsite Sensitive Biological Resources (Habitat and Plant and Wildlife Species) Related to Construction of the Proposed Indian Wells Town Center and Their Significance.

Development of the proposed Town Center project site will result in the following impacts:

- □ Removal of all natural, native Creosote Bush/Desert Sand Verbena Series and Fourwing Saltbush Series habitat occupied by the Coachella Valley Fringe-toed Lizard (CVFTL). Without mitigation the impact of CVFTL occupied habitat removal would be considered significant. As stated in the supplemental EIR being prepared for the project, "the City of Indian Wells approved the CV-MSHCP and is a "permittee under the plan. As such, the City requires developers to pay applicable mitigation fees." Since state and federal "take" permits have not been issued for the plan, "take" of CVFTL occupied habitat is not permitted and not mitigated by the plan. However, the project site is located in the CVFTL habitat conservation fee area. Therefore, payment of the CVFTL fee will reduce the impacts of CVFTL occupied habitat loss to less than significant.

- □ Development of the project site has the potential to impact BUOW occupied burrows. Without mitigation the loss of BUOW occupied burrows would be would be considered significant. As confirmed by the CDFG (Nicol, 2006), if state and federal "take" permits had already been issued for the plan, BUOW surveys would not be required for the Indian Wells Town Center project sites since it is ***outside*** any Conservation Area identified by the plan. However, until state and federal "take" permits are issued, BUOW surveys will "have to be completed and the project proponent has to get all permits and do the mitigation themselves" (Nicol, 2006). The 2006 CDFG NOP comments letter identifies mitigation that will reduce the loss of BUOW occupied burrows to less than significant.

- □ Development of the project site will result in the loss of habitat occupied by the following three unlisted wildlife species not proposed for listing as state or federal threatened or endangered: Coastal Western Whiptail, San Diego Black-tailed Jackrabbit and Coachella Giant Sand-treader Cricket. Even without mitigation, the impacts to the unlisted species will not be considered significant. Therefore, ***no*** mitigation is necessary.

- □ If identified onsite during focused 2007 botanical surveys, development of the project site has the potential to impact to the following listed plant species: Coachella Valley Milkvetch and Triple-ribbed Milkvetch, Without mitigation the loss of Milkvetch occupied habitat would be considered significant. As previously discussed, if state and federal "take" permits had already been issued for the CV-MSHCP, "projects outside of the Conservation Areas won't have to do biological surveys for the covered species, they can rely on the Plan" (Nicol, 2006). However, until state and federal "take" permits are issued, botanical surveys will "have to be completed and the project proponent has to get all permits and do the mitigation themselves" (Nicol, 2006) if any of the Table 1 listed threatened or endangered plant species are identified onsite. The mitigation necessary would be determined in consultation with the CDFG and FWS. Mitigation should not be required for species not listed as threatened or endangered by CDFG or FWS.

G. Location and Nature of any Onsite Jurisdictional Elements (Waters of the US and Associated Wetlands and/or Riparian Vegetation)

The jurisdictional Whitewater River, a USGS illustrated blue-line, passes across the southern portions of APNs 604-040-091, -090 and -089. The supplemental EIR states that "the Whitewater River will not be disturbed by development." Based on the results of the February 6, 2007 BCA field survey, the review of pervious project specific biological documents (BTC, 1998a and b) and the supplemental EIR being prepared for the project site, ***no*** jurisdictional elements (waters, wetlands or riparian habitat) are present within the proposed development area. Therefore, ***no*** further jurisdictional investigations are necessary.

Please call if you have any questions regarding this constraints analysis letter report or require additional information.

Respectfully Submitted,

THOMAS LESLIE CORPORATION

T. Leslie

Thomas A. Leslie
President/B.S.-M.S. Biology
TAL/nvl

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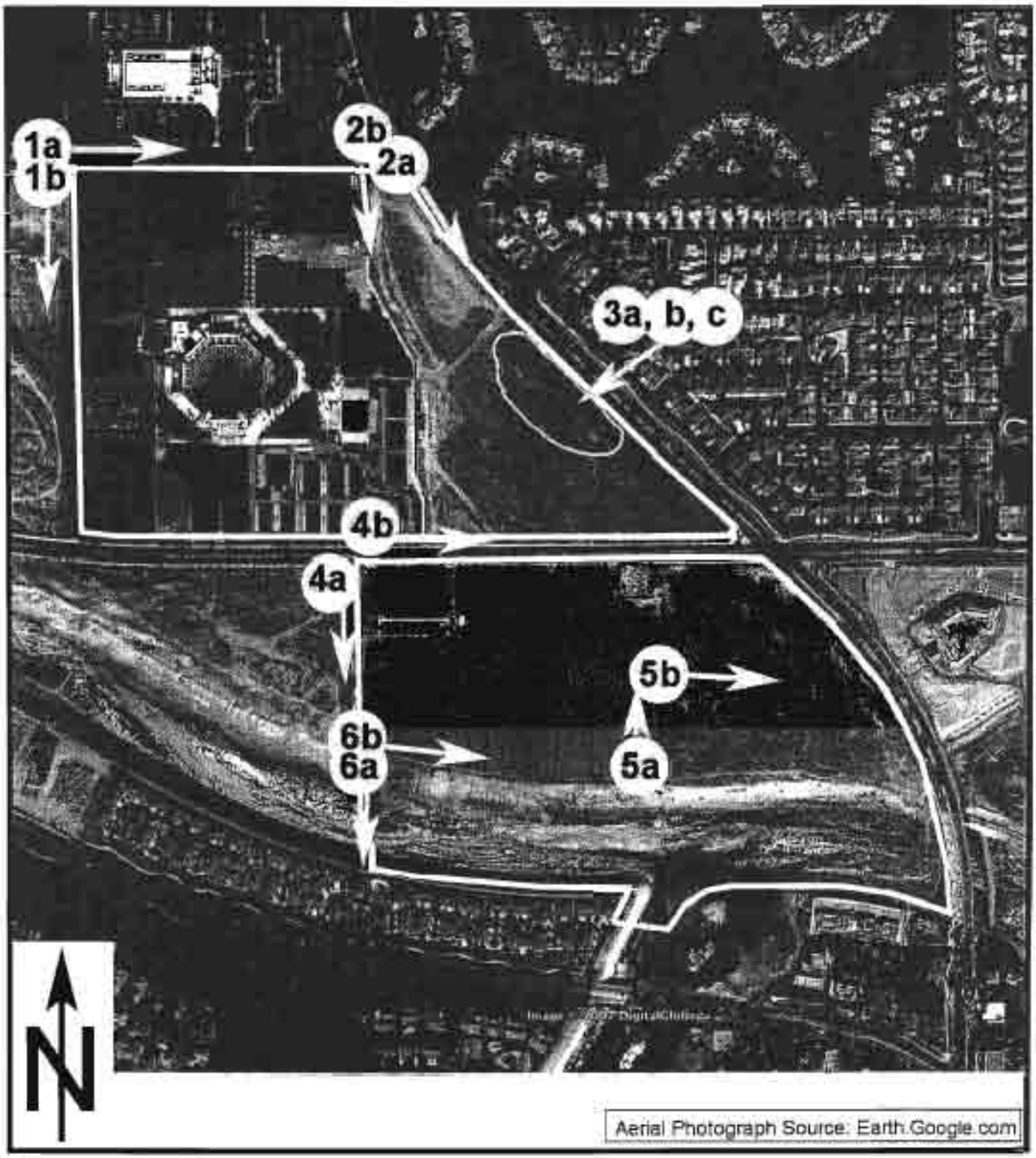
APPENDIX A

2007
PHOTO PLATE NOS. 1-6

FOR THE PROPOSED
INDIAN WELLS TOWN CENTER
PROJECT SITE

INDIAN WELLS, CALIFORNIA



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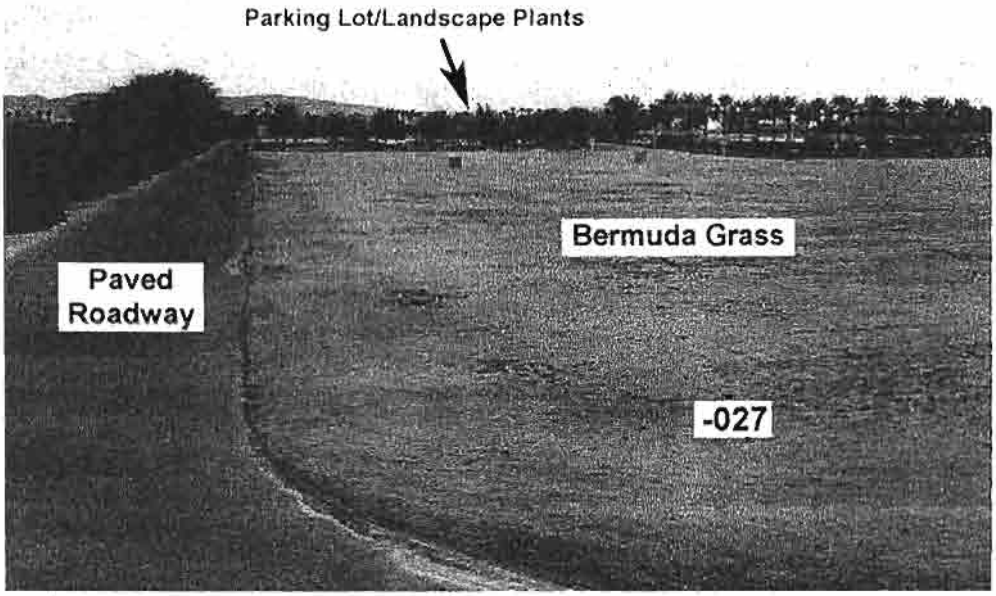
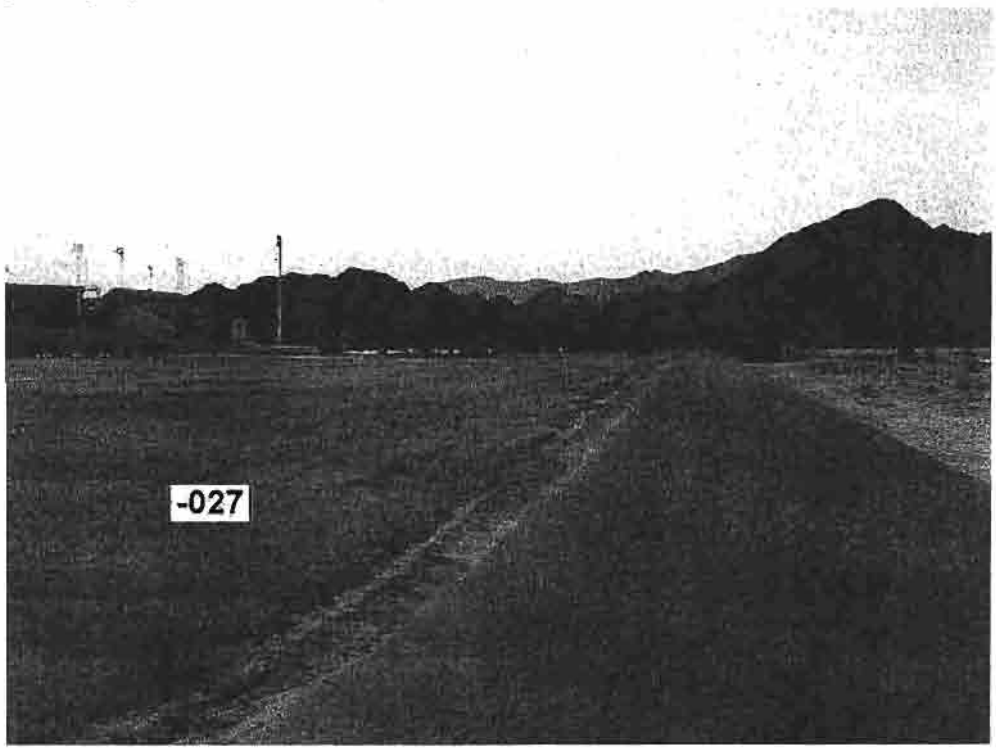
Location & Direction of Project Site Photographs on Indian Wells Town Center Project Site

PHOTO PLATE NO. 1

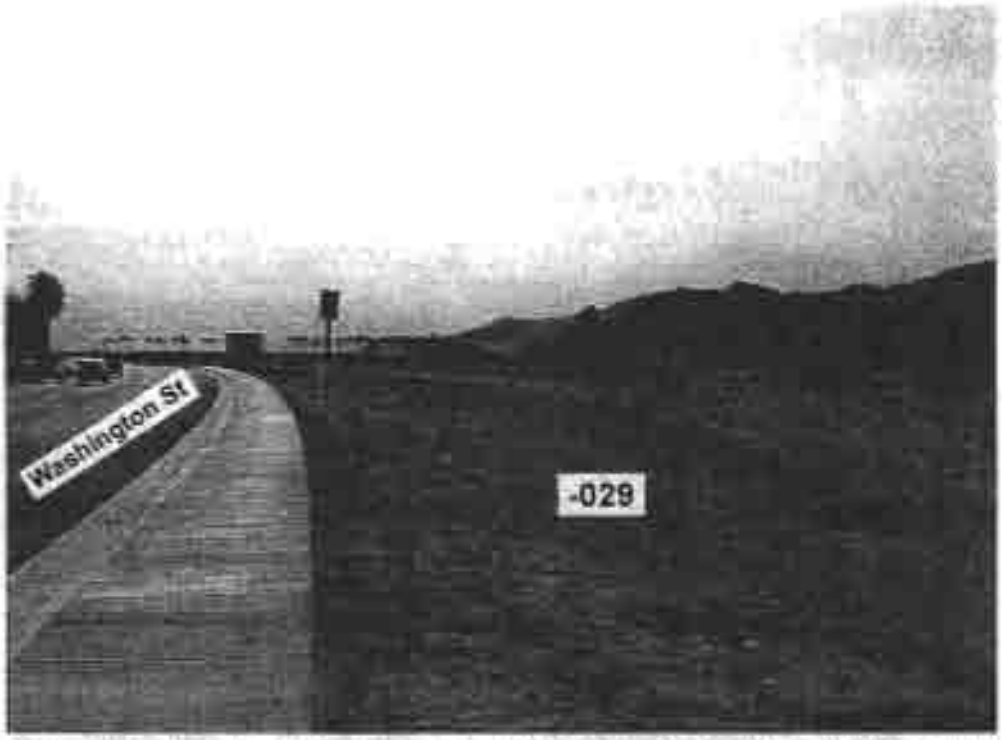


1a. East view, from the intersection of the unnamed paved roadway paralleling the northern boundaries of APNs 633-360-027, -028 and -029, across the northerly portion of the three parcels, from the northwest corner of APN 633-360-028. The topographic surface of APNs 633-360-027 and -028 was comprised of non-native Bermuda Grass (*Cynodon dactylon*) and paved roadways and parking lots, bordered by locally common non-native landscaping groundcover, shrub, bush and tree plantings (photo date – *02/06/07*).



1b. South view, across the Bermuda Grass/asphalt covered westerly portion of APN 633-360-027, from the northwest parcel corner (photo date - *02/06/07*).

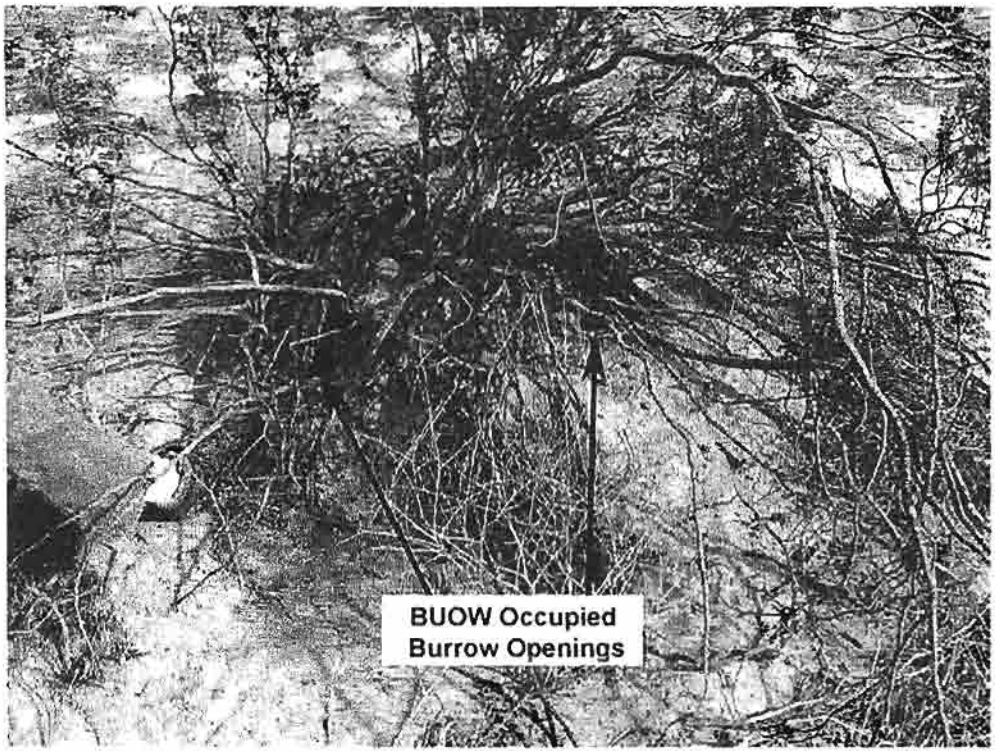
PHOTO PLATE NO. 2



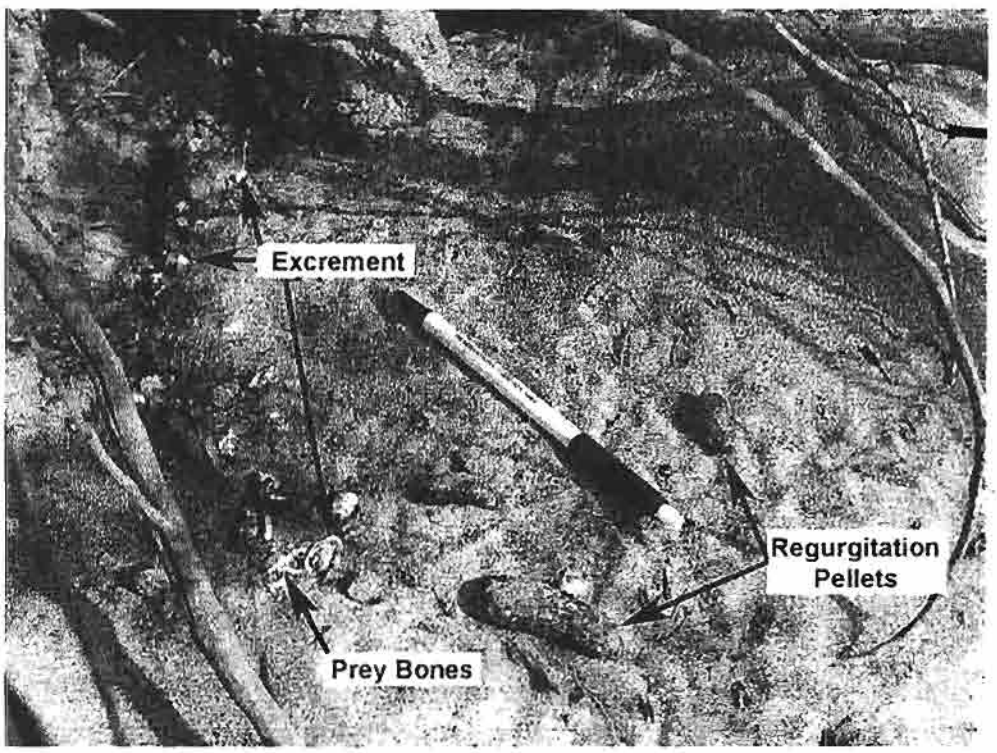
2a. Southeasterly view, from the intersection of Washington Street and an unnamed paved roadway paralleling the northern boundaries of APN 633-360-027, -028 and -029, across the easterly portion of APNs 633-360-029, -018 and -024. Extensive portions of APN 633-360-029 were comprised of disturbed primarily unvegetated sandy soils transected by unpaved vehicle trails. An open growth of Creosote Bush/Desert Sand Verbena series habitat vegetated APNs 633-360-018 and -024 and the undisturbed portion of APN 633-360-029 (photo date – *02/06/07*).

2b. Southerly view toward Miles Avenue, from the unnamed roadway paralleling the northern boundary of APNs 633-360-027, -028 and -029, across the westerly portions of APNs 633-360-026 and -029. As this photograph documents, extensive portions of both parcels were comprised of disturbed unvegetated sandy soils transected by unpaved vehicle trails (photo date - *02/06/07*).

PHOTO PLATE NO. 3-1

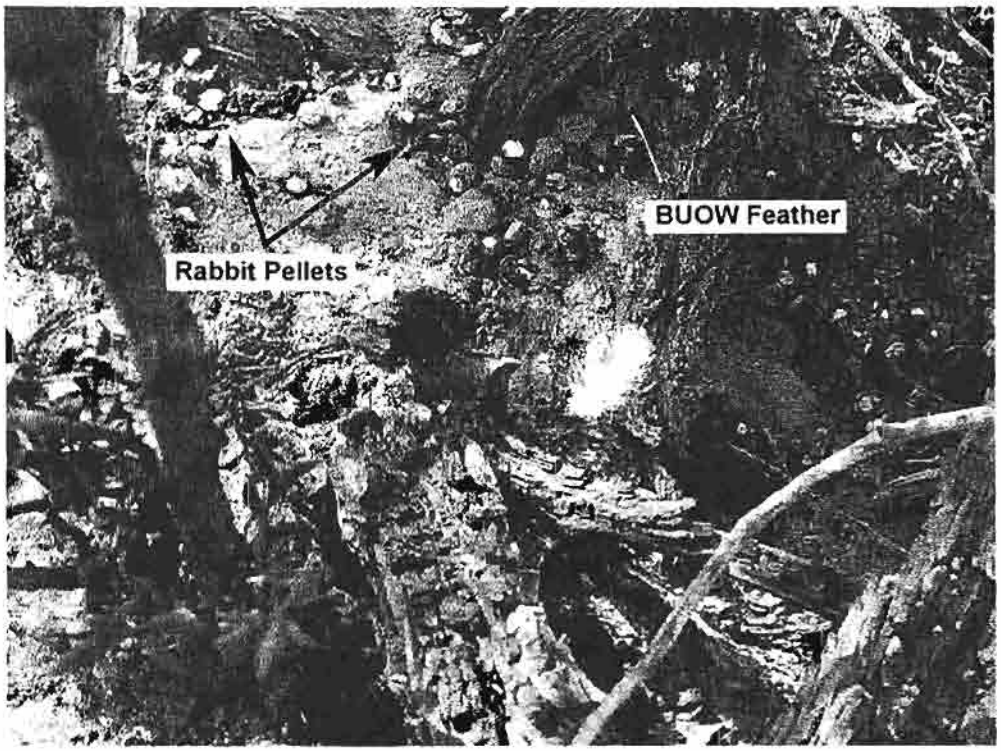


3a. Close-up view, of a Burrowing Owl (BUOW) occupied burrow situated in the northeast portion of APN 633-360-018. Signs of burrow occupation by BUOW include direct observation of a BUOW individual flying out of this burrow on February 6, 2007, presence of fresh BUOW foot tracks and excrement, white and brown BUOW feathers and fresh regurgitation pellets with undigested rodent prey bones and hair around burrow openings (photo date – *02/06/07*).



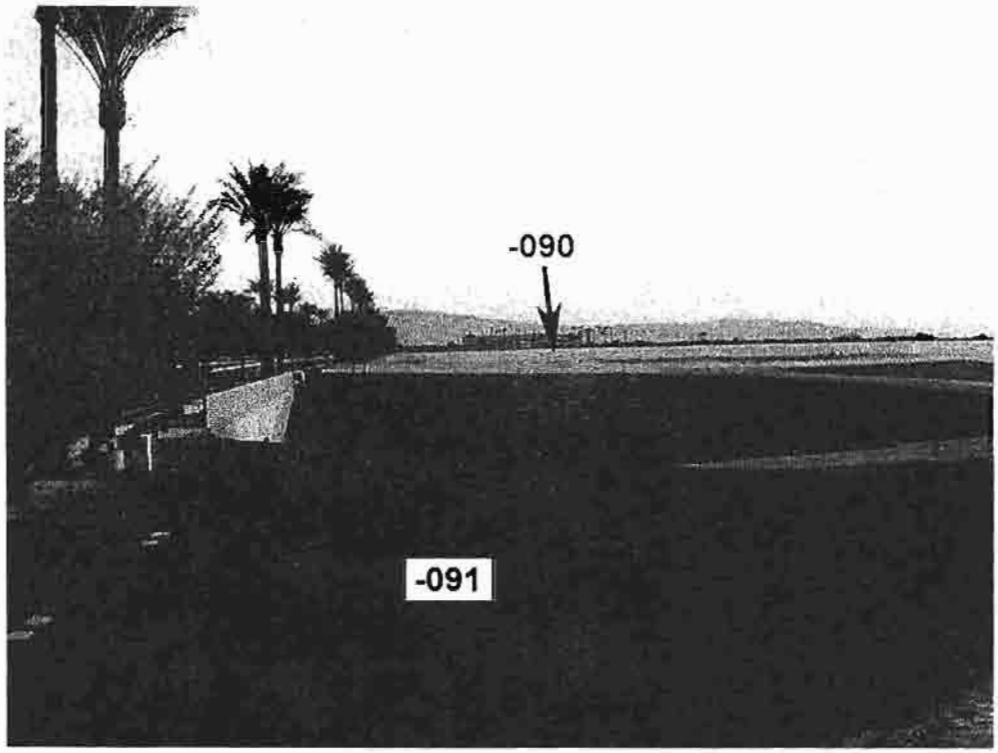
3b. Close-up view, of signs of current burrow occupation by BUOW observed at the burrow visible in 3a above on February 6, 2007 (photo date - *02/06/07*).

PHOTO PLATE NO. 3-2

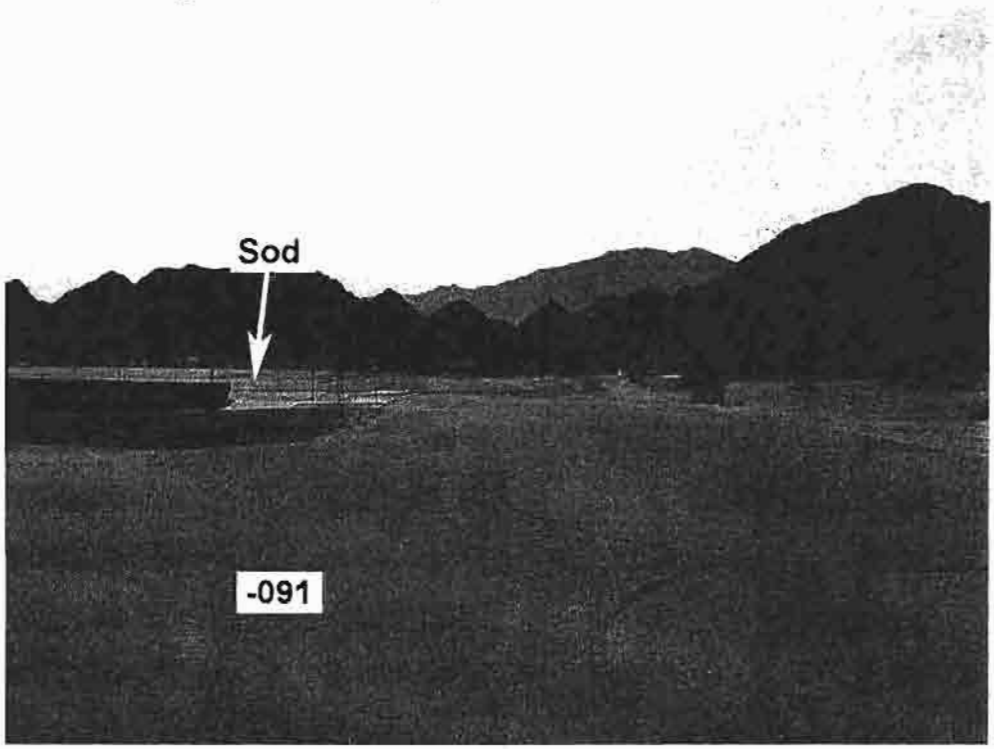


3c. Close-up view, of a white BUOW feather and numerous rabbit pellets, observed around the second BUOW occupied burrow also observed in the northeast portion of APN 633-360-018 on February 6, 2007 (photo date – *02/06/07*).

PHOTO PLATE NO. 4

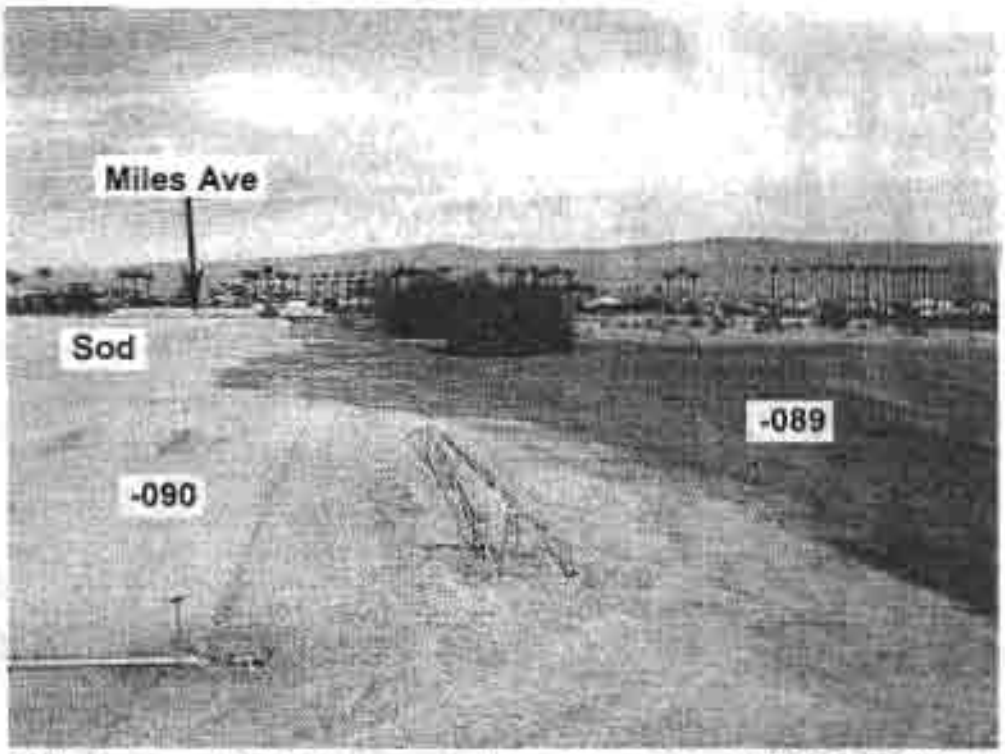


4a. Easterly view, across the northerly portions of APNs 604-040-091 (green grassy area), -090, -036 and -089, from the northeasterly corner of APN 604-040-091 and Miles Avenue (photo date – *02/06/07*).

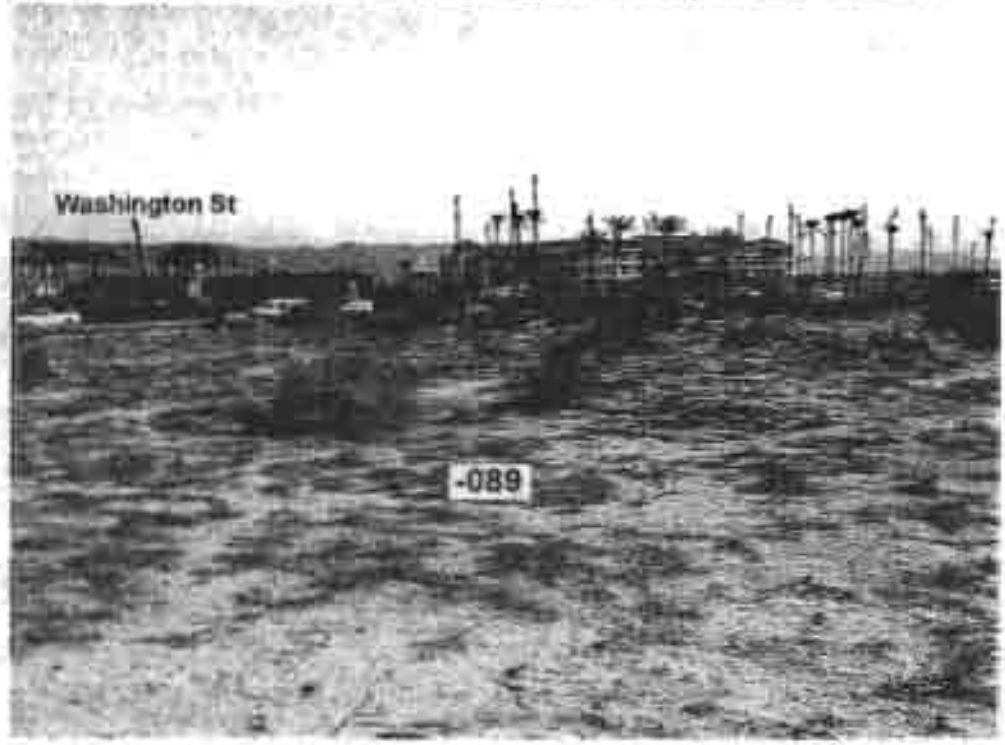


4b. South view, across the east portion of APN 604-040-091, from the northeasterly corner of APN 604-040-091 and Miles Avenue. The topographic surface of the northerly portion of APN 604-040-091 was comprised of paved roadways and flood control structures. The west central and southwesterly parcel portions were covered by what appeared to be an irrigated non-native Bermuda Grass sod farm (photo date - *02/06/07*).

PHOTO PLATE NO. 5

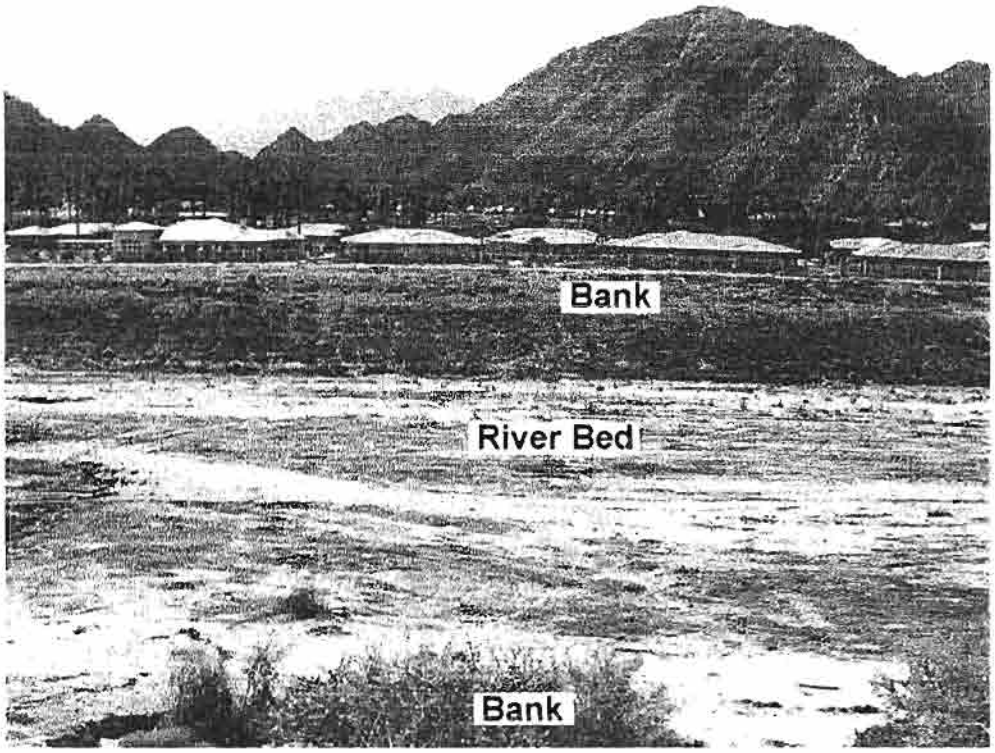


5a. North view toward Miles Avenue, across the easterly portion of APN 604-040-090 and westerly portion of APN 604-040-089, from the southeast corner of APN 604-040-090. The majority (95±%) of the topographic surface of APN 604-040-090 was covered by what appeared to be an irrigated non-native Bermuda Grass sod farm (photo date – *02/06/07*).

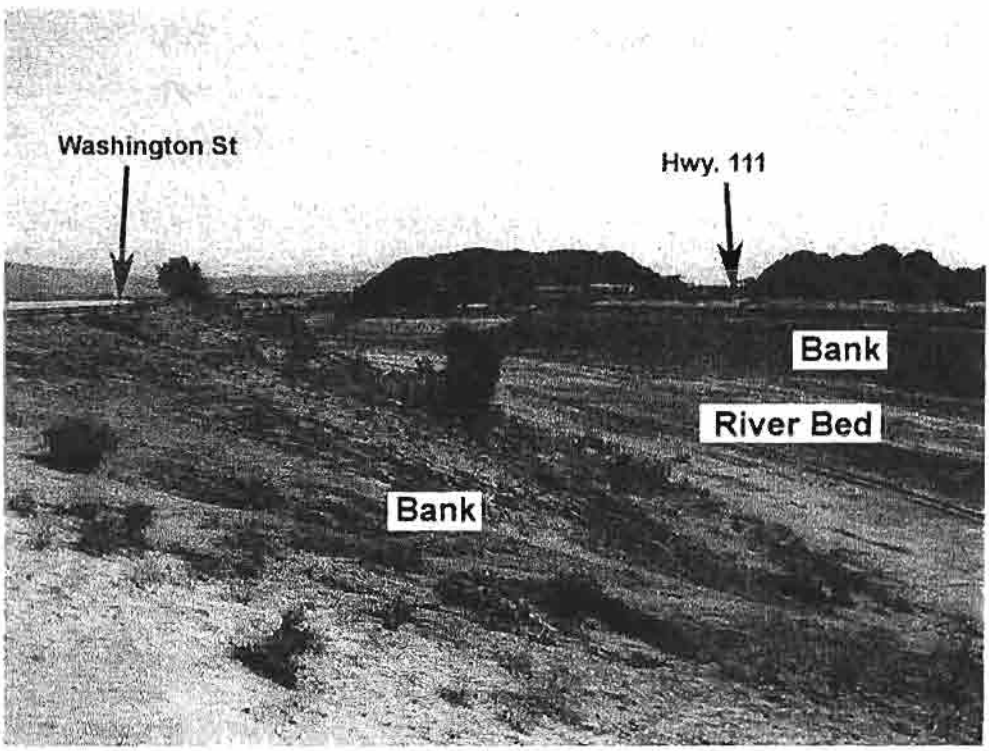


5b. East view toward Washington Street, across the northerly portion of APN 604-040-089, from the west parcel boundary. As this photograph documents, an open growth of Fourwing Saltbush series habitat vegetated the northern portion of the parcel's sandy soils. As visible in photograph 5a above, the southwestern corner of APN 604-040-089, and a narrow strip along the west boundary of APN 604-040-089, were unvegetated disked sandy soils (photo date - *02/06/07*).

PHOTO PLATE NO. 6



6a. South view toward the south bank of the Whitewater River, across the dry river bed, from the southeast corner of APN 604-040-091. The river bed and banks will not be impacted by the proposed Indian Wells Town Center development project (photo date – *02/06/07*).



6b. East view toward Washington Street, across the southern portions of APNs 604-040-091 and -090, from the southeast corner of APN 604-040-091. Sparse growths, of weedy non-native and native plant species, were observed growing on the banks and across the river bed on February 6, 2007 (photo date - *02/06/07*).

APPENDIX B

2007
Constraints Analysis Level
FLORAL COMPENDIUM

FOR THE PROPOSED
INDIAN WELLS TOWN CENTER
PROJECT SITE

INDIAN WELLS, CALIFORNIA

Non-native (11)	SCIENTIFIC NAMES	COMMON NAMES (44)	Listing Status
	Class Dicotyledones	**Dicots**	
	FAMILY ASTERACEAE	**SUNFLOWER FAMILY**	
	Ambrosia dumosa	Burro-weed	*None*
	Baileya paucirdiata	Desert-marigold	*None*
	Chaenactis stevioides	Desert Pincushion	*None*
	Dicoria canescens	Desert Twinbugs	*None*
	Encelia farinosa	Brittlebush	*None*
	Geraea canescens	Desert Sunflower	*None*
	Malacothrix glabrata	Desert Dandelion	*None*
	Palafoxia arida	Desert Spanish-needles	*None*
	Stephanomeria exigua	Wreath-plant	*None*
	Xanthium strumarium	Cocklebur	*None*
	FAMILY BORAGINACEAE	**BORAGE FAMILY**	
	Cryptantha angustifolia	Popcorn Flower	*None*
	Pectocarya recurvata	Curvenut Combseed	*None*
	Tiquilia plicata	Plicate Coldenia	*None*
	FAMILY BRASSICACEAE	**MUSTARD FAMILY**	
X	*Brassica tournefortii*	African Mustard	*None*
X	*Sisymbrium irio*	London Rocket	*None*
	FAMILY CARYOPHYLLACEAE	**PINK FAMILY**	
	Achyronychia cooperi	Onyx Flower	*None*
	FAMILY CHENOPODIACEAE	**GOOSEFOOT FAMILY**	
	Atriplex canescens	Four-wing Saltbush	*None*
	Atriplex polycarpa	Allscale	*None*
X	*Chenopodium album*	Pigweed	*None*
X	*Salsola tragus*	Russian Thistle	*None*
	FAMILY CUCURBITACEAE	**GOURD FAMILY**	
	Brandegea bigelovii	Brandegea	*None*
	FAMILY EUPHORBIACEAE	**SPURGE FAMILY**	
	*Chamaesyce sp.**	Spurge	*None*
X	*Ricinus communis*	Castor Bean	*None*
	FAMILY FABACEAE	**LEGUME FAMILY**	
	Dalea mollis	Annual Dalea	*None*
	Lotus strigosus	Bishop's Lotus	*None*
	Prosopis glandulosa	Mesquite	*None*
	Psorothamnus emoryi	Dye-plant	*None*

* = No identification to species was provided in 1998 report (BTC, 1998a); and it was too early in February 2007 to identify this plant to species due to the absence of necessary morphological structures.

Non-native (11)	SCIENTIFIC NAMES	COMMON NAMES (44)	Listing Status
	FAMILY LOASACEAE	**LOASA FAMILY**	
	*Mentzelia sp.**	Blazing Star	*None*
	FAMILY MALVACEAE	**MALLOW FAMILY**	
	Eremalche exilis	Mallow	*None*
	FAMILY NYCTAGINACEAE	**FOUR O'CLOCK FAMILY**	
	Abronia villosa	Sand Verbena	*None*
	FAMILY ONAGRACEAE	**EVENING PRIMROSE FAMILY**	
	Camissonia claviformis	Evening Primrose	*None*
	Oenothera deltoides	Devil's Cage	*None*
	FAMILY PLANTAGINACEAE	**PLANTAIN FAMILY**	
	Plantago ovata	Woolly Plantain	*None*
	FAMILY POLYGONACEAE	**BUCKWHEAT FAMILY**	
	Chorizanthe brevicornu	Brittle Spineflower	*None*
	Eriogonum sp. *	Annual Buckwheat	*None*
X	*Polygonum arenastrum*	Common Knotweed	*None*
	FAMILY PORTULACACEAE	**PURSLANE FAMILY**	
	Calyptridium monandrum	Common Pussypaws	*None*
	FAMILY SOLANACEAE	**NIGHTSHADE FAMILY**	
	Datura wrightii	Jimson Weed	*None*
X	*Nicotiana glauca*	Tree Tobacco	*None*
	FAMILY TAMARICACEAE	**TAMARISK FAMILY**	
X	*Tamarix aphylla*	Athel	*None*
	FAMILY ZYGOPHYLLACEAE	**CALTROP FAMILY**	
	Larrea tridentata	Creosote Bush	*None*
X	*Tribulus terrestris*	Puncturevine	*None*
	Class Monocotyledones	**Monocots**	
	FAMILY POACEAE	**GRASS FAMILY**	
X	*Cynodon dactylon*	Bermuda Grass	*None*
X	*Schismus barbatus*	Mediterranean Schismus	*None*

* = No identification to species was provided in 1998 report (BTC, 1998a); and it was too early in February 2007 to identify this plant to species due to the absence of necessary morphological structures.

APPENDIX C

2007

Constraints Analysis Level
WILDLIFE COMPENDIUM

FOR THE PROPOSED
INDIAN WELLS TOWN CENTER
PROJECT SITE

INDIAN WELLS, CALIFORNIA

SCIENTIFIC NAMES	COMMON NAMES (44)	TLC 2007 (11)	Bon Terra 1998 (39)*	Listing Status
VERTEBRATES				
CLASS REPTILIA	**REPTILES (2)**			
FAMILY IGUANIDAE	**IGUANIDS**			
Uta stansburiana	Side-blotched Lizard	X	X	*None*
FAMILY TEIIDAE	**WHIPTAILS AND THEIR ALLIES**			
Aspidoscelis tigris stejnegeri	Coastal Western Whiptail	X	X	CSC**
CLASS AVES	**BIRDS (24)**			
FAMILY GAVIIDAE	**LOONS**			
Gavia immer	Common Loon	- - -	X	*None*
FAMILY ACCIPITRIDAE	**BUTEOS, KITES, HARRIERS**			
Buteo jamaicensis	Red-tailed Hawk	- - -	X	*None*
Pandion haliaetus	Osprey (flying over)	- - -	X	CSC
FAMILY FALCONIDAE	**FALCONS AND CARACARAS**			
Falco sparverius	American Kestrel	- - -	X	*None*
FAMILY ODONTOPHORIDAE	**NEW WORLD QUAILS**			
Callipepla gambelii	Gambel's Quail	- - -	X	*None*
FAMILY COLUMBIDAE	**PIGEON AND DOVES**			
Zenaida macroura	Mourning Dove	X	X	*None*
FAMILY CUCULIDAE	**CUCKOOS, ANIS, & ROADRUNNERS**			
Geococcyx californianus	Greater Roadrunner	- - -	X	*None*
FAMILY STRIGIDAE	**OWLS**			
Athene cunicularia	Burrowing Owl	X	- - -	CSC
FAMILY TROCHILIDAE	**HUMMINGBIRDS**			
Calypte anna	Anna's Hummingbird	X	X	*None*
Calypte costae	Costa's Hummingbird	X	X	*None*

* = More species (especially insects) were observed in 1998 since the Bon Terra surveys were conducted in the warmer and more mesic month of April, when more species are present.

**CSC = CDFG California Special Concern species.

SCIENTIFIC NAMES	COMMON NAMES (44)	TLC 2007 (11)	Bon Terra 1998 (39)*	Listing Status
FAMILY TYRANNIDAE	**TYRANT FLYCATCHERS**			
Sayornis saya	Say's Phoebe	X	- - -	*None*
Tyrannus verticalis	Western Kingbird	- - -	X	*None*
FAMILY HIRUNDINIDAE	**SWALLOWS**			
Petrochelidon pyrrhonota	Cliff Swallow	- - -	X	*None*
Stelgidopteryx serripennis	Northern Rough-winged Swallow	- - -	X	*None*
FAMILY CORVIDAE	**JAYS, MAGPIES, AND CROWS**			
Corvus brachyrhynchos	American Crow	X	- - -	*None*
Corvus corax	Common Raven	- - -	X	*None*
FAMILY REMIZIDAE	**VERDINS**			
Auriparus flaviceps	Verdin	- - -	X	*None*
FAMILY TROGLODYTIDAE	**WRENS**			
Thryomanes bewickii	Bewick's Wren	X	- - -	*None*
FAMILY MIMIDAE	**MOCKINGBIRDS AND THRASHERS**			
Mimus polyglottos	Northern Mockingbird	- - -	X	*None*
FAMILY PARULIDAE	**WOOD WARBLERS**			
Dendroica coronata	Yellow-rumped Warbler	- - -	X	*None*
FAMILY ICTERIDAE	**BLACKBIRDS AND ORIOLES**			
Euphagus cyanocephalus	Brewer's Blackbird	- - -	X	*None*
FAMILY FRINGILLIDAE	**FINCHES**			
Carduelis psaltria	Lesser Goldfinch	- - -	X	*None*
Carpodacus mexicanus	House Finch	- - -	X	*None*
FAMILY EMBERIZIDAE	**SPARROWS**			
Pipilo aberti	Abert's Towhee	- - -	X	*None*
Spizella breweri	Brewer's Sparrow	- - -	X	*None*

* = More species (especially insects) were observed in 1998 since the Bon Terra surveys were conducted in the warmer and more mesic month of April, when more species are present.

SCIENTIFIC NAMES	COMMON NAMES (44)	TLC 2007 (11)	Bon Terra 1998 (39)*	Listing Status
CLASS MAMMALIA	**MAMMALS (2)**			
FAMILY LEPORIDAE	**RABBITS AND HARES**			
Lepus californicus bennetii	San Diego Black-tailed Jackrabbit	X	X	CSC**
Sylvilagus audubonii	Audubon's Cottontail	- - -	X	*None*
INVERTEBRATES				
CLASS INSECTA	**INSECTS (15)**			
Brephidium exilis	Pygmy Blue	- - -	X	*None*
Danaus gilippus	Queen Butterfly	- - -	X	*None*
Danaus plexippus	Monarch Butterfly	- - -	X	*None*
Erynnis funeralis	Funereal Duskywing	- - -	X	*None*
Hesperopsis libya	Mohave Sootywing	- - -	X	*None*
Hylephila phyleus	Fiery Skipper	- - -	X	*None*
Lerodea eufala	Eufala Skipper	- - -	X	*None*
Nathalis iole	Dainty Sulphur	- - -	X	*None*
Papilio cresphontes	Giant Swallowtail	- - -	X	*None*
Pontia protodice	Checkered White	- - -	X	*None*
Pontia sisymbrii	Spring White	- - -	X	*None*
Pyrgys communis	Common Checkered-skipper	- - -	X	*None*
Solenopsis xyloni	Southern Fire Ant	X	- - -	*None*
Strymon melinus	Common Hairstreak	- - -	X	*None*
Vanessa cardui	Painted Lady Butterfly	- - -	X	*None*

* = More species (especially insects) were observed in 1998 since the Bon Terra surveys were conducted in the warmer and more mesic month of April, when more species are present.

**CSC = CDFG California Special Concern species.

APPENDIX D

CALIFORNIA DEPARTMENT OF FISH AND GAME NATURAL DIVERSITY DATA BASE RECORD SEARCH FOR THE LA QUINTA, CALIFORNIA, USGS QUADRANGLE

Antirrhinum cyathiferum

Deep Canyon snapdragon — Element Code: PDSCR2R010

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G4?	CNPS List: 2.3
State: None	State: S1.3	

Habitat Associations

General: SONORAN DESERT SCRUB.

Micro: ROCKY SITES. 0-800M.

Occurrence No. 1 — Map Index: 05679 — EO Index: 31157

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1978-04-23
Site: 1978-04-23
Record Last Updated: 1997-07-18

Quad Summary: La Quinta (3311663/065A), Rancho Mirage (3311664/065B)

County Summary: Riverside

Lat/Long: 33.68012° / -116.37144°
UTM: Zone-11 N3724648 E558277
Radius: 1 mile
Elevation: 800 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 06S
Range: 06E
Section: 09 Qtr: XX
Meridian: S

Location: SOUTH OF PALM DESERT, COYOTE WASH AT JUNCTION WITH DEEP CANYON WASH.

Location Detail: COLLECTION BY SANDERS FROM "0.25 MILE SW (NW?) OF BOYD CENTER NEAR DEEP CANYON...1000'" IS ALSO ATTRIBUTED TO THIS SITE.

Ecological: COLLECTIONS MADE FROM FLOODPLAIN AND FROM WEST-FACING ROCKY SLOPE.

General: THREE COLLECTIONS ATTRIBUTED TO THIS SITE: TEVIS (SN UCR & #1062 DEEP CYN) IN 1968 AND SANDERS (#DC149 UCR) FROM 1978.

Owner/Manager: UCNR

Athene cunicularia

burrowing owl — Element Code: ABNSB10010

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G4	CDFG Status: SC
State: None	State: S2	

Habitat Associations

General: (BURROW SITES) OPEN, DRY ANNUAL OR PERENIAL GRASSLANDS, DESERTS & SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro: SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Occurrence No. 856 **Map Index:** 66265 **EO Index:** 66344

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2006-09-06
Site: 2006-09-06
Record Last Updated: 2006-09-19

Quad Summary: La Quinta (3311663/065A)

County Summary: Riverside

Lat/Long: 33.74835° / -116.26553°
UTM: Zone-11 N3734497 E568026
Radius: 80 meters
Elevation: 50 ft

Mapping Precision: SPECIFIC
Symbol Type: POINT

Township: 05S
Range: 07E
Section: 09 **Qtr:** SW
Meridian: S

Location: EAST SIDE OF I-10, SE OF THE JEFFERSON STREET JUNCTION, INDIO.

Location Detail: BURROW WAS LOCATED NEAR THE TOE OF THE NE-FACING MANUFACTURED SLOPE BELOW THE FREEWAY OFFRAMP FOR THE WESTBOUND LANES.

Ecological: SLOPE SURROUNDING BURROW WAS VEGETATED BY ATRIPLEX CANESCENS, TIDESTOMIA OBLONGIFOLIA, CONYZA CANADENSIS, ENCELIA FARINOSA, BRASSICA TOURNEFORTII, SALSOLA TRAGUS, AVENA FATUA, CYNODON DACTYLON, AND SCHISMUS BARBATUS.

Threat: THREATENED BY PLANS TO MODIFY AND REALIGN THE FREEWAY INTERCHANGE AND URBANIZATION OF SURROUNDING FORAGING HABITAT.

General: PAIR WAS OBSERVED DEFENDING THIS BURROW ON 12 AUG AND 6 SEP 2006; NO YOUNG OBSERVED.

Owner/Manager: CALTRANS

Chaetodipus fallax pallidus

pallid San Diego pocket mouse — Element Code: AMAFD05032

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5T3	CDFG Status: SC
State: None	State: S3	

Habitat Associations

General: DESERT BORDER AREAS IN EASTERN SAN DIEGO CO. IN DESERT WASH, DESERT SCRUB, DESERT SUCCULENT SCRUB, PINYON-JUNIPER, ETC.

Micro: SANDY HERBACEOUS AREAS, USUALLY IN ASSOCIATION WITH ROCKS OR COARSE GRAVEL.

Occurrence No. 3 Map Index: 57440 EO Index: 57456

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1996-12-XX
Site: 1996-12-XX
Record Last Updated: 2004-10-18

Quad Summary: Rancho Mirage (3311664/065B), La Quinta (3311663/065A)

County Summary: Riverside

Lat/Long: 33.65036° / -116.37644°
UTM: Zone-11 N3723564 E557819
Area:
Elevation: 900 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 06S
Range: 06E
Section: 17 Qtr: XX
Meridian: S

Location: DEEP CANYON, ABOUT 1.25 MI EAST OF STATE HWY 74 & 3.5 MI WEST OF LA QUINTA. BOYD DEEP CANYON DESERT RESEARCH CENTER.

Location Detail: TRAPPING STATIONS WERE SET IN FOUR LOCATIONS: 2 WITHIN DEEP CANYON (CHOLLA & PALO VERDE) & 2 ON HILLS SURROUNDING DEEP CANYON (CHUCKWALLA & STATION).

Ecological: CHUCKWALLA SITE IS ON THE SOUTH FACING SLOPE OF CHUCKWALLA HILL, STATION SITE IS ON THE NORTH FACING SLOPE OF HILL IMMEDIATELY SOUTH OF PHILIP L. BOYD CANYON DESERT RESEARCH STATION. CHOLLA & PALO VERDE SITES ARE ON THE FLOOR OF DEEP CANYON

General: TRAPPING WAS CONDUCTED IN JUN-JUL 1996 AND AGAIN IN DEC 1996. CAPTURES COUNTS FOR EACH SITE: CHOLLA: JUN/JULY=5; DEC=0; PALO VERDE: JUN/JULY=1; DEC=0; CHUCKWALLA: JUN/JULY=1; DEC=2; STATION: JUN/JULY=1; DEC=5

Owner/Manager: UCNR-DEEP CYN, OTHER

Crotalus ruber ruber

northern red-diamond rattlesnake — **Element Code:** ARADE02091

Status	NDDB Element Ranks	Other Lists
Federal: None	**Global:** G4T3T4	**CDFG Status:** SC
State: None	**State:** S2?	

Habitat Associations

General: CHAPARRRAL, WOODLAND, GRASSLAND, & DESERT AREAS FROM COASTAL SAN DIEGO COUNTY TO THE EASTERN SLOPES OF THE MOUNTAINS.

Micro: OCCURS IN ROCKY AREAS & DENSE VEGETATION. NEEDS RODENT BURROWS, CRACKS IN ROCKS OR SURFACE COVER OBJECTS.

Occurrence No. 56 **Map Index:** 05671 **EO Index:** 47579

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1954-05-09
Site: 1954-05-09
Record Last Updated: 2002-04-04

Quad Summary: Rancho Mirage (3311664/065B), La Quinta (3311663/065A)

County Summary: Riverside

Lat/Long: 33.64436° / -116.38298°
UTM: Zone-11 N3722895 E557217
Radius: 1 mile
Elevation: 2,400 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 06S
Range: 06E
Section: 20 **Qtr:** XX
Meridian: S

Location: DIRECTIONS GIVEN AS "5 MILES SOUTH OF PALM DESERT" WHICH PUTS IT IN THE VICINITY OF DEEP CANYON.

General: LA COUNTY MUSEUM #0003039

Owner/Manager: UNKNOWN

Cyprinodon macularius

desert pupfish — Element Code: AFCNB02060

Status		NDDB Element Ranks		Other Lists	
Federal:	Endangered	Global:	G1	CDFG Status:	
State:	Endangered	State:	S1		

Habitat Associations

General: DESERT PONDS, SPRINGS, MARSHES AND STREAMS IN SOUTHERN CALIFORNIA.

Micro: CAN LIVE IN SALINITIES FROM FRESH WATER TO 68 PPT, CAN WITHSTAND TEMPS FROM 9 - 45 C & D.O. LEVELS DOWN TO 0.1 PPM.

Occurrence No. 24 — Map Index: 52688 — EO Index: 28600

Occ Rank: Good
Origin: Refugium; Artificial Habitat/Occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1985-05-22
Site: 1985-05-22
Record Last Updated: 2004-12-29

Quad Summary: La Quinta (3311663/065A), Rancho Mirage (3311664/065B)

County Summary: Riverside

Lat/Long: 33.70048° / -116.37547°
UTM: Zone-11 N3729121 E557875
Radius: 1/10 mile
Elevation: 385 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 05S
Range: 06E
Section: 29 Qtr: XX
Meridian: S

Location: LIVING DESERT RESERVE; 47900 S PORTOLA AVE, PALM DESERT.

Ecological: CONCRETE PONDS ORIGINALLY STOCKED IN 1972.

General: 3 PONDS WITH STOCK FROM BOTH SALTON SEA AND SAN FELIPE CR (FROM ANZA BORREGO). NEW TRANSPLANTS KEPT SEPARATE.

Owner/Manager: PVT

Desert Fan Palm Oasis Woodland

Element Code: CTT62300CA

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3	
State: None	State: S3.2	

Habitat Associations

General:

Micro:

Occurrence No. 41 Map Index: 05691 EO Index: 13619

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1977-03-XX
Site: 1977-03-XX
Record Last Updated: 1996-07-22

Quad Summary: Martinez Mtn. (3311653/065D), La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.62116° / -116.35582°
UTM: Zone-11 N3720338 E559751
Radius: 1 mile
Elevation: 2,800 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 07S
Range: 06E
Section: 27 Qtr: W
Meridian: S

Location: BEAR CR PALMS, S OF COYOTE CR HEADWATERS, E OF DEEP CYN. SOURCE MAP NOT VERY ACCURATE.

Location Detail: 300 PALMS REPORTED 1977, 84 ADULT PALMS & 300 UP TO 6 FT TALL COUNTED 1936, 172 COUNTED OVER 6 FT TALL & EST OF 250 SMALLER 1947.

Ecological: WASHINGTONIA FILIFERA GROVE. INTERMITTENT STREAM.

General: ACCESS VIA IMPROVED 3 MI TRAIL. THIS WAS OCC #041 OF CTT62300CA.

Owner/Manager: UNKNOWN

Occurrence No. 50 Map Index: 05671 EO Index: 26844

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1981-01-19
Site: 1981-01-19
Record Last Updated: 1996-07-23

Quad Summary: Rancho Mirage (3311664/065B), La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.64436° / -116.38298°
UTM: Zone-11 N3722895 E557217
Radius: 1 mile
Elevation: 2,400 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 06S
Range: 06E
Section: 20 Qtr: XX
Meridian: S

Location: DEEP CANYON, EAST OF & PARALLEL TO HWY 74. PORTION BETWEEN COYOTE CR & HIDDEN PALMS CANYON.

Location Detail: SCATTERED WASHINGTONIA FILIFERA IN CYN BOTTOM. (MOST LARGE GROVES ARE IN STEEP SIDE CYNS). AT UC DESERT RESEARCH LAB.

Ecological: SITE AT 1400 FT W/PALMS, BACCHARIS SERGILOIDES, GRASSES SEEN 1981; PALMS BACCHARIS, GRASSES, FERNS MOSSES SEEN AT 2100 FT, 1981.

General: THIS WAS OCC #050 OF CTT62300CA.

Owner/Manager: UCNR, BLM, DFG

Dinacoma caseyi

Casey's June Beetle

Element Code: IICOLX5010

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G1	CDFG Status:
State: None	State: S1	

Habitat Associations

General: FOUND ONLY IN TWO POPULATIONS IN A SMALL AREA OF SOUTHERN PALM SPRINGS.

Micro: FOUND IN SANDY SOILS; THE FEMALES LIVE UNDERGROUND AND ONLY COME TO THE GROUND SURFACE TO MATE.

Occurrence No. 4 Map Index: 60902 EO Index: 60938

Occ Rank: None
Origin: Natural/Native occurrence
Presence: Extirpated
Trend: Unknown

Dates Last Seen
Element: 1953-04-25
Site: 1953-04-25
Record Last Updated: 2005-04-08

Quad Summary: La Quinta (3311663/065A)

County Summary: Riverside

Lat/Long: 33.71854° / -116.31381°
UTM: Zone-11 N3731160 E563576
Radius: 2/5 mile
Elevation: 120 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 05S
Range: 06E
Section: 24 Qtr: XX
Meridian: S

Location: INDIAN WELLS.

Ecological: FOUND ON ALLUVIAL FANS WHERE DISSIPATING FLOWS DEPOSIT FINER SILTS AND SANDS.

General: HISTORICAL LOCALITY, CITED IN EMERGENCY LISTING PETITION. TWO SPECIMENS IN LA COUNTY MUSEUM OF NATURAL HISTORY, COLLECTED 24-25 APR 1953.

Owner/Manager: UNKNOWN

Ditaxis claryana

glandular ditaxis — Element Code: PDEUP080L0

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G4G5	CNPS List: 2.2
State: None	State: S1S2	

Habitat Associations

General: MOJAVEAN DESERT SCRUB, SONORAN DESERT SCRUB.

Micro: IN DRY WASHES AND ON ROCKY HILLSIDES. SANDY SOILS. 0-465M.

Occurrence No. 4 — Map Index: 35282 — EO Index: 4824

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen — Element: 1932-12-15 — Site: 1932-12-15
Record Last Updated: 1996-09-03

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.67831° / -116.31221°
UTM: Zone-11 N3726700 E563754
Radius: 1 mile
Elevation: 400 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 06S
Range: 06E
Section: 01 — Qtr: XX
Meridian: S

Location: LA QUINTA AREA.
Location Detail: MAPPED AS PER BLM DIRECTIONS: T6S R6E SECTION 1.
Owner/Manager: UNKNOWN

Occurrence No. 5 — Map Index: 35281 — EO Index: 4822

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen — Element: XXXX-XX-XX — Site: XXXX-XX-XX
Record Last Updated: 1996-08-01

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.70777° / -116.27750°
UTM: Zone-11 N3729989 E566949
Radius: 1 mile
Elevation: 60 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 05S
Range: 06E
Section: 29 — Qtr: XX
Meridian: S

Location: 4 MILES WEST OF INDIO, COACHELLA VALLEY.
Location Detail: OBSERVED AT T05S R06E SECTION 29.
General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS UNDATED SITE REPORT BY BLM.
Owner/Manager: UNKNOWN

Ditaxis serrata var. californica

California ditaxis — Element Code: PDEUP08050

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5T2?	CNPS List: 3.2
State: None	State: S2.2	

Habitat Associations

General: SONORAN DESERT SCRUB.

Micro: ON SANDY WASHES AND ALLUVIAL FANS OF THE FOOTHILLS AND LOWER DESERT SLOPES. 30-1000M.

Occurrence No. 1 — Map Index: 05689 — EO Index: 18761

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen — Element: 1984-02-13 — Site: 1984-02-13 — Record Last Updated: 1989-08-11

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.70001° / -116.35973°
UTM: Zone-11 N3729076 E559334
Radius: 1/5 mile
Elevation: 400 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 05S
Range: 06E
Section: 26 — Qtr: SE
Meridian: S

Location: LIVING DESERT RESERVE ON EISENHOWER MTN TRAIL ALONG WASH, S OF PALM DESERT.

Ecological: IN A SANDY WASH ASSOCIATED WITH CREOSOTE, AMBROSIA, DALEA SCHOTTII, AND DITAXIS NEOMEXICANA.

General: 46 PLANTS OBSERVED.

Owner/Manager: PVT

Occurrence No. 2 — Map Index: 05679 — EO Index: 18760

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen — Element: 1933-01-29 — Site: 1933-01-29 — Record Last Updated: 1989-08-11

Quad Summary: La Quinta (3311663/065A), Rancho Mirage (3311664/065B)
County Summary: Riverside

Lat/Long: 33.66012° / -116.37144°
UTM: Zone-11 N3724648 E558277
Radius: 1 mile
Elevation: 800 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 06S
Range: 06E
Section: 09 — Qtr: XX
Meridian: S

Location: DEEP CANYON, SANTA ROSA MTS, 15 MILES NW OF INDIO & ABOUT 4 MI S OF PALM DESERT.

Ecological: OPEN ROCKY MESA DENSELY POPULATED WITH CHOLLA CACTUS.

General: FEW PLANTS OF DITAXIS CALIFORNICA SEEN.

Owner/Manager: STATE

Occurrence No. 3 — Map Index: 05687 — EO Index: 18762

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen — Element: 1976-05-XX — Site: 1976-05-XX — Record Last Updated: 1989-08-11

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.69168° / -116.36168°
UTM: Zone-11 N3728153 E559160
Radius: 1/5 mile
Elevation: 480 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 05S
Range: 06E
Section: 33 — Qtr: SE
Meridian: S

Location: NW SIDE OF HIDDEN VALLEY, S OF TOWN OF PALM DESERT.

Owner/Manager: PVT

Ditaxis serrata var. californica

California ditaxis — Element Code: PDEUP08050

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5T2?	CNPS List: 3.2
State: None	State: S2.2	

Habitat Associations

General: SONORAN DESERT SCRUB.

Micro: ON SANDY WASHES AND ALLUVIAL FANS OF THE FOOTHILLS AND LOWER DESERT SLOPES. 30-1000M.

Occurrence No. 4 — Map Index: 05681 — EO Index: 18758

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1978-05-XX
Site: 1978-05-XX
Record Last Updated: 1989-08-11

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.64874° / -116.36986°
UTM: Zone-11 N3723388 E558431
Radius: 1/5 mile
Elevation: 1,000 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 06S
Range: 06E
Section: 18
Meridian: S
Qtr: NW

Location: ALONG COYOTE CREEK, W OF TOWN OF LA QUINTA, & ABOUT 5 MI S OF PALM DESERT.

General: SOURCE STATES, "ALONG COYOTE CREEK E OF TOWN OF LA QUINTA," BUT COYOTE CREEK IS WEST OF TOWN OF LA QUINTA.

Owner/Manager: STATE

Occurrence No. 5 — Map Index: 05773 — EO Index: 18755

Occ Rank: None
Origin: Natural/Native occurrence
Presence: Possibly Extirpated
Trend: Unknown

Dates Last Seen
Element: 1905-04-XX
Site: 1905-04-XX
Record Last Updated: 1997-01-30

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.67924° / -116.29546°
UTM: Zone-11 N3726703 E565307
Radius: 1 mile
Elevation: 100 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 06S
Range: 07E
Section: 06
Meridian: S
Qtr: XX

Location: MARSHALL CANYON, 7 MILES WEST OF COACHELLA, NORTH BASE OF EL TORO MOUNTAIN, COLORADO DESERT.

General: TYPE LOCALITY. (AREA HIGHLY DEVELOPED, SITE MAY NOW BE A GOLF COURSE ACCORDING TO CNPS MAPS). MARSHALL CANYON IS NOW CALLED WASHINGTON STREET (TOWN OF LA QUINTA).

Owner/Manager: PVT

Falco mexicanus

prairie falcon — Element Code: ABNKD06090

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CDFG Status: SC
State: None	State: S3	

Habitat Associations

General: (NESTING) INHABITS DRY, OPEN TERRAIN, EITHER LEVEL OR HILLY.

Micro: BREEDING SITES LOCATED ON CLIFFS. FORAGES FAR AFIELD, EVEN TO MARSHLANDS AND OCEAN SHORES.

Occurrence No. 129 Map Index: 05710 EO Index: 26280

Dates Last Seen — Element: 1980-05-05 Site: 1980-05-05 Record Last Updated: 1989-08-10

* SENSITIVE *

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Quad Summary: La Quinta (3311663/065A)

County Summary: Riverside

* SENSITIVE *

Lat/Long:
UTM:
Radius:
Elevation:
Mapping Precision:
Symbol Type:
Township:
Range:
Section:
Meridian:
Qtr:

Location: *SENSITIVE* Location information suppressed.

Location Detail: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.

Owner/Manager:

Occurrence No. 130 Map Index: 05771 EO Index: 26289

Dates Last Seen — Element: 1977-05-10 Site: 1977-05-10 Record Last Updated: 1989-08-10

* SENSITIVE *

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Quad Summary: Martinez Mtn. (3311653/065D), La Quinta (3311663/065A)

County Summary: Riverside

* SENSITIVE *

Lat/Long:
UTM:
Radius:
Elevation:
Mapping Precision:
Symbol Type:
Township:
Range:
Section:
Meridian:
Qtr:

Location: *SENSITIVE* Location information suppressed.

Location Detail: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.

Owner/Manager:

Occurrence No. 131 Map Index: 05785 EO Index: 26279

Dates Last Seen — Element: 1977-06-06 Site: 1984-05-02 Record Last Updated: 1989-08-10

* SENSITIVE *

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Quad Summary: La Quinta (3311663/065A)

County Summary: Riverside

* SENSITIVE *

Lat/Long:
UTM:
Radius:
Elevation:
Mapping Precision:
Symbol Type:
Township:
Range:
Section:
Meridian:
Qtr:

Location: *SENSITIVE* Location information suppressed.

Location Detail: Please contact the California Natural Diversity Database, California Department of Fish and Game, for more information: (916) 324-3812.

Owner/Manager:

Lasiurus xanthinus

Western yellow bat — Element Code: AMACC05070

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CDFG Status:
State: None	State: S3	

Habitat Associations

General: FOUND IN VALLEY FOOTHILL RIPARIAN, DESERT RIPARIAN, DESERT WASH, AND PALM OASIS HABITATS.

Micro: ROOSTS IN TREES, PARTICULARLY PALMS. FORAGES OVER WATER AND AMONG TREES.

Occurrence No. 19 **Map Index:** 05740 **EO Index:** 58920

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1979-03-24
Site: 1979-03-24
Record Last Updated: 2004-12-29

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.71753° / -116.31142°
UTM: Zone-11 N3731049 E563799
Radius: 1 mile
Elevation: 100 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 05S
Range: 06E
Section: 24 **Qtr:** SE
Meridian: S

Location: INDIAN WELLS.

Location Detail: LAT-LONG GIVEN (33.43068 -115.1869 WITH 1 MI UNCERTAINTY), IS 0.57 MI NW OF THE WELL "INDIAN WELL" WHICH IS IN IMPERIAL CO. BUT RIVERSIDE IS GIVEN AS COUNTY OF COLLECTION THEREFORE, MAPPED AT COMMUNITY OF "INDIAN WELLS" IN RIVERSIDE CO.

General: 2 MALE SPECIMENS COLLECTED 4 NOV 1977 & 24 MAR 1979 BY D. CONSTANTINE AT "INDIAN WELLS." DEPOSITED AY MVZ #181896 & 181897.

Owner/Manager: UNKNOWN

Occurrence No. 21 **Map Index:** 52323 **EO Index:** 58923

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1987-10-19
Site: 1987-10-19
Record Last Updated: 2004-12-29

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.68637° / -116.29970°
UTM: Zone-11 N3725385 E564923
Radius: 1 mile
Elevation: 400 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 06S
Range: 07E
Section: 07 **Qtr:** XX
Meridian: S

Location: LA QUINTA.

Location Detail: EXACT LOCATION NOT GIVEN. MAPPED AT THE LAT-LONG COORDINATES GIVEN. LOCATION UNCERTAINTY GIVEN AS 762 M (0.5 MI).

General: 2 FEMALE & 1 MALE SPECIMENS COLLECTED 6 AUG 1975, 29 SEP 1982 & 19 OCT 1987 BY D. CONSTANTINE AT "LA QUINTA." DEPOSITED AT MVZ #181901-181903.

Owner/Manager: UNKNOWN

Occurrence No. 25 **Map Index:** 05676 **EO Index:** 58932

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1977-09-16
Site: 1977-09-16
Record Last Updated: 2004-12-21

Quad Summary: Rancho Mirage (3311664/065B), La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.71030° / -116.37417°
UTM: Zone-11 N3730211 E557990
Radius: 1 mile
Elevation: 225 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 05S
Range: 06E
Section: 28 **Qtr:** XX
Meridian: S

Location: CITY OF PALM DESERT.

Location Detail: EXACT LOCATION NOT KNOWN. MAPPED IN THE VICINITY OF CITY OF PALM DESERT.

General: 2 MALE SPECIMENS COLLECTED 2 JUN 1978 & 16 SEP 1977 BY D. CONSTANTINE AT "PALM DESERT." DEPOSITED AT MVZ # 181905 & 181906.

Owner/Manager: UNKNOWN

Macrobaenetes valgum

Coachella giant sand treader cricket — Element Code: IIORT22020

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G1G2	CDFG Status:
State: None	State: S1S2	

Habitat Associations

General: KNOWN FROM THE SAND DUNE RIDGES IN THE VICINITY OF COACHELLA VALLEY.

Micro: POPULATION SIZE REGULATED BY AMOUNT OF ANNUAL RAINFALL; SOME SPOTS FAVOR PERMANENT HABITATION WHERE SPRINGS DAMPEN SAND.

Occurrence No. 2 — Map Index: 05795 — EO Index: 22602

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extent
Trend: Unknown

Dates Last Seen — Element: XXXX-XX-XX — Site: XXXX-XX-XX
Record Last Updated: 1989-08-11

Quad Summary: Indio (3311662/064B), La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.72224° / -116.26528°
UTM: Zone-11 N3731601 E568070
Radius: 1 mile
Elevation: 40 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 05S
Range: 07E
Section: 21 — Qtr: W
Meridian: S

Location: 2 MILES W OF INDIO.

Ecological: FOUND ON WIND-SWEPT SAND DUNE RIDGES. ALTHOUGH LARGELY REGULATED IN ABUNDANCE BY WINTER RAINS, THERE ARE SOME SPOTS, WHERE SPRINGS KEEP THE SAND DAMP, THAT ARE FAVORABLE TO PERMANENT HABITATION.

General: IN VERY DRY YEARS, THE SPECIES DISAPPEARS OVER MOST OF THE SAND AREAS.

Owner/Manager: PVT

Occurrence No. 3 — Map Index: 05760 — EO Index: 22601

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen — Element: 1958-05-03 — Site: 1958-05-03
Record Last Updated: 1989-08-11

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.72167° / -116.30084°
UTM: Zone-11 N3731515 E564776
Radius: 1 mile
Elevation: 80 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 05S
Range: 07E
Section: 19 — Qtr: W
Meridian: S

Location: 4 MILES WEST OF INDIO.

Ecological: FOUND ON WIND-SWEPT SAND DUNE RIDGES. ALTHOUGH THIS SPECIES IS LARGELY REGULATED IN ABUNDANCE BY WINTER RAINS, SOME SPOTS, WHERE SPRINGS KEEP THE SAND DAMP, ARE FAVORABLE TO PERMANENT HABITATION.

General: IN VERY DRY YEARS, THE SPECIES DISAPPEARS OVER MOST OF THE SAND AREAS.

Owner/Manager: PVT

Occurrence No. 6 — Map Index: 05675 — EO Index: 22599

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen — Element: 1959-05-21 — Site: 1959-05-21
Record Last Updated: 1989-08-11

Quad Summary: La Quinta (3311663/065A), Myoma (3311673/082D), Rancho Mirage (3311664/065B), Cathedral City (3311674/082C)
County Summary: Riverside

Lat/Long: 33.73723° / -116.37418°
UTM: Zone-11 N3733198 E557970
Radius: 1 mile
Elevation: 60 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 05S
Range: 06E
Section: 16 — Qtr: W
Meridian: S

Location: 1 MILE NORTH OF PALM DESERT.

Ecological: FOUND ON WIND-SWEPT SAND DUNE RIDGES. ALTHOUGH THIS SPECIES IS LARGELY REGULATED IN ABUNDANCE BY WINTER RAINS, SOME SPOTS, WHERE SPRINGS KEEP THE SAND DAMP, ARE FAVORABLE TO PERMANENT HABITATION.

General: IN VERY DRY YEARS, THE SPECIES DISAPPEARS OVER MOST OF THE SAND AREAS.

Owner/Manager: PVT

Nemacaulis denudata var. gracilis

slender woolly-heads — Element Code: PDPGN0G012

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3G4T3?	CNPS List: 2.2
State: None	State: S2S3	

Habitat Associations

General: COASTAL DUNES, DESERT DUNES, SONORAN DESERT SCRUB.

Micro: IN DUNES OR SAND. 0-560M.

Occurrence No. 6 — Map Index: 30068 — EO Index: 19785

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen — Element: 1980-05-20; Site: 1980-05-20; Record Last Updated: 1994-07-29

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.72558° / -116.31900°
UTM: Zone-11 N3731937 E563090
Radius: 1/5 mile
Elevation: 100 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 05S
Range: 06E
Section: 24 — Qtr: NW
Meridian: S

Location: NORTH SIDE OF WHITEWATER WASH, WEST OF MILES AVE AND NORTH OF HWY 111, INDIAN WELLS.

Ecological: DUNE.

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1980 COLLECTION BY ERTTER AND STRACHAN.

Owner/Manager: UNKNOWN

Occurrence No. 7 — Map Index: 30069 — EO Index: 19777

Occ Rank: None
Origin: Natural/Native occurrence
Presence: Extirpated
Trend: Unknown

Dates Last Seen — Element: 1978-04-02; Site: 198X-XX-XX; Record Last Updated: 1994-09-26

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.71404° / -116.30767°
UTM: Zone-11 N3730665 E564149
Radius: 1/5 mile
Elevation: 100 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 05S
Range: 06E
Section: 24 — Qtr: SE
Meridian: S

Location: SOUTHWEST OF INTERSECTION OF HIGHWAY 111 AND BAY CLUB DRIVE, INDIAN WELLS.

Ecological: SAND DUNES.

Threat: ACCORDING TO SANDERS (1993) SITE HAS BEEN DESTROYED AND A COUNTRY CLUB BUILT ON THE SITE.

Owner/Manager: PVT

Occurrence No. 13 — Map Index: 05679 — EO Index: 55249

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen — Element: XXXX-XX-XX; Site: XXXX-XX-XX; Record Last Updated: 2004-04-23

Quad Summary: La Quinta (3311663/065A), Rancho Mirage (3311664/065B)
County Summary: Riverside

Lat/Long: 33.66012° / -116.37144°
UTM: Zone-11 N3724648 E558277
Radius: 1 mile
Elevation: 800 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 06S
Range: 06E
Section: 09 — Qtr: XX
Meridian: S

Location: DEEP CANYON.

Location Detail: EXACT LOCATION UNKNOWN. SOURCE LISTS SITE AS "DEEP CANYON IN THE COACHELLA VALLEY OF RIVERSIDE COUNTY". MAPPED IN VICINITY OF DEEP CANYON AS CNDDB'S BEST GUESS.

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS 2001 "CRAIG REISER'S RARE PLANTS OF SAN DIEGO COUNTY". NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Oliarces clara

cheeseweed owlfly (cheeseweed moth lacewing) — Element Code: IINEU04010

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G1G3	CDFG Status:
State: None	State: S1S3	

Habitat Associations

General: INHABITS THE LOWER COLORADO RIVER DRAINAGE.

Micro: FOUND UNDER ROCKS OR IN FLIGHT OVER STREAMS. LARREA TRIDENTATA IS THE SUSPECTED LARVAL HOST.

Occurrence No. 5 — Map Index: 58315 — EO Index: 58351

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1976-04-30
Site: 1976-04-30
Record Last Updated: 2005-03-10

Quad Summary: La Quinta (3311663/065A), Rancho Mirage (3311664/065B)

County Summary: Riverside

Lat/Long: 33.65217° / -116.37463°
UTM: Zone-11 N3723766 E557985
Area: 524.0 acres
Elevation: 800 ft

Mapping Precision: SPECIFIC
Symbol Type: POLYGON

Township: 06S
Range: 06E
Section: 17 Qtr: XX
Meridian: S

Location: DEEP CANYON, NEAR PALM DESERT.

General: UNKNOWN NUMBER COLLECTED 30 APR 1976. DEPOSITED IN UC RIVERSIDE ENTOMOLOGY MUSEUM.

Owner/Manager: UCNR, BLM, DFG

Phrynosoma mcallii

flat-tailed horned lizard

Element Code: ARACF12040

Status	NDDB Element Ranks	Other Lists
Federal: Proposed Threatened	Global: G3	CDFG Status: SC
State: None	State: S2	

Habitat Associations

General: RESTRICTED TO DESERT WASHES AND DESERT FLATS IN CENTRAL RIVERSIDE, EASTERN SAN DIEGO, AND IMPERIAL COUNTIES.

Micro: CRITICAL HABITAT ELEMENT IS FINE SAND, INTO WHICH LIZARDS BURROW TO AVOID TEMP EXTREMES; REQUIRE VEG COVER AND ANTS.

Occurrence No. 38 Map Index: 05750 EO Index: 27931

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1978-06-XX
Site: 1978-06-XX
Record Last Updated: 1989-08-10

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.69642° / -116.30702°
UTM: Zone-11 N3728711 E564222
Radius: 1 mile
Elevation: 430 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 05S
Range: 06E
Section: 36 Qtr: XX
Meridian: S

Location: NEAR BERMUDA DUNES.

Location Detail: 10 OBS IN STAND OF LARREA & ATRIPLEX IN DUNES.

Ecological: DOMINANT PLANTS: CAMISSONIA CLAVIFORMIS, SCHISMUS BARBATUS, ATRIPLEX CANESCENS, LARREA TRIDENTATA, CRYPTANTHA ANGUSTIFOLIA. SOIL: ROSITAS LOAMY SAND.

Owner/Manager: UNKNOWN

Occurrence No. 75 Map Index: 05792 EO Index: 34683

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: XXXX-XX-XX
Site: XXXX-XX-XX
Record Last Updated: 1998-09-08

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.68196° / -116.27251°
UTM: Zone-11 N3724913 E567448
Radius: 1 mile
Elevation: 20 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 06S
Range: 07E
Section: 08 Qtr: XX
Meridian: S

Location: 2 MILES EAST OF LA QUINTA.

General: MUSEUM COLLECTION (SDNHM) #23368.

Owner/Manager: UNKNOWN

Polioptila melanura

black-tailed gnatcatcher — Element Code: ABPBJ08030

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CDFG Status:
State: None	State: S4	

Habitat Associations

General: INHABITS PRIMARILY WOODED DESERT WASH HABITATS; ALSO OCCURS IN DESERT SCRUB HABITAT, ESPECIALLY IN WINTER.

Micro: NESTS IN DESERT WASH CONTAINING MESQUITE, PALOVERDE, IRONWOOD, ACACIA; ABSENT FROM AREAS WHERE SALT CEDAR INTRODUCED.

Occurrence No. 19 Map Index: 05750 EO Index: 25011

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1953-01-13
Site: 1953-01-13
Record Last Updated: 1989-08-10

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.69642° / -116.30702°
UTM: Zone-11 N3728711 E564222
Radius: 1 mile
Elevation: 430 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 05S
Range: 06E
Section: 36 Qtr: XX
Meridian: S

Location: 2 MI S OF INDIAN WELLS.

General: CSULB SPECIMEN #525.

Owner/Manager: UNKNOWN

Occurrence No. 20 Map Index: 05740 EO Index: 25017

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1919-03-16
Site: 1919-03-16
Record Last Updated: 1989-08-10

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.71753° / -116.31142°
UTM: Zone-11 N3731049 E563799
Radius: 1 mile
Elevation: 100 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 05S
Range: 06E
Section: 24 Qtr: SE
Meridian: S

Location: INDIAN WELLS.

General: SBCM SPECIMEN #8137 AND WFVZ EGG SET (1930-04-13).

Owner/Manager: UNKNOWN

Occurrence No. 21 Map Index: 05744 EO Index: 25009

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1984-05-02
Site: 1984-05-02
Record Last Updated: 1989-08-10

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.64252° / -116.31278°
UTM: Zone-11 N3722732 E563728
Radius: 1 mile
Elevation: 415 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 06S
Range: 06E
Section: 13 Qtr: S
Meridian: S

Location: BAJADA S OF LA QUINTA.

Ecological: HABITAT CONSISTS OF PALO VERDE, MESQUITE, SMOKE TREE WASH, CREOSOTE BAJADA.

Threat: SITE OF PROPOSED FLOOD CONTROL PROJECT; DUMPING AND ORV USE ALSO.

General: 50+ OBSERVED ON BAJADA, THROUGH LA QUINTA, AND NORTH OF TOWN; 6 OBSERVED IN 1984.

Owner/Manager: UNKNOWN

Polioptila melanura

black-tailed gnatcatcher — Element Code: ABPBJ08030

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CDFG Status:
State: None	State: S4	

Habitat Associations

General: INHABITS PRIMARILY WOODED DESERT WASH HABITATS; ALSO OCCURS IN DESERT SCRUB HABITAT, ESPECIALLY IN WINTER.

Micro: NESTS IN DESERT WASH CONTAINING MESQUITE, PALOVERDE, IRONWOOD, ACACIA; ABSENT FROM AREAS WHERE SALT CEDAR INTRODUCED.

Occurrence No. 27 — Map Index: 05786 — EO Index: 25010

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1984-05-01
Site: 1984-05-01
Record Last Updated: 1989-08-10

Quad Summary: La Quinta (3311663/065A)

County Summary: Riverside

Lat/Long:	33.66279° / -116.28028°		Township: 06S	
UTM:	Zone-11 N3725000 E566726		Range: 07E	
Radius:	1/5 mile	Mapping Precision: NON-SPECIFIC	Section: 08	Qtr: SW
Elevation:	150 ft	Symbol Type: POINT	Meridian: S	

Location: APPROX 1.5 MI E OF LA QUINTA JUST W OF COACHELLA CANAL, COACHELLA VALLEY.

Ecological: HABITAT IS BAJADA WITH VEGETATION CONSISTING OF ENCILIA SP, LARREA SP, AND PROSOPIS SP.

General: 2 INDIVIDUALS OBSERVED IN DEBRIS CHUTES OF ROCKY SLOPE.

Owner/Manager: BLM, PVT

Pyrocephalus rubinus

vermilion flycatcher

Element Code: ABPAE36010

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CDFG Status: SC
State: None	State: S2S3	

Habitat Associations

General: (NESTING) DURING NESTING, INHABITS DESERT RIPARIAN ADJ TO IRRIG FIELDS, IRRIG DITCHES, PASTURES, OTHER OPEN, MESIC AREAS

Micro: NEST IN COTTONWOOD, WILLOW, MESQUITE, AND OTHER LARGE DESERT RIPARIAN TREES.

Occurrence No. 3 Map Index: 05740 EO Index: 25282

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1930-05-11
Site: 1930-05-11
Record Last Updated: 1989-08-10

Quad Summary: La Quinta (3311663/065A)

County Summary: Riverside

Lat/Long: 33.71753° / -116.31142°
UTM: Zone-11 N3731049 E563799
Radius: 1 mile
Elevation: 100 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 05S
Range: 06E
Section: 24 Qtr: SE
Meridian: S

Location: INDIAN WELLS.

General: UCLA DICKEY COLLECTION #32572.

Owner/Manager: UNKNOWN

Selaginella eremophila

desert spike-moss

Element Code: PPSEL010G0

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G4	CNPS List: 2.2
State: None	State: S2.2?	

Habitat Associations

General: SONORAN DESERT SCRUB.

Micro: SHADED SITES. GRAVELLY SOILS; CREVICES OR AMONG ROCKS. 300-2425M.

Occurrence No. 20 Map Index: 05679 EO Index: 55290

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: XXXX-XX-XX
Site: XXXX-XX-XX
Record Last Updated: 2004-04-27

Quad Summary: La Quinta (3311663/065A), Rancho Mirage (3311664/065B)

County Summary: Riverside

Lat/Long: 33.66012° / -116.37144°
UTM: Zone-11 N3724648 E558277
Radius: 1 mile
Elevation: 800 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 06S
Range: 06E
Section: 09 Qtr: XX
Meridian: S

Location: DEEP CANYON.

Location Detail: EXACT LOCATION UNKNOWN, SOURCE LISTS SITE AS "DEEP CANYON IN THE COACHELLA VALLEY OF RIVERSIDE COUNTY". MAPPED IN VICINITY OF MOUTH OF DEEP CANYON AS CNDDB'S BEST GUESS.

General: ONLY SOURCE OF INFORMATION FOR THIS SITE IS CRAIG REISER'S RARE PLANTS OF SAN DIEGO COUNTY. NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Spermophilus tereticaudus chlorus

Palm Springs round-tailed ground squirrel — Element Code: AMAFB05161

Status	NDDB Element Ranks	Other Lists
Federal: Candidate	Global: G5T1T2	CDFG Status: SC
State: None	State: S1S2	

Habitat Associations

General: RESTRICTED TO THE COACHELLA VALLEY. PREFERS DESERT SUCCULENT SCRUB, DESERT WASH, DESERT SCRUB, ALKALI SCRUB, & LEVEES.

Micro: PREFERS OPEN, FLAT, GRASSY AREAS IN FINE-TEXTURED, SANDY SOIL. DENSITY CORRELATED WITH WINTER RAINFALL.

Occurrence No. 12 **Map Index:** 51827 **EO Index:** 51827

Occ Rank: Poor
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 2002-08-24
Site: 2002-08-24
Record Last Updated: 2003-07-21

Quad Summary: La Quinta (3311663/065A)

County Summary: Riverside

Lat/Long: 33.70857° / -116.29077°
UTM: Zone-11 N3730089 E565719
Area: 58.6 acres
Elevation: 75 ft
Mapping Precision: SPECIFIC
Symbol Type: POLYGON
Township: 05S
Range: 07E
Section: 30 **Qtr:** NE
Meridian: S

Location: EAST OF WASHINGTON STREET, NORTH OF 47TH AVENUE, WEST OF HIGHWAY 111, AND SOUTH OF SIMON DRIVE, LA QUINTA

Ecological: HABITAT CONSISTS OF HIGHLY-DISTURBED CREOSITE BUSH SCRUB.

Threat: THREATENED BY DEVELOPMENT.

General: ONE JUVENILE CAPTURED/RELEASED ON 20 AUG 2002, DURING A 775-TRAPNIGHT SURVEY FOR PALM SPRINGS POCKET MOUSE.

Owner/Manager: PVT

Stemodia durantifolia

purple stemodia

Element Code: PDSCR1U010

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CNPS List: 2.1
State: None	State: S2.1?	

Habitat Associations

General: SONORAN DESERT SCRUB.

Micro: SANDY SOILS; MESIC SITES. 180-300M.

Occurrence No. 14 Map Index: 49474 EO Index: 49474

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1942-XX-XX
Site: 1942-XX-XX
Record Last Updated: 2002-11-22

Quad Summary: La Quinta (3311663/065A)

County Summary: Riverside

Lat/Long: 33.69576° / -116.35597°
UTM: Zone-11 N3728609 E559886
Radius: 1 mile
Elevation: 600 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 05S
Range: 06E
Section: 33 Qtr: XX
Meridian: S

Location: EAGLE CANYON, COLORADO DESERT.

Location Detail: FOUND IN BOTTOM OF CANYON. EAGLE CANYON IS NOT CLEARLY MARKED ON MAP. MAPPED AS BEST GUESS TO INCLUDE CANYONS BETWEEN LIVING DESERT PARK AND EISENHOWER MOUNTAIN.

Ecological: GROWING IN WET PLACES.

General: NEEDS FIELDWORK.

Owner/Manager: UNKNOWN

Toxostoma crissale

Crissal thrasher

Element Code: ABPBK06090

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G5	CDFG Status: SC
State: None	State: S3	

Habitat Associations

General: RESIDENT OF SOUTHEASTERN DESERTS IN DESERT RIPARIAN AND DESERT WASH HABITATS.

Micro: NESTS IN DENSE VEG ALONG STREAMS/WASHES; MESQUITE, SCREWBEAN MESQUITE, IRONWOOD, CATCLAW, ACACIA, ARROWWEED, WILLOW.

Occurrence No. 17 Map Index: 05740 EO Index: 24420

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1932-12-29
Site: 1932-12-29
Record Last Updated: 1989-08-10

Quad Summary: La Quinta (3311663/065A)

County Summary: Riverside

Lat/Long: 33.71753° / -116.31142°
UTM: Zone-11 N3731049 E563799
Radius: 1 mile
Elevation: 100 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 05S
Range: 06E
Section: 24 Qtr: SE
Meridian: S

Location: INDIAN WELLS.

General: #32325 UCLA.

Owner/Manager: UNKNOWN

Toxostoma lecontei

Le Conte's thrasher

Element Code: ABPBK05100

Status	NDDB Element Ranks	Other Lists
Federal: None	Global: G3	CDFG Status: SC
State: None	State: S3	

Habitat Associations

General: DESERT RESIDENT; PRIMARILY OF OPEN DESERT WASH, DESERT SCRUB, ALKALI DESERT SCRUB, AND DESERT SUCCULENT SCRUB HABITATS.

Micro: COMMONLY NESTS IN A DENSE, SPINY SHRUB OR DENSELY BRANCHED CACTUS IN DESERT WASH HABITAT, USUALLY 2-8 FEET ABOVE GROUND.

Occurrence No. 25 Map Index: 05740 EO Index: 24536

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1919-03-16
Site: 1919-03-16
Record Last Updated: 1989-08-10

Quad Summary: La Quinta (3311663/065A)

County Summary: Riverside

Lat/Long: 33.71753° / -116.31142°
UTM: Zone-11 N3731049 E563799
Radius: 1 mile
Elevation: 100 ft

Mapping Precision: NON-SPECIFIC
Symbol Type: POINT

Township: 05S
Range: 06E
Section: 24 Qtr: SE
Meridian: S

Location: INDIAN WELLS.

General: SBCM SPECIMEN #S-4151.

Owner/Manager: UNKNOWN

Uma inornata

Coachella Valley fringe-toed lizard — Element Code: ARACF15010

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G1Q	CDFG Status:
State: Endangered	State: S1	

Habitat Associations

General: LIMITED TO SANDY AREAS IN THE COACHELLA VALLEY, RIVERSIDE COUNTY.

Micro: REQUIRES FINE, LOOSE, WINDBLOWN SAND (FOR BURROWING), INTERSPERSED WITH HARDPAN AND WIDELY SPACED DESERT SHRUBS.

Occurrence No. 13 — Map Index: 33785 — EO Index: 27910

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen — Element: 1975-07-XX — Site: 1975-07-XX — Record Last Updated: 2003-02-24

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.71424° / -116.30319° — Township: 05S
UTM: Zone-11 N3730690 E564564 — Range: 07E
Area: — Mapping Precision: NON-SPECIFIC — Section: 30 — Qtr: XX
Elevation: 80 ft — Symbol Type: POLYGON — Meridian: S

Location: AREA FROM MILES AVE TO 1.2 MILE SOUTH & WASHINGTON STREET TO 1.3 MILES WEST; VIC OF WHITEWATER RIVER, EAST INDIAN WELLS

Location Detail: ENGLAND AND NELSON: T5S R7E SW 1/4 OF NE 1/4 SECTION 30. DAVIS: T5S R6E NE 1/4 SECTION 25, SE 1/4 SECTION 24; T5S R7E NW 1/4 SECTION 30, SW 1/4 SECTION 19. SSC #768: 1 MI E INDIAN WELLS. SDNHM #10893: INDIAN WELLS.

Ecological: NEW GOLF COURSE OCCUPIES A LARGE PORTION OF THE HABITAT. PROBABLY SOME LIZARDS LEFT IN REMAINING HABITAT ACCORDING TO BARROWS (1988).

General: ENGLAND AND NELSON LOCALITY FOR JULY 1975. DAVIS RECORDS FOR TIME PERIOD 1969-1975. HISTORICAL COLLECTION (SDNHM #10893, COLLECTION DATE UNKNOWN). SSC COLLECTION #768. INCLUDES LOCATIONS FROM RECOVERY PLAN (1984)

Owner/Manager: UNKNOWN

Occurrence No. 14 — Map Index: 05776 — EO Index: 27914

Occ Rank: Fair
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen — Element: 19XX-XX-XX — Site: 19XX-XX-XX — Record Last Updated: 2003-02-03

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.69031° / -116.30607° — Township: 05S
UTM: Zone-11 N3728035 E564315 — Range: 06E
Area: — Mapping Precision: NON-SPECIFIC — Section: 36 — Qtr: SE
Elevation: 53 ft — Symbol Type: POLYGON — Meridian: S

Location: 0.5 MILE NORTH OF AVENUE 50 AND BORDERED TO THE WEST BY EISENHOWER DRIVE; APPROXIMATELY 1 MILE NORTH OF LA QUINTA

Location Detail: SDNHM #39750: 1 MI N OF LA QUINTA. UNIDENTIFIED MUSEUM RECORD: T5S R6E NE 1/4 OF SE 1/4 SECTION 36.

Ecological: SOME HABITAT AND LIZARDS EXTANT ACCORDING TO BARROWS (1988)

General: MUSEUM RECORD (MUSEUM NOT IDENTIFIED) FROM THE 1900'S. HISTORICAL COLLECTION #39750 SDNHM, COLLECTION DATE UNKNOWN. INCLUDES LOCATIONS FROM RECOVERY PLAN (1984)

Owner/Manager: UNKNOWN

Occurrence No. 21 — Map Index: 33786 — EO Index: 27911

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen — Element: 1975-07-XX — Site: 1975-07-XX — Record Last Updated: 2003-02-24

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.67767° / -116.27703° — Township: 06S
UTM: Zone-11 N3726652 E567016 — Range: 07E
Radius: 2/5 mile — Mapping Precision: NON-SPECIFIC — Section: 05 — Qtr: XX
Elevation: 40 ft — Symbol Type: POINT — Meridian: S

Location: LOCATED BETWEEN AVENUE 50 AND AVENUE 52, WEST OF JEFFERSON STREET; 1 MILE EAST OF LA QUINTA.

Location Detail: SSC #769: 1 MI E LA QUINTA. ENGLAND AND NELSON: T6S R7E SE 1/4 OF NW 1/4 SECTION 5.

General: ENGLAND AND NELSON LOCALITY FROM 1975. HISTORICAL COLLECTION #769 SSC. COLLECTED 4 SEP 1968. INCLUDES DATA FROM RECOVERY PLAN (1984).

Owner/Manager: UNKNOWN

Uma inornata

Coachella Valley fringe-toed lizard — Element Code: ARACF15010

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G1Q	CDFG Status:
State: Endangered	State: S1	

Habitat Associations

General: LIMITED TO SANDY AREAS IN THE COACHELLA VALLEY, RIVERSIDE COUNTY.

Micro: REQUIRES FINE, LOOSE, WINDBLOWN SAND (FOR BURROWING), INTERSPERSED WITH HARDPAN AND WIDELY SPACED DESERT SHRUBS.

Occurrence No. 43 — Map Index: 33784 — EO Index: 27903

Occ Rank: Poor
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Decreasing

Dates Last Seen — Element: 1980-04-XX — Site: 1980-04-XX — Record Last Updated: 2003-01-24

Quad Summary: Myoma (3311673/082D), La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.75902° / -116.35443°
UTM: Zone-11 N3735624 E559785
Radius: 3/5 mile
Elevation: 260 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 05S
Range: 06E
Section: 03 — Qtr: XX
Meridian: S

Location: 2.4 MILES NNE OF PALM DESERT, COACHELLA VALLEY.

Location Detail: VICINITY OF COUNTRY CLUB DR AND COOK ST. TURNER STUDY PLOT 7: 38 LIZARDS CAPTURED AND MARKED IN 1980. ENGLAND AND NELSON: T5S R6E NW 1/4 OF NW 1/4 SECTION 10.

Ecological: HABITAT OF SANDY PLAINS. HABITAT HAS BEEN DEGRADED BUT SOME EXTANT HABITAT OF POOR QUALITY AND POSSIBLY SOME LIZARDS.

Threat: DEVELOPMENT

General: ENGLAND AND NELSON LOCALITY FOR JULY 1975. TURNER STUDY DATA FOR APRIL 1980. INCLUDES LOCATIONS FROM RECOVERY PLAN (1984).

Owner/Manager: UNKNOWN

Occurrence No. 52 — Map Index: 05677 — EO Index: 27901

Occ Rank: None
Origin: Natural/Native occurrence
Presence: Extirpated
Trend: Unknown

Dates Last Seen — Element: 19XX-XX-XX — Site: 19XX-XX-XX — Record Last Updated: 1996-01-11

Quad Summary: Rancho Mirage (3311664/065B), La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.71557° / -116.37278°
UTM: Zone-11 N3730796 E558115
Radius: 1/5 mile
Elevation: 219 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 05S
Range: 06E
Section: 21 — Qtr: SW
Meridian: S

Location: 3 MI W OF INDIAN WELLS, SAND HILLS E OF RD. (MAPPED W/IN CITY OF PALM DESERT.)

Ecological: NO EXTANT LIZARDS OR HABITAT. COMPLETELY DEVELOPED ACCORDING TO BARROWS (1988).

General: HISTORICAL COLLECTION #7153 SDNHM. DATE UNKNOWN.

Owner/Manager: UNKNOWN

Occurrence No. 82 — Map Index: 05769 — EO Index: 27885

Occ Rank: Poor
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Decreasing

Dates Last Seen — Element: 1968-06-09 — Site: 1968-06-09 — Record Last Updated: 2003-02-18

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.71796° / -116.28182°
UTM: Zone-11 N3731116 E566541
Area:
Elevation: 80 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 05S
Range: 07E
Section: 20 — Qtr: SW
Meridian: S

Location: SOUTH OF MILES AVENUE AND NORTH OF WHITEWATER RIVER, EAST OF INDIAN WELLS

Location Detail: LACM #115546-7:OFF DUNE PALMS ROAD NR PALM DESERT. M. LONG FG 756: DUNE PALMS RD OFF MILES AVE. M. LONG: N END DUNE PALMS RD, 1/2 MI S BERMUDA DUNES COUNTRY CLUB. DAVIS RECORD: T5S R7E SW 1/4 SECTION 20.

Ecological: LARGE AREA WITH SOME EXTANT HABITAT BUT MOSTLY DEGRADED. PRESUMABLY A FEW LIZARDS BUT PROBABLY NOT A VIABLE POPULATION.

General: LACM #115546-7 COLLECTED ON 9 JUN 1968. M. LONG: SPECIMENS COLLECTED 27 APR 1968. DAVIS RECORD FOR TIME PERIOD 1969-1975. INCLUDES DATA FROM RECOVERY PLAN (1984).

Owner/Manager: UNKNOWN

Uma inornata

Coachella Valley fringe-toed lizard — Element Code: ARACF15010

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G1Q	CDFG Status:
State: Endangered	State: S1	

Habitat Associations

General: LIMITED TO SANDY AREAS IN THE COACHELLA VALLEY, RIVERSIDE COUNTY.

Micro: REQUIRES FINE, LOOSE, WINDBLOWN SAND (FOR BURROWING), INTERSPERSED WITH HARDPAN AND WIDELY SPACED DESERT SHRUBS.

Occurrence No. 168 Map Index: 49981 EO Index: 49981

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-XX-XX
Site: 1975-XX-XX
Record Last Updated: 2003-01-24

Quad Summary: La Quinta (3311663/065A), Rancho Mirage (3311664/065B)
County Summary: Riverside

Lat/Long: 33.73279° / -116.37316°
UTM: Zone-11 N3732705 E558068
Area:
Elevation: 180 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 05S
Range: 06E
Section: 16 Qtr: XX
Meridian: S

Location: AREA 0.8 MILE NORTH OF STATE ROUTE 111, SOUTH OF THE WHITEWATER RIVER; PALM DESERT
Location Detail: T5S R6E NW 1/4 OF SW 1/4 SECTION 16 AND SE 1/4 OF SE 1/4 SECTION 17 - WEST AND EAST OF PORTOLA RD
General: DAVIS RECORD FOR TIME PERIOD 1969-1975. INCLUDES DATA FROM RECOVERY PLAN (1984).
Owner/Manager: UNKNOWN

Occurrence No. 169 Map Index: 49982 EO Index: 49982

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-XX-XX
Site: 1975-XX-XX
Record Last Updated: 2003-01-24

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.73423° / -116.35839°
UTM: Zone-11 N3732673 E559435
Area:
Elevation: 160 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 05S
Range: 06E
Section: 16 Qtr: SE
Meridian: S

Location: 0 9 MILE NORTH OF STATE ROUTE 111, VICINITY OF WHITEWATER RIVER; PALM DESERT
Location Detail: T5S R6E NE 1/4 OF SE 1/4 SECTION 16
General: DAVIS RECORD FOR TIME PERIOD 1969-1975. INCLUDES DATA FROM RECOVERY PLAN (1984).
Owner/Manager: UNKNOWN

Occurrence No. 174 Map Index: 50002 EO Index: 50002

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-XX-XX
Site: 1975-XX-XX
Record Last Updated: 2003-01-27

Quad Summary: La Quinta (3311663/065A), Myoma (3311673/082D)
County Summary: Riverside

Lat/Long: 33.74920° / -116.27546°
UTM: Zone-11 N3734584 E567104
Area:
Elevation: 60 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 05S
Range: 07E
Section: 08 Qtr: SE
Meridian: S

Location: VICINITY OF BERMUDA DUNES AIRPORT, SOUTH OF I-10; MYOMA
Location Detail: T5S R7E NW 1/4 OF SE 1/4 SECTION 8
General: DAVIS RECORD FOR TIME PERIOD 1969-1975
Owner/Manager: UNKNOWN

Uma inornata

Coachella Valley fringe-toed lizard — Element Code: ARACF15010

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G1Q	CDFG Status:
State: Endangered	State: S1	

Habitat Associations

General: LIMITED TO SANDY AREAS IN THE COACHELLA VALLEY, RIVERSIDE COUNTY.

Micro: REQUIRES FINE, LOOSE, WINDBLOWN SAND (FOR BURROWING), INTERSPERSED WITH HARDPAN AND WIDELY SPACED DESERT SHRUBS.

Occurrence No. 177 Map Index: 50008 EO Index: 50008

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-XX-XX
Site: 1975-XX-XX
Record Last Updated: 2003-01-28

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.73064° / -116.33672°
UTM: Zone-11 N3732488 E561445
Area:
Elevation: 160 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 05S
Range: 06E
Section: 14 Qtr: SW
Meridian: S

Location: NE OF THE INTERSECTION OF AVENUE 44 AND THE WHITEWATER RIVER, 0.6 MILE NORTH OF STATE ROUTE 111; NW INDIAN WELLS.

Location Detail: BORDERED TO SOUTH BY AVENUE 44. T5S R6E SW 1/4 OF SW 1/4 SECTION 14

General: DAVIS RECORD FOR TIME PERIOD 1969-1975. INCLUDES DATA FROM RECOVERY PLAN (1984).

Owner/Manager: UNKNOWN

Occurrence No. 178 Map Index: 50009 EO Index: 50009

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-07-XX
Site: 1975-07-XX
Record Last Updated: 2003-01-28

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.72897° / -116.32782°
UTM: Zone-11 N3732308 E562271
Area:
Elevation: 180 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 05S
Range: 06E
Section: 14 Qtr: XX
Meridian: S

Location: APPROXIMATELY 1.4 MILES WEST OF WASHINGTON ST, NORTH OF THE WHITEWATER RIVER, BETWEEN PALM DESERT AND INDIAN WELLS

Location Detail: NORTH AND SOUTH OF AVENUE 44. ENGLAND AND NELSON: T5S R6E SW 1/4 OF SE 1/4 SECTION 14. MUSEUM RECORD: T5S R6E NW 1/4 OF NE 1/4 SECTION 23.

General: ENGLAND AND NELSON RECORD FOR JULY 1975. MUSEUM RECORD (MUSEUM UNIDENTIFIED) FROM THE 1900'S. INCLUDES DATA FROM RECOVERY PLAN (1984).

Owner/Manager: UNKNOWN

Occurrence No. 179 Map Index: 50012 EO Index: 50012

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-07-XX
Site: 1975-07-XX
Record Last Updated: 2003-01-28

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.72695° / -116.30165°
UTM: Zone-11 N3732100 E564697
Area:
Elevation: 130 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 05S
Range: 07E
Section: 19 Qtr: NW
Meridian: S

Location: SOUTH OF AVENUE 44 AND NORTH OF STATE ROUTE 111, INDIAN WELLS

Location Detail: SORDERED TO NORTH BY AVENUE 44 AND TO WEST BY WASHINGTON STREET. T5S R7E NW 1/4 OF NW 1/4 SECTION 19.

General: ENGLAND AND NELSON LOCALITY FOR JULY 1975. INCLUDES DATA FROM RECOVERY PLAN (1984).

Owner/Manager: UNKNOWN

Uma inornata

Coachella Valley fringe-toed lizard — Element Code: ARACF15010

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G1Q	CDFG Status:
State: Endangered	State: S1	

Habitat Associations

General: LIMITED TO SANDY AREAS IN THE COACHELLA VALLEY, RIVERSIDE COUNTY.

Micro: REQUIRES FINE, LOOSE, WINDBLOWN SAND (FOR BURROWING), INTERSPERSED WITH HARDPAN AND WIDELY SPACED DESERT SHRUBS.

Occurrence No. 180 Map Index: 50013 EO Index: 50013

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-XX-XX
Site: 1975-XX-XX
Record Last Updated: 2003-02-24

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.73452° / -116.27545°
UTM: Zone-11 N3732956 E567118
Area:
Elevation: 60 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 05S
Range: 07E
Section: 17 Qtr: XX
Meridian: S

Location: VICINITY OF BERMUDA DUNES COUNTRY CLUB, EAST OF ADAMS STREET AND NORTH OF AVENUE 44, SOUTH OF MYOMA

Location Detail: DAVIS: T5S R7E NW 1/4 OF SE 1/4 SECTION 17.

General: DAVIS RECORD FOR TIME PERIOD 1969-1975. INCLUDES DATA FROM RECOVERY PLAN (1984).

Owner/Manager: UNKNOWN

Occurrence No. 181 Map Index: 50014 EO Index: 50014

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-XX-XX
Site: 1975-XX-XX
Record Last Updated: 2003-02-24

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.72010° / -116.27093°
UTM: Zone-11 N3731360 E567549
Area:
Elevation: 80 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 05S
Range: 07E
Section: 20 Qtr: XX
Meridian: S

Location: AREA 1 MILE NORTH OF STATE ROUTE 111, EAST OF INDIAN WELLS

Location Detail: NORTH/SOUTH OF MILES AVENUE AND EAST/WEST OF JEFFERSON STREET. DAVIS RECORD: T5S R7E NE 1/4 OF SE 1/4 SECTION 20.

General: DAVIS RECORD FOR TIME PERIOD 1969-1975. INCLUDES DATA FROM RECOVERY PLAN (1984)

Owner/Manager: UNKNOWN

Occurrence No. 182 Map Index: 50015 EO Index: 50015

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-07-XX
Site: 1975-07-XX
Record Last Updated: 2003-01-28

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.72018° / -116.25785°
UTM: Zone-11 N3731378 E568760
Area:
Elevation: 40 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 05S
Range: 07E
Section: 21 Qtr: SE
Meridian: S

Location: VICINITY OF WHITEWATER RIVER / COACHELLA VALLEY STORMWATER CHANNEL, 0.9 MILE NORTH OF HWY 111; EAST OF INDIAN WELLS

Location Detail: BORDERED TO NORTH BY MILES AVENUE. T5S R7E NW 1/4 OF SE 1/4 SECTION 21.

General: ENGLAND AND NELSON LOCALITY FOR JULY 1975

Owner/Manager: UNKNOWN

Uma inornata

Coachella Valley fringe-toed lizard — Element Code: ARACF15010

Status	NDDB Element Ranks	Other Lists
Federal: Threatened	Global: G1Q	CDFG Status:
State: Endangered	State: S1	

Habitat Associations

General: LIMITED TO SANDY AREAS IN THE COACHELLA VALLEY, RIVERSIDE COUNTY.

Micro: REQUIRES FINE, LOOSE, WINDBLOWN SAND (FOR BURROWING), INTERSPERSED WITH HARDPAN AND WIDELY SPACED DESERT SHRUBS.

Occurrence No. 183 Map Index: 50016 EO Index: 50016

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-07-XX
Site: 1975-07-XX
Record Last Updated: 2003-01-28

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.70505° / -116.28384°
UTM: Zone-11 N3729683 E566364
Area:
Elevation: 60 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 05S
Range: 07E
Section: 29 Qtr: SW
Meridian: S

Location: 0.4 MILE WEST OF DUNES PALM ROAD, JUST SOUTH OF STATE ROUTE 111; EAST OF INDIAN WELLS
Location Detail: T5S R7E NW 1/4 OF SW 1/4 SECTION 29
General: ENGLAND AND NELSON LOCALITY FOR JULY 1975
Owner/Manager: UNKNOWN

Occurrence No. 184 Map Index: 50017 EO Index: 50017

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-XX-XX
Site: 1975-XX-XX
Record Last Updated: 2003-02-21

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.69802° / -116.30380°
UTM: Zone-11 N3728891 E564519
Radius: 2/5 mile
Elevation: 60 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POINT
Township: 05S
Range: 07E
Section: 31 Qtr: NW
Meridian: S

Location: 1.3 MILES SOUTH OF STATE ROUTE 111, 0.5 MILE WEST OF WASHINGTON STREET; SW INDIAN WELLS
Location Detail: DAVIS RECORD: T5S R7E NW 1/4 OF NW 1/4 SECTION 31.
General: DAVIS RECORD FOR TIME PERIOD 1969-1975. INCLUDES DATA FROM RECOVERY PLAN (1984).
Owner/Manager: UNKNOWN

Occurrence No. 185 Map Index: 50018 EO Index: 50018

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-07-XX
Site: 1975-07-XX
Record Last Updated: 2003-02-03

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.68458° / -116.29991°
UTM: Zone-11 N3727403 E564890
Area:
Elevation: 40 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 06S
Range: 07E
Section: 06 Qtr: XX
Meridian: S

Location: 2 MILES SOUTH OF STATE ROUTE 111, NORTH OF LA QUINTA
Location Detail: 1/4 MILE SOUTH AND NORTH OF AVENUE 50, BORDERED TO THE EAST BY WASHINGTON STREET. ENGLAND AND NELSON: T5S R7E SE 1/4 OF SW 1/4 SECTION 31. DAVIS: T6S R7E NW 1/4 OF NW 1/4 SECTION 6.
General: ENGLAND AND NELSON LOCALITY FOR JULY 1975. DAVIS RECORD FOR TIME PERIOD 1969-1975. INCLUDES DATA FROM RECOVERY PLAN (1984).
Owner/Manager: UNKNOWN

Uma inornata

Coachella Valley fringe-toed lizard — Element Code: ARACF15010

Status		NDDB Element Ranks		Other Lists	
Federal:	Threatened	Global:	G1Q	CDFG Status:	
State:	Endangered	State:	S1		

Habitat Associations

General: LIMITED TO SANDY AREAS IN THE COACHELLA VALLEY, RIVERSIDE COUNTY.

Micro: REQUIRES FINE, LOOSE, WINDBLOWN SAND (FOR BURROWING), INTERSPERSED WITH HARDPAN AND WIDELY SPACED DESERT SHRUBS.

Occurrence No. 186 Map Index: 50019 EO Index: 50019

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-05-06
Site: 1975-05-06
Record Last Updated: 2003-01-28

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.68727° / -116.28818°
UTM: Zone-11 N3727709 E565975
Area:
Elevation: 60 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 05S
Range: 07E
Section: 31 Qtr: SE
Meridian: S

Location: 1.5 MILE SOUTH OF STATE ROUTE 111 AND 0.4 MILE EAST OF WASHINGTON STREET, NORTH OF LA QUINTA

Location Detail: BORDERED TO SOUTH BY AVENUE 50. BRODE AND CORDONE: RD 50 JCT E WASHINGTON ST 1 MI N LA QUINTA. DAVIS RECORD: T5S R7E SE 1/4 OF SE 1/4 SECTION 31

General: BRODE AND CORDONE: COLLECTED 6 MAY 1975. DAVIS RECORD FOR TIME PERIOD 1969-1975. INCLUDES DATA FROM RECOVERY PLAN (1984).

Owner/Manager: UNKNOWN

Occurrence No. 187 Map Index: 50020 EO Index: 50020

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-07-XX
Site: 1975-07-XX
Record Last Updated: 2003-01-28

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.69965° / -116.27079°
UTM: Zone-11 N3729093 E567577
Area:
Elevation: 60 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 05S
Range: 07E
Section: 32 Qtr: XX
Meridian: S

Location: AREA 0.5 MILE SOUTH OF STATE ROUTE 111 AND BORDERED TO THE EAST BY JEFFERSON STREET, NE OF LA QUINTA

Location Detail: ENGLAND AND NELSON: T5S R7E NE 1/4 OF NE 1/4 SECTION 32. DAVIS: T5S R7E SE 1/4 OF SE 1/4 SECTION 29.

General: ENGLAND AND NELSON LOCALITY FOR JULY 1975. DAVIS RECORD FOR TIME PERIOD 1969-1975. INCLUDES DATA FROM RECOVERY PLAN (1984).

Owner/Manager: UNKNOWN

Occurrence No. 202 Map Index: 50091 EO Index: 50091

Occ Rank: Unknown
Origin: Natural/Native occurrence
Presence: Presumed Extant
Trend: Unknown

Dates Last Seen
Element: 1975-XX-XX
Site: 1975-XX-XX
Record Last Updated: 2003-02-21

Quad Summary: La Quinta (3311663/065A)
County Summary: Riverside

Lat/Long: 33.66876° / -116.26386°
UTM: Zone-11 N3725672 E568244
Area:
Elevation: 20 ft
Mapping Precision: NON-SPECIFIC
Symbol Type: POLYGON
Township: 06S
Range: 07E
Section: 09 Qtr: NW
Meridian: S

Location: VICINITY OF THE COACHELLA CANAL & AVENUE 52, 2 MILES EAST OF LA QUINTA

Location Detail: EAST OF JEFFERSON STREET AND SOUTH OF AVENUE 52. ENGLAND AND NELSON RECORD: T6S R7E NE 1/4 OF NW 1/4 SECTION 9. DAVIS RECORD: T6S R7E NW 1/4 OF NW 1/4 SECTION 9.

General: ENGLAND AND NELSON LOCALITY FOR JULY 1975. DAVIS RECORD FOR TIME PERIOD 1969-1975. INCLUDES DATA FROM RECOVERY PLAN (1984)

Owner/Manager: UNKNOWN

APPENDIX A

2007
Focused BUOW Surveys
WILDLIFE COMPENDIUM

FOR

Survey Area #1 and Survey Area #2

(Includes only species field identified between April 15 and 23, 2007)

OF THE PROPOSED
INDIAN WELLS TOWN CENTER PROJECT SITE

INDIAN WELLS, CALIFORNIA

Thomas Leslie Corporation

Biological and Cultural Investigations & Monitoring

Mr. Ernest Perea, Principal
EPC Land Planning, Inc.
5225 Canyon Crest Drive, Suite 71-325
Riverside, California 92507

April 24, 2007

Subject: Results of Four 2007 Peak of Breeding Season Burrowing Owl (BUOW) Field Surveys Performed Within Two Naturally Vegetated Areas (Survey Area #1 and #2) of the Indian Wells Tennis Garden Project Site (Project Site)

Dear Mr. Perea:
Thomas Leslie Corporation (TLC) is pleased to present this letter report documenting the methodologies and results of focused 2007 peak of breeding season BUOW field surveys conducted within two suitable habitat areas of the project site on April 15, 16, 22 and 23, 2007.

The 2007 BUOW focused surveys results report includes the following elements: **(I)** a summary of the results of the 2007 focused BUOW surveys, **(II)** a description and map of the 2007 focused BUOW survey site, **(III)** purpose of the 2007 focused BUOW surveys, **(IV)** methodologies of the 2007 focused BUOW surveys, **(V)** results of the 2007 focused BUOW surveys, **(VI)** Conclusions, and **(VII)** Recommendations.

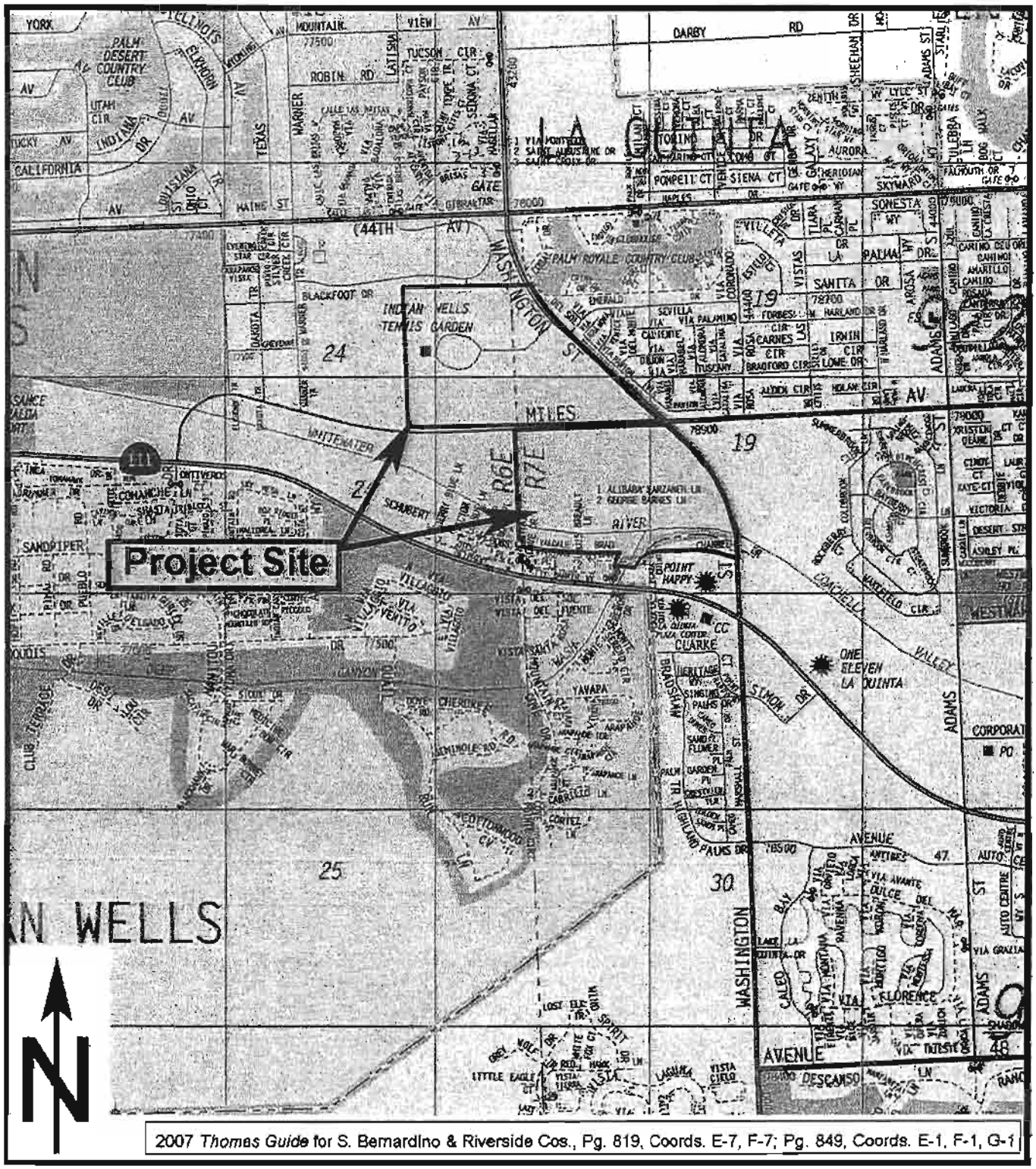
I. SUMMARY OF 2007 FOCUSED BUOW BREEDING SEASON SURVEYS

- *No* BUOW individuals were observed at, in, or near any ground burrow within the boundaries of the project site on April 15, 16, 22 or 23, 2007.
- *No* BUOW individual was observed foraging over, or perching within the boundaries of the project site during the focused BUOW surveys conducted on April 15, 16, 22 or 23, 2007.
- Although, three burrows with sign of past BUOW occupancy were observed onsite, ***no*** currently occupied BUOW ground burrow was observed within the boundaries of the project site during performance of the focused BUOW surveys on April 15, 16, 22 or 23, 2007.

II. LOCATION AND DESCRIPTION OF 2007 FOCUSED BUOW SURVEYS SITE

- **Figure 1** illustrates the boundaries of the entire project site on the 2007 Thomas Guide San Bernardino and Riverside Counties Street Guide and Directory, on map page 819, map coordinates E-7 and F-7 and on map page 849, map coordinates E-1, F-1 and G-1.
- **Figure 2,** the project site *Biological Resources Map*, illustrates the five vegetation types/areas identified onsite during the February 6, 2007 Biological Constraints Analysis (BCA) field survey (TLC, 2007). Since Area #1 and Area #2 are proposed for development, and both were naturally vegetated with Creosote Bush/Desert Sand Verbena series and Fourwing Saltbush series habitat, the four breeding season BUOW surveys were performed within those two areas on April 15, 16, 22 and 23, 2007. The other three vegetation types/areas were not surveyed because Area #3 and Area #4 do not provide suitable habitat for the BUOW; and Area #5 is not proposed for development.

42210 Roick Drive, Suite 11, Temecula, CA 92590-5523 Office (951) 719-1128 Fax (951) 719-3106



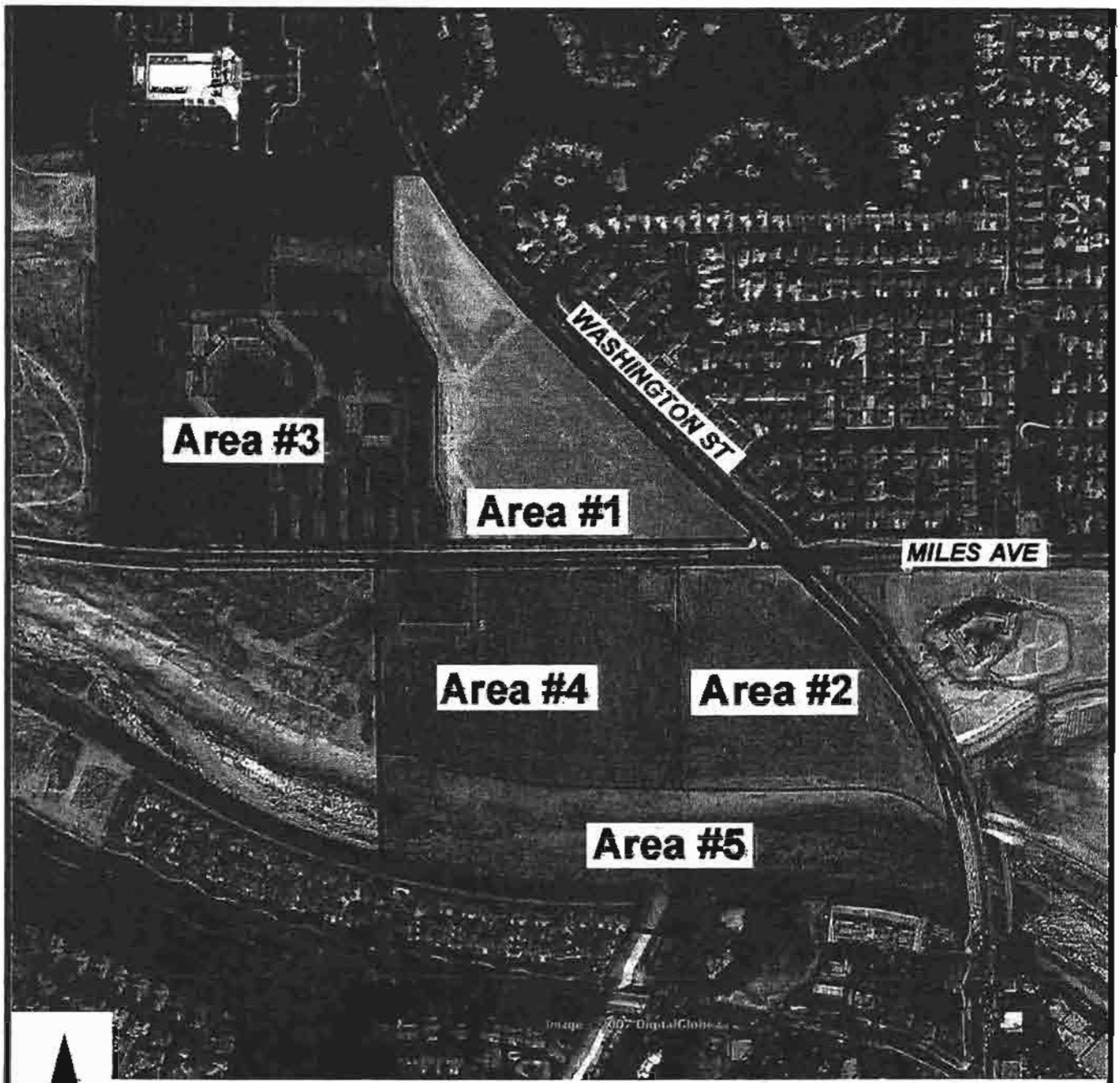
Thomas Leslie Corporation

BIOLOGICAL & CULTURAL INVESTIGATIONS & MONITORING

Figure 1

Location of Indian Wells Town Center Project Site

Illustrated on the Thomas Guide Map



Area # 1: Creosote Bush/Desert Sand Verbena Series Natural Habitat (northern portions are disturbed) - BUOW Survey Area #1

Area # 2: Fourwing Saltbush Series Natural Habitat (southwestern portion is disturbed) - BUOW Survey Area #2

Area # 3: Existing Tennis Garden Facility with associated paved parking, landscaping and Bermuda Grass lawns

Area # 4: Flood Control Structure and Bermuda Grass Sod Farm and associated structures (e.g., Water Tank)

Area # 5: Whitewater River (not proposed for development)

Aerial Photograph Source: Earth.Google.com

Thomas Leslie Corporation

BIOLOGICAL & CULTURAL INVESTIGATIONS & MONITORING

Figure 2

Biological Resources Map for the Indian Wells Town Center Project Site

Interstate 10 (I-10) provides access to the project site. To reach the project site, exit I-10 at Washington Street and drive southerly 2.8± miles to Miles Avenue, which bisects the project site into the northern and southern portions. A number of paved and dirt roads/trails provide access to all portions of the project site.

III. PURPOSE OF 2007 FOCUSED BUOW BREEDING SEASON SURVEYS

In response to the City of Indian Wells Notice of Preparation (NOP), for the Town Center Specific Plan (Indian Wells Tennis Garden) draft Environmental Impact Report (EIR), the California Department of Fish and Game (CDFG) prepared and sent a comments letter dated December 18, 2006 to the City of Indian Wells. Item 1.e. of the CDFG comments letter recommended that

> "if the project has the potential to impact the western burrowing owl *(Athene cunicularia)*, a California Species of Special Concern, the Department recommends that focused burrowing owl surveys be conducted on the project site to determine how many occupied owl burrows will be impacted. Any burrows that cannot be avoided should be mitigated at a 2:1 ratio with artificial burrows located in a protected area that provides a minimum 6.5 acres per pair or solitary owl."

To collect field survey data needed to respond to Item 1.e. of the CDFG comments letter, EPC Land Planning, Inc. contracted Thomas Leslie Corporation (TLC) biologists to conduct a biological constraints analysis (BCA) level field survey of the project site on February 6, 2007.

Findings of the February 6, 2007 BCA Level Field Survey: A solitary unpaired Burrowing Owl (BUOW) individual was observed onsite during performance of February 6, 2007 BCA level field survey. Therefore, it was concluded that focused breeding season BUOW surveys were necessary to determine how many occupied owl burrows will be impacted by development of the project site.

IV. METHODOLOGIES OF THE FOCUSED BUOW FIELD SURVEYS

The focused BUOW breeding season field surveys were performed within Survey Areas # 1 and #2 of the project site on April 15, 16, 22 or 23, 2007 by TLC biologists Thomas A. Leslie (B.S-M.S. Biology) and Nadya Leslie (M.S. Biology). Both biologists are experienced with, and have conducted numerous BUOW habitat assessments, focused BUOW burrow surveys and focused BUOW breeding season field surveys in Coachella Valley, Riverside County, California and throughout southern California.

The surveys were conducted in accordance with BUOW survey protocols identified in the 1993 California Burrowing Owl Consortium guidelines (CBOC, 1993) and 1995 CDFG staff memo regarding the Burrowing Owl mitigation (CDFG, 1995). Specifically, the CBOC and CDFG focused BUOW survey protocols recommend the field survey methodologies listed below.

- "A complete burrowing owl survey consists of four site visits" "repeated on four separate days." "During the initial site visit examine burrows for owl sign and map the locations of occupied burrows" (CBOC, 1993).

- If possible, the nesting season survey should be conducted during the peak of the breeding season, between April 15 and July 15" "from two hours before sunset to one hour after or from one hour before to two hours after sunrise" (CBOC, 1993).

- Focused BUOW "surveys should be conducted by walking suitable habitat on the entire project site" (CDFG, 1995).

- Notes: (1) Since suitable BUOW habitat only occurs within the parcels bordering the west side of Washington Street, illustrated on the Figure 3 *Biological Resources Map* as Area #1 and Area #2, the focused BUOW surveys were limited to those two areas. (2) With the exception of the area south of Survey Area #2, the buffer zone around the BUOW Survey Areas is already developed and does not contain suitable BUOW habitat. Therefore, buffer zone surveys were not conducted; the area south of Area #2 was binocular surveyed each of the four survey days.

- "Pedestrian survey transects should be spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines should be no more than 30 meters (approx. 100 ft.) and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility" (CDFG, 1995).

V. RESULTS OF THE 2007 FOCUSED BREEDING SEASON BUOW SURVEYS

A. Date and Time of Visit(s)

Table 1 documents the dates, duration (start/end) times and weather conditions for each of the four BUOW survey dates. To ensure 100% visual coverage of the ground surface of potential impact areas, TLC's qualified/experienced BUOW surveyors (T. Leslie and N. Leslie) systematically walked along 28 (twenty-eight), 30 meter wide east-west oriented belt transects established within the native Creosote Bush/Desert Sand Verbena series (17 transects) and Fourwing Saltbush series (11 transects) habitat vegetating the parcels bordering Washington Street. Both habitat types represent suitable BUOW habitat.

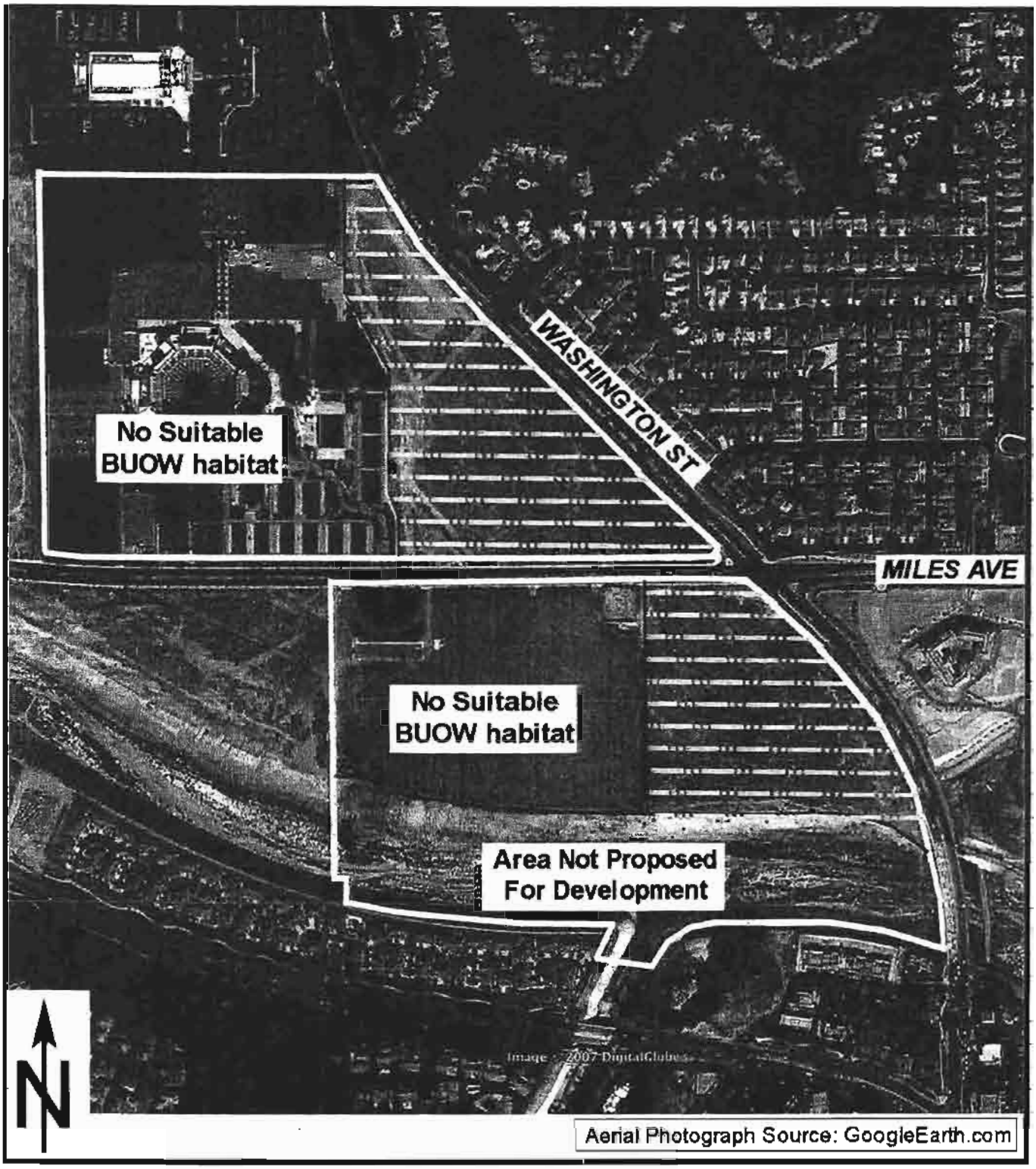
Figure 3 schematically[1] illustrates the location and width[2] and number[3] of belt transects systematically walked on each of the four separate focused BUOW survey days.

Notes:

[1] = The locations of the 28 Figure 3 transects are *schematic* and should not be used in an attempt to calculate transects widths or distance between transect centerlines: as stated above and in [2] below, transects were 30 meter wide.

[2] = **Width of Transects**: 1995 CDFG survey protocols, for performance of focused breeding season BUOW field surveys, require that "the distance between the transect center lines should be no more than 30 meters (approx. 100 ft.)" (CDFG, 1995).

[3] = **Number of Transects**: Since (1) the distance between the north and the south boundaries of the two BUOW field survey areas is 1,700± feet for Survey Area #1 and 1,100± feet for Survey Area #2, and (2) the distance between transect center lines of each plant field survey transect was "approx. 100 ft.", the number of east-west orientated transects was calculated to be 17 for the Survey Area #1 (1,700± feet ÷ 100 feet) and 11 for the Survey Area #2 (1,100± feet ÷ 100 feet).



Aerial Photograph Source: GoogleEarth.com

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Figure 3

Schematic Location of Transects Walked on Indian Wells Town Center Project Site During April 2007 BUOW Focused Breeding Season Surveys

Table 1: BUOW Breeding Season Survey Dates, Times and Temperatures and Daily Survey Hours

Survey Date in 2007	Survey Hours		WEATHER CONDITIONS*					Surveyors
			Temperature In Degrees Fahrenheit		Average Wind Speed In Miles Per Hour		Ambient Survey Conditions	
	Start	End	Start	End	Start	End		
1. April 15, 2007 (4.0 Survey Person Hours)	1715	1915	74.4	67.8	4.0	3.7	Partially sunny over survey site, with high wispy white clouds; dark rain clouds off-site to the west but no rain during survey.	TAL NVL
2. April 16, 2007 (4.0 Survey Person Hours)	0600	0800	57.9	58.5	4.5	4.4	Occasional sun breaking through low dark rain clouds in most (75%±) of the sky over the survey site; overcast sky at survey end but no rain during survey.	TAL NVL
3. April 22, 2007 (4.0 Survey Person Hours)	1730	1930	80.2	75.5	2.0	5.1	Sunny skies, with few clouds.	TAL NVL
4. April 23, 2007 (4.0 Survey Person Hours)	0600	0800	67.6	62.2	1.1	4.0	Clear, cloudless skies, with light haze on the horizon.	TAL NVL

* = As required by CBOC (1993) survey protocols, the four focused BUOW surveys were conducted during weather that was conducive to observing owls outside their burrows. Specifically, surveys were not conducted during rain or winds during the survey periods were less than 20 mph.

B. Description of the Site and BUOW Habitat

As illustrated on Figure 1, the project site is located in the City of Indian Wells, west of Washington Street and north and south of Miles Avenue. Although, the entire project site comprises 98.4± acres, only 34± acres of natural habitat proposed for development were surveyed during each of the four focused breeding season BUOW surveys. Specifically, the focused BUOW surveys were conducted within Survey Areas #1 and #2. The boundaries of Survey Areas #1 and #2 are illustrated on Figure 3.

Topographically, the project site is relatively flat. Onsite elevations range from low of 80 feet above mean sea level (msl) in the southern portion of the project site, to high of 150 feet above msl, in the northern portion of the site.

The following two natural native plant habitat types (communities) were identified onsite: Creosote Bush/Desert Sand Verbena Series and Fourwing Saltbush Series (TLC, 2007). Wildlife species observed onsite during the April 2007 BUOW breeding season surveys listed in Appendix A *Wildlife Compendium.*

As documented by the February 2007 BCA, Creosote Bush/Desert Sand Verbena series and Fourwing Saltbush Series habitat provide suitable habitat for the BUOW. Therefore, the April 2007 focused BUOW surveys were conducted within the two areas of the project site vegetated with Creosote Bush/Desert Sand Verbena series (BUOW Survey Area #1) and Fourwing Saltbush Series habitat (BUOW Survey Area #2).

C. Photographs of the Site

Photo Plate Nos. 1 and 2, located in Appendix B, provide representative views of focused BUOW Survey Area #1 and Survey Area #2 in February and April 2007.

D. Results of Focused BUOW Surveys

1. ***No*** BUOW individuals were observed at, in, or near any ground burrow within the boundaries of the project site on April 15, 16, 22 or 23, 2007.
2. ***No*** BUOW individual was observed foraging over, or perching within the boundaries of the project site during the focused BUOW surveys conducted on April 15, 16, 22 or 23, 2007.
3. Although, three burrows with sign of past BUOW occupancy were observed onsite, ***no*** currently occupied BUOW ground burrow was observed within the boundaries of the project site during performance of the focused BUOW surveys on April 15, 16, 22 or 23, 2007.
4. Figure 4 illustrates the location of 12 potential BUOW burrows observed onsite in April 2007. None of the 12 potential BUOW burrows were occupied during performance of the focused BUOW surveys on April 15, 16, 22 or 23, 2007. Table 2 provides the GPS coordinates of each unoccupied potential BUOW burrow.
5. ***No*** state BUOW occurrence record is documented onsite. The ***nearest*** state BUOW occurrence record is ***off-site*** 2.6± miles northeast from the northeastern corner of the project site [Occurrence #856] (CDFG, 2007a, b).

Table 2: GPS Coordinates of 12 Unoccupied Potential BUOW Burrow Locations* Mapped by Figure 4 Within BUOW Survey Areas #1 and #2

Unoccupied Potential Burrow location (*see* Figure 4)	GPS Coordinates (WGS84)	Comments
1	33°43'27.0"N; 116°18'06.5"W	Unoccupied, previously utilized BUOW burrow; ***no*** current use sign.
2	33°43'24.2"N; 116°18'02.2"W	Unoccupied, previously utilized BUOW burrow; ***no*** sign of current BUOW use.
3	33°43'22.4"N; 116°18'07.2"W	Large potential burrow under a Creosote Bush, probably a Coyote den; ***no*** sign of BUOW use.
4	33°43'21.9"N; 116°18'01.9"W	Moderate size potential burrow under Creosote Bush; ***no*** sign of BUOW use.
5	33°43'20.5"N; 116°17'59.7"W	Moderate size potential burrow in open sandy area; ***no*** sign of BUOW use.
6	33°43'20.3"N; 116°17'59.7"W	Moderate size potential burrow in open sandy area; ***no*** sign of BUOW use.
7	33°43'16.2"N; 116°17'55.0"W	Moderate size potential burrow under Saltbush; ***no*** sign of BUOW use.
8	33°43'14.5"N; 116°17'55.6"W	Previously used BUOW burrow; ***no*** sign of current BUOW use.
9	33°43'12.2"N; 116°17'48.2"W	Large potential burrow under Saltbush; ***no*** sign of BUOW use.
10	33°43'12.1"N; 116°17'48.3"W	Large potential burrow under Saltbush; ***no*** sign of BUOW use.
11	33°43'09.4"N; 116°17'52.7"W	Few old BUOW pellets under Saltbush but no burrow and ***no*** sign of current BUOW use.
12	33°43'08.9"N; 116°17'49.9"W	Large potential burrow under Saltbush, probably Coyote den; ***no*** sign of BUOW use.

* = It is possible that the number of potential BUOW burrows will change over time for at least the following reasons: (a) old burrows may collapse due to natural causes (e.g., gravity, rain, excavation by 4-footed predators such as dogs, coyote, etc.), (b) new potential BUOW burrows will be excavated by ground squirrels, coyotes, (c) etc.

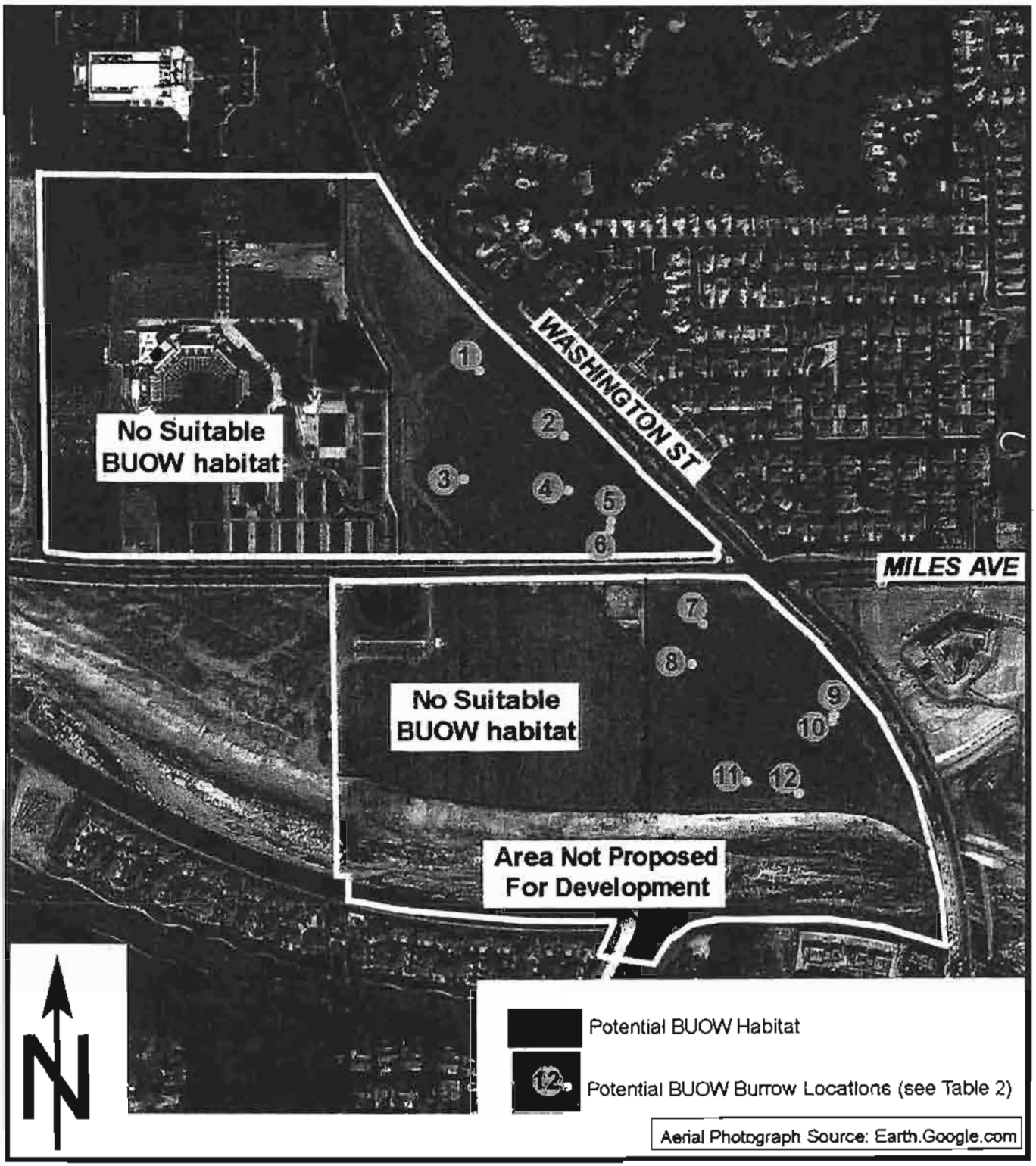

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Figure 4

BUOW Habitat and Potential BUOW Burrows Locations Within the Boundaries of Indian Wells Town Center Project Site

VI. CONCLUSION

The project site was ***not*** occupied by, or observed being used at all by, BUOW on April 15, 16, 22 or 23, 2007. Therefore, development of the project site will not impact occupied BUOW burrows.

VII. RECOMMENDATIONS

- In accordance with CDFG recommendations, "if the species was not detected but is likely to occur on the project site," a pre-grading survey must be conducted within 30 days of any ground disturbance to avoid direct take of burrowing owls (CDFG, 1995). The biologist conducting the 30-day pre-construction BUOW survey must submit a short letter report, documenting the results of 30-day pre-grading survey, to the City for review and approval.

- If BUOW occupied habitat was detected onsite during the 30-day pre-grading survey, in consultation with the City of Indian Wells, California and the CDFG, the appropriate mitigation actions would need to be carried out prior to the burrowing owl breeding season, generally from February 1 through August 31 (CBOC, 1993).

Please call me if you have any questions regarding this focused BUOW survey results letter report.

Respectfully Submitted,
THOMAS LESLIE CORPORATION

Thomas A. Leslie, President/BS-MS Biology
TAL/nvl

REFERENCES

California Burrowing Owl Consortium (CBOC), April 1993, Burrowing Owl Survey Protocol and Mitigation Guidelines.

California Department of Fish and Game (CDFG), April 3, 2007a (Printed April 20, 2007), Natural Diversity Data Base (CNDDB) Rare Find Record Search Results for the La Quinta, Calif. USGS 7.5 Minute Topographic Quadrangle.

California Department of Fish and Game (CDFG), January 31, 2007b, Natural Diversity Data Base (CNDDB) Quadrangle Velum Overlay No. 33116F3 for the 1959 (Photorevised 1980) La Quinta, Calif. USGS 7.5 Minute Topographic Quadrangle.

California Department of Fish and Game (CDFG), December 18, 2006, Letter to the City of Indian Wells: Notice of Preparation for the Town center Specific Plan SCH # 2006111097.

California Department of Fish and Game (CDFG), 1995, Staff Report on Burrowing Owl Mitigation.

Thomas Leslie Corporation (TLC), February 13, 2007, Results of a Biological Constraints Analysis (BCA) for the 98.4-acre City of Indian Wells Town Center Project Site (Project Site).

SCIENTIFIC NAMES	COMMON NAMES (54)	Listing Status
VERTEBRATES		
CLASS REPTILIA	**REPTILES (1)**	
FAMILY IGUANIDAE	**IGUANIDS**	
Uta stansburiana	Side-blotched Lizard	*None*
CLASS AVES	**BIRDS (12)**	
FAMILY COLUMBIDAE	**PIGEON AND DOVES**	
Columba livia	Rock Dove	*None*
Zenaida macroura	Mourning Dove	*None*
FAMILY CAPRIMULGIDAE	**GOATSUCKERS**	
Chordeiles acutipennis	Lesser Nighthawk	*None*
FAMILY TROCHILIDAE	**HUMMINGBIRDS**	
Calypte anna	Anna's Hummingbird	*None*
FAMILY TYRANNIDAE	**TYRANT FLYCATCHERS**	
Myiarchus cinerascens	Ash-throated Flycatcher	*None*
Tyrannus verticalis	Western Kingbird	*None*
FAMILY HIRUNDINIDAE	**SWALLOWS**	
Hirundo rustica	Barn Swallow	*None*
Petrochelidon pyrrhonota	Cliff Swallow	*None*
FAMILY CORVIDAE	**JAYS, MAGPIES, AND CROWS**	
Corvus brachyrhynchos	American Crow	*None*
FAMILY REMIZIDAE	**VERDINS**	
Auriparus flaviceps	Verdin	*None*
FAMILY MIMIDAE	**MOCKINGBIRDS AND THRASHERS**	
Mimus polyglottos	Northern Mockingbird	*None*
FAMILY ICTERIDAE	**BLACKBIRDS AND ORIOLES**	
Quiscalus mexicanus	Great-tailed Grackle	*None*

SCIENTIFIC NAMES	COMMON NAMES (54)	Listing Status
CLASS MAMMALIA	**MAMMALS (3)**	
FAMILY CANIDAE	**DOGS, FOXES AND ALLIES**	
Canis familiaris	Domestic Dog	*None*
Canis latrans	Coyote	*None*
FAMILY LEPORIDAE	**RABBITS AND HARES**	
Lepus californicus bennetii	San Diego Black-tailed Jackrabbit (20+)	**CSC***
INVERTEBRATES		
CLASS INSECTA	**INSECTS (8)**	
Aeshna multicolor	Multicolored Darner	*None*
Apis mellifera	Honey Bee	*None*
Coccinella californica	California Ladybird Beetle	*None*
Efferia sp.	Common Robber Fly	*None*
Iridomyrmex humilis	Argentine Ant	*None*
Leptoconops foulki	No-see-ums	*None*
Pogonomyrmex californicus	California Harvester Ant	*None*
Solenopsis xyloni	Southern Fire Ant	*None*

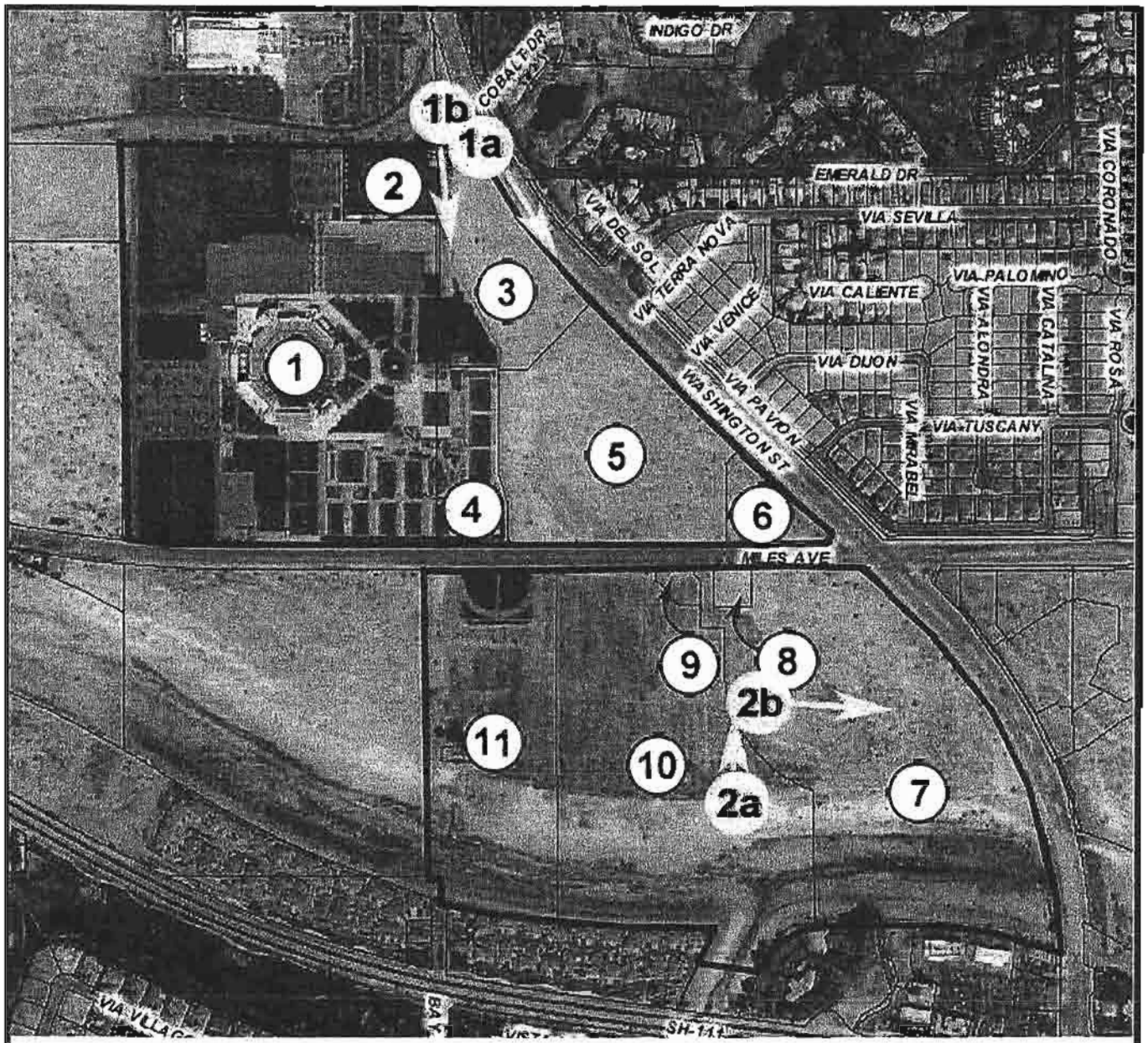
*CSC = CDFG California Special Concern species.

APPENDIX B

PHOTO PLATE NOS. 1 and 2

FOR THE PROPOSED
INDIAN WELLS TOWN CENTER
PROJECT SITE

INDIAN WELLS, CALIFORNIA



1 = APN 633-360-027 (existing Tennis Garden);
2 = APN 633-360-028;
3 = APN 633-360-029;
4 = APN 633-360-026;
5 = APN 633-360-018;
6 = APN 633-360-024
7 = APN 604-040-089
8 = APN 604-040-036
9 = APN 604-040-097
10 = APN 604-040-098
11 = APN 604-040-091 (easterly 6 AC portion)

1a, 1b, 2a and 2b = Location and Directions of Photos

Map Source: Riverside County GIS

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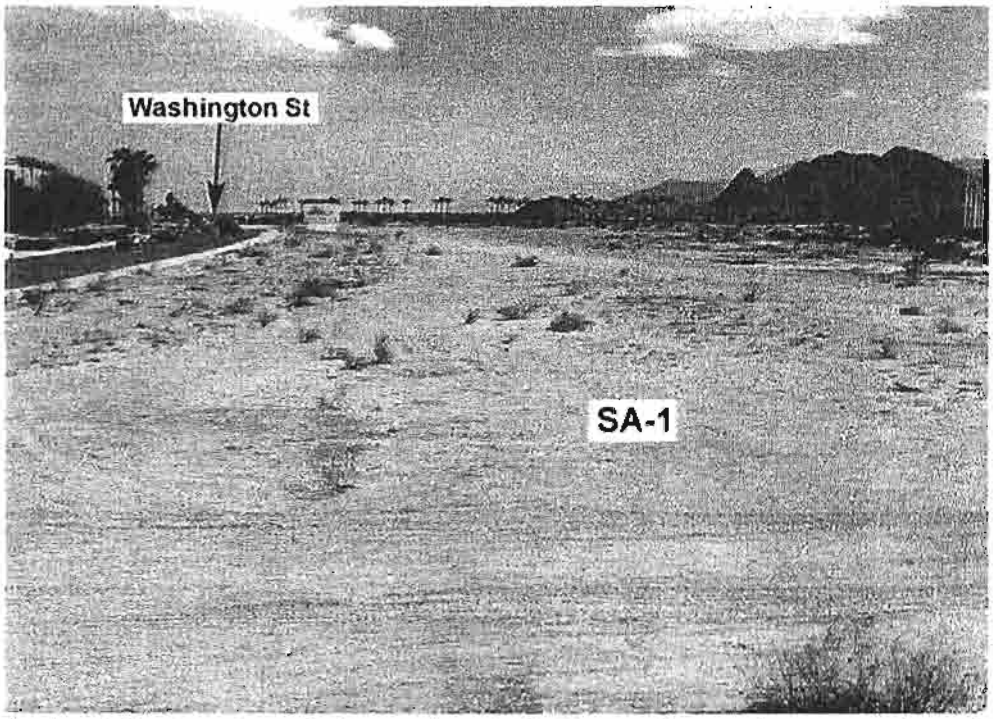
BIOLOGICAL & CULTURAL INVESTIGATIONS & MONITORING

Index Map:

Location and Direction of Photos and Parcel Map for APNs Comprising the Indian Wells Town Center Project Site

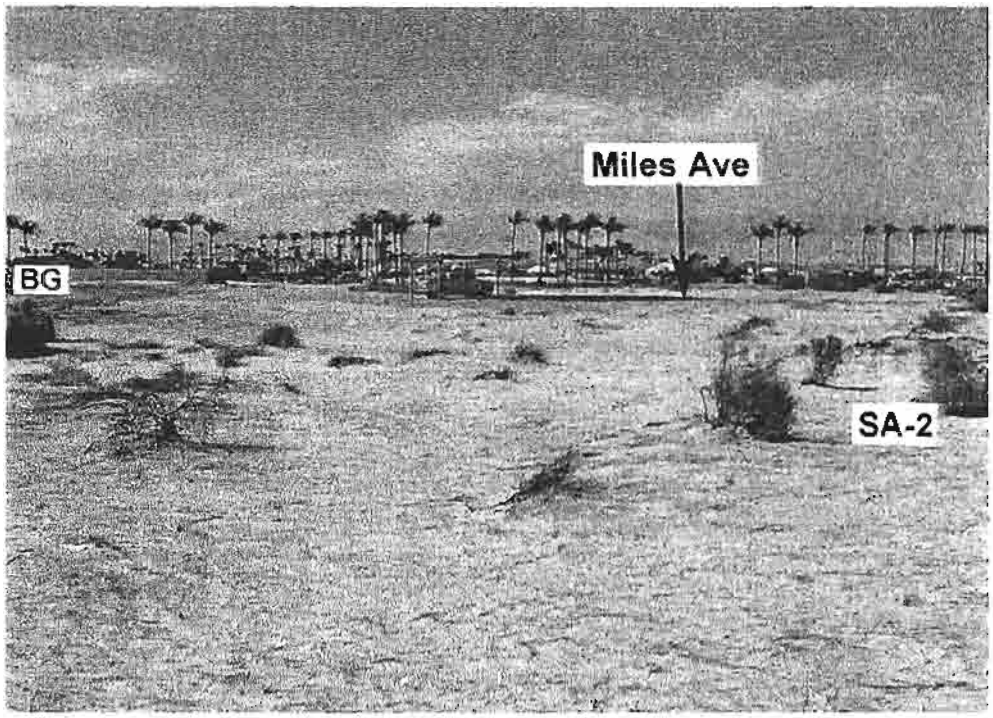
PHOTO PLATE NO. 1



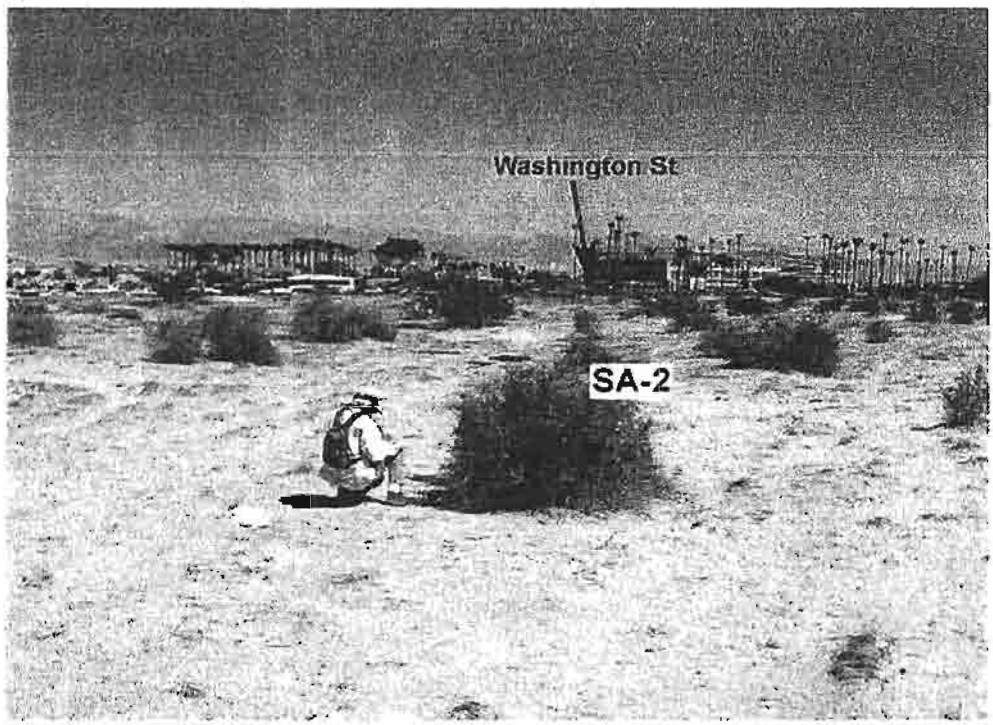
1a. Southeasterly view, from the intersection of Washington Street and an unnamed paved roadway paralleling the northern boundaries of APN 633-360-027, -028 and -029, across the easterly portion of APNs 633-360-029, -018 and -024. Extensive portions of APN 633-360-029 were comprised of highly disturbed primarily unvegetated sandy soils transected by unpaved dirt vehicle trails. An open growth of Creosote Bush/Desert Sand Verbena series habitat vegetated APNs 633-360-018 and -024 and the undisturbed portion of APN 633-360-029. The Creosote Bush/Desert Sand Verbena habitat comprises the suitable Burrowing Owl (BUOW) habitat of Survey Area # 1 [SA-1] (photo date – *04/22/07*).

1b. Southerly view toward Miles Avenue, from the unnamed roadway paralleling the northern boundary of APNs 633-360-027, -028 and -029, across the westerly portions of APNs 633-360-026 and -029. As this photograph documents, substantial areas of the sandy soils beneath the shrub canopy of the Creosote Bush/Desert Sand Verbena habitat were essentially unvegetated in April 2007 (photo date - *04/22/07*).

PHOTO PLATE NO. 2



2a. North view toward Miles Avenue, across APN 604-040-097, the easterly portion of APN 604-040-098 and westerly portion of APN 604-040-089, from the southeast corner of APN 604-040-089. The majority (95±%) of the topographic surface of APNs 604-040-097 and -098 was covered by irrigated non-native Bermuda Grass (BG). APN 604-040-089 was vegetated with an open growth of Fourwing Saltbush series habitat. The Fourwing Saltbush habitat comprises the suitable Burrowing Owl (BUOW) habitat of Survey Area # 2 [SA-2] (photo date ~ *04/22/07*).



2b. East view toward Washington Street, across the northerly portion of APN 604-040-089, from the west central parcel boundary. As this photo documents, an open growth of Fourwing Saltbush series habitat vegetated the parcel's sandy soils. The Fourwing Saltbush habitat comprises the suitable BUOW habitat of SA-2. The sandy soils beneath the shrub canopy of the Saltbush habitat were essentially unvegetated in April 2007 (photo date - *02/06/07*).

Thomas Leslie Corporation

Biological and Cultural Investigations & Monitoring

Mr. Ernest Perea, Principal
EPC Land Planning, Inc.
5225 Canyon Crest Drive, Suite 71-325
Riverside, California 92507

April 24, 2007

Subject: Results of Spring 2007 Focused Rare Plant Field Surveys Performed Within Two Naturally Vegetated Areas (Survey Area #1 and #2) of the Indian Wells Tennis Garden Project Site

Dear Mr. Perea:

In response to the City of Indian Wells Notice of Preparation (NOP), for the Town Center Specific Plan (Indian Wells Tennis Garden) draft Environmental Impact Report (EIR), the California Department of Fish and Game (CDFG) prepared and sent a comments letter dated December 18, 2006 to the City of Indian Wells. Item 1.a. of the CDFG comments letter recommended

> "a thorough assessment of rare plants and rare plant communities, following the Department's May 1984 Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities."

Figure 1 illustrates the boundaries of the Indian Wells Tennis Garden project site on the 2007 Thomas Guide San Bernardino and Riverside Counties Street Guide and Directory.

To collect field survey data needed to respond to CDFG comments letter Item 1.a., EPC Land Planning, Inc. contracted Thomas Leslie Corporation (TLC) biologists to conduct a biological constraints analysis (BCA) level field survey of the project site on February 6, 2007. Two of the objectives of the 6 February BCA field survey were to ascertain (1) if any of habitat types were present on the project site provides suitable habitat for any listed or unlisted special-status plant species known to occur in the region surrounding the project site and (2) the need to conduct focused rare plant field surveys following the Department's May 1984 *Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities*.

Findings of the February 6, 2007 BCA Level Field Survey:

1. On February 6, 2007, TLC biologists determined that the parcels bordering Washington Street were naturally vegetated with two habitat types: Creosote Bush/Desert Sand Verbena series (*see* Figure 2 Area #1) and Fourwing Saltbush series (*see* Figure 2 Area #2). The Figure 2 *Biological Resources Map* for the project site illustrates the locations of these two habitat types in Areas #1 and #2 respectively. Both habitat types represent suitable habitat for the following listed, and unlisted special-status annual plant species, known to occur in the region surrounding the project site:
   - two federally listed endangered, February-May flowering species, the Coachella Valley Milkvetch and Triple-ribbed Milkvetch, and
   - six unlisted, special-status plants: Flat-seeded Spurge (February-September flowering), Glandular Ditaxis (October-March flowering), California Ditaxis (March-December flowering), Slender Wooly-heads (March-May flowering), Desert Spike-moss (Non-flowering) and Purple Stemodia (January-December flowering).

42210 Roick Drive, Suite 11, Temecula, CA 92590-5523 Office (951) 719-1128 Fax (951) 719-3106

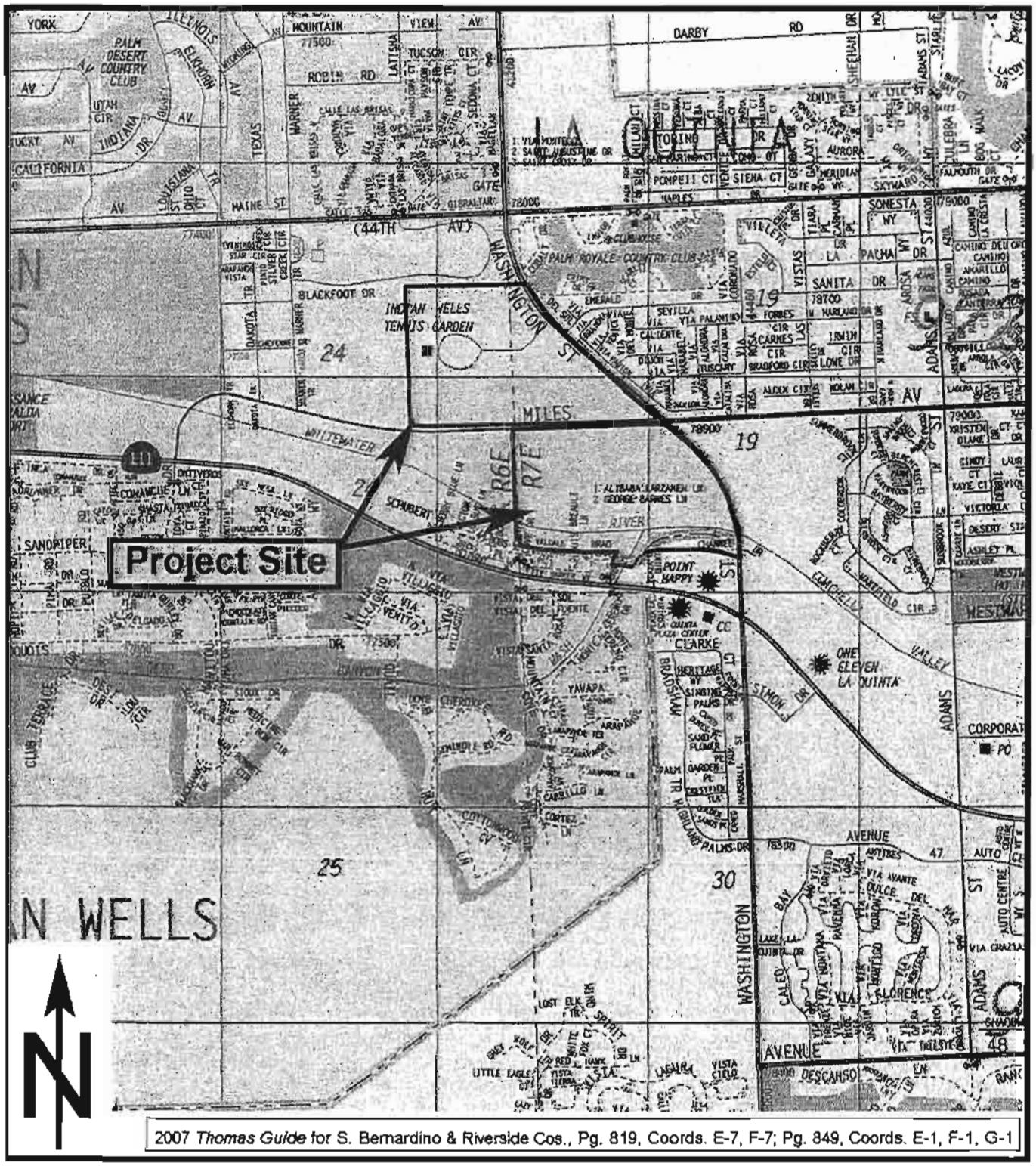


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Figure 1

Location of Indian Wells Town Center Project Site

Illustrated on the Thomas Guide Map

Area # 1: Creosote Bush/Desert Sand Verbena Series Natural Habitat (northern portions are disturbed) - Rare Plant Survey Area #1

Area # 2: Fourwing Saltbush Series Natural Habitat (southwestern portion is disturbed) - Rare Plant Survey Area #2

Area # 3: Existing Tennis Garden Facility with associated paved parking, landscaping and Bermuda Grass lawns

Area # 4: Flood Control Structure and Bermuda Grass Sod Farm and associated structures (e.g., Water Tank)

Area # 5: Whitewater River

Aerial Photograph Source: Earth.Google.com

Thomas Leslie Corporation

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Figure 2

Biological Resources Map for the Indian Wells Town Center Project Site

2. Because ***no*** annual plants were flowering on February 6, 2007, it was not possible to determine the presence or absence of any of the listed/unlisted species that could potentially occur on the project site due to the presence of suitable habitat. In addition, ***no*** determination could be made regarding California Ditaxis and Slender Wooly-heads since the flowering periods for both species do not start until March of the year. Therefore, based on an analysis of the flowering periods of the listed and unlisted special-status plant species having potential to occur on the project site, three focused Rare Plant field surveys were scheduled and conducted within naturally vegetated Area #1 and #2 (***see*** Figure 2) on March 10 and April 16 and 22, 2007. The results of the three focused Rare Plant field surveys are provided in this letter report.

The focused Rare Plant field survey letter report includes (I) a summary of the results of the March and April 2007 focused Rare Plant field surveys, (II) location of focused Rare Plant Survey Area #1 and Area #2, (III) methodologies of the 2007 focused Rare Plant surveys, (IV) results and conclusions for the 2007 focused Rare Plant surveys and (V) Recommendations regarding the need for further focused Rare Plant surveys.

I. SUMMARY OF THE RESULTS OF THE MARCH AND APRIL 2007 FOCUSED RARE PLANT FIELD SURVEYS

- *No* listed endangered, or unlisted special-status annual plant species, having potential to occur within focused Rare Plant Survey Area #1 or Area #2 due to the presence of suitable habitat, were observed on March 10 or April 16 and 22, 2007.

- Since ***no*** rare plant species were identified within the boundaries of Survey Area #1 or #2, ***no*** impacts to rare plants are anticipated. Therefore, ***no*** mitigation measures are proposed.

II. LOCATION OF THE RARE PLANT FOCUSED SURVEY AREAS #1 AND #2 AND PROJECT DESCRIPTION

Location of Rare Plant Focused Survey Areas #1 and #2:

- **Figure 1** illustrates the boundaries of the entire project site on the 2007 Thomas Guide San Bernardino and Riverside Counties Street Guide and Directory, on map page 819, map coordinates E-7 and F-7 and on map page 849, map coordinates E-1, F-1 and G-1.

- **Figure 2,** the project site *Biological Resources Map*, illustrates the five vegetation types/areas identified onsite during the February 6, 2007 BCA field survey. Since Area #1 and Area #2 are proposed for development and both were naturally vegetated with Creosote Bush/Desert Sand Verbena series and Fourwing Saltbush series habitat, the three Rare Plant focused surveys were performed within these two areas on March 10 and April 16 and 22, 2007. The other three vegetation types/areas were not surveyed because Area #3 and Area #4 do not provide suitable habitat for listed or unlisted special-status plant species known to occur in the region surrounding the project site; and Area #5 is not proposed for development.

Interstate 10 (I-10) provides access to the project site. To reach the project site, exit I-10 at Washington Street and drive southerly 2.8± miles to Miles Avenue, which bisects the project site into the northern and southern portions. A number of paved and dirt roads/trails provide access to all portions of the project site.

Project Description:

The "Town Center Specific Plan" proposes 35.9 acres of mixed use consisting of retail, restaurants, offices, a 2,400-seat theater, a 267-room hotel, 65 single-family detached homes and 12.9 acres developed into 1,632 permanent parking spaces for use by the existing tennis complex (CDFG, 2006).

III. METHODOLOGIES OF THE 2007 FOCUSED RARE PLANT FIELD SURVEYS

As recommended by the CDFG comments letter, three focused Rare Plant field surveys were performed in accordance with the methodologies identified by the CDFG's May 1984 *Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities*. Specifically, the following *Guidelines* required information is included in TLC's focused Rare Plant field survey results letter report:

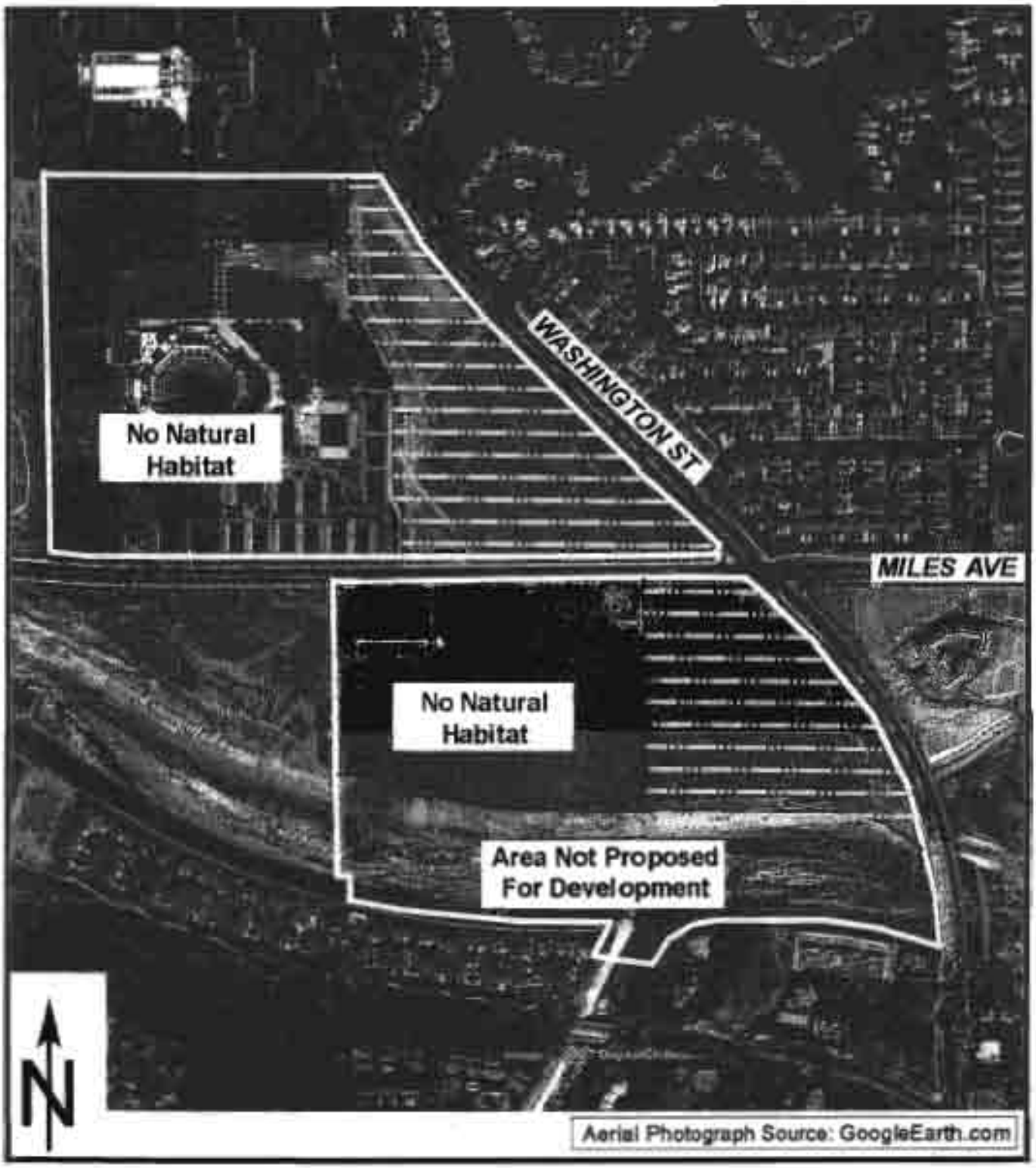
- Botanical consultants should possess the following qualifications: (a) experience conducting floristic field surveys, (b) knowledge of plant taxonomy and plant ecology, (c) familiarity with the plants of the area, including rare, threatened, and endangered species, and (d) familiarity with the appropriate state and federal statutes related to plants and plant collecting.
- Field surveys should be "conducted using systematic field techniques in all habitats of the site to ensure a thorough coverage of potential impact areas."
- "Field surveys should be conducted at the proper time of the year when rare, threatened, or endangered species are both evident and identifiable. Usually, this is when the plants are flowering."
- The results of botanical field surveys should include the "name of field investigator(s)," a "detailed description of survey methodology" (techniques), the "dates of field surveys and total person-hours spent on field surveys," a "list of all species occurring on the project site," and a list of the "references cited."

A. Field Surveyors Qualifications: The focused Rare Plant field surveys, of the Indian Wells Tennis Garden project site, were performed by TLC biologists Thomas A. Leslie and Nadya Leslie. Both biologists

- are experienced in conducting focused Rare Plant field surveys in the Coachella Valley Multiple Species Habitat Conservation Plan Area (CV-MSHCP) including the vicinity of the project site,
- have a Masters of Science degree in Botany,
- are expert and experienced with identifying the common, listed and unlisted special-status plant species of the CV-MSHCP including the region surrounding the project site,
- are familiar with state and federal statutes related to plants and plant collecting,
- have their own individual California Department of Fish and Game Scientific Collector's Permit and corporate National Forest Service Botanical Collector's Permits and
- TLC is on the current Riverside County *List of Qualified Environmental Consulting Firms* viewable at: http://www.tlma.co.riverside.ca.us/epd/consultants.html

B. Field Survey Techniques: To ensure 100% visual coverage of the ground surface of potential impact areas, TLC's qualified/experienced Rare Plant field surveyors (T. Leslie and N. Leslie) systematically walked along 28 (twenty-eight) 30 meter wide east-west oriented belt transects through the native Creosote Bush/Desert Sand Verbena series (17 transects) and Fourwing Saltbush series (11 transects) habitat vegetating the naturally vegetated parcels bordering Washington Street. Both habitat types are known to provide suitable habitat for two listed endangered and six unlisted special-status rare annual plant species known to occur in these two habitat types in the region surrounding the project site.

Figure 3 schematically[1] illustrates the location and width[2] and number[3] of belt transects systematically walked on each of the three focused Rare Plant field survey days.



Thomas Leslie Corporation

BIOLOGICAL & CULTURAL INVESTIGATIONS & MONITORING

Figure 3

Schematic Location of Transects Walked on Indian Wells Town Center Project Site During March and April 2007 Rare Plant Field Surveys

Notes:

[1] = The locations of the 28 Figure 3 transects are *schematic* and should not be used in an attempt to calculate transects widths or distance between transect centerlines: as stated above, the transects were 30 meter wide.

[2] = **Width of Transects**: Focused Rare Plant field survey Nos. 2 and 3 were conducted *concurrently* with two of the four focused Burrowing Owl (BUOW) "peak of the breeding season" field surveys were also conducted within Survey Areas #1 and #2. CDFG survey protocols, for performance of focused breeding season BUOW field surveys, require that "the distance between the transect center lines should be no more than 30 meters (approx. 100 ft.)" (CDFG, 1995). Therefore, the distance between the Rare Plant field survey transect centerlines was also 30 meters (approx. 100 ft.).

[3] = **Number of Transects**: Since (1) the distance between the north and the south boundaries of the two Rare Plant field survey areas is 1,700± feet for Survey Area #1 and 1,100± feet for Survey Area #2, and (2) the distance between transect center lines of each plant field survey transect was "approx. 100 ft.", the number of east-west orientated transects was calculated to be 17 for the Survey Area #1 (1,700± feet ÷ 100 feet) and 11 for the Survey Area #2 (1,100± feet ÷ 100 feet).

Table 1 identifies the focused rare plant field survey dates, survey start and end times, survey conditions (temperatures and wind speed), surveyor names and total person-hours spent on field surveys.

Table 1: Focused Rare Plant Field Survey Dates, Survey Start/End Times, Survey Conditions (Temperatures and Average Wind Speeds) and Surveyor(s) Names and Total Person-Hours Spent On Field Surveys

2007 Survey Dates	Survey Times		Survey Conditions				Surveyor Names* and Surveyor Hours	Total Person Hours Spent On Field Surveys
			Survey Temperatures In Degrees Fahrenheit		Average Wind Speed In Miles Per Hour			
	Start	End	Start	End	Start	End		
1. March 10	1145	1245	90.1	88.7	3.1	2.7	TAL (1.0) NVL (1.0)	2.0
2. April 16	0600	0800	57.9	58.5	4.5	4.4	TAL (2.0) NVL (2.0)	4.0
3. April 22	1730	1930	80.2	75.5	2.0	5.1	TAL (2.0) NVL (2.0)	4.0
						Total Survey Hours:		***10.0***

* = TAL = Thomas A. Leslie, MS Botany; NVL = Nadya V. Leslie, MS Botany.

C. Field Survey Timing: According to Item 4.a., of the CDFG May 1984 *Guidelines for Assessing Impacts to Rare Plants and Rare Natural Communities*, focused Rare Plant field surveys must be "conducted in the field at the proper time of year when rare, threatened, or endangered species are both evident and identifiable. Usually, this is when the plants are flowering." Therefore, in accordance with

the *Guidelines*, the focused Rare Plant field surveys for the eight plant species identified by the BCA as having potential to occur onsite, were conducted during the following species-specific flowering periods listed below. Consequently, *if* any of the eight species surveyed for had been present and flowering within the Survey Area #1 and #2, they could have been identifiable on both March 10 and/or April 16 and 22, 2007.

- January-December flowering Purple Stemodia
- February-May flowering Coachella Valley Milkvetch
- February-May flowering Triple-ribbed Milkvetch
- February-September flowering Flat-seeded Spurge
- March-December flowering California Ditaxis
- March-May flowering Slender Wooly-heads
- October-March flowering Glandular Ditaxis
- Non-flowering Desert Spike-moss

D. **List of Species Field Identified Onsite**: As also required by the CDFG May 1984 *Guidelines*, the Appendix A *Floral Compendium* of this letter report provides a list of all plant species field identified within Survey Area #1 and #2, on March 10 and April 16 and 22, 2007.

IV. RESULTS AND CONCLUSIONS FOR THE 2007 FOCUSED RARE PLANT SURVEYS

- As documented by February 2007 BCA report prepared by TLC (TLC, 2007), the following two natural native plant habitat types (communities) were identified onsite: Creosote Bush/Desert Sand Verbena Series and Fourwing Saltbush Series. The community nomenclature followed *A Manual of California Vegetation* (Sawyer and Keeler-Wolf, 1995).

- While the Desert Sand Verbena Series is identified as a California Natural Diversity Data Base (CNDDB) Community of Highest Inventory Priority (C.H.I.P.), the Fourwing Saltbush Series is not. Since the project site is located within the Coachella Valley Fringe-toed Lizard (CVFTL) habitat conservation fee area, all potential impacts to the Desert Sand Verbena Series plant community would be mitigate to less than significant by payment of the CVFTL fee.

- 100% of the ground surface of focused Rare Plant Survey Area #1 and Survey Area #2 was visible due to the (a) open, low-density structure of the natural Creosote Bush/Desert Sand Verbena series and Fourwing Saltbush series habitat vegetating the two survey areas and (b) absence of herbaceous groundcover below the shrub canopy of the two native habitat types. Photo Plate Nos. 1 and 2 located in Appendix B, provide representative views of the Survey Area #1 and Survey Area #2 in February and April 2007.

- The focused Rare Plant field surveys were conducted at the time of the year when rare, threatened, or endangered species would be both evident and identifiable had they been growing Survey Area #1 and Survey Area #2: the species-specific flowering period for each of the eight plant species having potential to occur onsite due to the presence of suitable habitat.

- *No* listed endangered, or unlisted special-status annual plant species, having potential to occur within focused Rare Plant Survey Area #1 or Area #2 due to the presence of suitable habitat, were observed on March 10 or April 16 or 22, 2007.

- *No* CDFG Natural Diversity Data Base occurrence record, for any listed threatened or endangered or unlisted special-status plant species, is recorded within or proximal to Rare Plant Survey Area #1 or Survey Area #2.

- As the Appendix A Floral Compendium (FC) documents:
  a. In total, 22 plant species (13 natives; 9 non-natives) were identified within the boundaries of the project site during performance of the three focused 2007 Rare Plant surveys within Survey Area #1 or Area #2. Additional annual plant species might be identified within Survey Area #1 or Area #2 during surveys conducted in a more mesic year.
  b. The plant species field identified within Survey Areas #1 and #2 were all locally common annual and perennial species typically associated with natural but disturbed Creosote Bush/Desert Sand Verbena series and Fourwing Saltbush Series habitat of the local vicinity.
  c. As documented by Column 5 of the FC, ***no*** listed threatened or endangered plant species, or unlisted special-status species, were identified during performance of the three focused 2007 Rare Plant surveys of Survey Areas #1 and #2. Similarly, ***none*** were identified within the boundaries of the Indian Wells Tennis Garden project site (which included 2007 Focused Rare Plant Survey Area #1 and #2), in 1998 by Bon Terra Consulting (BTC, 1998a, b).

- Since no rare plant species were identified within the boundaries of Survey Area #1 or #2, ***no*** impacts to rare plants are anticipated. Therefore, ***no*** mitigation measures are proposed.

V. RECOMMENDATIONS REGARDING THE NEED FOR FURTHER FOCUSED RARE PLANT SURVEYS

If focused Rare Plant Survey Area #1 and/or Area #2 are not graded by mid-March 2008, the focused Rare Plant survey of Survey Area #1 and Area #2 should be repeated mid-March and mid-April 2008 to confirm the continued absence of any of the eight plant species having potential to occur onsite. Conversely, if Survey Area #1 and Survey Area #2 are graded by mid-March 2008, focused Rare Plant surveys would not be recommended.

Respectfully Submitted
THOMAS LESLIE CORPORATION

T. Leslie

Thomas A. Leslie, President/BS-MS Biology
TAL/nvl

REFERENCES

Bon Terra Consulting (BTC), April 21, 1998a, Biological Impact Report, Garden of Champions Tennis Facility, Indian Wells, California.

Bon Terra Consulting (BTC), June 11, 1998b, Findings of Supplemental Biological Resources Survey for the Garden of Champions Tennis Facility in Indian Wells, Riverside County.

California Department of Fish and Game (CDFG), April 3, 2007a (Printed April 20, 2007), Natural Diversity Data Base (CNDDB) Rare Find Record Search Results for the La Quinta, Calif. USGS 7.5 Minute Topographic Quadrangle.

California Department of Fish and Game (CDFG), January 31, 2007b, Natural Diversity Data Base (CNDDB) Quadrangle Velum Overlay No. 33116F3 for the 1959 (Photorevised 1980) La Quinta, Calif. USGS 7.5 Minute Topographic Quadrangle.

California Department of Fish and Game (CDFG), December 18, 2006a, Letter to the City of Indian Wells: Notice of Preparation for the Town center Specific Plan SCH # 2006111097.

California Department of Fish and Game (CDFG), 1995, Staff Report on Burrowing Owl Mitigation.

California Department of Fish and Game (CDFG), May 4, 1984, Revised August 15, 1997, Guidelines for Assessing the Effects of Proposed Developments on Rare, Threatened, and Endangered Plants and Plant Communities.

Sawyer, J., and T. Keeler-Wolf, 1995, A Manual of California Vegetation, California Native Plant Society.

Thomas Leslie Corporation (TLC), February 13, 2007, Results of a Biological Constraints Analysis (BCA) for the 98.4-acre City of Indian Wells Town Center Project Site (Project Site).

APPENDIX A

2007

Focused Rare Plant Survey
FLORAL COMPENDIUM

FOR

Survey Area #1 and Survey Area #2

(Includes only species field identified in February, March and April 2007)

OF THE PROPOSED
INDIAN WELLS TOWN CENTER
PROJECT SITE

INDIAN WELLS, CALIFORNIA

Non-native (9)	SCIENTIFIC NAMES	COMMON NAMES (22)	Flowering in March and April 2007	Listing Status
	Class Dicotyledones	**Dicots**		
	FAMILY ASTERACEAE	**SUNFLOWER FAMILY**		
	Ambrosia dumosa	Burro-weed	- - -	*None*
	Encelia farinosa	Brittlebush	- - -	*None*
	Palafoxia arida	Desert Spanish-needles	**F**	*None*
	Xanthium strumarium	Cocklebur	- - -	*None*
	FAMILY BORAGINACEAE	**BORAGE FAMILY**		
	Tiquilia plicata	Plicate Coldenia	**F**	*None*
	FAMILY BRASSICACEAE	**MUSTARD FAMILY**		
X	*Brassica tournefortii*	African Mustard	**F**	*None*
X	*Sisymbrium altissimum*	Tumble Mustard	**F**	*None*
X	*Sisymbrium irio*	London Rocket	**F**	*None*
	FAMILY CHENOPODIACEAE	**GOOSEFOOT FAMILY**		
	Atriplex canescens	Four-wing Saltbush	- - -	*None*
X	*Salsola tragus*	Russian Thistle	- - -	*None*
	FAMILY CUCURBITACEAE	**GOURD FAMILY**		
	Brandegea bigelovii	Brandegea	- - -	*None*
	FAMILY EUPHORBIACEAE	**SPURGE FAMILY**		
X	*Ricinus communis*	Castor Bean	- - -	*None*
	FAMILY FABACEAE	**LEGUME FAMILY**		
	Dalea mollis	Annual Dalea	**F**	*None*
	Prosopis glandulosa	Mesquite	- - -	*None*
	Psorothamnus emoryi	Dye-plant	- - -	*None*

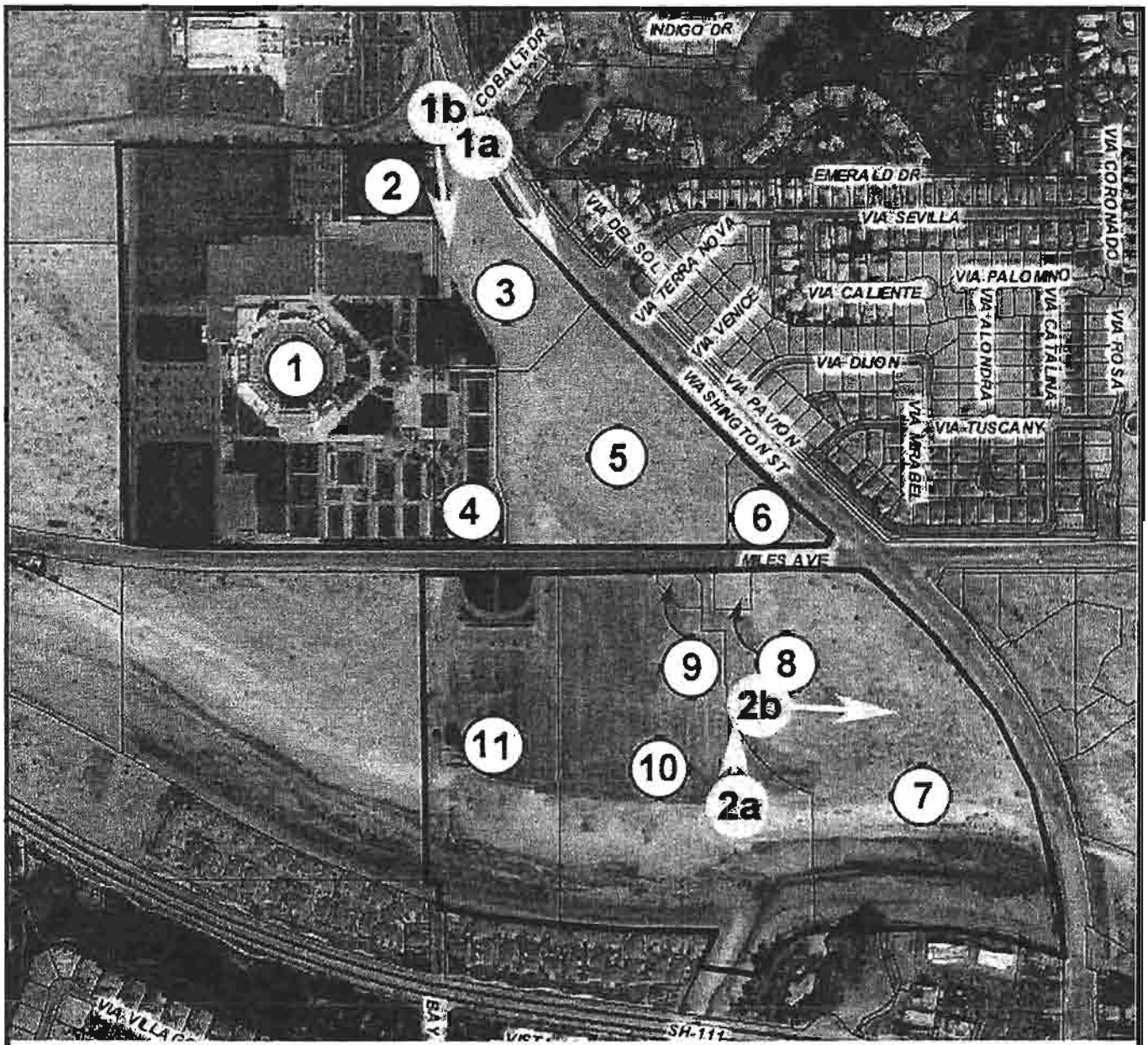
Non-native (9)	SCIENTIFIC NAMES	COMMON NAMES (22)	Flowering in March and April 2007	Listing Status
	FAMILY ONAGRACEAE	**EVENING PRIMROSE FAMILY**		
	Oenothera deltoides	Devil's Cage	- - -	*None*
	FAMILY SOLANACEAE	**NIGHTSHADE FAMILY**		
	Datura wrightii	Jimson Weed	- - -	*None*
X	*Nicotiana glauca*	Tree Tobacco	- - -	*None*
	FAMILY TAMARICACEAE	**TAMARISK FAMILY**		
X	*Tamarix aphylla*	Athel	**F**	*None*
	FAMILY ZYGOPHYLLACEAE	**CALTROP FAMILY**		
	Larrea tridentata	Creosote Bush	**F**	*None*
	Class Monocotyledones	**Monocots**		
	FAMILY POACEAE	**GRASS FAMILY**		
X	*Cynodon dactylon*	Bermuda Grass	- - -	*None*
X	*Schismus barbatus*	Mediterranean Schismus	- - -	*None*

APPENDIX B

2007
PHOTO PLATE NOS. 1 and 2

FOR THE PROPOSED
INDIAN WELLS TOWN CENTER
PROJECT SITE

INDIAN WELLS, CALIFORNIA



1 = APN 633-360-027 (existing Tennis Garden);
2 = APN 633-360-028;
3 = APN 633-360-029;
4 = APN 633-360-026;
5 = APN 633-360-018;
6 = APN 633-360-024
7 = APN 604-040-089
8 = APN 604-040-036
9 = APN 604-040-097
10 = APN 604-040-098
11 = APN 604-040-091 (easterly 6 AC portion)

1a, 1b, 2a and 2b = Location and Directions of Photos

Map Source: Riverside County GIS

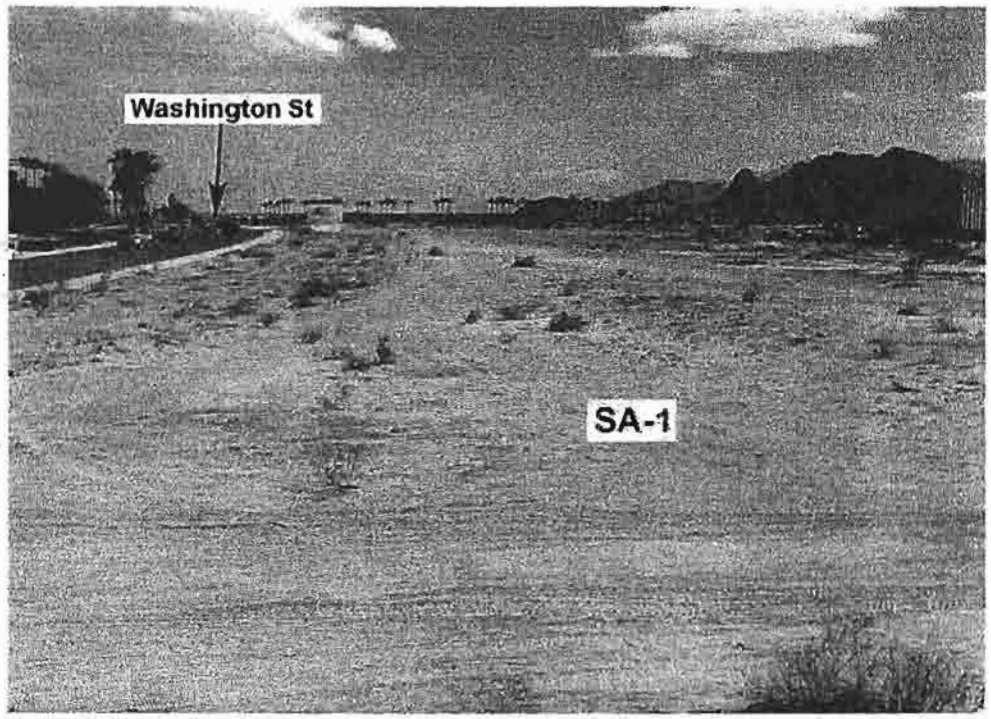
Thomas Leslie Corporation

BIOLOGICAL & CULTURAL INVESTIGATIONS & MONITORING

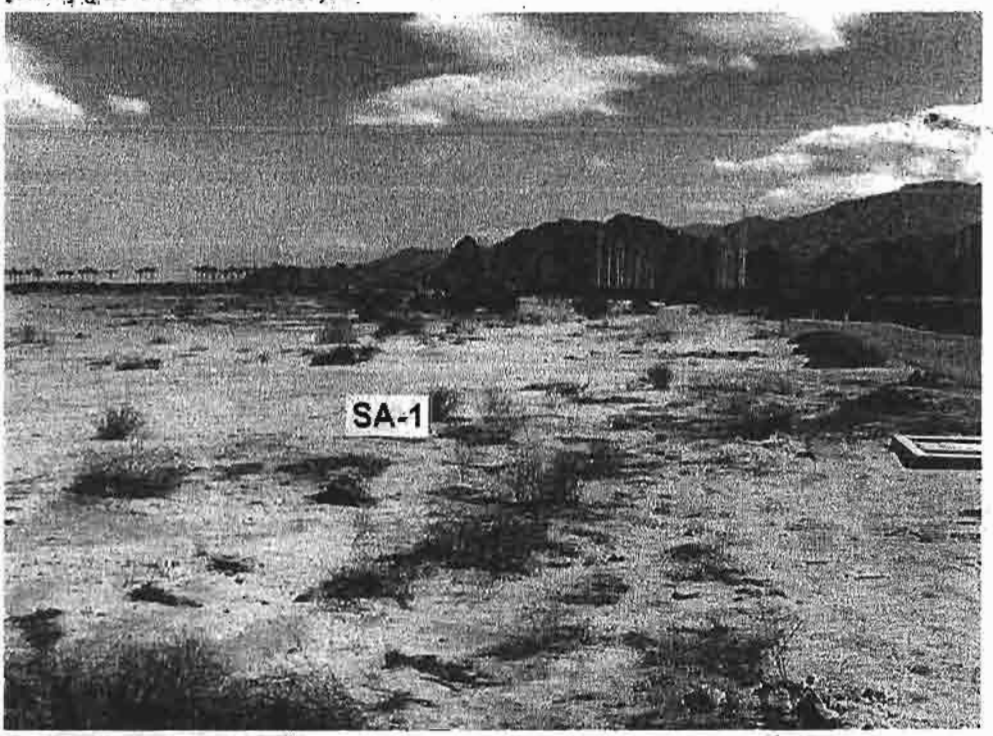
Index Map:

Location and Direction of Photos and Parcel Map for APNs Comprising the Indian Wells Town Center Project Site

PHOTO PLATE NO. 1



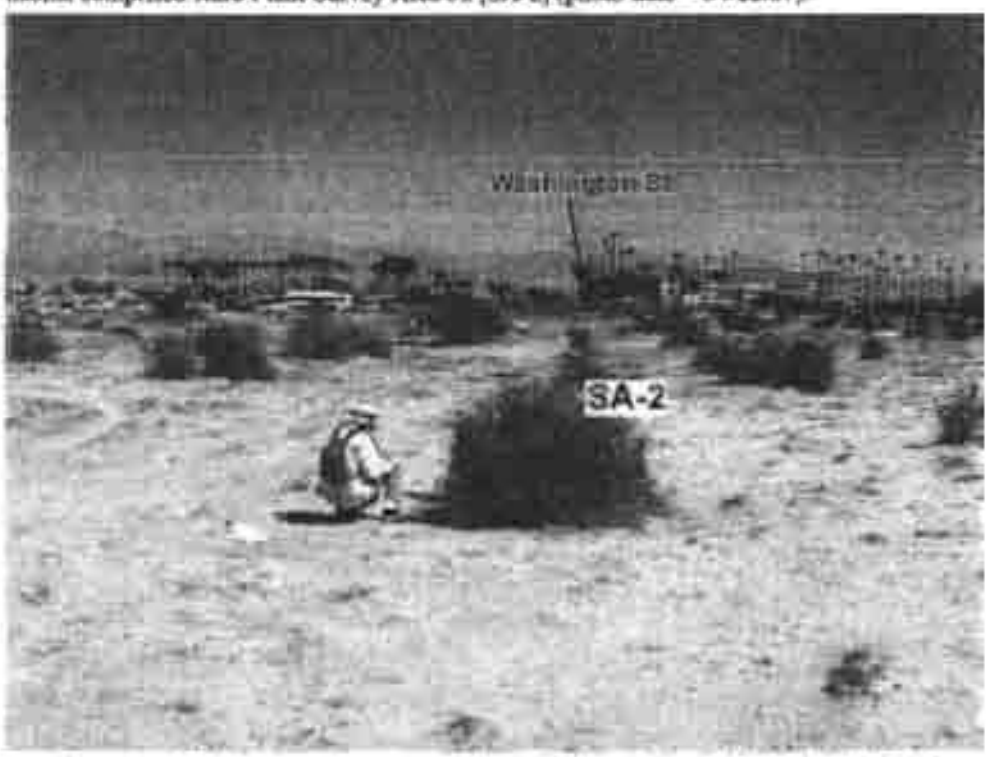
1a. Southeasterly view, from the intersection of Washington Street and an unnamed paved roadway paralleling the northern boundaries of APN 633-360-027, -028 and -029, across the easterly portion of APNs 633-360-029, -018 and -024. Extensive portions of APN 633-360-029 were comprised of highly disturbed primarily unvegetated sandy soils transected by unpaved dirt vehicle trails. An open growth of Creosote Bush/Desert Sand Verbena series habitat vegetated APNs 633-360-018 and -024 and the undisturbed portion of APN 633-360-029. The Creosote Bush/Desert Sand Verbena habitat comprised Rare Plant Survey Area #1 [SA-1] (photo date – *04/22/07*).



1b. Southerly view toward Miles Avenue, from the unnamed roadway paralleling the northern boundary of APNs 633-360-027, -028 and -029, across the westerly portions of APNs 633-360-026 and -029. As this photograph documents, substantial areas of the sandy soils beneath the shrub canopy of the Creosote Bush/Desert Sand Verbena habitat were essentially unvegetated in April 2007 (photo date - *04/22/07*).

PHOTO PLATE NO. 2

2a. North view toward Miles Avenue, across APN 604-040-097, the easterly portion of APN 604-040-098 and westerly portion of APN 604-040-089, from the southeast corner of APN 604-040-089. The majority (95±%) of the topographic surface of APNs 604-040-097 and -098 was covered by irrigated non-native Bermuda Grass (BG). APN 604-040-089 was vegetated with an open growth of Fourwing Saltbush series habitat. The Fourwing Saltbush habitat comprised Rare Plant Survey Area #2 [SA-2] (photo date – *04/22/07*).



2b. East view toward Washington Street, across the northerly portion of APN 604-040-089, from the west central parcel boundary. As this photo documents, an open growth of Fourwing Saltbush series habitat vegetated the parcel's sandy soils. The Fourwing Saltbush habitat comprised Rare Plant SA-2. The sandy soils beneath the shrub canopy of the Saltbush habitat were essentially unvegetated in April 2007 (photo date - *02/06/07*).

BIOLOGICAL REPORT SUMMARY SHEET

(Submit two copies to the County)

Applicant Name: _____

Assessor's Parcel Number (APN): _____

APN cont. : _____

Site Location: Section: _____ **Township:** _____ **Range:** _____

Site Address: _____

Related Case Number(s): _____ **PDB Number:** _____

CHECK SPECIES SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE OF CONCERN	(Circle Yes, No or N/A regarding species findings on the referenced site)		
	Arroyo Southwestern Toad	Yes	No	N/A
	Blueline Stream(s)	Yes	No	N/A
	Coachella Valley Fringed-Toed Lizard	Yes	No	N/A
	Coastal California Gnatcatcher	Yes	No	N/A
	Coastal Sage Scrub	Yes	No	N/A
	Delhi Sands Flower-Loving Fly	Yes	No	N/A
	Desert Pupfish	Yes	No	N/A
	Desert Slender Salamander	Yes	No	N/A
	Desert Tortoise	Yes	No	N/A
	Flat-Tailed Horned Lizard	Yes	No	N/A
	Least Bell's Vireo	Yes	No	N/A
	Oak Woodlands	Yes	No	N/A
	Quino Checkerspot Butterfly	Yes	No	N/A
	Riverside Fairy Shrimp	Yes	No	N/A
	Santa Ana River Woolystar	Yes	No	N/A
	San Bernardino Kangaroo Rat	Yes	No	N/A
	Slender Horned Spineflower	Yes	No	N/A
	Stephen's Kangaroo Rat	Yes	No	N/A
	Vernal Pools	Yes	No	N/A
	Wetlands	Yes	No	N/A

CHECK SPECIES SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE OF CONCERN	(Circle Yes, No or N/A regarding species findings on the referenced site)		
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A

Species of concern shall be any unique, rare, endangered, or threatened species. It shall include species used to delineate wetlands and riparian corridors. It shall also include any hosts, perching, or food plants used by any animals listed as rare, endangered, threatened or candidate species by either State, or Federal regulations, or for Riverside County as listed by the California Department of Fish and Game Natural Diversity Data Base (NDDB).

I declare under penalty of perjury that the information provided on this summary sheet is in accordance with the information provided in the biological report.

Signature and Company Name _____ Report Date _____

10(a) Permit Number (if applicable) _____ Permit Expiration Date _____

County Use Only

Received by: _____ Date: _____

PD-B#: _____

LEVEL OF SIGNIFICANCE CHECKLIST
For Biological Resources
(Submit Two Copies)

Case Number: _____ **Lot/Parcel No.** _____ **EA Number** _____

Wildlife & Vegetation

Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

(Check the level of impact the applies to the following questions)

a) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved local, regional, or state conservation plan?

b) Have a substantial adverse effect, either directly or through habitat modifications, on any endangered, or threatened species, as listed in Title 14 of the California Code of Regulations (Sections 670.2 or 670.5) or in Title 50, Code of Federal Regulations (Sections 17.11 or 17.12)?

c) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U. S. Wildlife Service?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife nursery sites?

e) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U. S. Fish and Wildlife Service?

f) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

g) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Source: CGP Fig. VI.36-VI.40

Findings of Fact:

Proposed Mitigation:

Monitoring Recommended:

APPENDIX C

Cultural Records Search

EASTERN INFORMATION CENTER

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

Department of Anthropology, University of California, Riverside, CA 92521-0418

(951) 827-5745 - Fax (951) 827-5409 - eickw@ucr.edu

Inyo, Mono, and Riverside Counties

March 27, 2007
RS #3932

Ernest Perea
EPC Land Planning Inc.
5225 Canyon Crest Drive, #7-325
Riverside, CA 9207

Re: Cultural Resource Records Search for City of Indian Wells Town Center Specific Plan

Dear Mr. Perea,

We received your verbal request on March 21, 2007, for a cultural resource records search for the City of Indian Wells Town Center Specific Plan project, located in Sections 24 and 19, T.5S, R.7E, SBBM, in Riverside County. We have reviewed our maps, records, and reports against the project area defined on the map you provided.

Our records indicate that four cultural resources studies (EIC Report Numbers RI-1930, RI-1933, RI-1934, and RI-6772) have been conducted within the boundaries of the project area and that there are three cultural resources properties (CA-RIV-3005, CA-RIV-3008, and CA-RIV-5876) are recorded within the boundaries of the project area.

Additional sources of information consulted are identified below.

National Register of Historic Places: no listed properties are located within the boundaries of the project area.

Office of Historic Preservation, Archaeological Determinations of Eligibility: no listed sites are located within the boundaries of the project area.

Office of Historic Preservation, Directory of Properties in the Historic Property Data File: no listed properties are located within the boundaries of the project area.

Note: not all properties in the California Historical Resources Information System are listed in the OHP ADOE and HPD; the ADOE and HPD comprise lists of properties submitted to the OHP for review.

Two of the studies noted above (RI-1934 and RI-6772) involved field and laboratory investigations to evaluate the significance of the three cultural resources properties located within the project area. These efforts resulted in the recommendation that although the three sites did contain and yield important archaeological and cultural heritage information, further study was not necessary. It was, however, recommended (RI-6772) that construction activities in the portion of the project area north of Miles Avenue, including the area around one of the recorded sites (CA-RIV-3308), be monitored to ensure protection of any significant, subsurface cultural resources which might be exposed. It is therefore recommended here that a qualified archaeologist: (1) monitor earth-grading and any other ground-disturbing activities related to land development in order to ensure protection of significant cultural resources; and (2) prepare a report on results of the monitoring and submit a copy of it to this office. A list of archaeological and cultural resources consultants is attached for your use.

Sincerely,

Matthew C. Hall

M. C. Hall
Coordinator

Enclosure

11.9 Cultural Resource Reports

AUTHOR:	Joan C. Brown
DATE:	July 1998
TITLE:	An Exploratory Investigation Of CA-RIV-3005 and CA-RIV-5876, Located Near Indian Wells, Riverside County, California
SUBMITTED BY:	RMW Paleo Associates, Incorporated 23392 Madero, Suite L Mission Viejo, California 92691 (714) 770-8042 FAX (714) 458-9058
SUBMITTED TO:	Robert Bein, William Frost and Associates 14725 Alton Parkway Post Office Box 57057 Irvine, California 92618-2069
CONTRACT NUMBER:	RMW Project Number 98-1230
MAP:	USGS La Quinta, California 7.5 Minute Quadrangle 1959, Photorevised 1980
ACREAGE:	Approximately 50 acres
KEYWORDS:	Indian Wells, California, Township 5 South, Ranges 6 and 7 East, San Bernardino Base and Meridian; CA-RIV-3005, CA-RIV-3008, CA-RIV-5876

MANAGEMENT SUMMARY

Purpose and scope: Robert Bein, William Frost and Associates (RBF) is preparing an environmental impact report for the proposed Garden of Champions Tennis Facility. The primary purpose of this study, which took place 10 through 18 June 1998, was to conduct exploratory investigations at CA-RIV-3005 and CA-RIV-5876 to establish reasonable methods for use during Phase 2 archaeological evaluation of the two prehistoric sites. The project was limited in scope to a few of the areas of artifact concentration that were visible when the work was accomplished. It must be noted that significant differences in surface artifact distributions were noted between April 1998, when the reconnaissance of the property was performed, and June 1998, when the work described in this report was accomplished. In other words, the shifting sands cause major differences in visible artifact distributions over very short time scales.

A surface collection and subsurface examination of CA-RIV-3008 was accomplished during the current project, as was a reconnaissance of the Whitewater River Channel portion of the study area.

The study methodology was developed by RMW Paleo Associates and was presented at a meeting attended by RMW, RBF, and County of Riverside Planning Department personnel. RMW Paleo Associates contacted two local Native American representatives; the Cabazon Band of Mission Indians and the Agua Caliente Band of Cahuilla Indians to inform them of the work program, the schedule, and to invite them to visit the field crew. Contact was by both telephone and letter.

The investigation within CA-RIV-3005 consisted of a surface collection of prehistoric artifactual remains, the excavation of six one meter square hand excavated units, and five machine excavated trenches. The investigation at CA-RIV-5876 consisted of a surface collection, four hand excavated units, and three machine excavated trenches. The units were excavated to a depth of 50 to 60 cm. The trenches were excavated by backhoe and averaged a meter in width and two meters in depth.

A surface collection of visible artifacts was accomplished at CA-RIV-3008, previously recorded as a "pot drop". Four shovel test pits were excavated in the areas of CA-RIV-3008 considered most likely to yield sub-surface artifactual material.

A surface examination of the Whitewater River Channel, the southernmost extent of the project parcel, was accomplished by two archaeologists walking transects spaced approximately 10 meters apart.

Findings summary: During excavations at CA-RIV-3005 and CA-RIV-5876, the vast majority of cultural remains were found on the surface or within the 0 to 10 cm level beneath the surface. Archaeological excavation of prehistoric sites in the vicinity, including a test excavation of the western portion of CA-RIV-5876 (located on a five acre parcel to the immediate west), indicates a similar distribution of cultural remains. A comparison of the surface distribution of artifacts, as

mapped during the April 1998 survey and site recording of CA-RIV-3005 and CA-RIV-5876, and the artifact distribution, as mapped during this investigation in June 1998 (Figures 3-5), indicates that the wind blown sand uncovers and covers artifacts on very short time scales.

The 50+ acre project parcel contains two recorded prehistoric archaeological sites consisting of four currently visible principal areas containing artifact concentrations (primarily pottery sherds with some lithics), plus apparently isolated artifacts located among the concentrations. Given the limited scope of the current project, it is unknown if these artifacts represent the remains of a single large site scattered throughout the 50 acres; the remains of multiple campsites; a satellite of the large prehistoric village recorded to the south; or are related to the historic era village recorded northwest of the parcel.

Recommendations summary: It is recommended that a Phase 2 test evaluation (based on CEQA) be accomplished at CA-RIV-3005 and CA-RIV-5876. The purpose of this current investigation of CA-RIV-3005 and CA-RIV-5876 was to determine the most efficient method of completing a Phase 2 test evaluation of the two sites. Because of the paucity of subsurface cultural material, it was determined that information for a valid assessment of site importance can be most effectively obtained by the use of 0 to 10 cm deep surface scrapes placed judgementaly and randomly within the sites. It is also recommended that an attempt be made to move quantities of sand by the use of leaf blowers in an effort to discover features such as fire hearths, post holes relating to prehistoric structures, human coprolite remains, and/or possible midden deposits within the sand dunes. Additionally, it is recommended that the Phase 2 test include a geomorphologist to study dune formation and movement and how these actions influence the displacement of artifactual remains. This information would then be used to determine the areas most likely to yield artifactual remains. The geomorphology study would precede the Phase 2 test excavation.

It is recommended that the Phase 2 test evaluation (based on CEQA), to determine the sites' ability to provide research information and to determine the horizontal and vertical extent of CA-RIV-3005 and CA-RIV-5876, be accomplished far in advance of any planned ground disturbing activities within the area.

It is strongly recommended that the pottery sherds collected during this investigation be incorporated into an in depth ceramic analysis during the test phase. The 422 fragments collected to date represent a variety of color ranges, that could indicate if the clays were residual or sedimentary in origin. Sixteen of the sherds are rim fragments. An analysis of these fragments could determine vessel type and size. Additionally, six of the sherds possibly contain residue and, upon residue analysis, could represent prehistoric food remains. Two of the sherds appear to be decorated, uncommon in this area and one sherd has a ground edge. This artifact could be part of a lid or a tool.

No additional research is required at CA-RIV-3008, however, it is recommended that the site area be monitored by an archaeologist during ground disturbing activities. During a previous study (Brown 1998), no additional cultural material was observed in the study area north of Miles Avenue and the recommendation was that that area also be monitored during ground disturbing activities.

No cultural remains were observed within the Whitewater River Channel during a survey of the river bottom. No additional cultural resources investigation is warranted within that area.

Disposition of data: This report will be filed with the Eastern Information Center, University of California, Riverside; Robert Bein, William Frost and Associates; and RMW Paleo Associates, Inc. Field notes and records are on file at the office of RMW Paleo Associates, Inc.

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INTRODUCTION
CONTRACTING INFORMATION/INTRODUCTION

Undertaking: RMW Paleo Associates, Inc. was retained by Robert Bein, William Frost and Associates to conduct an exploratory archaeological investigation of CA-RIV-3005 and CA-RIV-5876 to determine the most feasible method for conduct of a Phase 2 archaeological evaluation of the two pre-historic sites. A previous Cultural Resources Study of the project area recommended that if avoidance of the cultural deposits was not possible, then the sites were to be evaluated to determine their importance (Brown 1998).

The current project consisted of a collection of surface artifacts, hand excavation of units, and the mechanical excavation of trenches in both sites. This report follows the format for *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (California Department of Parks and Recreation 1989).

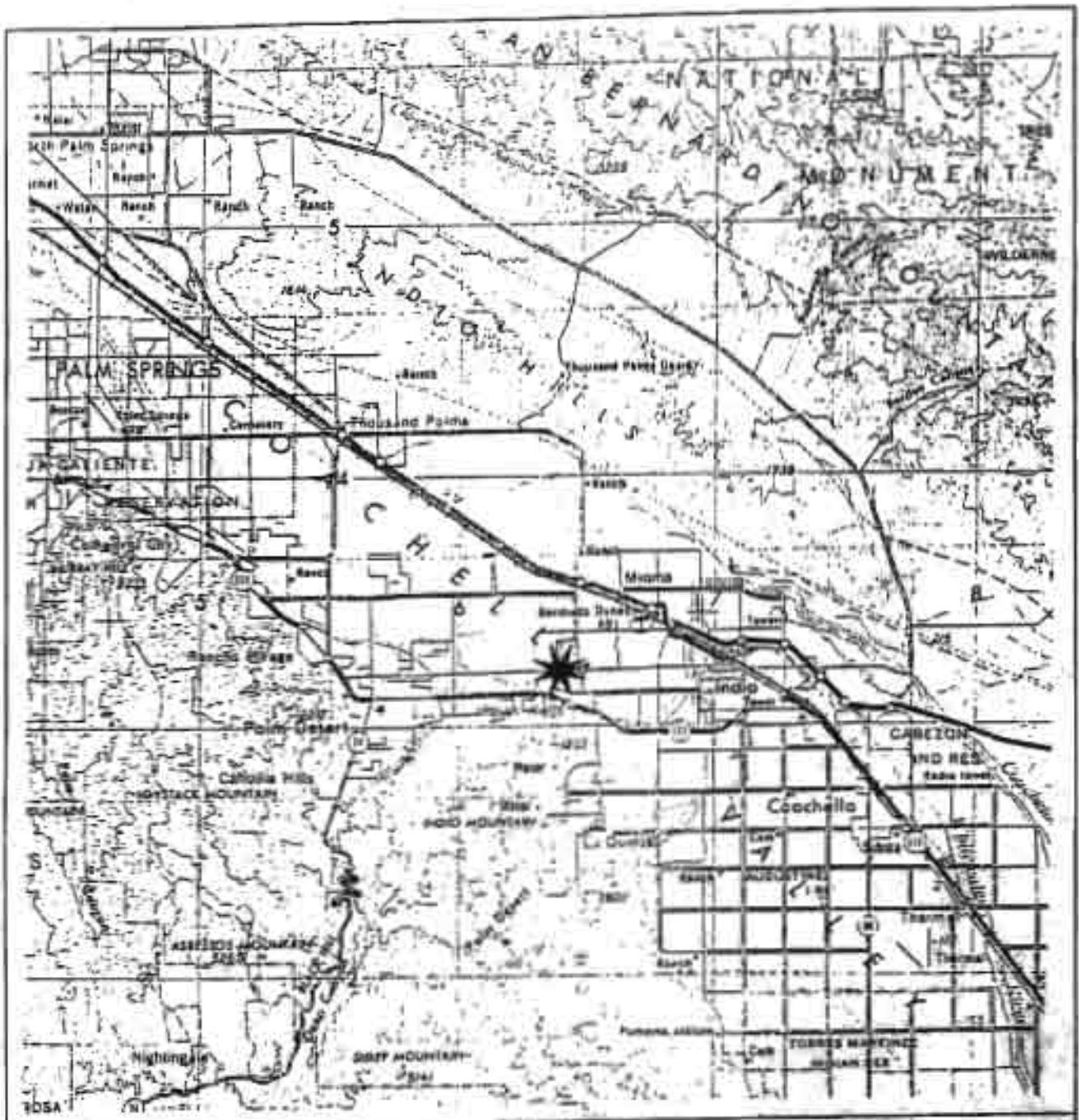
The 50+ acre parcel where the sites are located will be developed as parking facilities. The project area consists of approximately 50 acres located north of and including portions of the Whitewater River Channel, south of Miles Avenue, and west of Washington Street, near the community of Indian Wells, Riverside County, California. Figures 1 and 2 show the project location.

Personnel: Joan C. Brown and Ronald Bissell were Principal Investigators for the cultural study and conducted field work, research, and report writing. Tim Goddard and Carol Bissell assisted with the field and laboratory work. Resumes for the project personnel are contained in Appendix A.

NATURAL SETTING

The project area is located in the Coachella Valley, Riverside County, California. The Coachella Valley is in the northern portion of the Salton Trough and is separated from the Imperial Valley by the present day Salton Sea. The valley, which is considered part of the Colorado Desert, is bordered on the north and east by the Little San Bernardino, Cottonwood, and Orocopia Mountains; and on the west by the Santa Rosa, San Jacinto, and San Bernardino Mountains. The Santa Rosa and San Jacinto Mountains are the northernmost extension of the Peninsular Range. The mountains reach elevations from 6,000 to over 10,000 feet and have a pronounced rain shadow effect in the valley (Wilke 1978).

The climate of Coachella Valley is characterized by low humidity, very low precipitation, hot summers and mild winters. High summer temperatures can reach 125 degrees Fahrenheit and frost can occur in December and January. Winter precipitation from Pacific storms tends to fall on the western slopes of the Peninsular Range as rain and snow, but very little precipitation reaches the eastern slopes or the floor of the valley. Most precipitation occurs in the winter with an average annual rainfall of 3.2 inches recorded at Indio. Occasional summer tropical storms move north into the valley from the Gulf of Mexico, producing flash flooding (Wilke 1978).



Paleontology
Archaeology
History

Steatite Bird Effigy, Recovered by RMW Paleo, 1993

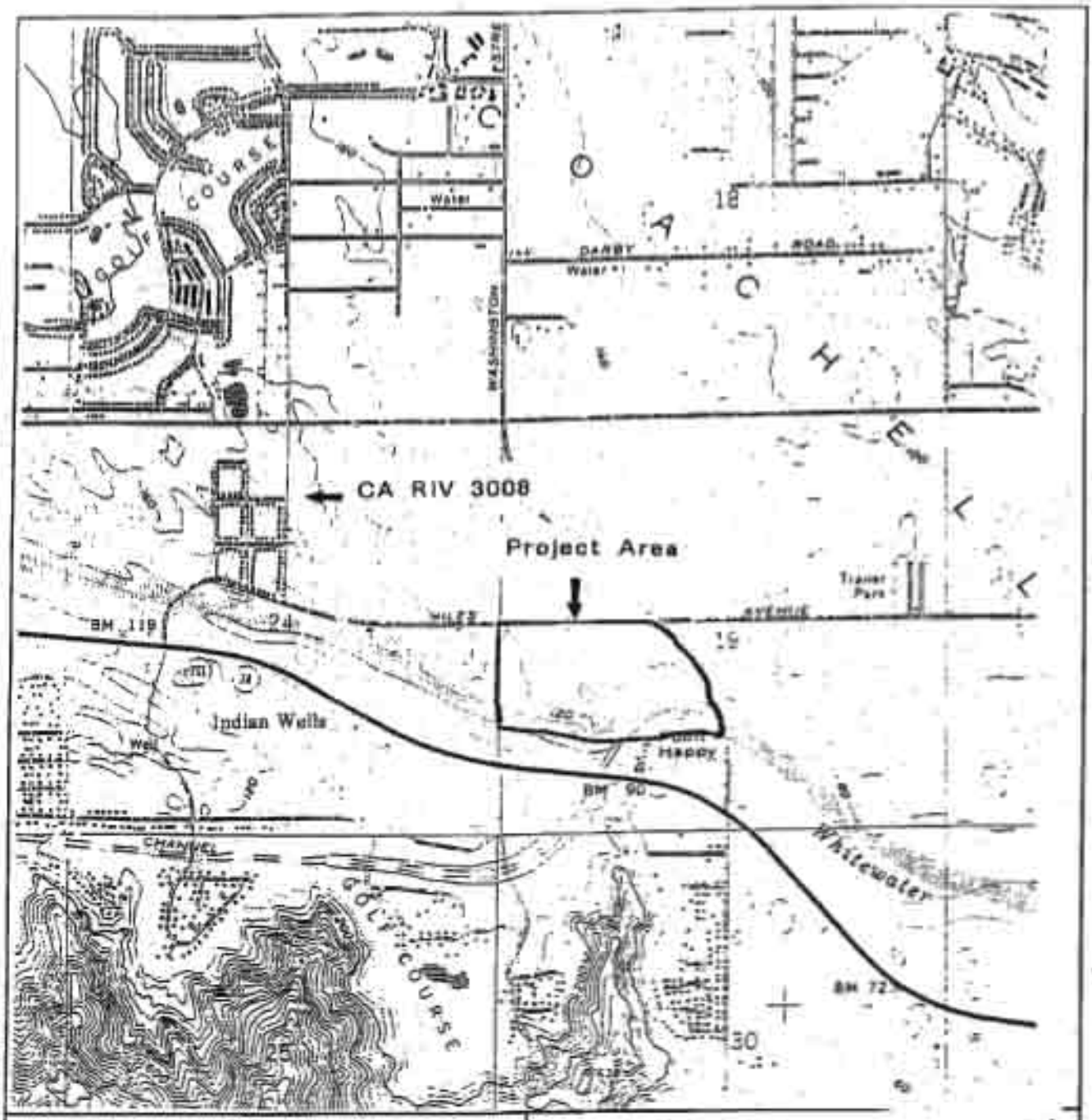
23392 Madero, Suite L
Mission Viejo, CA 92691
(714) 770-8042
FAX (714) 458-9058

Figure 1: Project Vicinity Map

Portion of USGS 1 by 2 degree Santa Ana California Quadrangle 1959, Revised 1979

Scale 1:250,000

N



Paleontology
Archaeology
History

Suzette Bird Effigy, Recovered by RMW Paleo, 1993

23392 Madero, Suite L
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(714) 770-8042
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Figure 2: Index Map

Portion of USGS La Quinta California 7.5 Minute Series Quadrangel, 1959 Photorevised 1980. San Bernardino Base and Meridian

Scale 1:24,000

N

The project area is located at an elevation of 120 feet to 160 feet above sea level within the Sonoran Desert Scrub plant community. Among those plants observed during the survey that would have been used by the prehistoric inhabitants were Mesquite (*Prosopis juliflora*), Creosote Bush (*Larrea divaricata*), Saltbush (*Atriplex californica*), and Desert Sage (*Salvia Dorrii*). Other plants found in the Sonoran Desert Scrub plant community that would have been utilized are Cholla (*Opuntia spp.*), Barrel Cactus (*Echinocactus acanthodes*), and Agave (*Agave spp.*).

Plants were used prehistorically for drinks, medicines, soap, dyes, construction materials, fuel, and tools; and plant fibers were used for thread, nets, and basketry (Bean 1972). Mesquite was among the most important of the desert plants. The mesquite blossoms, which are abundant in June, were roasted and could be dried; the pods (available in July and August) were either eaten fresh or ground into flour. Additionally, mesquite provided material for construction (Bean 1972:38). Creosote was used for treating ailments (Balls 1962:91). The roots of the saltbush were used as soap and the seeds were parched and ground for use in bread. The seeds of many plants, such as chia, cat's claw, palo verde, desert willow, and ironwood, were used as food. Sage was mixed with tobacco leaves for smoking (Balls 1962).

Numerous varieties of cactus, such as the cholla, were abundant and provided leaves, stalks, fruit and seeds for food (Balls 1962:25; Bean 1972:40-43). The indigo bush, (when steeped in water) created a yellow dye used for coloring deer skins and dyeing fibers for use in creating patterns in baskets (Balls 1962:77).

Among the animals observed or expected in the project area are various lizards, snakes, birds, rabbits, squirrels, kangaroo rats, mice, skunks and coyotes. Lizards, particularly the chuckwalla, were eaten. Rattlesnakes were caught by men experienced in handling snakes and were either boiled or roasted and used as food. Birds were not only used as a food resource but their bones were used as tools and their feathers for ceremonial regalia (Brown 1989).

Rabbits provided the largest amount of animal food and their fur was used for blankets and clothing. Rabbits were killed with bows and arrows or throwing sticks, netted, or caught in snares. Most of the small animals were entirely consumed including the bones which were crushed and eaten in soups and mushes. Coyotes were probably not eaten, but their skins were used to make ceremonial objects (Bean 1972:59-63).

CULTURAL SETTING

Archaeological investigations in the Colorado desert area have been infrequent and many gaps exist in our understanding of the area's prehistory. Humans have been present in the New World for at least 12,000 years B.P. (before present). The earliest portion of the archaeological sequence is identified as the Paleo-Indian Period (Chartkoff and Chartkoff 1984). There are no known Paleo-Indian sites in the Coachella Valley. The chronological framework frequently applied to the local area was established primarily on data collected in adjacent desert areas of California. Four temporal periods are generally accepted for the desert area: Pinto Period (5,000 - 2,000 B.C.), Gypsum Period (2,000 B.C.- A.D. 500), Saratoga Springs Period (A.D. 500-1200),

and Protohistoric or Late Prehistoric Period (A.D. 1,200-Historic) (Warren 1984:410-430).

Pinto Period sites are few in number and are usually identified by a particular type of projectile point. Pinto sites are usually found along dry water courses and lakes, indicating the sites were in use when wetter conditions prevailed. Pinto sites are usually limited to the surface and are very difficult to date. Consequently, there is some confusion regarding the true range of artifact types that can be associated with Pinto Period sites.

The Gypsum Period is characterized by the presence of Humbolt Concave Base, Gypsum Cave, Elko Eared, or Elko Corner Notched projectile points. Milling equipment is found at Gypsum age sites, and becomes more common as the period progresses. The mortar and pestle were introduced during the latter part of the period. In general, the artifact assemblage reveals an increasing reliance on vegetable resources with less emphasis on hunting.

The Saratoga Springs period was a period of regional development. Milling equipment is common and pottery is introduced from the Colorado River area.

The majority of the sites excavated in the Coachella Valley area date to the Late Prehistoric or Ethnohistoric Periods. Archaeological research has been conducted along the old shoreline of Lake Cahuilla in an attempt to study human adaptation to the lake environment. The first thorough analysis was based on data from four sites located along the northwest lake shore of the now desiccated lake. Desert Side-notched and Cottonwood Triangular projectile points were common in the sites. Colorado Buff Ware and Tizon Brown Ware were present in the ceramic assemblage. Quantities of shell beads made from both Gulf of California and Pacific coast shell species are present. Analysis of the material indicated dates from about A. D. 800 to A. D. 1500 (Wilke 1978).

Analysis of human coprolites and floral and faunal remains indicated that shellfish, fish, aquatic birds, freshwater marsh plants, and animals and plants from both the adjacent lowlands and uplands contributed to the subsistence base. Furthermore, the analysis established that some of the sites were occupied on a year around basis, while other sites were occupied on a seasonal basis, apparently when resources near the site were at a maximum (Wilke 1978).

These data, combined with evidence of a stable shoreline for a duration of several hundred years, led Wilke to postulate a large sedentary population living in villages along the northwest shore of the lake, relying heavily on lacustral resources, with lesser dependance on resources in outlying areas. Subsequent studies along the east and southwest shores contradict Wilke's model, and indicate that shoreline occupation there was limited to only short term use on a seasonal basis (Pallette 1993; Wilke 1978).

After periodic episodes of infilling and recession, Lake Cahuilla is believed to have receded for the last time around A.D. 1580. Populations followed the receding shoreline while continuing to exploit the dwindling resources. Archaeological excavations of fish traps, nearby associated houses and middens situated at the -95 feet elevation level produced an abundance of fish bone.

Fish bone is also reported from archaeological deposits at -103 feet and -120 feet near Thermal Airport (Wilke 1978:110). Finally, the water became too saline to support the usual flora and fauna, and human populations are believed to have then abandoned the desert floor.

The final desiccation of the lake certainly had an impact on the populations dependent on the lake. However, exactly what occurred at this time is not certain. If the typical settlement pattern prior to the final recession was one of sedentary villages and year round dependance on the lacustral resources, the impact would have been tremendous. As resources in the immediate vicinity were quickly depleted, populations would have moved westward into the Peninsular Ranges, displacing, at least temporarily, other groups who collected in that area. If the alternative model of seasonal occupation of the lake shore is correct, then the effect of the final recession would have been less pronounced, with populations merely shifting subsistence emphasis to other areas already exploited.

Evidence exists of a partial infilling of Lake Cahuilla to sea level sometime between A.D. 1158 and A.D. 1710. The possibility of partial infilling of the lake after its final recession in A.D. 1580 is further supported by the oral history of the Cahuilla Indians:

> When questioned about the shore-line and water marks of the ancient lake, the chief gave an account of a tradition they have of a *great water (agua grande)* which covered the whole valley and was filled with fine fish. There was also plenty of geese and ducks. Their fathers lived in the mountains and used to come down to the lake to fish and hunt. The water gradually subsided 'poco,' 'poco,' (little by little), and their villages were moved down from the mountains, into the valley it had left. *They also said that the waters once returned very suddenly and overwhelmed many of their people and drove the rest back to the mountains* [emphasis added] (Blake 1856:98 in Wilke and Lawton 1975:11-12).

The people occupying the current study area at the time of the arrival of the Spanish are known as the Cahuilla. It is believed the Cahuilla first traveled from the north to southern California about 2,000 to 3,000 years ago (Bean and Bourgeault 1989:13). They occupied a large geographic area extending from present day Riverside to the central part of the Salton Sea with a population as high as 6,000 to 10,000 individuals (Bean 1978). Two thirds of the Cahuilla territory was in the low desert (Bean and Bourgeault 1989).

The Cahuilla social structure was based on political units called sibs. Each sib had a defined territory with various sibs uniting for protection and ceremonial purposes. Each sib had villages that were occupied year around. Houses were commonly grouped around a spring in a two to three square mile area. Villages were situated to take maximum advantage of basic resources such as climate, food, water, and materials. Individuals or groups would leave the villages for hunting, gathering, visiting, or trading activities (Bean 1972).

The first recorded contact of the Cahuilla with European culture took place when the Anza

Expedition, enroute from Arizona to Mission San Gabriel, passed through Los Coyotes Canyon in 1776. By 1819, several mission asistencias were established near Cahuilla territory, and many of the Cahuilla began to learn European agriculture and cattle raising techniques (Bean 1972:17). A mail route was established in 1821 from Tucson through the San Gorgonio Pass and the Coachella Valley to coastal southern California. Indian runners who carried the mail followed the route known as the "Cocomaricopa Trail" (Wilke and Lawton 1975:22).

Jose Romero, looking for a new route to the Colorado River, made two expeditions to the Cahuilla area, the first in 1823 and the second in 1826. By that time, some of the Cahuilla could speak Spanish, and Mission San Gabriel was running cattle as far east as Palm Springs (Bean 1972:17). Jose Maria Estudillo, who accompanied Don Jose Romero in the winter of 1823-24, described in his diary the patches of corn, pumpkins, melons and watermelons he saw growing. This is the first known reference to Cahuilla agriculture (Wilke and Lawton 1975:23).

When David Prescott Barrows began his studies of the Cahuilla in 1891, the population had declined greatly. In 1770, there had been approximately 2,500 Cahuilla and by 1910 only 800 remained (Sleight 1971:6). A smallpox epidemic was responsible for the death of many of the people in 1862 and 1863 (Bean and Bourgeault 1989). Barrows described the Coachella Valley as being dotted with wells, many of them marking sites of homes long ago abandoned (1967:26-27). For generations the Cahuilla had been well diggers. Where the water table was from 10 to 30 feet below the surface, the Indians dug deep walk-in wells in the sand. The wells were great pits with terraced sidewalls leading down to a narrow hole at the bottom where the sand was banked around the well, creating small lakelets (Barrows 1967, Bean 1972). The wells were considered significant for survival in the desert and were typically surrounded by thick clumps of mesquite or other plants.

The Cahuilla houses were usually dome shaped, occasionally rectangular, the sides thatched with palm fronds, tule or whatever plant was available. The roofs were supported by forked branches with holes left open for the smoke to escape (Barrows 1967, Bean 1972). Barrows claimed that the most beautiful houses were those thatched with palm. The furnishings were simple. A metate or mortar could be seen on one side of the doorway, on the other side a water jar. The center of the room contained a hearth with cooking pots. Bunks constructed of poles were found along the wall, sometimes a bed consisting only of rawhide and a blanket was placed on the floor (Barrows 1967).

Among the Cahuilla, hunting was the activity of men, who also performed the skinning and butchering. Women were responsible for the gathering of vegetable foods and cooking. The diet of the Cahuilla was more diversified than most North American Indians, with over 300 plants being used. The most important of the seed foods was chia. Food supplies were kept in earthen ollas or in grass baskets (Barrows 1967).

ARCHIVAL RESEARCH /RESULTS

A record search was undertaken at the Eastern Information Center at the University of California, Riverside to determine if prehistoric or historic sites had been previously recorded within or near the project area. Information regarding archaeological sites and studies within the project area and information for archaeological studies within a one mile radius of the project area were compiled. In addition to the Archaeological Inventory records, a check was made of the files of historic maps, the National Register of Historic Places Index, the Office of Historic Preservation Archaeological Determinations of Eligibility Listings (through January 14, 1997), and the Office of Historic Preservation Directory of Properties in the Historic Property Data File.
Reports housed at the Eastern Information Center showed that two previous cultural resources studies had been conducted on portions of the current project area (Sutton 1985a) (McKenna 1990). The 1985 study included the current study area plus adjacent parcels. Two prehistoric archaeological sites, CA-RIV-3005 and CA-RIV-3008, were recorded within the current project boundaries as a result of that study (Sutton 1985a, 1985c and 1985e). The artifactual remains of CA-RIV-3005 were observed in a series of blowouts located within small sand dunes. The site area, 300 meters by 250 meter in size, contained a mano, Brownware and Buffware ceramics, obsidian, jasper, basalt, chert, and quartz debitage, a jasper Desert Side-notched point, and animal and fish bone fragments. CA-RIV-3008 consisted of "at least 12 Brownware sherds."

The 1990 study consisted of a portion of the current project and included the area located north of Miles Road. No cultural resources were observed during that survey, however, McKenna stated that a concentration of trees could be related to an early homesteading of the property. (McKenna 1990). An additional 78 cultural resource reports have been written for the area within a one mile radius of the project. Approximately 50% of the area within the one mile radius has been examined. Twenty nine archaeological sites are recorded within a one mile radius of the project and are listed in Table One.

A 1856 U.S. General Land Office plat map of Township 5S, Range 6E, surveyed by Henry Washington and John La Croze shows an Indian Ranchero in the northwestern quarter of Section 24 and a road apparently following along the north bank of the Whitewater River (Brock 1997, McKenna 1990). The same map also indicates the location of "Palma Seco Well" south of the current project area. Later maps, including the 1904 Indio 30' Quadrangle, the 1941 USGS Toro Peak 15' Quadrangle, and the 1959 USGS La Quinta 7.5' Quadrangle do not indicate any activity or structures within the project area.

Point Happy, located south of the river and the project area, is listed in the Historic Resources Inventory. The 134 acre Point Happy Ranch was purchased in 1922 by Chauncy and Marie Clarke who grew dates and raised Arabian horses (Carpenter 1982).

TABLE ONE: Archaeological Sites Recorded Within One Mile Of The Project Area

SITE#	DESCRIPTION	SOURCE AND DATE
CA-RIV-64	Camp Site: Cremations, magnesite and shell beads, potsherds, bone awl, manos, metates, clay objects, shaft smoothers, pendants, bone tools, clay pipes and olla. "Water hole at one time cut into lower level with steps leading to it." Partially destroyed in dredging storm channel.	Smith (1954) and Ruth Shepard (1963)
Supplement	Historic trash dumps, possible historic structures, potsherds, fire-affected rock, fired daub. Disturbed by Highway 111 and dumping	Hogan (1994)
CA-RIV-150	Sherds, bone, fire broken rock, shell and stone beads, arrow points, flakes, part of a clay pipe, gaming disks, metate, and manos.	(1933-35) recorded in files by Dorothy Cowper
Supplement	Village Site: Cremation area, pottery, bone, shell, points, hammerstones, metates, manos, pestles, steatite tube, stone beads, throwing stick, cooking and polishing stones.	Eberhart (1951)
Supplement	Shell, chips, olivella disk beads.	Cowper (1967)
Supplement	Approximately 200' by 1,500' of pottery, plus flakes, shell, and bone.	Corbin (1974)
Supplement	"Much pottery", flakes, cremation area, about 40 acres; Mano frags, metate, shell, bone, pottery, rough clay, pestle frag., shell beads.	Lipp and Swenson (1977)
CA-RIV-1530	Deflating midden: Groundstone, ceramics, shell, bone, flakes, and charcoal.	Baldwin (1978)
Supplement	Hearth, bone, ceramics, milling stones, fire-affected rock.	Sutton (1985b)
CA-RIV-1754	About 40 pottery sherds.	Breece and Breece (1979)
Supplement	Secondary deposit due to channelization of the Whitewater River and construction of the levee.	McCarthy (1984a)
CA-RIV-2195	Light scatter on hard pan: 15 fire cracked rocks, 20 potsherds, and 1 shell frag.	Bowles (1981)
Supplement.	Could not relocate.	McCarthy (1989a)

SITE#	DESCRIPTION	SOURCE AND DATE
CA-RIV-2197	Numerous ceramic fragments, bone, midden and charcoal.	Fenenga (1972)
CA-RIV-2200	Sparse scatter with three concentrations: Hearth, pottery sherds, mano, historic glass, shell.	Salpas (1980a)
Supplement	Mano frag., numerous pottery, burnt bone. Site disturbed by dumping and channelizing of river.	McCarthy (1988 and 1989b)
Supplement	Sparse scatter with several concentrations: Mostly potsherds, mano, hammerstone, burnt rodent bone, three frags of amethyst glass.	Hogan, Saubel, and Broomhall (1992)
CA-RIV-2934	Artifact scatter: Possible fired clay floors, mano frags, metate frag., flakes (some obsidian).	McCarthy (1984b)
CA-RIV-2935	Artifact scatter: Possible clay floor remains, Desert Side-notched point. Disturbed due to ORV use and channelizing of river.	McCarthy (1984c)
Supplement	Surface and buried deposit: Possible house construction (burned clay), ceramics, bone, lithics.	Toenjes and Toenjes (1984)
CA-RIV-2936	Extensive area in sand dunes: Possible clay house floors, pottery, bone, bone awl, manos, metate frag. exposed in blow-outs.	McCarthy (1984d)
Supplement	Extensive artifact scatter: Hearths, fire-affected rocks, fired clay daub, burnt bone.	McCarthy (1989c)
Supplement	Extensive scatters of pottery, fire-affected rock, debitage, and faunal remains. Western portion tested in 1990 by Yohe.	Everson (1992a)
Supplement	Scatter of pottery sherds, animal bone, shell frags, fire-affected rock.	Reeves (1996)
CA-RIV-3007	Cremation, shell ornaments, bead, awl, and charcoal. Badly disturbed by pothunting.	Sutton (1985d)
CA-RIV-3659 (CA-RIV-150A)	Burned clay, fire-affected rocks, pottery, lithic flakes in deflated depressions.	Toenjes (1989)

SITE#	DESCRIPTION	SOURCE AND DATE
CA-RIV-3679H Supplement Supplement	Three concentrations of pottery, flakes, cores. Possible hearths, artifact scatter, pottery sherds, burnt bone, fired daub. Majority of site disturbed. Potsherds, possible hearths. Historic trash dump one meter deep.	Salpas (1980b) McCarthy (1989d) Hogan and Everson (1992)
CA-RIV-3680 Supplement	Scatter of pottery, daub, and fire affected rock Scatter of pottery, daub, and fire affected rock. Site tested; destroyed by development.	McCarthy (1989e) Everson (1992b)
CA-RIV-3681 Supplement	Pottery sherds, clay daub, mano frag., burnt bone, and hearths. Site damaged prior to testing, destroyed by development.	McCarthy (1989f) Everson (1992c)
CA-RIV-3682 Supplement	Several fire hearths, pottery, clay daub, burnt bone. Testing yielded substantial subsurface deposit to three meters: Human coprolites, pottery, burnt bone, debitage, bifacial artifacts.	McCarthy (1989g) Everson (1992d)
CA-RIV-3683 Supplement	Artifact scatter: Pottery and fire-affected rock. Site disturbed by channelizing river and highway construction. Potsherds, debitage, ground stone frags, core and faunal remains.	McCarthy (1989h) McCarthy, Arkush and Hogan (1992)
CA-RIV-3866	Scattered and concentrated midden in deflated and mounded deposits: Possible burned and collapsed structure, clay daub, fire-affected rock, bone, shell, pottery, and biface frag.	Toenjes (1990)
CA-RIV-4076	Scatter of pottery sherds.	Swope and Thaler (1990)
CA-RIV-4107	Approximately 1,400 potsherds.	Archaeological Associates (1991a)
CA-RIV-4108	Six potsherds.	Archaeological Associates (1991b)
CA-RIV-4745	Scattered pottery and shell.	Everson (1992e)
CA-RIV-4756-H	Water-valve tower, old piping, and fence.	Everson (1992f)

SITE#	DESCRIPTION	SOURCE AND DATE
CA-RIV-5840	Camp emerging from dune: pottery sherds, pestle frag., debitage, possible burnt clay structure floor.	Mouriquand (1996a)
CA-RIV-5841	Scatter of pottery sherds and fire-affected rock.	Mouriquand (1996b)
CA-RIV-5842	Hearth, pottery sherds, and mano.	Mouriquand (1996c)
CA-RIV-5843	Pottery sherd scatter.	Mouriquand (1996d)
CA-RIV-5844	Pottery sherd scatter.	Mouriquand (1996e)
CA-RIV-5876	Pottery sherds, chipped stone, faunal, and fire affected rock.	Brock (1997)

FIELD METHODS

The surface of the site areas were systematically examined by a team of archaeologists. All observed artifacts were marked with pin flags. Artifacts located within a 50 cm radius of each other were marked with a single pin flag and mapped as a cluster. The location of each artifact or cluster was recorded relative to site datum using transit and stadia radiation techniques. The site datums used were those established to record supplemental site records during an earlier study (Brown 1998). (The provenience of artifacts was recorded but no artifacts were collected during that study). All artifacts collected during this study were brought to the RMW laboratory for processing and preliminary analysis.

The surface artifacts at CA-RV-3008, consisting entirely of pottery sherds, were marked with pin flags and mapped with the use of a Brunton compass and fiberglass tape. A previously placed surveyor's stake served as datum. Distance and azimuth were also taken to the middle of the graded road and a corner of the school yard fence. Four areas of sherds were observed, and designated areas 1 through 4. After measuring the perimeter of each area, the pottery was collected, and four shovel test pits (STPs) were excavated. The STPs were 35 to 60 cm in diameter and 35 to 62 cm in depth.

The subsurface investigation at CA-RIV-3005 consisted of six one meter square hand excavated units and five machine excavated trenches. The subsurface investigation at CA-RIV-5876 consisted of four hand excavated units and three machine excavated trenches. Figures 3, 4, and 5 show locations of units and trenches. All units were dug in 10 cm arbitrary levels and all excavated soil was dry screened through 1/8 inch mesh. All of the units were dug to either the 50 or 60 cm level. Trenching was accomplished by a backhoe with a 24 inch bucket. The trenches were excavated to a depth of approximately six feet. All of the trenching was directed and closely

NOTE: Figures 3,4, and 5, Artifact Distribution Exhibits, are confidential, and are available for review at the County of Riverside, by qualified archeologists on a limited basis.

monitored by the archaeologists to limit damage to any subsurface cultural deposit. Sand from the trenches was spread adjacent to the trench and excavation was halted while the archaeologist examined the sand for artifactual remains. All units and trenches were backfilled for safety.

All observed cultural material from each level of the units was recovered from the screen and placed within a ziplock bag marked with the appropriate provenience data. Soil samples were recovered from the top of each level. Sidewall profiles were drawn for units that exhibited stratigraphy. All cultural material collected during trenching was likewise placed in a ziplock bag and marked with the proper provenience. A profile of representative stratigraphy was drawn for each trench.

Site maps (Figures 3, 4, and 5) illustrating surface artifact distribution, unit, and trench locations, were produced by Tim Goddard. The maps were created by first digitizing the existing engineer's map into AutoCAD. The survey information was then plotted on the imported map. Final production was achieved by importing the CAD file into CorelDraw for final editing for page presentation. Colors were used in the maps to represent different data sets. Green represents artifacts recorded during the April 1998 survey; red represents artifacts collected during this study; purple shows the location of the backhoe trenches Unit locations are depicted on each map.

FINDINGS

CA-RIV-3005: The artifacts recovered from this site consist of pottery sherds, lithic material and faunal remains. There are a total of 132 pottery sherds. The vast majority, 123 sherds, were collected from the surface. Only three sherds were collected from levels below 10 cm. Twelve lithics were identified as groundstone fragments; probably the remains of manos or metates. There are two pieces of debitage, one flake, two tool fragments, and 42 items identified as manuports. Twenty lithic fragments from this site were fire affected. The faunal remains consist of four shell fragments (*Anodonta dejecta*), the unidentifiable bone fragments of a small rodent and a snake vertebra.

CA-RIV-3008: There were 106 pottery sherds recovered from this site . Forty eight sherds were from the surface, 16 from STP "A", 21 from STP "B", 2 from STP "C", and 19 from STP "D". The sherds had deteriorated to the degree that only three still retained evidence of the interior and exterior finished surface.

CA-RIV-5876: The artifacts recovered from this site are 184 pottery sherds, 21 lithic fragments, four bone fragments, and two pieces of shell. The lithics include one flake, one utilized flake, a chopper, one groundstone fragment, and 15 items described as manuports. The only identified artifact collected from below 10 cm was a pottery sherd from the 10 to 20 cm level in Unit 10. The dirt road running east and west across the southern part of the site contained 138 small sherds. It was obvious that these sherds had been repeatedly broken by traffic and also displaced. Accordingly, they were collected as a group, with the surrounding boundaries point provenienced.

A metate fragment was collected from Trench 4 and one pottery sherd from Trench 8 (CA-RIV-3005). A chert flake was recovered from Trench 1 (CA-RIV-5876) at approximately 160 cm and a pottery sherd was recovered from the same trench at about 20 cm.

The term "manuports" has been used to describe lithic materials that are not native to the dunes area. The identified lithic materials recovered from the sites include basalt, chert, gneiss, granitics, metavolcanics, quartz, quartzite, sandstone, schist, scoria, and sillimante. Many of these rocks could have been collected from the adjacent Whitewater River bed and brought to the site with the intent of using them as cooking stones, for tool manufacture, for fire hearths or other diverse purposes.

The laboratory cataloging of the pottery sherds included Munsel values for color coding, temper size and content, size and thickness of fragments, and whether the fragments had rims. Unusual attributes were also recorded. Six of the fragments appear to have a residue adhering to the interior surface. Sixteen of the fragments are rim fragments and two are possibly decorated. Unidentifiable fragments of burnt clay and daub, similar in description to those found on sites located southeast of the project area (Yohee II 1990), were collected from both CA-RIV-3005 and CA-RIV-5876.

DISCUSSION/INTERPRETATION

The primary purpose of this study, which took place 10 through 18 June 1998, was to conduct exploratory investigations at CA-RIV-3005 and CA-RIV-5876 to establish reasonable methods for use during the Phase 2 archaeological evaluation of the two prehistoric sites. The project was limited in scope to a few of the areas of artifact concentration that were visible when the work was accomplished. It must be noted that significant differences in surface artifact distributions were noted between April 1998, when the reconnaissance of the property was performed, and June 1998, when the work described in this report was accomplished. In other words, the shifting sands cause major differences in visible artifact distributions over very short time periods.

During excavations at CA-RIV-3005 and CA-RIV-5876, the vast majority of cultural remains were found on the surface or within the 0 to 10 cm level beneath the surface. Archaeological excavation (Yohe II 1990) of prehistoric sites in the vicinity, and a test excavation (Alexandrowicz et. al 1998) of the western portion of CA-RIV-5876 (located on a five acre parcel to the immediate west), indicate a similar distribution of cultural remains. A comparison of the surface distribution of artifacts, as mapped during the April 1998 survey and site recording of CA-RIV-3005 and CA-RIV-5876 (Brown 1998), and the artifact distribution as mapped during this investigation in June 1998 (Figures 3, 4, and 5), indicates that the wind blown sand uncovers and covers artifacts rapidly. This was demonstrated when a beer can dating from the 1970s was recovered from a depth of approximately 130 cm in Trench 1. (A chert flake was recovered from the same area within the trench at a depth of approximately 160 cm).

The 50+ acre project parcel contains two recorded prehistoric archaeological sites consisting of four currently visible principal areas containing artifact concentrations (primarily pottery sherds

with some lithics), plus apparently isolated artifacts located among those areas. Given the limited scope of the current project, it is unknown if these artifacts represent the remains of a single large site scattered throughout the 50 acres, the remains of multiple campsites, a satellite of the large prehistoric village recorded to the south, or are related to the historic era village recorded northwest of the parcel.

The shell fragments collected from these sites are small, but are probably freshwater mussel (cf. *Anodonta dejecta*), a species common to the ancient Lake Cahuilla and known to have been a food resource of the local inhabitants. A majority of the bone fragments, such as the snake vertebra and rodent fragments, probably represent naturally occurring animal deaths. Only one bone fragment was fire affected.

CA-RIV-3008 (in the northwest section of the parcel surveyed in April) is located on an unconsolidated sand dune. Although many of the sherds were collected during excavation of the STPs, the area surrounding the excavations was continually caving in, bringing sand and any near surface sherds into the STPs. All of the sherds are similar in exhibiting an unusual state of deterioration, color, and temper and are believed to represent only one or two vessels.

RECOMMENDATIONS

It is recommended that a Phase 2 test evaluation (based on CEQA) be accomplished at CA-RIV-3005 and CA-RIV-5876. The purpose of this investigation of CA-RIV-3005 and CA-RIV-5876 was to determine the most efficient method of completing the Phase 2 test evaluation of the two sites. Because of the paucity of subsurface cultural material, it was determined that information for a valid assessment of site importance can be most effectively obtained by the use of 0 to 10 cm deep surface scrapes placed judgementaly and randomly within the sites. It is also recommended that an attempt be made to move quantities of sand by the use leaf blowers in an effort to discover features such as fire hearths, post holes relating to prehistoric structures, human coprolite remains, and/or possible midden deposits within the sand dunes. Additionally, it is recommended that the Phase 2 test include a geomorphologist to determine dune formation and movement and how those actions would influence the displacement of artifactual remains. This information would then be used to determine the areas that would be most likely to yield artifactual remains. This study would precede the Phase 2 test excavation.

It is recommended that the Phase 2 test evaluation (based on CEQA) to determine the ability of these sites to provide research information, and to determine the horizontal and vertical extent of CA-RIV-3005 and CA-RIV-5876 be accomplished far in advance of any planned ground disturbing activities within the area.

It is strongly recommended that the pottery sherds collected during this investigation be incorporated into an in depth ceramic analysis during the test phase. The 422 fragments collected to date represent a variety of color ranges, that could indicate if the clays were residual or sedimentary in origin. Sixteen of the sherds are rim fragments. An analysis of these fragments

could determine vessel type and size. Additionally, six of the sherds possibly contain residue and, upon residue analysis, could represent prehistoric food remains. Two of the sherds appear to be decorated, uncommon in this area and one sherd has a ground edge. This artifact could be part of a lid or a tool.

No additional research is required at CA-RIV-3008, however, it is recommended that the site area be monitored by an archaeologist during ground disturbing activities. During a previous study (Brown 1998), no additional cultural material was observed in the study area north of Miles Avenue and the recommendation was that that area also be monitored during ground disturbing activities.

No cultural remains were observed within the Whitewater River Channel during a survey of the river bottom. No additional cultural resources investigation is warranted within that area.

Joan C. Brown

Joan C. Brown
Senior Archaeologist

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APPENDIX A

Personnel Qualifications

Joan C. Brown
RMW Paleo Associates, Inc.
Certified Archaeologist

Professional Experience

1988 - Present	Senior Archaeologist, RMW Paleo Associates, Inc.
1987- 88	Natural History Museum of Los Angeles County Foundation, Molding & Casting of Fossils
1987	Field Director: Historical archaeology sites. Heritage Park Project, Santa Fe Springs, California
1985	Analysis of faunal remains from archaeology sites. Archaeological Associates, Sun City, California
1983-85	Paleontological field salvage. RMW Paleo Associates, Inc. Mission Viejo, California
1983-85	Archaeological site surveying, salvage and laboratory work, including faunal analysis. CSUF
1982-83	Field Director: Pacific Coast Archaeology Society, Crystal Cove State Park survey, recording & analysis of 7 sites
1982	Paleontological field salvage. Los Angeles County Museum National Geographic Grant.
1981	Laboratory preparation of fossil specimens. Los Angeles County Museum, NSF Grant.
1980-81	Paleontological field salvage. Scientific Resource Surveys, Inc. Santa Ana, California
1978-79	Archaeological site surveying. Christina Brewer and Company, Laguna Beach, California
1979- present	Associate: Natural History Museum of Los Angeles County

Publications

1984 A Fossil Baleen Whale from the Capistrano Formation in Laguna Hills, California, pp. 11-18: in *The Natural Sciences of Orange County, vol. 1, Natural History Foundation of Orange County*

1987 PCAS Project at Crystal Cove State Park: pp. 1-6 in *Pacific Coast Archaeological Society Quarterly, vol. 23*

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—— Analysis of Marine Mammal Bones from A Pre-Historic Site in Marina Del Rey, Los Angeles, County, California. *Southern California Academy of Sciences Bulletin, The Natural History Museum of Los Angeles County* (in press)

Degrees & Certifications

M.A. (Anthropology: Emphasis in Archaeology) 1988. CSUF. Thesis: *Avifauna remains from Archaeology Sites*
B.A. (Anthropology) 1982. CSUF
A.A. (Social Science) 1979. Saddleback College Mission Viejo, California
Certified by the Society of Professional Archaeologist as a Field Archaeologist

Membership

Pacific Coast Archaeology Society
Society for California Archaeologist
Society of Professional Archaeologist

Ronald M. Bissell
RMW Paleo Associates, Inc.
Principal/Certified Archeologist

Professional Experience

1986 - Present.	Principal Archaeologist, RMW Paleontological Associates, Incorporated
1983 - 1986.	Independent Consultant Archaeologist
1976 - 1983.	Information Specialist and Administrative Services Officer, Leighton and Associates
1956 - 1976.	United States Army. Rank at retirement was Major of Field Artillery

Publications

1983 Archaeological Site CA-ORA-572, a Two Component Site in Fullerton, California. *Master's Thesis on file at the Library, California State University, Fullerton, California*

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1994 Archaeological Site CA-ORA-1058: Six Cairns in Orange County, California.

Degrees

1983	Anthropology, M.A., Archaeological Emphasis. California State University, Fullerton, California
1977	Library Science, M.S. California State University, Fullerton, California
1972	Bachelor of Arts, Geology and History, San Diego State University, San Diego, California
1989	Introduction to Federal Projects and Historic Preservation Law. Sponsored by the Advisory Council on Historic Preservation and the General Services Administration Training Center

Credentials

Certified by the Society of Professional Archaeologist as a Field Archaeologist.
Certified as an Archaeologist by the County of Orange Environmental Management Agency. Also certified by the Counties of Ventura, Los Angeles, Riverside, San Bernardino, Kern, Kings, Fresno, Tulare, Madera and San Diego
Certified as Open Water Scuba Diver by the Professional Association of Diving Instructors.

Memberships

Society of Professional Archaeologists
Pacific Coast Archaeological Society
Society for California Archaeology
Southwestern Anthropological Association
California Mission Studies Association
American Library Association
California Library Association
South Coast Geological Society

RESUME

Timothy A. Goddard

EDUCATION

1995	B.A. (Anthropology) University of Arizona
1989-91	Northern Arizona University (Anthropology major)

PROFESSIONAL EXPERIENCE

1998-present	RMW Paleo Associates Archaeologists: Responsibilities include fieldwork(survey, excavation, monitoring) and producing technical reports.
1995-present	Computer Consultant. Responsibilities include generation of maps by use of survey, remote sensing, and computer softaware includig CAD and GIS.
1997-98	Western Cultural Resource Management: Responsibilities included fieldwork(survey, excavation) and Crew Chief duties. Experience in both prehistoric and historic archaeology .
1996-97	Museum of History and Art Salt Lake City, Utah. Contracted Consultant: Responsibilities included restoration of historic pioneer furniture and research of craftsman.
1996	Assistant director for historic archaeology field school. University of Nevada-Reno.
1996	Archaeological survey and excavation . Desert Archaeology, Tucson, AZ.
1995	Archaeological Crew Chief (GS-7) Lassen National Forest, Susanville, CA.
1995	Assistant director for historic archaeology field school. University of Nevada-Reno.
1994	Western Cultural Resource Management: Responsibilities included fieldwork(survey, excavation). Experience in both prehistoric and historic archaeology.

1993	University of Nevada-Reno Historical Archaeology Field Schools: Responsibilities included teaching students the use of survey equipment, and supervising students in excavation.
1992	Western Cultural Resource Management: Responsibilities included fieldwork(survey, excavation). Experience in both prehistoric and historic archaeology.
1992	Archaeological survey and excavation . Desert Archaeology, Tucson, AZ
1991	Office of Contract Archaeology- ENRON Project University of New Mexico. Responsibilities included laboratory processing, preliminary analysis, coordinator of ceramic processing, logistics, crew chief on call, member of emergency excavation team.
1991	New World Consultants, Inc. Albuquerque, New Mexico. Archaeological field salvage.
1990	INFOTEC Research Inc. Ely NV. Responsibilities included illustration and drafting for archaeological reports.
1989-91	Bilby Lab, Northern Arizona University. Laboratory processing of wide variety of artifacts.
1990	University of Nevada-Reno Historical Archaeology Field School. Instructed students in use of alidade and transit.
1989	United States Forest Service, Flagstaff, AZ. Stabilization of Oak Creek Ruin.

ACHIEVEMENTS

1994	President of Undergraduate Archaeology Club, University of Arizona.

CAROL A. BISSELL

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EDUCATION: Associate of Arts Degree, Business Administration, Saddleback Community College, Mission Viejo, California, 1975

EXPERIENCE:

1991-1992: Crew Member, Reconnaissance, Sequoia National Forest, Kern and Tulare Counties, California. In excess of 10,000 acres were examined during the project and more than 60 archaeological sites were recorded.

1993: Excavator, Millingstone Age site in La Habra, Orange County, California.

1994: Excavator, four Millingstone Age sites in eastern Orange County, California.

1994: Volunteer Assistant, excavation of Late Period site in Santa Ana Mountains, western Riverside County, California, for California State University, Fullerton field methods class.

1994-1995: Excavator, early to late period site in Rose Canyon, San Diego County, California.

1995: Crew Member, Reconnaissance, Forecast Property, Oceanside, San Diego, County, California.

APPENDIX B

Artifact Catalogs

CA-RIV-3005

ID No.	Prov.	Depth	Class	Description	Ct.	Material	Wt.	Curved	Rim Type	Color Int.	Color Ext.	Temper	Comment
1	Surface		Lithic	Manuport	1	Quartz	7.64	NO					
2	Surface		Ceramic		1		4.12	YES		7.5YR 7/2 Pinkish Gray	7.5YR 6/4 Light Brown	Sand, Moderate Mica, Medium-Coarse	
3	Surface		Ceramic		1		2.41	YES		10YR 5/1 Gray	10YR 5/1 Gray	Sand, Low Mica, Coarse	Scrape marks visible on interior
4	Surface		Lithic	FAR	1	Granitic	30.98	NO					
5	Surface		Ceramic		1		4.34	YES		7.5YR 6/4 Light Brown	10YR 4/1 Dark Gray	Sand, Moderate Mica, Coarse	
6	Surface		Ceramic		1		3.36	NO		7.5 YR 6/2 Pinkish Gray	7.5YR 6/4 Light Brown	Sand, Low Mica, Coarse	
7	Surface		Lithic	Manuport	1	Quartzite	122.45	NO					
8.1	Surface		Ceramic		1		4.61	YES		7.5YR 4/2 Brown, Dark Brown	7.5YR 4/2 Brown,Dark Brown	Sand, High Mica, Medluum	
8.2	Surface		Lithic	Ground Stone Fragment	1	Granitic	238.8	NO					
9.1	Surface		Ceramic		1		2.44	NO		7.5YR 6/4 Light Brown	7.5YR 5/4 Brown	None	Baked clay
9.2	Surface		Ceramic		1		3.84	NO		7.5YR 5/2 Brown	7.5YR 6/2 Pinkish Gray	Sand, Moderate Mica, Coarse	
9.3	Surface		Ceramic		1		9.65	YES		7.5YR 3/1 Very Dark Gray	7.5YR 4/2 Brown, Dark Brown	Sand, Moderate Mica, Coarse	Burned residue interior
10	Surface		Ceramic		1		3.27	YES		7.5YR 4/2 Brown, Dark Brown	7.5YR 4/2 Brown, Dark Brown	Sand, Moderate Mica, Coarse	
11	Surface		Lithic	Manuport	1	Granitic	83.97	NO					
12.1	Surface		Lithic	Manuport	1	Granitic	68.71	NO					
12.2	Surface		Lithic	FAR	1	Granitic	137.05	NO					
13.1	Surface		Ceramic		1		0.31	NO		7.5YR 5/2 Brown		None	Baked clay
13.25	Surface		Lithic	Manuport	1	Quartzite	220.2	NO					
14	Surface		Ceramic		1		0.23	NO		7.5YR 6/4 Light Brown		None	Baked clay
15	Surface		Ceramic		1		1.07	NO		7.5YR 6/4 Brown		None	Baked clay

ID No.	Prov.	Depth	Class	Description	CT.	Material	Wt.	Curved	Rim Type	Color, Int.	Color, Ext.	Temper	Comment
16	Surface		Lithic	FAR	1	Gneiss	132.59	NO					
17	Surface		Ceramic		1		8.94	NO		5YR 6/6 Reddish Yellow		None	Baked clay
18	Surface		Ceramic		1		3.27	NO		2.5YR 6/4 Light Brown	77.5YR 5/2 Brown	Sand, High Mica, Coarse	
19	Surface		Ceramic		1		15.19	YES		7.5YR 5/2 Brown	7.5YR 3/0 Very Dark Gray	Sand, High Mica, Very Coarse	Burned residue interior
20	Surface		Ceramic		1		3.5	YES	Slight Rounded	7.5YR 6/4 Light Brown	7.YR 6/4 Light Brown	Sand, Moderate Mica, Medium	
21	Surface		Shell	cf. Ariodonta dejecta	2		0	NO					
22	Surface		Ceramic		1		4.67	YES		7.5YR 6/2 Pinkish Gray	7.5R 6/2 Pinkish Gray	Sand, High Mica, Coarse	
23	Surface		Ceramic		1		2.57	YES		7.5YYR 4/0 Dark Gray	7.5YR 5/0 Gray	Sand, High Mica, Coarse	
24.1	Surface		Ceramic		1		4.21	NO		7.5YR 5/2 Brown	7.5YR 5/0 Gray	Sand, Moderate Mica, Medium	
24.2	Surface		Ceramic		1		3.69	NO		7.5YR 6/4 Light Brown	7.5YR 4/2 Brown, Dark Brown	Sand, High Mica, Medium	
24.3	Surface		Ceramic		1		3.11	YES		10YR 6/3 Pale Brown	10YR 4/1 Dark Gray	Sand, Moderate Mica, Medium	
24.4	Surface		Ceramic		1		0.45	NO		10YR 6/3 Pale Brown	10YR 4/1 Dark Gray	Sand, High Mica, Coarse	
24.5	Surface		Lithic	Manuport	1	Granitic	2.64	NO					
25	Surface		Lithic	Groundstone	1	Granitic	33.91	NO					
26.1	Surface		Ceramic		1		9.58	NO		10YR White	10YR 8/2 White	Sand, Low Mica, Coarse	
26.2	Surface		Lithic	FAR	1	Gneiss	181.87	NO					
27	Surface		Lithic	Manuport	1	Quartz	20.07	NO					
28	Surface		Lithic	Tool Fragment	1	Quartz	6.67	NO					
29	Surface		Ceramic		1		2.53	YES		10YR 5/3 Brown	10YR 5/3 Brown	Sand, Low Mica, Medium	Interior indentations
30	Surface		Ceramic		1		4.35	NO		7.5YR 4/0 Dark Gray	7.5YR 4/2 Brown, Dark Brown	Sand, Low Mica, Coarse	Interior'strations from finishing exterior linear

ID No.	Prov.	Depth	Class	Description	Ct.	Material	Wt.	Curved	Rim Type	Color, Int.	Color, Ext.	Temper	Comment
31	Surface		Ceramic		1		6.36	YES		10YR 6/3 Pale Brown	10YR 5/2 Grayish Brown	Sand, Moderate Mica Coarse	
32	Surface		Ceramic		1		6.68	NO		10YR 4/4 Dark, Yellowish Brown	10YR 4/4 Dark Yellowish Brown	Sand, High Mica, Coarse	White fiberous residue exterior (natural?)
33.1	Surface		Ceramic		1		4.34	NO		10YR 3/1 Very Dark Gray	10YR 5/3 Brown	Sand, High Mica, Medium	Finishing striations, exterior
33.2	Surface		Ceramic		1		4.89	YES		10YR 3/3 Dark Brown	10YR 2/1 Black	Sand, High Mica, Medium	Finishing striations exterior white fibrous,
34	Surface		Ceramic		1		5.25	YES		10YR 2/1 Black	10YR 5/2 Grayish Brown	Sand, High Mica, Medium	Exterior portion of finished scratched off
35	Surface		Ceramic		1		0.94	NO		10YR 5/2 Grayish Brown	10YR 5/2 Greyish Brown	Sand, Moderate Mica, Coarse	
36	Surface		Ceramic		1		13.29	NO	Slightly Rounded	10YR 5/3 Brown	2.5YR 5/4 Reddish Brown	Sand, Moderate Mica, Coarse	Finishing striations, exterior
37	Surface		Ceramic		1		5.24	YES		7.5YR 5/4 Brown	7.5YR 5/2 Brown	Sand, Low Mica, Coarse	
38.1	Surface		Lithic	Possible Tool	1	Sillimanite	8.96	NO					
38.2	Surface		Lithic	Manuport	1	Granitic	28.97	NO					
38.3	Surface		Lithic	Manuport	1	Granitic	29.74	NO					
38.4	Surface		Lithic	Groundstone Fragment	1	Granitic	122.05	NO					
39	Surface		Ceramic		1		0.78	NO		7.5YR 6/4 Light Brown		None	Baked clay
40.1	Surface		Ceramic		1		1.83	NO	Slightly Rounded	7.5YR 6/4 Light Brown	7.5YR 6/4 Light Brown	None	Baked clay
40.2	Surface		Ceramic		1		0.16	NO		7.5YR 6/4 Light Brown		None	
41.1	Surface		Ceramic		1		6.26	NO		10YR 5/3 Brown	10YR 5/1 Gray	Sand, Low Mica, Very Coarse	
41.2	Surface		Ceramic		1		0.24	NO		7.5YR 6/4 Light Brown		None	Baked clay
41.3	Surface		Ceramic		1		0.18	NO		7.5YR 6/4 Light Brown		None	Baked clay
41.4	Surface		Lithic	FCR	1	Granitic	88.6	NO					
41.5	Surface		Ceramic		1		0	NO		7.5YR 6/4 Light Brown			Lithic

ID No.	Prov.	Depth	Class	Description	CT	Material	Wt	Curved	Rim Type	Color, Int	Color, Ext	Temper	Comment
42.1	Surface		Ceramic		1		0.18	NO		7.5YR 6/4 Light Brown		None	Baked clay
42.2	Surface		Lithic	FCR	1	Sandstone	59.34	NO					
42.3	Surface		Lithic	Groundstone Fragment	1	Schist	75.54	NO					
43.1	Surface		Ceramic		1		4.14	NO		7.5YR 6/4 Light Brown		None	Baked clay
43.2	Surface		Ceramic		1		1.15	NO		7.5YR 6/4 Light Brown		None	Baked clay
43.3	Surface		Ceramic		1		0.12	NO		7.5 YR 6/4 Light Brown		None	Baked clay
44.1	Surface		Ceramic		1		0.9	NO		7.5YR 6/4 Light Brown		None	Baked clay
44.2	Surface		Ceramic		1		0.57	NO		7.5YR 6/4 Light Brown		None	Baked clay
45.1	Surface		Ceramic		1		0.17	NO		7.5YR 6/4 Light Brown		None	Baked clay
46	Surface		Lithic	FAR	1	Gneiss	96.4	NO					
47.1	Surface		Ceramic		1		2.53	NO		7.5YR 4/2 Brown, Dark Brown	7.5YR 4/2 Brown, Dark Brown	Sand, Moderate Mica, Coarse	
47.2	Surface		Ceramic		1		0.57	NO		7.5YR 6/4 Light Brown		None	Vesicular clay
47.3	Surface		Lithic	FAR	1	Granitic	22.81	NO					
47.4	Surface		Lithic	FAR	1	Granitic	63.75	NO					
48	Surface		Ceramic		1		1.09	NO		7.5YR 6/4 Light Brown		None	Baked clay
49	Surface		Ceramic		1		4.19	NO		10YR 8/2 White	10YR 5/1 Gray	Sand, Low Mica, Coarse	Exterior ridges from rough finishing
51.1	Surface		Lithic	Fragment	1	Quartz	0.39	NO					
51.2	Surface		Lithic	Manuport	1	Metavolcanic	31.04	NO					
51.3	Surface		Lithic	FAR	1	Metavolcanic	39.74	NO					
52	Surface		Ceramic		1		2.63	YES		7.5YR 6/4 Light Brown	7.5YR 6/4 Light Brown	Sand, Moderate Mica, Coarse	

ID No.	Prov.	Depth	Class	Description	CT	Material	Wt.	Curved	Rim Type	Color, Int.	Color, Ext.	Temper	Comment
53	Surface		Ceramic		1		4.64	NO		7.5YR 5/2 Brown	7.5YR 5/2 Brown	Sand, Low Mica, Medium	
54	Surface		Lithic	Manuport	1	Granitic	22.32	NO					
55.1	Surface		Ceramic		1		2.97	NO		7.5YR 6/4 Light Brown		None	Vesicular clay
55.2	Surface		Lithic	Manuport	1	Granitic	32.63	NO					
55.3	Surface		Lithic	FAR	1	Granitic	60.49	NO					
55.4	Surface		Lithic	Manuport	1	Granitic	148.8	NO					
56.1	Surface		Lithic	Manuport	1	Granitic	34.5	NO					
56.2	Surface		Lithic	FAR	1	Granitic	103	NO					
57	Surface		Ceramic		1		0.7	NO		7.5YR 6/4 Light Brown		None	Baked clay
58.1	Surface		Ceramic		1		2.03	NO		7.5YR 6/4 Light Brown		None	Baked clay
58.2	Surface		Ceramic		1		6.54	NO		7.5YR 7/4 Pink		None	Baked clay
58.3	Surface		Ceramic		1		3.52	NO		7.5YR 6/4 Light Brown		None	Baked clay
58.4	Surface		Ceramic		1		4.13	NO		7.5YR 6/4 Light Brown		None	Baked clay
58.5	Surface		Ceramic		1		0.24	NO		7.5YR 6/4 Light Brown		None	Baked clay
59	Surface		Lithic	FAR	1	Granitic	124.62	NO					
59.1	Surface		Ceramic		1		3.38	NO		7.5YR Brown		None	Baked clay
59.2	Surface		Ceramic		1		0.29	NO		7.5YR 5/4 Brown		None	Baked clay
59.3	Surface		Ceramic		1		0.2	NO		7.5YR 5/4 Brown		None	Baked clay
59.4	Surface		Ceramic		1		0.6	NO		7.5YR 5/4 Brown		None	Baked clay
59.5	Surface		Ceramic		1		0.4	NO		7.5YR 5/4 Brown		None	Baked clay

ID No	Prov	Depth	Class	Description	Ct	Materials	Wt	Curved	Sherd Type	Color, Int	Color, Ext	Temper	Comment
60.1	Surface		Ceramic		1		2.98	NO		7.5YR 6/4 Light Brown		None	Baked clay
60.2	Surface		Lithic	Groundstone	1	Sandstone	37.21	NO					
61	Surface		Ceramic		1		9.19	YES		10YR 5/2 Grayish Brown	10YR 5/1 Gray	Sand, High Mica, Coarse	Finishing striations, exterior and interior
62.1	Surface		Ceramic		1		5.59	NO		10YR 2/1 Black	10YR 4/2 Dark Grayish Brown	Sand, Low Mica, Coarse	Burned residue interior
62.2	Surface		Lithic	Manuport	1	Granitic	242.9	NO					
63	Surface		Lithic	FAR	1	Granitic	113.59	NO					
64	Surface		Ceramic		1		1.9	NO		5YR 5/2 Reddish Gray	5YR5/1 Gray	Sand, High Mica, Coarse	
65	Surface		Ceramic		1		2.02	NO		10R 6/6 Light Red		None	Vesicular clay
66	Surface		Lithic	Debitage	1	Quartz	24.44	NO					
67	Surface		Ceramic		1		3.02	NO		5YR 5/1 Gray	5YR 5/3 Reddish Brown	Saqnd, Low Mica, Coarse	
68.1	Surface		Lithic	Manuport	1	Granitic	142.49	NO					
68.2	Surface		Ceramic		1		2.35	NO		5YR 5/3 Reddish Brown	5YR 5/3 Reddish Brown	Sand, Low Mica, Very Coarse	
69.1	Surface		Lithic	FAR	1	Granitic	218.1	NO					
69.2	Surface		Lithic	Manuport	1	Granitic	78.14	NO					
69.3	Surface		Lithic	Manuport	1	Granitic	31.15	NO					
69.4	Surface		Lithic	Fragment	1	Granitic	10.19	NO					
69.5	Surface		Ceramic		1		1.27	NO		7.5YR 6/4		None	Baked clay
69.6	Surface		Ceramic		1		1.5	NO		10R 6/6 Light Red		None	Vesicular clay
69.7	Surface		Ceramic		1		0.17	NO		10R 6/6 Light Red		None	Vesicular clay
70.1	Surface		Ceramic		1		0.42	NO		10R 6/6 Light Red		None	Vesicular clay

ID No.	Provenience	Depth	Class	Description	Ct	Material	Wt	Charred	Rim Type	Color Int	Color Ext	Temper	Comment
70.3	Surface		Lithic	Manuport	1	Granitic	14.05	NO					
71	Surface		Lithic	Groundstone Fragment	1	Granitic	97.19	NO					
72	Surface		Ceramic		1		6.59	YES		5YR 3/3 Dark Reddish Brown	5YR 5/3 Reddish Brown	Sand, Moderate Mica, Coarse	
73	Surface		Ceramic		1		0.4	NO	Flare moderate	7.5YR 6/4 Light Brown	7.5YR 6/4 Light Brown	None	Baked clay
74	Surface		Lithic	Flake	1	Basalt	0.33	NO					
75	Surface		Lithic	Flake	1	Basalt	2.29	NO					
76	Surface		Lithic	Flake in 2 pieces	1	Basalt	1.05	NO					
77	Surface		Lithic	Flake	1	Basalt	0.39	NO					
78.1	Surface		Lithic	Flake	1	Basalt	0.16	NO					
78.2	Surface		Lithic	Manuport - discard?	1	Quartz	0.28	NO					
78.3	Surface		Shell	cf. Anodonta dejecta	1		0.29	NO					
79	Surface		Lithic	Flake with complex dorsal	1	Basalt	0.62	NO					
80	Surface		Lithic	?	1	Schist	33.41	NO					
81	Surface		Lithic	Mano Fragment	1	Granitic	11.57	NO					
82.1	Surface		Lithic	Flake	1	Basalt	0.71	NO					
82.2	Surface		Lithic	Flake	1	Basalt	0.27	NO					
82.3	Surface		Lithic	Flake	1	Basalt	0.09	NO					
82.31	Surface		Lithic	Debitage	1	Basalt	0.03	NO					
82.4	Surface		Lithic	Flake	1	Basalt	0.06	NO					
82.5	Surface		Lithic	Flake?	1	Schist	0.18	NO					

ID No.	Prov.	Depth	Class	Description	Ct.	Material	Wt.	Curved	Rim Type	Color In	Color Ex	Temper	Comment
83	Surface		Lithic	Manuport	1	Granitic	342.6	NO					
84	Surface		Lithic	Groundstone fragment	1	Granitic	30.48	NO					
85	Surface		Ceramic		1		32.63	YES		7.5YR 6/4 Light Brown	7.5YR 6/4 Light Brown	Sand, Low Mica, Fine-Medium	Interior indentations in 2 pieces
86	Surface		Ceramic		1		12.22	YES		7.5YR 5/4 Brown	2.5YR 5/2 Weak red	Sand, Low Mica, Coarse	
87	Surface		Lithic	Manuport	1	Granitic	186.4	NO					
88	Surface		Lithic	Manuport	1	Quartz	37.18	NO					
89.1	Surface		Ceramic		1		11.73	YES		2.5YR 5/4 Reddisn Brown	2.5YR 4/0 Dark Gray, 10R 5/3 Weak Red	Sand, Low Mica, Very Coarse	Distinct firing coloration
89.2	Surface		Lithic	Groundstone?	1	Granitic	87.6	NO					
90	Surface		Ceramic		1		6.89	NO		7.5YR 6/4 Light Brown	5YR 6/6 Reddish Yellow	None	Baked clay
91	Surface		Lithic	Manuport	1	Granitic	122.25	NO					
92.1	Surface		Lithic	FCR	1	Granitic	43.31	NO					
92.2	Surface		Lithic	Manuport	1	Granitic	165.93	NO					
92.3	Surface		Lithic	FCR	1	Granitic	126.83	NO					
92.4	Surface		Ceramic		1		2.61	NO		10YR 5/3 Brown	10YR 5/3 Brown	Sand, Low Mica, Coarse	Interior exfoliated away
93.1	Surface		Ceramic		1		12.61	YES		5YR 5/4 Reddish Brown	10YR 6/4 Light Yellowish Brown	Sand, Moderate Mica, Medium-Coarse	
93.2	Surface		Ceramic		1		4.21	YES		2.5Y 3/0 Very Dark Gray	7.5YR 5/2 Brown	Sand, Moderate Mica, Coarse	Burned residue interior
93.3	Surface		Ceramic		1		3.64	YES		10YR 6/3 Pale Brown	10YR 5/1 Gray, 2.5YR 4/0 Dark Grey	Sand, Low Mica, Fine	Possible burnished decoration
93.4	Surface		Ceramic		1		3.24	NO		7.5YR 6/2 Pinkish Gray	10YR 6/3 Pale Brown	Sand, Low Mica, Medium	
93.5	Surface		Lithic	Manuport	1	Quartz	15.19	NO					
93.6	Surface		Lithic	Manuport	1	Granitic	299.7	NO					

ID No.	Prov.	Depth	Class	Description	Ct	Material	Wt	Curved	Rim Type	Color, Int.	Color, Ext.	Temper	Comment
94	Surface		Ceramic		1		1.55	NO		5Y 6/1 Gray		None	Baked clay
95	Surface		Ceramic		1		18.71	YES		10YR 5/2 Grayish Brown	5YR 3/4 Dark Reddish Brown	Sand, High Mica, Very Coarse	Finishing striations, exterior
96	Surface		Ceramic		1		3.32	YES		10YR 6/3 Pale brown	7.5YR 5/0 Gray	Sand, Low Mica, Coarse	
97.1	Surface		Ceramic		1		1.39	NO		10YR 6/2 Light Brownish Gray	10YR 6/2 Light Brownish Gray	Sand, Low Mica, Coarse	
97.2	Surface		Ceramic		1		4.51	NO		7.5YR 7/4 Pink	10YR 6/2 Light Brownish Gray	Sand, Moderate Mica, Coarse	
98.1	Surface		Ceramic		1		2.35	NO		7.5YR 6/4 Light Brown	7.5YR 6/2 Pinkish Gray	Sand, High Mica, Coarse	
98.2	Surface		Ceramic		1		1.93	NO		7.5YR 7/4 Pink	5YR 7/2 Pinkish Gray	Sand, Moderate Mica, Coarse	
99	Surface		Ceramic		1		1.67	NO		10YR 5/1 Gray	10YR 5/1 Gray	Sand, Low Mica, Coarse	
100.1	Surface		Ceramic		1		4.04	YES		10YR 7/1 Light Gray	10YR 6/1 Gray	Sand, Low Mica, Coarse	
100.2	Surface		Ceramic		1		1.12	NO		10YR 5/1 Gray	10YR 6/2 Light Brownish Gray	Sand, Low Mica, Medium - Coarse	
100.3	Surface		Ceramic		1		0.9	NO		10YR 6/2 Light Brownish Gray	5YR 6/6 Reddish Yellow	Sand, High Mica, Coarse	
101.1	Surface		Ceramic		1		2.64	NO		10YR 5/1 Gray	10YR 6/1 Light Gray, Gray	Sand, Low Mica, Coarse	
101.2	Surface		Ceramic		1		1.99	NO		10YR 6/3 Pale Brown	10YR 7/3 Very Pale Brown	Sand, Low Mica, Coarse	
101.3	Surface		Ceramic		1		0.31	NO		10YR 5/1 Gray	10YR 6/1 Gray	Sand, High Mica, Medium	
102.1	Surface		Ceramic		1		2.37	NO		10YR 6/3 Pale Brown	10YR 6/7 Light Brownish Gray	Sand, High Mica, Coarse	
102.2	Surface		Ceramic		1		1.65	NO		10YR 5/2 Grayish Brown	10YR 5/2 Grayish Brown	Sand, High Mica, Coarse	
102.3	Surface		Ceramic		1		0.66	NO		10YR 6/2 Light Brownish Gray	10YR 6/2 Light Brownish Gray	Sand, Moderate Mica, Coarse	
102.4	Surface		Ceramic		1		0.32	NO		No surface present	10YR /2 Light Brownish Gray	Sand, Moderate Mica, Coarse	
102.5	Surface		Ceramic		1		0.47	NO		No surface present	10YR 6/2 Light Brownish Gray	Sand, Moderate Mica, Coarse	
102.6	Surface		Ceramic		1		0.23	NO		10YR 6/2 Light Brownish Gray	7.5YR 7/2 Pinkish Gray	Sand, High Mica, Coarse	

ID No.	Prov	Depth	Class	Description	CT	Material	Wt	Curved	Rim Type	Color Int	Color Ext	Temper	Comment
103	Surface		Ceramic		1		7.74	YES		10YR 6/3 Pale Brown	10YR 6/3 Pale Brown	Sand, Moderate Mica, Coarse	
104.1	Surface		Ceramic		1		5.81	YES	Rounded Margin	10YR 6/2 Light Brownish Gray	7.5YR 6/4 Light Brown	Sand, Low Mica, Coarse	
104.2	Surface		Lithic	Possible Groundstone	1	Granitic	266.5	NO					
104.3	Surface		Lithic	FCR	1	Granitic	84.53	NO					
105	Surface		Ceramic		1		3.84	NO		5Y 8/2 White		None	Baked clay
106.1	Surface		Ceramic		1		1.79	NO		7.5YR 7/6 Reddish Yellow		None	Baked clay
106.2	Surface		Ceramic		1		2.23	NO		10YR 6/2, 6/3 Light Brownish Gray, Pale Brown	10YR 6/3 Pale Brown	Sand, Low Mica, Coarse	
106.3	Surface		Ceramic		1		3.73	YES		10YR 7/2 Light Gray	10YR 6/2 Light Brownish Gray	Sand, High Mica, Coarse	
106.4	Surface		Ceramic		1		0.75	NO		7.5YR 6/4 Light Brown	10YR 6/3 Pale Brown	Sand, Moderate Mica, Medium	
106.5	Surface		Lithic	Manuport	1	Granitic	29.66	NO					
106.6	Surface		Lithic	Manuport	1	Granitic	24.58	NO					
107.1	Surface		Lithic	Manuport	1	Granitic	424.8	NO					
107.2	Surface		Lithic	FCR	1	Granitic	10.09	NO					
107.3	Surface		Ceramic		1		2.63	YES		10YR 6/3, Pale Brown	10YR 6/2, Light Brownish Gray	Sand, Moderate Mica, Medium	
107.4	Surface		Ceramic		1		0.21	NO		7.5YR 7/4 Pink		None	Baked clay
108	Surface		Ceramic		1		2.35	NO		7.5YR 6/4 Light Brown	10YR 6/2 Light Brownish Gray	Sand, Low Mica, Coarse	
109	Surface		Ceramic		1		1.18	NO		5YR 6/4 Light Reddish Brown	10YR 6/2 Light Brownish Gray	Sand, Moderate Mica, Coarse - Very Coarse	
110	Surface		Lithic	Groundstone	1	Granitic	71.86	NO					
111	Surface		Ceramic		1		1.59	NO		10YR 6/1 Gray	7.5YR Reddish Yellow	Sand, Low Mica, Coarse	Dense quartz included finishing striations
112.1	Surface		Ceramic		1		1.47	NO		5YR 6/4 Light Reddish Brown		None	Baked clay

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ID No.	Prov.	Depth	Class	Description	Qty	Material	Wt.	Lowered	Burn Type	Color, Int.	Color, Ext.	Temper	Comment
112.2	Surface		Ceramic		1		14.88	YES		10YR 4/2 Dark Grayish Brown	10YR 5/2 Grayish Brown	Sand, Low Mica, Very Coarse	Small amount possible? Burnt
112.3	Surface		Lithic	Manuport	1	Granitic	198.6	NO					
112.4	Surface		Lithic	Manuport	1	Granitic	9.4	NO					
113	Surface		Ceramic		1		4.8	YES	Margin Rounded	10YR 6/2 Light Brownish gray	10YR 6/2 Light Brownish Gray	Sand, Low Mica, Very Coarse	
114	Surface		Ceramic		1		0.75	NO		5YR 8/4 Light Reddish Brown	7.5YR 5/6 Strong Brown	Sand, Low Mica, Medium	2 pieces fit together
114.1	Surface		Lithic	Manuport	1	Quartz	14.85	NO					
677	Trench 4	4-1/2" dp	Lithic	Metate Fragment?	1	Granitic	422.7	NO					
678	Trench 8		Lithic	Manuport	1	Granitic	44.14	NO					
679	Trench 8		Lithic	Manuport	1	Granitic	202.8	NO					
680	Trench 8		Lithic	Manuport	1	Granitic	1.66	NO					
681	Trench 8		Ceramic		1		3.37	YES		5YR 3/1 Very Dark gray	5YR 2.5/1 Black	Sand, Moderate Mica, Coarse	
682	Unit 1	0-10cm	Shell	cf. Anodonta dejecta	1	Shell	0.03	NO					
683	Unit 1	0-10cm	Sample		1	Soil	0	NO					
684	Unit 1	10-20cm	Sample		1	Soil	0	NO					
685	Unit 1	20-30cm	Sample		1	Soil	0	NO					
686	Unit 1	30-40cm	Lithic	FCR	1	Granitic	140.95	NO					
687	Unit 1	30-40cm	Sample		1	Soil	0	NO					
688	Unit 1	40-50cm	Sample		1	Soil	0	NO					
689	Unit 1	50-60cm	Sample	Silty Soil	1	Soil	0	NO					
690	Unit 2	0-10cm	Ceramic		1		2.84	YES		10YR 4/2 Dark Grayish Brown	10YR 4/1 Dark Gray	Sand, Low Mica, Coarse	Finishing striations, Interior

ID.No	Prov.	Depth	Class.	Description	CT.	Material	WT.	Curved	Rim Type	Color, Int	Color, Ext	Temper	Comment
691	Unit 2	0-10cm	Sam		1		3.67	NO		10YR 4/2 Dark Grayish Brown	10YR 4/1 Dark Gray	Sand, Low Mica, Medium - Coarse	Finishing triations interior
692	Unit 2	0-10cm	Sample		1	Soil	0	NO					
693	Unit 2	10-20cm	Sample		1	Soil	0	NO					
694	Unit 2	20-30cm	Sample		1	Soil	0	NO					
695	Unit 2	30-40cm	Sample		1	Soil	0	NO					
696	Unit 2	40-50cm	Bone	Small rodent fragments	1		0.09	NO					
697	Unit 2	50-60cm	Sample		1		0	NO					
698	Unit 5	0-10cm	Sample		1	Sandy Soil	0	NO					
699	Unit 5	0-10cm	Sample		1	Charcoal	0	NO					
700	Unit 5	0-10cm	Ceramic		1		5	YES		10YR 7/4 Very Pale Brown	10YR 7/3 Very Pale Brown	Sand, Low Mica, Medium - Coarse	
701	Unit 5	0-10cm	Ceramic		1		3.62	NO		10YR 6/3 Pale Brown	10YR 7/3 Very Pale Brown	Sand, High Mica, Medium	Finishing striations, exterior
702	Unit 5	0-10cm	Ceramic		1		2.4	NO		10YR 7/3 - 7/4 Very Pale Brown	10YR 7/2 Light gray	Sand, Moderate Mica, Medium - Coarse	Exterior beginning to deteriorate
703	Unit 5	10-20cm	Ceramic		1		0.05	NO		7.5YR 6/4 Light Brown		None	Baked clay
704	Unit 5	10-20cm	Ceramic		1		0.16	NO		10YR 7/3 Very Pale Brown	10YR 7/4 Very Pale Brown	Sand, Low Mica, Medium	
705	Unit 5	10-20cm	Sample		1	Charcoal	0	NO					
706	Unit 5	10-20cm	Sample		1	Sandy Soil	0	NO					
707	Unit 5	20-30cm	Sample		1	Sandy Soil	0	NO					
708	Unit 5	30-40cm	Sample		1	Sandy Soil	0	NO					
709	Unit 5	40-50cm	Sample		1	Sandy Soil	0	NO					
710	Unit 5	50-60cm	Sample		1	Sandy	0	NO					

ID No.	Prov.	Depth	Class	Description	CT	Material	Wt.	Curved	Rim Type	Color, Int.	Color, Ext.	Temper	Comment
711	Unit 6	0-10cm	Lithic	Manuport	1	Quartz	4.37	NO					
712	Unit 6	0-10cm	Sample		1	Sand	0	NO					
713	Unit 6	0-10cm	Ceramic		1		8.1	YES		10YR 7/3 Very Pale Brown	10YR 7/2 Light Gray	Sand, Low Mica, Coarse	
714	Unit 6	10-20cm	Bone	Snake vertebrae	1		0.45	NO					
715	Unit 6	10-20cm	Sample		1	Sand	0	NO					
716	Unit 6	20-30cm	Sample		1	Sand	0	NO					
717	Unit 6	30-40cm	Sample		1	Sand	0	NO					
718	Unit 6	30-40cm	Lithic		1	Basalt	0.15	NO					
719	Unit 6	30-40cm	Ceramic		1		2.08	NO		7.5YR 7/6 Reddish Yellow		None	Baked clay
720	Unit 6	40-50cm	Sample		1	Sand	0	NO					
721	Unit 6	50-60cm	Sample		1	Sand	0	NO					
722	Unit 7	0-10cm	Sample		1	Sand	0	NO					
723	Unit 7	10-20cm	Sample		1	Sand	0	NO					
724	Unit 7	10-20cm	Sample		1	Charcoal	0	NO					
725	Unit 7	20-30cm	Sample		1	Sand	0	NO					
726	Unit 7	30-40cm	Sample		1	Sand	0	NO					
727	Unit 7	40-50cm	Sample		1	Sand	0	NO					
728	Unit 7	50-60cm	Sample		1	Sand	0	NO					
729	Unit 8	0-20cm	Lithic		1	Basalt (fine grain)	0.63	NO					
730	Unit 8	0-20cm	Sample		1	Sand	0	NO					

ID No.	Proj.	Depth	Class	Description	[illegible]	Material	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Comment
731	Unit 8	20-30cm	Sample		1	Sand	0	NO					
732	Unit 8	30-40cm	Sample		1	Sand	0	NO					
733	Unit 8	40-50cm	Sample		1	Sand	0	NO					
734	Unit 8	50-60cm	Sample		1	Sand	0	NO					

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ID No.	Prov	Class	CT	Wt.	Curved	Color, Int	Color, Ext	Temper	Comment
735	Surface	Ceramic	1	5.3	YES	5YR 6/4 Light Reddish Brown	No Surface	Sand, High Mica, Coarse	
736	Surface	Ceramic	1	4.39	YES	7.5YR 6/4 Light Brown	No Surface Present	Sand, High Mica, Coarse	
737	Surface	Ceramic	1	3.01	YES	7.5YR 6/4 Light Brown	5YR 6/3 Light Reddish Brown	Sand, High Mica, Coarse	Small piece of exterior presents showing spalling nature of ceramic
738	Surface	Ceramic	1	2.57	YES	5YR 6/4 Light Reddish Brown	No Surface	Sand, Low Mica, Coarse	
739	Surface	Ceramic	1	3.19	NO	7.5YR 6/4 Light Brown	No Surface Present	Sand, Moderate Mica, Coarse	
740	Surface	Ceramic	1	0.85	YES	No Surface	7.5YR 6/6 Reddish Yellow	Sand, Low Mica, Coarse	
741	Surface	Ceramic	1	2.95	YES	7.5YR 6/4 Light Brown	10YR 6/3 Pale Brown	Sand, Low Mica, Coarse	
742	Surface	Ceramic	1	3.37	YES	5YR 6/6-7/6 Reddish Yellow	No Surface	Sand, Low Mica, Coarse	White fiberous residue on interior
743	Surface	Ceramic	1	1.31	YES	5YR 6/4-6/6 Light Reddish Brown	No Surface	Sand, Low Mica, Coarse	
744	Surface	Ceramic	1	1.59	YES	No Surface	5YR 5/3 Reddish Brown	Sand, Moderate Mica, Coarse	
745	Surface	Ceramic	1	1.23	YES	No Surface	5YR 7/4, 7/6 Pink - Reddish Yellow	Sand, Moderate Mica, Coarse	Scrape marks on finish
746	Surface	Ceramic	1	1.32	YES	5YR 6/4 Light Reddish Brown	No Surface	Sand, Low Mica, Coarse	
747	Surface	Ceramic	1	0.96	YES	No Surface	10YR 6/3 Pale Brown	Sand, Low Mica, Coarse	
748	Surface	Ceramic	1	1.16	YES	5YR 5/6 Yellowish Red	No Surface	Sand, Moderate Mica, Coarse	
749	Surface	Ceramic	1	0.93	YES	7.5YR 6/4 Light Brown	No Surface Present	Sand, Moderate Mica, Very Coarse	
750	Surface	Ceramic	1	0.4	NO	10YR 6/3 Pale Brown	No Surface	Sand, Low Mica, Coarse	
751	Surface	Ceramic	1	0.54	NO	5YR 6/4 Light Reddish Brown	5YR 6/4 Light Reddish Brown	Sand, Moderate Mica, Coarse	90% temper, 10% surface. Not sure which surface
752	Surface	Ceramic	1	0.4	YES	5YR 6/4 Light reddish Brown	No Surface	Sand, Moderate Mica, Coarse	
753	Surface	Ceramic	1	0.47	NO	No Surface	No Surface	Sand, High Mica, Coarse	
754	Surface	Ceramic	1	0.48	YES	No Surface	10YR 6/2, 5/2 Grayish Brown, Light Brownish Gray	Sand, High Mica, Coarse	
755	Surface	Ceramic	1	0.38	YES	No Surface	10YR 6/3 Pale Brown	Sand, High Mica, Coarse	
756	Surface	Ceramic	1	0.43	YES	No Surface	10YR 6/3 Pale Brown	Sand, Moderate Mica, Coarse	
757	Surface	Ceramic	1	0.24	YES	5YR 5/2 Reddish Gray	No Surface	Sand, Low Mica, Coarse	
758	Surface	Ceramic	1	0.68	YES	5YR 5/6 Yellowish Red	No Surface	Sand, High Mica, Very Coarse	
759	Surface	Ceramic	1	0.27	YES	No Surface	10YR 6/3 Pale Brown	Sand, High Mica, Very Coarse	
760	Surface	Ceramic	1	0.34	YES	5YR 6/4 Light Reddish Brown	No Surface	Sand, Low Mica, Coarse	
761	Surface	Ceramic	1	0.17	YES	5YR 6/4-6/6 Light Reddish Brown	No Surface	Sand, Low Mica, Coarse	
762	Surface	Ceramic	1	0.28	NO	No Surface	No Surface	Sand, Low Mica, Coarse	
763	Surface	Ceramic	1	0.58	NO	No Surface	7.5YR 5/6 Strong Brown	Sand, Moderate Mica, Coarse	
764	Surface	Ceramic	1	0.35	NO	No Surface	7.5YR 6/4 Light Brown	Sand, Low Mica, Coarse	
765	Surface	Ceramic	1	0.21	NO	No Surface	5YR 6/4 Light Reddish Brown	Sand, Low Mica, Medium - Coarse	
766	Surface	Ceramic	1	0.19	NO	No Surface	7.5YR 6/4 Light Brown	Sand, Low Mica, Coarse	
767	Surface	Ceramic	1	0.18	NO	7.5YR 7/4 Pink	No Surface	Sand, Low Mica, Coarse	
768	Surface	Ceramic	1	0.06	YES	5YR 6/4 Light Reddish Brown	No Surface	Sand, Low Mica, Coarse	
769	Surface	Ceramic	1	0.08	NO	5YR 6/4 Light Reddish brown	No Surface	Sand, Moderate Mica, Coarse	
770	Surface	Ceramic	1	0.08	NO	5YR 5/6 Yellowish Red	No Surface	Sand, Low Mica, Coarse	
771	Surface	Ceramic	1	1.65	YES	No Surface	7.5YR 6/4 Light Brown	Sand, Low Mica, Coarse	
772	Surface	Ceramic	1	0.77	YES	No Surface	7.5YR 5/4 Brown	Sand, High Mica, Coarse	
773	Surface	Ceramic	1	0.38	YES	1-YR 5/3 Brown	No Surface	Sand, Low Mica, Medium	
774	Surface	Ceramic	1	0.28	YES	7.5YR 6/6 Reddish Yellow	No Surface	Sand, Low Mica, Coarse	

ID No	Prov	Class	CT	Wt	Curved	Color Int	Color Ext	Temper	Comment
775	Surface	Ceramic	1	3.05	YES	5YR 6/4 Light Reddish Brown	No Surface	Sand, Moderate Mica, Coarse	White fibrous residue on finish
776	Surface	Ceramic	1	1.42	YES	7.5YR 6/4 Light Brown	No Surface	Sand, Moderate Mica, Coarse	
777	Surface	Ceramic	1	0.78	YES	7.5YR 6/4 Light Brown	No Surface	Sand, Moderate Mica, Coarse	
778	Surface	Ceramic	1	0.55	YES	7.5YR 6/4 Light Brown	No Surface	Sand, High Mica, Coarse	
779	Surface	Ceramic	1	0.38	YES	10YR 6/3 Pale Brown	No Surface	Sand, High Mica, Coarse	
780	Surface	Ceramic	1	1.09	YES	5YR 6/4 Light Reddish Brown	No Surface	Sand, High Mica, Coarse	
781	Surface	Ceramic	1	0.19	YES	2.5YR 6/6 Light Red	No Surface	Sand, Low Mica, Coarse	
782	Surface	Ceramic	1	0.21	YES	5YR 6/6 Reddish Yellow	No Surface	Sand, Low Mica, Medium	
783	Posthole A	Ceramic	1	2.72	YES	No Surface	10YR 6/3 Pale Brown	Sand, Low Mica, Coarse	
784	Posthole A	Ceramic	1	3.06	YES	No Surface	7.5YR 6/4 Light Brown	Sand, Moderate Mica, Coarse	Shoulder fragment
785	Posthole A	Ceramic	1	1.37	YES	No Surface	7.5YR 6/4 Light Brown	Sand, High Mica, Medium - Coarse	
786	Posthole A	Ceramic	1	1.36	NO	7.5YR 6/4 Light Brown	No Surface	Sand, High Mica, Coarse	
787	Posthole A	Ceramic	1	0.72	NO	7.5YR 6/4 Light Brown	No Surface	Sand, Low Mica, Coarse	
788	Posthole A	Ceramic	1	1.15	YES	No Surface	7.5YR 6/4 Light Brown	Sand, Low Mica, Coarse	Scrape marks on finish
789	Posthole A	Ceramic	1	0.34	YES	No Surface	10YR 5/1 gray	Sand, Low Mica, Medium	
790	Posthole A	Ceramic	1	0.27	YES	No Surface	5YR 6/4 Light Reddish Brown	Sand, Low Mica, Medium	
791	Posthole A	Ceramic	1	0.48	YES	5YR 6/6 Reddish Yellow	No Surface	Sand, High Mica, Coarse	
792	Posthole A	Ceramic	1	0.41	NO	No Surface	7.5YR 6/6 Reddish Yellow	Sand, Low Mica, Medium	Scrape marks on finish
793	Posthole A	Ceramic	1	0.22	NO	No Surface	No Surface	Sand, Low Mica, Medium	
794	Posthole A	Ceramic	1	0.13	NO	No Surface	No Surface	Sand, Low Mica, Medium	
795	Posthole A	Ceramic	1	0.14	NO	No Surface	10YR 6/3 Pale Brown	Sand, Low Mica, Medium	
796	Posthole A	Ceramic	1	0.16	NO	5YR 5/3 Reddish Brown	No Surface	Sand, Low Mica, Medium	
797	Posthole A	Ceramic	1	0.06	NO	No Surface	No Surface	Sand, Low Mica, Medium	
798	Posthole A	Ceramic	1	0.02	NO	No Surface	No Surface	Sand, Low Mica, Medium	
799	Posthole B	Ceramic	1	2.91	YES	No Surface	7.5YR 7/6 Reddish Yellow	Sand, Moderate Mica, Coarse	Shoulder scrape marks on finish
800	Posthole B	Ceramic	1	2.02	YES	10YR 6/3 Pale Brown	No Surface	Sand, Moderate Mica, Coarse	
801	Posthole B	Ceramic	1	2.17	YES	No Surface	7.5YR 6/6 Reddish Yellow	Sand, Moderate Mica, Coarse	
802	Posthole B	Ceramic	1	2.21	YES	No Surface	10YR 6/3 Pale Brown	Sand, High Mica, Medium	
803	Posthole B	Ceramic	1	1.65	YES	No Surface	7.5YR 6/6 Reddish Yellow	Sand, Moderate Mica, Coarse	
804	Posthole B	Ceramic	1	1.55	YES	No Surface	5YR 6/4 Light Reddish Brown	Sand, Moderate Mica, Coarse	
805	Posthole B	Ceramic	1	1.49	YES	No Surface	10YR 6/3 Pale Brown	Sand, Low Mica, Coarse	Blackened area on surface around inclusion
806	Posthole B	Ceramic	1	1.63	YES	No Surface	5YR 6/6 Reddish Yellow	Sand, Low Mica, Coarse	Scrape marks on finish
807	Posthole B	Ceramic	1	0.97	YES	No Surface	7.5YR 6/4 Light Brown	Sand, Moderate Mica, Coarse	
808	Posthole B	Ceramic	1	0.77	YES	No Surface	10YR 6/3 Pale Brown	Sand, Low Mica, Medium	
809	Posthole B	Ceramic	1	1.06	YES	No Surface	7.5YR 6/4 Light Brown	Sand, Low Mica, Medium	
810	Posthole B	Ceramic	1	0.78	YES	No Surface	7.5YR 6/4 Light Brown	Sand, High Mica, Coarse	
811	Posthole B	Ceramic	1	0.63	YES	No Surface	10YR 6/3 Pale Brown	Sand, Low Mica, Coarse	
812	Posthole B	Ceramic	1	0.48	NO	No Surface	No Surface	Sand, Low Mica, Coarse	
813	Posthole B	Ceramic	1	0.69	YES	7.5YR 6/4 Light Brown	No Surface	Sand, High Mica, Medium	
814	Posthole B	Ceramic	1	0.36	NO	No Surface	7.5YR 6/4 Light Brown	Sand, Low Mica, Medium	
815	Posthole B	Ceramic	1	0.52	YES	No Surface	7.5YR 6/6 reddish Yellow	Sand, Low Mica, Coarse	
816	Posthole B	Ceramic	1	0.23	YES	7.5YR 6/6 Reddish Yellow	No Surface	Sand, Low Mica, Medium	

ID No	Prov	Class	CT	Wt	Curved	Color Int	Color Ext	Temper	Comment
817	Posthole B	Ceramic	1	0.35	YES	No Surface	7.5YR 6/4 Light Brown	Sand, Low Mica, Coarse	
818	Posthole B	Ceramic	1	0.29	YES	No Surface	10YR 6/3 Pale Brown	Sand, Low Mica, Medium	
819	Posthole B	Ceramic	1	0.15	NO	No Surface	10YR 6/3 Pale Brown	Sand, Low Mica, Medium	
820	Posthole C	Ceramic	1	2.87	YES	10YR 6/3 Pale Brown	No Surface	Sand, High Mica, Medium	
821	Posthole C	Ceramic	1	0.79	YES	7.5YR 6/4 Light Brown	No Surface	Sand, High Mica, Coarse	
822	Posthole D	Ceramic	1	0.92	YES	No Surface	5YR 5/6 Yellowish Red	Sand, Moderate Mica, Coarse	
823	Posthole D	Ceramic	1	0.83	YES	No Surface	5YR 6/6 Reddish Yellow	Sand, High Mica, Coarse	
824	Posthole D	Ceramic	1	1.26	YES	No Surface	5YR 6/6 Reddish Yellow	Sand, Low Mica, Medium	
825	Posthole D	Ceramic	1	0.89	YES	5YR 6/4 Light Reddish Brown	No Surface	Sand, Moderate Mica, Medium	
826	Posthole D	Ceramic	1	0.73	YES	7.5YR 6/6 Reddish Yellow	No Surface	Sand, High Mica, Medium	
827	Posthole D	Ceramic	1	0.84	YES	No Surface	10YR 5/2 Grayish Brown	Sand, Moderate Mica, Coarse	
828	Posthole D	Ceramic	1	0.69	YES	No Surface	5YR 6/6 Reddish Yellow	Sand, Low Mica, Medium	Scrape marks on exterior
829	Posthole D	Ceramic	1	0.4	YES	No Surface	5YR 6/6 Reddish Yellow	Sand, Low Mica, Coarse	
830	Posthole D	Ceramic	1	0.36	YES	No Surface	7.5YR 6/6 Reddish Yellow	Sand, Low Mica, Coarse	
831	Posthole D	Ceramic	1	0.52	YES	No Surface	10YR 5/2 Grayish Brown	Sand, Low Mica, Medium	
832	Posthole D	Ceramic	1	0.28	YES	7.5YR 6/6 Reddish Yellow	No Surface	Sand, Low Mica, Medium	
833	Posthole D	Ceramic	1	0.18	NO	5YR 6/6 Reddish Yellow	No Surface	Sand, Low Mica, Coarse	
834	Posthole D	Ceramic	1	0.34	NO	7.5YR 6/4 Light Brown	No Surface	Sand, Low Mica, Medium	
835	Posthole D	Ceramic	1	0.36	YES	7.5YR 6/4 Light Brown	No Surface	Sand, Low Mica, Medium	
836	Posthole D	Ceramic	1	0.22	YES	5YR 6/4 Light Reddish Brown	No Surface	Sand, Low Mica, Medium	
837	Posthole D	Ceramic	1	0.22	NO	5YR 6/6 Reddish Yellow	No Surface	Sand, Low Mica, Coarse	
838	Posthole D	Ceramic	1	0.12	YES	10YR 6/2 Light Brownish Gray	No Surface	Sand, Moderate Mica, Coarse	
839	Posthole D	Ceramic	1	0.12	YES	5YR 6/6 Reddish Yellow	No Surface	Sand, Low Mica, Coarse	
840	Posthole D	Ceramic	1	0.15	YES	5YR 6/4 Light Reddish Brown	No Surface	Sand, Low Mica, Medium	

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ID No.	Prov.	Depth	Class	Description	Ct.	Material	Wt.	Curved	Rim Type	Color Int.	Color Ext.	Temper	Comment
1.1	Surface		Ceramic		1		2.31	NO		7.5YR 5/2 Brown	7.5YR 6/2 Pinkish Gray	Sand, Moderate Mica, Medium	
1.2	Surface		Ceramic		1		0.98	NO		7.5YR 6/2 Pinkish Gray	7.5YR 6/4 Light Brown	Sand, Low Mica, Very Coarse	Well rounded liquid like
1.3	Surface		Ceramic		1		0.55	NO		7.5YR 5/2 Brown	7.5YR 5/2 Brown	Sand, Moderate Mica, Medium	
1.4	Surface		Ceramic		1		1.41	NO		7.5YR 6/2 Pinkish Gray	7.5YR 5/2 Brown	Sand, Low Mica, Very Coarse	Well rounded liquid like
2.1	Surface		Lithic	Manuport	1	Granitic	80.44	NO					
2.2	Surface		Lithic	Manuport	1	Granitic	112.06	NO					
3.1	Surface		Ceramic		1		0.79	NO		7.5YR 5/2 Brown	7.5YR 4/2 Brown, Dark Brown	Sand, Low Mica, Coarse	
3.2	Surface		Ceramic		1		1.45	NO	Slightly Rounded	7.5YR 4/2 Brown, Dark Brown	7.5YR 4/4 Brown, Dark Brown	Sand, High Mica, Medium - Coarse	
3.3	Surface		Ceramic		1		1.02	NO		7.5YR 5/2 Brown	7.5YR 5/4 Brown	Sand, High Mica, Medium - Coarse	
3.4	Surface		Ceramic		1		0.36	NO		7.5YR 5/2 Brown	7.5YR 5/4 Brown	Sand, Low Mica, Medium	
4.1	Surface		Ceramic		1		0.65	NO		7.5YR 5/2 Brown	7.5YR 5/2 Brown	Sand, High Mica, Medium	
4.2	Surface		Ceramic		1		1.49	NO		7.5YR 5/2 Brown	7.5YR 5/2 Brown	Sand, Low Mica, Very Coarse	
5	Surface		Ceramic		1		1.96	NO		7.5YR 5/2 Brown	7.5YR 5/2 Brown	Sand, Low Mica, Very Coarse	
6	Surface		Ceramic		1		1.14	NO		7.5YR 4/0 Dark Gray	7.5YR 4/0 Dark Gray	Sand, Low Mica, Very Coarse	
7.1	Surface		Ceramic		1		0.61	YES		10R 5/4 Weak Red	10R 5/4 Weak Red	Sand, Moderate Mica, Very Coarse	
7.2	Surface		Ceramic		1		1.25	NO		7.5YR 5/2 Brown	7.5YR 5/2 Brown	Sand, Low Mica, Very Coarse	
8	Surface		Ceramic		1		2.32	NO		10R 5/4 Weak Red	7.5YR 4/2 Brown, Dark Brown	Sand, Moderate Mica	
9	Surface		Ceramic		1		2.94	NO		7.5YR 5/2 Brown	7.5YR 5/4 Brown	Sand, Moderate Mica, Very Coarse	
10.1	Surface		Ceramic		1		2.75	NO		7.5YR 6/2 Pinkish Gray	7.5YR 6/2 Pinkish Gray	Sand, Low Mica, Very Coarse	
10.2	Surface		Ceramic		1		1.25	NO		10R 5/4 Weak Red	7.5YR 6/4 Light Brown	Sand, High Mica, Very Coarse	
11	Surface		Ceramic		1		3.11	NO		7.5YR 4/2 Brown, Dark Brown	7.5YR 4/2 brown, Dark Brown	Sand, Low Mica, Very Coarse	Evenly fired
12	Surface		Ceramic		1		4.4	NO		7.5YR 6/2 Pinkish Gray	7.5YR 6/2 Pinkish Gray	Sand, High Mica, Very Coarse	
13	Surface		Ceramic		1		4.36	YES		7.5YR 6/2 Pinkish Gray	7.5YR 6/4 Light Brown	Sand, High Mica, Very Coarse	
14.1	Surface		Ceramic		1		0.68	NO		10R 5/4 Weak Red	10R 5/4 Weak Red	Sand, Low Mica, Very Coarse	
14.2	Surface		Ceramic		1		0.77	NO		10R 5/4 Weak Red	10R 5/4 Weak Red	Sand, Low Mica, Very Coarse	
14.3	Surface		Ceramic		1		0.21	NO		10R 5/4 Weak Red	10R 5/4 Weak Red	Sand, Low Mica, Very Coarse	
14.4	Surface		Ceramic		1		0.23	NO		10R 5/4 Weak Red	10R 5/4 Weak Red	Sand, Low Mica, Very Coarse	
14.5	Surface		Shell	cf. Anodonta	1		0	NO					
15	Surface		Ceramic		1		0.74	NO		2.5YR 5/4 Reddish Brown	2.5YR 5/4 Reddish Brown	Sand, High Mica, Very Coarse	
16	Surface		Ceramic		1		0.92	NO		7.5YR 5/4 Brown	7.5YR 5/4 Brown	Sand, Moderate Mica, Coarse	Evenly fired
17	Surface		Ceramic		1		1.05	NO		7.5YR 6/4 Light Brown	7.5YR 6/4 Light Brown	Sand, High Mica, Very Coarse	
18	Surface		Ceramic		1		4.51	YES		7.5YR 6/2 Pinkish Gray	7.5YR 6/2 Pinkish Gray	Sand, Low Mica, Very Coarse	
19	Surface		Ceramic		1		4.03	YES		10YR 6/3 Pale Brown	10YR 6/3 Pale Brown	Sand, High Mica, Fine - Medium	
20	Surface		Ceramic		1		1.4	NO		10R 5/4 Weak Red	10YR 5/4 Weak Red	Sand/Low Mica, Very Coarse	Evenly fired
21.1	Surface		Ceramic		1		1.57	YES		7.5YR 5/2 Brown	7.5YR Pinkish Gray	Sand, Moderate Mica, Very Coarse	
21.2	Surface		Ceramic		1		1.16	NO		7.5YR 5/2 Brown	7.5YR Pinkish Gray	Sand, High Mica, Very Coarse	
21.3	Surface		Ceramic		1		0.27	NO		7.5YR 5/2 Brown	7.5YR Pinkish Gray	Sand, Moderate Mica, Very Coarse	
22	Surface		Ceramic		1		0.82	NO		10YR 5/3 Weak Red	10R 5/3 Weak Red	Sand, High Mica, Medium - Coarse	
23	Surface		Lithic	Groundstone	1	Sandstone	203.5	NO					
24	Surface		Ceramic		1		0.76	NO		7.5YR 6/4 Light Brown	7.5 YR 6/4 Light Brown	Sand, High Mica, Coarse	
25.1	Surface		Ceramic		1		5.37	YES		10R 5/3 Weak Red	7.5YR 6/4 Pinkish Gray	Sand, Low Mica, Medium - Fine	
25.2	Surface		Bone	Unidentifiable	1		0.51	NO					
26	Surface		Ceramic		1		5.17	YES	Slightly Rounded	10YR 6/3 Pale Brown	10YR 6/3 Pale Brown	Sand, Moderate Mica, Very Coarse	
27	Surface		Ceramic		1		0.95	NO		10YR 5/1 Gray	10YR 5/1 Gray	Sand, Low Mica, Very Coarse	
28	Surface		Lithic	Chopper	1	Quartzite	249.3	NO					

11.9-57

ID No.	Prov.	Depth	Class	Description	CT	Material	Wt.	Curved	Rim Type	Color Int.	Color Ext.	Temper	Comment
29	Surface		Ceramic		1		4.56	NO		10YR 4/2	10YR 4/2 Dark Gravish Brown	Sand, Low Mica, Very Coarse	
30	Surface		Ceramic		1		0.64	NO		10YR 5/3 Brown	10YR 3/3 Dark Brown	Sand, Low Mica, Coarse	Well rounged liquid like
31	Surface		Ceramic		1		0.69	NO		2.5YR 5/4 Reddish Brown	10YR 3/2 Very Dark, Gravish	Sand, Low Mica, Very Coarse	
32.1	Surface		Ceramic		1		1.13	NO		10YR 6/2 Light Brownish Grav	10YR 6/2 Light Brownish Grav	Sand, Low Mica, Very Coarse	
32.2	Surface		Ceramic		1		1.18	NO		2.5YR 5/4 Reddish Brown	10YR 4/1 Dark Gray	Sand, Low Mica, Very Coarse	Well rounded liquid like
33	Surface		Ceramic		1		0.6	NO		7.5YR 5/4 Brown	7.5YR 5/2 Brown	Sand, Low Mica, Very Coarse	
34	Surface		Ceramic		1		0.87	NO		7.5YR 5/4 Brown	7.5YR 5/2 Brown	Sand, Low Mica, Very Coarse	Well rounged liquid like
35.1	Surface		Ceramic		1		4.76	NO		5YR 5/3 Reddish Brown	2.5YR 4/4 Reddish Brown	Sand, Low Mica, Very Coarse	Well rounged liquid like
35.2	Surface		Ceramic		1		0.69	NO		5YR 5/3 Reddish Brown	5YR 5/3 Reddish Brown	Sand, Low Mica, Very Coarse	Well rounged liquid like
35.3	Surface		Ceramic		1		0.73	NO	Slight/Flattened	5YR 5/3 Reddish Brown	5YR 5/3 Reddish Brown	Sand, Low Mica, Very Coarse	
36.1	Surface		Ceramic		1		1.26	NO		10YR 5/3 Brown	10YR 4/1 Dark Gray	Sand, Low Mica, Very Coarse	
36.2	Surface		Ceramic		1		1.86	NO		2.5YR 5/2 Weak Red	2.5YR 4/2 Weak Red	Sand, Low Mica, Very Coarse	Rounded
37	Surface		Ceramic		1		0.76	NO	Slightly Rounded	2.5YR 5/4 Reddish Brown	2.5YR 4/2 Weak Red	Sand, Low Mica, Coarse	
38	Surface		Ceramic		1		0.42	NO		7.5YR 5/2 Brown	7.5YR 6/2 Pinkish Grav	Sand, Low Mica, Very Coarse	Rounded
39	Surface		Ceramic		1		2.08	NO		7.5YR 6/2 Pinkish Brown	7.5YR 5/2 Brown	Sand, Low Mica, Very Coarse	Rounded
40.1	Surface		Ceramic		1		0.35	NO		7.5YR 5/2 Brown	7.5YR 6/4 Light Brown	Sand, Low Mica, Coarse	
40.2	Surface		Ceramic		1		1.17	NO		10R 6/4 Pale Red	10R 6/3 Pale Red	Unknown, Moderate Mica	Different matrix no quartz
41	Surface		Ceramic		1		0.39	NO		7.5YR 5/2 Brown	7.5YR 5/2 Brown	Sand, Low Mica, Medium - Coarse	
42	Surface		Ceramic		1		0.98	NO		7.5YR 6/4 Light Brown	10YR 5/1 Gray	Sand, Moderate Mica, Medioum	Well rounded liquid like
43	Surface		Ceramic		1		2.29	YES		2.5YR 6/4 Light Reddish Brown	2.5YR 6/4 Light Reddish Brown	Sand, High Mica, Coarse - Very	
44	Surface		Ceramic		1		1.42	NO		7.5YR 5/2 brown	7.5YR 5/2 Brown	Sand, High Mica, Coarse	
45	Surface		Shell	cf. Anodonta	1		0.06	NO					
46.1	Surface		Ceramic		1		2.52	NO		10YR 5/4 Weak Red	10R 4/1 Dark Reddish Grav	Sand, Moderate Mica, Caorse	
46.2	Surface		Ceramic		1		0.41	NO		5YR 5/3 Reddish Brown	5YR 5/3 Reddish Brown	Sand, High Mica, Coarse	
47.1	Surface		Ceramic		1		0.43	NO		5YR 5/3 Reddish Brown	5YR 5/3 Reddish Brown	None	Baked clay
48.1	Surface		Ceramic		1		1.13	NO		5YR 6/3 Light Reddish Brown	5YR 5/2 Reddish Grav	Sand, Low Mica, Coarse	
48.2	Surface		Ceramic		1		0.87	NO		5YR 6/3 Light Reddish Brown	5YR 5/2 Reddish Grav	Sand, Moderate Mica, Coarse	
48.3	Surface		Ceramic		1		0.77	NO		10R 5/4 Weak Red	2.5YR 6/6 Light Red	Sand, Low Mica, Medium	Well rounded liquid like
48.4	Surface		Lithic	Manuport	1	Granitic	45.34	NO					
49	Surface		Ceramic		1		0.45	NO		7.5YR 6/2 Pinkish Grav	7.5YR 6/2 Pinkish Grav	Sand, Low Mica, Coarse	
50	Surface		Ceramic		1		0.95	NO		7.5YR 5/4 Brown	7.5YR 6/2 Pinkish Grav	Sand, High Mica, Medium	
51	Surface		Ceramic		1		5.01	NO		7.5YR 5/2 Brown	7.5YR 5/2 Brown	Sand, High Mica, Very Coarse	
52	Surface		Ceramic		1		1.41	NO		7.5YR 6/2 Pinkish Grav	7.5YR 6/2 Pinkish Grav	Sand, Low Mica, Very Coarse	
53.1	Surface		Ceramic		1		1.11	NO		7.5YR 5/4 Brown	7.5YR 5/4 brown	Sand, Low Mica, Very Coarse	
54	Surface		Ceramic		1		1.16	NO		10R 5/4 Weak Red	10R 4/4 Weak Red	Sand, Low Mica, Very Coarse	
55	Surface		Ceramic		1		12.81	NO		10YR 6/4 Light Yellowish Brown	10YR 6/4 Light Yellowish brown	None	Baked clay
56	Surface		Lithic	Flake	1	Granitic	14.72	NO					
57	Surface		Ceramic		1		4.01	NO		7.5YR 5/2 Brown	7.5YR 5/2 Brown	Sand, Moderate Mica, Coarse	Well rounded liquid like
58	Surface		Ceramic		1		3.32	NO		7.5YR 5/2 Brown	7.5YR 5/2 Brown	Sand, Moderate Mica, Coarse	
59.1	Surface		Ceramic		1		0.69	NO		No interior surface present	5YR 5/3 Reddish Brown	Sand, Moderate Mica, Coarse	(labeled groundstone)
59.2	Surface		Lithic	Fragment	1		0.69	NO					
60	Surface		Ceramic		1		1.96	NO		10YR 5/3 Brown	10YR 5/3 brown	Sand, High Mica, Coarse	
61.1	Surface		Ceramic		1		3.69	YES		10YR 4/2 Dark Gravish Brown	10YR 4/3 Brown, dark Brown	Sand, Hion Mica, Coarse	Possible finger indent.
61.2	Surface		Ceramic		1		1.5	NO		10YR 7/2 Light grav	10YR 7/2 Light Gray	Sand, Low Mica, Coarse	
61.3	Surface		Ceramic		1		0.7	YES		10YR 7/2 Light grav	10YR 7/2 Light Gray	Sand, Low Mica, Coarse	

ID No.	Prov.	Depth	Class	Description	CT	Material	Wt.	Curved	Rim Type	Color Int.	Color Ext.	Temper	Comment
61.4	Surface		Ceramic		1		0.56	NO		10YR 5/2 Grayish Brown	10YR 5/2 Grayish Brown	Sand, Moderate Mica, Coarse	
62.1	Surface		Ceramic		1		2.2	NO		10R 5/4 Weak Red	7.5YR 5/2 Brown	Sand, Low Mica, Medium	High density quartz
62.3	Surface		Ceramic		1		0.6	NO		7.5YR 6/2 Pinkish Gray	7.5YR 6/2 Pinkish Gray	Sand, High Mica, Coarse	Ceramic No finished
63	Surface		Lithic		1	Quartz	0.59	NO					
64	Surface		Ceramic		1		6.03	YES	Moderate, Flattened, High	10YR 6/3 Pale Brown	10YR 6/3 Paleo Brown	Low, Mica, Unknown Fine - Medium	
65	Surface		Ceramic		1		4.18	YES		10YR 5/2 Grayish Brown	10YR 5/2	Sand, Low Mica, Very Coarse	
66	Surface		Ceramic		1		7.76	YES		10YR 6/2 Light Brownish Gray	7.5YR 6/4 Light Brown	Sand, Moderate, Coarse	Interior indentations
67.1	Surface		Ceramic		1		13.97	YES		10YR 5/2 Grayish Brown	10YR 5/2 Grayish Brown	Sand, Moderate Mica, Medium	Well rounded liquid like
67.2	Surface		Ceramic		1		3.61	YES		10YR 5/3 Brown	10YR 5/3 Brown	Sand, High Mica, Very Coarse	
67.3	Surface		Ceramic		1		5.51	YES		10YR 5/3 Brown	10YR 5/3 Brown	Sand, Moderate, Mica, Medium	Well rounded liquid like
67.4	Surface		Ceramic		1		2.07	NO		10YR 4/3 Brown, dark Brown	10YR 4/3 Brown, dark Brown	Sand, Low Mica, Coarse	
67.5	Surface		Lithic	Manuport	1	Schist	16.36	NO					
68	Surface		Ceramic		1		3.75	NO		10YR 6/3 Pale Brown	10YR 6/3 Pale Brown	Sand, Low Mica, Medium	
69	Surface		Ceramic		1		0.51	NO		10R 5/6 Red	10YR 5/3 Brown	Sand, Low Mica, Medium	
70.1	Surface		Ceramic		1		1.07	NO		10YR 7/3 Very Pale Brown	5YR 6/4 Light Reddish Brown	Sand, Moderate Mica, Medium	
70.2	Surface		Ceramic		1		1.12	NO		5YR 6/4 Light Reddish Brown	5YR 6/4 Light Reddish Brown	Sand, Low Mica, Medium	
70.3	Surface		Ceramic		1		1.16	YES		5YR 6/4 Light Reddish Brown	5YR 6/4 Light Reddish Brown	Sand, Low Mica, Medium	Well rounded liquid like
70.4	Surface		Ceramic		1		1.02	NO		5YR 5/4 Reddish Brown	5YR 5/4 Reddish Brown	Sand, Low Mica, Medium	Well rounded liquid like
70.5	Surface		Lithic	Manuport	1	Granitic	16.87	NO					
71.1	Surface		Ceramic		1		3.8	YES		5YR 6/4 Light Reddish Brown	10YR 6/3 Pale Brown	Sand, High Mica, Medium	
71.2	Surface		Ceramic		1		0.65	NO		5YR 7/6 Reddish Yellow	5YR 7/6 Reddish Yellow	Sand, Moderate Mica, Fine - Medium	
72	Surface		Ceramic		1		0.89	NO		7.5YR 6/2 Pinkish Gray	7.5YR 6/2 Pinkish Gray	Sand, High Mica, Medium	Well rounded liquid like
73	Surface		Ceramic		1		0.88	NO		7.5YR 4/0 Dark Gray	7.5YR 4/0 Dark Gray	Sand, Low Mica, Coarse	
74	Surface		Ceramic		1		0.49	NO			7.5YR 6/4 Light Brown		Baked clay
75	Surface		Ceramic		1		0	NO					Discarded
76	Surface		Ceramic		1		2.14	YES		10YR 6/2 Light Gray, Gray	10YR 6/2 Light gray, Gray	Sand, High Mica, Coarse	
77.1	Surface		Ceramic		1		3.55	NO		10YR 6/2 Light Gray, Gray	10YR 6/2 Light Gray, Gray	Sand, Moderate Mica, Coarse	
77.2	Surface		Ceramic		1		0.38	NO		7.5YR 6/2 Pinkish Gray	2.5YR 5/4 Reddish Brown	Sand, Moderate Mica, Coarse	
78.1	Surface		Ceramic		1		4.74	YES		2.5YR 6/4 Light Reddish Brown	2.5YR 5/4 Reddish Brown	Sand, Low Mica, Very Coarse	
78.2	Surface		Ceramic		1		3.36	NO		2.5YR 5/4 Reddish Brown	2.5YR 5/4 Reddish Brown	Sand, High Mica, Very Coarse	
79.1	Surface		Ceramic		1		0.79	NO		10YR 6/4 Light Yellowish Brown	10YR 6/4 Light Yellowish Brown	None	Baked clay
79.2	Surface		Ceramic		1		0.8	NO		10YR 6/4 Light Yellowish Brown	10YR 6/4 Light Yellowish Brown	None	Baked clay
79.3	Surface		Ceramic		1		1.4	NO		10YR 6/4 Light Yellowish Brown	10YR 6/4 Light Yellowish Brown	None	Baked clay
79.4	Surface		Ceramic		1		0.17	NO		10YR 6/4 Light Yellowish Brown	10YR 6/4 Light Yellowish Brown	None	Baked clay
79.5	Surface		Ceramic		1		0.44	NO		10YR 6/4 Light Yellowish Brown	10YR 6/4 Light Yellowish Brown	None	Baked clay
79.6	Surface		Ceramic		1		0.45	NO		10YR 6/4 Light Yellowish Brown	10YR 6/4 Light Yellowish Brown	None	Baked clay
79.7	Surface		Ceramic		1		0.39	NO		10YR 6/4 Light Yellowish Brown	10YR 6/4 Light Yellowish Brown	None	Baked clay
79.8	Surface		Ceramic		1		0.15	NO		10YR 6/4 Light Yellowish Brown	10YR 6/4 Light Yellowish Brown	None	Baked clay
79.9	Surface		Ceramic		1		0.19	NO		10YR 6/4 Light Yellowish Brown	10YR 6/4 Light Yellowish Brown	None	Baked clay
80	Surface		Ceramic		1		1.03	NO		5YR 6/3 Reddish Brown	5YR 5/3 Reddish Brown	None	Baked clay
81	Surface		Ceramic		1		1.79	NO		10YR 6/3 Pale Brown	10YR 6/3 Pale Brown	Sand, Low Mica, Very Coarse	
82	Surface		Ceramic		1		3.44	YES	Slight, Flattened,	10YR 7/3 Very Pale Brown	10YR 7/3 Very Pale Brown	Sand, Moderate Mica, Very Coarse	
83	Surface		Ceramic		1		3.36	YES					
84.1	Surface		Ceramic		1		0.77	NO		10R 6/6 Light Red		None	Baked clay

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ID No	Prov	Depth	Class	Description	CT	Material	Wt	Curved	Rim Type	Color Int	Color Ext	Temper	Comment
84.2	Surface		Ceramic		1		1.81	NO		10R 6/6 Light Red		None	Baked clay
85.1	Surface		Ceramic		1		6.31	YES		10YR 6/4 Light Yellowish Brown	10YR 6/4 Light Yellowish Brown	Sand, Moderate Mica, Coarse	Interior Impressions
85.2	Surface		Ceramic		1		3.4	NO		10YR 6/4 Light Yellowish Brown	10YR 6/4 Light Yellowish Brown	Sand, High Mica, Coarse	
85.3	Surface		Ceramic		1		0.62	NO		10YR 5/2 Grayish Brown	10YR 5/2 Grayish brown	Sand, Low Mica, Medium	Possible shell in temper
85.4	Surface		Ceramic		1		0.34	NO		2.5YR 6/4 Light Reddish Brown		None	Baked clay
86	Surface		Ceramic		1		0.69	NO		10YR 6/2 Light Brownish Gray	10YR 6/2 Light Brownish Gray	Sand, Moderate Mica, Coarse	
87	Surface		Ceramic		1		1.25	NO		10YR 6/2 Light Brownish Gray	10YR 6/2 brownish Gray	Sand, Low Mica, Very Coarse	
88	Surface		Lithic	Manuport	1	Granitic	32.21	NO					
89	Surface		Lithic	Manuport	1	Quartz	14.21	NO					
90	Surface		Ceramic		1		0.5	NO		2.5YR 4/4 Reddish brown	2.5YR 4/2 Weak Red	Sand, Low Mica, Coarse	
91.1	Surface		Ceramic		1		0	NO		10YR 6/2 Light Brownish Gray	10YR 4/1 Dark Gray	Sand, Moderate Mica, Medium	
91.2	Surface		Ceramic		1		1.04	NO		10YR 5/3 Brown	10YR 5/1 Gray	Sand, Moderate Mica, Moderate	
92	Surface		Ceramic		1		2.58	YES		7.5YR 6/2 Pinkish Gray	7.5YR 6/4 Light Brown	Sand, Low Mica, Fine - Medium	
93.1	Surface		Ceramic		1		2.92	NO		10YR 7/2 Light Gray	5 YR 5/4 Reddish Brown	Sand, Moderate Mica, Fine	
93.2	Surface		Ceramic		1		14.42	YES		10YR 7/3 Very Pale Brown	10YR 7/3 Very Pale Brown	Sand, Low Mica, Fine	
94	Surface		Ceramic		1		1.44	NO		7.5YR 6/4 Light Brown	10YR 4\5/2 Grayish Brown	Sand, Low Mica, Coarse	
95.1	Surface		Bone	Large	1		0	NO					
95.2	Surface		Ceramic		1		1.17	YES		10YR 6/3 Pale Brown	10YR 4/1 Dark Gray	Sand, Low Mica, Coarse	
95.3	Surface		Ceramic		1		1.29	NO		2.5YR 6/8 Light Reddish Brown		None	Baked clay
95.4	Surface		Ceramic		1		1.13	NO		5YR 6/4 Light reddish Brown	5YR 6/4 Light Reddish Brown	Sand, Moderate Mica, Fine	
95.5	Surface		Ceramic		1		0.3	NO		10YR 6/3 Pale Brown		None	Baked clay
600	Trench 1		Ceramic		1		4.93	NO		5YR 6/3 Light Reddish Brown	10YR 5/3 Brown	Sand, Low Mica, Very Coarse	Collected 4' east of Trench
601	Trench 1		Ceramic		1		0.91	NO		5YR 6/4 Light Reddish Brown	5YR 5/6 Yellowish Red	Sand, Low Mica, Fine	West end of Trench
602	Trench 1		Lithic		1	Chert	1.41	NO					Trench 1, 2' West of East end, 1' below 1970 era coors can
603	Trench 1	4-5' deep	Bone	Unidentifiable	1		0.72	NO					Trench 1, near center
604	Surface		Lithic	discard?	1	Quartz	0.8	NO					Surface, 5 meters north/n.w. of Trench 3
605	Unit 3, 0-10		Ceramic		1		16.14	YES		7.5YR 5/4 Light Brown	7.5YR 6/4 Light Brown	Sand, Moderate Mica, Coarse - Very Coarse	
606	Unit 3	0-10cm	Sample		1	Soil	0	NO					
607	Unit 3	10-20cm	Bone	Unidentifiable	1		0	NO					
608	Unit 3	10-20cm	Sample		1	Charcoal	0.08	NO					
609	Unit 3	10-20cm	Ceramic		1		0	NO					
610	Unit 3	20-30cm	Sample		1	Soil	0	NO					
611	Unit 3	30-40cm	Sample		1	Soil	0	NO					
612	Unit 3	40-50cm	Sample		1	Soil	0	NO					
613	Unit 3	50-60cm	Sample		1	Soil	0	NO					
614	Unit 4	0-10cm	Ceramic		1		0.83	NO		7.5YR 5/4 Brown	10YR 6/2 Light Brownish Gray	Sand, Moderate Mica, Medium - Coarse	
615	Unit 4	0-10cm	Ceramic		1		0.89	NO		10YR 5/4 Yellowish Brown	10YR 6/2 Light Brown Gray	Sand, High Mica, Medium - Coarse	
616	Unit 4	0-10cm	Ceramic		1		0.42	NO		10YR 6/3 Pale Brown	10YR 5/3 Brown	Sand, ModerateMica, Medium - Coarse	

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ID No.	Prov	Depth	Class	Description	CT	Material	Wt	Curved	Rim Type	Color Int	Color Ext	Temper	Comment
617	Unit 4	0-10cm	Ceramic		1		0.45	NO		2.5YR 5/4 Reddish Brown	2.5YR 5/8 Red	Sand, Low Mica, Coarse - Very Coarse	
618	Unit 4	0-10cm	Ceramic		1		0.67	NO		5YR 4/3 Reddish Brown	5YR 4/3 Reddish Brown	Sand, Moderate Mica, Coarse	
619	Unit 4	0-10cm	Ceramic		1		1.11	NO		5YR 5/2 Reddish Gray	5YR 4/3 Reddish Brown	Sand, Moderate Mica, Coarse	
620	Unit 4	0-10cm	Ceramic		1		15.52	NO		10YR 5/4 Yellowish Brown	10YR 5/4 Yellowish brown		Burnt daub or clay
621	Unit 4	0-10cm	Sample		1	Soil	0	NO					
622	Unit 4	10-20cm	Sample		1	Soil	0	NO					
623	Unit 4	20-30cm	Sample		1	Soil	0	NO					
624	Unit 4	30-40cm	Lithic		1	Quartzite	0.41	NO					
625	Unit 4	30-40cm	Sample		1	Soil	0	NO					
626	Unit 4	40-50cm	Sample		1	Soil	0	NO					
627	Unit 4	50-60cm	Sample		1	Soil	0	NO					
628	Road		Ceramic		1		1.32	NO	Flattened	5YR 3/2 Dark Reddish Brown	2.5Y 4/0 Dark Gray	Sand, Low Mica, Coarse	Road concentration
629	Road		Ceramic		1		0.67	NO	Flattened	5YR 4/2 Dark Reddish Gray	10YR 4/2 Dark Grayish Brown	Sand, Low Mica, Coarse	Road concentration
630	Road		Ceramic		1		0.94	NO	Rounded	10YR 5/3 Brown	10YR 5/3 Brown	Sand, Low Mica, Coarse	Road concentration
631	Road		Ceramic		1		0.82	NO	Flare Moderate	7.5YR 6/4 Light Brown	7.5YR 6/2 Pinkish Gray	Sand, Moderate Mica, Coarse	Road concentration
632	Road		Ceramic		1		0.79	NO	Rounded	10YR 4/2 Dark Grayish Brown	5YR 5/3 Reddish Brown	Sand, Low Mica, Coarse	Road concentration
633	Road		Ceramic		1		0.49	NO		7.5YR 6/4 Light Brown	7.5YR 4/0 Dark Gray	Sand, Low Mica, Coarse	Ground edge, circular
634	Road		Ceramic		1		0.29	NO	Flattened	5YR 5/3 Reddish Brown	5YR 5/3 Reddish Brown	Sand, Low Mica, Very Coarse	Road concentration
635	Road		Ceramic		1		0.33	NO	Flattened Slight	2.5YR 6/2 Pale Red	2.5YR 6/2 Pale Red	Sand, Low Mica, Medium	Road concentration
636	Road		Ceramic		1		0.42	NO		2.5YR 4/0 Dark Gray	2.5YR 4/0 Dark Gray	Sand, Low Mica, Medium	Road concentration
637	Road		Ceramic		1		0.22	NO		2.5YR 4/0 Dark Gray	2.5YR 4/0 Dark Gray	Sand, Low Mica, Medium	Road concentration
638	Road		Ceramic		1		0.93	NO		7.5YR 6/2 Pinkish Gray	2.5YR 5/4 Reddish Brown	Sand, Moderate Mica, Coarse	Road concentration
639	Road		Ceramic		1		0.54	NO		7.5YR 6/2 Pinkish Gray	2.5YR 5/4 Reddish Brown	Sand, Low Mica, Coarse	Road concentration
640	Road		Ceramic		1		3.39	YES		5YR 4/4 reddish Brown	7.5YR 4/2 Brown, Dark Brown	Sand, High Mica, Coarse	Road concentration
641	Road		Ceramic		1		0.87	NO		5YR 4/4 Reddish Brown	7.5YR 4/2 Brown, Dark Brown	Sand, Low Mica, Very Coarse	Road concentration
642	Road		Ceramic		1		0.96	NO		5YR 4/4 Reddish Brown	7.5YR 4/2 Brown, Dark Brown	Sand, Moderate Mica, Coarse - Very	Road concentration
643	Road		Ceramic		1		1.09	NO		5YR 4/4 Reddish Brown	7.5YR 4/2 Brown, Dark Brown	Sand, Moderate Mica, Coarse	Road concentration
644	Road		Ceramic		1		0.51	NO		5YR 4/4 Reddish Brown	7.5 YR 4/2 Brown, Dark Brown	Sand, Moderate Mica, Coarse	Road concentration
645	Road		Ceramic		1		1.49	NO		7.5YR 4/2 Brown, Dark Brown	7.5YR 4/2 Brown, Dark Brown	Sand, Low Mica, Coarse	Road concentration
646	Road		Ceramic		1		0.7	NO		7.5YR 4/2 Brown, Dark Brown	7.5YR 4/2 Brown, Dark Brown	Sand, Moderate Mica, Very Coarse	Road concentration
647	Road		Ceramic		1		0.74	NO		7.5YR 4/2 Brown, Dark Brown	7.5YR 4/2 Brown, Dark Brown	Sand, Low Mica, Very Coarse	Road concentration
648	Road		Ceramic		1		0.66	NO		7.5YR 4/2 Brown, Dark Brown	7.5YR 4/2 Brown, Dark Brown	Sand, Moderate Mica, Coarse	Road concentration
649	Road		Ceramic		1		0.57	NO		7.5YR 4/2 Brown, Dark Brown	7.5YR 4/2 Brown, Dark Brown	Sand, Low Mica, Coarse	Road concentration
650	Road		Ceramic		1		0.45	NO		7.5YR 4/2 Brown, Dark Brown	7.5YR 4/2 Brown, Dark Brown	Sand, Low Mica, Very Coarse	Road concentration
651	Road		Ceramic		1		1.42	NO		2.5YR 4/0 Dark Gray	7.5YR 4/2 Brown, Dark Brown	Sand, High Mica, Coarse	Road concentration
652	Road		Ceramic		1		0.62	NO		2.5YR 4/0 Dark Gray	7.5YR 4/2 Brown, Dark Brown	Sand, Low Mica, Coarse	Road concentration
653	Road		Ceramic		1		0.43	NO		10YR 6/2 Light Brownish Gray	7.5YR 4/2 Brown, Dark Brown	Sand, Low Mica, Fine - Medium	Road concentration
654	Road		Ceramic		1		0.56	NO		7.5YR 4/2 Brown, Dark Brown	7.5YR 4/2 Brown, Dark Brown	Sand, Low Mica, Coarse	Road concentration
655	Road		Ceramic		1		0.65	NO		7.5YR 6/4 Light Brown	7.5YR 6/2 Pinkish Gray	Sand, Low Mica, Coarse	Road concentration
656	Road		Ceramic		1		0.5	NO		10YR 5/1 Gray	7.5YR 6/2 Pinkish Gray	Sand, Low Mica, Coarse	Road concentration
657	Road		Ceramic		108		87.5	NO					Variety of sizes and col 108 fragments, 110.87 weight of 137 total fragments in road

ID No.	Prov.	Depth	Class	Description	CI	Material	Wgt	Curved	Rim Type	Color Int	Color Ext	Temper	Comment
657	1	Road	Surface	Lithic	1	Quartzite	0.54	NO					
658	1	Road	Surface	Lithic	1	Quartzite	0.45	NO					
659	1	Road	Surface	Lithic	1	Scoria	2.36	NO					Road Concentration
660	1	Road	Surface	Lithic	1	Scoria	0.78	NO					Road Concentration
661	1	Road	Surface	Lithic	1	Scoria	0.49	NO					Road Concentration
662	1	Road	Surface	Lithic	1	Scoria	0.41	NO					Road Concentration
663	1	Unit 9	0-10cm	Ceramic	1		25.51	YES		10YR 6/3 Pale Brown	10YR 6/3 Pale Brown	Sand, High Mica, Fine - Medium	
664	1	Unit 9	0-10cm	Sample	Soil becomes	1	Soil	0	NO				
665	1	Unit 9	10-20cm	Sample	Soil becomes	1	Soil	0	NO				
666	1	Unit 9	20-30cm	Sample	Soil becomes	1	Soil	0	NO				
667	1	Unit 9	30-40cm	Sample	Soil becomes	1	Soil	0	NO				
668	1	Unit 9	40-50cm	Sample	Soil becomes	1	Soil	0	NO				
669	1	Unit 10	0-10cm	Ceramic		1		1.3	NO	7.5YR 3/0 Very Dark Gray	10YR 6/2 Light Brownish Gray	Sand, Low Mica, Very Fine - Fine	
670	1	Unit 10	0-10cm	Ceramic		1		0.95	YES	5YR 6/4 Light Reddish Brown	5YR 6/4 Light Reddish Brown	None	Baked clay
671	1	Unit 10	0-10cm	Sample	Soil becomes	1	Soil	0	NO				
672	1	Unit 10	10-20cm	Ceramic		1		0.68	NO	10YR 5/1 Gray	10YR 5/1 Gray	Sand, Moderate Mica, Fine	
673	1	Unit 10	10-20cm	Sample	Soil becomes	1	Soil	0	NO				
674	1	Unit 10	20-30cm	Sample	Soil becomes	1	Soil	0	NO				
675	1	Unit 10	30-40cm	Sample	Soil becomes	1	Soil	0	NO				
676	1	Unit 10	40-50cm	Sample	Soil becomes	1	Soil	0	NO				

AUTHOR:	Joan C. Brown
DATE:	April 1998
TITLE:	A Cultural Resources Reconnaissance For The Garden Of Champions Tennis Facility, Located Near Indian Wells, Riverside County, California
SUBMITTED BY:	RMW Paleo Associates, Incorporated 23392 Madero, Suite L Mission Viejo, California 92691 (714) 770-8042 FAX (714) 458-9058
SUBMITTED TO:	Robert Bein, William Frost and Associates 14725 Alton Parkway Post Office Box 57057 Irvine, California 92618-2069
CONTRACT NUMBER:	RMW Project Number 98-1204
MAP:	USGS La Quinta, California 7.5 Minute Quadrangle 1959, Photorevised 1980
ACREAGE:	Approximately 150 acres
KEYWORDS:	Indian Wells, California, Township 5 South, Ranges 6 and 7 East, San Bernardino Base and Meridian; CA-RIV-3005, CA-RIV-3008, CA-RIV-5876

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Appendix A: Personnel Qualifications

CONFIDENTIAL APPENDICES (Bound Separately)

Appendix B: Site Recording Forms

Appendix C: Bibliography of Previous Cultural Studies Within One Mile of the Project Area

MANAGEMENT SUMMARY/ABSTRACT

Purpose and scope: Robert Bein, William Frost and Associates is preparing an Environmental Impact Report (EIR) for the Garden of Champions Tennis Facility project area. The purpose of the current study is to perform a cultural resources reconnaissance of the project area, to record any sites that are found and to present those findings and recommendations in this report. The study was undertaken under the provisions of the California Environmental Quality Act (CEQA) (Sections 21081.6 and 21083.2 of the Statutes and Appendix K of the Guideline) (Governor's Office of Planning and Research 1992) and the guidelines for the California Register of Historic Resources published by the Office of Historic Preservation (1995).

Dates of investigation: Field reconnaissance for the project took place on 13, 28, and 29 March 1998. Field recording of sites took place on 17 and 18 April 1998.

Findings summary: Two prehistoric archaeological sites previously recorded within the project boundaries were relocated. A prehistoric archaeological site previously recorded on an adjacent parcel was found to extend into the current project area. Fragments of prehistoric ceramics were found scattered throughout the southern portion of the project area.

Investigation constraints: Approximately 25% of the ground surface was covered by vegetation. A majority of the artifactual material was observed in blow-outs within sand dunes. It is expected that additional cultural remains are obscured by the sand dunes that are prevalent throughout the project area.

Recommendations summary: If avoidance of the cultural deposits is not possible, it is recommended that a Phase II test excavation be undertaken to determine the presence and integrity of possible subsurface deposits.

Disposition of data: This report will be filed with the Eastern Information Center, University of California, Riverside; Robert Bein, William Frost and Associates; and RMW Paleo Associates, Inc. Field notes and records are on file at the office of RMW Paleo Associates, Inc.

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CONTRACTING INFORMATION/INTRODUCTION

Undertaking: RMW Paleo Associates, Inc. was retained by Robert Bein, William Frost and Associates to provide a cultural resources assessment of the 150 acre project area currently scheduled to be developed for a tennis facility, a golf driving range, and commercial facilities. The area north of Miles Avenue will be developed as a tennis facility, including indoor and outdoor tennis courts, three stadiums, a T.V. amphitheater, and parking: The northeastern 40 acre parcel, abutting Washington Street, will consist of commercial development; The 50+ acre parcel of land south of Miles Avenue will be developed as a golf driving range and parking facilities.

The Cultural Resources study consisted of a surface reconnaissance of the project area, the preparation of supplemental site recording forms for the archaeological sites, and preparation of this report with recommendations. The study was undertaken under the provisions of the California Environmental Quality Act (CEQA) (Sections 21081.6 and 21083.2 of the Statutes and Appendix K of the Guideline) (Governor's Office of Planning and Research 1992), and the guidelines for the California Register of Historic Resources published by the Office of Historic Preservation (1995). The report follows the format for *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format* (California Department of Parks and Recreation 1989).

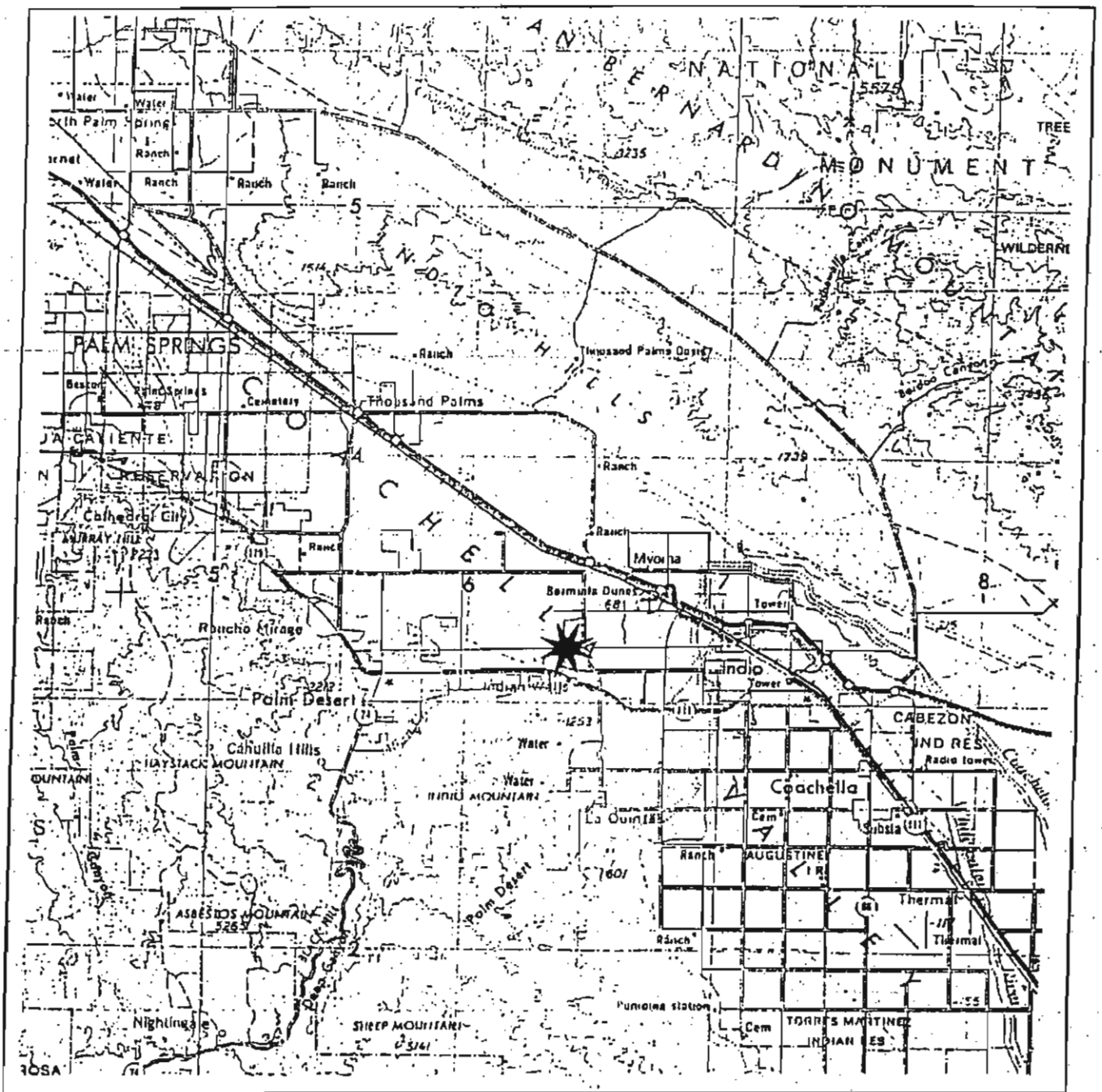
The project consists of approximately 150 acres located south of Fred Waring Drive, north of the Whitewater River Channel, east of Warner Trail, and west of Washington Street, near the community of Indian Wells, Riverside County, California. Figures 1 and 2 show the project location.

Personnel: Joan C. Brown was Principal Investigator for the cultural study and conducted field work, research, and report writing. Kenneth M. Becker was involved in the research and field work. Blanche A. Schmitz assisted with the field work. Resumes for the project personnel are contained in Appendix A.

NATURAL SETTING

The project area is located in the Coachella Valley, Riverside County, California. The Coachella Valley is in the northern portion of the Salton Trough and is separated from the Imperial Valley by the present day Salton Sea. The valley, which is considered part of the Colorado Desert, is bordered on the north and east by the Little San Bernardino, Cottonwood, and Orocopia Mountains; and on the west by the Santa Rosa, San Jacinto, and San Bernardino Mountains. The Santa Rosa and San Jacinto Mountains are the northernmost extension of the Peninsular Range. The mountains reach elevations from 6,000 to over 10,000 feet and have a pronounced rain shadow effect in the valley (Wilke 1978).

The climate of Coachella Valley is characterized by low humidity, very low precipitation, hot summers and mild winters. High summer temperatures can reach 125 degrees Fahrenheit and



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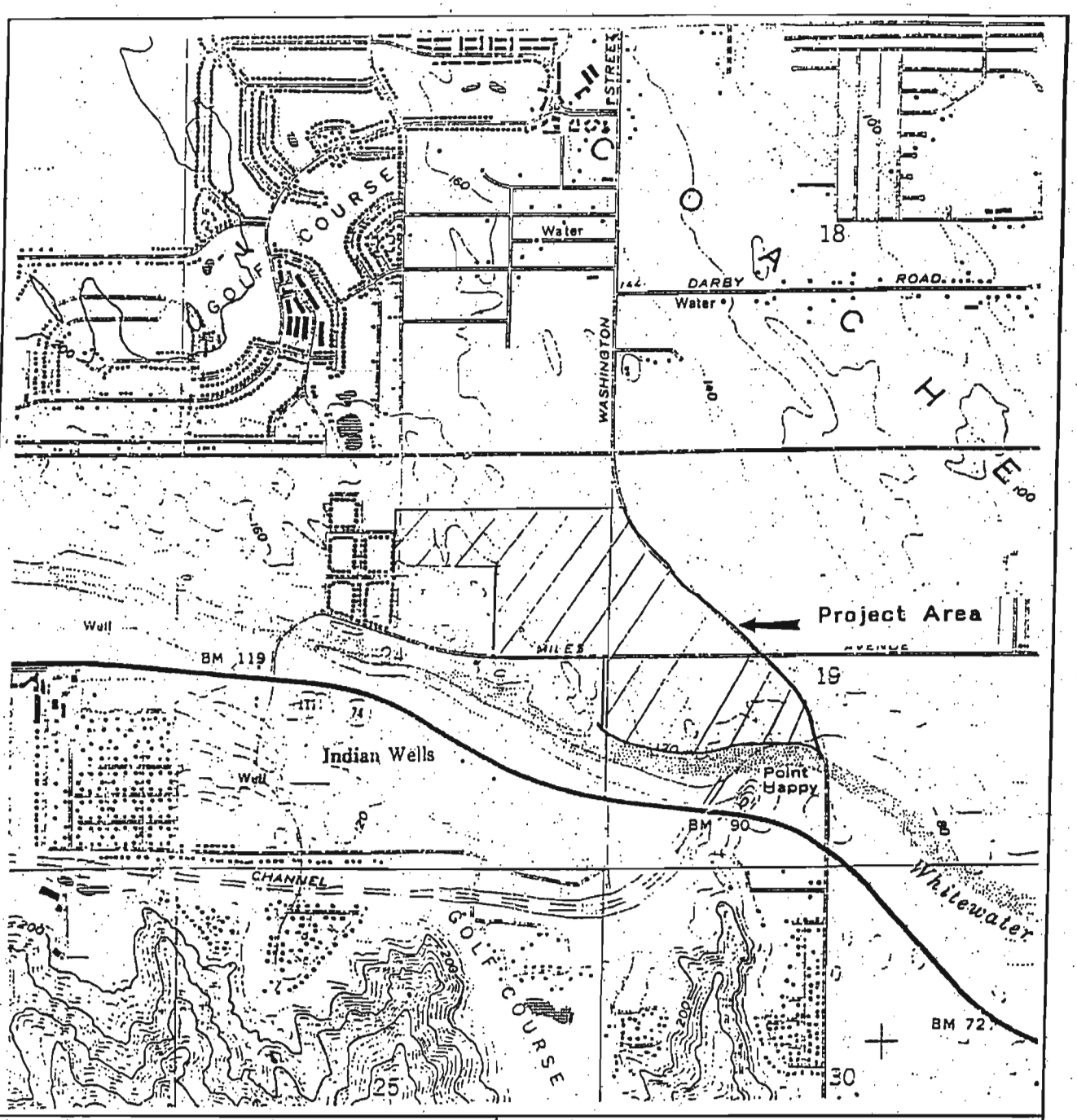
Steatite Bird Effigy, Recovered by RMW Paleo, 1993

Figure 1: Project Vicinity Map

Portion of USGS 1 by 2 degree Santa Ana California Quadrangle 1959, Revised 1979

Scale 1:250,000



Steatite Bird Effigy, Recovered by RMW Paleo, 1993

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Figure 2: Index Map

Portion of USGS La Quinta California 7.5 Minute Series Quadrangel, 1959 Photorevised 1980. San Bernardino Base and Meridian

Scale 1:24,000

N

frost can occur in December and January. Winter precipitation from Pacific storms tends to fall on the western slopes of the Peninsular Range as rain and snow, but very little precipitation reaches the eastern slopes or the floor of the valley. Most precipitation occurs in the winter with an average annual rainfall of 3.2 inches recorded at Indio. Occasional summer tropical storms move north into the valley from the Gulf of Mexico, producing flash flooding (Wilke 1978).

The project area is located at an elevation of 120 feet to 160 feet above sea level within the Sonoran Desert Scrub plant community. Among those plants observed during the survey that would have been used by the prehistoric inhabitants were Mesquite (*Prosopis juliflora*), Creosote Bush (*Larrea divaricata*), Saltbush (*Atriplex californica*), and Desert Sage (*Salvia Dorrii*). Other plants found in the Sonoran Desert Scrub plant community that would have been utilized are Cholla (*Opuntia spp.*), Barrel Cactus (*Echinocactus acanthodes*), Saltbush (*Atriplex californica*), and Agave (*Agave spp.*).

Plants were used prehistorically for drinks, medicines, soap, dyes, construction materials, fuel, and tools; and plant fibers were used for thread, nets, and basketry (Bean 1972). Mesquite was among the most important of the desert plants. The mesquite blossoms, which are abundant in June, were roasted and could be dried; the pods (available in July and August) were either eaten fresh or ground into flour. Additionally, mesquite provided material for construction (Bean 1972:38). Creosote was used for treating ailments (Balls 1962:91). The roots of the saltbush were used as soap and the seeds were parched and ground for use in bread. The seeds of many plants, such as chia, cat's claw, palo verde, desert willow and ironwood, were used as food. Sage was mixed with tobacco leaves for smoking (Balls 1962).

Numerous varieties of cactus, such as the cholla, were abundant and provided leaves, stalks, fruit and seeds for food (Balls 1962:25; Bean 1972:40-43). The indigo bush, (when steeped in water) created a yellow dye used for coloring deer skins and dyeing fibers for use in creating patterns in baskets (Balls 1962:77).

Among the animals observed or expected in the project area are various lizards, snakes, birds, rabbits, squirrels, kangaroo rats, mice, skunks and coyotes. Lizards, particularly the chuckwalla, were eaten. Rattlesnakes were caught by men experienced in handling snakes and were either boiled or roasted and used as food. Birds were not only used as a food resource but their bones were used as tools and their feathers for ceremonial regalia (Brown 1989).

Rabbits provided the largest amount of animal food and their fur was used for blankets and clothing. Rabbits were killed with bows and arrows or throwing sticks, netted, or caught in snares. Most of the small animals were entirely consumed including the bones which were crushed and eaten in soups and mushes. Coyotes were probably not eaten, but their skins were used to make ceremonial objects (Bean 1972:59-63).

CULTURAL SETTING

Archaeological investigations in the Colorado desert area have been infrequent and many gaps

exist in our understanding of the area's prehistory. Humans have been present in the New World for at least 12,000 years B.P. (before present). The earliest portion of the archaeological sequence is identified as the Paleo-Indian Period (Chartkoff and Chartkoff 1984). There are no known Paleo-Indian sites in the Coachella Valley. The chronological framework frequently applied to the local area was established primarily on data collected in adjacent desert areas of California. Four temporal periods are generally accepted for the desert area: Pinto Period (5,000 - 2,000 B.C.), Gypsum Period (2,000 B.C.- A.D. 500), Saratoga Springs Period (A.D. 500-1200), and Protohistoric or Late Prehistoric Period (A.D. 1,200-Historic) (Warren 1984:410-430).

Pinto Period sites are few in number and are usually identified by a particular type of projectile point. Pinto sites are usually found along dry water courses and lakes, indicating the sites were in use when wetter conditions prevailed. Pinto sites are usually limited to the surface and are very difficult to date. Consequently, there is some confusion regarding the true range of artifact types that can be associated with Pinto Period sites.

The Gypsum Period is characterized by the presence of Humbolt Concave Base, Gypsum Cave, Elko Eared, or Elko Corner Notched projectile points. Milling equipment is found at Gypsum age sites, and becomes more common as the period progresses. The mortar and pestle were introduced during the latter part of the period. In general, the artifact assemblage reveals an increasing reliance on vegetable resources with less emphasis on hunting.

The Saratoga Springs period was a period of regional development. Milling equipment is common and pottery is introduced from the Colorado River area.

The majority of the sites excavated in the Coachella Valley area date to the Late Prehistoric or Ethnohistoric Periods. Archaeological research has been conducted along the old shoreline of Lake Cahuilla in an attempt to study human adaptation to the lake environment. The first thorough analysis was based on data from four sites located along the northwest lake shore of the now desiccated lake. Desert Side-notched and Cottonwood Triangular projectile points were common in the sites. Colorado Buff Ware and Tizon Brown Ware were present in the ceramic assemblage. Quantities of shell beads made from both Gulf of California and Pacific coast shell species are present. Analysis of the material indicated dates from about A. D. 800 to A. D. 1500 (Wilke 1978).

Analysis of human coprolites and floral and faunal remains indicated that shellfish, fish, aquatic birds, freshwater marsh plants, and animals and plants from both the adjacent lowlands and uplands contributed to the subsistence base. Furthermore, the analysis showed that some of the sites were occupied on a year around basis, while other sites were occupied on a seasonal basis, apparently when resources near the site were at a maximum (Wilke 1978).

These data, combined with evidence of a stable shoreline for a duration of several hundred years, led Wilke to postulate a large sedentary population living in villages along the northwest shore of the lake, relying heavily on lacustral resources, with lesser dependance on resources in outlying areas. Subsequent studies along the east and southwest shores contradict Wilke's model, and

indicate that shoreline occupation there was limited to only short term use on a seasonal basis (Pallette 1993; Wilke 1978).

After periodic episodes of infilling and recession, Lake Cahuilla is believed to have receded for the last time around A.D. 1580. Populations followed the receding shoreline while continuing to exploit the dwindling resources. Archaeological excavations of fish traps, nearby associated houses and middens situated at the -95 feet elevation level produced an abundance of fish bone. Fish bone is also reported from archaeological deposits at -103 feet and -120 feet near Thermal Airport (Wilke 1978:110). Finally, the water became too saline to support the usual flora and fauna, and human populations are believed to have abandoned the desert floor.

The final desiccation of the lake certainly had an impact on the populations dependent on the lake. However, exactly what occurred at this time is not certain. If the typical settlement pattern prior to the final recession was one of sedentary villages and year round dependance on the lacustral resources, the impact would have been tremendous. As resources in the immediate vicinity were quickly depleted, populations would have moved westward into the Peninsular Ranges, displacing, at least temporarily, other groups who collected in that area. If the alternative model of seasonal occupation of the lake shore is correct, then the effect of the final recession would have been less pronounced, with populations merely shifting subsistence emphasis to other areas already exploited.

Evidence exists of a partial infilling of Lake Cahuilla to sea level sometime between A.D. 1158 and A.D. 1710. The possibility of partial infilling of the lake after its final recession in A.D. 1580 is further supported by the oral history of the Cahuilla Indians:

> When questioned about the shore-line and water marks of the ancient lake, the chief gave an account of a tradition they have of a *great water (agua grande)* which covered the whole valley and was filled with fine fish. There was also plenty of geese and ducks. Their fathers lived in the mountains and used to come down to the lake to fish and hunt. The water gradually subsided 'poco,' 'poco,' (little by little), and their villages were moved down from the mountains, into the valley it had left. *They also said that the waters once returned very suddenly and overwhelmed many of their people and drove the rest back to the mountains* [emphasis added] (Blake 1856:98 in Wilke and Lawton 1975:11-12).

The people occupying the current study area at the time of the arrival of the Spanish are known as the Cahuilla. It is believed the Cahuilla first traveled from the north to southern California about 2,000 to 3,000 years ago (Bean and Bourgeault 1989:13). They occupied a large geographic area extending from present day Riverside to the central part of the Salton Sea with a population as high as 6,000 to 10,000 individuals (Bean 1978). Two thirds of the Cahuilla territory was in the low desert (Bean and Bourgeault 1989).

The Cahuilla structure was based on political units called sibs. Each sib had a defined territory

with various sibs uniting for protection and ceremonial purposes. Each sib had villages that were occupied year around. Houses were commonly grouped around a spring in a two to three square mile area. Villages were situated to take maximum advantage of basic resources such as climate, food, water, and materials. Individuals or groups would leave the villages for hunting, gathering, visiting, or trading activities (Bean 1972).

The first recorded contact of the Cahuilla with European culture took place when the Anza Expedition, enroute from Arizona to Mission San Gabriel, passed through Los Coyotes Canyon in 1776. By 1819, several mission asistencias were established near Cahuilla territory, and many of the Cahuilla began to learn European agriculture and cattle raising techniques (Bean 1972:17). A mail route was established in 1821 from Tucson through the San Gorgonio Pass and the Coachella Valley to coastal southern California. Indian runners who carried the mail followed the route known as the "Cocomaricopa Trail" (Wilke and Lawton 1975:22).

Jose Romero, looking for a new route to the Colorado River, made two expeditions to the Cahuilla area, the first in 1823 and the second in 1826. By that time, some of the Cahuilla could speak Spanish, and Mission San Gabriel was running cattle as far east as Palm Springs (Bean 1972:17). Jose Maria Estudillo, who accompanied Don Jose Romero in the winter of 1823-24, described in his diary the patches of corn, pumpkins, melons and watermelons he saw growing. This is the first known reference to Cahuilla agriculture (Wilke and Lawton 1975:23).

When David Prescott Barrows began his studies of the Cahuilla in 1891, the population had declined greatly. In 1770, there had been approximately 2,500 Cahuilla and by 1910 only 800 remained (Sleight 1971:6). A smallpox epidemic was responsible for the death of many of the people in 1862 and 1863 (Bean and Bourgeault 1989). Barrows described the Coachella Valley as being dotted with wells, many of them marking sites of homes long ago abandoned (1967:26-27). For generations the Cahuilla had been well diggers. Where the water table was from 10 to 30 feet below the surface, the Indians dug deep walk-in wells in the sand. The wells were great pits with terraced sidewalls leading down to a narrow hole at the bottom where the sand was banked around the well, creating small lakelets (Barrows 1967, Bean 1972). The wells were considered significant for survival in the desert and were typically surrounded by thick clumps of mesquite or other plants.

The Cahuilla houses were usually dome shaped, occasionally rectangular, the sides thatched with palm fronds, tule or whatever plant was available. The roofs were supported by forked branches with holes left open for the smoke to escape (Barrows 1967, Bean 1972). Barrows claimed that the most beautiful houses were those thatched with palm. The furnishings were simple. A metate or mortar could be seen on one side of the doorway, on the other side a water jar. The center of the room contained a hearth with cooking pots. Bunks constructed of poles were found along the wall, sometimes a bed consisting only of rawhide and a blanket was placed on the floor (Barrows 1967).

Among the Cahuilla, hunting was the activity of men, who also performed the skinning and butchering. Women were responsible for the gathering of vegetable foods and cooking. The diet of the Cahuilla was more diversified than most North American Indians, with over 300 plants

being used. The most important of the seed foods was chia. Food supplies were kept in earthen ollas or in grass baskets (Barrows 1967).

RESEARCH METHODS/RESULTS

A record search was undertaken at the Eastern Information Center at the University of California, Riverside to determine if prehistoric or historic sites had been previously recorded within or near the project area. Information regarding archaeological sites and studies within the project area and information for archaeological studies within a one mile radius of the project area were compiled. In addition to the Archaeological Inventory records, a check was made of the files of historic maps, the National Register of Historic Places Index, the Office of Historic Preservation Archaeological Determinations of Eligibility Listings (through January 14, 1997), and the Office of Historic Preservation Directory of Properties in the Historic Property Data File.
Reports housed at the Eastern Information Center showed that two previous cultural resources studies had been conducted on portions of the current project area (Sutton 1985a) (McKenna 1990). The 1985 study included the current study area plus adjacent parcels. Two prehistoric archaeological sites, CA-RIV-3005 and CA-RIV-3008, were recorded within the current project boundaries as a result of that study (Sutton 1985a, 1985c and 1985e). The artifactual remains of CA-RIV-3005 were observed in a series of blowouts located within small sand dunes. The site area, 300 meters by 250 meter in size, contained a mano, Brownware and Buffware ceramics, obsidian, jasper, basalt, chert, and quartz debitage, a jasper Desert Side-notched point, and animal and fish bone fragments. CA-RIV-3008 consisted of "at least 12 Brown ware sherds."

The 1990 study consisted of a portion of the current project and included the area located north of Miles Road. No cultural resources were observed during that survey, however, McKenna stated that a concentration of trees could be related to an early homesteading of the property. (McKenna (1990). An additional 78 cultural resource reports have been written for the area within a one mile radius of the project. Approximately 50% of the area within the one mile radius has been examined. A bibliography of those reports is contained in Appendix C.

Twenty nine archaeological sites are recorded within a one mile radius of the project and are listed in Table One.

A 1856 U.S. General Land Office plat map of Township 5S, Range 6E, surveyed by Henry Washington and John La Croze shows an Indian Ranchero in the northwestern quarter of Section 24 and a road apparently following along the north bank of the Whitewater River (Brock 1997, McKenna 1990). The same map also indicates the location of "Palma Seco Well" south of the current project area. Later maps, including the 1904 Indio 30' Quadrangle, the 1941 USGS Toro Peak 15' Quadrangle, and the 1959 USGS La Quinta 7.5' Quadrangle do not indicate any activity or structures within the project area.

Point Happy, located south of the river and the project area, is listed in the Historic Resources Inventory. The 134 acre Point Happy Ranch was purchased in 1922 by Chauncy and Marie Clarke who grew dates and raised Arabian horses (Carpenter 1982).

TABLE ONE: Archaeological Sites Recorded Within One Mile Of The Project Area

SITE#	DESCRIPTION	SOURCE AND DATE
CA-RIV-64	Camp Site: Cremations, magnesite and shell beads, potsherds, bone awl, manos, metates, clay objects, shaft smoothers, pendants, bone tools, clay pipes and olla. "Water hole at one time cut into lower level with steps leading to it." Partially destroyed in dredging storm channel.	Smith (1954) and Ruth Shepard (1963)
Supplement	Historic trash dumps, possible historic structures, potsherds, fire-affected rock, fired daub. Disturbed by Highway 111 and dumping	Hogan (1994)
CA-RIV-150	Sherds, bone, fire broken rock, shell and stone beads, arrow points, flakes, part of a clay pipe, gaming disks, metate, and manos.	(1933-35) recorded in files by Dorothy Cowper
Supplement	Village Site: Cremation area, pottery, bone, shell, points, hammerstones, metates, manos, pestles, steatite tube, stone beads, throwing stick, cooking and polishing stones.	Eberhart (1951)
Supplement	Shell, chips, olivella disk beads.	Cowper (1967)
Supplement	Approximately 200' by 1,500' of pottery, plus flakes, shell, and bone.	Corbin (1974)
Supplement	"Much pottery, flakes, cremation area, about 40 acres; Mano frags, metate, shell, bone, pottery, rough clay, pestle frag., shell beads.	Lipp and Swenson (1977)
CA-RIV-1530	Deflating midden: Groundstone, ceramics, shell, bone, flakes, and charcoal.	Baldwin (1978)
Supplement	Hearth, bone, ceramics, milling stones, fire-affected rock.	Sutton (1985b)
CA-RIV-1754	About 40 pottery sherds.	Breece and Breece (1979)
Supplement	Secondary deposit due to channelization of the Whitewater River and construction of the levee.	McCarthy (1984a)
CA-RIV-2195	Light scatter on hard pan: 15 fire cracked rocks, 20 potsherds, and 1 shell frag.	Bowles (1981)
Supplement.	Could not relocate.	McCarthy (1989a)

SITE#	DESCRIPTION	SOURCE AND DATE
CA-RIV-2197	Numerous ceramic fragments, bone midden and charcoal.	Fenenga (1972)
CA-RIV-2200	Sparse scatter with three concentrations: Hearth, pottery sherds, mano, historic glass, shell.	Salpas (1980a)
Supplement	Mano frag., numerous pottery, burnt bone. Site disturbed by dumping and channelizing of river.	McCarthy (1988 and 1989b)
Supplement	Sparse scatter with several concentrations: Mostly potsherds, mano, hammerstone, burnt rodent bone, three frags of amethyst glass.	Hogan, Saubel, and Broomhall (1992)
CA-RIV-2934	Artifact scatter: Possible fired clay floors, mano frags, metate frag., flakes (some obsidian).	McCarthy (1984b)
CA-RIV-2935	Artifact scatter: Possible clay floor remains, Desert Side-notched point: Disturbed due to ORV use and channelizing of river.	McCarthy (1984c)
Supplement	Surface and buried deposit: Possible house construction (burned clay), ceramics, bone, lithics.	Toenjes and Toenjes (1984)
CA-RIV-2936	Extensive area in sand dunes: Possible clay house floors, pottery, bone, bone awl, manos, metate frag. exposed in blow-outs.	McCarthy (1984d)
Supplement	Extensive artifact scatter: Hearths, fire-affected rocks, fired clay daub, burnt bone.	McCarthy (1989c)
Supplement	Extensive scatters of pottery, fire-affected rock, debitage, and faunal remains. Western portion tested in 1990 by Yohe.	Everson (1992a)
Supplement	Scatter of pottery sherds, animal bone, shell frags, fire-affected rock.	Reeves (1996)
CA-RIV-3007	Cremation, shell ornaments, bead, awl, and charcoal. Badly disturbed by pothunting.	Sutton (1985d)
CA-RIV-3659 (CA-RIV-150A)	Burned clay, fire-affected rocks, pottery, lithic flakes in deflated depressions.	Toenjes (1989)

SITE#	DESCRIPTION	SOURCE AND DATE
CA-RIV-3679H Supplement Supplement	Three concentrations of pottery, flakes, cores. Possible hearths, artifact scatter, pottery sherds, burnt bone, fired daub. Majority of site disturbed. Potsherds, possible hearths. Historic trash dump one meter deep.	Salpas (1980b) McCarthy (1989d) Hogan and Everson (1992)
CA-RIV-3680 Supplement	Scatter of pottery, daub, and fire affected rock Scatter of pottery, daub, and fire affected rock. Site tested; destroyed by development.	McCarthy (1989e) Everson (1992b)
CA-RIV-3681 Supplement	Pottery sherds, clay daub, mano frag., burnt bone, and hearths. Site damaged prior to testing, destroyed by development.	McCarthy (1989f) Everson (1992c)
CA-RIV-3682 Supplement	Several fire hearths, pottery, clay daub, burnt bone. Testing yielded substantial subsurface deposit to three meters: Human coprolites, pottery, burnt bone, debitage, bifacial artifacts.	McCarthy (1989g) Everson (1992d)
CA-RIV-3683 Supplement	Artifact scatter: Pottery and fire-affected rock. Site disturbed by channelizing river and highway construction. Potsherds, debitage, ground stone frags, core and faunal remains.	McCarthy (1989h) McCarthy, Arkush and Hogan (1992)
CA-RIV-3866	Scattered and concentrated midden in deflated and mounded deposits: Possible burned and collapsed structure, clay daub, fire-affected rock, bone, shell, pottery, and biface frag.	Toenjes (1990)
CA-RIV-4076	Scatter of pottery sherds.	Swope and Thaler (1990)
CA-RIV-4107	Approximately 1,400 potsherds.	Archaeological Associates (1991a)
CA-RIV-4108	Six potsherds.	Archaeological Associates (1991b)
CA-RIV-4745	Scattered pottery and shell.	Everson (1992e)
CA-RIV-4756-H	Water-valve tower, old piping, and fence.	Everson (1992f)

SITE#	DESCRIPTION	SOURCE AND DATE
CA-RIV-5840	Camp emerging from dune: pottery sherds, pestle frag., debitage, possible burnt clay structure floor.	Mouriquand (1996a)
CA-RIV-5841	Scatter of pottery sherds and fire-affected rock.	Mouriquand (1996b)
CA-RIV-5842	Hearth, pottery sherds, and mano.	Mouriquand (1996c)
CA-RIV-5843	Pottery sherd scatter.	Mouriquand (1996d)
CA-RIV-5844	Pottery sherd scatter.	Mouriquand (1996e)
CA-RIV-5876	Pottery sherds, chipped stone, faunal, and fire affected rock.	Brock (1997)

FIELD METHODS

The surface examination of the project area was accomplished by walking parallel transects spaced at intervals from five meters to twenty meters apart. Navigation was accomplished by the use of magnetic compass and the developers 1:200 scale map. Transects were oriented north/south during most of the reconnaissance. The northwest section of the parcel was examined while walking transects oriented east/west. To assure accuracy in navigation, the beginning and end of each transect was marked with a wooden stake which was then moved to reflect the new transect. The location of artifacts were recorded on the 1:200 scale map as they were observed in the field.

All visible artifacts were marked with pin flags and site mapping of the artifactual material was accomplished with a tripod mounted Brunton compass and fiberglass tape. At CA-RIV-3005 stakes were placed at 25 meter intervals extending in a line south from the site datum. A line of stakes, set at 25 meter intervals, extended west from the 50 meter point of the southern line and a third set of stakes, also set 25 meters apart, extended east from the 75 meter point of the southern line. Distance and azimuth of artifacts was then recorded from the nearest stake. The same procedure was used at CA-RIV-5876 with a line of stakes set at 25 meter intervals extending north from the site datum.

FINDINGS

During this reconnaissance, both CA-RIV-3005 and CA-RIV-3008 were relocated and re-examined. Ceramic fragments, lithic debitage, and milling stone fragments were observed within the recorded location of CA-RIV-3005. CA-RIV-3008 was found to consist of eight ceramic fragments. In addition to the previously recorded sites, it was found that CA-RIV-5876, a

prehistoric archaeological site recorded on an adjacent parcel, extends into the current project boundaries. The artifactual material observed in that area consisted primarily of ceramic sherds and quartzite debitage. Both Buffware and Brownware ceramic sherds were observed scattered throughout the southern portion of the project area. The artifactual remains were found primarily in sand dune blowouts or along dirt roads immediately north of the Whitewater River.

During this study it was apparent that the project area is currently being used and impacted by off road vehicle enthusiasts, hikers, and people walking their dogs. A contemporary campsite was seen in the southern portion of the property. During field recording of the sites, we encountered a crew of laborers collecting wildflower seeds from plants on the project parcel. On both days of field recording work, the crew of about ten men was intensively harvesting wildflower seeds from the entire surface.

DISCUSSION

The project is located in a highly sensitive area for prehistoric cultural resources. The study parcel is located on the northern edge of the Whitewater River in an area that would have been near the shifting shoreline of ancient Lake Cahuilla. Both the river and the lake would have provided water and food for the prehistoric people. An ethnographic era village was recorded immediately north of the project area and 32 archaeological sites are recorded within a one mile radius.

The 50+ acre parcel, south of Miles Avenue and adjacent to the Whitewater River, contains numerous artifactual remains. The artifacts observed during this study were primarily ceramic sherds, lithic debitage, and groundstone fragments. This assemblage differed somewhat from the artifacts recorded by Sutton thirteen years ago. At that time he found a mano, a Desert Side-notched point, and obsidian and jasper debitage, in addition to pottery sherds and debitage. The difference in observations could be caused by the shifting sand dunes alternatively covering and exposing material, by nearby residents collecting the most obvious artifacts, or a combination of these factors. Obvious artifacts would have been noticed by crews of laborers harvesting wildflower seeds. The history and extent of harvesting wildflower seeds on the property is unknown.

Three primary types of prehistoric archaeological sites exist in the Coachella Valley: Habitation sites, Camp sites, and Activity loci. Habitation sites are areas that were inhabited by relatively large groups of people over a sufficient time for accumulation of quantities of various types of debris, including food remains and discarded, lost or broken artifacts. These sites were frequently located along the northwest shore of ancient Lake Cahuilla from La Quinta to northwest of Indio. Most of these sites have been destroyed by development. Habitation sites yield information regarding aboriginal lifeways and have been found to contain human coprolites and cremations in addition to lithic, ceramic, and food remains (Wilke 1988). In fact, coprolite studies have provided a great deal of data relative to prehistoric dietary patterns.

Camp sites are less extensive than habitation sites and usually contain a narrower range of

artifactual remains. This sites are usually associated with the exploitation of specific resources in a specific location, such as fishing, bighorn sheep hunting, seed harvesting and processing, or agave collecting and roasting (Wilke 1988).

Activity loci represent activities rather then habitation. These are areas such as quarrying locations, agave roasting pits, rock art sites, aboriginal foot trails, bedrock milling stations, and isolated cremations. At this time it is unknown which type(s) of site is represented by the artifact assemblage in the project area. However, the variety of artifacts on the surface indicate that either habitation sites or camp sites are present. It is also unknown if a single extensive site is located within the 50+ acre parcel, or if the artifact scatters represent more then one site.

RECOMMENDATIONS

This study was undertaken under the provisions of the California Environmental Quality Act (CEQA). CEQA requires that the effect that a project will have on cultural resources be assessed and recommends avoidance or *in-situ* preservation of archaeological sites. When avoidance is not feasible, affected archaeological resources must be evaluated to determine their importance. Sites determined to be not important require no further work. The effects of the project on important archaeological sites must be mitigated to a level of insignificance, generally through excavation. Under Appendix K of CEQA an important archaeological resource is one which is: (A) Associated with a person or event of recognized significance in California or American history or is of recognized importance in prehistory; (B) Can provide information which is both of demonstrable public interest and useful in addressing scientifically consequential and reasonable or archaeological research questions; © Has a special or particular quality such as the oldest, best example, largest, or last surviving example of its kind; (D) Is at least 100 years old and possesses substantial stratigraphic integrity or; (E) Involves important research questions that historical research has shown can be answered only with archaeological methods.

If avoidance of the cultural deposits is not possible, then it is recommended that the exposed artifacts be mapped and collected and that a subsurface examination be undertaken to determine the presence and integrity of possible subsurface deposits. The 51+ acre parcel south of Miles Avenue has prehistoric indicators essentially throughout. The remains observed during this study consist primarily of potsherds, lithic debitage, and groundstone fragments. A projectile point and exotic lithics were recorded 13 years ago. Almost all of the artifactual material has been observed in blow outs where the hardpan is exposed. It is unknown whether the artifacts were deposited directly on the hardpan. An answer to this question is vital to development of an appropriate site treatment plan. If material was deposited in sand and it can be shown that the sand still contains artifacts, stratigraphy could be preserved and the deposit assumes greater importance than if the artifacts on the hardpan arrived there through the process of deflation, indicating that stratigraphy has been lost.

In either event (stratigraphy preserved or not), important archaeological data may still exist on the property. Postholes related to prehistoric house construction were found in the hardpan at a site a short distance to the southeast. Ancient human coprolites from another nearby site enabled

researches to acquire prehistoric dietary information.

Given the existing circumstances, any test excavation effort for the 50+ acre parcel must be designed to:

- Sample throughout the entire parcel. The logical beginning points are at sand blowouts, with excavation proceeding into the surrounding dunes.

- Process large amounts of sand while maintaining provenience of prehistoric material.

- Preserve the hardpan until it can be examined for cultural traces.

The adopted methodology for completion of the evaluation excavation will require the examination of large quantities of sand, while maintaining provenience of recovered artifactual and ecofactual material. This could be accomplished through either hand or carefully controlled machine methods, or by a combination of methods. In either case, hand excavation methods will be required to explore features and the hardpan.

It is recommended that shovel test pits be excavated at CA-RIV-3008, located in the northwest corner of the project area, to determine if a subsurface cultural deposit is present.

All recovered artifacts and ecofacts should be cataloged and analyzed and special studies undertaken, if the recovered cultural remains warrant such studies. All of the information should be complied in a report including further recommendations for the future management of the deposits. The cultural studies should be completed well in advance of any planned ground disturbing activities.

Because of the archaeological sensitivity of the project area, it is recommended that the entire area north of Miles Avenue be monitored during all ground disturbing activities.

Joan C. Brown

Joan C. Brown
Senior Archaeologist

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1992e Archaeological Site Record (CA-RIV-4745). On file at the Eastern Information Center, University of California, Riverside.

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APPENDIX A

Personnel Qualifications

APPENDIX A

Personnel Qualifications

RESUME

Kenneth M. Becker

EDUCATION

M.A., Anthropology: In Progress, California State University at Los Angeles, Los Angeles, California. Awarded Certificate of Honor for Outstanding and Distinguished Achievement in the Department of Anthropology.

B.A., Anthropology: 1988, California State University at Los Angeles, Los Angeles, California. Honored in *The National Dean's List*, 1983-1984, Seventh Annual Edition and 1988-1989, Twelfth Annual Edition.

A.A., Anthropology: 1982, Pasadena Community College, Pasadena, California. Awarded Honors for Superior Achievement in Anthropology.

Intensive Course in Management Communication: 1988, Gib Whiteman Seminars, Interdependence Associates Inc., Guilford, Connecticut.

Introduction to Federal Projects and Historic Preservation Law.
Sponsored by the Advisory Council on Historic Preservation and the General Services Administration Training Center, 1994.

EXPERIENCE

Archaeological:

Field Director of Archaeology:
1988 to the present, RMW Paleo Associates, Mission Viejo, California. Responsible for all phases of field work including surface reconnaissance, test excavation, and data recovery excavation. Additional duties include report writing, cartography, laboratory analysis, employee management, and acting as an intermediary between development companies and Native American groups.

Editor, *California Anthropologist*:
1992 to the present, Department of Anthropology, California State University at Los Angeles. (The *California Anthropologist* is a scholarly journal publishing articles in Anthropology and related disciplines.) Responsibilities include critical review of submissions, editing, and managing general office procedures. Member of the Editorial Board since 1991.

Teaching Assistant:
1985, "Archaeological Field Research Techniques" for Dr. Fred Reinman. California State University at Los Angeles, Anthropology Department.

Archaeological Consultant:
1983 to 1984, various firms in southern California.

Other:

Store Manager:
1978 to 1988, Sunseri's Market, Rosemead, California. Responsibilities included customer service, inventory control, advertising, and human resource management.

MEMBERSHIPS

Society for California Archaeology

Society for American Archaeology

RESUME

Joan C. Brown

EDUCATION

1988 M.A. (Anthropology: Emphasis in Archaeology) California State University Fullerton (C.S.U.F.). Thesis Research: Avifauna remains from Archaeology Sites.

Independent research in progress: Fossil Birds from Archaeological and Paleontological Sites.

1982 B.A. (Anthropology). C.S.U.F.

1979 A.A. (Social Science). Saddleback College Mission Viejo, California.

MEMBER

Pacific Coast Archaeology Society

Society of Vertebrate Paleontology

Society for California Archaeologist

Society of Professional Archaeologist

CERTIFICATION

Certified by the Society of Professional Archaeologist as a Field Archaeologist.
Certified as an Archaeologist by the County of Orange Environmental Management Agency.
Certified as an Archaeologist by the County of San Diego.

PROFESSIONAL EXPERIENCE

1988 - Present RMW Paleo Associates Senior Archaeologist:
Responsibilities include project management, proposal writing, report writing and personnel supervision.

1987-88	Natural History Museum of Los Angeles County Foundation. Responsibilities included molding and casting of fossils for 75th Anniversary of Rancho La Brea Traveling Exhibit.
1987	Field Director: Historical Archaeology Sites. Heritage Park Project, Sante Fe Springs, California. Mitigation of sites prior to reconstruction of Victorian era, and Mission period remains.
1985	Analysis of faunal remains from archaeology sites. Archaeological Associates, Sun City, California.
1983-85	Paleontological field salvage, includes monitoring, evaluating and collection of fossils. RMW Paleo Associates. Mission Viejo, California.
1983-85	Archaeological site surveying, salvage and laboratory work, including faunal analysis. Archaeology Resource Foundation. C.S.U.F. Fullerton, California.
1982-83	Field Director: Pacific Coast Archaeology Society. Responsibilities included being in charge of over thirty volunteers during the survey, recording and analysis of seven archaeology sites at Crystal Cove State Park, Corona del Mar, California.
1982	Paleontological field salvage. Los Angeles County Museum National Geographic Grant.
1981	Laboratory preparation of fossil specimens. Los Angeles County Museum National Science Foundation Grant.
1980-81	Paleontological field salvage. Scientific Resource Surveys, Inc. Santa Ana, California.
1978-79	Archaeological site surveying. Christina Brewer and Company, Laguna Beach, California.
1979-Present	Associate: Natural History Museum of Los Angeles County. Responsibilities include field collecting of specimens, laboratory preparation of materials, micro-fossil sorting, cataloging of museum collections.

PROFESSIONAL ACTIVITIES

Presentations and guest lecturer for:
Southern California Academy of Sciences 100th Anniversary meeting held at University of Southern California and the Natural History Museum of Los Angeles County.
California State University, Fullerton Anthropology Department.
Saddleback College Anthropology Department.

PUBLICATIONS

Barnes, L.G., Raschke, R.E., and Brown, J.C., 1984, A Fossil Baleen Whale from the Capistrano Formation in Laguna Hills, California, pp. 11-18: in Butler, B., Gant, J., and Stadum, C.J., eds., The Natural Sciences of Orange County, vol. 1, Natural History Foundation of Orange County.

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Sandra Minadeo

From: Mike Ray
Sent: Thursday, July 22, 2004 1:25 PM
To: Sandra Minadeo
Subject: FW: Additional Findings for the Indian Wells Property

S
Pls print and add to Phase I report
M

-----Original Message-----
From: Bill Musser [mailto:wmusser@edsgrp.com]
Sent: Thursday, July 22, 2004 10:05 AM
To: Michael D. Ray
Cc: Suzi Rosen
Subject: Additional Findings for the Indian Wells Property

Michael -

Provided below is a summary of our findings from the three outstanding items that Suzi has prepared. These findings indicate that your subject property has no identified area of impact on the property or from a neighboring property. I think this additional information will provide you with the warm and fuzzy to purchase the Site. If you have any questions today, please do not hesitate to contact Suzi Rosen (949.457.3488) she is very knowledgeable of the Site and I have copied her on this email. I am taking the day off today, but will be back in the office tomorrow should you have any additional questions. We will be submitting the addendum to the Phase One no later than 2 weeks from now. Thanks for letting us be of service to you and if we can offer anymore assistance, please do not hesitate to call us.

Bill

SUMMARY OF FINDINGS FOR OUTSTANDING ITEMS

Pursuant to the Phase I Environmental Site Assessment (ESA) submitted to your office on July 15, 2004, the three outstanding tasks have been completed to meet the American Standards and Testing Method (ASTM) E-1527 for an ESA for the Indian Wells Washington Street/Miles Avenue properties (the Site). A summary of the tasks completed, the findings, and conclusions for the Site ESA are provided below.

Historical Aerial Photograph Review

A historical aerial photograph search was conducted through Environmental Data Resources, Inc. (EDR). Aerial photographs of the Site were obtained for 1972, 1984, and 1996. The Site and adjacent properties are shown as undeveloped land on each of the three historical photographs obtained for this review. Subsequently, no Areas of Concern for the Site (AOCs) were identified by the historical aerial photograph review.

Historical Topographic Map Review

A historical topographic map search for the Site was conducted through EDR as part of this ESA. Topographic maps of the Site area dated 1904, 1959, 1972, and 1980 were obtained. The Site and adjacent properties are shown as undeveloped land on each of the historical topographic maps, and no AOCs for the Site were identified from the historical topographic map review.

Riverside County Department of Environmental Health File Search

As part of this ESA, files for the Site, the Indian Wells Tennis Garden, and the three (3) orphan properties identified by the EDR database search (The Golf Resort at Indian Wells, The City of Indian Wells/Public Works, and Simon Motors/Champion) were requested from the Riverside County Department of Environmental Health (RCDEH). On July 19, 2004, EDSG was notified by the RCDEH that files for The Golf Resort at Indian Wells and the Simon Motors/Champion site would be available for review on July 21, 2004. The RCDEH also indicated that the Simon Motors/Champion site had been referred to the Regional Water Quality Control Board, Palm Desert Office (RWQCB) in May of 2000. As noted in Section 4.1 of the ESA report, the RWQCB had previously informed EDSG that their database indicated that the Simon Motors/Champion site was under the jurisdiction of the RCDEH. Subsequently, a review of both the RCDEH files and the RWQCB files (Simon Motors/Champion) was conducted as part of completion of this task. A summary of the file review findings is provided below by site.

The Golf Resort at Indian Wells

A review of the RCDEH file for The Golf Resort at Indian Wells was conducted on July 21, 2004. According to the RCDEH records, two (2) 1,000 gallon underground storage tanks (USTs) were installed at the site in 1987. The tanks consisted of one (1) diesel UST and one (1) unleaded gasoline UST. Both tanks were removed on August 19, 2003. The tanks were reportedly in good condition upon removal and no significant soil contamination was found beneath the tanks. Subsequently, no further action was required by the RCDEH. Based on the results of the file review, The Golf Resort at Indian Wells is not considered an AOC for the Site.

Simon Motors, Inc./Champion

A review of the RWQCB and RCDEH files for Simon Motors, Inc./Champion was conducted on July 21, 2004. According to documentation in the files, three (3) UST were removed from the site in June 1984. The USTs included: 1) a 5,000 gallon waste oil UST, 2) a 2,500 gallon gasoline UST; and 3) a 1,000 gallon waste oil UST. In December, 1993, prior to removal of the USTs, the piping system of the tanks had failed the annual tightness testing, and soils around the tanks indicated gasoline impacts.

Between 1994 and 1996 subsurface investigations were conducted at the Simon Motors, Inc./Champion site, and in February 1997 a Phase II Subsurface Investigation report was submitted. The report documented that 660 parts per billion (ppb) total volatile petroleum hydrocarbons (TVPH); 11 ppb benzene; and 26 ppb methyl tertiary butyl ether (MTBE) were detected in the groundwater beneath the site. According to the investigation reports in the RWQCB files, the impacts to groundwater have not been delineated, however it was noted that the groundwater beneath the site is flowing to the east, with a southeast and northeast component. This direction of groundwater flow is consistent with the Department of Water Resources (DWR) information provided in the July 15, 2004 ESA which indicates that the flow direction is away from the Site.

Because the Simon Motors, Inc./Champion site is located 0.85 miles southeast of the Site, groundwater

flowing east/southeast/northeast from Simon Motors, Inc./Champion is flowing away from the Site, the impacts to groundwater associated with Simon Motors, Inc./Champion are not considered a potential risk for the Site. Subsequently, based on the results of the file review, Simon Motors, Inc./Champion site is not considered an AOC for the Site.

Conclusions

Based on the findings reported in the July 15, 2004 ESA report and the outstanding tasks subsequently completed and summarized herein, EDSG sees no indication of any AOCs at or within 1-mile of the Site that would potentially create environmental or health risks for the Site.

William W. Musser, P.E.

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tel 949-457-3483
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The Leader in Integrating IT Innovations to Optimize EHS performance!

APPENDIX D

Development Activity Reports:
Indian Wells,
La Quinta,
Palm Desert

THE CITY OF

INDIAN WELLS

CALIFORNIA

We promise exceptional experiences for our residents, guests, and colleagues by being pleasant, professional, and efficient.
We are dedicated to enhancing the quality of life in Indian Wells.

DEVELOPMENT LOG

City of Indian Wells
Planning Department

44-950 Eldorado Drive
Indian Wells, CA 92210
760-776-0229 (V)
760-346-0407 (F)
www.CityofIndianWells.org

July 2006

INFORMATION IS DEEMED RELIABLE BUT SUBJECT TO CHANGE WITHOUT PRIOR NOTICE. PLEASE CHECK WITH INDIVIDUAL DEVELOPERS FOR MOST ACCURATE INFORMATION REGARDING PRICING AND SALES. THE CITY DOES NOT ASSUME LIABILITY FOR THE ACCURACY OF THIS INFORMATION.

Indian Wells Developments

This document outlines projects in the City of Indian Wells that are currently under review or in construction as of July 2006.

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1. Toscana Country Club
Sunrise Colony Company [760-772-7000] is developing a private gated golf course community (Tract No. 29663) north of Fred Waring Drive designed in a Tuscan style. The project includes two 18-hole golf courses, pro shop, sports club, locker rooms, clubhouse, grill pavilion and 612 residential lots on a 620-acre site. An on-site sales and design center are open for prospective buyers by appointment. Homes are currently under construction.

2. Mountain View Villas (Income Qualified Senior Rental Housing)
Phase I of the City's Mountain View Villas Senior Affordable Housing Project has been completed. The project contains 128 one (1) and two (2) bedroom single story **rental** units on 13 acres. Project access is from Mountain Cove Drive at Highway 111. Call for questions regarding eligibility [760-568-9199].

Phase 2 will consist of 57 additional **rental** units. SoCal Housing is the project manager and construction will proceed through 2006 and 2007.

3. Liberty Square Office Development Adjacent to The Nest Restaurant
An application for construction of a single-story office park located at 75-188 State Highway 111 consisting of 22,447 square feet of office space on a 4.86 acre site has been approved by the City Council. The project will consist of two single-story buildings comprising 15,495 sq. ft. and 6,952 square feet. The property is located adjacent to The Nest Restaurant and The Sands Hotel on the north side of State Highway 111 between Cook Street and Desert Horizons Drive. The developer is Laliberte Enterprises, Inc. [760-346-2314].

4. The Province at Indian Wells
A 133-unit single-family home subdivision located on a 42.9 acre site at the southeast corner of State Highway 111 and Cook Street (Tract 32880) known as The Province at Indian Wells has been approved by the City Council. Site grading has commenced. Homes will range from 2,758 square feet to 3,616 square feet. The project developer is Standard Pacific Coachella Valley [949-789-1600]. The developer's web site is www.theprovince-indianwells.com.

5. Miles Crossing

A mixed-use commercial/retail, condominium/hotel (Fairmont), and residential development at the northeast and northwest corners of State Highway 111 at Miles Avenue is known as the Miles Crossing development. The commercial/retail and the condominium/hotel components of the project have been approved by the City Council. The residential component known as Accent Homes is under review by the City. The developer, Miles Avenue Development, LLC is locally represented by Michael Kiner Associates [760-324-3360]. Information regarding the Fairmont Residences may be obtained by telephoning 760-200-0006. The project is divided in three components:

- Fairmont Residents Club Condominium/Hotel – 129 total units, with 76 units in The Lodge building ranging from 600 sq. ft. studios to 2,000 sq. ft. 2 bedroom/2 bath units and 53 "casitas" in 1 and 2 story buildings ranging from 1,800 sq. ft. 2 bedroom/2 ½ bath units to 2,600 sq. ft. 3 bedroom/2 ½ bath units.
- Miles Crossing – 120,000 sq. ft. mixed commercial, restaurant, and retail lifestyle center with 3 restaurants and luxury stores.
- Accent Homes - residential component of 22 paired homes (11 duplexes) on three levels ranging from 2,200 sq. ft. to 2,800 sq. ft. located on the north side of the Whitewater Channel.

6. The Estates at Indian Wells

AMERIND, Inc. [760-365-1068] is developing a 13-lot single-family custom home development in the Indian Wells Country Club (Tract 27747). The project is located at the intersection of Manitou Drive and Sandpiper Drive. Home construction, lot sales, and home sales have commenced.

7. Hyatt Grand Champions Villas Expansion

The Hyatt Grand Champions Resort Hotel and Spa is in construction for six additional luxury villas to be added to the existing villa complex on the western edge of the Resort. Construction completion is expected by autumn 2006.

8. Indian Wells Tennis Gardens Town Center, Sanderson J. Ray "Lifestyle Center"

The City has received an application from Sanderson J. Ray for a proposed mixed-use project adjacent to the Indian Wells Tennis Gardens on a 29-acre site at the northwest corner of Miles Avenue and Washington Street. The project conceptual summary for this "lifestyle retail center" includes restaurants, an estimated 279,000 square feet of retail and mixed use, and movie theaters. Public hearings on the project are proposed for summer 2006.

9. The Remington Condo/Hotel and Woodbridge Homes

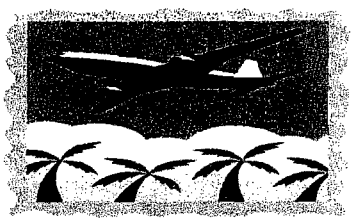
The City has received an application for a proposed luxury condo/hotel, The Remington Hotel, with 267 condominium units and 49 residential dwellings by Woodbridge Homes to be located near the Indian Wells Tennis Gardens on a 22-acre site at the southwest corner of Miles Avenue and Washington Street. The proposed condo/hotel will have up to 65,000 square feet of meeting space, two restaurants, two pools, and a spa facility. Information may be obtained by telephoning 866-706-2006 or accessing www.RemingtonLasMontanas.com. Public hearings are proposed for summer 2006.

10. Indian Wells Golf Resort & Clubhouse

The Indian Wells Golf Resort will undergo a $45 million major renovation over the next three years including construction of a new Clubhouse. The master plan, budget, schedule, and routing plans have been adopted. The West Course is scheduled to reopen in November of 2006. The East Course will close in November of 2006 and will reopen in November of 2007. The clubhouse construction will commence in summer 2006 and is scheduled for completion in late 2007.

11. Miramonte Resort & Spa

The Miramonte Resort & Spa has received City Council approval for a new 5,600 square foot ballroom. Project completion is scheduled for mid-December 2006 with grand opening on January 1, 2007.



CITY OF LA QUINTA
COMMUNITY DEVELOPMENT DEPARTMENT
MARCH 2007

COMMERCIAL ACTIVITY

PROJECTS IN PROCESS:

- **Mayer Villa Capri (TTM 35088)** – located on 25 acres at the northeast corner of Washington Street and Fred Waring Drive, the proposed project consists of 103,972 square feet of retail space, and another 130,450 square feet of medical office use. The current proposal consist of 10 retail buildings anchored by a drug store and a Wal*Mart Neighborhood Market. The medical office center will include five one-to-three story buildings located near the corner of Fred Waring and Palm Royale Drive.
- **Michael Shovlin (SDP 07-884)** – the applicant has proposed to build a 9,781 square foot, 2-story, office building on the last available pad within the Point Happy Commercial Center.
- **The Foundation Group (SDP 07-879)** – the applicant has proposed to build a 6,200 square foot building on the last available pad site within the La Quinta Village Shopping Center. Possible tenants are unknown at this time.
- **Mimi's Café (SDP 07-882)** – Located within the Komar/Costco development on the southeast corner of Depot Dr. and HWY 111, the proposed Mimi's Café will consist of 7,724 square feet of restaurant space.
- **Daniel Cline (VUP 06-035)** – located on the northeast corner of Desert Club and Calle Tampico, within the Village, the applicant has proposed to build three buildings totaling 31,472 square feet. No tenants are known at this time, however, plans call for a drug store, shops and restaurant uses.

RECENTLY APPROVED PROJECTS:

- **Dunes Retail Center (SDP 06-862)** – approved in August of 2006, the project consist of three retail pad buildings located west of the Home Depot center. The three retail pad building total 22,550 square feet of retail space. Possible tenants are unknown at this time.

PRIOR APPROVALS PENDING:

- **Medical Office Building (SDP 05-830)** – approved in June of 2005, the project is located on 3 acres along the east side of Washington Street, south of La Quinta Professional Plaza. The project was approved for 36,000 square feet of medical office space, including an out-patient surgi-center. *NOTE: Project approval expires 6/29/07*

PROJECTS UNDER CONSTRUCTION

- **Caleo Bay Park (TTM 31248)** – located at the northwest corner of Caleo Bay Drive and Avenue 48, the project includes five separate one story buildings surrounding a common parking area. Currently, only Phase 1, a 10,000 square foot multi-tenant office building, has been completed. The remaining building phases have yet to be built.

- **Jefferson Square (SDP 02-754)** - approved in November of 2003, the project is located on 10 acres at the southwest corner of Fred Waring Drive and Jefferson Street. The project was approved for 102,402 square feet of retail and shopping space.

- **Center Pointe (SP 01-055)** – the project is a 55 acre site located at the southeast corner of Washington Street and Miles Avenue. Currently, Homewood Suites, a 130 room hotel chained owned by Hilton Hotels, is nearing completion. The remaining acres of the site are proposed to be used for an affordable housing development, a park, and a 196,500 square foot medical facility.

- **Washington Park** – the project is located on the northeast corner of Avenue 47 and Washington Street, with frontage along HWY 111. Total square feet of retail space is unknown at this time; however the project occupies 66 acres. The project is in various phases of construction, with several phases already complete. Current tenants include Target, Lowe's, Circuit City, Stein Mart, Trader Joes, and Office Depot.

- **Dunes Business Park (SDP 06-822)** – approved in May of 2005, the Dunes Business Park consists of four relatively large retail buildings. The buildings, which range between 10,000 square feet and 8,600 square feet, will add a total of 36,200 square feet of retail space to the City of La Quinta.

- **Pavilions at La Quinta (SP 03-066)** – the Pavilions project is located on 18 acres at the northeast corner of HWY 111 and Adams Street. The project is composed of a number of large retailers and pad sites. The overall retail square footage for the site is 175,200 square feet. Current tenants include Best Buy, Bed Bath and Beyond, Office Max, and Henry's Market.

- **La Quinta Business Center (SDP 04-811)** – the project is located on 1.8 acres northeast of the Washington Street and Fred Waring Drive intersection. The 79,446 square foot, 2-story office building is intended to be used for office space and medical office.

PROJECTS NEARING COMPLETION

- **Coronel Plaza (VUP 04-024)** – Coronel Plaza is a 15,525 square foot, two-story office building located within the La Quinta Village, at the southwest corner of Calle Tampico and Avenida Navarro. When complete, the project will include eight tenants, a sunken plaza and subterranean parking.

- **REA La Quinta (SP 97-029)** – originally approved with the Home Depot center along Jefferson St and HWY 111, the newest addition completes the project,

which is built on 20 acres and includes over 218,000 square feet of retail space. The overall center includes Home Depot, Smart & Final, and IHOP.

- **Old Town La Quinta: Phase 2 (SDP 02-745)** – located at the southwest corner of Desert Club Drive and Calle Tampico within the La Quinta Village, the project was originally approved in 2002. Most recently the developer has completed phase 2 of the approved development. Phase 2 includes over 67,000 square feet of retail space.
- **La Quinta Medical Center (SDP 04-811)** – located along Lake La Quinta Drive, between Washington Street and Caleo Bay Drive, the project was been developed as a 42,000 square foot, 2-story medical office building.
- **La Quinta Professional Plaza (SP 01-049)** – located on 5 acres at the southeast corner of Avenue 47 and Washington Street, the overall project has been approved for over 53,000 square feet of commercial/office space.
- **Center at La Quinta (SP 97-029)** – the project occupies the land along HWY 111 between Adams Street and Dune Palms Road. The project incorporates automobile mall pad sites, and retail shops. The "Auto Center" is located between Adams Street and La Quinta Drive and occupies 44 acres, and includes automobile dealers such as Nissan, Dodge, and Kia Mazda. The retail center occupies 30 acres between La Quinta Drive and Dune Palms Road, and consists of nearly 400,000 square footage of retail space. Tenants include Marshals, Pets Mart, Super Wal*Mart, and the soon to be open Sam's Club.
- **111 La Quinta (89-014)** –the project is located along HWY 111 between Washington Street and Adams Street. The site occupies 60 acres and has added over 620,000 square feet of retail space to the City. Although the project was originally approved in the early 90's, the center still has a number of developable sites left. Current tenants include Lamppost Pizza and Backstreet Brewery, Stater Brothers, McDonalds, Carl's Jr, Kohl's, Big 5, Staples, and Ross.
- **Komar Development (SP 05-075)** – the project is located at the southeast corner of Depot Drive and HWY 111. The project occupies 28 acres and will add an additional 233,000 square footage of retail space to the City. Currently, Costco is the only open tenant at the center.

CITY OF LA QUINTA
COMMUNITY DEVELOPMENT DEPARTMENT
MARCH 2007

RESIDENTIAL ACTIVITY

Projects in Process *(application on file with the Community Development Department)*

- **Eden Rock (TTM 33226)** – the project is located within PGA West at the terminus of PGA Boulevard. The proposed project is situated on 42 acres and will include 292 residential units.
- **Laing Luxury Homes (TTM 35060)** – located at the northwest corner of Washington Street and Avenue 48, the project has proposed to develop 28 acres of land with 74 residential units.

Recently Approved *(Projects approved through 2006-2007)*

- **Village at Coral Mountain (TTM 31249)** – located near the southwest corner of Madison Street and Avenue 58, the project consists of 85 residential units on 33 acres.
- **Casa La Quinta (TTM 34038)** – the projects is located on the block of Calle Tampico, Avenida Navarro and Avenida Villa, adjacent to Coronel Plaza, within the La Quinta Village. The project will comprise of 20 condominium units on roughly 1 acre.
- **Stone Creek (TTM 30834)** – the project has yet to begin constructing their approved 76 residential units on 29 acres. The project is located near the northwest corner of Avenue 58 and Madison Street.
- **Dune Palms Affordable Housing Project (SP 06-078)** – the specific plan for a multiple family, low-moderate income housing project has been approved at the northwest corner of Dune Palms Road and Avenue 48. The project will include 220 residential units on 15 acres.
- **KB Homes sites (TTM 31732, 31733)** – two KB Homes sites have been approved at the southeast corner of Avenue 60 and Monroe Street. The two projects are connected by internal roads and will occupy 78 acres and will include 324 residential units.
- **Robert Schumacher (recently approved Time Ext. 32398)** – this project was originally approved in November of 2004, and has recently be approved for a two year time extension. Although no improvements or construction have taken place to date, the project would include 394 residential units and 10 acres of commercial property on 111 acres of land on the northeast corner of Avenue 60 and Monroe Street.

Projects Under Construction

- **Trilogy at La Quinta (TTM 30023)** –Trilogy is a 55+ and older community located at the southwest corner of Monroe Street and Avenue 60. The project includes a golf course and 1,200 residential units on 486 acres.
- **Andalusia (SP 03-067)** – the approved specific plan includes a private golf course and custom home development located on 934 acres at the southeast corner of Avenue 58 and Madison Street. When complete the project will comprise of 1,400 residential units.
- **Madison Club (TTM 33076)** – the project is a private golf course and custom home site located at the southeast corner of Madison Street and Avenue 52. The project consists of 470 acres and when complete, will have a total of 275 residential units.
- **The Hideaway (TTM 29894)** – the project is a private golf course and custom home site located at the southwest corner of Madison Street and Avenue 52. The project consists of 525 acres and when complete, will have a total of 819 residential units.
- **Rancho Santana (TTM 31202)** – the project is located at the southwest corner of Avenue 52 and Monroe Street, and upon completion will have a total of 203 residential units on 77 acres.
- **Griffin Ranch (TTM 32879, 34642**(still in process)**)** – the project is an equestrian oriented community located at the southeast corner of Madison Street and Avenue 54. The project includes 393 units and is located on 245 acres.
- **Diamante (TTM 30138)** – the project is located near the northwest corner of Madison Street and Avenue 52. The project consists of 47 residential units occupying 14.
- **Cordoniz (TTM 32070)** – located at the southeast corner of Jefferson Street and Avenue 52, the project includes 145 residential units on 15 acres.
- **Santerra (TTM 32225)** – the project is located on the northwest corner of Avenue 58 and Madison Street. When complete the project will occupy 8 acres and will have a total of 29 residential units.
- **Marchmonte (TTM 32742)** – the project is located along Monroe Street, near the southwest corner of Avenue 54. The project is located on 15 acres of land and will include 40 residential units.
- **Vista Dunes Affordable Housing Project** – this is an 80-unit affordable housing project for very low income residents. The project is on 9 acres near the northwest corner of Adams Street and Miles Avenue.
- **Point Happy Estates (TTM 31348)** – the project is located at the northwest intersection of Spring Court and Washington Street, just south of HWY 111. The project, upon completion, will include 72 residential units on 38 acres.

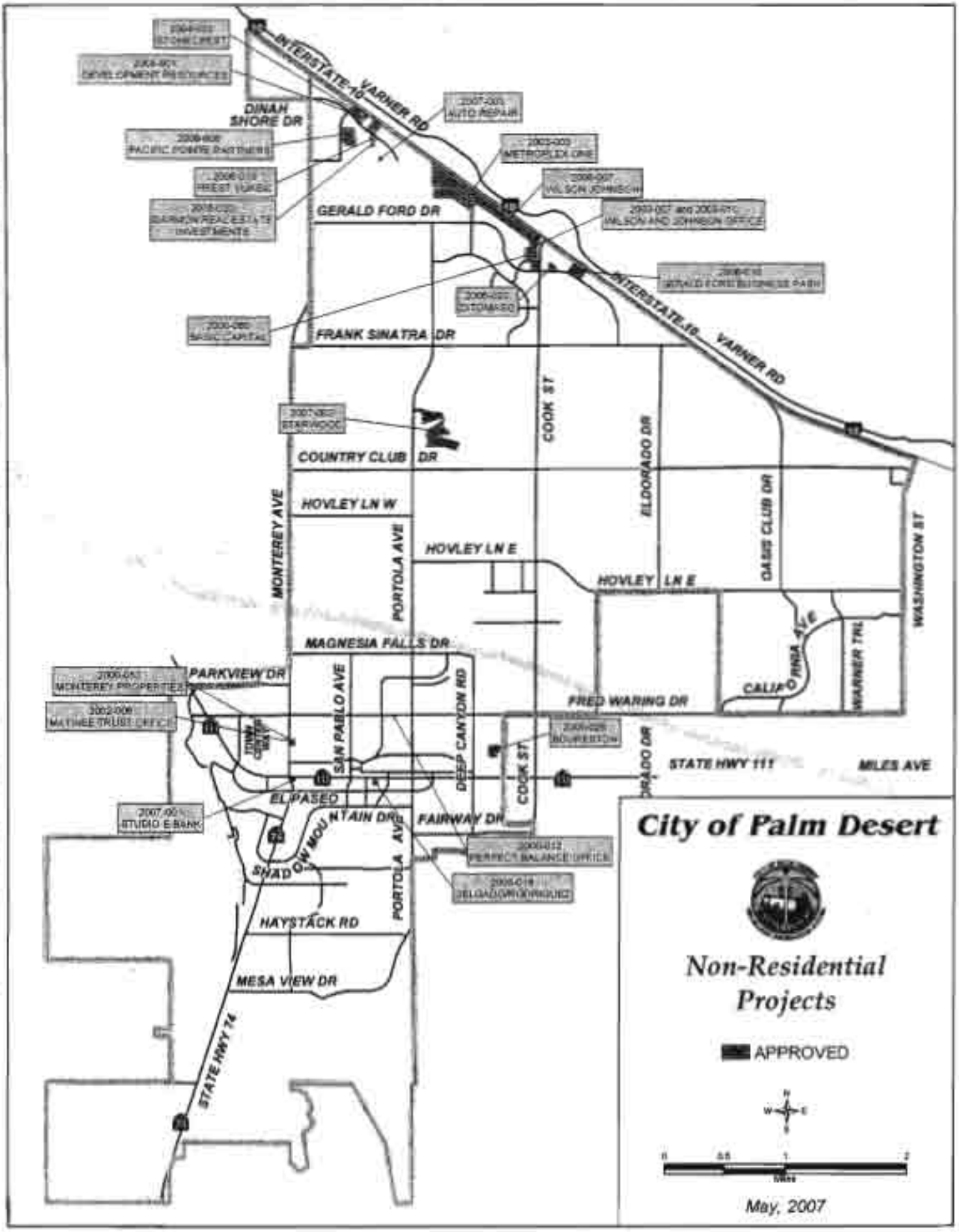
- **The Tradition (TTM 28470, 28611, 29897, 28867, 30056, 28612, 29872, 29897, 29984, 29985)** – located on 746 acres at the intersection of Washington Street and Avenue 52, the project includes a private golf course and clubhouse and is approved for a total of 296 custom residential units.
- **Clubhouse Apartments (TTM 33220)** – the project is located along Avenue 52 adjacent to the Coachella Valley Water Channel. The project is comprised of a number of buildings ranging in height from 1-to-3 stories. The project includes 149 apartment units on 11 acres of land.
- **Hidden Canyon (TTM 29436)** – located northwest of the Eisenhower/Coachella Drive intersection, the project has been approved for 169 residential units on 190 acres.
- **Village at the Palms (TTM 28983)** – is a private country club locate at the southwest corner of Airport Boulevard and Monroe Street. Because the project was originally approved by Riverside County, exact counts for the number of acres and units are unknown at this time.
- **Piazza Serena (TTM 30092)** – the project is currently constructing the last of their approved residential units. The project has been approved for 97 residential units on 37 acres. The project is located at the northwest corner of Avenue 58 and Monroe Street.
- **Center Pointe Casitas (SP 01-055)** - Center Pointe is a specific plan approved on the southeast corner of Miles Avenue and Washington Street. The overall project includes a hotel, residential casitas, medical office space, low-income housing and a park. The hotel and casitas are currently under construction with the hotel expected to open in mid-April, 2007. There are a total of 90 casitas units.
- **Mediterra Apartments (SDP 02-792)** – the project is located at the northeast corner of Darby Road and Washington Street. A total of 224 apartment units have been approved on the 15 acres site.

Projects Nearing Completion *(last phases of construction)*

- **Desert Cove (TTM 31310)** – located at the northeast corner of Adams Street and Avenue 48, it was approved along with the Watercolors development which is just east of the project. The project is located on 10 acres and has a total of 36 residential units.
- **Watercolors (TTM 31311)** – the project is located near the northeast corner of Adams Street and Avenue 48, adjacent to the Desert Cove development. The project includes 149 residential units, most of which reserved for low and moderate incomes. The project is located on 22 acres.
- **Lion's Gate (TTM 28034)** – Located near the northwest corner of Avenue 58 and Madison Street, the project includes 25 residential units on 19 acres.
- **The Estancias (TTM 26524, 28935)** – the project is located south of Rancho La Quinta Country Club along Avenue 50. The gated community is located on 42

acres of land, and when complete will comprised of 49 residential units. The project is nearly complete with the last units currently under construction.

- **Watermark Villas (TTM 31798)** – the project is located on the northwest corner of Avenue 52 and Jefferson Street. It is located on 19 acres and has a total of 250 condominium units.
- **Legacy Villas (TTM 31397)** – located at the intersection of Coachella Drive and Eisenhower Drive, the project includes 280 owner/rental units on 44 acres.
- **Mountain View Country Club (TTM 31349)** – the project is a private golf course community located near the southeast corner of Jefferson Street and Pomelo Street. The project is located on 379 acres and is comprised of 405 residential units.
- **Flores de Montanas (TTM 28409)** – located west of the Yucatan Cove, the project is located on 9 acres and at build out will comprise of 19 custom residential units.
- **Carmela (TTM 31874)** – the project is located at the northwest corner of Avenue 53 and Monroe Street, immediately south of the Rancho Santana development. The project has been approved for 111 residential units on 38 acres.


INTERSTATE 10
VARNER RD
DINAH SHORE DR
GERALD FORD DR
FRANK SINATRA DR
COUNTRY CLUB DR
HOVLEY LN W
HOVLEY LN E
MONTEREY AVE
PORTOLA AVE
COOK ST
ELDORADO DR
DESERT CLUB DR
WASHINGTON ST
MAGNESIA FALLS DR
PARKVIEW DR
SAN PABLO AVE
DEEP CANYON RD
FRED WARING DR
CALIFORNIA AVE
WARNER TRL
STATE HWY 111
MILES AVE
EL PASEO
FAIRWAY DR
SHADOW MOUNTAIN DR
HAYSTACK RD
MESA VIEW DR
STATE HWY 74
City of Palm Desert
Non-Residential Projects
APPROVED
May, 2007

NON-RESIDENTIAL PROJECTS - APPROVED

2000-012...73-867 FRED WARING DR... PERFECT BALANCE OFFICE... 2,111 sq ft office conversion. PP 98-7. No Permits. PERFECT BALANCE, c/o Luis Perez 73-867 Fred Waring Dr. Palm Desert, CA 92260 (760) 773-4063.

2000-053...44-377 MONTEREY AVE... MONTEREY PROPERTIES...7,460 sq ft office building. PP 97-10. No Permits. FRANK URRUTIA ARCHITECTS 73-550 Alessandro Dr., Suite 201. Palm Desert, CA 92260 (760) 341-2555.

2000-080...74-950 GERALD FORD DR...BASIC CAPITAL... 23,500 sq ft office building. PP 00-7, PMW 00-5. No Permits. BASIC CAPITAL, c/o Dan Allred 10607 N. Central Expressway, Suite 600, Dallas, TX 75231 (214) 692-4737.

2001-039...75-300 GERALD FORD DRIVE... Office/Industrial center, five buildings and five lot TTmap on 6.1 acres. PP/CUP 01-21. TT 30314. Approved 10/01 COLLEGE BUSINESS PARK PARTNERS, 74-770 Hwy 111, Suite 201, Indian Wells, CA 92210 (760) 674-0998.

2002-006...73-026 GUADALUPE AVE... MATINEE TRUST OFFICE... Office Buildings. PP 01-27, C/Z 01-05. Approved 03/02. MATINEE TRUST, 8743 Warren Vista Ave, Yucca Valley, CA 92284 (760) 228-3235.

2003-003...TECHNOLOGY DR...METROPLEX ONE...29,950 sq ft Office Building. PP 03-02. Approved 04/03. METROPLEX ONE, 45-455 Portola Ave, Palm Desert, CA 92260 (760) 837-1880

2003-007...74-812 TECHNOLOGY DR...WILSON AND JOHNSON OFFICE...24,474 sq ft Office Building. PP 03-09. Approved 07/03. PREST VUKSIC ARCHITECTS, 72-624 El Paseo, Suite B-4, Palm Desert, CA 92260 (760) 779-5393.

2003-010...TECHNOLOGY DR...WILSON AND JOHNSON OFFICE...32,910 sq ft Industrial/Office Building. PP 03-07. Approved 05/03. PREST VUKSIC ARCHITECTS, 72-624 El Paseo, Suite B-4, Palm Desert, CA 92260 (760) 779-5393.

2004-033...73-500 DINAH SHORE DRIVE...STONECREST... A 43,446 sq ft Office/Warehouse complex on Lot 34 of PM 24255. APN 653-250-042. PP 04-28. Approved 12/04. STONECREST, 74-868 Joni Dr, Palm Desert, CA, 92260. (760) 867-0445.

2005-001...73-550 DINAH SHORE DRIVE...DEVELOPMENT RESOURCES... A 52,164 sq ft Showroom/Warehouse building. APN 653-250-043. PP 04-30. Approved 01/05. DEVELOPMENT RESOURCES CONSULTANTS, 8175 E Kaiser Blvd., Anaheim, CA, 92080. (714) 685-6860.

2005-018...73-703 HIGHWAY 111...DELGADO/RODRIGUEZ... Tear down existing restaurant/retail buildings and construct a two-story restaurant/retail/office complex. APN 627-212-003. PP/CUP 05-08. Approved 08/05. DELGADO/RODRIGUEZ, 73-703 Highway 111, Palm Desert, CA 92260. (760) 568-0011.

2005-020...34-501 & 34-601 SPYDER CIR...DARMON REAL ESTATE INVESTMENTS... Construct two contiguous industrial buildings with totaling 18,991 sq ft on a 1.12 acre site. APNs 653-810-019 and 653-810-020. PP 05-15. Approved 09/05. DARMON REAL ESTATE INVESTMENTS, INC. 75-100 Merle Drive, Palm Desert, CA 92211. (760) 774-1089.

NON-RESIDENTIAL PROJECTS – APPROVED (Continued)

2005-026...44-651 VILLAGE COURT...BOURESTON... Construction of a single-story 36,175 sq ft office building including up to 9,044 sq ft medical office space. APNs 625-100-027,031,047, and 048. PP/CUP 05-23. Approved 12/05. BOURESTON DEVELOPMENT, 5500 Trabuco Road, Suite 100, Irvine, CA 92620 (949) 387-4665.

2006-007...PORTOLA AVE & COOK ST...WILSON JOHNSON...Tentative Parcel Map to subdivide 83.2 acres into 22 parcels. APNs 653-280-035, 653-390-091, and 653-390-071. TPM 34211. Approved 04/06. WILSON JOHNSON, CRE, INC. 45-445 Portola Ave, Palm Desert, CA, 92260. (760) 837-1880.

2006-008...34-300 GATEWAY DR...PACIFIC POINTE...Construct seven (7) industrial buildings ranging from 5,000 – 50,000 sq ft totaling 143,942 sq ft. APN 653-250-036. PP 06-02. Approved 04/06. PACIFIC POINTE PARTNERS. 3636 Birch St, Suite 260, Newport Beach, CA, 92660. (949) 724-9990.

2006-016...75-300 GERALD FORD DR...GERALD FORD BUSINESS PARK...Construct 100,500 sq ft mixed use retail/office center with a two-story parking structure, including one 4,500 sq ft bank, four retail/restaurant spaces totaling 16,000 sq ft, 2 two-story office/retail buildings totaling 62,000 sq ft. APN 653-410-022. CZ 06-05, PP/CUP 06-03, TT 34437. Approved 08/06. GERALD FORD BUSINESS PARK, LLC. 74-399 Hwy 111, Suite M, Palm Desert, CA 92260. (760) 340-1515.

2006-017...73-650 DINAH SHORE DR...PROMONTORY POINT...Construct an 86,000 sq ft two-story medical/general office building with a parking structure. APN 653-250-045. PP 05-26. Approved 08/06. PROMONTORY DEVELOPMENT, LLC. 16 Villagio Place, Rancho Mirage, CA, 92270. (760) 202-6445.

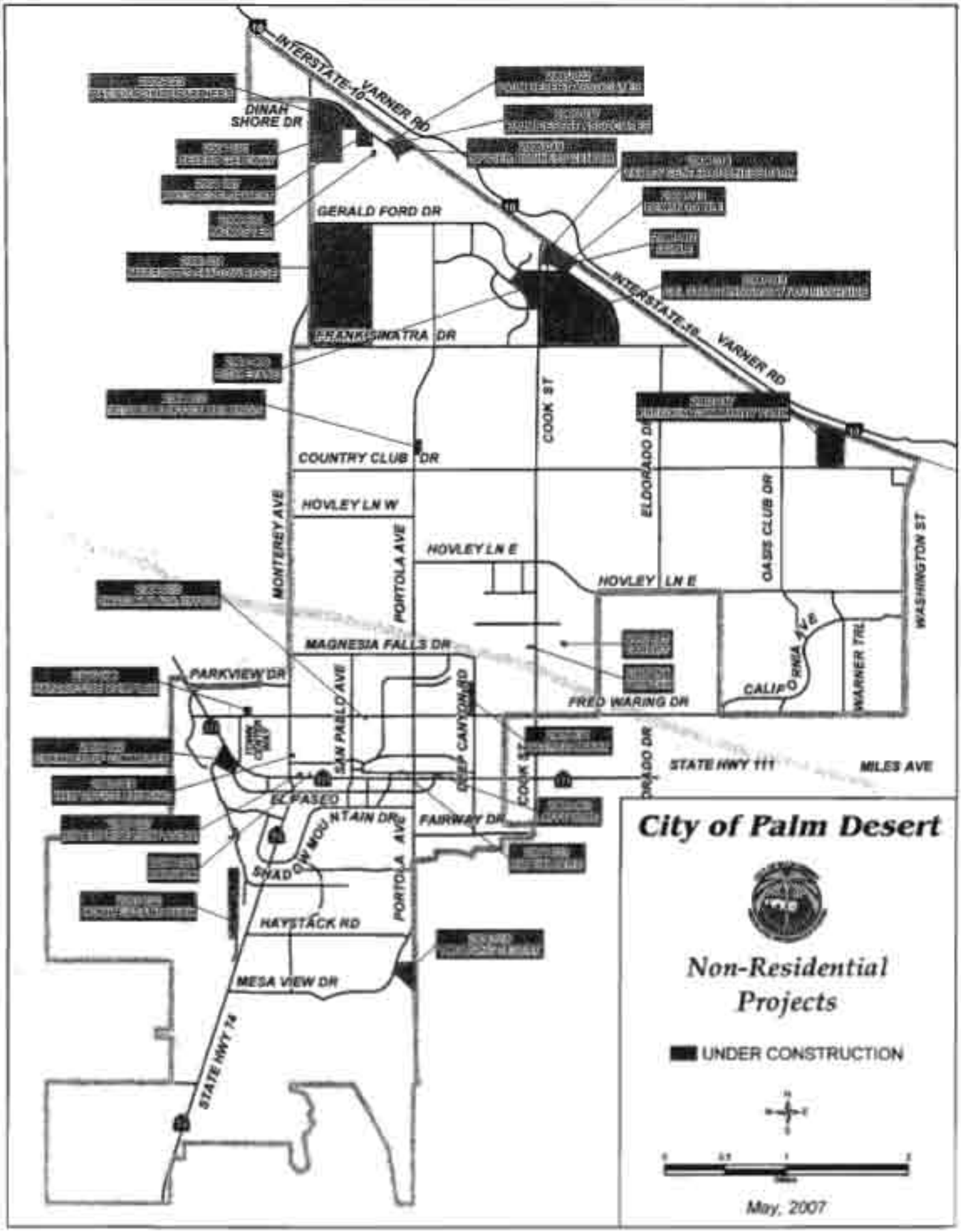
2006-019...73-665 DINAH SHORE DR...PREST VUKSIC...Construct an 15,267 sq ft Industrial building including a tower element up to 34 ft in height. APN 653-810-021. PP 05-29. Approved 12/06. PREST VUKSIC 44-530 San Pablo Ave, Palm Desert, CA, 92260. (760) 779-5393.

2006-020...75-096 GERALD FORD DR...DITOMASO...Construct three commercial buildings, two with drive-thru restaurants totaling 11,400 sq ft. APNs 653-690-017 and 028. PP/CUP 06-09. Approved 12/06. TIM DITOMASO P.O. Box 27427, Anaheim, CA, 92809. (951) 278-0263.

2007-001...73-051 HIGHWAY 111...STUDIO E BANK...Construct 2,770 sq ft bank building APN 627-192-043. PP 06-11. Approved 03/07. STUDIO E ARCHITECT 2411 Second Avenue, San Diego, CA, 92101. (619) 235-9662.

2007-002...39-500 PORTOLA AVE - DESERT WILLOW GOLF RESORT...STARWOOD...Construct 300 new timeshare units (of which 215 are already entitled) with a height exception for a 52-ft 8-inch maximum roof height, a 40,000 sq ft Villa Clubhouse and amenities. sq ft bank building. APNs 620-420-001 thru 008, 620-430-001 thru 003, and 620-430-008 thru 014. DA 06-03, PP/CUP 06-17, TT 35426. Approved 03/07. STARWOOD/WVC RANCHO MIRAGE, INC. 8801 Vista Centre Dr, Suite 140, Orlando, FL 32821. (407) 239-3785.

2007-001...73-731 SPYDER CIRCLE...AUTO REPAIR...Construct a 7,540 sq ft Auto Repair building. APN 653-810-013. PP 06-13. Approved 03/07. MIRKO STARK AND EDMUND CELAYA 41-951 Corporate Way, Suite E, Palm Desert, CA, 92260. (760) 779-8299.


INTERSTATE 10
VARNER RD
DINAH SHORE DR
GERALD FORD DR
FRANK SINATRA DR
COUNTRY CLUB DR
COOK ST
ELDORADO DR
OASIS CLUB DR
WASHINGTON ST
MONTEREY AVE
HOVLEY LN W
PORTOLA AVE
HOVLEY LN E
MAGNESIA FALLS DR
PARKVIEW DR
SAN PABLO AVE
DEEP CANYON RD
FRED WARING DR
CALIFORNIA AVE
WARNER TRL
STATE HWY 111
MILES AVE
EL PASEO
FAIRWAY DR
SHADOW MOUNTAIN DR
HAYSTACK RD
MESA VIEW DR
STATE HWY 74
City of Palm Desert
Non-Residential Projects
UNDER CONSTRUCTION
May, 2007

NON-RESIDENTIAL PROJECTS - UNDER CONSTRUCTION

2000-018...37-300 COOK ST...CAL STATE UNIVERSITY /UNIVERSITY OF CALIFORNIA, RIVERSIDE MASTER PLAN. 200 acres. CAL STATE UNIVERSITY, c/o Peter Wilson (760) 341-2883.

2000-031...36-750 MONTEREY AVE...MARRIOTT'S SHADOW RIDGE...999 timeshare and 18-hole golf course. PP/CUP 98-5, TT 28818 MARRIOTT OWNERSHIP RESORT INC., 6649 Westwood Blvd, #500, Orlando, FL, 32809-6090 (407) 206-6000.

2001-032...72-500 THRUSH RD..HOMME/ADAMS PARK...Public Park on 27 +/- acres. C/Z 01-01, GPA 01-01. PP 01-01. Approved 6/01. CITY OF PALM DESERT, 73510 Fred Waring Dr, Palm Desert, CA 92260 (760) 346-0611.

2002-017...77-500 COUNTRY CLUB DRIVE...FREEDOM COMMUNITY PARK...12 acre elementary school, 22.8 acre park, lighted baseball and soccer fields, 13,000 sq ft recreation office/childcare building, tennis courts, basketball courts, picnic pavilions, tot lot, restrooms, parking lot. PP/CUP 02-05. Approved 09/02. CITY OF PALM DESERT, 73-510 Fred Waring Drive, Palm Desert, CA 92260 (760) 346-0611.

2003-004...73-081 FRED WARING DR...SUNWEST...4,971 sq ft Office Building. PP 03-07. Approved 05/03. PREST VUKSIC ARCHITECTS, 72-624 El Paseo, Suite B-4, Palm Desert, CA 92260 (760) 779-5393.

2003-019...44-630 MONTERY AVE...HAIT OFFICE BUILDING...6,192 sq ft Two-story Office Building. PP 03-16. Approved 12/03. HOWARD HAIT, 44-650 Monterey Ave, Palm Desert, CA 92260 (760) 340-4290.

2004-007...SE CORNER DINAH SHORE DR/LEILANI WAY...PRES DEVELOPMENT...16 Light Industrial Buildings, 174,550 sq ft on 10.21 Acres. PP 03-21. Approved 04/04. PRES DEVELOPMENT & CM SERVICE, INC. 1201 Dove Street, Suite 100, Newport Beach, CA 92660.

2004-009...37-001 COOK ST...RICK EVANS...111,800 sq ft Retail, 3-story 140-room Hotel, 122,000 sq ft single-story garden office complex C/Z 03-10, PP 03-11, TPM 31515, DA 03-03. PP 04-04. APN 634-040-001. Approved 04/04. RICK EVANS, 74-000 Country Club Dr Suite H2, Palm Desert, CA 92660. (760) 773-9832.

2004-010...SE CORNER MONTEREY AVE/DINAH SHORE DR – DESERT GATEWAY...70 Acre Shopping Center. 689,071 sq ft gross commercial and subdivide 70 acres into 24 parcels. PP 01-30, TPM 30502, DA 92-3 Restated. Approved 2/03. SEIR RILEY/CARVER, LLC, c/o The Carver Cos. 74-947 Hwy 111, Indian Wells, CA 92210 (760) 773-5855.

2004-013...PORTOLA AVE...SCOTELLE OFFICE BUILDING... Five (5) office buildings totaling 53,662 gross sq ft. PP 03-19. APN 620-430-018. Approved 04/04. PREST VUKSIC ARCHITECTS FOR SCOTELLE DEVELOPMENT, LLC. 72-624 El Paseo, Suite B4, Palm Desert, CA, 92260. (760) 779-5393.

2004-014...NORTHEAST CORNER OF COOK ST AND GERALD FORD DR...VALLEY CENTER BUSINESS PARK... Five (5) two-story buildings totaling 166,000 sq ft on 10.56 acres. PP 04-05, TPM 31563, DA 97-2 Addendum #3. APN's 653-410-023 thru -025 and APN's 653-690-015, -016 and -019. Approved 04/04. HOLT ARCHITECTS . 41-555 Cook Street, Suite 1-100, Palm Desert, CA, 92211. (760) 946-9248.

2004-016...ORACLE PLAZA OFFICE... 12,450 sq ft office building. PP 03-22. APN 627-101-036. Approved 05/04. PATEL ARCHITECTURE, 71-711 San Jacinto Drive, Rancho Mirage, CA, 92270. (760) 776-5031.

2004-018...47-900 PORTOLA AVE...THE LIVING DESERT... One two-story, 19,075 sq ft administrative building. CUP 04-12. APN 655-230-019. Approved 06/04. THE LIVING DESERT 47-900 Portola Ave, Palm Desert, CA, 92260. (760) 346-5694.

2004-019...NORTH SIDE GERALD FORD DR...DEMUNDO TILE... One 19,565 sq ft showroom/warehouse and vehicle storage yard on 1.14 acres. PP 04-14. APN 653-410-023. Approved 07/04. WILLIAM SHARON, SMITH CONSULTING ARCHITECTS. 12220 El Camino Real, Suite 200, San Diego, CA, 92130. (760) 797-1377.

NON-RESIDENTIAL PROJECTS - UNDER CONSTRUCTION (Continued)

2004-022...73-168 Hwy 111...ZYLSTRA... Two-story 5,250 sq ft office/commercial retail building. PP 04-07. Approved 10/04. ALLAN ZYLSTRA. 73168 Hwy 111, Palm Desert, CA, 92260. (562) 822-0882.

2004-023...44-875 SAN JACINTO AVE... RM BUILDERS... Single-story 2,140 sq ft office building. PP 04-11. VAR 04-02. Approved 08/04. RANCHO MIRAGE BUILDERS, INC. 41-945 Boardwalk, Suite U, Palm Desert, CA, 92211. (760) 779-9552.

2005-004...42-901 COOK ST...WORZACK... Two professional office buildings totaling 6,500 sq ft. APNs 624-241-016/017/018/019. PP 04-22. GPA 04-01, C/Z 04-03,PMW 04-15. Approved 04/05. WILLIAM J. WORZACK, 41-865 Boardwalk, Palm Desert, CA, 92260. (760) 773-4443.

2005-006...72-600 FRED WARING DRIVE...KATZ OFFICE COMPLEX... Three professional office buildings totaling 64,521 sq ft. APN 640-040-006. PP 00-11. GPA 00-04, C/Z 00-05,VAR 00-06. Approved 04/05. KENNETH KATZ, 77-587 Ashberry Court, Palm Desert, CA, 92260. (760)345-1971.

2005-011...43-775 DEEP CANYON ROAD...SACRED HEART... Master Plan for Sacred Heart Church and School that includes construction of eight (8) new classrooms, a new library, lunch shade structures, a new parish hall/ gymnasium, a new playground for grades 2 thru 5, a new sports field with a track, a reconfigured paved parking lot with 35 spaces, a new paved parking lot with 87 spaces, and a grass overflow parking area for 78 spaces. APN 624-270-001,002. CUP 04-13. Approved 06/05. THE ROMAN CATHOLIC BISHOP OF SAN BERNARDINO, 1201 E. Highland Avenue, San Bernardino, CA, 92404. (760) 346-6502.

2005-012...72-575 HIGHWAY 111...CHAMBER OF COMMERCE... Construct a 5,725 sq ft Chamber of Commerce multi-tenant office building (The Henderson Community Building) and a request to allow a height exception to allow a 22-ft high building with architectural projections up to 37 ft high. APN 640-080-011. PP 01-16, Amendment No. 1. Approved 06/05. PALM DESERT REDEVELOPMENT AGENCY, 73-510 Fred Waring Drive, Palm Desert, CA, 92260. (760)346-0611.

2005-015...75-25 SHERYL AVE...CARDIFF LIMOUSINE... Construct a parking lot for buses and employees, a fuel dispensing island with above-ground fuel tanks and future (Phase II) construction of a 3,322 sq ft building with 3 bays for cleaning and washing vehicles. APN 634-260-014. PP 05-01. Approved 07/05. GARY CARDIFF/CARDIFF LIMOUSINE AND TRANSPORTATION, 45-490 Apache Trail, Indian Wells, CA, 92210. (760) 568-1403.

2005-017...73-800 DINAH SHORE DR...PALM DESERT ASSOCIATES... Construct eleven (11) buildings totaling 64,707 sq ft, subdivide a 4.97 acre parcel into 11 lots. APN 653-250-032. PP 05-03. TPM 33736. Approved 07/05. PALM DESERT ASSOCIATES, 701 S. Parker, Suite 1000, Orange, CA 92868 (714) 564-7111.

2005-019...73-770 DINAH SHORE DR...SPYDER BUSINESS CENTER... Construct five (5) industrial office buildings totaling 68,198 sq ft. APN 653-250-030. PP 05-13. TPM 33855 Approved 09/05. SPYDER BUSINESS CENTER, LLC, 471 Old Newport Blvd, Newport Beach, Ca 92663. (949) 650-6562.

2005-022...73-760 DINAH SHORE DR...PALM DESERT ASSOCIATES... Construct a 9,886 sq ft industrial building. APN 653-250-033. PP 05-14. Approved 10/05. PALM DESERT ASSOCIATES, 701 S. Parker, Suite 1000, Orange, CA 92868 (714) 564-7111.

2005-023...73-501 DINAH SHORE DR...PACIFIC POINTE PARTNERS... Construct seven (7) office buildings totaling 89,9000 sq ft. APN 653-250-039. PP 05-16. Approved 11/05. PACIFIC POINTE PARTNERS, LLC, 3636 Birch St. Suite 260, Newport Beach, CA 92660 (949) 724-9990.

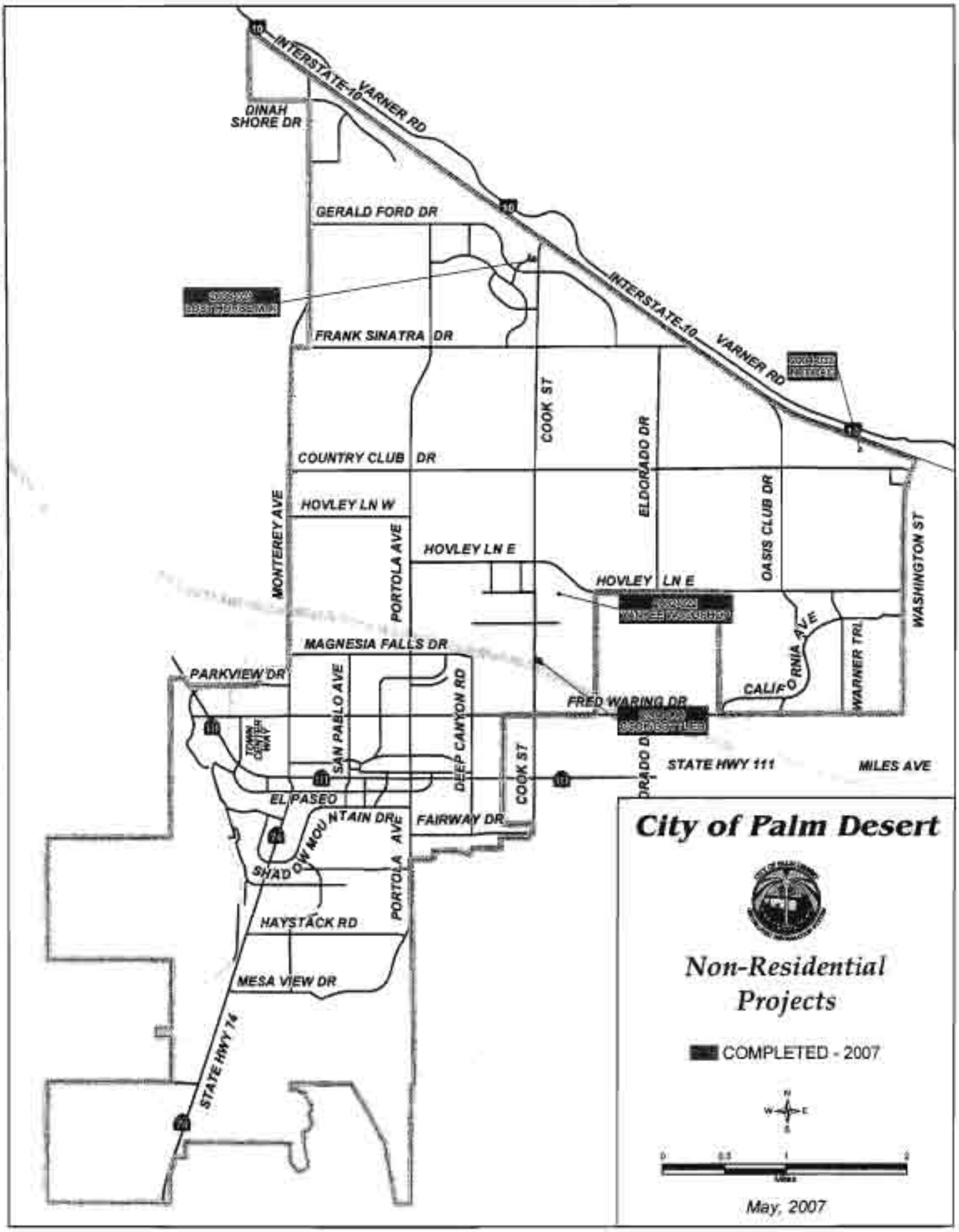
2005-027...73-086 HWY 111...ENTERPRISE RENT-A-CAR... Construction of a 2,594 sq ft rental car facility with a satellite sales office and a conditional use permit to allow outdoor display of two vehicles. APNs 627-071-045 and 046. PP/CUP 05-24. Approved 12/05. ENTERPRISE RENT-A-CAR, 14594 7th St, Victorville, CA 92392 (760) 403-8349.

2006-001...34-501 & 34-601 SPYDER CIR...MACMASTER... Construct two contiguous industrial buildings totaling 20,010 sq ft on a 0.98 acre site. PP 05-19. APNs 653-810-016 & -017. . Approved 01/06. BILL MACMASTER, 1212 Pembroke Lane, Newport Beach, CA 92660.

2006-002...75-178 GERALD FORD DR...GOBLE... Construct two contiguous industrial buildings totaling 18,846 sq ft on a 1.42 acre site. PP 04-35. APN 653-410-023. Approved 02/06. ERNEST GOBLE, 1650 Zanker Rd, #125, San Jose, CA 92211. (408) 437-8920.

NON-RESIDENTIAL PROJECTS - UNDER CONSTRUCTION (Continued)

2006-003...74-180 HWY 111...JIFFY LUBE...Construction of an oil change facility. APN 625-085-002. PP/CUP 05-05. VAR 05-04. Approved 03/06. ERNEST RAMIREZ, 668 N. Pacific Coast Hwy, Suite 517, Laguna Beach, CA 92651 (949) 464-2200 ext 248.


INTERSTATE-10
VARNER RD
DINAH SHORE DR
GERALD FORD DR
FRANK SINATRA DR
COOK ST
ELDORADO DR
COUNTRY CLUB DR
HOVLEY LN W
MONTEREY AVE
PORTOLA AVE
HOVLEY LN E
OASIS CLUB DR
WASHINGTON ST
MAGNESIA FALLS DR
PARKVIEW DR
SAN PABLO AVE
DEEP CANYON RD
FRED WARING DR
CALIFORNIA AVE
WARNER TRL
TOWN CENTER WAY
STATE HWY 111
MILES AVE
EL PASEO
FAIRWAY DR
SHADOW MOUNTAIN DR
HAYSTACK RD
MESA VIEW DR
STATE HWY 74
City of Palm Desert
Non-Residential Projects
COMPLETED - 2007
May, 2007

NON-RESIDENTIAL PROJECTS - COMPLETED IN 2007

2002-022...75-180 MAYFAIR DRIVE...YANKEE WORKSHOP...5,580 sq ft industrial warehouse. PP 02-11. Approved 09/02. YANKEE WOODSHOP, 74-850 Joni Drive, Palm Desert, CA 92260 (760) 568-5163. Completed Spring 2007

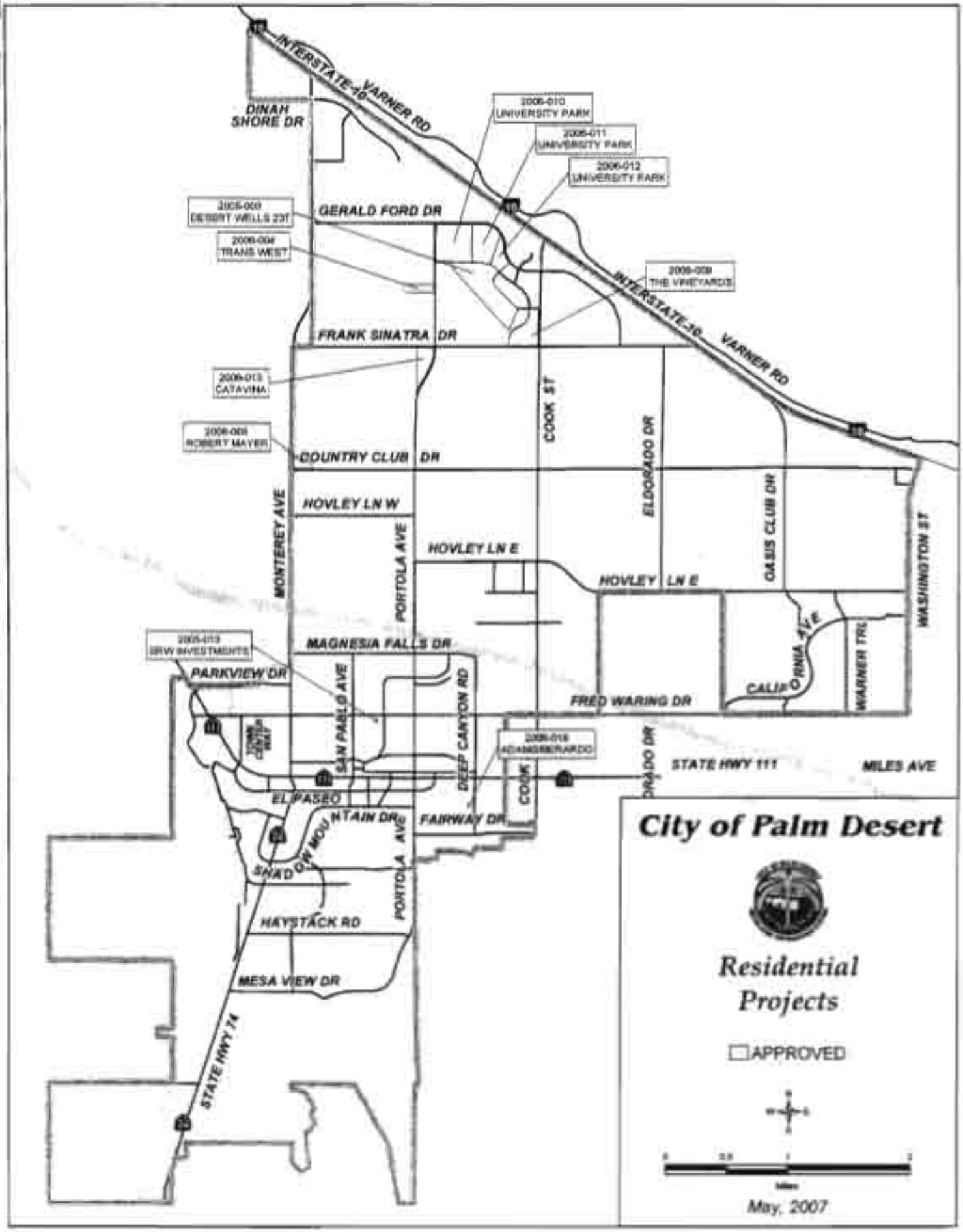
2004-008...COOK ST/SHERYL AVE...COOK/GOTTLIEB...2-story, 25,000 sq ft office building PP 04-04. APN 634-040-001. Approved 04/04. ALFRED COOK/BRIAN GOTTLIEB, 45-120 San Pablo Ave, Palm Desert, CA 92260. (760) 568-2296. Completed Spring 2007

2004-028...77-621 SPYDER CIRCLE...PEGGY AMES...EXPIRED ~~One 9,180 sq ft office/warehouse building. APN 653-381-011. PP 04-25. Approved 11/04. PEGGY AMES, & RANDY WEINER, 72-925 Fred Waring Drive, Palm Desert, CA, 92260. (760) 369-2850.~~

2004-032...77-321 ENFIELD LANE...NEDRAC... A 6,935 sq ft Industrial warehouse building. APN 626-320-014. PP 04-16. Approved 12/04. NEDRAC, INC., 5930 Lakeshore Dr, Cypress, CA, 90630. (714) 799-7333. Completed Spring 2007

2005-002...36-775 PORTOLA AVE...COMMUNITY CENTER... EXPIRED ~~A 94,000 sq ft Community Center Facility on 8.5 acre lot. APNs 653-370-020 and 024. PP 04-23. Approved 01/05. JEWISH FEDERATION OF PALM SPRINGS, 255 N El Cielo, Suite 430, Palm Springs, CA, 92262. (760) 325-7281.~~

2005-021...74-836 TECHNOLOGY DR ST...LOST HORSE MOUNTAIN... Construct an 11,395 sq ft retail/office building with a drive thru Starbuck Restaurant. APN 653-390-071. PP 05-09. Approved 09/05. LOST HORSE MOUNTAIN, LLC 45-445 Portola Ave, Palm Desert, CA 92260 (760) 837-1880. Completed Spring 2007


City of Palm Desert
Residential Projects
APPROVED
May, 2007
INTERSTATE-10
VARNER RD
DINAH SHORE DR
2006-010 UNIVERSITY PARK
2006-011 UNIVERSITY PARK
2006-012 UNIVERSITY PARK
2005-001 DESERT WELLS 23T
2006-004 TRANS WEST
GERALD FORD DR
2006-009 THE VINEYARDS
FRANK SINATRA DR
2006-013 CATAVINA
2006-008 ROBERT MAYER
COUNTRY CLUB DR
COOK ST
ELDORADO DR
OASIS CLUB DR
WASHINGTON ST
MONTEREY AVE
HOVLEY LN W
PORTOLA AVE
HOVLEY LN E
HOVLEY LN E
2005-013 BRW INVESTMENTS
MAGNESIA FALLS DR
PARKVIEW DR
SAN PABLO AVE
DEEP CANYON RD
FRED WARING DR
CALIFORNIA AVE
WARNER TRL
2006-016 ADAMS/BERARDO
PRADO DR
STATE HWY 111
MILES AVE
EL PASEO
FAIRWAY DR
SHADOW MOUNTAIN DR
HAYSTACK RD
MESA VIEW DR
STATE HWY 74

RESIDENTIAL PROJECTS - APPROVED

2001-016...73-825 LARREA STREET...FEDDERLY & ASSOCIATES...12 apartment units. PP 01-06 Approved 4/01. FEDDERLY & ASSOCIATES, 45-350 San Luis Rey Avenue, Palm Desert, CA 92260 (760) 773-5205.

2005-003...GERALD FORD/PORTOLA/COOK...DESERT WELLS 237... Subdivide 69.26 acres into 270 single-family lots. TT 32655. PM 31730, Parcel 9 Approved 03/05. Desert Wells 237, LLC, 5005 Calle San Raphael, Palm Springs, CA 92262. (760) 325-4289.

2005-013...73-692 SANTA ROSA WAY...SRW INVESTMENTS... A precise plan for a two-story, four-unit apartment complex within the R-3, S.O. zone. PP 05-10. Approved 07/05. SRW Investments, 35 Sierrra Madre Way, Rancho Mirage, CA 92270. (760) 837-1057.

2006-004...SHEPHERD LANE...TRANS WEST... Subdivide 9.69 acres into 32 single-family lots (8,749 minimum lot size) located on east and west sides of Shepherd Lane,2,400 feet North of Frank Sinatra Dr. TT 34391. APNs 653-380-001 & 019. Approved 02/06. Trans West Housing, 47-120 Dune Palms Road, Suite C, La Quinta, CA 92253. (760) 777-4307.

2006-005...73-150 COUNTRY CLUB DR...ROBERT MAYER... Tentative Tract Map for 49 Residential lots on 8.63 acres. TT 33120. PP 05-28. APN 620-391-015. Approved 03/06. Robert Mayer Corp. 660 Newport Center Dr, Suite 1050, Newport Beach, CA 92660. (949) 759-8091.

2006-009...37-755 COOK ST...THE VINEYARDS... Construct 260 apartments on 19.6 acre site. TT 34304. APN 653-400-072. Approved 09/06. Sinatra & Cook, LLC, 828 N. Ogden Dr, Los Angeles, CA, 90046. (310) 508-4083.

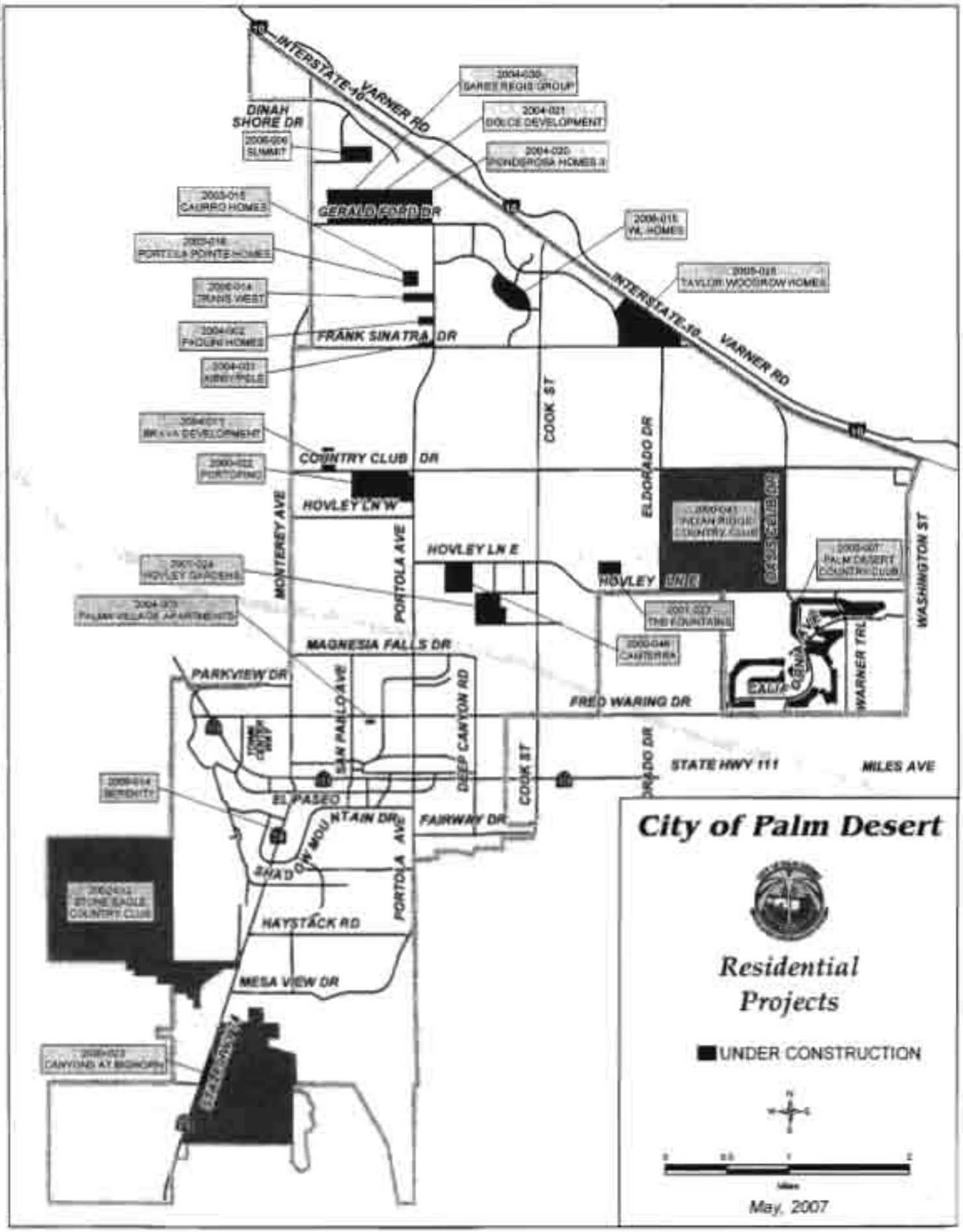
2006-010...74-255 GERALD FORD DR...UNIVERSITY PARK... Construct 244 single-family homes on 42.2 acre site. TT 34055. APNs 653-390-083, 653-390-087, and 653-390-082. Approved 04/06. Palm Desert Funding Company, LP, 8 Civic Plaza, Suite 215, Newport Beach, CA 92660. (949) 644-7600.

2006-011...36-200 PACIFIC AVE...UNIVERSITY PARK... Tentative Tract Map for 141 single-family homes. TT 34055. APNs 653-390-064, 653-390-077, and 653-390-062. Approved 04/06. Palm Desert Funding Company, LP, 8 Civic Plaza, Suite 215, Newport Beach, CA 92660. (949) 644-7600.

2006-012...74-300 COLLEGE DR...UNIVERSITY PARK... Tentative Tract Map for 72 single-family homes on 81.6 acre site. TT 34074. APNs 653-390-064, 653-390-077, and 653-390-062. Approved 04/06. Palm Desert Funding Company, LP, 8 Civic Plaza, Suite 215, Newport Beach, CA 92660. (949) 644-7600.

2006-013...SW CORNER FRANK SINATRA DR & PORTOLA AVE...CATAVINA... Tentative Tract Map for 159 single-family homes on 18.67 acre site. TT 33719. APNs 620-400-015 and 620-400-016. Approved 05/06. Chad Meyers/RJT Homes, PO Box 810, La Quinta, CA 92247. (760) 564-6555.

2006-018...74-455 DRIFTWOOD DR...ADAMS/BERARDO... Construct a three-unit apartment complex. PP 06-11. APN 625-143-015. Approved 12/06. Adams/Berardo, P.O. Box 12253, Palm Desert, CA 92255. (760) 285-0826.


City of Palm Desert
Residential Projects
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INTERSTATE 10
VARNER RD
DINAH SHORE DR
GERALD FORD DR
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MESA VIEW DR
MONTEREY AVE
PORTOLA AVE
SAN PABLO AVE
DEEP CANYON RD
COOK ST
ELDORADO DR
WASHINGTON ST
WARNER TRL
2004-030 SABER REGIS GROUP
2004-021 DIOCE DEVELOPMENT
2004-020 PONDEROSA HOMES II
2006-006 SUMMIT
2003-015 CALIRO HOMES
2006-015 WL HOMES
2005-018 PORTOLA POINTE HOMES
2005-028 TAYLOR WOODROW HOMES
2006-014 TRUMS WEST
2004-002 FIDLINI HOMES
2004-031 KIRBY/BELE
2004-017 BRAVA DEVELOPMENT
2006-022 PORTOPINO
2006-041 INDIAN RIDGE COUNTRY CLUB
2006-007 PALM DESERT COUNTRY CLUB
2001-024 HOVLEY GARDENS
2004-029 PALMA VILLAGE APARTMENTS
2001-027 THE FOUNTAINS
2006-046 CANTERRA
2006-014 SERENITY
2006-012 STONE EAGLE COUNTRY CLUB
2006-012 CANYONS AT BIGHORN

RESIDENTIAL PROJECTS - UNDER CONSTRUCTION

2000-022...73-755 COUNTRY CLUB DR...PORTOFINO... 288 apartment units and 182 casita units on 75 acres. Senior health and wellness resort, 161 bed skilled nursing, 150 bed assisted living, GPA 98-6, C/Z 98-7, PP/CUP 98-21 & DA. Approved 1/99. ROYCE INTERNATIONAL INVESTMENTS CO., 249 Las Entradas Drive, Santa Barbara, CA 93108 (805) 969-3927.

2000-023...HIGHWAY 74...CANYONS AT BIGHORN...395 lot residential country club with 18-hole golf course. TT 25296, TT 28575. WINMAR PALM DESERT, 19700 Fairchild, Suite 120, Irvine, CA 92612 (714) 225-4200.

2000-043...COUNTRY CLUB DR...INDIAN RIDGE COUNTRY CLUB...1,278 residential units with (2) 18 hole golf courses. TT 26123. SUNRISE DESERT PARTNERS, 42-600 Cook Street, Palm Desert, CA 92260 (760) 568-2828.

2000-046...74-555 HOVLEY LANE EAST...CANTERRA...612 Apartments. PP 87-37. Approved 1987 PRIME RESIDENTIAL, 77 West Wacker Drive, Suite 4200, Chicago, IL 60601. (312) 917-8875.

2001-023...41-505 CARLOTTA DRIVE...THE FOUNTAINS...82-single story units, 32 casitas, 55 assisted living, and converting existing 22 assisted units into Alzheimer facility. C/Z 01-03, PP 01-07. Approved 8/01. No Permits. THE FOUNTAINS, 2020 W Rudasill Rd, Tucson, AZ 85709 (520) 742-4252.

2001-024...42nd AVE, HOVLEY GARDENS...40 acres, 162 multi-family units, 117 single-family affordable units. C/Z 01-04 , GPA 01-03, PP 01-11, TPM 30193. Approved 3/01.
PALM DESERT REDEVELOPMENT AGENCY/PALM DESERT DEVELOPMENT CO,
PO Box 3958, Palm Desert, CA 92261 (760) 568-1048.
Note: the 162 multi-family units were completed in 2004.

2002-012...ANNEXATION AREA 36...STONE EAGLE... 221 acres, residential village (44 lots), clubhouse, 18-hole golf, driving range, comfort station, open pavilion. GPA 02-01, C/Z 02-01, TT 30438, PP/CUP 02-03, DA 02-01. Approved 9/02. DESTINATION DEVELOPMENT CORPORATION, 74-001 Reserve Drive, Indian Wells, CA (760) 779-1646.

2003-015...SHEPHERD LANE...CAURRO HOMES...Subdivide 5 Acre site into 16 single-family lots. TT 31020. Approved 6/03. DOMINIC CAURRO, 40-841 Glenmoore, Palm Desert, CA 92260 (760) 568-0908.

2003-016...SHEPHERD LANE...PORTOLA POINTE. Subdivide 5 Acre site into 16 single-family lots. TT 30706. Approved 6/03. PORTOLA POINT, LLC, 73-155 Fiddleneck Lane, Palm Desert, CA 92260 (760) 773-0677.

2004-002...SHEPHERD LANE...PAOLINI HOMES...between Chinook Circle E and East College View Circle...Subdivide 4.68 Acre site into 16 single-family lots. TT 31860. APN 653-751-017 Approved 02/04. CHRIS PAOLINI, 40-993 Sonata Court, Palm Desert, CA 92260 (760) 641-3716.

2004-003...73-610 SANTA ROSA WAY...PALMA VILLAGE APTS...36 unit affordable housing complex. PP 02-16, DA 02-02 Approved 02/03. PALM DESERT REDEVELOPMENT AGENCY, 73-510 Fred Waring Drive, Palm Desert, CA 92260 (760) 346-1127.

2004-011...73-200 COUNTRY CLUB DRIVE...BRAVA DEVELOPMENT...Subdivide 12.7 acres into 13 condominium lots; 38 triplex buildings totaling 114 units. PP 04-12, TT 32420. Approved 07/04. BRAVA DEVELOPMENT GROUP, LLC. 73-081 Fred Waring Drive, Palm Desert, CA 92260 (760) 900-8989.

2004-020...NW CORNER PORTOLA AVE/ 74-000 GERALD FORD DR...PONDEROSA HOMES II... Subdivide 87.45 Acre site into 237 single-family lots. TT 31490. APN 653-260-036 Approved 09/04. PONDEROSA HOMES II, INC. 6671 Owens Drive, Pleasonton, CA 94588 (925) 460-8910.

RESIDENTIAL PROJECTS - UNDER CONSTRUCTION (Continued)

2004-021...GERALD FORD DR/GATEWAY DRIVE...DOLCE DEVELOPMENT... Subdivide 38.05 Acre site into 159 single-family lots, 11 lots for common area, 2 lots for school district. TT 31071. APN 653-260-030 Approved 10/04. Rilington Communities, ~~277 Rancheros Drive, Suite 303, San Marcos, CA 92069. (760) 471-5460.~~ New address and telephone: 30-885 Date Palm Drive, Cathedral City, CA 92234. (760) 328-0402.

2004-030...73-240 GERALD FORD DRIVE...SARES REGIS GROUP... GPA from Low Density Residential (3-5 dwelling units per acre) to High Density Residential (7-18 dwelling units per acre), Change of Zone from PR-5 (Planned Residential, 5 units per acre) to PR-13 (13 units per acre), Precise Plan/Conditional Use Permit and Tentative Tract Map for condominium purposes to construct three-hundred, twenty (320) residential condominium units on a 25-acre site on the North side of Gerald Ford Drive. GPA 03-05, Z/Z 03-04, TT 31363, PP/CUP 03-06, and DA 03-02. APN 653-260-029. Approved 04/04. Sares Regis Group, 18825 Bardeen Avenue, Irvine, CA 92612 (949) 253-0455.

2004-031...PORTOLA AVE/FRANK SINATRA DRIVE...KIBBY/PELE DEVELOPMENT... Subdivide 3.88 acre site into 14 single-family lots. TT 33018. APN 653-760-018 Approved 12/04. Lauri Kibby/Pele Development, 11349 Bolas St, Los Angeles, CA 90049. (310) 877-3110.

2005-007...PALM DESERT COUNTRY CLUB...PALM DESERT COUNTRY CLUB... Change of zone from Open Space to R-1, 9000 for 41 lots around the golf course perimeter; Change of zone from Open Space to Planned Residential - 6 for 9.68 acres; a Tentative Tract Map to create 95 single-family lots and precise plan with development agreement for golf course related improvements and new club house. CZ 04-01, TT 31836, PP04-01, DA 04-01. APNs 637-350-001 thru 007; 637-424-039, 043; 637-190-001 thru 005; 634-202-303, 004; 637-081-020; 637-020-001 thru 005. Approved 6/25/04. KOSMONT COMPANIES, 16501 Ventura Blvd, Suite 511, Encino, CA 91436. (818) 981-8484.

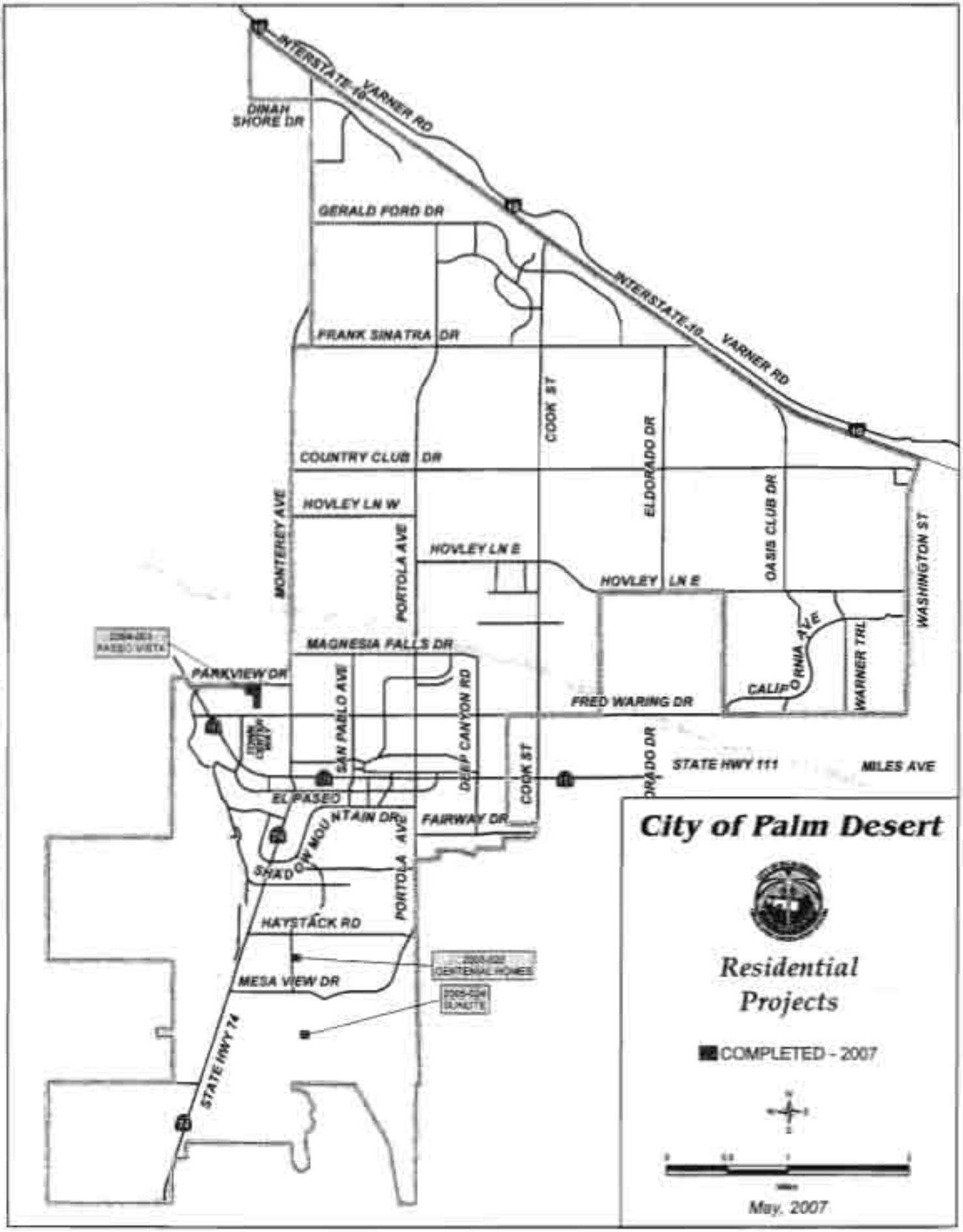
2005-014...SHEPHERD LANE...TRANS WEST... Subdivide 9.73 acres into 32 single-family lots (8,749 minimum lot size) located on east and west sides of Shepherd Lane. TT 33935. Approved 10/05. Trans West Housing, 47-120 Dune Palms Road, Suite C, La Quinta, CA 92253. (760) 777-4307.

2005-025...EMERALD DESERT RV PARK...TAYLOR WOODROW ... Construct a 755-unit residential projects, 605 condominium/single-family units (Taylor Woodrow Homes) and 150 Apartment units (Emerald Brook LLC) on 79.6 acres. APN 653-420-010. TPM 33837. GPA 05-02, C/Z 05-02, PP 05-12. Approved 12/05. Taylor Woodrow Homes, Inc. 15 Cushing, Irvine, CA 92618. (949) 341-1200. Emerald Brook LLC, 1100 Quail Suite 102, Newport Beach, CA 92660. (949) 833-1960.

2006-006...73-600 35TH AVE...SUMMIT... Construct 247 residential condominium units on a 20-acre site Change of Zone from SI to PR-13 TT 34179. PP 05-02, CZ 05-03. APN 653-250-007. Approved 02/06. Summit Properties, 2082 Michelson Dr, Suite 100, Irvine, CA 92612. (949) 852-0322.

2006-014...45-900 HWY 74...SERENITY... Tentative Tract for 6 detached single-family homes on 18,400 sq ft site. TT 34597, PP 06-07, CUP 06-04. APN 628-081-007. Approved 06/06. Serenity of Palm Desert, LLC. PO Box 1135, Poway, CA 92074. (858) 705-1226.

2006-015...SW CORNER GERALD FORD/COOK ST...W.L. HOMES... Construct 195 residential condominium units, private recreation facilities, a public park site on 26.83 acres. TT 34626, PP 06-05. APNs 653-390-064, 653-400-050, and 653-400-055. (lots 10 & 14 of PM 31730). Approved 07/06. W. L. Homes, LLC, 255 E Rincon St, Suite 100, Corona, CA, 92879. (951) 272-5123.


City of Palm Desert
Residential Projects
COMPLETED - 2007
May, 2007
INTERSTATE-10
VARNER RD
DINAH SHORE DR
GERALD FORD DR
FRANK SINATRA DR
COUNTRY CLUB DR
HOVLEY LN W
HOVLEY LN E
MONTEREY AVE
PORTOLA AVE
COOK ST
ELDORADO DR
OASIS CLUB DR
WASHINGTON ST
WARNER TRL
CALIFORNIA AVE
MAGNESIA FALLS DR
PARKVIEW DR
SAN PABLO AVE
DEEP CANYON RD
FRED WARING DR
STATE HWY 111
MILES AVE
EL PASEO
FAIRWAY DR
SHADOW MOUNTAIN DR
HAYSTACK RD
MESA VIEW DR
STATE HWY 74
CENTENNIAL HOMES
SUNLITE

RESIDENTIAL PROJECTS - COMPLETED IN 2007

2003-020...BEL AIR RD/ALAMO DR...CENTENIAL HOMES... Subdivide 2.53 Acre site into 9 single-family lots. TT 31346 Approved 11/03. CENTENIAL HOMES, 7533 Redwood Blvd, Novato, CA 94945 (415) 899-1962. Completed Spring 2007

2004-001...72-755 PARKVIEW...PASEO VISTA... Subdivide 9.75 Acre site into 65 single-family lots. TT 31969, PP 03-24. Termination of existing DA 99-3 (Ord. No. 932) Approved 02/04. SOUTHERN SUN CONSTRUCTION, 73-733 Fred Waring Drive, Palm Desert, CA 92260 (760) 346-9844. Completed Spring 2007

2005-024...NE CORNER SUNROSE LN AND CROSBY LN...SUNLITE... Subdivide 2.5 acres into five (5) parcels. APN 655-300-015. TPM 33943. Approved 12/05. Sunlite Development, P.O. Box 10688, Palm Desert, CA 92260. (760) 340-9800. Completed Spring 2007