



Associated Engineering Consultants, Inc.

Pavement Management Plan

Prepared for:

**Indian Wells Country Club Community-FAMD #1
Indian Wells, CA**

**By
Associated Engineering Consultants, Inc.**

**January 2021
Job No. 20033**



Associated Engineering Consultants, Inc.

January 11, 2021

Job No. 20033

Indian Wells
42635 Melanie Place
Suite 103
Palm Desert, CA 92211

Attn: Mr. John Walters-Clark
District Manager / FAMD #1

Subject: Pavement Management Plan
Indian Wells CC / FAMD #1

Dear Mr. Walters-Clark:

We have completed our evaluation of pavement conditions found throughout Indian Wells and have prepared a Pavement Management Plan (PMP). Our findings and recommendations are based on visual examinations of the various roads that were performed by our firm. Extensive measurements and photographs were taken throughout such that a thorough record might be kept by our office should the need for an additional review arise. The duration of the PMP is five years.

Overall pavement conditions throughout Indian Wells are poor to good. The existing condition is a function of age, traffic and previous maintenance and rehabilitation actions. Indian Wells maintains approximately 2,403,401 square feet of asphalt-concrete pavements.

Our PMP suggests the need for approximately \$3,476,403.38 in improvements to protect your current investment in pavements. This cost includes engineering and construction management. A list of repairs and maintenance, broken down on a yearly basis, is included in Table 1 of this report.

Thank you for the opportunity to be of service to Indian Wells. If you have any questions or comments, please contact us at your earliest convenience.

Very truly yours,
ASSOCIATED ENGINEERING CONSULTANTS, INC.

Jeff Pearson
Project Manager

EXECUTIVE SUMMARY

General Conditions

The pavements found throughout Indian Wells CC-FAMD #1 are generally in poor to good condition. Due to the age and conditions of AC pavements found throughout Indian Wells, various repairs, PCC curb & gutter, surface seal coat, AC overlays and AC reconstruction are recommended over the next five years. As a result of continued maintenance / rehabilitation, the pavements will continue to perform and the investment in AC pavements will be maintained.

Projected Costs

The following table provides our estimated construction costs and actions throughout the site for the next five years.

<u>Priority / Plan Year</u>	<u>Cost</u>	<u>Action</u>
Priority 1 / 2021	\$970,972.09	Conduct full-depth AC Reconstruction, AC Mill and Inlay, AC Overlay, PCC repairs, and re-striping on various streets.
Priority 2 / 2022	\$539,062.61	Conduct full-depth AC repairs, AC Mill & Inlay, AC Overlay with fabric interlayer, and re-striping on various streets.
Priority 3 / 2023	\$907,506.07	Conduct full-depth AC & PCC repairs, AC Reconstruction, AC Mill & Inlay, AC Overlay with fabric interlayer, surface seal coat, and re-striping on various streets.
Priority 4 / 2024	\$879,873.09	Conduct full-depth AC repairs, AC Overlay with fabric interlayer, surface seal coat, and re-striping on various streets
Priority 5 / 2025	\$178,989.52	Conduct surface seal coat and re-striping on various streets

BACKGROUND

A Pavement Management Plan (PMP) is a guideline that assists property managers, property owners and property users in making crucial financial decisions when reviewing current and future investments in asphalt concrete pavements and associated facilities. A PMP provides two primary benefits. First and foremost, the PMP provides funding guidelines for future years such that proper budgeting for future construction can be implemented. Secondly, the plan provides specific engineering guidelines for the prioritization of repairs and maintenance. The types of repairs and maintenance that are suggested in the PMP are based on the existing pavement characteristics, severity and extent of defects, and a predictive model of deterioration based on environment, sound engineering principles, professional experience, scientific study and historical record.

This PMP was developed by determining existing conditions of pavements and identifying the type, extent and location of all pertinent defects. In addition, existing utilities, current and future demands were factored into the plan. Also noted during the inspection were items that may constitute a hazard and thus pose a threat of liability and the potential of litigation.

The objective of this PMP is to optimize the current investment in pavements by scheduling maintenance and rehabilitation activities with a goal of achieving the maximum benefit at a minimum expenditure. This PMP is the result of a systematic approach by which responsive maintenance work, repairs and improvements can now be executed over a determined duration. In this case, the duration is five years. The final step of the plan is to prioritize improvements.

Indian Wells Country Club-FAMD #1 maintains approximately 2,403,401 square feet of asphalt concrete (AC) pavement roadway. Conditions and evidence throughout Indian Wells indicate that preventative maintenance and rehabilitation have been conducted in past years.

Mr. Jeff Pearson of Associated Engineering Consultants, Inc. (AEC) evaluated the various roads throughout the association in the Spring of 2020. During our evaluation measurements and photographs to enhance the record of his visit. Various selected photographs can be found in the **Appendix** of this report.

DESIGN METHOD

When older pavements are evaluated, two major criteria are examined. They are:

1. The structural requirements of existing pavements.
2. The potential for reflective cracking or duplicative defects.

The structural requirements of existing pavements are enhanced through the placement of an overlay. The thickness of the overlay is based upon the existing thickness of the pavement, the condition of existing pavements, the load or traffic that the pavement must sustain over its lifespan, and environmental factors such as weather and native soils.

Reflective cracking occurs when cracks or similar defects that were prevalent throughout the original pavement surface manifest themselves through a newly placed overlay. Typically, it takes several years for reflective cracks to appear. Placing an AC overlay that is at least one-half the thickness of the existing AC controls reflective cracking. A fabric interlayer may be used and a credit of 0.10-feet of AC may be applied. This credit can only be applied to the reflective cracking control criteria. It should be noted that when using a fabric interlayer, the AC overlay should be a minimum of 1.5-inches in thickness, regardless of the credit for the use of a fabric interlayer. This minimum requirement assures that there will be sufficient heat to assist the bonding of the fabric interlayer and AC, as well as making it less likely for slippage or shoving of the AC material due to a lack of thickness.

In some cases we have recommended the use of a fabric interlayer. As mentioned in the paragraph above, a fabric interlayer is typically used to help retard reflective cracking. The State of California guidelines for reflective cracking control is that at least one-half of the existing thickness of asphalt concrete be placed as an AC overlay. A 0.10-foot (1.2 inches) credit towards this requirement can be obtained by using a paving fabric. To date, there is no credit for using fiber additives. When any additive or other product is used, it is important that all manufacturer specifications are followed. Fabric should not be placed on steep grades, within 150-feet of busy intersections or anywhere where heavy braking or acceleration takes place

Reflective cracking is also controlled through applying a crack seal to transverse and longitudinal cracking and the rendering of proper AC repairs prior to the placement of an overlay. It is typically the recommendation of AEC, Inc., that a cold pour crack fill material is used when sealing cracks prior to placement of a thin AC overlay without a fabric interlayer. The hot pour crack fill materials will often reflect through a thin AC overlay. This reflection is caused by the heat of the AC overlay causing the material to expand and often causes a small bump in the new surface. Though these bumps are seldom visible, they are certainly noticed when driven over by a vehicle.

Prior to placement of any overlay we recommend performing full-depth repair of the wheel paths or any pavements that exhibit moderate to severe fatigue cracking, mud pumping or rutting. Any area that is rutted or is pumping mud cannot be repaired by overlay alone. Such defects are commonly signs of base failure, which requires removal and

replacement and/or the placement of an AC leveling course. (Typically, full-depth AC is used in these repairs.) We typically recommend a minimum depth of 4 or 6-inches placed in two equal compacted lifts. An 8-inch repair would occur in an area such as entrance, exit roads or construction routes as warranted. We also recommend a thorough cleaning of the pavement surfaces and an application of crack seal prior to the placement of an overlay. Again, as mentioned in the prior paragraph, the use of cold or hot pour crack fill material is typically recommended.

Prior to placing an overlay or AC leveling course, repairing a Portland Cement Concrete, (PCC) gutter, etc., drainage requirements need to be examined. Poor drainage is commonly associated with accelerated pavement degradation. Drainage is typically poor-to-fair throughout Indian Wells.

We recommend the use of ½" - Type A Maximum Medium aggregate for AC used for all overlays 2-inches or thinner. The size of aggregate is dependent on the thickness of the overlay. The overlay thickness should be at least 1-1/2 times the thickness of the largest aggregate. If this guideline is not followed the finished product may exhibit excessive and premature raveling, lack of compaction and surface segregation. These defects occur when the aggregate is allowed to roll over on other aggregate. Surface voids are the first major sign of this occurring. A larger, ¾" - Type A Maximum Medium aggregate is recommended for a thicker AC overlays and all full depth AC repairs. Each section of pavement should be evaluated on a case-by-case basis.

PLAN APPROACH

As discussed in our proposal, the development of this PMP report involves four primary functions:

- **Pavement Condition Evaluation** – Every paved road, street, parking area, etc., was evaluated to determine overall pavement conditions and identify the current extent and severity of pertinent defects such as alligator fatigue cracking, longitudinal cracking, transverse cracking, raveling, rutting, and surface profile. All paved areas were assigned a maintenance action for the duration of the PMP.
- **Analysis and Design** – After visual identification of pertinent defects, an analysis was performed to establish priorities based on classification and usage (travel lane, entrance/exit, parking area, staging area). A maintenance action was assigned to each uniform pavement segment.
- **Hazard and Liability Identification** – During the visual inspection at each site, hazards and or conditions contributing to possible hazards and liability issues were identified with recommended actions assigned to each noted and/or general hazard.
- **Pavement Management Plan** – Using sound engineering judgment, a rehabilitation/maintenance plan for future years was prepared. Work is projected over a five-year period.

The pavement condition evaluation is a systematic, objective methodology for rating defects so that two different people rating the same segment would produce the same evaluation. In deciding which projects to do when, AEC considered several other factors:

- o **Combinations:** Build a larger project all at once instead of disrupting an area year after year or fragmenting the work so much that the mobilization cost increases.
- o **Continuity:** Where the pavement is generally in the same condition through several adjacent areas, build them all to the same standard rather than having one section with a different treatment.
- o **Economics of Scale:** In any given year, seal coat or overlay work is either not included at all, or is included in a large enough quantity to obtain a low unit price.
- o **Delaying Actions:** The condition of all pavements will gradually deteriorate until a rehabilitation action is taken. For expensive overlay projects that cannot be budgeted until late in the plan, a seal coat is applied in one of the early years to prevent unacceptable deterioration until the overlay project is implemented.
- o **Extending Service Life:** The service life for a slurry seal is expected to be seven to ten years. The service life of an AC overlay is considered to be ten to twelve years. The life of the overlay can be extended approximately five years by routine maintenance and applying a slurry seal or seal coat approximately five to seven years after the overlay has been placed.

DEFECTS AND MAINTENANCE OPTIONS

There are four basic levels of asphalt concrete pavement maintenance: routine maintenance, maintenance seal coat, rehabilitative overlay, and reconstruction.

Routine maintenance is performed where a pavement has no overall structural deficiency or failure. This type of maintenance involves full-depth dig-out repairs (i.e., areas with severe alligator cracking, mud pumping or rutting), isolated leveling of depressed or irregular profile areas, and cleaning and sealing pavement cracks. The pavement cracking (Block / Thermal Cracking) is one of the predominant types of defects at Indian Wells. These types of cracks are caused by thermal changes and / or absorptive aggregate found at local material quarries/plants. The severity of these cracks range from slight to severe (1.5" wide). They will be a maintenance issue in the future no matter what type of surface treatment is applied to the surface. Due to the expansion and contraction of the pavements during thermal changes these cracks will reflect through any type of surface treatment to the pavements. These types of cracks are normal for the desert region and maintaining them with a rubberized crack fill material would be the only way to treat them. An emulsified crack seal material would also be recommended when seal coat is the surface treatment, however it can be more costly. Routine maintenance is also performed before applying a maintenance seal or AC overlay.

A maintenance seal can be a parking lot type surface seal coat, highway application slurry seal, chip seal or micro paving. Maintenance seals are applied where there is substantial

EXISTING CONDITIONS & RECOMMENDATIONS

Within the confines of the property, there are approximately 2,403,401 square feet of AC pavement roadway. The overall pavement conditions throughout Indian Wells FAMD #1 is poor to good. This plan is set up to address all streets within the next five years.

The pavements were analyzed on a road-by-road basis. Basic dimensions and an assessment of the general conditions for each area were collected and maintained at the offices of Associated Engineering Consultants, Inc.

We have prioritized the roads based on condition, budget and constructability. Since this pavement management plan is for the duration of five years and are assigned based on priority. Priorities are as follows:

Priority 1, 2021 – Streets scheduled in this Priority are generally in poor condition. Continuous slight to severe block (photo 1) and intermittent to continuous slight to severe alligator fatigue cracking (photo 2) are evident throughout these streets. We are recommending isolated AC / PCC repairs, milling the previous overlay & fabric interlayer from the street and installing a new AC overlay with fabric interlayer, as well as full-reconstruction on the streets outlined in Priority One.

Priority 2, 2022 – Streets scheduled in this Priority are generally in poor condition, but are slightly better than those identified in Priority 1. Continuous moderate to severe block (photos 3 and 4) and intermittent slight-to-moderate alligator fatigue cracking (photo 5) are evident throughout these streets. We are recommending isolated AC repairs, milling the previous overlay & fabric interlayer from the street and installing a new AC overlay with fabric interlayer on streets outlined in Priority Two.

Priority 3, 2023 – Streets scheduled in this Priority are generally in poor-to-fair condition, yet are in slightly better condition than the streets identified in Priority 1 & 2. However, there were some major defects noted. Continuous slight to severe block (photo 6) and typical isolated-to-intermittent PCC repairs needed (photo 7) are evident throughout these streets. We are recommending isolated AC / PCC repairs, milling the previous overlay & fabric interlayer from the street and installing a new AC overlay with fabric interlayer, and surface seal coat, on streets outlined in Priority Three.

Priority 4, 2024 – Streets scheduled in this Priority are generally poor-to-fair, and are in similar condition to the streets identified in Priority 3. Continuous moderate to severe block (photo 8) and intermittent-to-continuous moderate-to-severe block cracking (photo 9) are evident throughout these streets. We are recommending isolated AC repairs, AC overlay with fabric interlayer, and surface seal coat, as outlined in Priority Four.

Priority 5, 2025 – Streets scheduled in this Priority will generally be in good condition, as they will have been fixed as needed, in Priority 1 and 2. These

streets will most likely not need any major repairs (photo 10) and simply require surface seal coat in order to protect Indian Wells' investment in pavements, which had been completed in the previous Priorities.

Please refer to **Figures 1 thru 5** for a visual representation and Table 1 for yearly cost for the various streets.

Other factors to consider when assigning tasks to particular years or level of priority are economies of scale, esthetics, and future usage and trends. In addition, you want to schedule your work such that the unit cost of a particular task is driven down to an absolute minimal.

Though the original intent of this PMP was to solely evaluate the condition of the existing pavements, several observations were made with regard to some of the contributing factors to pavement wear which include the quality of native soils, thermal changes of the region and garbage truck traffic.

SUMMARY

Based on the existing pavement conditions at Indian Wells Country Club-FAMD #1 many of the streets are in need of major rehabilitation and / or maintenance in order to prevent them reaching the next stage of failure. It is our belief that following the current plan will extend the service life of the pavement investment.

We have established a baseline of existing conditions for all streets throughout the Association. While rehabilitation treatments that are recommended for all of these streets are typically good for 10-12 year's we recommend starting a maintenance program immediately following Priority 5. Routine maintenance such as crack sealing, isolated asphalt repairs and surface seal coat will help extend the service life of the streets beyond 15 – 20 years.

INDIAN WELLS COUNTRY CLUB-FAMD#1
 Pavement Management Plan 2020
 Job No. 20033

Year 2021

Priority	Street Name	Width	Length	Cul-de-Sac	Total Sq. Ft.	Surface Treatment	PCC Repair (L.F)	AC Repair (Sq. Ft.)	Cost Total
1	Blue Jay Drive	24	280	2612	9,332	AC Reconstruction	24		\$37,261.60
1	Lark Drive (Pawnee to Pueblo)	20	1210	0	24,200	AC Reconstruction	150		\$103,210.00
1	Lark Dr. (Pawnee to Dead End)	24	463	0	11,112	AC Reconstruction	472		\$77,625.60
1	Robin Dr. (Pawnee to Pueblo)	20	1210	0	24,200	AC Reconstruction	150		\$103,210.00
1	Robin Dr. (Pawnee to Dead End)	24	254	2898	8,994	AC Reconstruction	254		\$53,227.20
1	Hopi Road	32	1134	6853	43,141	AC Mill and Inlay	850		\$156,503.15
1	Pima Road	32	1126	15936	51,968	AC Mill and Inlay	750		\$167,981.20
1	Pueblo Road (Sandpiper to Dead End)	30	1017	0	30,510	AC Overlay	1000		\$61,693.50
1	Pueblo Road (Sandpiper to End Lat. Parking)	10	264	0	2,640	AC Mill and Inlay			\$5,676.00
1	Pawnee Rd (Sandpiper to Dead End)	36	1119	0	40,284	AC Overlay	45		\$77,900.40
1	Club Drive (Outside of Gate)	46	400	0	18,400	AC Mill and Inlay			\$47,435.00
								Misc. Repairs	\$44,586.18
								Total	\$899,048.23
								Engineering	\$26,971.45
								Construction Management	\$44,952.41
								Total	\$970,972.09

Year 2022

Priority	Street Name	Width	Length	Cul-de-Sac	Total Sq. Ft.	Surface Treatment	PCC Repair (L.F)	AC Repair (Sq. Ft.)	Cost Total
2	Black Mountain Trail	37	2054	5776	81,774	AC Overlay		1500	\$159,156.90
2	Chocolate Mountain Road	37	401	5776	20,613	AC Overlay		1500	\$46,009.05
2	Coyote Creek Path	33	269	8874	17,751	AC Overlay		1000	\$38,089.35
2	Coyote Creek Path	57	72	0	4,104	AC Overlay		1000	\$12,842.40
2	Sugarloaf Mountain Trail	37	694	5776	31,454	AC Overlay		2500	\$71,314.90
2	Delgado Dr. (Sandpiper to Manitou)	28	1780	0	49,840	AC Overlay		1500	\$100,079.00
2	Delgado Dr. (Sandpiper to Manitou) Lat. Parking	10	201	0	2,010	AC Mill and Inlay			\$4,321.50
2	Neville Dr. Lateral Parking	10	120	0	1,200	AC Mill and Inlay			\$2,580.00
2	Neville Drive	28	384	0	10,752	AC Overlay		1500	\$27,766.20
								Misc. Repairs	\$36,972.74
								Total	\$499,132.04
								Engineering	\$14,973.96
								Construction Management	\$24,956.60
								Total	\$539,062.61

Priority	Street Name	Width	Length	Cul-de-Sac	Total Sq. Ft.	Surface Treatment	PCC Repair (L.F)	AC Repair (Sq. Ft.)	Cost Total
3	Sandpiper Drive (Club Dr to Pueblo Rd)	60	1879	0	112,740	Surface Seal Coat		2500	\$33,822.00
3	Sandpiper (Parking within VG conform)	12	1105	0	13,260	AC Reconstruction	1105		\$127,738.00
3	Sandpiper (Club to Pueblo Lateral Parking)	20	387	0	7,740	AC Mill and Inlay			\$16,641.00
3	Sandpiper Dr.(Manitou to Pueblo)	44	1104	0	48,576	Surface Seal Coat		1000	\$19,822.80
3	Delgado Drive (Lateral Parking)	10	573	0	5,730	AC Mill and Inlay		500	\$12,319.50
3	Club Dr. (Gate Entrance)	50	118	0	5,900	Surface Seal Coat		1000	\$4,395.00
3	Club Dr. (Sandpiper to Iroquois)	44	1463	0	64,372	Surface Seal Coat		1000	\$24,561.60
3	Club Terrace Drive	30	1323	6786	46,476	Surface Seal Coat		1000	\$19,192.80
3	Pawnee Rd. (Lateral Parking)	10	108	882	1,962	AC Mill and Inlay		1000	\$4,218.30
3	Pueblo Rd. (Sandpiper to Roadrunner)	34	433	0	14,722	Surface Seal Coat		1500	\$9,666.60
3	Roadrunner Drive (incl. Lateral Parking and Driveways)	33	2626	0	86,658	Surface Seal Coat		1000	\$33,872.40
3	Gurley Drive	28	441	5244	17,592	Surface Seal Coat		1000	\$10,527.60
3	Oswego Lane	28	198	4896	10,440	Surface Seal Coat		750	\$7,069.50
3	Seneca Lane	28	78	5440	7,624	Surface Seal Coat		750	\$6,224.70
3	Takota Lane	28	94	5168	7,800	Surface Seal Coat		750	\$6,277.50
3	Pawnee Road	32	440	4050	18,130	Surface Seal Coat		1500	\$13,314.00
3	Cayuga Lane	28	214	4830	10,822	Surface Seal Coat	75	1000	\$14,121.60
3	Cayuga Lane (Lateral Parking)	10	80	0	800	AC Mill and Inlay			\$1,720.00
3	Delgado Drive (Sandpiper to Sandpiper)	28	1390	0	38,920	Surface Seal Coat		2000	\$22,176.00
3	Shasta Lane	28	211	6141	12,049	Surface Seal Coat		1000	\$8,864.70
3	Teton Lane	28	165	5184	9,804	Surface Seal Coat		1000	\$8,191.20
3	Cottonwood Cove	30	1477	0	44,310	AC Overlay		1500	\$89,848.50
3	Dove Road (Entrance)	27	125	0	3,375	AC Mill and Inlay		125	\$7,912.50
3	Dove Road (End-to-End)	19	307	0	5,833	AC Mill and Inlay		125	\$13,197.20
3	Quail Run Drive (Bridge to Seminole)	35	1036	0	36,260	AC Overlay		500	\$69,706.00
3	Quail Run Drive (Seminole to Cottonwood Cove)	29	1584	5248	51,184	AC Overlay		1500	\$102,565.40
3	Black Hawk Dr.	30	263	0	7,890	Surface Seal Coat		500	\$4,992.00
3	Cherokee Road (Quail Run to Cul-de-Sac)	27	1478	7031	46,937	Surface Seal Coat		1000	\$19,331.10
3	Cherokee Road (Dead End)	19	194	0	3,686	Surface Seal Coat		500	\$3,730.80
3	Manitou Drive (from bridge back to itself near Sacatan)	31	3154	5963	103,737	Surface Seal Coat		2500	\$44,246.10
3	Medicine Bow Circle	31	40	4556	5,796	Surface Seal Coat		500	\$4,363.80
3	Papago Circle	31	250	6365	14,115	Surface Seal Coat		1000	\$9,484.50
3	Sacatan Circle	31	75	9430	11,755	Surface Seal Coat		1000	\$8,776.50
3	Seminole Road	27	855	0	23,085	Surface Seal Coat		1000	\$12,175.50
3	War Bonnet Circle	31	100	5494	8,594	Surface Seal Coat		500	\$5,203.20
								Misc. Repairs	\$40,013.50
								Total	\$840,283.40
								Engineering	\$25,208.50
								Construction Management	\$42,014.17
								Total	\$907,506.07

								(L.F.)	(Sq. Ft.)	
4	Sandpiper (Manitou to Appian)	44	1668	0	73,392			Surface Seal Coat	1000	\$27,267.60
4	Appian Way	36	1445	11316	63,336			Surface Seal Coat	1000	\$24,250.80
4	Box Mountain Road (Entrance to Mallorca)	40	145	0	5,800			AC Overlay	250	\$12,042.50
4	Box Mountain Road	28	586	0	16,408			AC Overlay	1000	\$35,604.80
4	Box Ridge Place	28	350	7992	17,792			AC Overlay	2000	\$43,415.20
4	Cota Way	28	440	0	12,320			AC Overlay	2000	\$33,292.00
4	Mallorca Lane	28	738	0	20,664			AC Overlay	2000	\$48,728.40
4	Sky Mesa Lane	28	752	0	21,056			AC Overlay	2000	\$49,453.60
4	Corte Picollo	36	282	9184	19,336			Surface Seal Coat	1000	\$11,050.80
4	Corte Picollo	57	72	0	4,104			Surface Seal Coat	1000	\$6,481.20
4	Manitou Dr. (Gate Entrance)	80	125	0	10,000			Surface Seal Coat	500	\$5,625.00
4	Manitou Dr. (Comanche to Iroquois)	46	1972	0	90,712			Surface Seal Coat	2000	\$37,713.60
4	Espinozo Street	32	186	8064	14,016			AC Overlay	1000	\$31,179.60
4	Ontiveros Court	32	699	6408	28,776			AC Overlay	1000	\$58,485.60
4	Tribeca Street	32	641	0	20,512			AC Overlay	1000	\$43,197.20
4	Vaidya Court	32	248	7200	15,136			AC Overlay	1000	\$33,251.60
4	Aztec Drive	36	269	0	9,684			Surface Seal Coat	1000	\$8,155.20
4	Casa De Mariposa	32	215	8342	15,222			Surface Seal Coat	1000	\$9,816.60
4	Comanche Lane	28	155	7395	11,735			Surface Seal Coat	1000	\$8,770.50
4	Comanche Lane	36	488	0	17,568			Surface Seal Coat	1000	\$10,520.40
4	Comanche Lane	36	74	0	2,664			Surface Seal Coat	250	\$2,111.70
4	Tomahawk Run	32	1418	9180	54,556			Surface Seal Coat	1000	\$21,616.80
4	Tomahawk Run	28	275	0	7,700			Surface Seal Coat	750	\$6,247.50
4	Inca Drive	28	1275	0	35,700			Surface Seal Coat	1000	\$15,960.00
4	Inca Drive	32	250	0	8,000			Surface Seal Coat	1000	\$7,650.00
4	Desi Drive	28	1008	0	28,224			Surface Seal Coat	1000	\$13,717.20
4	Desi Drive (Loop)	17	525	0	8,925			Surface Seal Coat	1000	\$7,927.50
4	Lou Circle	28	131	4860	8,528			Surface Seal Coat	1000	\$7,808.40
4	Iroquois Drive (Delgado to Club Terrace)	32	953	0	30,496			Surface Seal Coat	1000	\$14,398.80
4	Iroquois Drive (Manitou to Delgado)	42	570	0	23,940			Surface Seal Coat	1000	\$12,432.00
4	Iroquois Drive (from Manitou towards Black Mtn Tr.)	57	132	0	7,524			Surface Seal Coat	1000	\$7,507.20
4	Iroquois Drive (from Narrowing point to Appian Way)	47	965	0	45,355			Surface Seal Coat	1000	\$18,856.50
4	Iroquois (Club Dr. to Club Terrace)	47	1550	0	72,850			Surface Seal Coat	1000	\$27,105.00
4	E. Via Villaggio	36	374	9558	23,022			Surface Seal Coat	1000	\$12,156.60
4	Iroquois Drive (from Appian to E. Via Villaggio)	36	1525	0	54,900			Surface Seal Coat	1000	\$21,720.00
4	N. Via Villaggio	36	869	0	31,284			Surface Seal Coat	1000	\$14,635.20
4	Via Venito	36	652	0	23,472			Surface Seal Coat	1000	\$12,291.60
4	W. Via Villaggio	36	760	0	27,360			Surface Seal Coat	1000	\$13,458.00
									Misc. Repairs	\$38,795.11
									Total	\$814,697.31
									Engineering	\$24,440.92
									Construction Management	\$40,734.87
									Total	\$879,873.09

Priority	Street Name	Year 2025				Surface Treatment	PCC Repair (L.F)	AC Repair (Sq. Ft.)	Cost Total
		Width	Length	Cul-de-Sac	Total Sq. Ft.				
5	Blue Jay Drive	24	280	2612	9,332	Surface Seal Coat		\$2,799.60	
5	Lark Drive (Pawnee to Pueblo)	20	1210	0	24,200	Surface Seal Coat		\$7,260.00	
5	Lark Dr. (Pawnee to Dead End)	24	463	0	11,112	Surface Seal Coat		\$3,333.60	
5	Robin Dr. (Pawnee to Pueblo)	20	1210	0	24,200	Surface Seal Coat		\$7,260.00	
5	Robin Dr. (Pawnee to Dead End)	24	254	2898	8,994	Surface Seal Coat		\$2,698.20	
5	Hopi Road	32	1134	6853	43,141	Surface Seal Coat		\$12,942.30	
5	Pima Road	32	1126	15936	51,968	Surface Seal Coat		\$15,590.40	
5	Pueblo Road (Sandpiper to Dead End)	30	1017	0	30,510	Surface Seal Coat		\$9,153.00	
5	Pueblo Road (Sandpiper to End Lat. Parking)	10	264	0	2,640	Surface Seal Coat		\$792.00	
5	Pueblo Road (Sandpiper to Dead End)	36	1119	0	40,284	Surface Seal Coat		\$12,085.20	
5	Pawnee Rd (Sandpiper to Dead End)	46	400	0	18,400	Surface Seal Coat		\$5,520.00	
5	Club Drive (Outside of Gate)	37	2054	5776	81,774	Surface Seal Coat		\$24,532.20	
5	Black Mountain Trail	37	401	5776	20,613	Surface Seal Coat		\$6,183.90	
5	Chocolate Mountain Road	33	269	8874	17,751	Surface Seal Coat		\$5,325.30	
5	Coyote Creek Path	57	72	0	4,104	Surface Seal Coat		\$1,231.20	
5	Sugarloaf Mountain Trail	37	694	5776	31,454	Surface Seal Coat		\$9,436.20	
5	Delgado Dr. (Sandpiper to Manitou)	28	1780	0	49,840	Surface Seal Coat		\$14,952.00	
5	Delgado Dr. (Sandpiper to Manitou) Lat. Parking	10	201	0	2,010	Surface Seal Coat		\$603.00	
5	Neville Dr. Lateral Parking	10	120	0	1,200	Surface Seal Coat		\$360.00	
5	Neville Drive	28	384	0	10,752	Surface Seal Coat		\$3,225.60	
							Misc. Repairs	\$14,528.37	
							Total	\$159,812.07	
							Engineering	\$7,191.54	
							Construction Management	\$11,985.91	
							Total	\$178,989.52	
							Total	\$3,476,403.38	

APPENDIX
PHOTOGRAPHS



PHOTO 1

This photo represents intermittent slight to moderate block cracking. This is also an example of a previously sealed smooth surface.



PHOTO 2

This photo represents intermittent to continuous moderate alligator cracking.



PHOTO 3

Continuous moderate block cracking is depicted in this photo. This street was recently sealed and is in fair to good condition.



PHOTO 4

Another example of moderate to severe block cracking.



PHOTO 5

This is an example of isolated moderate alligator fatigue cracking.



PHOTO 6

Continuous moderate to severe block cracking is depicted in this photo.



PHOTO 7
Typical PCC repair needed is depicted in this photo.



PHOTO 8
Continuous slight to severe block cracking is depicted in this photo.



PHOTO 9

This photo is another example of continuous severe block cracking.



PHOTO 10

A street which requires surface seal coat is depicted in this photo. This street was recently reconstructed with new asphalt.