IOWA CONCRETE PAVING ASSOCIATION

IOWA SCENE

Sloan's Municipal Street Concrete Paving Program — Project Report #17

Sloan, Iowa — June, 1994

When early historians recorded the platting of Sloan, Iowa on July 29, 1870, they described the surrounding civil township as "lacking of several features common to all others in Woodbury County '---because---' It has no stream of water, no spring, nor is there any timber that can be called such -- yet the land is as rich and productive as any on the globe." Founded as a station site on the Sioux City and Pacific Railroad in the Missouri River valley 20-miles south of Sioux City where the soil is "pure, simple, flat as a floor and tropical in its fertility," the town was named after Samuel Sloan, formerly president of the Delaware, Lackawanna & Western Railway.

Although those railroads have long ceased to exist, modern transportation services are effectively supplied by the Chicago Northwestern Railroad, Interstate 29, Iowa 141 and the Sioux Gateway Airport.

As settlers were drawn westward by favorable geographic attributes, corn, cattle and commerce generated the fiscal incentives that today makes Sloan a prosperous, attractive and expanding home for its 938 residents. In addition to housing commuters who are employed at Sioux City, Sloan boasts a modern city hall, quality water and sewer systems, a public park and an excellent 9-hole golf course. With justifiable pride attention is drawn to the Westwood Community School, many churches and commercial enterprises that are dominated by the stately Western Iowa Coop grain elevator.

In keeping with their community focus on progress, according to City Clerk Kay Ping, the recent completion of a 22-block municipal construction project by the Cedar Valley Corporation (CVC) of Waterloo, Iowa means that excepting for two short blocks, all developed streets in Sloan are now paved with Portland Cement Concrete (PCC). Woodbury County road K-42, old US 75 and Evans Street (main) are also PCC but the latter two have been AC resurfaced. After more than 48 years of service, they remain in satisfactory condition.

Nearly 20-years ago a public works long range program was adopted to PCC pave residential streets, an effort that would eventually total 62 blocks. One-third of the streets were built in 1976 and another one-third in 1978. Although originally intended for completion in 1980, the last stage had to be deferred in order to build a higher-priority water treatment plant and because of escalating road financing costs. When interest rates showed a sharp decline last year, the city elected to pursue their third and final stage.

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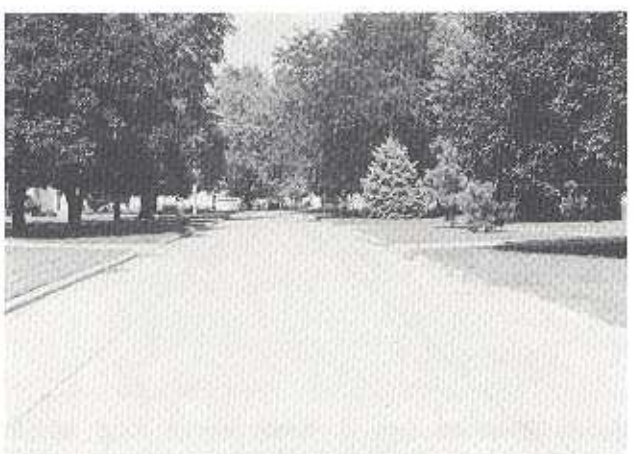
At the letting on July 22, 1993, city officials received a low bid of $761,750 from Cedar Valley Corporation for paving all 22 blocks 25-feet wide by 6-inches thick, including street returns, drains and other miscellaneous requirements. Contract documents permitted work to be completed not later than July 31, 1994. Construction plans and specifications were prepared by consulting engineers Kuehl & Payer, Ltd. of Storm Lake, Iowa under the supervision of Mr. Robert F. Payer. This firm also performed project management duties for the city to insure technical compliance. Underground utility work was completed in late 1993 by Hopkins Construction, a local subcontractor.

When work started in early 1994 following a staging sequence that retained essential property access, the natural subgrade material was scarified and compacted. This was a loess material and for the most part, this worked very well. In the locations where there were minor problems, these were also the areas of the deepest cut at the low points where the intakes were constructed. The previous sealcoat was totally removed and the subgrade was cut into natural ground below what had been compacted with time from street traffic. Gutter elevations of the 6-inch by 25-foot curbed PCC slab were engineered to supply essential gradients for surface drainage.



Cedar Valley used their CMI SF-250 paver to place the concrete supplied by Standard Ready Mix Concrete Co. of Sioux City. Delivery rates and mix consistency was excellent. A burlap drag created the desired texture, followed by a uniform application of white pigmented curing compound. At the contractor's option sawed contraction joints were initially cut 1/8-inch wide and sealed full depth with hot pour materials. However, this system was replaced for the last half of the project to use 3/8-inch D/4 saw cuts with backer rod so as to obtain uniformity, better appearance and higher quality joint seals.

An interesting comparison can be made in future years by observing the performance of pavements having three independent jointing systems. All 62 blocks have been paved 6" x 25' with 6-inch curbs.

1976	20 blocks	Longitudinal joints at centerline and 30-inches from back of curb. Transverse joints at 20-foot spacing.
1978	20 blocks	Longitudinal joints at third points, 7.0' - 11.0' - 7.0'. Transverse joints at 30-foot spacing.
1994	22 blocks	Longitudinal joints at quarter points, 6.5' - 6.0' - 6.0' - 6.5'. Transverse joints at 12-foot spacing.

Although noted only at random and infrequent locations, the existence of several longitudinal quarter-point cracks on the 1976 project persuaded Mr. Payer to adopt the smaller joint system for 1994. According to City Clerk Ping, project financing supporting this final stage has included 5 years of savings from General fund and Road Use Tax Fund allocations, the issuance of General Obligation Bonds ($125,000) and Special Assessments ($556,000) levied against abutting properties. Residents have 10 years to pay street improvement assessments but within 30 days of final notification they can pay any amount or all of it interest free.

With this work completed in time for its 125th Anniversary, the people of Sloan can be justly proud of their community for achieving these goals. Mrs. Ping says this project completes current objectives, "until future housing additions develop that require more PC concrete paving."

Additional information may be obtained by contacting:
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