

**CITY COUNCIL
COMMUNICATION:**

REVISED

ITEM _____

00-288

**OFFICE OF THE CITY MANAGER
CITY OF DES MOINES, IOWA**

AGENDA:

SYNOPSIS -

JUNE 26, 2000

SUBJECT:

RECOMMENDATION
FOR PAVING
UNPAVED STREETS

The Public Works and Engineering Departments have developed a proposed plan for paving the City's remaining 50 miles of unpaved streets. The majority of unpaved miles appear to be candidates for either permanent intermediate depth or interim asphalt (10 year design life) pavements. It is recommended that intermediate paving now be performed under contract through the Engineering Department and be assessed for the following project costs:

TYPE:

RESOLUTION
ORDINANCE
RECEIVE/FILE

- Pavement and curb construction (50 percent assessed)
- Driveway approaches (50 percent assessed)
- Related engineering design and inspection costs (limited to 10 percent of the total construction cost)

SUBMITTED BY:

JOHN P. BELLIZZI
PUBLIC WORKS
DIRECTOR

The major non-assessable items would include the following:

- Subgrade stabilization using existing roadway surface material
- Storm intakes and sewer construction needed to accommodate street drainage
- Sod replacement

FLOYD BENTZ
CITY ENGINEER

In addition, the 10 percent Default Fund would be eliminated.

The Public Works Department will continue to place non-assessed interim pavements in conjunction with the Neighborhood Infrastructure Rehabilitation Program and as required in other low density or undeveloped areas where no sanitary sewer exists.

FISCAL IMPACT -

Funding for the first year of the proposed paving plan is available in the Capital Improvements Program (CIP City-Wide Paving Account No. CP038 ENG990000 STRO13) in the amount of \$810,021,

\$100,000 from the Public Works Department's operating budget, and \$231,816 in assessments.

RECOMMENDATION -

Direct the city engineer to complete a feasibility study to determine which of the City's unpaved streets are candidates for intermediate paving and authorize the city engineer to take alternate PCC and ACC bids for the placement of intermediate depth pavements. Allow the city engineer to proceed with full depth paving where traffic volumes dictate. Authorize the Public Works Department to proceed with non-assessed interim asphalt pavements (10 year design life) in low-density residential areas or open areas with development pending and no sanitary sewer available.

BACKGROUND -

On December 5, 1994, by Roll Call No. 94-4615, the City Council authorized the Public Works Department to proceed with permanent intermediate paving programs and assess only 50 percent of the project costs in order to increase the number of street surfaces paved within the city of Des Moines. Subsequently, on March 1, 1999, by Roll Call No. 99-606, the City Council excluded from assessment storm sewer improvements associated with intermediate paving because of the stormwater utility fee-funded program and storm sewer improvements.

On February 8, 2000, the Public Works Department distributed the attached street pavement report during the course of the City Council's budget hearings. The report detailed paving alternatives, which included both intermediate depth pavements and interim pavements. It is recommended that those paving alternatives be adopted by the City Council.

Current design standards for residential pavement thickness are for alternate bids of 6-inch portland cement concrete versus 8 inches of asphaltic concrete between concrete curb and gutter. The design calls for these pavements to be placed upon compacted subgrade, which results in a 50-year design life for the total pavement section. Experience has taught us that in areas of poor subgrade, such as expansive soils and soils highly susceptible to frost heave, this pavement section performed below expectations. As a result of our experience, the specifications for the last eight years have required

placing the pavements on a stabilized base. This 6-inch thick base consists of recompacting the existing roadway materials and using moisture density control for the compaction of the soil below the stabilized base. Pavements placed on these stabilized bases have performed very well.

The Engineering Department has recently reviewed its residential pavement designs and has determined that 5 inches of portland cement concrete or 7 inches of asphaltic concrete placed on the stabilized base is structurally equivalent to the original 6 inches of portland cement concrete or 8 inch asphaltic concrete placed upon only a compacted subgrade. Based upon our experience with stabilized base, we believe that the recommended design change is superior to the original pavement design that did not include the stabilized base.

Street storm drainage in the form of intakes and sewers will be designed for both alternatives and suitable outlets will be established in terms of either existing storm sewers or open drainageways.

Parkings will be restored with grass sod, and driveway approaches will be paved as part of the project to the right-of-way line.

The street paving program for Year 2000 for intermediate paving includes the following streets:

- Garfield Avenue, from East 32nd to East 33rd Streets
- SW 26th Street, from Stanton to McKinley Avenues
- East 36th Street, from Arthur to East Sheridan Avenues
- SE 9th Street, from East Hillside to East Hartford Avenues
- SW 12th Place, from Army Post Road to the dead end north

Funding for the first year of the proposed paving plan is available in the CIP in the amount of \$810,021, \$100,000 from the Public Works Department's operating budget, and \$231,816 in assessments.

Over the last several years, the Public Works Department's commitment to the Neighborhood Infrastructure Rehabilitation Program and other unmet maintenance needs has limited the time available to perform permanent intermediate paving during the construction season. Further, the Public Works Department has initiated the use of interim (10 year design life) pavements to replace the poorly regarded asphalt stabilization program. Interim pavements have been shown to reduce overall maintenance costs while increasing customer satisfaction. Approximately 2 miles of interim pavements will be constructed by the Public Works Department in

the Gray's Woods Area during this construction season, as well as on SE 34th Street from Evergreen Avenue to Watrous Avenue, and Watrous Avenue from SE 34th Street to the east city limits.

Attachment

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