

Maintaining Traffic Operations During Snow and Ice Conditions

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Editor's Note: At the Thursday morning session of the Traffic Engineers, City Engineers, and Street Commissioners, W. W. Harris discussed the topic "Maintaining Traffic Operations During Snow and Ice Conditions." The discussion was based on experiences in Indianapolis; the experience of Mr. Harris in snow work in Chicago, New York City, and Wilmington, Delaware; and a study made for a minimum snow program for the city of Indianapolis. Inasmuch as the findings of the study in Indianapolis relative to ideas, needs, equipment, and relative costs may be useful to other cities, Mr. Harris has granted permission for the publication of the report of this study for Indianapolis in the Proceedings. The full report follows.

PROPOSED INITIAL EXPENDITURES FOR SNOW AND ICE CONTROL FOR THE CITY OF INDIANAPOLIS

Indianapolis fortunately does not lie in the heavy snow belt to the north, but occasionally, at least once or twice in the winter season, snow cripples or paralyzes traffic in the City of Indianapolis, causing hardship, disruption of traffic, and the resultant tardiness of employes and the loss of thousands of dollars to downtown stores and business.

Because of the great number of people that travel through our city to industrial plants or come to the central city daily, it is paramount that our major streets and parkways be kept free of ice and snow, insuring normal flow of traffic in winter months. This is especially true of streets upon which buses operate.

The various departments of the city have sufficient major truck equipment and manpower to do an excellent job of snow and ice control with a minimum expenditure of money for auxiliary equipment. The trucks are equipped with hydraulic engines to operate the dump bodies. A "take-off" from these engines will operate the snow blades.

This report has been based upon a survey of the equipment on hand, and it is estimated, for an initial program of snow and ice control, that approximately 175 miles of major streets in the City of Indianapolis and 75 miles of parkways need snow control. The suggested initial purchase of equipment for minimum control is based upon these mileages.

In addition to the equipment outlined in the following pages, it is recommended that the Legal Department of the City formulate an ordinance making it unlawful to park any vehicle for a period of time longer than three minutes for loading and unloading passengers, or thirty minutes for loading and unloading of property in any place, whether designated as a loading zone or not so designated, at any time after snow begins to fall and for a period of eight hours after snow stops falling, if the snow on the street exceeds one inch in depth, provided that said eight hour parking restriction shall continue during snow-removal operations until completed. This ordinance is to be in effect on all major streets and on all boulevards.

Cooperation of local radio stations when a snow emergency has been declared should be inaugurated. This is done in many cities in the snow belt and is very effective.

It is also suggested that ample supplies of abrasive materials and salt be supplied, or emergency funds made available for this purpose.

The City of Indianapolis has never plowed any streets. The snow would be plowed to the curb and then loaded with snow loaders, as fast as possible, into trucks and taken to the nearest place for dumping. (Fall Creek, Pogue's Run, White River, etc.) It might be necessary at several of these places to construct inexpensive dumping docks where snow could be disposed of safely.

It is suggested that the major equipment ultimately contain two-way radios for efficient dispatching of information directly from the central dispatcher's office on West Street which is equipped with a weather teletype machine.

In conclusion, this program would initially cost the City of Indianapolis less than \$100,000, and would insure safety and proper movement of traffic to and from the central city and on the vital streets to industries.

It is suggested that the responsible heads of departments involved review this study carefully and set up a plan of action and operation before the coming winter.

TABLE 1

SUMMARY OF COST OF PROPOSED SNOW EQUIPMENT

Plows	\$17,000
Spreaders	11,000
Snow Loaders	54,000
Material Hoppers	5,000

GRAND TOTAL

 \$87,000

TABLE 2

PRESENT CITY-OWNED SNOW AND ICE EQUIPMENT

PARK DEPARTMENT

3 Spinners

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TOTAL 3

NO PLOWS

NO MATERIAL HOPPERS FOR SNOW AND ICE CONTROL

STREET COMMISSIONERS DEPARTMENT

6 Swenson Spreaders

3 Century Spreaders

4 Scotchman's Spreaders

3 Baughman Spreaders

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TOTAL 16

NO PLOWS

NO SNOW LOADING EQUIPMENT

NO MATERIAL HOPPERS FOR SNOW AND ICE CONTROL

TABLE 3

TRUCKS AVAILABLE FOR SNOW AND ICE CONTROL

PARK DEPARTMENT

12 Dump Trucks

8 Flatbed Dump Trucks

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TOTAL 20

STREET COMMISSIONERS DEPARTMENT

4 Heavy-Duty Dump Trucks

3 Internationals with Baughman Spreaders

3 Dumpsters

3 Flushers

40 Dump Trucks

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TOTAL 53

FLOOD CONTROL TRUCKS

4 Heavy-Duty Dump Trucks

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TOTAL 4

SANITATION DEPARTMENT

7 Trucks

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TOTAL 7

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GRAND

TOTAL 84 TRUCKS

TABLE 4

PROPOSED INITIAL PURCHASE OF PLOW EQUIPMENT

PARK DEPARTMENT

Install one-way trip plows 11'4" x 28" on
 8 Flatbed Dump Trucks @ \$850 each \$ 6,800

TOTAL 8

STREET COMMISSIONERS DEPARTMENT

Install reversible 10' x 27" Plows on
 4 Heavy-Duty Trucks
 3 Internationals (Baughman Spreaders on trucks)
 3 Dumpsters
 3 Flushers

TOTAL 13 @ \$600 each 7,800

FLOOD CONTROL TRUCKS

Install reversible 10' x 27" Plows on
 4 Heavy-Duty Dump Trucks @ \$600 each 2,400

TOTAL 4

GRAND TOTAL 25 PLOWS \$17,000

TABLE 5

PROPOSED INITIAL SANDING EQUIPMENT

PARK DEPARTMENT

3 Hopper type self-contained spreaders @ \$2,000 each \$ 6,000
 4 Tailgate spreaders @ \$500 each 2,000

STREET COMMISSIONERS DEPARTMENT

6 Additional Tailgate spreaders @ \$500 each 3,000

\$11,000

TABLE 6

PROPOSED SNOW LOADING EQUIPMENT

STREET COMMISSIONERS DEPARTMENT

3 Snow Loaders that can load on either side of one-way
 streets @ \$18,000 each \$54,000

TABLE 7

PROPOSED MATERIAL HOPPERS

PARK DEPARTMENT

1 Material Hopper @ \$2,500 each

STREET COMMISSIONERS DEPARTMENT

1 Material Hopper @ \$2,500 each \$ 5,000