

HE
356.5
.H5
R45
1960

RELOCATION STUDY

Of

IOWA 192

Council Bluffs

DIVISION OF PLANNING
IOWA STATE HIGHWAY COMMISSION



Relocation Study
of
Iowa 192
Council Bluffs, Iowa
June 1960

Prepared by the
Traffic and Highway Planning Department
Division of Planning
Iowa State Highway Commission
In Cooperation With the
Bureau of Public Roads

COUNCIL BLUFFS RELOCATION

Whenever a highway improvement is contemplated a number of basic questions must first be answered.

- (1) Will the improvement fit in with a long range plan?
- (2) Can the new facility adequately serve the various types of traffic expected?
- (3) Will the improvement adequately handle the anticipated traffic during the expected life of the project?
- (4) Can the overall improvement be constructed in stages and at the same time fully utilize already constructed sections?
- (5) Will the expenditures for construction be justified by providing a savings to the road user?

The answers to these questions are all interrelated to some extent and must emphatically substantiate the propriety of the expenditure of public funds. When the contemplated improvement is within an urban area these questions and many more must be answered not only to the satisfaction of the road user but also to the satisfaction of the local authorities and the property owners in the immediate vicinity of the improvement. The problem of parking must be solved. The location of schools must be considered.

At the present time an improved connection between Interstate Routes 80 and 29 across the south side of Council Bluffs and the central business district is being considered for improvement. Figure 1 shows the location of the Interstate Routes in the Council Bluffs area together with existing major streets which serve the city. Primary Road 192 which is presently being considered for improvement enters the area from the south on South Seventh Street, continuing north on South Seventh Street to Sixteenth Street, thence east on Sixteenth Street for two blocks to Main Street, thence north on Main Street to Ninth Street, thence east one block to Fourth Street to Junction with Iowa 375 where Primary Road 192 terminates. Iowa 375 then continues north along Fourth Street to Junction with US 6 and Iowa 64. Also shown on Figure 1 is the outline of the Council Bluffs central business district.

The first question which immediately arises is whether or not the present location of Iowa 192 fits into the overall development of a long range arterial street

plan for the city. Figure 2 shows a segment of Council Bluffs on which is shown the general location of arterial street needs in the area. Also shown in dashed lines is the present location of Iowa 192.

It is readily apparent from this figure that a street in this location, even though improved extensively, could not possibly serve the traffic in a manner expected of an arterial street. There are four ninety degree turns on the present route and it terminates in the center of the Council Bluffs business district at one of the most congested intersections in the entire state. This intersection does not lend itself to extensive reconstruction because of existing business buildings.

The second ninety degree turn (from the south) also involves an extremely active rail-road crossing. During an average day there are 175 train movements across this intersection, some of which block the street for extended periods of time. Assuming that each movement caused a stoppage of highway traffic for two minutes, which is a very conservative assumption, this street is presently blocked approximately twenty-five percent of the time.

Again referring to Figure 2, a street or streets parallel to and in the vicinity of South Seventh Street meets the requirements for an arterial highway and is consistent with the development of a long range major street plan. The improvement of any one of the streets or combinations of one way pairs of any two of these streets appears to be at least partially consistent with this long range plan.

All possible routings, even those with only remote possibilities, should be considered in the initial phases of a relocation study. Since the fundamental purpose of Iowa 192 is to serve as a convenient connection between the contemplated Interstate Routes across the south side of Council Bluffs and the central business district, any route between the east end of the Broadway Street viaduct and the railroad barrier to the east of Fourth Street would appear to have some possibilities

and should at least merit initial consideration. Some of these possibilities can immediately be eliminated because they do not satisfy the basic needs of the route or because they do not properly fit into the pattern of overall arterial street needs in the area.

The construction of the route along Eighth Street from the south corporation line to Broadway was considered and rejected. The selection of the route along this street would not fit into the one way street pattern now in existence north of Broadway. The Eighth Street and Broadway intersection is immediately adjacent to the viaduct and would require considerable reconstruction in order for it to adequately serve the anticipated traffic. The selection of this street would also involve out of way travel to and from the central business district.

Seventh Street was also considered and rejected. This street, like Eighth Street, is fully developed residentially with many driveway accesses. In order to properly improve this street to carry the anticipated traffic a considerable portion of the front yards of each piece of residential properties would be required. It would also be necessary to eliminate all parking.

The development of Sixth and Fourth Streets south of Sixteenth Avenue have sufficient potential to warrant further consideration. Figure 3 shows the location of the route on Sixth Street and how this route could be developed into a one way couple with Seventh Street north of Ninth Avenue. Ultimately, if this plan is selected, a rail-road separation structure would extend from south of Sixteenth Avenue to north of Ninth Avenue.

Figures 4 and 5 show two possible developments of the Fourth Street route. Figure 4 depicts the location of a railroad separation on Seventh Street with an at grade intersection at Sixteenth Avenue. Figure 5 shows the possibility of providing a railroad separation mid-way between Sixth and Seventh Street with a subsequent interchange at Sixteenth Avenue.

The two Fourth Street routes have a number of advantages over the Sixth Street route. The overall cost of the Sixth Street route, including the cost of right of

way and the construction of the viaduct, is greater than the total cost of constructing the Fourth Street route and the Seventh Street viaduct. The road user operating cost of motor vehicles would be four and four tenths percent greater over the Sixth Street route than over the Fourth Street route with the Seventh Street viaduct and nine and six tenths percent greater than over the Fourth Street route with the mid-block separation. Since the construction costs are greater and the road user savings are less the Sixth Street route can now be eliminated from further consideration.

If these same validity tests were in the same direction between the two Fourth Street alternates the final selection of the proper route would be relatively simple. However, the total construction cost of the Fourth Street route with the mid-block viaduct is greater than the total construction cost of the route with the Seventh Street viaduct. At the same time the road user savings over the mid-block viaduct route are greater than over the Seventh Street viaduct route.

Table 1 shows the comparative construction cost of the Sixth Street route and the two Fourth Street routes together with the average annual road user operating costs.

Table No. 1
Construction and Road User Costs
on
Alternate Locations for Iowa 192
in Council Bluffs

Cost	Alternate Routes for Iowa 192 in Council Bluffs		
	Sixth Street Two-way	Fourth Street with Viaduct on Seventh Street	Fourth Street with Viaduct mid-way between Sixth and Seventh Streets
Right of Way Construction	\$ 423,300 2,147,500	\$ 655,140 1,720,200	\$ 930,340 2,241,600
Total	\$2,570,800	\$2,375,340	\$3,171,940
Total Cost south of Sixteenth Ave	\$ 342,400	\$ 384,700	\$ 361,900
Annual road user operating costs	\$1,617,308	\$1,549,756	\$1,475,596

Presently the annual operating cost of motor vehicles over the present routing of Iowa 192 & Iowa 375 is \$2,135,611. Therefore an annual saving of \$660,015 will be realized by the road users if the Fourth Street route with the mid-block viaduct is constructed. If the Fourth Street route with the Seventh Street viaduct is selected and constructed the road users will realize a saving of \$585,855 per year. These savings will equal the total construction costs of the mid-block viaduct route in 4.8 years and the total construction costs of the Seventh Street Viaduct route in 4.1 years. Therefore the construction of either Fourth Street route is justified from a road user savings stand point.

Each of these routes have some distinct advantages over the other. The principal advantage the Seventh Street viaduct route has over the mid-block viaduct route is that of cost. The viaduct would be shorter and there would be an overall savings in total construction costs of \$796,600. At the same time it would cost the road user an additional \$74,160 per year were this route selected over the mid-block route.

In addition to the \$74,160 annual savings to the road user by the construction of the mid-block viaduct, such savings being principally brought about by the separation of Sixteenth Avenue and the subsequent interchange, the selection of this route would permit the normal use of Seventh Street between Ninth Avenue and Sixteenth Avenue. Were a viaduct constructed along Seventh Street it would be closed to surface traffic and would provide no convenient access to the business properties facing Seventh Street in the area.

Another distinct advantage to the selection of the mid-block viaduct route is that it appears to be readily adaptable to stage construction. Figures 6 and 7 show the proposed layout of the Sixteenth Avenue connection of these two alternates. Figure No. 6 shows the proposed Sixteenth and Nineteenth Street connections if the Seventh Street viaduct route is selected. This route would require an at grade intersection at Sixteenth Avenue and the closing of Seventh Street immediately

south of Sixteenth Avenue. There would also be an at grade intersection which would connect with Nineteenth Avenue. The total construction cost along this route from Sixteenth Street south would be \$384,700.

Figure No. 7 shows the layout of the interchange between Sixteenth Avenue and Iowa 192 if the mid-block viaduct route is selected. Sixteenth Avenue and Seventh Street will not be effected by the construction of this alternate. In fact the traffic on Sixteenth Avenue which is a major east and west artery, will be relieved of cross street congestion if this alternate is selected. The selection of this route would lend itself quite readily to stage construction. Initially the construction of the on-ramp from Nineteenth Avenue and the off-ramp to Sixteenth Avenue could serve traffic to or from the south very advantageously until at such time as the viaduct could be financed and constructed. The total construction cost of the ramps and the remaining four lane divided section to the south would be \$361,900.

In conclusion, the selection of either route is economically sound from a road user stand point, and they each satisfy the five basic requirements previously enumerated. Both routes fit well into the long range street plan for Council Bluffs, and either facility will serve adequately the types and anticipated volumes of traffic. Stage construction will lend itself very well to both alternates, and the expenditures are definitely justified by providing a savings to the road user. In connection with this last basic requirement, selection of the mid-block viaduct route would be more expensive to construct, but at the same time it would provide additional road user savings and not disturb the present use of Seventh Street as a surface street.

The following photographs show the development in the area through which the relocation of Iowa 192 would pass.

COUNCIL BLUFFS - IOWA 192 RELOCATION

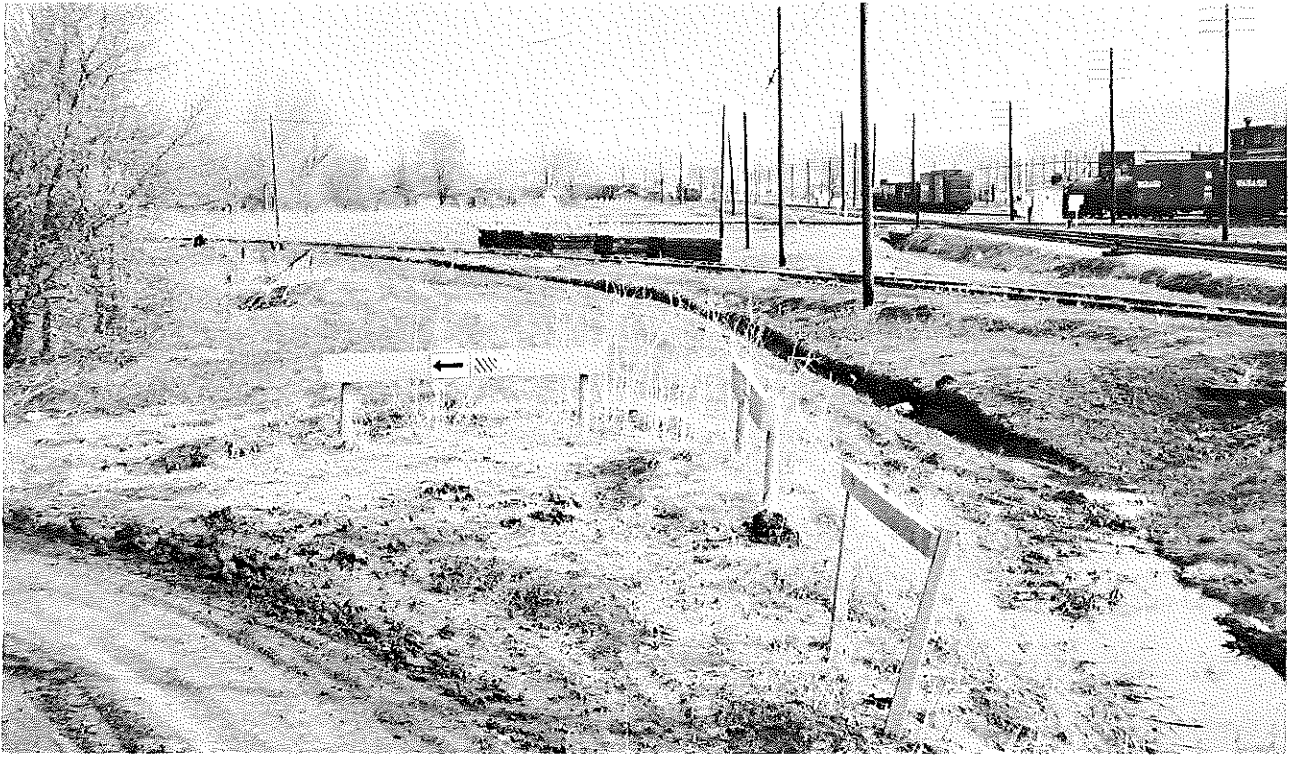


1. Looking north along 4th street from near present Iowa 192.



2. Looking north along 4th street from near the intersection of 4th street and 29th avenue.

COUNCIL BLUFFS - IOWA 192 RELOCATION

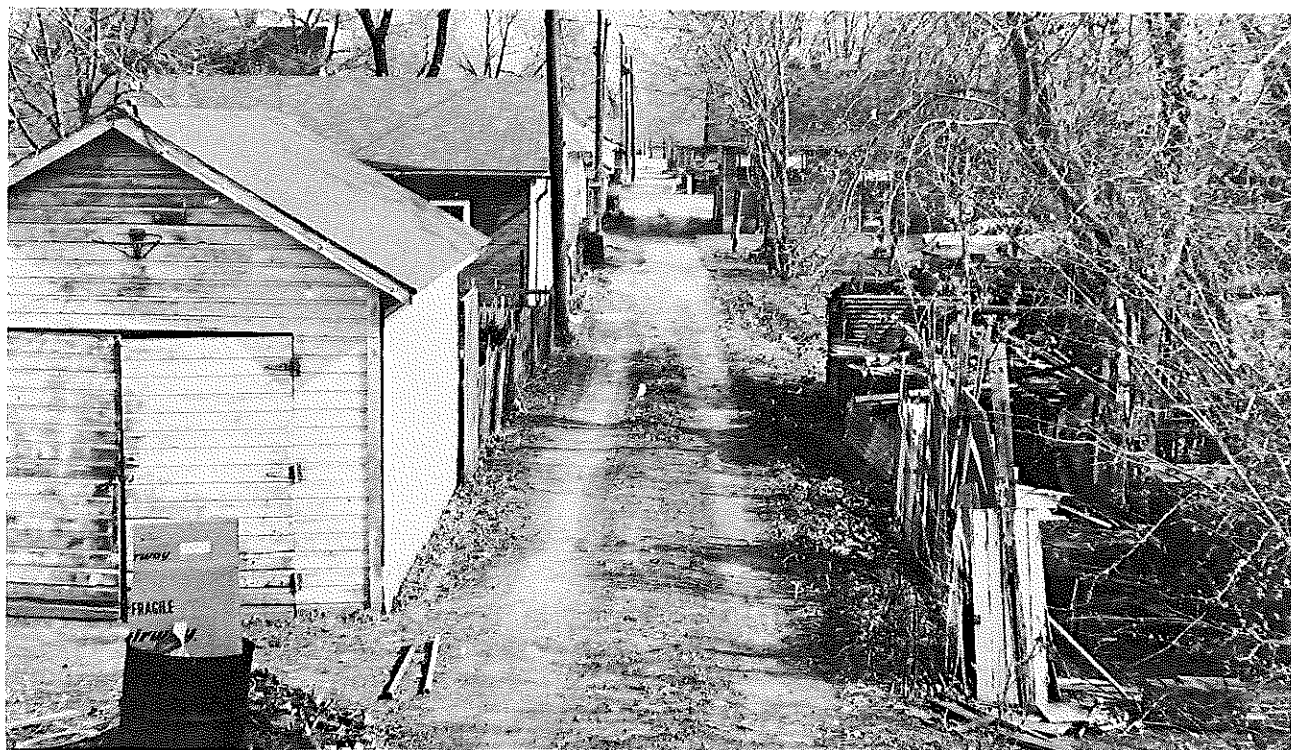


3. Looking north along 4th street from near the intersection of 4th street and 23rd avenue.



4. Looking north along 4th street from near the intersection of 4th street and 21st avenue.

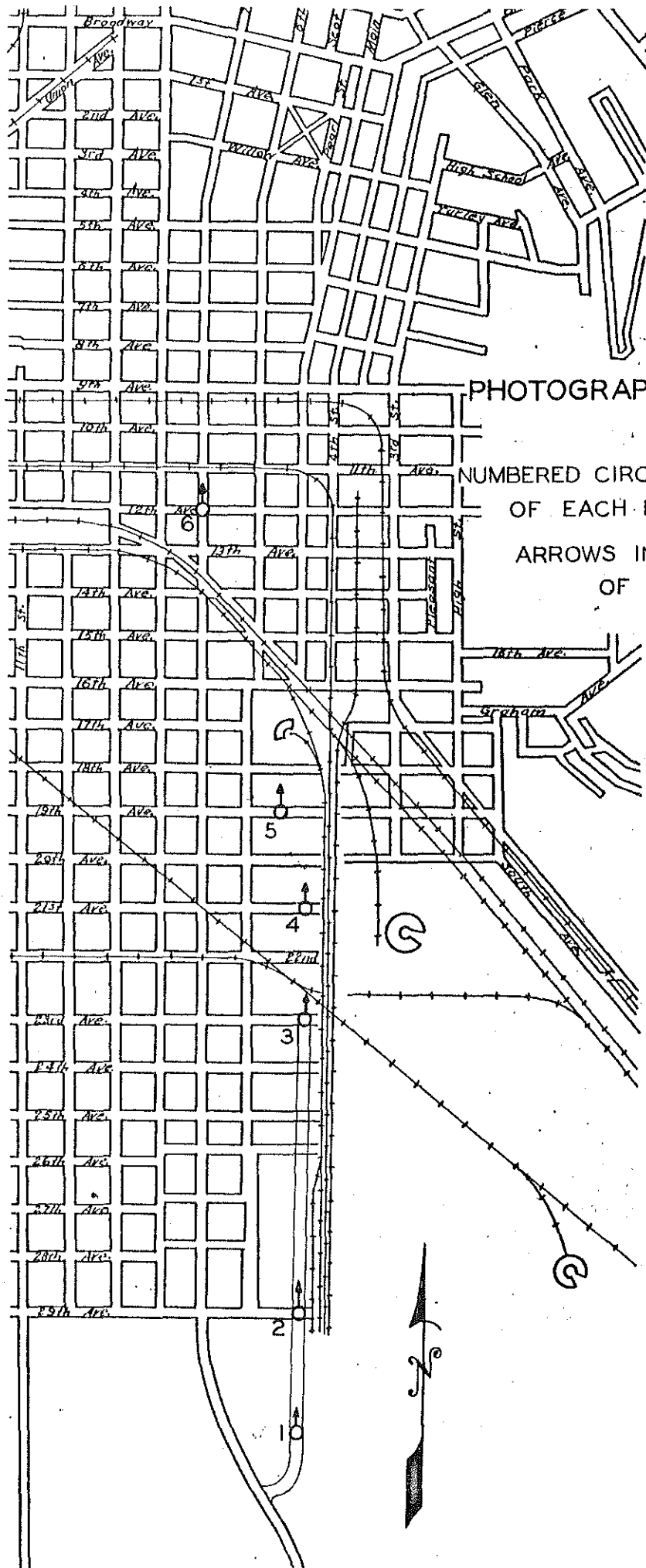
COUNCIL BLUFFS - IOWA 192 RELOCATION



5. Looking north along an alley between 4th and 6th streets from the intersection of this alley with 19th avenue.



6. Looking north along 7th street from near the intersection of 7th street and 12th avenue.



PHOTOGRAPH LOCATION MAP

NUMBERED CIRCLES SHOW LOCATION
OF EACH NUMBERED PICTURE

ARROWS INDICATE DIRECTION
OF PHOTOGRAPH

FIGURE 1
INTERSTATE ROUTES
IN
COUNCIL BLUFFS AREA

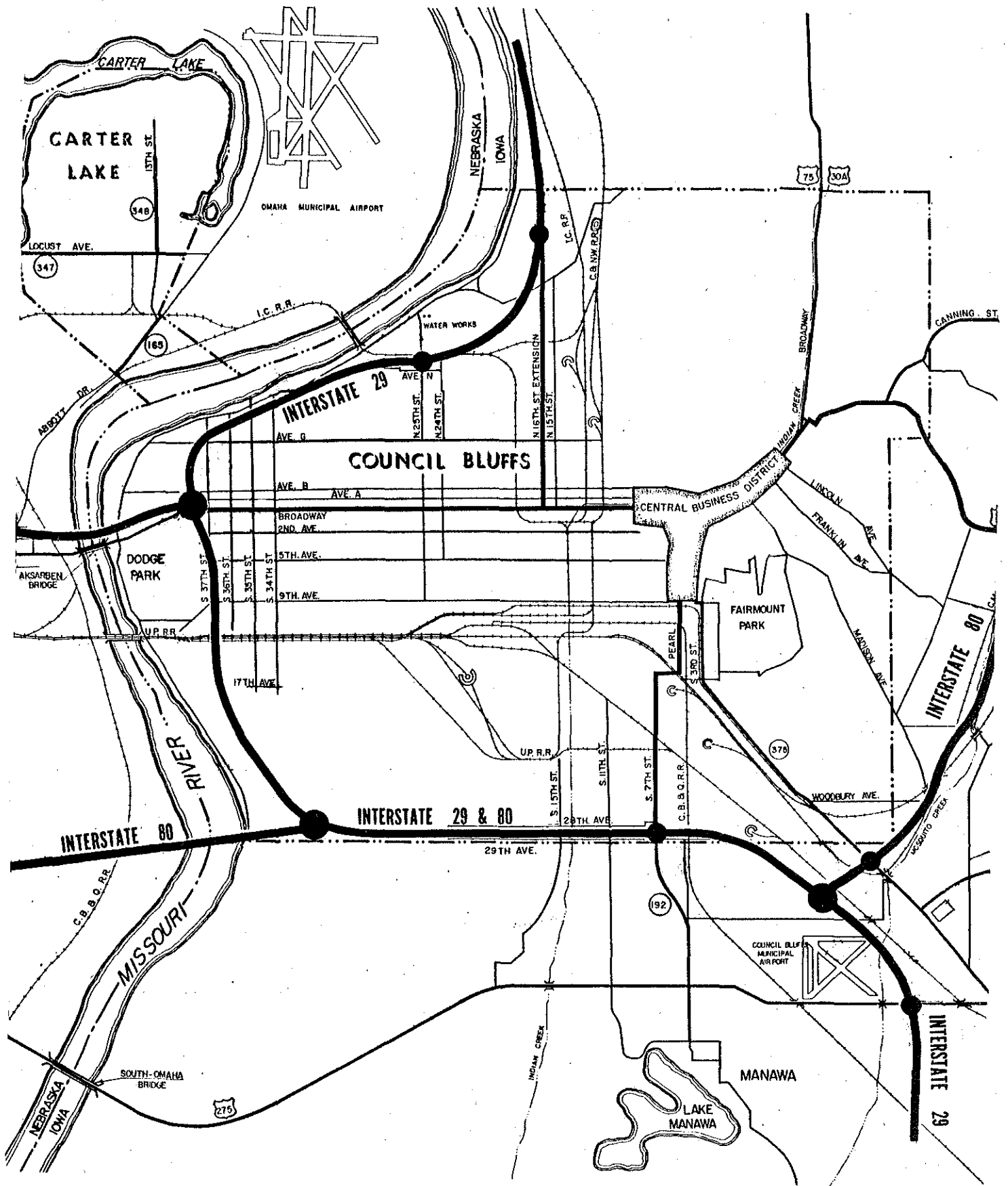


FIGURE 2
COUNCIL BLUFFS
PROPOSED ARTERIAL STREET PLAN
IOWA ROAD STUDY

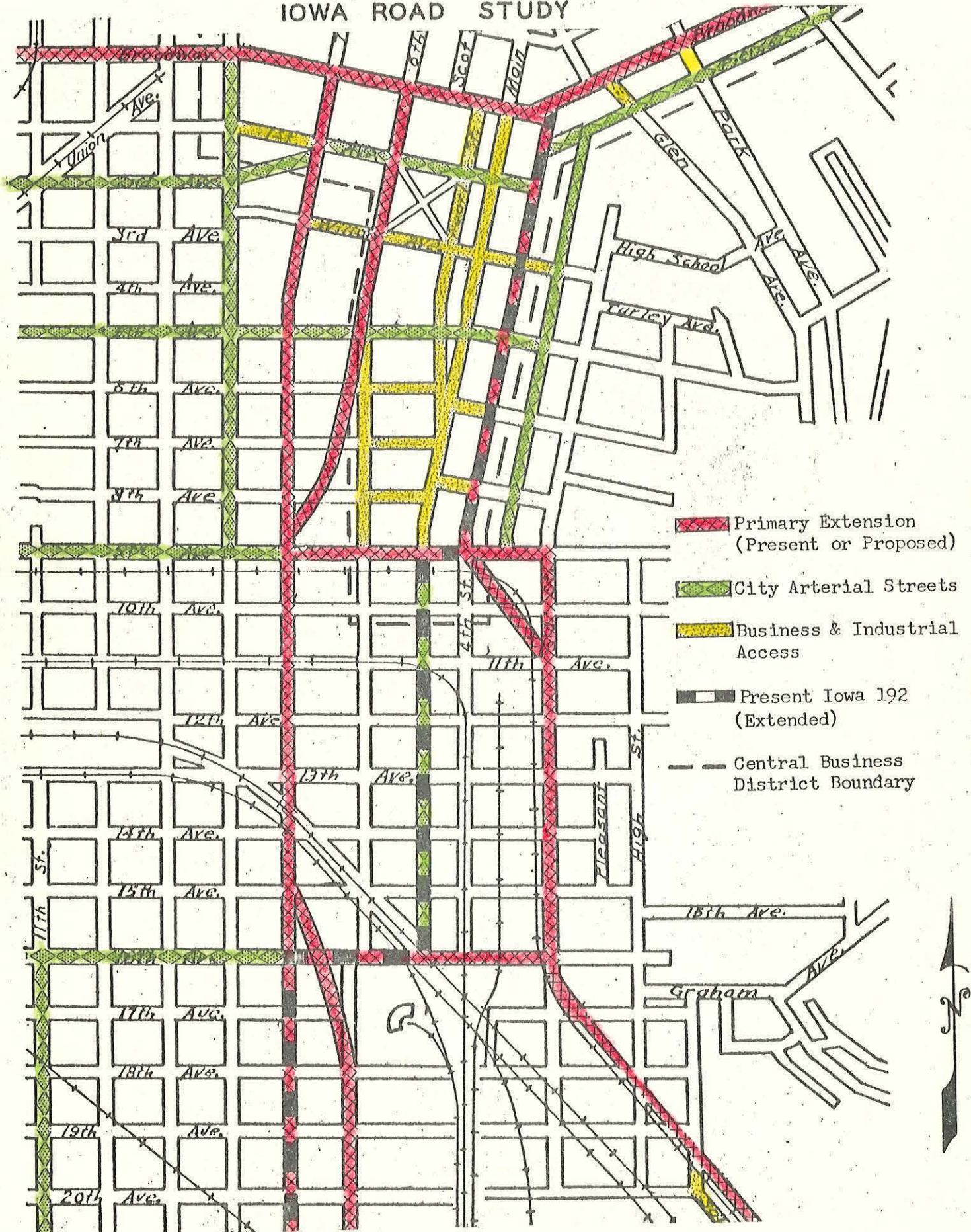


FIGURE 3
- 6TH STREET -

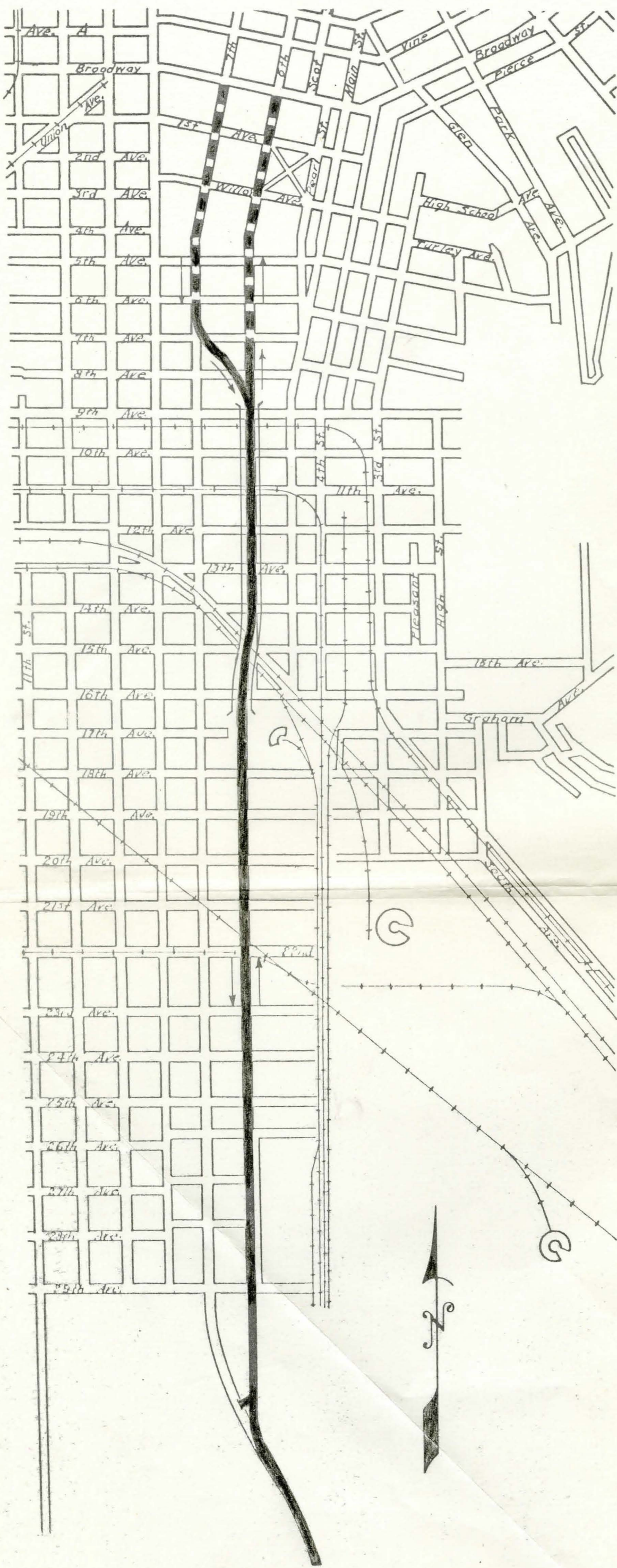
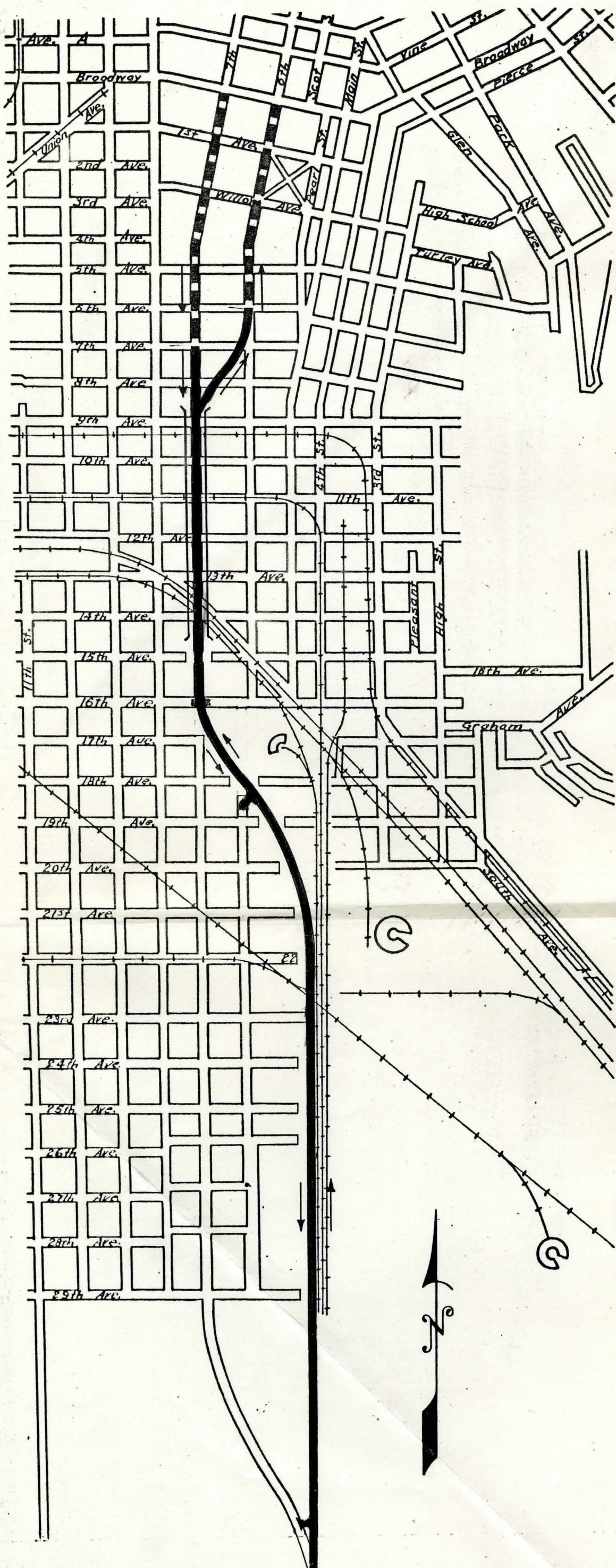


FIGURE 4
- 4TH STREET -
VIADUCT ON 7TH STREET





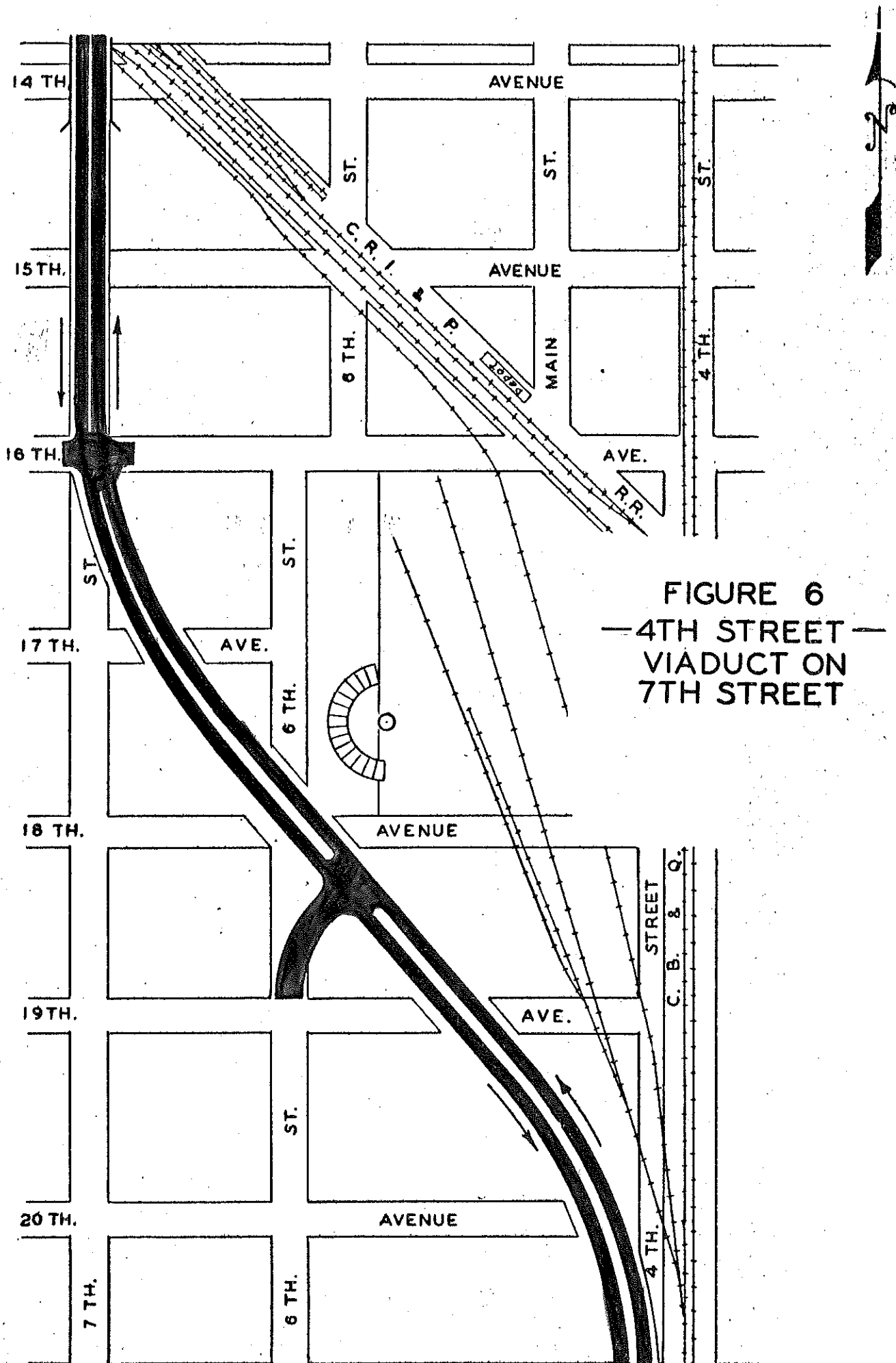


FIGURE 6
— 4TH STREET —
VIADUCT ON
7TH STREET

