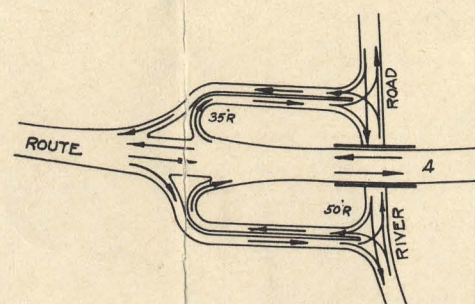
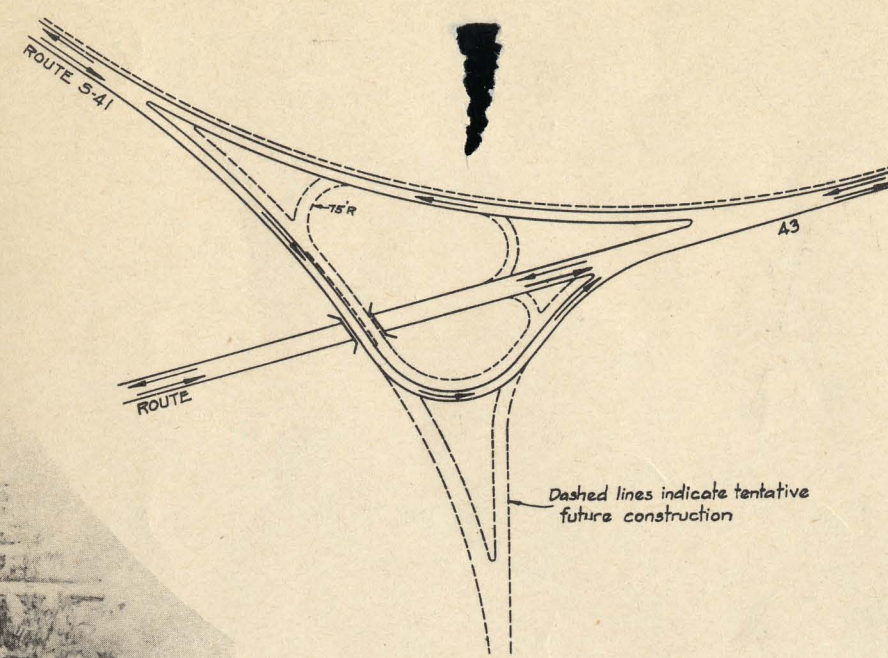
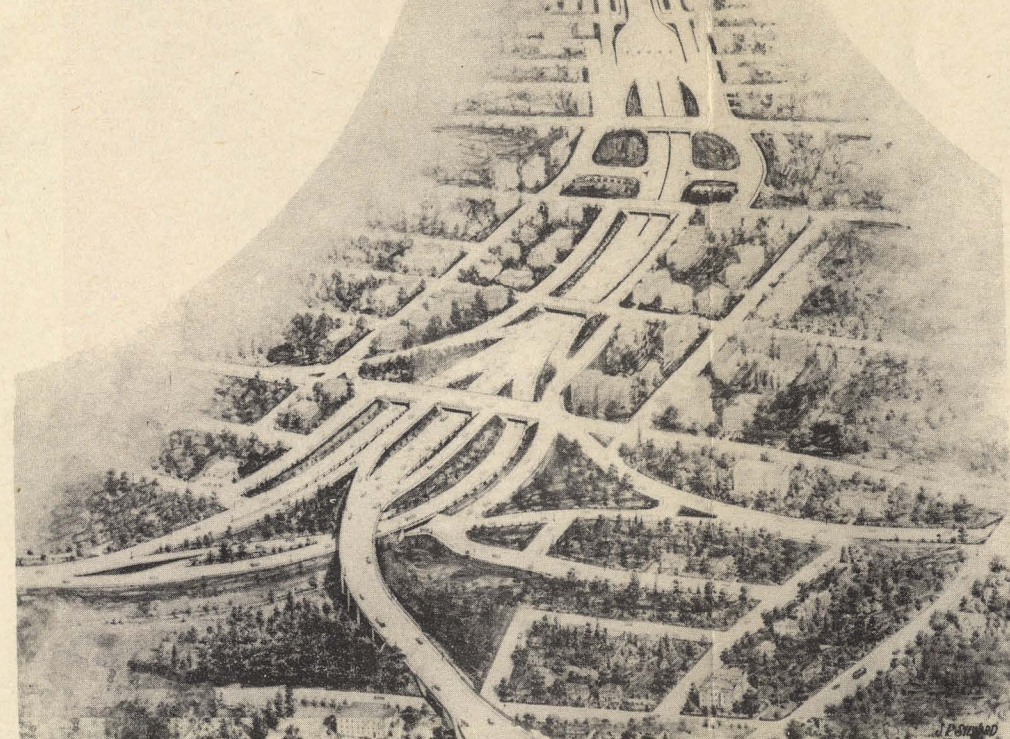


Designed 1932  
Layout favors main traffic movements.  
Circle elongated to obtain necessary weaving distance for important crossing movements.

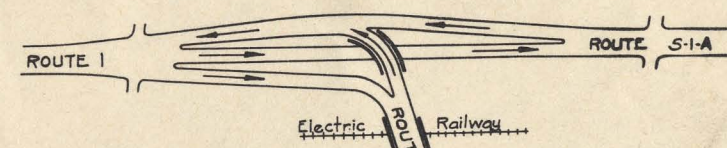


Designed 1930  
Note cross traffic due to turns on lower or secondary road.  
Ramps are two-way but divided, preventing wrong turns and cross traffic on main (upper) route.

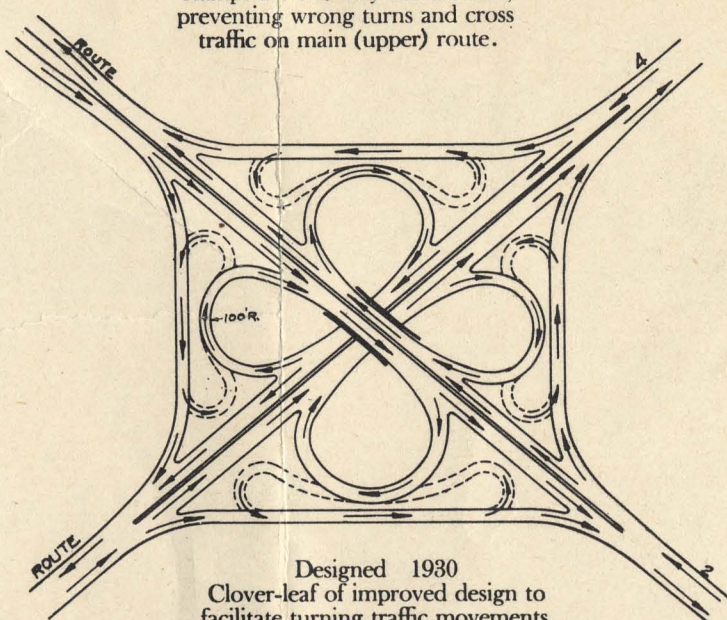
Designed 1929  
Complicated in plan because the eye sees too much at one time.  
Simple in operation because the drivers eye sees little that is not necessary.  
Distributional exits for through traffic are well separated to give drivers but one choice at a time.



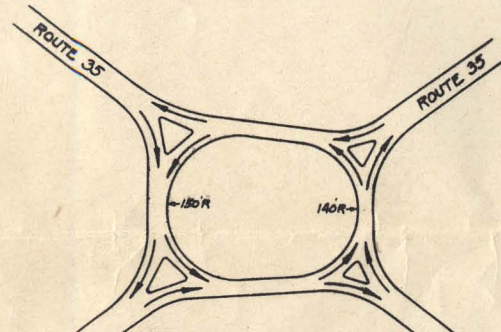
Designed 1930  
Important feeder route joining main route.  
Future extension indicated of minor importance.



Designed 1930  
Heaviest traffic on upper route.  
Note side islands protecting through traffic movements.  
Ramps carry two-way traffic and are cramped to avoid expense due to high land values.  
Business frontage on ramps.



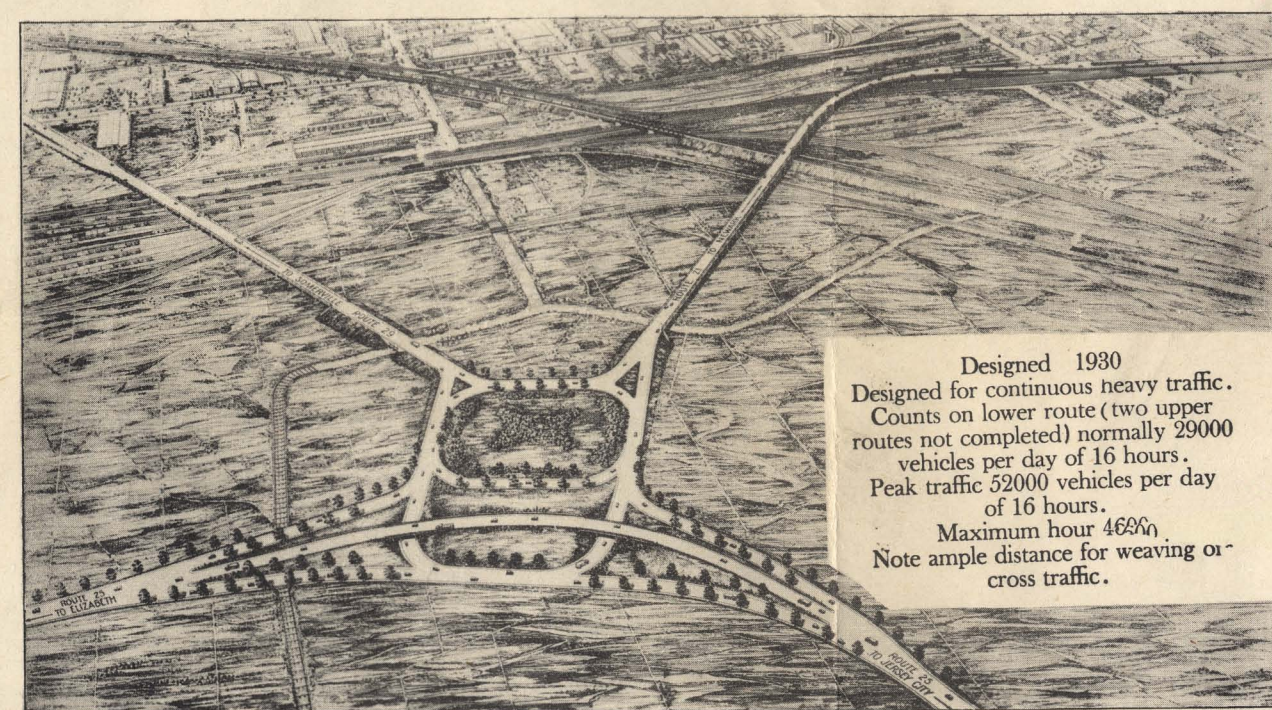
Designed 1930  
Clover-leaf of improved design to facilitate turning traffic movements.  
Both routes designed for heavy traffic.  
Dashed lines indicate future connections necessary to serve local traffic using frontage on outside ramps.



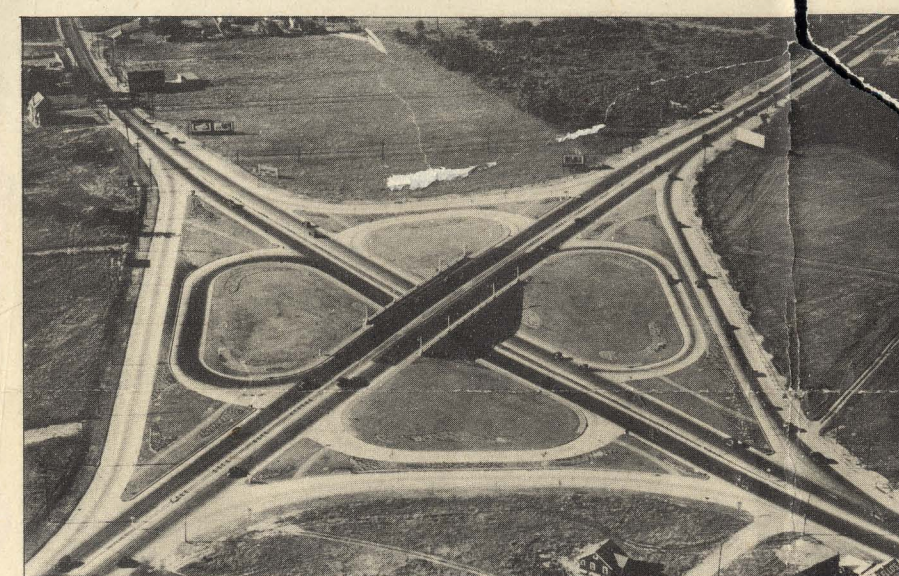
Designed 1932  
High speed circle with straight sides.  
Left side lengthened for peak traffic weaving.



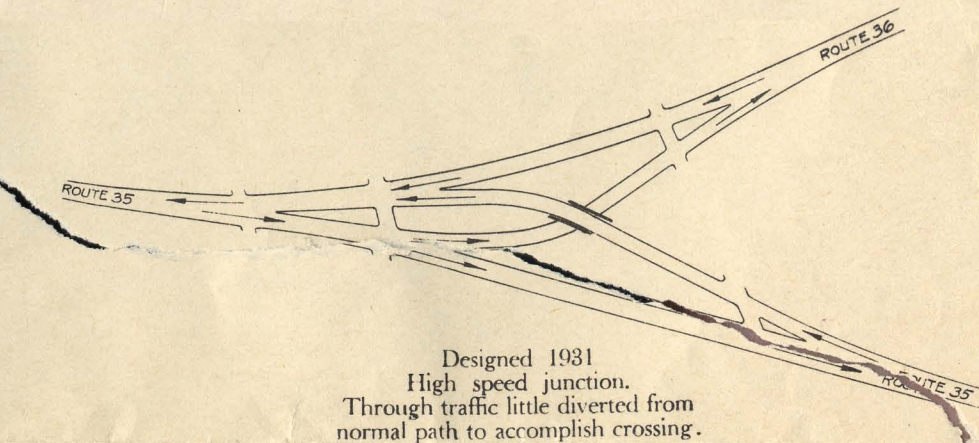
Designed 1925  
Designed for operating speed of 15 miles per hour. Operated at speeds up to 35 miles per hour. Vehicles tend to use shortest line through intersection, concentrating traffic at outside curbs at entrances and exits and at inside curb of circle, resulting in areas little used on outside of pavement on circle between each entrance and the next exit. Circle 320 ft. inside diameter is too small for smooth operation during peak traffic.



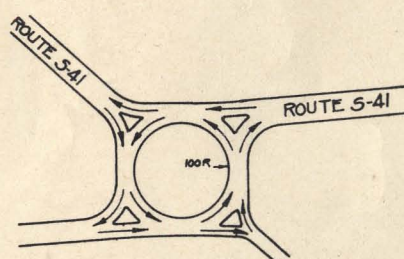
Designed 1930  
Designed for continuous heavy traffic.  
Counts on lower route (two upper routes not completed) normally 29000 vehicles per day of 16 hours.  
Peak traffic 52000 vehicles per day of 16 hours.  
Maximum hour 46900.  
Note ample distance for weaving or cross traffic.



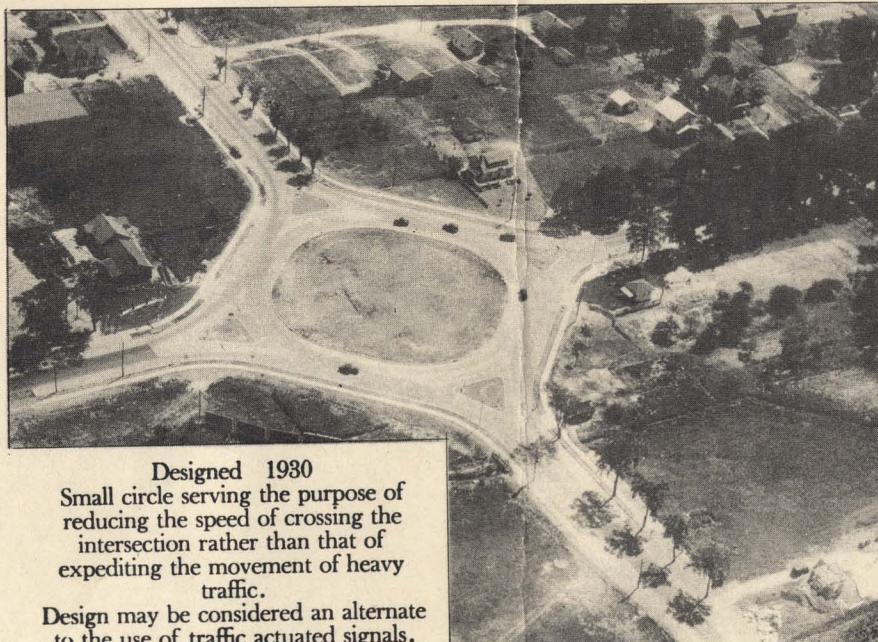
Designed 1928  
Normal week day traffic through intersection approximately 3000 per day.  
Peak traffic 62927 per day of 16 hours. Maximum hour 6034.  
Turning traffic about 23 percent of total. Oil stains on pavement indicate traffic densities. First clover-leaf constructed in New Jersey. Some imperfections in layout were apparent after a short period of operation. Unnatural method of accomplishing left turn confusing to uninitiated drivers.



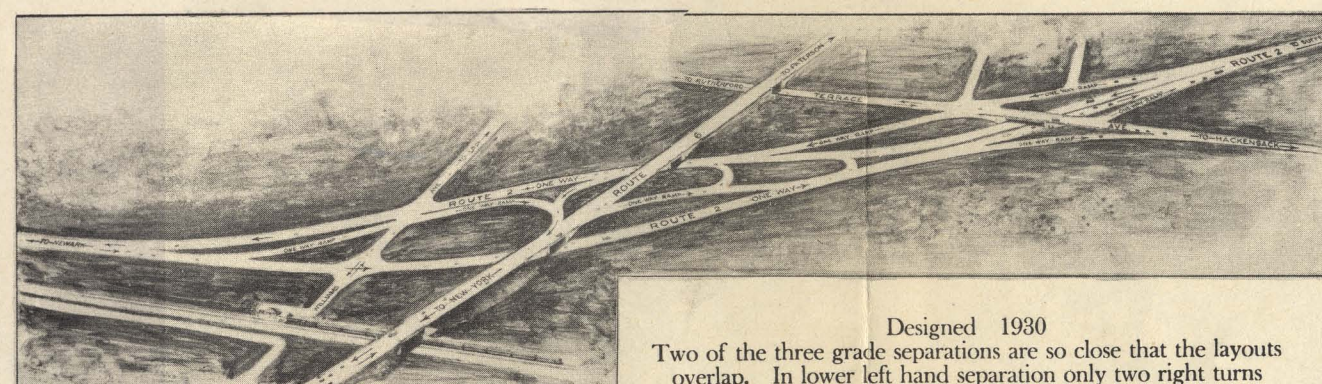
Designed 1931  
High speed junction.  
Through traffic little diverted from normal path to accomplish crossing.



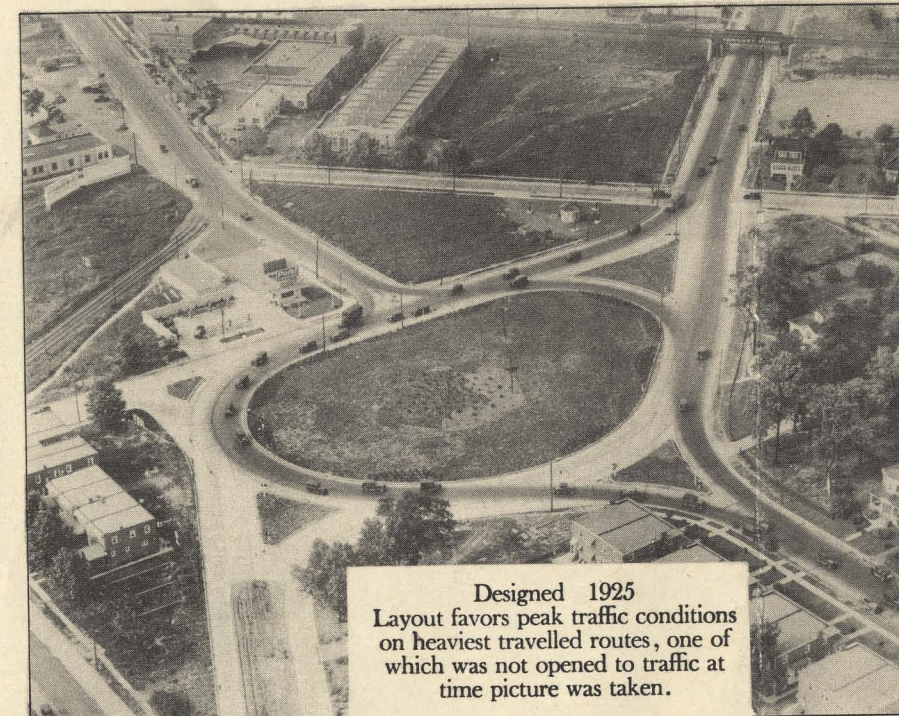
Designed 1930  
Note type of entrances at upper right and lower left and difference at upper left and lower right.  
Circle designed for medium traffic.



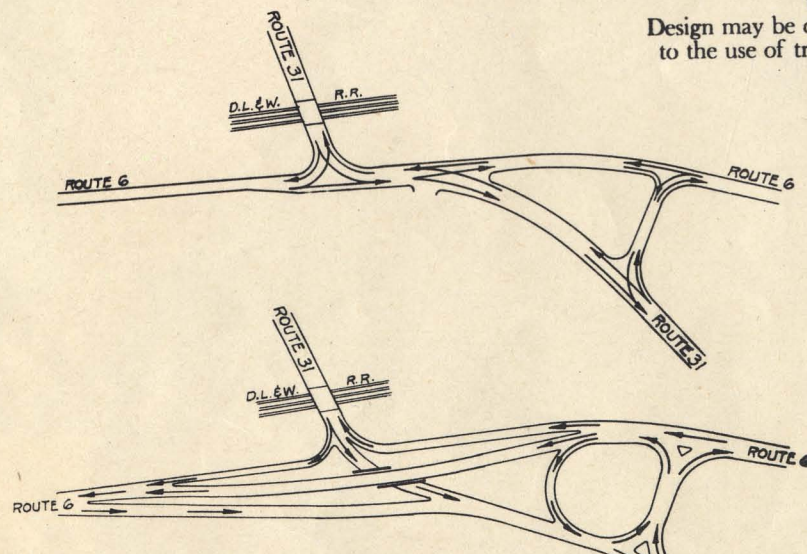
Designed 1930  
Small circle serving the purpose of reducing the speed of crossing the intersection rather than that of expediting the movement of heavy traffic.  
Design may be considered an alternate to the use of traffic actuated signals.



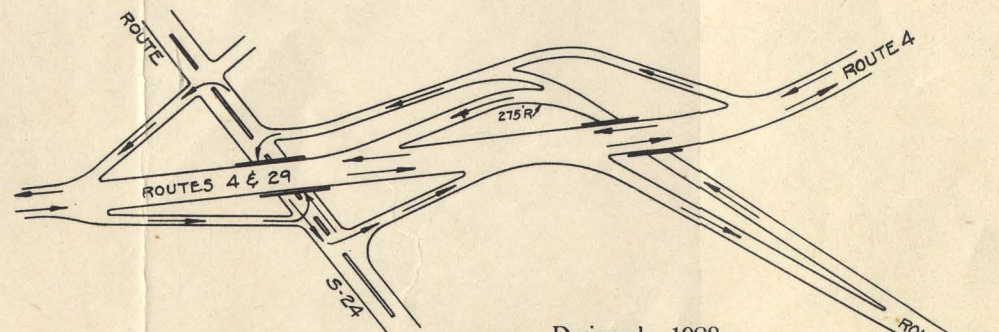
Designed 1930  
Two of the three grade separations are so close that the layouts overlap. In lower left hand separation only two right turns and two left turns are provided serving only the predominant interchange flows. Other interchange flows are light and served by local streets. On upper right hand separation, left turn traffic crosses straight traffic on secondary road. Layout influenced by railroad crossing elimination and by topography as well as considerations of safety and traffic congestion.



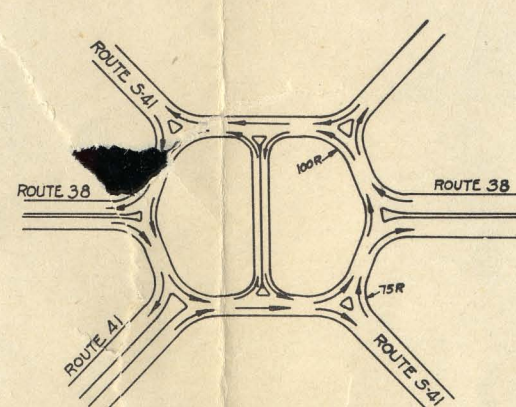
Designed 1925  
Layout favors peak traffic conditions on heaviest travelled routes, one of which was not opened to traffic at time picture was taken.



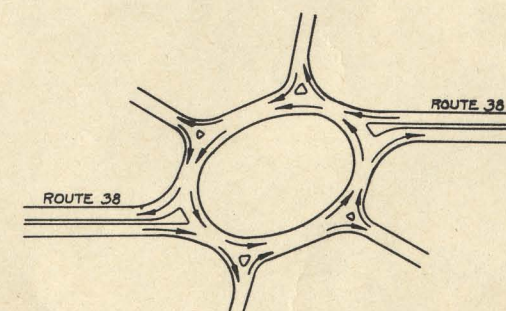
Designed 1932  
A dangerous and congested intersection and the proposed revision.



Designed 1928  
A three route intersection with partial separation.



Designed 1930  
Connection across circle saves distance for one half of left turns.  
Straight sides enable driver to keep sense of direction better than on true circle.



Designed 1932  
Alignment of main route offset to obtain better entrances penalizing somewhat traffic on secondary roads.

-NOTES-  
Islands within roadway width have low curb.  
Later designs show roadway island curb 12" to 36" wide, of white concrete, and interior of island of white or black concrete or grass.  
Islands are flood lighted in direction of traffic or illuminated by street lights.  
Interior of traffic circles in one plane where conditions are favorable.  
Maximum bank  $\frac{1}{4}$ " per foot.  
All surfaces of concrete.  
All widths shown indicate distance between curbs.  
Side lines shown are ultimate curb lines.  
The design of all intersections was influenced by topographic conditions at the location.



# TYPES OF TRAFFIC CIRCLES AND GRADE SEPARATIONS DESIGNED FOR THE NEW JERSEY STATE HIGHWAY SYSTEM

Scale  
0 100 200 300 400 500 ft

July 1932

MAP  
J912.9  
N154