

**Cramped, Narrow, and Overfilled:
What Drove the Renovation of Rochester's Can of Worms in March 1989**

Declan Morrow

Professor Bridget Chesterton

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In a symposium to the Project Management institute in September 1992, regional director of New York State Department of Transportation Lewis M. Gurley briefly recounted the history of transportation in Rochester before delving into the mess that locals referred to colloquially as “the Can of Worms,” but served as the interchange between Interstate Routes 490 and 590. Focusing on the reconstruction efforts that took place in 1983 under the “Rebuild New York” program, Gurley chronicled the methods of construction while also taking note of the public distrust toward the Department of Transportation’s efforts, as “the greater Rochester community expressed major concerns and reservations about the impending reconstruction ion.”¹ Despite being given clear proposals for the reconstruction, Rochesterians believed that traffic would be “diverted to local streets, causing intolerable conditions” and could even leave Rochester’s “entire business districts abandoned.”² The ire toward the highway had clearly permeated any effort to reconstruct or otherwise address the mass infrastructure that comprised the Can. The roots of Rochester’s displeasure of the Can was explained in a report by Timothy J. O’Leary who simulated the Can through computerized, stating: “a consensus has been reached [...]: The road widths are too narrow, the weaving areas, entrance ramps, and exit ramps are too short, and the traffic volumes are too great.”³ But the bureaucratic or academic perspective does not fully communicate the displeasure that many Rochesterians felt toward the Can for its inefficiencies and the Department of Transportation for both initially constructing the Can and then further inconveniencing their lives by promising to fix it. Many factors contributed to this disillusionment beyond the

¹ Lewis M. Gurley, “The Can of Worms Untangled” (Seminar, Project Management Institute, Pittsburgh, September 21-23, 1992.

² Ibid.

³ Timothy J. O’Leary. “Simulating the Can of Worms,” *Simulations & Games* 11, no. 2 (June 1980): 151.

Department of Transportation's direct involvement in Rochester's transportation corridor, including population increases, changes in the average car's size, and advancements (or delays) to traffic control and safety. It appears that the off-handed nomenclature that proclaimed the I-490 interchange a Can of Worms becomes almost prophetic when the full extent of the problems surrounding this freeway can only be called a can of worms in the classical sense.

Constructed in the 1960s and rebuilt in the 1980s, the I-490 Interchange situated east of Rochester, New York was a source of constant controversy by the motorists who used the freeway to journey from the suburbs where they lived to the downtown districts where they worked. This infamous interchange became known to Rochesterians as "the Can of Worms" because of its winding ramps and narrow roads that would often leave those who traversed it confused and at the mercy of other drivers if they had not already experienced its design. To explain why this freeway was so terrible to drive on, those who have driven it and voiced their dismay have been included in this paper, from newspaper articles before and after the time of the Can of Worms' existence. To this day testimonies exist in the digital world, from blog posts and comments from websites, as well as photographs of the extent of the freeway and even a satire of the Can of Worms printed in a contemporary newspaper. Outside of these firsthand accounts of drivers of this freeway, reports and simulations conducted by engineers and Department of Transportation officials have also been included in this paper to provide logistical and structural information on the design of the freeway and how it contributed to its unpopularity. With all of these attestations, testimonies, and reports taken into account and consideration, the Can of Worms was a freeway that was generally unsafe and uninviting to the general public in the 1980s and contributed to an atmosphere of distrust toward the Department of Transportation to the extent that efforts to reform and reconstruct the freeway in the 1980s was only met with cynicism and resistance.

Analysis on freeway construction in America has been extensive. The aspects behind their construction, from political philosophies and policy decisions to their social impact, have been a part of this analysis. Mark Rose and Raymond Mohl discuss the 1941-44 post-war planning for employment for Americans, how overloaded military convoys punched holes in existing infrastructure, and the philosophy behind freeway planning was founded on hope that freeways “would create jobs, ease traffic congestion, and help remodel rundown cities.”⁴ David Jones plots the transition from street cars to freeways, especially after World War II when the end of gasoline and rubber rationing helped facilitate a boom for private automobile transport. Even before the entrance of the US into World War II, Jones notes that the Bureau of Public Roads knew the criticality of highways to national defense, writing that such constructions were in conjunction with the War Department as early as 1939.⁵ Edward Muller wrote about the politics of freeway construction, remarking on “acceptably pleasing” as the benchmark for the “punching [of freeways] into the heart of cities as part of the grand post–World War II vision to revitalize congested, aging downtowns.”⁶ Again, the idea that freeways were the gateway for both economic progress and revitalization was prevalent as the Bureau of Public Roads began to lay some 48,000 miles of road. However, in the face of these infrastructure developments, Raymond Mohl writes in another book about the public resistance to freeway expansion and construction, remarking on how so-called “freeway fighters” forced freeway builders to adopt alternative routes or outright

⁴ Mark H. Rose and Raymond A. Mohl, *Interstate: Highway Politics and Policy since 1939* (University of Tennessee Press: May 2010). 16. <https://ebookcentral.proquest.com/lib/buffalostate/reader.action?docID=1084840>

⁵ David W. Jones, *Mass Motorization and Mass Transit: An American History and Policy Analysis* (Indiana University Press: June 2008). 101-102.

<https://ebookcentral.proquest.com/lib/buffalostate/reader.action?docID=362711>

⁶ Edward K. Muller, “Acceptably Pleasing: The Urban Advisors and the Struggle to Improve Freeway Design,” *Journal of Urban History*, 40, no. 5 (June, 2014). <https://journals.sagepub.com/doi/full/10.1177/0096144214533297>

permanently abandon certain projects.⁷ These analyses point toward a conflicted, complicated relationship between the general public and freeway construction, with a genuine concern for national defense, economic progress, and city revitalization juxtaposed with concerned citizens watching as their cities become rearranged around these new developments with mixed results. This paper will bring to the field an analysis of personal and professional accounts of the Can of Worms, the problems plaguing the Can, and how motorists were affected by such conditions.

Across the country it was deemed a matter of national security to construct a system of freeways that could allow for the rapid movement or deployment of armed forces in response to an attack or emergency. Coupled with this military concern was a vested interest in seeing the US economy benefit from Americans purchasing automobiles, utilizing consumer demand for better roads for travel across the country while also strengthening connections between cities and suburbs, which were also booming. Road construction projects across the country were initiated following World War II, laying 24,000 miles of asphalt across the continental US from 1956 to 1980 in metropolitan areas alone.⁸ However, in the early postwar years following World War II state legislatures found themselves either unwilling or unable to fund infrastructural development in the form of roads. To complete such works Congress came to an agreement with states that funding would be allocated in a 90-10 plan, in that Congress supplied 90% of funding and 10% would be given by states.⁹ However, road construction funded by states was not equal and seven states took the lead, in order: California, New York, New Jersey, Ohio, Texas, Connecticut, and Maryland. In fact, these three states accounted for 63% of road construction by 1950.¹⁰

⁷ Raymond A. Mohl, "Stop the Road: Freeway Revolts in American Cities," *Journal of Urban History*, 30, no. 5: 675.

⁸ Jones, 103

⁹ Jones, 104

¹⁰ Ibid.

Road networks in American cities were not equipped for motorization, resulting in “big-city mayors, downtown business groups, and urban planners calling for the reconstruction and modernization of the American city. New highways were high on the wish list.”¹¹ The Interstate Highway System had an immediate and long lasting effect on how urban and suburban space was allocated, such as “huge expressway interchanges, cloverleaves, and off-ramps creating enormous areas of dead and useless space in the central cities.”¹² These freeways were seen as a way to remove “blighted” neighborhoods from cities, resulting in some one million Americans being displaced from their homes as the freeway project reached its completion.¹³ The victims of the freeway were overwhelmingly black and poor, who were moving into the transitory neighborhoods that white families left behind when they fled to the suburbs.¹⁴ In fact, when it comes to New York’s development of freeway systems, the demolition and placement of roadways through the cities were simply a means to remove black areas from the city “for higher and better uses,” according to one redeveloper involved in the project.¹⁵ This targeting of black neighborhoods and communities led to the collision between anti-freeway activists and the Civil Rights movement, with the goals of both groups coinciding with the demand of halting freeway construction through these areas.¹⁶ Many criticisms of the highway project centered on a call for “coordinated planning, housing relocation, mass transit, and preservation of small-scale neighborhood life in the modern city that resonated with freeway opponents and buttressed anti-highway movements.”¹⁷

Automotive manufacturing in the 1980s faced a series of drastic changes that can be attributed to the global market that not only changed the face of American consumerism toward

¹¹ Rose & Mohl, 95.

¹² Ibid, 96.

¹³ Ibid.

¹⁴ Ibid, 97.

¹⁵ Ibid.

¹⁶ Ibid, 113.

¹⁷ Rose & Mohl, 114.

vehicles but also had an important impact on how freeways functioned across the United States. The American energy market was facing an energy crisis spurred by an international embargo on the United States from the Organization of Petroleum Exporting Countries (OPEC) in 1973 that generated a desire for energy conscientiousness and conservatism.¹⁸ This energy crisis encouraged congressional action, resulting in legislation that obliged automotive manufacturers to “annually improve the fuel economy of their new car and light truck fleets to the maximum extent that is technically and economically feasible.”¹⁹ This crisis resulted in a noticeable bump in small car ownership as marked by the National Highway Safety Administration (NHTSA) in December 1980 just as the OPEC embargo was put into effect, as seen in Figure 1. The share of small cars jumped from around 40% in 1973 to over 50% in 1974, then receding to a low in 1978 to comparable levels in 1973 that rebounds by 1979 to 55%.²⁰ This ebb and flow of market share of small cars speaks to the desire for the American consumer to find economically feasible means to maintain private automotive transportation within the confines of political realities, such as an international embargo brought on by US foreign policy. There was also an infrastructural capacity argument to be made for smaller cars. With smaller cars making up a larger portion of what was being driven on freeways, such as the Can of Worms in Rochester, there was more room for cars to traverse these systems, with a report finding that such capacity can be increased by some 8%.²¹

¹⁸ National Highway Traffic Safety Administration, *Small Car Safety in the 1980's*, Washington, D.C.: 1980. David A. Ramsett and Robert W. Sherrer, “The Demand for Small Cars and the Resulting Automobile Fleets 1970-1990”: 36.

<https://books.google.com/books?id=cYQNbZLr5fAC&dq=car%20safety%201980s&lr&pg=PA47#v=onepage&q&f=false>

¹⁹ Ibid, 31.

²⁰ Ibid, 33.

²¹ Paul Wasielewski. “The Effect of Car Size on Headways in Freely Flowing Freeway Traffic,” *Transportation Science* 15, no. 4 (November 1981): 14. Accessed March 5, 2024, <https://www-jstor-org.proxy.buffalostate.edu/stable/25768028?sid=primo&seq=1>.

With the increased use of small cars came serious concerns about the safety of the drivers and passengers of said small cars, with the same NHTSA report published in December 1980 raising such concerns after extensive study. The agency found that two-vehicle crashes became more frequent than one-vehicle crashes, and in those two-vehicle crashes the smaller vehicle involved experienced higher rates of fatality than those in the larger vehicle.²² These rates of fatality can be attributed to the difference in force and mass between the two vehicles, which is important to consider because smaller cars began to account for a larger share of new cars purchased, reaching about 55% of all new car purchases in 1980.²³ While there were important reforms that made vehicles much safer, with a decline in injury and fatalities starting since the automobile first became popular and used more frequently, the popularity of small cars exacerbated the standing problems with the Can. This system of freeway was simply not designed to keep up with the increasing volume of traffic nor the popularity of new vehicles that crossed it.

The shortcomings of the Can of Worms were apparent and required an extensive reconstruction process to both address the concerns of local Rochesterians while rebuilding faith in the Department of Transportation at the state and federal levels. As such, a critical piece of reconstruction and one its highest priorities was restoring this faith, with efforts including even a festival to drum up this lacking support in a so-called “Can Day” sponsored by local merchants, TV & radio shows.²⁴ Before reconstruction began, New York passed in 1983 a “Rebuild New York” program which sought to address ailing infrastructure across the state. Indeed, in just the Can of Worms area, the NYS Department of Transportation identified 16 bridges in desperate need

²² National Highway Traffic Safety Administration, *Small Car Safety in the 1980's*, Washington, D.C.: 1980. William A. Boehly and Louis V. Lombardo, “Safety Consequences of the Shift to Small Cars in the 1980's”: 55. <https://books.google.com/books?id=cYQNbZLr5fAC&dq=car%20safety%201980s&lr&pg=PA47#v=onepage&q&f=false>

²³ David and Sherrer, “The Demand for Small Cars and the Resulting Automobile Fleets 1970-1990”: 33.

²⁴ Gurley, 53.

of repair, requiring either replacement or extensive reconstruction.²⁵ Given the engineering of the Can of Worms, and the use of “weaves” and complicated lane placement, the reconstruction efforts would be inherently disruptive whereas other freeways being repaired could be done in piecemeal fashion. As such, the traffic disruption that repair entailed worried many Rochester residents who worried that the Can traffic would be rerouted through local streets, with worries that downtown districts would shutter.²⁶ Given these concerns, it was deemed necessary to include in the project more than just engineers and department officials; liaison was done with community leaders in an effort to engage with public and media relations.

The reconstruction efforts were concentrated in a Construction Corridor Task Force that included “state, city, county, local and industry leaders, together with media and law enforcement agencies.”²⁷ This group met regularly to approve construction plans, address concerns as they arose, and “become aware of each phase of the reconstruction as it would occur.”²⁸ This group recognized the need to mitigate the traffic that would inevitably be disrupted and came up with plans for diverting traffic before the actual reconstruction efforts could truly begin. Ironically, as the motorization of America saw the overall end to mass transit in most American cities, the methods of this diversion included park-and-ride lots that utilized the Regional Transit Service (RTS) bus system along major commuter routes. Coupled with a promoted “Rideshare” carpooling program, Can traffic was reduced by as much as 20% before the project was initiated.²⁹ In December 1987 a bid of 93.2 million dollars by the Perini Corporation from Framingham, Massachusetts and ground was broken on the following St. Patrick’s Day in March 1988.³⁰ Once

²⁵ Gurley, 51.

²⁶ Gurley, 52.

²⁷ Gurley, 52.

²⁸ Ibid.

²⁹ Ibid.

³⁰ Ibid.

begun, the public relations efforts continued with major events being held throughout the course of construction, of which the groundbreaking ceremony was one. These efforts were a part of the NYS Department of Transportation's recognition that "working together in a total community effort was key to the successful completion of the largest single highway construction project ever awarded in the State of New York at the time construction began."³¹

The public impatience for Rochester's personal spaghetti junction was palpable. Not only do the newspapers during the 1980s communicate this, but also testimonies of those who drove on the Can of Worms before its reconstruction. Even before the completion of the project, the size and shape of the project coined its now famous nickname of "the Can," against the wishes of both the engineers and Department of Transportation officials working on the project. In a 1985 publication by *The Greece Post*, a satire board game so-called "The Can of Worms Freeway Frenzy" (Figure 2) made its debut, expressing sharp criticisms that were on the minds of anyone who drove the freeway. The goal of the game was simply "to successfully navigate your playing piece through the tangled, mangled, mixed-up mess of a highway system." In the third rule of the game, it is stated that "it does not matter in which direction you are traveling, because by the time you get to your destination you will have probably been lost several times over and will have traveled on every roadway trying to get back where you belong." In a mock of this principle of the Can, the sixth rule adds a stipulation that if no player should get to the other side of the game board, then the winner would be "the player who convinces the greatest number of other players to quit and go home."³² The different playing spaces on the board also communicate both the cutting satire and the genuine frustration with the highway system plaguing commutes, with such

³¹ Ibid.

³² "The Can of Worms Freeway Frenzy," *The Greece Post* (Rochester, NY), December 26, 1985. Accessed March 3, 2024.

spots as “Don’t panic. Keep telling yourself, “I made it through yesterday,” or “You get a flat tire in the middle of the can. Lose 2 turns and your temper,” or, “Warning! First snowfall! Immediately forget everything you know about winter driving. Slide into a guardrail,” offering a particular blend of Rochesterian culture and frustration with the NYS DOT’s shortcomings in their community.

Many users of the website Reddit under Rochester’s specific thread remember the dread of driving on the Can of Worms as commuters or even as first-time drivers. Per “Billy0598”, “I remember that we weren’t allowed to take the driver’s test until we had driven on the Can of Worms early in [the] afternoon.”³³ The tenuousness of driving the Can resides entirely in having to trust complete strangers, according to “haxjunkie”: “You needed to spend time as you approached tracking your speed to the person ahead of you and judging their character. [Were] they reliable? Did they follow the traditions of the Can?”³⁴ In a similar vein to these posts, another comment was made under a different thread, this time by “NewMexicoJoe”, who reinforced this pattern that being able to pass through the Can required a sense of teamwork and trust amongst the motorists caught the winding overpasses:

“I learned to drive in the old Can, taking 590 N across 490 E. The trick was to roll down your window and look at the driver in the left lane who needed to give you some space. That practically forced them to let you in, unless they were some sort of sociopath. You sometimes needed to do this three times to successfully cross 490.”³⁵

³³ Billy0598, “Any personal experiences of the original ‘Can of Worms’?” *Reddit*, Accessed March 28, 2024. https://www.reddit.com/r/Rochester/comments/1bp5ehr/comment/kwwvru9/?utm_source=share&utm_medium=web3x&utm_name=web3xcss&utm_term=1&utm_content=share_button.

³⁴ Haxjunkie, “Any personal experiences of the original ‘Can of Worms’?” *Reddit*, Accessed March 28, 2024. https://www.reddit.com/r/Rochester/comments/1bp5ehr/comment/kwv2bj2/?utm_source=share&utm_medium=web3x&utm_name=web3xcss&utm_term=1&utm_content=share_button.

³⁵ NewMexicoJoe, “‘Can of worms’?” *Reddit*, Accessed March 28, 2024. <https://reddit.com/r/Rochester/comments/5lhorc/comment/dbxz4mx/?rdt=36732>

The difficulty of the Can of Worms made the motorists who drove on develop a sense of animosity toward both the project and the New York State Department of Transportation, evident from the efforts taken by the Department to regain the trust of the community and the testaments from the Reddit submissions.

Timothy H. O’Leary of Arizona State University conducted analysis on the shortcomings of the Can of Worms in the June 1980s edition of *Simulation & Games* used “a modeling approach capable of analyzing a wide variety of complex traffic weaving problems,” which the Can was full of.³⁶ Per O’Leary’s identification of such problems, the Can had “road widths too narrow, the weaving areas, entrance ramps, and exit ramps are too short, and the traffic volumes are too great.”³⁷ However, these problems are “not unique” to Rochester’s highway stem as models used to identify such problems are limited to “design considerations and are becoming more and more infeasible as construction costs increase and available public funds decrease.”³⁸ In short, while the problems could be identified, public funding limited construction efforts to actually provide solutions to the public. O’Leary then makes complicated mathematical equations to validate the model he uses to predict and analyze both traffic problems and solutions for the Can. In the end, O’Leary is able, through these calculations, to hypothetically reduce “146 seconds to 55 seconds the average time required to traverse the SYSTEM, and from 166 seconds to 48 seconds the average time required to traverse the WEAVE.”³⁹ Personal analysis of these problems can be made evident in Figure 3, being photographed in 200, and Figure 4, being photographed shortly after the construction of the freeway system.

³⁶ O’Leary, 152.

³⁷ O’Leary, 151.

³⁸ Ibid.

³⁹ Ibid, 160.

This paper has analyzed the various aspects of the Can of Worms up to its reconstruction starting in the 1980s. Following the conclusion of World War II, the federal government picked up where cities and states were incapable of continuing, mass funding the motorization effort that swept the nation starting in the 1950s. Soon, even cities bent to the will of highway planners as they sought to construct these vast webs of connections in the name of economy and national security, to the frequent dismay of poor and black communities as they saw their homes and neighborhoods leveled for highway construction. Rochester, NY was not spared this treatment as they saw a massive highway interchange wove and folded in on itself in the name of convenient commutes. Soon, however, Rochesterians began to feel the shortcomings of the New York State Department of Transportation and the engineers they employed, labeling this freeway the Can of Worms in response. The weaving and complicated lanes completed at the end of the 1950s found itself outdated by the 1970s, incapable of handling the sheer volume of traffic and vehicles that began to become a daily occurrence and nuisance to those who had to use its roads on daily commutes. For these reasons, NYS sought to rebuild this system and completed its reconstruction in the early 1990s while largely leaving the system itself intact as its function was too important to fully demolish.

New Car Sales by Size Category 1970-1980*

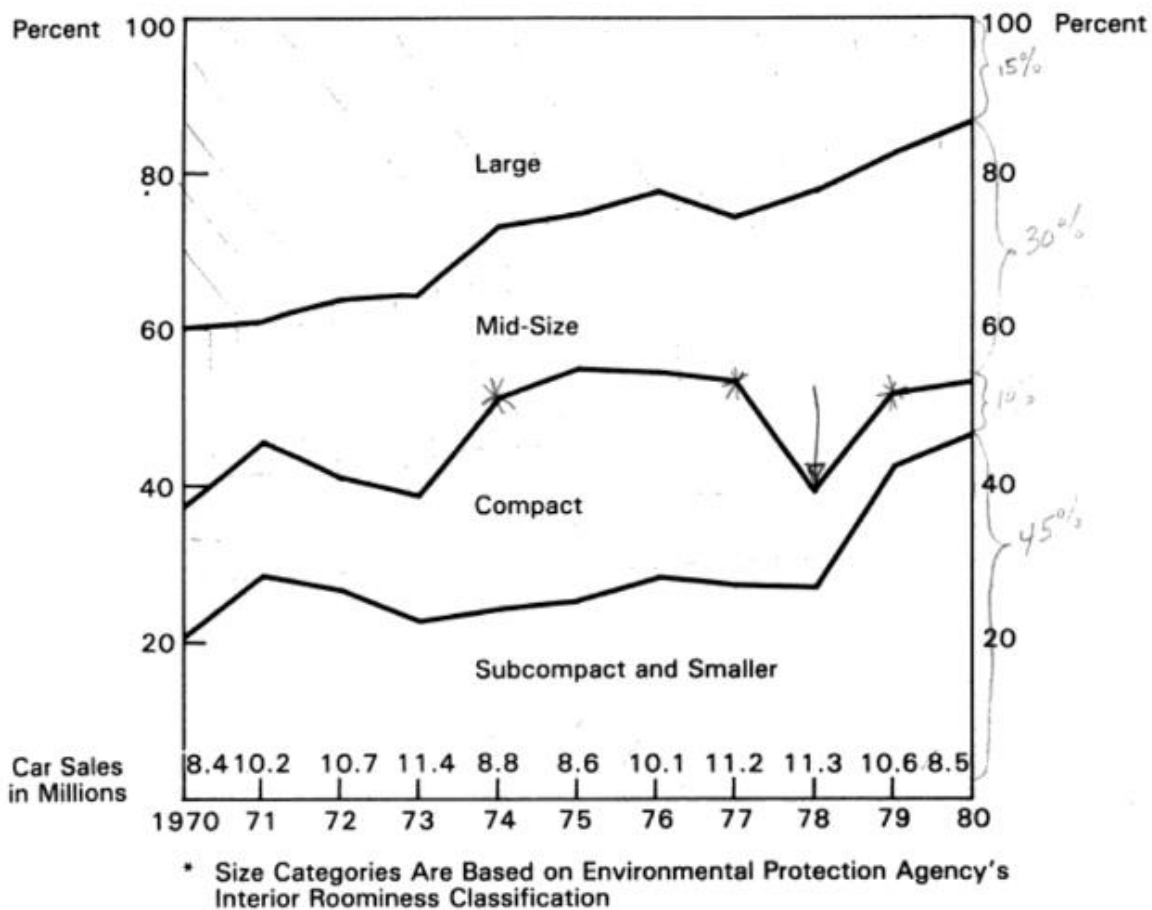


Figure 1. The share of car sales in millions by their size based on the Environmental Protection Agency's Interior Roominess Classification.⁴⁰

⁴⁰ National Highway Traffic Safety Administration, Small Car Safety in the 1980's, Washington, D.C.: 1980. David A. Ramsett and Robert W. Sherrer, "The Demand for Small Cars and the Resulting Automobile Fleets 1970-1990.

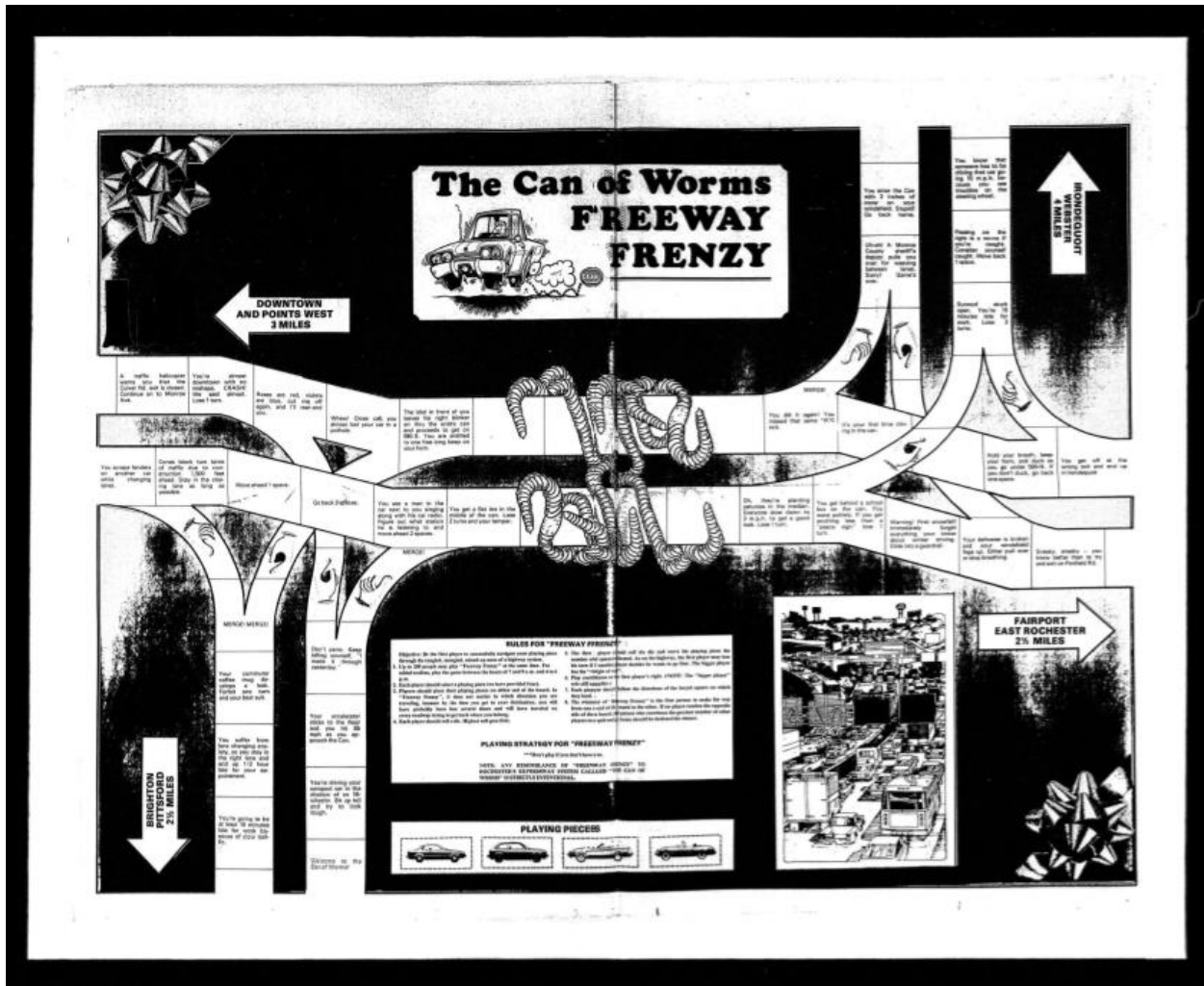


Figure 2. The Can of Worms Freeway Frenzy (Publication by *The Greece Post*, December 26, 1985).

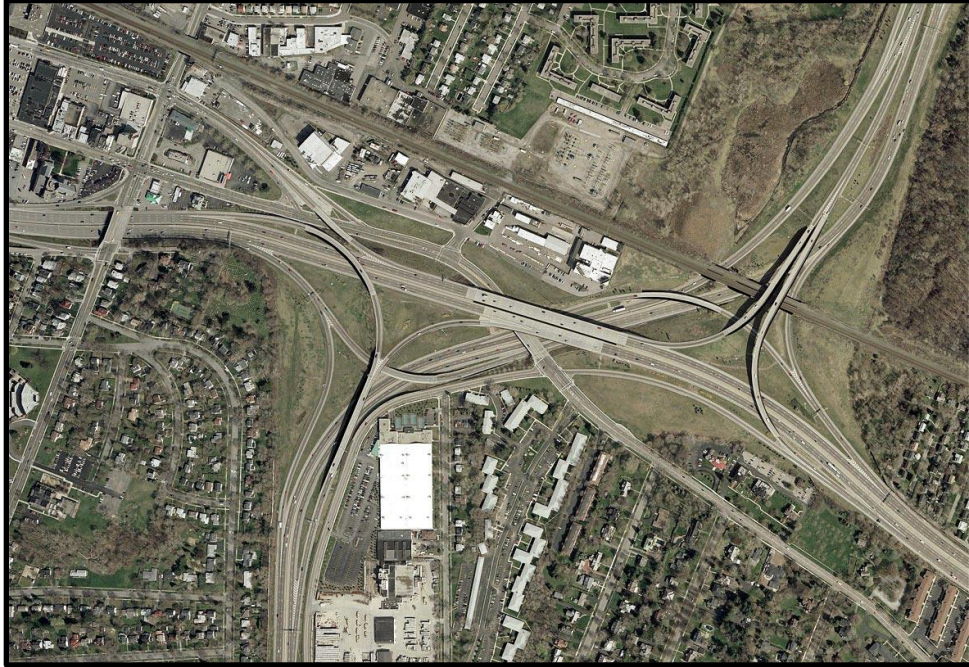


Figure 3. An aerial view of the Can of Worms, captured by satellite in 2002. ⁴¹



Figure 4. The Can of Worms at time of completion. ⁴²

⁴¹ N.W. Perry. Interchange of the Week - I-490, I-590 & NY 590, Rochester: The "Can of Worms", *Empire State Roads*, October 2, 2000. Accessed March 5, 2024.

⁴² Ibid.

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