The Defeat of Scheme Z

How Bostonians Changed the Big Dig

by

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Table of Contents

Introduction

Imagine on a nice summer day, a family decides to drive south to visit Boston for the day. They hop in their car and drive over the Zakim Bridge and into downtown, parking their car in the North Station Garage. Leaving the garage, they walk over to the Nashua Street Park where they picnic and watch the sailboats float down the Charles. Deciding they want some dessert from the North End, they walk along the Rose Kennedy Greenway to get there. It likely never crosses their mind, but the Boston they see is very different from what it used to be. In fact, every interaction they have with the physical landscape of the city was touched, if not fully formed, by the most expensive highway project in American history: the Big Dig.

Officially known as the "Central Artery/Tunnel (CA/T) Project," the Big Dig was a $15 billion project that completely overhauled Boston's highway infrastructure.[1] The project took two and a half decades to complete, with planning beginning in 1982 and construction ending in 2006. The project primarily involved taking one of Boston's existing highways—the elevated Central Artery—and depressing it underground by replacing it with tunneled highways. Additionally, the project included building a harbor tunnel to East Boston, the development of new urban parks, and even the building of new rail lines and bus routes.[2] Based on the idea that a new highway project could correct the mistakes of old highway projects, the Big Dig was intended to improve Boston in multiple ways. The plan would improve the transportation system, stimulate the economy, boost real estate value, and beautify the city as well. Yet despite all the benefits that Boston stood to gain from the project, the Big Dig almost never began construction.

[1] Anthony Flint, "10 Years Later, Did the Big Dig Deliver? The $15 Billion Project Is A Road Paved With Failures, Successes, And What-Ifs," *Boston Globe*, January 3, 2016.
[2] Frederick Salvucci, "Frederick P. Salvucci Oral History," by Giordana Mecagni, Moving Image, June 2, 2016. Northeastern University Library, Archives and Special Collections.

Building public projects always comes with hurdles. Each one is almost destined to face design challenges, funding issues, legal controversies, and public pushback at some point in the process. In some cases, these issues become so severe that projects are stopped in their planning stages—something that almost happened to the Big Dig due to controversies over its planned Charles River crossing.

In 1986, planners submitted a Charles River crossing design for environmental review.[3] Due to the plans' shortfalls such as poor traffic performance, the plan failed to gain the approval of the Environmental Secretary and needed to be redesigned. A new plan, called "Scheme Z," was selected by planners in 1988. When Scheme Z caught the public's eye in 1989, its size and ugliness—among other features—sparked substantial outrage from residents from Cambridge and Charlestown, which is where Scheme Z was planned to be built, and environmentalists who saw the project as damaging to the environment, among others. In 1991, Scheme Z made it through the environmental approval process.[4] For most plans, this is where construction begins. For the Charles River crossing, a review committee was created, they discarded Scheme Z, selected a new river crossing called Alternative 8.1D Mod 5 as their preferred alternative, only for Transportation Secretary James Kerasiotes to ignore the committee's decision and choose the Non-River Tunnel alternative (NRT), all before construction began years later.[5] During this process, the greater Boston residents and environmentalists who were critical of the river crossing plans flooded the project with pushback in the form of lawsuits and negotiations with the goal of reworking the crossing design or shutting down the CA/T project completely.[6]

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[3] David Luberoff and Alan Altshuler, *A Political and Institutional Analysis of Boston's Central Artery/Tunnel Project* (Amherst: New England University Transportation Center, 1996), IV-22.
[4] "Ten O'Clock News; DeVillars Endorses Scheme Z," January 2, 1991, GBH Archives, accessed April 25, 2024.
[5] Thomas C. Palmer Jr., "All-Bridge Plan Cheapest Way to Go, Kerasiotes Says," *Boston Globe*, November 17, 1993.
[6] Peter J. Howe, "Will Artery Suffer Fate of NY's Westway? How Legal Sniping Felled Another Highway Plan," *Boston Globe*, January 27, 1991.

Outside pressure grew so intense that many feared Scheme Z would be the death of the Big Dig.[7] In the end, the Big Dig was built with NRT as its Charles River crossing design.[8] The plan improved upon Scheme Z due to its smaller size and more aesthetic bridge, yet did not utilize tunnels like Alternative 8.1D Mod 5 did. The Charles River crossing is now known as the "Leonard P. Zakim Bunker Hill Memorial Bridge" as it stands today.[9] Though imperfect, it was both better designed and better received than Scheme Z.

From the original idea of correcting the mistakes of old highway projects, to the planning and replanning of the Charles River crossing, citizen participation was one of the most defining forces. In the context of public projects, citizen participation is the involvement of those who will be affected by the project in planning and administrative processes.[10] During the 20th century, calls for increased citizen participation in infrastructure projects occurred all throughout the United States. In Boston, these calls especially happened after the 1950s construction of the Central Artery and the failed planning of the Inner Belt in the 1960s, both of which were received poorly by greater Boston residents. Due both to the poor reception of past highway projects and calls for more citizen input, citizen participation was meant to be deeply integrated into the Big Dig's planning and design processes. However, Scheme Z was designed and selected behind closed doors.[11] When the design of Scheme Z came to light, enraged greater Boston residents fought until citizen participation was formally incorporated into designing a

[7] Howe, "Will Artery Suffer Fate of NY's Westway?"
[8] Palmer Jr., "All-Bridge Plan Cheapest Way to Go, Kerasiotes Says."
[9] Ralph Ranalli, "Zakim Bridge: An Instant Icon," *Boston Globe*, March 31, 2003.
[10] Karilyn Crockett, "People before Highways: Stopping Highways, Building a Regional Social Movement," in *People before Highways: Boston Activists, Urban Planners, and a New Movement for City Making* (Amherst: University of Massachusetts Press, 2018), 21-30.
[11] Ian Coss, "Part 4: The Double Cross," by GBH, *The Big Dig*. October 11, 2023. Podcast, MP3, 56:00.

new river crossing that was better than Scheme Z.[12] In the end, citizen participation was one of the most impactful forces for the Big Dig, and especially the Scheme Z fight.

Most secondary literature on the Big Dig involving citizen participation either quickly glances over the Scheme Z fight or ignores it entirely. For example, Domonic Bearfield and Melvin Dubnick released a paper on citizen participation in the Big Dig. It goes into depth about the differences between Transportation Secretaries Salvucci and Kerasiotes, yet does not mention Scheme Z or the Charles River crossing at all. Those that do cover it often do not reflect a holistic examination of the citizen participation in the fight. David Luberoff and Alan Altshuler's *A Political and Institutional Analysis of Boston's Central Artery/Tunnel Project* examines how the Big Dig was shaped by the shifting away from completely utilitarian mindsets for public projects. While it does go into detail about Scheme Z, it does not grasp the role of citizen participation in shaping the Charles River crossing. Rather, it focuses more on how the Dukakis and Weld gubernatorial administrations dealt with Scheme Z. Likewise, Luberoff and Altshuler discuss Scheme Z in their book chapter "The New Politics of Highways," but the chapter largely focuses on the costs and difficulties associated with highway building.

The purpose of this analysis is to trace and interpret the complex dynamics of citizen participation in public projects through the lens of the Charles River crossing. The first chapter covers the history of highway projects in Boston, offering a historical context of how past highway projects shaped sentiment around citizen participation. It argues that while the history of highway projects in Boston created momentum for a highway project guided by citizen input, the economic and transportation needs of the city necessitated the successful completion of the Big Dig. The second chapter analyzes how and why Transportation Secretary Fred Salvucci

[12] Palmer Jr., "All-Bridge Plan Cheapest Way to Go, Kerasiotes Says."

resisted citizen participation when fighting to have Scheme Z environmentally approved. It also shows how citizen participation persevered, and Scheme Z was replaced by a river crossing design more palatable for greater Boston residents and environmentalists. The final chapter discusses how citizen input was sometimes warped to achieve ulterior motives during the Scheme Z fight. Together, these three chapters demonstrate that the biggest fight in the biggest highway project—while being on the surface about a design—was really about the proper incorporation of citizen participation.

Chapter 1

Neighborhoods, Planners, and Projects

The Big Dig was initially conceived of in the early 1970s.[1] At the time, the Central Artery was the main highway through downtown Boston. Despite its importance to the city's transportation system, it was in horrible shape and had continuous detrimental effects on the surrounding city. The deteriorating highway saw traffic far beyond its capacity, resulting in intense gridlock occurring through many hours of the day. The quantity of cars coming through created large amounts of pollution and noise that plagued the city daily. The roadway was also poorly designed, featuring tight corners and on and off ramps without merge lanes that caused the expressway to have an accident rate twice the national average. Many Bostonians also considered the elevated Central Artery to be an eyesore. Painted green and slashing through the city, it cut off districts from the waterfront, and left the North End, one of Boston's most iconic and historic neighborhoods, isolated from the rest of the city.

Though work to get permits for the plans did not begin until 1982, it was clear a decade prior that between the state of the Central Artery, as well as its continued impacts on the city, a major transportation project was needed.[2] More than any other individual, Fred Salvucci brought the idea to depress the Artery into the planning process.[3] He was informed of the idea by fellow MIT engineer Bill Reynolds. At the time, Salvucci had been serving as a transportation advisor to Mayor of Boston Kevin White (1968-1984), and soon became Transportation Secretary under Governor of Massachusetts Michael Dukakis (1975-1979, 1983-1991). As Transportation

[1] Alyssa Danigelis, "The Man Behind the Big Dig," Technology Review, Massachusetts Institute of Technology, July 1, 2004, https://www.technologyreview.com/2004/07/01/101647/the-man-behind-the-big-dig/.
[2] Daniel C. Wood, "Learning from The Big Dig," *Public Roads* 65, no. 1, (July 2001): 30-36.
[3] Danigelis, "The Man Behind the Big Dig."

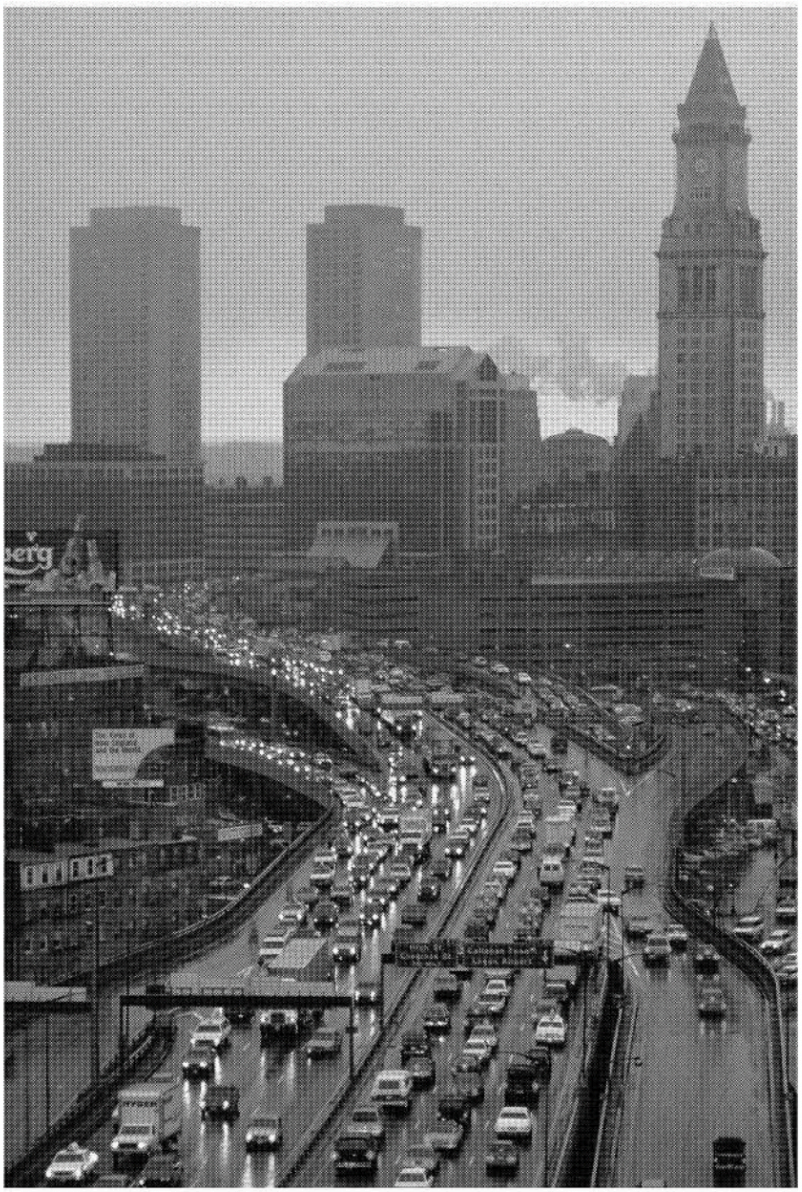
Secretary, Salvucci focused his efforts on the Big Dig. Salvucci represented a new generation of planners and administrators that held a philosophy shaped by decades of destructive highway and renewal projects. They believed public projects should utilize public feedback to build better projects and communities—an idea that penetrated deep into Boston neighborhoods. So, while the Big Dig was the next in line of many highway projects Boston saw in the 20th century, it was meant to be different in the nature of the project and its planning process. However, the deteriorating roadways, economic uncertainty of Boston's future, and instability of federal funding all became relevant factors for the project's planning in the 1980s. The juxtaposition of the philosophies of Salvucci, his generation of planners, and grassroots organizations, and the pressing transportation, economic, and funding issues created a tension around the planning of the Big Dig that set the stage for the drama around Scheme Z in the early 1990s.

Understanding the philosophies of Salvucci and his generation of planners begins with looking at the previous generation of planners, their philosophies, and the impacts of their projects on Boston. The story of major highway projects in Boston begins with the Central Artery (see figure 1.1). The highway was originally conceived in the 1920s.[4] At the time, the automobile began exploding in popularity all over the U.S. Boston was no exception, but the winding roads that were made for horse carriages could not effectively handle this new mode of transportation. Already, Bostonians were calling for the creation of a six-lane highway. Though official planning began in the 1930s, the Great Depression and WWII delayed construction until the 1950s. Designed to carry 75,000 cars a day, the Artery was supposed to improve the city by removing much of the gridlock that plagued the downtown.

[4] Thomas H. O'Connor, *Building a New Boston: Politics and Urban Renewal from 1950 to 1970* (Boston: Northeastern University Press, 1993), 14-15.

Figure 1.1: Image from the mid 1980s of traffic on the Central Artery. Photo taken by Peter Vanderwarker.

Source: Altshuler, Alan, and David Luberoff. "The New Politics of Highways." In *Mega-Projects: The Changing Politics of Urban Public Investment*, 96. Brookings Institution Press, 2003.



Boston's Central Artery in the mid-1980s. Warning that the road was severely overloaded and would soon need to be rebuilt in any event, state transportation secretary Frederick Salvucci proposed replacing it with an underground highway, to be constructed underneath the existing road. Credit: Peter Vanderwarker.

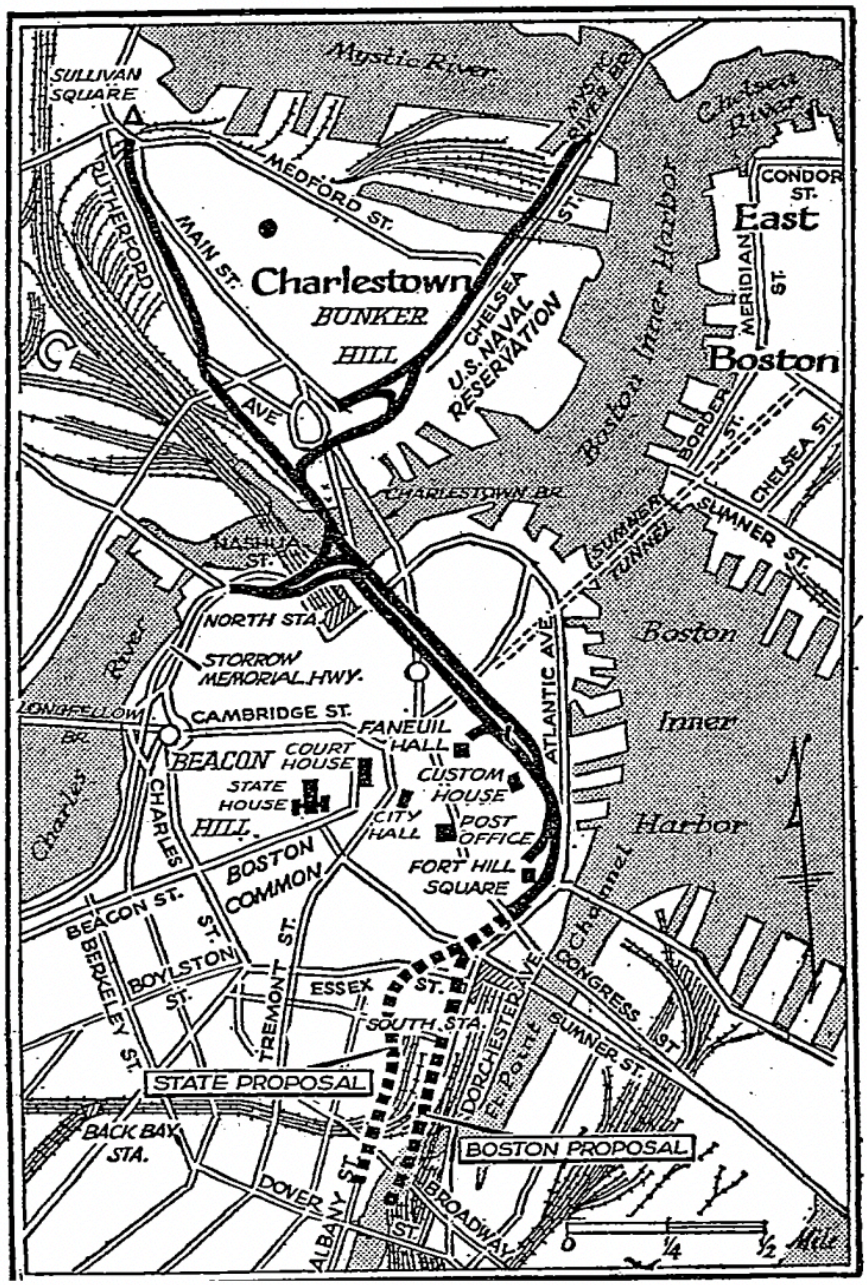
The hopes of the planners proved to be far from the reality of the highway. According to historian Tom Lewis, the engineers knew that the project was disastrous for the city even before the highway was finished.[5] To build the Artery, houses and businesses had to be torn down, forcing thousands of people to relocate. The destruction of neighborhoods was only made worse by the noisy, elevated highway that cut through communities. Despite early signs of the project's failings, there was little widespread effort to prevent the project from happening. Thomas H. O'Connor, a historian and author of the book *Building a New Boston*, described the 1940s and 1950s as a time when America had great faith in experts.[6] Experts had made recent great advances in the fields of military affairs, science, and medicine that had seemingly major positive impacts on the world. In the eyes of most Americans, Bostonians included, they should be capable of creating great change to America socially and economically.

While outcry against the project was not the predominant opinion at the time, there were certainly groups that were vocal against it. The North End was one of the hardest hit neighborhoods by the project, and the largely Italian-American residents were outraged by the prospect of the new highway.[7] The Artery plan cut off the North End from Boston's downtown (see figure 1.2), but that wasn't the only issue. Thousands of people had to be relocated due to the incredible land-takings that the project required. Hundreds of dwellings and businesses were claimed as a part of Right-of-Way acquisition, something that was considered acceptable by city planners in the 1950s, but outrageous for residents affected. Protests began in 1950, a year before construction was set to begin. Store owners, restaurants, and other businesses came together to create the "Save Boston Business" committee. They protested again as construction began in

[5] Tom Lewis, "Buried Desires," in *Divided Highways* (Ithaca: Cornell University Press, 2013), 296.
[6] O'Connor, *Building a New Boston*, 79.
[7] Sara Rimer, "Upheaval and Calm as Big Dig Transforms Boston," *New York Times*, April 28, 1996.

Figure 1.2: 1950s illustration showing planned and proposed highway segments of the Central Artery.

Source: Fenton, John H. "Old Boston Bows to Superhighway; $40,000,000 Central Artery Levels Ancient Buildings, but Faneuil Hall Stands." *New York Times.* February 28, 1954.



The New York Times Feb. 28, 1954

Expressway sections under construction or planned (solid lines). Alternative extension routes (broken lines) proposed.

1951. Despite their efforts, their protests were disorganized and ineffective, and the highway went up anyway.[8]

Like the North End, Chinatown was also hit hard by the Central Artery. Nearly half of Chinatown's residential footprint was leveled for the construction of the highway. While residents did not put up the same resistance as North End residents did, the Artery left a lasting impression in their minds. To them, highway projects were only destroying communities and leaving more traffic in their wake. They saw a breach of trust from political leaders who supported the interests of downtown businesses and suburban commuters over those of Boston neighborhoods and their residents. Though the Artery construction had shaped the perspectives of Boston residents, little could be done to prevent these types of projects from occurring in the 1950s.[9]

Destructive, land-capturing projects became the norm in the 1950s across the United States. Houses were torn down not just for transportation solutions, but also as a part of tactics of urban renewal. Urban renewal was based on the premise that public projects could reinvigorate cities by creating social and economic reform.[10] These projects often took the form of slum clearance, where poor urban areas were destroyed to make way for new construction. This was not just a Boston phenomenon. Urban renewal was nationwide, impacting nearly every city in America. In Boston, it most notoriously took place in the West End. After inspectors deemed most of the dwellings substandard, the West End was declared a slum by the city government in 1953.[11] West End residents immediately took to City Hall, with 500 of them flooding a meeting

[8] O'Connor, *Building a New Boston*, 84-85.
[9] Karilyn Crockett, "People before Highways: Stopping Highways, Building a Regional Social Movement," in *People before Highways: Boston Activists, Urban Planners, and a New Movement for City Making* (Amherst: University of Massachusetts Press, 2018), 29-30.
[10] C. A. Doxiadis, "Problems of Urban Renewal." *Ekistics* 72, no. 430/435 (2005): 85.
[11] Herbert J. Gans, *The Urban Villagers: Group and Class in the Life of Italian-Americans* (New York: The Free Press, 1962), ix.

in early 1953.[12] They had seen the destruction the North End faced and did not want to face the same fate.[13] Though some protested, other West End residents lost hope. Many West End residents learned from the North End's experience that local government was willing to destroy their communities for renewal projects. Generally, they held the belief that City Hall could not be fought, and that government decisions could not be changed by protests. By 1960, the West End was completely torn down.

Watching the destruction of the North End, West End, and Chinatown quickly became a learning opportunity for many in the Boston area. Thomas "Tip" O'Neill, at the time a Massachusetts representative in the House of Representatives, saw the project as civic vandalism.[14] Recognizing the destruction that this project caused, he swore to help prevent Boston from making the same mistake. He of course was not the only major figure to understand the destruction the projects of the 1950s had on Boston.

In 1959, many houses and businesses were torn down as a part of the Massachusetts Turnpike's extension of Route 128.[15] One of those homes belonged to the grandmother of Fred Salvucci. His grandmother, like many others, was forced out of her home in Brighton. Salvucci recognized that the destruction of Boston neighborhoods and communities was awful, regardless of what they were torn down for. His grandmother's relocation and the bulldozing of her home proved to be a formative moment in the creation of Salvucci's philosophy around highways and cities. This was not unique to Salvucci, or even O'Neill. Residents in neighborhoods all around Boston saw their ideas surrounding infrastructure projects shift as a result of the projects of the

[12] Adam Tomasi, "The Committee to Save the West End," The West End Museum, accessed December 15, 2023. https://thewestendmuseum.org/history/era/new-boston/the-committee-to-save-the-west-end/.
[13] Gans, *The Urban Villagers,* 167, 169.
[14] Lewis, "Buried Desires," 296.
[15] Rimer, "Upheaval and Calm as Big Dig Transforms Boston."

1950s. By the 1960s, these philosophies became apparent as they clashed with the philosophies of the older generation of planners that were responsible for the Inner Belt.

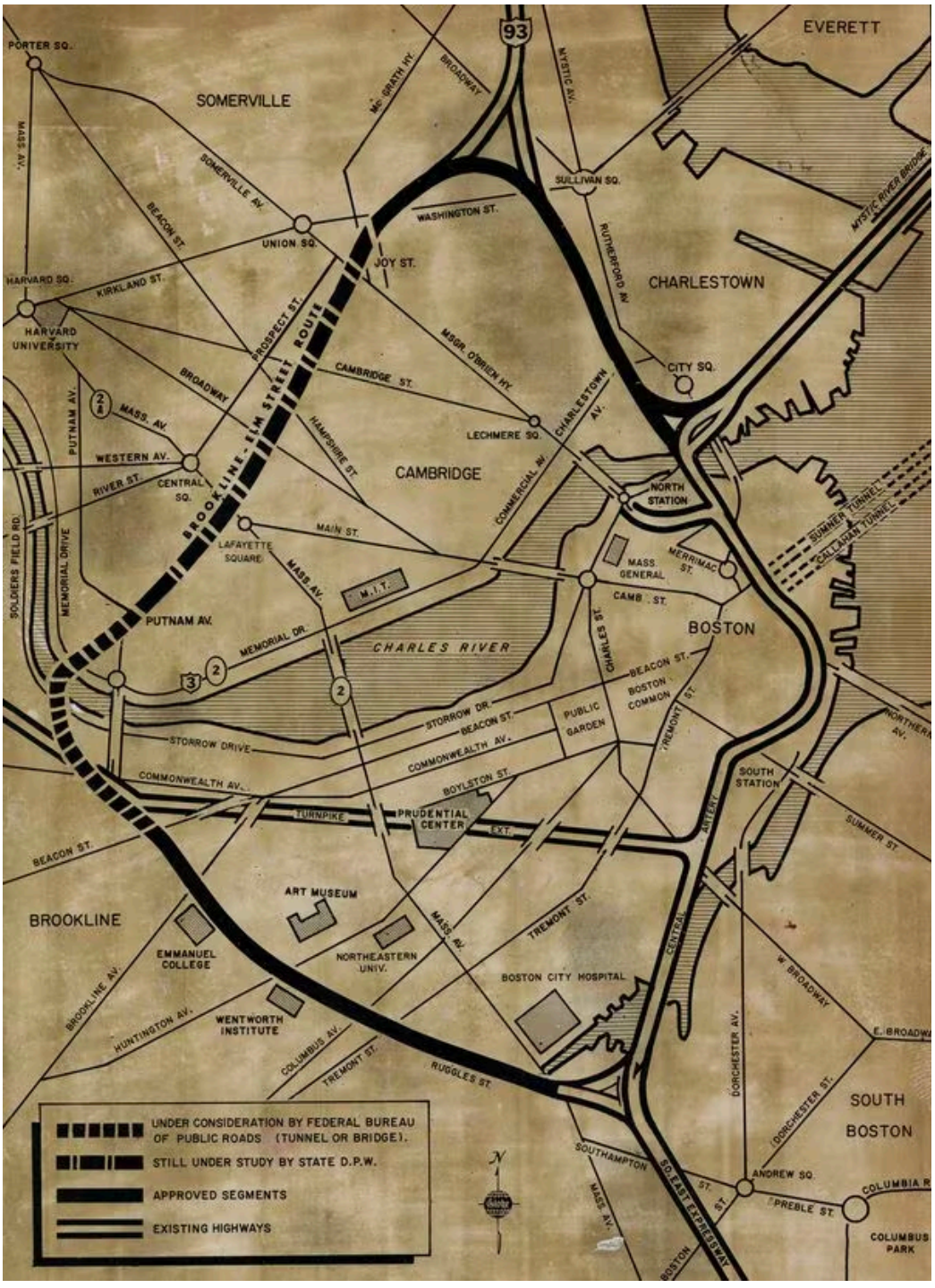
The Inner Belt was a highway designed to connect Boston's highways to the adjacent cities of Cambridge, Somerville, and Brookline (see figure 1.3).[16] By doing so, it would supposedly increase the efficiency of Boston's highway system, further reducing congestion within the city. While planning began in 1948, little progress was made on it until after President Eisenhower signed into law the Federal-Aid Highway Act of 1956, which allowed the federal government to pay for up to 90% of the costs of highway construction projects. Like the Central Artery, land-takings were an essential component of the planned project. With the Inner Belt, though, takings were less of a side-effect and more of a feature. Until it was canceled in 1971, the planning of the Inner Belt took place during the height of urban renewal in the U.S. Many people in power saw urban renewal as what Boston needed, such as Governor of Massachusetts John Volpe (1961-1963, 1965-1969). Volpe believed that the Inner Belt could function as both a transportation solution and as a means of raising property values in the communities it went through.[17] This could partially be achieved by routing the belt through decaying properties, which in Volpe's eyes was good for two reasons: it helped to redevelop blighted areas, and it made the proposed project cheaper.

The heart of this plan was not just about urban renewal and transportation within Boston. While many endorsed the plan for those reasons, another major reason for this was its impact on suburban communities. The proposed Belt promised faster travel times from the suburbs to the city centers, saving commuters time and money as routes were shortened and travel times

[16] Hilary Moss, Yinan Zhang, and Andy Anderson, "Assessing the Impact of the Inner Belt: MIT, Highways, and Housing in Cambridge, Massachusetts," *Journal of Urban History* 40, no. 6 (2014): 1057.
[17] "Inner Belt Seen Land Value Booster," *Christian Science Monitor* (Boston), February 11, 1959.

Figure 1.3: Map of the proposed Inner Belt, also featuring established highways such as Central Artery. Circa 1968.

Source: Reyes, Max. "50 Years After Inner Belt Protest, Activists Gather Again." *Boston Globe*. January 25, 2019.



became less of an issue.[18] A development like this threatened to increase flight from cities into suburbs by continuing to make suburbs more appealing while destroying urban communities. While this was beneficial for those who had the means to take advantage of suburban living, urban flight was a major issue that led to the degradation of cities in 20th century America. As people moved away from urban centers, so did businesses and investment, leading to property values decreasing and the conditions of cities worsening.

For urban and highway planners of this earlier generation, city projects that benefitted suburban residents and created urban renewal at the expense of urban communities and residents were necessary for social progress. They believed that the sacrifices communities were being forced to make, while significant, were worth what the projects had to offer.[19] Additionally, planners and officials saw their actions as a job they were required to carry out.[20] They viewed their approach as technical and professional, and believed that their actions were not a part of the problem. Instead, they deferred the blame to those who implemented the projects, indifferent to the ways that their methods of planning privileged the suburban driver and the downtown business sector at the expense of the residents whose homes were bulldozed.

Having gone through the nightmarish construction of the Central Artery, Boston residents protested more actively against the Inner Belt. They petitioned and staged protests at City Hall, only this time, they organized across the whole city and beyond. In 1968, The Greater Boston Committee on the Transportation Crisis (GBC) formally mobilized residents from Boston, Cambridge, and surrounding areas.[21] While protests had been going on for years, the GBC was organized because many believed that Massachusetts Governor Frances Sargent needed to see

[18] Moss, "Assessing the Impact of the Inner Belt," 1054-1055.
[19] Moss, "Assessing the Impact of the Inner Belt," 1058.
[20] Crockett, "People before Highways," 30-34.
[21] Crockett, "People before Highways," 23-24.

the persistence of the anti-highway movement. Grassroots movements such as this one were substantial in fighting against the Inner Belt, but they were not the only piece of the anti-highway movement.

Many important governmental figures supported the fight against the Inner Belt. For example, O'Neill, a Cambridge resident who was presently a member of the U.S. House of Representatives (1953-1987), sent a letter to the Federal Highway Administration (FHWA) arguing against the project.[22] Dukakis, who presently was a member of the Massachusetts House of Representatives representing Brookline, was also a major critic of the project, advocating for a change in policy allowing for federal highway funds to be used for mass transit projects.[23] However, arguably the most important people attacking the Inner Belt were planners such as Salvucci. At the time, Salvucci worked for the Boston Redevelopment Authority (BRA), the urban planning and economic development agency for Boston. Salvucci and some of his colleagues had been scarred by the projects of the 1950s, leading them to create the Cambridge Committee on the Inner Belt in 1965.[24] These planners were frustrated by what they saw to be an abuse of state power, and looked to create a more participatory approach when it came to highway planning. The committee worked at the street level to inform residents about the plan, while also publishing reports and editorials on it. The committee eventually received significant public attention and became the Urban Planning Aid (UPA). Between the Committee/UPA, state and federal representatives, and city-wide grassroots movements, the Inner Belt received far more backlash than any of the projects of the 1950s ever did.

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[22] Gavin Kleespies, "The Inner Belt: Chronology," History Cambridge, accessed Dec 16, 2023. https://historycambridge.org/innerbelt/chronology.html.
[23] Lily Geismer, "From Taxachusetts to the Massachusetts Miracle," in *Don't Blame Us: Suburban Liberals and the Transformation of the Democratic Party* (Princeton: Princeton University Press, 2015) 273.
[24] Crockett, "People before Highways," 29-32.

As a result of the wide-reaching anti-highway movement in Boston, the Inner Belt was canceled after over two decades of planning. Governor Sargent announced its cancellation in 1971. One year later, Sargent announced the cancellation of the Southwest Expressway, another highway project that required land-takings. The community destruction that would have come from building the Inner Belt was avoided, but the problems of transportation in Boston were far from over. Without new roads being built, the Central Artery remained congested, still cutting through the city as it had before. Additionally, the long planning period for the Inner Belt left uncertainty within many Boston neighborhoods. No one wanted to invest into their properties and their businesses if they were going to be torn down. So, for nearly two decades, communities were left to decay. Urban flight was also still an issue. This was a time where industry was leaving Boston, and instead, many of the jobs being created in the state were from high-tech firms located along Route 128, a highway that spanned through suburbs surrounding Boston.[25]

Despite these persisting issues, the 1970s did see promising developments for the future of Boston. Kevin White, during his time as mayor, facilitated major building projects that reinvigorated the city, such as Quincey Market, Copley Place, and Lafayette Place.[26] At the same time, investors began viewing Boston as an attractive market again, bringing in lots of private development. The new projects greatly helped the city of Boston fiscally. Boston previously faced challenges from past shocks to the city's tax revenues. For example, Proposition 2 ½, which was first implemented in 1982, imposed limits on the amount of tax revenue that could be generated from real and personal property taxes. This was only overcome through the new

[25] Geismer, "From Taxachusetts to the Massachusetts Miracle," 257.
[26] Lawrence W. Kennedy, *Planning the City Upon a Hill: Boston Since 1630*. (Amherst: The University of Massachusetts Press, 1992), 214.

buildings opened under White that drastically increased the amount of taxable real estate in the city.[27]

Around this same time was when Salvucci began imagining and planning the Big Dig. Regularly, he walked to lunch from City Hall to the North End, thinking of the possibilities of the project as he passed under the Artery each day. Keeping the experiences of his family, and so many others, in mind, Salvucci knew that the needs of individuals and communities had to be met in future transportation projects. This meant not only removing the inefficient environmental hazard that was the elevated Central Artery, but also constructing new bridges, tunnels, and interchanges to accommodate larger amounts of traffic in safer ways. He believed construction had to be done while keeping the old Artery open so that the city could function until the new one was built. Sewers had to be relocated and utilities had to be rerouted. All this had to be done without having a major impact on the environment, while also not tearing down a single dwelling or business.[28]

These early stages of the planning process show how different Salvucci and the new generation of planners were compared to the older generation from the 1950s and 1960s. Describing the early conception of the project, Salvucci says he saw the Big Dig as an opportunity to fix the mistakes of the past and create a solution that worked well for the city of Boston. Since Jane Jacobs's *The Death and Life of Great American Cities* (1961), the idea that the needs of city residents could be met, but only if everyone were to be included in the process of building them, had deeply infiltrated Salvucci's early thinking about the project. The idea of the Big Dig as an opportunity to correct past mistakes was widespread with other project planners. Even within the Environmental Impact Statements it was confirmed that this project

[27] Lewis, "Buried Desires," 266.
[28] Rimer, "Upheaval and Calm as Big Dig Transforms Boston."

was a way to improve Boston for Boston residents.[29] Planners hoped to fix Boston's highway issues, while improving the city. Most importantly though, the project was to be done in a way that planners perceived as right—preserving homes and businesses, while allowing communities to express their interests and have their input. These ideas were reflected in the actions that were taken by the project's planners.

Early in the official planning process, Salvucci was taking actions to meet the needs of communities. In the spring of 1983, the year immediately after official planning had begun, Salvucci hired, "A dedicated and intelligent group of deputies and publicists who listened, explained patiently, and, when necessary, adjusted their plans to meet the community's needs."[30] This was reflective of his philosophy that bringing everyone into the planning process was necessary. Unlike the projects of the 1950s and 1960s, Salvucci was committed to incorporating community needs and interests, "Communities have an 'invisible fabric' of knowledge that planners must consider, he said. 'You need the information the community has in its head.'"[31] Salvucci and his team of planners knew early on that if they were to complete this project, the only fair way to do it was to bring in community feedback, and allow that feedback to influence their plans, all while compensating those who were impacted. This clear shift in philosophies between the previous generation of planners and those now in charge of planning the Big Dig shows that this project was imagined as fundamentally different from previous ones.

Despite the clear conception by Salvucci and other planners about the Big Dig as a community-oriented project to fix past mistakes and improve the living conditions of Boston,

[29] Massachusetts Department of Public Works and United States Federal Highway Administration. "Third Harbor Tunnel, Interstate 90/Central Artery, Interstate 93, Boston, Massachusetts: Final Environmental Impact Statement/Report and Final Section 4 (f) Evaluation," August 16, 1985, 482.
[30] Lewis, "Buried Desires," 301.
[31] Lewis, "Buried Desires," 303.

there were other important factors that played into the mentalities of planners. Arguably the most important one was the economy in Boston. As mentioned earlier, Mayor White engaged in many urban construction projects to help revitalize Boston in the 1970s. He regularly worked with private contractors to open new offices and apartment buildings. This greatly increased the amount of taxable property in the city, generating more funds for the city.[32] The opening of new real estate also brought business into the city, further economically uplifting Boston. This proved to be a great tool for White's successor, Mayor Raymond Flynn (1984-1993). With the development of Boston's downtown, investors began looking at the city more favorably, and private industry's boom commenced just in time for Flynn's mayorship. Flynn, like Salvucci, understood that to improve a city, incorporating citizen input is important. Along with Stephen Coyle, the director of the Boston Redevelopment Agency (BRA), the Mayor worked hard to help communities in the ways that the communities were asking for. Reflecting the philosophies of the new generation of planners, "Flynn and Coyle worked strenuously to earn the trust of the neighborhoods and to use government power to advance neighborhood and community interest."[33] Flynn and Coyle were able to make great strides in improving Boston when the economy was improving by working closely with neighborhoods. This became more difficult though as the city took a fiscal downturn.

While Flynn could create change and advancing progress to their community-oriented goals early in his term as mayor, the fortune Boston saw in the early to mid 1980s took a turn beginning around 1986. Banks began losing hundreds of millions and unemployment grew.[34] Positive sentiment from investors began fading, and as a result, private industry could no longer

[32] Kennedy, *Planning the City Upon a Hill*, 218, 222.
[33] Kennedy, *Planning the City Upon a Hill*, 233.
[34] Kennedy, *Planning the City Upon a Hill*, 234-35.

be relied on for major economic development and social change. Instead, Flynn turned to government spending. Though the city was not in immediate danger, Flynn knew that its future could be compromised if nothing were done.

Meanwhile, Boston was still left with the same transportation problems it had faced when Salvucci began developing the concept of the Artery depression in the 1970s. The Central Artery remained a major issue in need of solving. Meanwhile, Boston's transportation problem was growing worse, as the new real estate development that contributed to the Massachusetts Miracle was set to attract more cars to the road.[35] The philosophy behind the project as an improvement of quality of life in the city and an advancement of community objectives had not changed, nor had the conditions that made the project necessary, yet the economic conditions of the city were deteriorating. With the Big Dig, as well as other projects in Boston in the works, it was clear to planners that the success of these projects were imperative to the future of the city, "Closer to home, Flynn and Coyle realized that Boston's fortunes would depend in large part on the fate of two gargantuan state-run public works projects in the 1990s."[36] The larger of these two projects referred to was the Big Dig, the other was the Boston Harbor cleanup. While planners and administrators, such as Flynn and Coyle, maintained the same mentalities about public projects, they knew that the Big Dig had an additional motive behind it: to revitalize the economy of Boston.

This idea that the Big Dig could be used as a means of economic uplift did not just stay at the level of municipal politics. During his time as Governor, Mike Dukakis embraced the idea that advancing private business interests could shape economic growth. For Dukakis, this meant

[35] "Ten O'Clock News; Central Artery for Better or Worse," January 11, 1989, GBH Archives, accessed April 25, 2024.
[36] Kennedy, *Planning the City Upon a Hill*, 237.

building a tight relationship with the Massachusetts High-Technology Committee (MHTC), with which he pushed for the interests of the high-tech industry.[37] Though this was generally thought of as a Republican policy, the tactic began to be embraced by Democrats at both the state and federal level. This was in part a response to the "Reagan Revolution of the 1980s."[38] As lower taxes and private sector growth became increasingly popular among voters, Democrats had to adjust their platform. Thanks in part to the 1980 passing of Proposition 2 ½, Dukakis knew that a major priority of his had to be to make Massachusetts a more attractive place to do business. Because of this, he became a part of a group that many called either neoliberal or Atari Democrats, "The group eschewed the party's traditional focus on full employment and adequate housing as the favored means to create social equality, and instead concentrated on stimulating entrepreneurship and private sector growth."[39] In the wake of reduced tax revenue and the new goals and Democrats across the nation, Dukakis had to adopt new methods to achieve his goals as well.

When Dukakis returned to the Governor's office in 1983, he reappointed Salvucci as Transportation Secretary.[40] Salvucci knew, long before Flynn, that the Big Dig would be an integral project for the future of the Massachusetts economy. Though Dukakis was a staunch anti-highway advocate, Salvucci convinced Dukakis of the project's potential as a means of incentivizing private industry. While Salvucci may have based his original ideas of the Big Dig around the philosophies of the new generation of planners, he was no stranger to transportation projects as a means of economic development. From 1964 to 1965, he spent a year studying transportation investments as a means of economic stimulation in high poverty areas at the

[37] Geismer, "From Taxachusetts to the Massachusetts Miracle," 257.
[38] Geismer, "From Taxachusetts to the Massachusetts Miracle," 268.
[39] Geismer, "From Taxachusetts to the Massachusetts Miracle," 270.
[40] Geismer, "From Taxachusetts to the Massachusetts Miracle," 273-74.

University of Naples Federico II.[41] So, despite the philosophies of the Big Dig planners, this project had the subtext of being an economic booster. This was only amplified by the economic uncertainty of the late 1980s.

Though Massachusetts leadership was convinced by the project's potential, executing it was no easy task. Federal funding for projects was not easy to come by in the 1980s, and being the expensive project it was, federal funding was necessary. Amid Reagan's mentalities of "new federalism," significant cutbacks in the funding of state level projects occurred.[42] This did not stop Massachusetts leadership in Congress from pushing for it, though. One such leader, Tip O'Neill, who was now Speaker of the House, made a major push in 1986 to help secure the initial $3.1 billion in funding. The bill approving this funding was vetoed by President Reagan, but Congress overturned that veto in 1987. Though the initial funding was secure, that still did not mean that the project would be completed. While 80% of the project was supposed to be funded by the federal government, that funding was not guaranteed. As planning continued, projected costs kept increasing, and planners kept reworking aspects of the project. The more the project changed, and the more the costs increased, the more future funding from the federal government was jeopardized.[43] So, as planners looked to fulfill the great opportunity that was the Big Dig, they also had to keep in mind that there was always a possibility that federal authorities could cut the project entirely.

As planning of the Big Dig advanced, city planners had a lot to keep on their minds. The project still maintained the philosophies of Salvucci and the new generation of planners, but extenuating circumstances made the project more than just a transportation solution. As the

[41] Fred Salvucci, "Reflections on the Big Dig," (Special Events and Lectures, MIT, Cambridge, March 30, 2004), https://techtv.mit.edu/videos/15956-reflections-on-the-big-dig.
[42] Geismer, "From Taxachusetts to the Massachusetts Miracle," 273-274.
[43] Peter J Howe, "Business Group Pushes Scheme Z for Artery's Sake," *Boston Globe*, December 12, 1990.

economy of Boston took a downturn beginning in 1986, Massachusetts leaders, such as Governor Dukakis and Mayor Flynn, looked towards the Big Dig as the stimulus the economy needed. Meanwhile, difficulties securing funding for the increasing budget of the project left the whole project in uncertainty. These were all beside the fact that the decaying Central Artery still cut through Boston. All these factors played a part in the drama involving the new bridge and interchange plan across the Charles: Scheme Z.

Chapter 2

The Scheme Z Fight

Mike Dukakis returned to the office of Governor of Massachusetts in 1983. After losing the Democratic nomination to Ed King in 1978, he and his Transportation Secretary, Fred Salvucci, both spent their time away from politics. Salvucci went back to MIT to teach, and Dukakis went and taught at Harvard's Kennedy School. In 1982, Dukakis ran for the Democratic nomination again, this time beating King. He went on to win the gubernatorial election. As he came back to the position of governor, he brought back his old Transportation Secretary, Fred Salvucci. During his first tenure as Transportation Secretary, Salvucci had begun planning the depression of the Central Artery. This plan was cut short though by King's election. The King administration scrapped the Artery depression in favor of another highway project: the Third Harbor Tunnel.[1]

Before Dukakis' reelection, The Third Harbor Tunnel and the Central Artery Depression were two completely separate projects. The Third Harbor Tunnel was supported by pro-highway builders, while the Artery Depression was favored by anti-highway activists. Generally, the group that supported one opposed the other. As a result, nothing was getting done on either front. When one group was voted out and another in, all the progress that was made on previous projects were scrapped, and work on the other would begin. In an interview, Salvucci later described it as the War of the Roses. When Salvucci returned to his position as Transportation Secretary, he and Dukakis decided that they were going to, "Go for broke," and tackle both in the

[1] Frederick Salvucci, "Frederick P. Salvucci Oral History," by Giordana Mecagni, Moving Image, June 2, 2016. Northeastern University Library, Archives and Special Collections.

same project.[2] In their eyes, this was the only way they could garner up enough support for the Artery depression, "Not going to be a tunnel without an Artery, not going to be an Artery without a tunnel."[3] By combining the projects, only then was Salvucci able to move forward with the project.

Even with the combined support for the project, Salvucci still had a long road ahead for beginning construction on the Big Dig. Many planners had barely any hope for it. By 1983, there were two main reasons why they were pessimistic. As MIT trained engineer Stephen Kaiser put it, "No one gave the project any chance without 90/10 funding. Almost no one except Fred felt there was any hope of reviving the project and getting it through the environmental process."[4] Funding is a major roadblock for any infrastructure project, with 90/10 funding being the system that many highway projects received their funding from in the past.[5] 90/10 meant that the federal government funded 90% of the project, while state governments funded the remaining 10%. It was established under the Federal-Aid Highway Act of 1956, and was essential for projects as expensive as the Artery. Securing funding for a highway project in the context of the 1980s was especially difficult due to the Reagan administration's unwillingness to approve funding, as well as the economic downturn Massachusetts was experiencing since 1986. As was discussed in the previous chapter, funding for the Big Dig would be secured in 1987. Though there were still some contingencies possible based on future project changes, as long as the project remained economical, funding should not be an issue.

[2] Salvucci, "Frederick P. Salvucci Oral History."
[3] Salvucci, "Frederick P. Salvucci Oral History."
[4] Stephen Kaiser, "A Grass-Roots Perspective On The Battle Of Scheme Z" (Book, Cambridge, 1993), 10.
[5] R.F. Weingroff, "Federal Aid Highway Act of 1956: Creating the Interstate System," *Public Roads* 60, no. 1 (1996): 45.

With funding largely secured, it appeared that the only remaining roadblock to beginning construction was the project making it through the environmental review process.[6] In 1970, The National Environmental Policy Act (NEPA) was signed into policy. This required that government agencies assess the environmental impacts of approved projects before building them. Additionally, in 1971 the Supreme Court gave citizens grounds to sue the government based over projects that disrupt parkland. Many planners were optimistic that since funding was seemingly secured, the rest of the project would run smoothly.[7] The environmental review process involved the planners putting together an Environmental Impact Statement (EIS), which was then reviewed by the Environmental Secretary, and if approved, ultimately reviewed by the Federal Highway Administration (FHWA). If the FHWA approved, construction on the project could begin. This was of course barring any legal actions such as lawsuits that would require aspects of the project to be reworked before the EIS could be approved. For Salvucci, getting the Big Dig through to have an approved EIS was his biggest goal as Transportation Secretary.

The reason why Salvucci was so focused on a completed EIS was because he believed that if they could achieve that, then the project would be completed. Otherwise, the project's future was less certain. After Dukakis' failed presidential campaign in 1988, the three-term governor made it clear that he was not running for reelection in 1990.[8] With Dukakis gone, the new Governor would likely bring in a new Transportation Secretary. To ensure that the project still was built after he left office, he knew that he had to have the EIS submitted and certified, "Salvucci believed that once the document was submitted and certified, no future administration would want to reopen that can of worms, and so the project—specifically his vision for the

[6] Coss, "Part 4: The Double Cross."
[7] Luberoff and Altshuler, *A Political and Institutional*, IV-2.
[8] Coss, "Part 4: The Double Cross."

project— would be secure."[9] For most aspects of the project, the planners had a straightforward preparation of an EIS capable of making it through the environmental review process. However, when it came to the plan for the Charles River Crossing, the path through the review process was anything but easy.

From the mid 1980s to the mid 1990s, the plan for the Charles River Crossing was pushed and challenged in every direction. When the future depressed Central Artery reached the Northern edge of Boston, it had to do three things, "It had to come up from underground, cross the Charles River, and then intersect with a pair of important roads that ran on either side of that river – Route 1 and Storrow Drive."[10] Everyone, from planners, to city residents, to environmentalists, had competing opinions on how to accomplish this, resulting in some of the most complex internal, mitigation, and engineering challenges of the entire project. As a result, competing values clashed, and a dramatic and dynamic political fight occurred. This fight happened all the way until the Charles River Crossing was completed, and occurred under three different Transportation Secretaries: Salvucci, Richard Taylor (1991-92), and Jim Kerasiotes (1992-2000).[11] At its worst, the fight was so severe many supporters of the project feared that Scheme Z would cause the Big Dig to never be done.[12]

The early fight over Scheme Z demonstrates an interesting dynamic between its selection and its opposition. On one hand, the political, economic, and environmental circumstances surrounding the CA/T project show that Scheme Z was the best choice for what they had to work with.[13] On the other hand, Scheme Z opponents largely fought against the plan due to their

[9] Coss, "Part 4: The Double Cross."
[10] Coss, "Part 4: The Double Cross."
[11] Frank Phillips, "Weld Appoints Kerasiotes as State Transportation Head." *Boston Globe*, November 24 1992.
[12] Howe, "Will Artery Suffer Fate of NY's Westway?"
[13] Coss, "Part 4: The Double Cross."

perception of it as poor and inappropriate. Scheme Z was approved in 1991, but it was soon rejected by citizens, with planners subsequently reworking new river crossing plans. The new river crossings were developed under the same difficult conditions that Scheme Z had to face, yet by the time a new river crossing was selected in 1994, the new design proved to be more satisfactory to greater Boston residents. The new river crossing, called the Non-River-Tunnel alternative (NRT), was a better plan than Scheme Z, but the plan itself does not tell the whole story for why people received it better. Rather, the differences in the planning and selection of Scheme Z versus the NRT had more to do with the roles of citizen input in each plan than anything else. Contrary to the principles of the new generation of planners that were discussed in the previous chapter, Scheme Z was created and chosen behind closed doors, with little outside feedback, a lack of consideration for what residents wished for, and no option to replace it. Ironically, it was Secretary Salvucci, one of the biggest champions of citizen involvement in public projects, who was largely responsible for this closed process. Because of this, citizens and community groups grew frustrated at what they felt was an undemocratic process. They saw the unsatisfactory plans they were presented with as comparable to how planners treated citizens in the 1950s and 1960s. With the planning of the NRT, citizen input was directly incorporated into the planning process, resulting in a plan that better weighed competing priorities, and a process that was more palatable to residents. The difference in the planning processes and receptions of Scheme Z and the Non-River-Tunnel alternative shows that the effective incorporation of citizen input created a better public project which was more easily accepted by greater Boston residents and environmentalists.

The origin of the Charles River Crossing issue starts in 1986, when the first draft EIS was reviewed. Before the Big Dig, there were multiple issues that had to be resolved in the area that

Scheme Z was later planned in. The area was called the Area North of Causeway Street (see figure 2.1).[14] One of the most important issues was that a new Charles River crossing was needed, as the existing bridge was one of the biggest bottlenecks in the city. Additionally, a new interchange was needed between I-93, Route 1, and Storrow Drive. Because these problems locationally overlapped, planners solved them all with one design, a Charles River Crossing and interchange known as scheme 5A modified.[15] Though the design would have functioned, there were multiple issues with it. Most notably, it had a poor traffic performance, cast a shadow over the Charles River dam, required part of the Charles River basin to be filled, and interfered with parks and historical districts. Additionally, this all came at the price of forcing some connections, such as Storrow Drive to Route 1, to be closed for two years for construction.

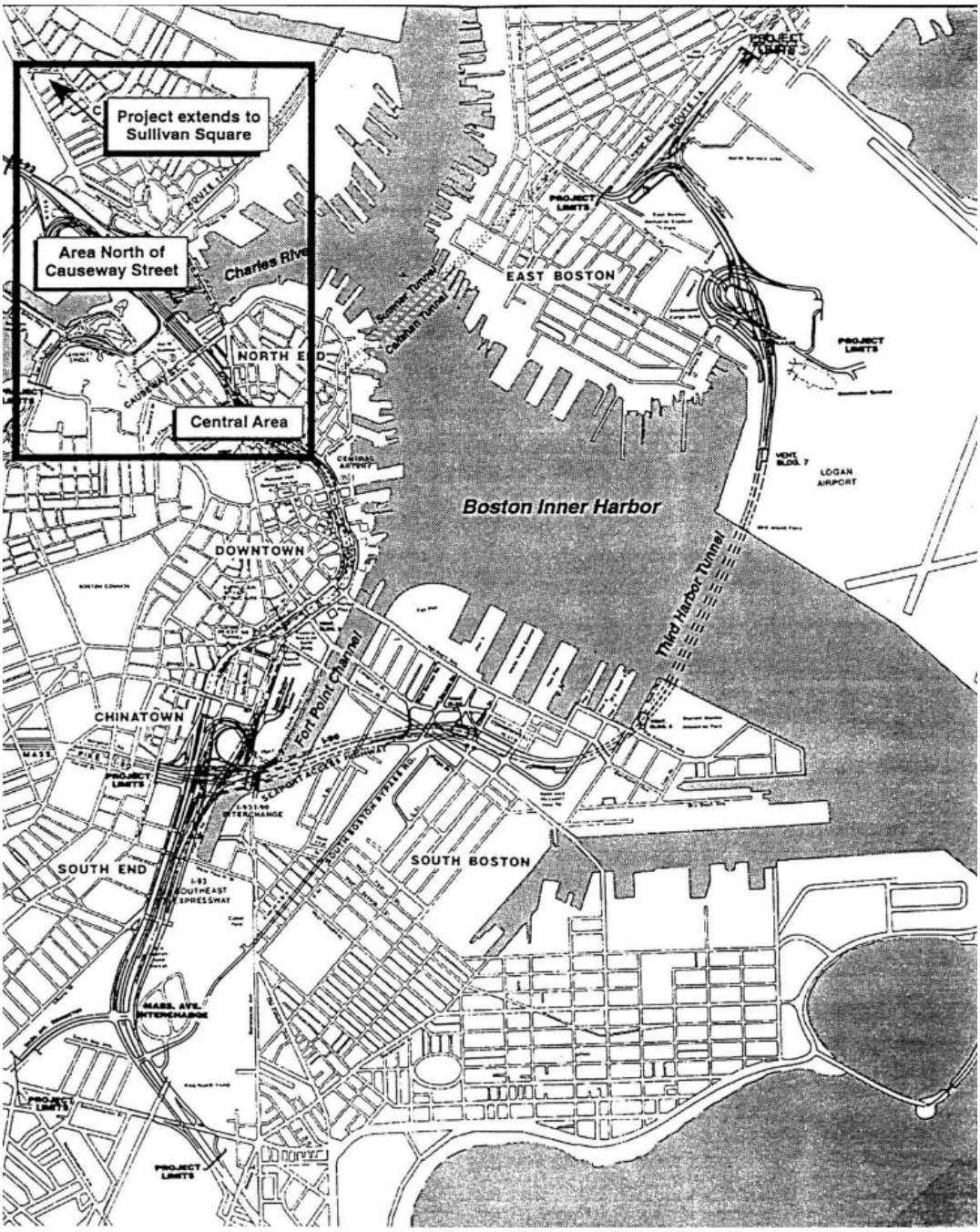
All these factors caused Scheme 5A Modified's rejection. A crossing plan was still needed though, so the DPW hired Bechtel and Parsons-Brinckerhoff, two major multinational engineering firms, to design a new bridge plan.[16] Between 1986 and 1988, 31 different plans were designed. They were named alphabetically, with the first one being Scheme A, the second being Scheme B, all the way to Scheme DD. Each plan was crafted to meet seven design objectives:

- Accommodation of traffic flow which meets appropriate highway norms on all mainlines and ramps.
- Provision of a high level of travel safety.
- Conformance to Department and FHWA highway design standards.
- Minimization of environmental impacts.
- Reasonable cost.
- Capability to be constructed safely and with minimal impacts on traffic service during construction.

[14] United States Federal Highway Administration and Massachusetts Department of Public Works, "Draft Supplemental Environmental Impact Statement/Report and Supplemental Final Section 4(f) Evaluation," 1989, UMass Amherst Libraries, IIB 1-1.
[15] FHWA and DPW, "Draft Supplemental Environmental Impact Statement," IIB 1-56-59.
[16] Coss, "Part 4: The Double Cross."

Figure 2.1: Map of Boston Showing Location of Charles River Crossing (Area North of Causeway Street)

Source: Massachusetts Department of Public Works and United States Federal Highway Administration. *Central Artery/Tunnel Project, Charles River Crossing, Final Supplemental Environmental Impact Statement/Report*. 1994.



- Compatibility with new and proposed construction in the area.[17]

These standards are interesting because they reflected what Salvucci sought to achieve during the Big Dig. He is trying to create an affordable project that would function well. However, there was one notable emission from this list.

The most important objective that was left off this list was designing an aesthetically pleasing blueprint. Though this may not sound like a major part of designing a river crossing and interchange, it was a high priority among residents of the Boston area.[18] This is something that Salvucci knew too. During the EIS process in 1986, it was determined that aesthetic impacts of the Charles River Crossing were a high priority.[19] Additionally, there were talks at the time about how Boston did not have an iconic symbol of the city, such as a major bridge, the way that other cities did. However, as the list of objectives shows, this was left from the criteria. With the Charles River crossing, Salvucci was not trying to create an iconic symbol of the city, or even something that was considered pleasing to look at. Instead, he sought to create a functional, economical, and environmentally passable piece of transportation infrastructure. Though it may not make sense why he did not prioritize the aesthetics of the project, there is important context for why it was the least of his concerns.

In 1985, New York's Westway highway project was canceled during the environmental approval process. In development since 1971, Westway was very similar to the CA/T project in many ways. Both began out of a need to rebuild outdated highways and would have been an economic boost to financially struggling cities.[20] However, Westway was met with

[17] FHWA and DPW, "Draft Supplemental Environmental Impact Statement," IIB 1-3.
[18] Federal Highway Administration, *Record of Decision: Central Artery (I-93)/Tunnel (I-90) Project Supplemental Environmental Impact Statement, Boston, Massachusetts*, FHWA-MA-EIS-82-02-FS3, May 24, 1993, 1.
[19] Karl Haglund, *Inventing the Charles* (Cambridge: The MIT Press, 2003), 324-330.
[20] William W. Buzbee, "Introduction," in *Fighting Westway: Environmental Law, Citizen Activism, and the Regulatory War That Transformed New York City* (Ithaca: Cornell University Press, 2014), 1.

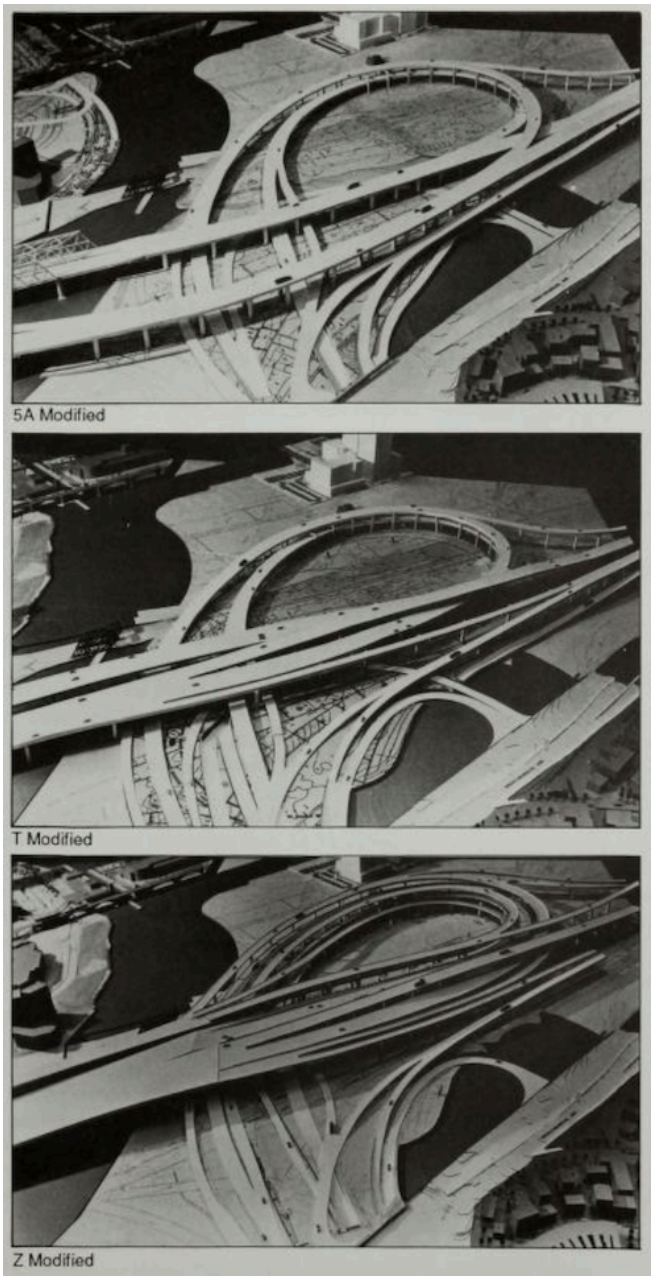
environmental opposition in the form of both protests and lawsuits. When these lawsuits made it to court, a federal judge ruled that planners had failed to adequately assess the project's impact on striped bass, and subsequently shut down the project. For many, this was deemed a bad omen for the future of multi-billion-dollar public projects. "A few weeks after Westway died in 1985, Lewis Blakey, chief of civil works planning for the Army Corps of Engineers, said, 'It's probably true that you're not going to see the larger project anymore, because we've constructed so many hoops . . . that it's almost impossible to get a large project through.'"[21] CA/T planners understood the parallels between Westway and the Artery depression, and they wanted to avoid that same fate. They knew the risk that the environmental review process posed, especially if their plans were challengeable in court. The head of the Federal Highway Administration Massachusetts office, Anthony J. Fusco, was even quoted as saying that a legal challenge to the Big Dig could see the same fate that Westway had, "All it takes is for someone to drag us into court. That's what happened with Westway."[22] Planners such as Salvucci knew that they had to create a project that could above all else make it through the environmental review process. Otherwise, the much-needed transportation and economic solution to Boston's problems may never be built. This was reflected in the narrowing down and selection of a river crossing.

When designing the river crossings, Bechtel/Parsons separated the plans into three different families. Each plan was categorized by how they made their connections: whether it was with tunnels or viaducts (bridges).[23] The first was the A Family, which had a viaduct/tunnel concept. The second was the M family, which has all tunnel connections. The last family was the E family, which used all viaduct connections. By 1988, three refined plans emerged.

[21] Howe, "Will Artery Suffer Fate of NY's Westway?"
[22] Howe, "Will Artery Suffer Fate of NY's Westway?"
[23] FHWA and DPW, "Draft Supplemental Environmental Impact Statement," IIB 1-7-8.

Figure 2.2: Comparison of the original Charles River crossing design: Scheme 5A Modified, with Scheme Z and Scheme T. This image shows the magnitude of Scheme Z compared with other plans.

Source: Massachusetts Department of Public Works and United States Federal Highway Administration. *Draft Supplemental Environmental Impact Statement/Report and Supplemental Final Section 4(F) Evaluation.* 1989.



Scheme S was the refined version of the viaduct tunnel concept, Scheme T was the refined Charles River Tunnel concept, and Scheme Z was the refined Viaduct design.[24]

Of the three designs, it largely came down to Scheme T and Scheme Z, as Scheme S had the most negative impacts of the three. Though there were many different factors that they were judged by, in the end, four were judged as most important.[25] The first was long-term traffic operations, in which Scheme Z was deemed best, largely due to its safer and better traffic flow. The second was impacts on land use in the north station area, which Scheme Z also performed best in, partially due to it being the only plan to not obstruct the planned new Boston Garden. The third was impacts on open space and parks in the lower Charles area. In this area, Z and T were judged to be better than S, each for different reasons. Z would have the worst impact on future waterfront developments, while having the best design for parks and pedestrian crossings around causeway street. Meanwhile, T would have the least impact on future river parks but would be worse for the existing causeway street parks. The last criteria was construction period impacts. While Scheme Z had no major impacts during its construction, T required the shutting down of some traffic operations, as well as possibly affecting the MBTA commuter rails. Besides all these design factors, Scheme Z was by far the cheapest option, and would provide the best air quality measurements out of all the plans studied. Because of all these factors, Scheme Z was deemed the most beneficial and least impactful of the interchange designs.

Despite Scheme Z being the technically best plan, among planners, there was not a clear choice of a river crossing. There was much discourse among planners that remained out of the public eye. Some insiders said that Scheme T was the first choice among planners.[26] However,

[24] Haglund, *Inventing the Charles*, 324-330.
[25] FHWA and DPW, "Draft Supplemental Environmental Impact Statement," IIB 1-95-97.
[26] "Ten O'Clock News; Opposition to Scheme Z," December 12, 1990, GBH Archives, accessed April 25, 2024.

Salvucci had the final say. By 1988, he was under pressure by federal highway officials to finish the environmental impact statement so that the project could be approved and begin construction.[27] Understanding that it was a controversial plan, Salvucci chose Scheme Z because of its advantages over the other plans studied. Afterall, the soundest plan had the best chance of being environmentally approved; between the pressing transportation needs of Boston and the recent economic downturn in Massachusetts that were discussed in the first chapter, it was especially important that the Big Dig would be built. He knew that Scheme Z would not be received well by the public. When interviewed about his selection years later, he said, "I felt awful."[28] However, he knew that it was the best choice they had. He asked his planners to do what they described as "Selling the dog."[29] Essentially, they were going to get Scheme Z through the environmental review process in any way they could. This was reflected in many of Salvucci's decisions and rhetoric in his remaining years as Transportation Secretary.

When Salvucci made the choice of Scheme Z as the Charles River Crossing, he did so discreetly. He originally made the decision in July of 1988, and it was announced to the public in August that year. However, a visual description was not provided. Additionally, broad public comment did not immediately occur. As was stated in GBH's podcast, "He didn't go out of his way to advertise that decision."[30] This was in stark contrast to the community feedback-oriented project that Salvucci had originally meant the Big Dig to be. The Big Dig was intended to be a community oriented urban beautification project, not a tightly controlled utilitarian one. However, that was exactly what it became in the eyes of critics with Scheme Z. As former *Boston Globe* reporter Peter Howe, who covered transportation in Boston put it, "The Central

[27] Jerry Ackerman, "Artery Bridges Raise Doubts," *Boston Globe*, September 14, 1989.
[28] Coss, "Part 4: The Double Cross."
[29] Coss, "Part 4: The Double Cross."
[30] Coss, "Part 4: The Double Cross."

Artery project had been this really tightly managed story that had been kept inside a box."[31] This was not an uncommon idea. MIT engineer Stephen Kaiser, in his *Grassroots Perspective on the Battle of Scheme Z*, charges that Salvucci was continuing the legacy of previous political leaders by trying to keep a tight grip on the planning process.

> However, state officials have always used design to control the process. By selecting the alternatives and denying the feasibility of ideas one doesn't like, the agenda is controlled regardless of outside clout. If everyone is forced to defer to the engineers, and the engineers defer to their political superiors, the control of the engineers means control of the process – by the bureaucrats.[32]

This idea that Salvucci was keeping Scheme Z under wraps in order to control the flow of the project is certainly verified by his handling of the selection of the Charles River Crossing. The theme of Salvucci keeping a tight grip on the Big Dig became more apparent as Scheme Z was brought to the public's attention.

Salvucci never highlighted Scheme Z to the public. It was one of his staffers, Senior CA/T project staff member Rebecca Barnes, who brought it into the public eye.[33] Believing that more people should know about the plan, she commissioned a physical model that was unveiled in 1989. The public did not take well to learning about the planned crossing. It was said to have been "immediate and negative," with Kaiser saying in an interview, "Most people, if they had any reaction, was to gasp."[34] Almost immediately, the project was met with pushback. Even though Scheme Z may have been the best blueprint that planners could come up with, there were many reasons why it was received so poorly.

Out of all the criticized aspects of Scheme Z, one of the most talked about features was its size. The whole bridge and interchange plan covered around 70 acres, which is more land than

[31] Coss, "Part 4: The Double Cross."
[32] Kaiser, "A Grass-Roots Perspective," 47.
[33] Luberoff and Altshuler, *A Political and Institutional Analysis,* IV-24.
[34] Luberoff and Altshuler, *A Political and Institutional Analysis,* IV-24; Coss, "Part 4: The Double Cross."

the Boston Common.[35] When Scheme Z eventually came to the public's attention, this statistic was reported everywhere from the *Boston Globe* to the Ten O'Clock News. In fact, in one Ten O'Clock News reel covering Scheme Z, the reporter says that "Even Salvucci couldn't call Scheme Z small."[36] Outrage over the physical footprint was amplified by the height of the structure. At its tallest, Scheme Z stood at 110 feet, roughly the size of a ten-story building. This was because the Scheme Z interchange was designed basically by taking all the functionality of the standard four-leaf clover interchange that is commonly seen in American highways and stacking it all into one quadrant. This meant that in North Point, an area North of the Charles between Charlestown and Cambridge, would have six looping ramps stacked on top of each other, a sight that many considered ugly.

In order to get cars into this interchange, four separate bridges had to be built: two cable-stayed bridges carrying five lanes of traffic each, a two-lane access ramp to Charlestown, and double decker viaduct bridge that carried six lanes.[37] In total, Scheme Z planned eighteen lanes of highway to span the Charles. This meant casting a wide shadow over the Charles, which would have been bad for the river's ecosystem. Environmentalists and planners alike were highly concerned about the Charles River. The Charles River is one of the most important natural elements of Boston, and a shadow was not the only effect it had on the river. The bridges were relatively low, drawing concerns that they may impact the navigation of ships.[38] Additionally, Scheme Z did not even fix the issue that the previous design had that required filling in part of the river.

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[35] Bryan Marquard, "Designer Gave Hub its Iconic Bridge," *Boston Globe*, July 23, 2018.
[36] "Ten O'Clock News; Salvucci on Scheme Z," December 13, 1990, GBH Archives, accessed April 25, 2024.
[37] Ronald Rosenberg, "River Bridge Is 18 Lanes of Woe for Central Artery's Planners," *Boston Globe*, January 31, 1990.
[38] Luberoff and Altshuler, *A Political and Institutional Analysis*, IV-3.

While a revision of the plan in 1990, called Scheme Z modified, took it from 18 lanes and four bridges to 16 lanes and 3 bridges it did little to change anyone's outlook on the project.[39] One of the most unique talking points of Scheme Z was its feature of the double river crossing. For planners and residents alike, the feature made no sense.[40] Not only was it an inconvenience for drivers, but also it meant cars spending more time on the road, thus producing more pollution. The double cross was featured in the news many times. For example, a January 1990 *Boston Globe* article began with this description of Scheme Z:

> It is 1999, and you are driving east on Storrow Drive heading for Cape Cod. But first you must get an aerial view of Charlestown and East Cambridge as you turn north across the Charles River, then loop back, crossing the Charles again before continuing south on the Southeast Expressway—a distance of three-quarters of a mile.[41]

Between the number of lanes, the massive size, the overlapping ramps, and the double decker bridge, many activists became concerned about how it would impact drivers and the environment. One phrase that was often repeated was, "It will be the highest density highway interchange in the world."[42] On top of this, Scheme Z meant building more highway above ground than was being put underground during the Artery depression. People described it as moving the issue that Boston was facing into Cambridge and Charlestown, essentially saying that the planners were abandoning the city beautification aspect of the Big Dig. Overall, almost every part of this plan seemed to detract from its implied benefit as a transportation solution.

While Scheme Z was being bashed by nearly everyone for the reasons previously listed, Salvucci took to the media to "sell the dog." He did not deny most of the claims the critics made. Instead, he embraced them, saying that they were not actually bad choices, but a calculated

[39] Ronald Rosenberg, "Artery Impact Report Issued," *Boston Globe*, November 22, 1990.
[40] Coss, "Part 4: The Double Cross."
[41] Rosenberg, "River Bridge Is 18 Lanes."
[42] "Ten O'Clock News; Opposition to Scheme Z."

weighing of priorities. For example, to the criticism that it was like taking a four-leaf clover interchange and stacking it, he said, "Our response to that is exactly, we've taken all the quadrants of a clover leaf, put them in the quadrant that is already industrial, already has a very noisy but necessary activity called Boston sand and gravel, and the railroad."[43] Essentially, Salvucci was arguing that Scheme Z was what many people were saying about it, but it needed to be put into context. North point was already noisy, industrial, and contained elevated highway structures. As he said, building Scheme Z would not change North Point for the citizens of Charlestown and Cambridge, except to reinforce its industrial character, "What you will see from Charlestown after scheme Z is built is virtually identical to what you see from let's say the corner of Rutherford Avenue and Austin Street today."[44] Though his rhetoric was not persuasive to critics, Salvucci was truthful in his advertisement of Scheme Z. Looking at the models they created versus what existed at the time, the differences in views are negligible (see figure 2.3).

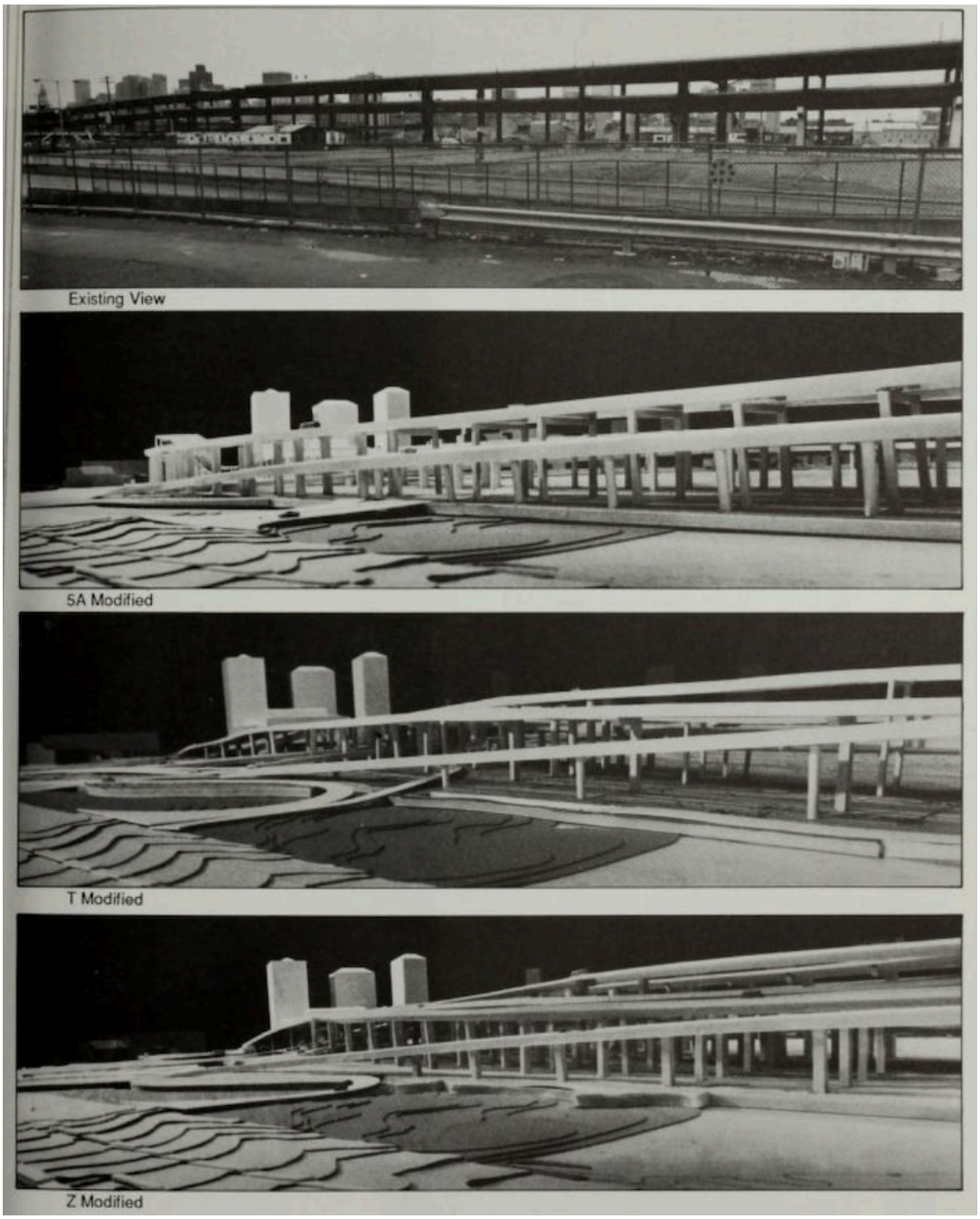
What is most interesting about Salvucci's rhetoric is that he makes the claim that Scheme Z was the result that planners arrived on from balancing priorities. He admitted that Scheme Z was a dense and ugly plan, but tradeoffs had to be made somewhere. Salvucci was just looking to make the best ones, "I think that's an appropriate balancing of the values, it can't be beautiful residential everywhere and it shouldn't be, you know the city won't function if there aren't some places where the railroads carry the people into the downtown."[45] Regardless of his rhetoric about balancing values, Boston residents could not get behind the plan.

For Scheme Z opponents, Salvucci's unwillingness to negotiate a redesign was incredibly frustrating. As one environmentalist put it, "When we first started becoming concerned about

[43] "Ten O'Clock News; Salvucci on Scheme Z."
[44] "Ten O'Clock News; Salvucci on Scheme Z."
[45] "Ten O'Clock News; Salvucci on Scheme Z."

Figure 2.3: Comparison of the views of different Charles River crossing plans from Charlestown

Source: Massachusetts Department of Public Works and United States Federal Highway Administration. *Draft Supplemental Environmental Impact Statement/Report and Supplemental Final Section 4(F) Evaluation.* 1989.



Scheme Z, we asked about alternatives, and the DPW was only ready to talk mitigation with us from the word go."[46] When the EIS was prepared, it presented alternative designs to Scheme Z, but they were not presented as options. Instead, Scheme Z was presented as the preferred alternative, with no real discussion about the workability of the other crossings.

Salvucci's unwillingness to redesign Scheme drove the narrative around it. Not only did it cause Scheme Z's selection to be called a "rush to judgment," but also the whole process appeared counter-intuitive to the point of an environmental review process. "The purpose of an environmental impact study is to put all the issues on the table so they can be debated. It should be the beginning of a discussion, not the end."[47] Many saw this as a continuation of the tendencies of planners from the 1950s and 1960s who were unwilling to listen to citizens in project design. As one Globe article later put it, "Still, failure to involve the public during early design stages of controversial projects seems endemic in Boston."[48] As a result of this, many interest groups that were impacted by Scheme Z grew frustrated with negotiations with CA/T planners. "The Cambridge Conservation Commission and Charles River Watershed Association refused to participate because Salvucci refused to include any consideration of alternatives to Scheme Z in discussions about how to minimize environmental impacts."[49] Between the perceived issues with Scheme Z, as well as a frustration from a lack of control that many felt they had over its selection, the plan received a lot of push back. This meant lawsuits, protests, and negative media coverage. Arguably the most pushback came from environmentalists who believed that the plan disrupted the waterfront of the Charles River, and thus was an overall bad

[46] "Ten O'Clock News; Opposition to Scheme Z."
[47] Robert Campbell, "Caution: High Bridge Ahead Artery Plan Includes an Awful Scheme for a Great Wall across the Charles," *Boston Globe*, June 24, 1990.
[48] "Scheme Z's Working Ramps." *Boston Globe*, August 25, 1993.
[49] Peter J. Howe, "Statewide Group Blasts Scheme Z; Bill Calls for A Revamp By Citizens," *Boston Globe*, December 5, 1990.

plan for the environment. While this may have been true, there were a variety of factors that made Scheme Z's impact on the environment a complicated issue.

One of the most important factors was the state of environmental discourse and leadership in Massachusetts. The Massachusetts Environmental Secretary at the time, John DeVillars (1989-1991), was sworn in as Massachusetts' new Environmental Secretary in January of 1989.[50] He entered the position at a charged time. His predecessor, James Hoyte, was criticized by environmentalists as being too passive. Meanwhile, across the country, environmental issues seemingly were becoming more urgent. For example, pollution in the Boston Harbor was a major talking point in the 1988 presidential election.[51] Arguably the most relevant environmental discussion when it came to the Big Dig was air pollution. Recently, issues such as acid rain, global warming, and the ozone layer had become household topics of conversation, "Increasingly gloomy news from the scientific community about the greenhouse effect and deterioration of the earth's protective ozone layer all have put environmental issues on the nightly television news." The Big Dig, being a highway project, was naturally very sensitive to the topic of pollution. The design of highways and interchanges contribute to how pollutive the infrastructure is when it is in use, as it can determine how long cars spend stuck in traffic, the speeds they go at, and even how many cars are on the road. Additionally, many environmental groups in Boston were highly concerned about the impacts of the CA/T project on pollution. The most notable one was the Conservation Law Foundation, which led a whole campaign in the 1980s in attempt to reduce the project's impact on air quality and pollution.[52] In the coming

[50] M.E. Malone, "New Environmental Chief Strikes A High Profile: DeVillars Tackles Key Issues Despite Lame-Duck Status," *Boston Globe*, April 23, 1989.
[51] Robin Toner, "Bush, in Enemy Waters, Says Rival Hindered Cleanup of Boston Harbor," *New York Times*, September 2, 1988.
[52] "Ten O'Clock News; Central Artery for Better or Worse."

years, DeVillars was going to have to either give the project his approval and allow it to continue or reject it. This would not simply be an environmental decision. The Big Dig was a much-needed upgrade to Boston's transportation system, as well as an economic booster to a struggling economy. The context that DeVillars found himself in when he became Environmental Secretary is made more interesting by how he acted after coming to the position.

Even early on during his tenure as Transportation Secretary, DeVillars was active and decisive in his role. Some of his early actions, such as a crackdown on wetland polluters, gave him a reputation for being a willing and capable advocate for the environment.[53] Actions such as these made him popular among environmentalists, with one member of the Conservation Law Foundation saying that he has a high-profile personality, "And it is backed up by a surprising amount of common sense and good intuition, both politically and environmentally."[54] Early on, DeVillars positioned himself as someone who wanted to do what was right. Seemingly, he was less concerned about the broad scope of what was going on, and rather was focused on ensuring the environment was treated with justice by projects. This did not mean he was necessarily against development, rather that he just wanted to ensure the process was done right. As he said in one interview in 1989, "I by no means am anti-business. . .. I'm not interested in standing in the way of development, I'm interested in making certain that development is done in an environmentally sensitive and appropriate way."[55] This mindset that he was portraying for himself was tested soon after he came to the office.

In his first year in office in 1989, DeVillars showed that he was willing to make controversial decisions and push back against development if he believed it was the right thing to

[53] Richard Saltus, "State Vows Crackdown on Wetlands Polluters," *Boston Globe*, March 5, 1989.
[54] Malone, "New Environmental Chief Strikes."
[55] Malone, "New Environmental Chief Strikes."

do. One of the important times that he did this was with two developments near the Hyannis Airport in Cape Cod.[56] One of these projects, called the Christmas Tree Plaza, was nearing completion. It was supposed to be opened by the Christmas season in 1989, and DeVillars rejected it in October of the same year. He did so because the area already had a massive traffic problem, and the plaza was estimated to bring an additional 6,000 car trips per day. This decision by DeVillars shows two important things. The first is that he was very willing to take traffic into account when it came to approving projects. More importantly though, it shows he was willing to abandon a sunk cost and not fold under political pressure when it came to doing what he believed was the right thing, which he acknowledged when talking about his decision. He said that situations like this, "Put the environmental review process at risk … because there is a great deal of pressure on us to approve a project that is already constructed."[57] This was not an isolated situation though. Rather, DeVillars continually acted without regardless to political pressure in the lead-up to the Scheme Z drama.

When DeVillars continued making the decisions he thought were best for the environment, it brought him a lot of political heat from Salvucci and Dukakis. In early 1990, DeVillars rejected the Final Environmental Impact Reports of two more projects on the grounds that they were in locations already stressed by traffic and lacked adequate public transit.[58] This decision was not received well by Dukakis and the business community. Dukakis had recently been trying to spur economic and real estate development during a time of economic downturn in Boston. This decision by DeVillars meant that the projects were going to be delayed by months, a prospect that Dukakis was unhappy about. The *Boston Globe* reported that this "sparked angry

[56] Dianne Dumanoski, "DeVillars Quashes Two Cape Projects Calls Hyannis Area 'Stressed,'" *Boston Globe*, October 21, 1989.
[57] Dumanoski, "DeVillars Quashes Two Cape Projects."
[58] Teresa M. Hanafin, "DeVillars Under Fire for Derailing Key Projects," *Boston Globe*, March 19, 1990.

exchanges" between Dukakis and DeVillars.[59] The environmental affairs office refused to fan these flames in the media, with one spokesperson saying that this was essentially just a normal decision by DeVillars, "I can't speak to the supposed anger of the governor or other members of the administration. All I know is that John makes his decisions based on the environmental merits of each case and that's that. If they're not up to snuff, they flunk."[60]

Despite the criticism that he received from Dukakis, this situation elevated DeVillars' reputation as Secretary. One State House insider was quoted as praising him for not backing down to political pressure and doing what was right for the environment, "There are development pressures and political pressures surrounding these decisions, and it shows a good independence on John's part that he resists those."[61] Though these decisions by DeVillars were irrelevant to the actual progress of the Big Dig, they provide important context for understanding some of the significance of the Scheme Z fight. Not only was Scheme Z the politically and environmentally controversial keystone of multi-billion-dollar project, but it had to get past an Environmental Secretary who demonstrated with his actions that he would not step aside to let political pressure push an environmentally unsound project through the review process. Not only that, but before Scheme Z was brought to him, tensions between DeVillars and Dukakis were rising. This all contributes to an escalating political fight over Scheme Z.

Besides a decisive Environmental Secretary who was concerned with traffic and a larger environmental community concerned with pollution, the designing a Charles River crossing meant dealing with one of the most important environmental elements in the city of Boston: the Charles. To understand the controversy over the Charles, it is important to understand Boston's

[59] Hanafin, "DeVillars Under Fire."
[60] Hanafin, "DeVillars Under Fire."
[61] Hanafin, "DeVillars Under Fire."

relationship to the river. The Charles is sometimes described as Boston's "Central Park."[62] It has been one of the focal points for park planning in Boston for over a century. In 1844, a plan for the Boston metropolis was published. In it, the Charles was envisioned as a great public space that should be emphasized in the region. By 1936, the riverfront park now known as the Esplanade was created, solidifying the idea of the Charles as Boston's "water park."[63] After this, some had considered the basin to be "the city's most distinguishing physical feature."[64] Despite the importance of the Charles to Boston, the 20th century saw the river and its parklands threatened multiple times. For example, Storrow Drive was built at the expense of multiple different parks along the Charles.[65] At the time, the bill to build Storrow Drive was fought against to protect the Charles, but it eventually persevered, and the road went up anyway. Because of events like this, there was already a precedent for a fight against highways to protect the parks of the Charles.

By the late 1980s, this precedent of fighting highways to protect river parks had already been set, and it was only amplified by plans that were in place for the area. In 1980, the Metropolitan District Commission proposed a plan to expand the number of parks around the Charles in Cambridge and Charlestown. This is on top of the fact that in the 1980s, the state released a wetlands protections act, which protected the Charles River basin even further. So, when Scheme Z, which was viewed as destructive to future river park plans as well as the protected river basin, came to light, many environmentalists who prioritized the Charles called for a redesign. Some planners, understanding the criticisms of Scheme Z, attempted to push for Scheme T to replace Scheme Z, despite its overall worse environmental impact and other

[62] Haglund, *Inventing the Charles*, xv.
[63] Haglund, *Inventing the Charles*, xvi.
[64] Haglund, *Inventing the Charles*, xvi.
[65] Haglund, *Inventing the Charles*, 252-56.

negative downsides. However, the call for a redesign was not met due to one of the most important tactics Salvucci and other planning leaders can use: mitigation. [66]

Since the creation of NEPA in 1970, mitigation has become an important tool for getting projects supported and approved. As the 10 O'Clock News put it, "In the world of massive public works projects, mitigation is the magic potion of compromise. If a project disrupts the environment in one area, the builders offer to make the environment better in another."[67] Believing that there was not enough time to resign the river crossing, Salvucci met the woes of environmentalists with nothing but mitigation measures. He was willing to have the project fund riverfront amenities but not to throw out Scheme Z.[68] By 1990, over 1,500 mitigation measures had been incorporated into the EIS, including funding for park improvement along the Charles. However, no matter how much mitigation was included, people could still not get passed Scheme Z. Still unwilling to change the plan, Salvucci decided to take a more forceful approach to ensure that Scheme Z could make it through the environmental review process. Just like how Kaiser alleges planners used design to control the process, he attempted to do so with the design of a project that was external to the Big Dig: the Boston Garden.

The Boston Garden was an aging arena by the 1980s, with its owner, Delaware North, looking to build a new one.[69] By 1989, the rights to construct a new Boston Garden were given to the Boston Redevelopment Authority. The project was entirely separate from the Big Dig; however, it became entrenched in the Scheme Z battle. The building of a new Boston Garden had much larger implications than just for the arena itself. The arena was planned on top of a parking garage by North Point. According to Kaiser, the fact that it was being built on a parking garage

[66] "Ten O'Clock News; Opposition to Scheme Z."
[67] "Ten O'Clock News; Opposition to Scheme Z."
[68] Luberoff and Altshuler, *A Political and Institutional Analysis*, IV-26.
[69] "Boston Garden Owners Agree to Build New Boston Arena," *Bangor Daily News,* January 6, 1989.

was an important detail for Salvucci.[70] The garage was smaller than the footprint of the Garden plan. This meant that more support was needed outside of the garage in order to construct it. Not only that, but the garage was also right next to the Central Artery. The extra supports brought the structure closer to the Artery by roughly 50 feet. This would normally be avoided, but for Salvucci, this was not an issue, "Normally, such physical intrusion into a transportation right-of-way would be resisted by a highway agency, but Fred had noticed one clear advantage."[71] By bringing the Garden closer to the Central Artery, it prevented the possibility of incorporating a ramp from the Artery directly to Leverett Circle. As a result, every single Charles River Crossing plan was incompatible with the Garden plan, except for one, "As now designed, the new Garden would physically prevent construction of any interchange plan except Scheme Z."[72] Salvucci supported this Garden plan, which did not go over well in the eyes of the public.

During 1990, the same time when Salvucci was fighting to keep Scheme Z and the Big Dig alive, the new Boston Garden was being planned. Like the Big Dig, the Garden had to go through an environmental review process if it were to be approved for construction. However, there were talks about whether the new Garden should have to go through this process.[73] Environmental Secretary DeVillars had the power to waive the necessity of an environmental approval, which would have allowed for construction of the new Garden to start earlier. Salvucci supported this happening, as was evidenced by a letter he sent in November of 1990. This was a decision his supporters defended, yet Scheme Z opponents attacked.

When this came to light, Salvucci and his backers pleaded innocence. Publicly, it was argued that he was being open and straightforward. For example, a project director and one of his

[70] Kaiser, "A Grass-Roots Perspective," 36-38.
[71] Kaiser, "A Grass-Roots Perspective," 37.
[72] Peter J. Howe, "Salvucci Hit for Backing Garden Plan," *Boston Globe*, December 9, 1990.
[73] Howe, "Salvucci Hit for Backing Garden Plan."

advisors, William V. Twomey is quoted in a *Boston Globe* article as saying that Salvucci was consistent. He argued that Salvucci had stated publicly that he supported Scheme Z and that he supported the Boston Garden plan, and that there was nothing wrong with that. He additionally defended the two plans, saying that they worked together and that Salvucci was open to the public about that, "'The Garden is only compatible with Scheme Z. That's a reality and Fred is being candid about it,' Twomey said. 'He's doing the right thing here, not the wrong thing."[74] While this is the picture that was meant to be painted for the public to accept the two plans, this is not how the public received it.

Opponents of Scheme Z saw Salvucci's actions around the Garden plan as a coercive tactic to ensure that Scheme Z was the approved Charles River Crossing plan. He did this through his attempted use of environmental approvals, or rather, the lack thereof, "The controversy over Salvucci's support for the Garden originated when he sent a letter on Nov. 28 to the Executive Office of Environmental Affairs declaring his support for giving Garden developers Delaware North Corp. a waiver exempting them from further state environmental review."[75] Environmentalists accused him of expediting the approval process in order to begin construction as soon as possible. They believed it was especially problematic because the design effectively forced Scheme Z, or any other option that featured the double cross, to be approved if the Big Dig were to continue. Scheme Z had not yet been approved though. The letter was sent months before both DeVillars and FHWA officials would have had a chance to evaluate the project. A letter alone could not cause the plan to be approved, however, environmentalists still felt troubled by the nature of this action, "While acknowledging that Salvucci can hardly control singlehandedly the environmental waiver, these critics charged that it was improper of him to

[74] Howe, "Salvucci Hit for Backing Garden Plan."
[75] Howe, "Salvucci Hit for Backing Garden Plan."

attempt … to subvert the environmental review process by pushing a Garden plan that would force Scheme Z to become a foregone conclusion."[76] While these accusations seem like speculation by Scheme Z opponents, Salvucci outwardly made this claim.

Kaiser accused Salvucci of intentionally using the Garden plan to push for Scheme Z. In his unpublished review, *A Grass-Roots Perspective on the Battle of Scheme Z*, he described it as a "special defense mechanism," as well as a "Trojan horse for Scheme Z."[77] According to Kaiser, the Garden plan was an attempt to fend off the lawsuits by adjacent cities, and with the Garden plan, Scheme Z was the only crossing that worked both as a highway, and with the public parks, "By this logic, Cambridge and Charlestown would have to accept Scheme Z, because there was no alternatives."[78] Though it could seem like a coincidence that this happened, the benefit of the doubt is removed from Salvucci's letter to the Massachusetts Environmental Policy Act Office (MEPA). In his letter, he presented his intention of leveraging the Garden plan for Scheme Z, "Fred made the tactical error of spelling out in great detail and candor the reasons for his support, in particular the goal of using the Garden to structurally prevent ramp alternatives to Z."[79] Regardless of whether or not this is what Salvucci actually said in the letter, Kaiser's accusation reveals how Salvucci was being viewed by Boston area residents involved in the Scheme Z fight. Kaiser does not see Salvucci as the Jane Jacobs-inspired planner that developed a highway plan to right the wrongs of previous ones. Instead, he sees him as a Machiavellian leader looking to keep a tight grasp on the project. Salvucci's attempt to use the Boston Garden to get the project through the environmental review process was replicated with the design of Scheme Z itself.

[76] Howe, "Salvucci Hit for Backing Garden Plan."
[77] Kaiser, "A Grass-Roots Perspective," 36-38.
[78] Kaiser, "A Grass-Roots Perspective," 37.
[79] Kaiser, "A Grass-Roots Perspective," 38; results to recover the original letter turned up dry.

Not only did Salvucci attempt to push Scheme Z through the environmental review process by making it the only feasible option in relation to the Boston Garden plan, he also suddenly altered Scheme Z in attempt to make it more easily approvable. One of the controversial aspects of Scheme Z was a part of it called the Traverse Street ramp.[80] This was a ramp that went over the Charles River. Its addition to the plan greatly reduced the traffic that the North End and Charlestown would face had Scheme Z been built. When removed though, Scheme Z became a third thinner, with one less bridge. Because of this, including the ramp was great from a traffic perspective, but was contested as something that hurt the environment. Because of this, Salvucci made the decision himself to eliminate it from the plan. This meant that Scheme Z would have a smaller impact on the river, yet "eliminating the ramp would force 2,100 vehicles during the peak afternoon rush hour to pass through Charlestown or the North End."[81] This decision was described as abrupt.[82] Salvucci's sudden attempt to reduce the environmental impacts is another clear bid to try to get Scheme Z through the environmental review process more easily.

When the EIS was finally brought to DeVillars, he was in a tough spot. On one hand, he had to sign his name off on a river crossing design that many in the environmentalist community adamantly opposed. On the other hand, "This was one of the final stones to be placed in the governing legacy of Dukakis and Salvucci."[83] It was the transportation and economic solution that Boston needed. He chose to sign it, because as he put it in his certificate of the project, "This

[80] Kaiser, "A Grass-Roots Perspective," 38-40.
[81] Peter J. Howe, "Environmentalists, Others Make Final Attempt to Halt Interchange," *Boston Globe*, November 18, 1990.
[82] Peter J. Howe, "All-Tunnel Alternative Won't Work, Say Backers of Artery Scheme Z," *Boston Globe*, December 13, 1990.
[83] Coss, "Part 4: The Double Cross."

opportunity must not be missed."[84] In the speech he gave after signing the EIS, he reasoned, "The Central Artery Project, when looked at in its entirety, will substantially improve our quality of life and bring with it enormous environmental, as well as economic, benefits."[85] In his mind, the benefits of the proposed Big Dig for Boston far outweighed the negative impacts of it. However, he still had the issue of Scheme Z.

When he signed off on the EIS, in his Certificate of the Secretary of Environmental Affairs, DeVillars dedicated a whole subsection to the Charles River crossing. He began by expressing how dangerous the existing interchange is, "Is the most dangerous bottleneck in the United States interstate highway system."[86] He acknowledged the difficulties in designing a river crossing, with engineers having to blueprint around the Boston Garden, existing commuter lines, and other challenges. However, essentially every traffic solution necessitates crossing the Charles. In his certificate, DeVillars explained how it is the responsibility of the DPW to review transportation solutions, and choose, "What they consider to be the solution that best balances the transportation and environmental values that must be considered."[87] He believed that the DPW fulfilled their obligation, and thus allowed the project to proceed by approving Scheme Z. However, acknowledging the high degree of public outcry over the project, he gave a recommendation that the Charles River Crossing should be further investigated, this time, with a greater emphasis on citizen involvement, "The approach that I am strongly recommending, that is to conduct further review, has the potential for creating greater understanding of scheme Z, and possibly finding an option to it."[88] What DeVillars was suggesting was that the DPW create

[84] Executive Office of Environmental Affairs, *Certificate of The Secretary of Environmental Affairs on The Final Supplemental Environmental Impact Report,* John DeVillars, EOEA 4325, January 2, 1991.
[85] "Ten O'Clock News; DeVillars endorses Scheme Z."
[86] Executive Office of Environmental Affairs, *Certificate of The Secretary of Environmental Affair.*
[87] Executive Office of Environmental Affairs, *Certificate of The Secretary of Environmental Affair.*
[88] "Ten O'Clock News; DeVillars endorses Scheme Z."

a Bridge Design Review Committee (BDRC). He recommended doing this back in August of 1990, but this time he put it down in official writing. Additionally, DeVillars said that because of the importance of the aesthetics of the plan, that the BDRC should specifically look to create a bridge design that can become an icon of the city. Though his recommendation was in no way binding, it put pressure on the next administration to incorporate it.

DeVillars approval of Scheme Z came with mixed reactions. Those who were in favor of the Artery project were happy to see its approval. Those against the Artery and Scheme Z did not approve of the decision. Even with DeVillars' recommendation, environmentalists thought that he was being far too lenient, "Basically we're very disappointed, we felt that with the incredible public outcry about various parts of the project, in particular Scheme Z, that the Secretary could've and should've taken a much harder look and made much more stringent requirements on the next administration."[89] Because DeVillars had allowed the DPW to proceed with Scheme Z, environmentalists said they only had two options left, "One is lawsuits, the other is a sympathetic ear from the new Weld administration, which can either follow through or ignore devisers recommendation for further review."[90] Both were carried out.

After pleas from environmentalists, the Weld administration decided to go ahead and create the BDRC. It was created in early 1991 and consisted of over 40 members.[91] These members came from various groups. It had officials employed from various planning groups, such as the Boston Transportation Department and Boston Redevelopment Agency. It also included officials from state offices, such as the Executive Office of Environmental Affairs. Multiple architects were also on the committee as well. The bulk of the membership though, was

[89] "Ten O'Clock News; DeVillars endorses Scheme Z."
[90] "Ten O'Clock News; DeVillars endorses Scheme Z."
[91] "Bridge Design Review Committee—Context and Process," (July 1991). Frederick P. Salvucci Papers, Z17-002, Northeastern University Library, Archives and Special Collections.

Figure 2.4: Chart from U.S. Department of Transportation Briefing showing differences between Scheme Z and river crossing plans designed under BDRC.

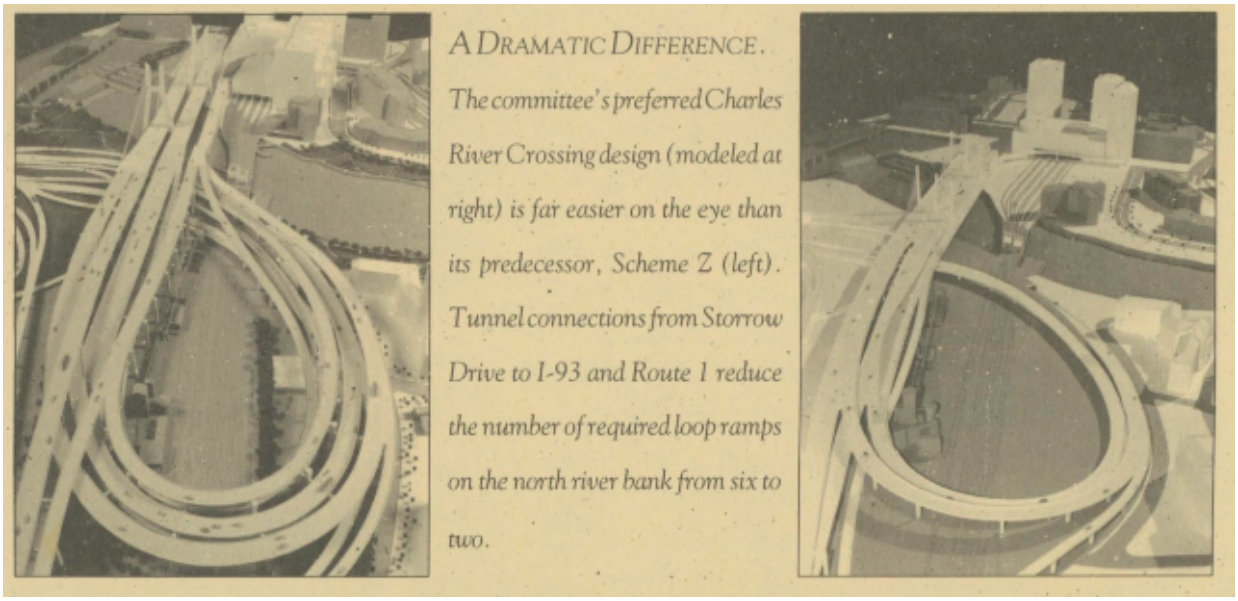
Source: U.S. Department of Transportation, "Briefing Prepared for Inspector General U.S. Department of Transportation; Central Artery/Third Harbor Tunnel Project: Office of inspector General Region II," Frederick P. Salvucci Papers, Z17-002, Northeastern University Library, Archives and Special Collections.

ALTERNATIVE PLANS FOR CHARLES RIVER CROSSING

	Scheme Z	8.1 D Mod 5	Reduced River Tunnel	Non-River Tunnel (1)
Cost ($ million)	489	1,280	1,130	995
Construction time (yrs)	8.5	13	9	8.5
No. Lanes	16	10	12	14
No. Bridges	3	1	1	2
No. feet of tunnels	0	10,100	6,150	3,300
No. loop ramps	6	1	2	3
Connection from Artery	Viaduct	Tunnel	Viaduct	Viaduct

Figure 2.5: Comparison of Scheme Z with Alternative 8.1D Mod 5 taken from newsletter.

Source: "Committee Recommends New Charles River Crossing Designs," *Access: Central Artery/Tunnel Project 5*, no. 3 (Summer 1991): 1.



from residents and private organizations. For example, K. Dun Gifford of the Committee for Regional Transportation, Stephen Burrington of the Conservation Law Foundation, and Dan King of the Citizens for a Livable Charlestown.

The responsibility of the committee was simply to make recommendations. They did not have power to make official decisions. However, they were able to suggest designs and improvements. One of the first actions the committee took was to vote on Scheme Z. Unanimously, they voted to abandon it.[92] Instead, three separate bridge plans were adopted to be studied. These plans were called Alternative 8.1D Mod 5, Reduced-River-Tunnel, and Non-River-Tunnel alternatives.[93] Each of them had the distinct advantage that the double river crossing was removed. By 1993, the committee voted on the plan that they deemed the "preferred alternative." Essentially, it was just their suggestion as to what bridge plan the Big Dig should use. They voted on Alternative 8.1D Mod 5, a plan that resembled Scheme T due to its connections being mostly made with tunnels. In the end, Transportation Secretary Kerasiotes decided to go against their decision though. Instead, he selected the Non-River-Tunnel alternative. He did this because the Non-River-Tunnel alternative was advantageous in nearly every way to the Alternative 8.1D Mod 5. The only thing that it had going for it was that it incorporated tunnels, which allowed for the crossing's footprint to be reduced above ground. This came at the dismay of many in the committee, some of whom even went on to sue the project. However, nothing came of these lawsuits. This was likely a result of Kerasiotes' decision, as the Non-River-Tunnel alternative was, "The design that was most defensible in court."[94] Even

[92] Peter J. Howe, "Scheme Z Declared `Dead' by Panel Chief, but Agreement Is Lacking on an Alternative; Higher Costs Also Feared," *Boston Globe*, June 1, 1991.
[93] "Bridge Design Review Committee—Context and Process."
[94] Thomas C. Palmer Jr., "Decision on River-Crossing Design Sinks In," *Boston Globe*, November 21, 1993.

though the BDRC's choice of crossing was not the one that was built, they played a major role in contributing to the planning of the bridge that was built.

After the BDRC came together in 1991, one of its members was responsible for bringing in Swiss bridge designer Christian Menn. Menn previously had designed dozens of bridges in Switzerland and taught at the Federal Institute of Technology in Zurich. Unlike Bechtel/Parsons when they designed Scheme Z, Menn understood that bridges were about more than just function. "'It's very important that these and other structures not only be utilitarian but that they look well,' Menn says. 'I really think it's a question of the well-being of the people."[95] Grasping Boston's need for a charismatic bridge to match the beautification goal of the Big Dig, he set about designing the largest bridge of its kind: an asymmetrical cable-stayed bridge. While making a beautiful structure, he did not let the aesthetics of it come at a major cost, "Joining the Big Dig project as a consultant, Dr. Menn created a design in which aesthetics paid heed to environmental concerns, and beauty was built on a foundation of practicality."[96] Of the over a dozen bridge plans that were studied to be included in the Non-River-Tunnel alternative, Menn's design for an asymmetrical cable-stayed bridge was selected.

With this design, he was able to do something that 31 river crossing designs and over a thousand mitigation measures could not. As Governor Paul Cellucci (1999-2001) put it, "He put architectural form and engineering function into one."[97] Today it is known as the Leonard P. Zakim Bunker Hill Memorial Bridge (see figure 2.6). Standing in the same place where the ugly Scheme Z plan was supposed to be built, the Zakim bridge immediately became a focal point of the Big Dig. Even when it was just finishing construction, Cellucci predicted the bridge, "Will

[95] Marquard, "Designer Gave Hub its Iconic Bridge."
[96] Marquard, "Designer Gave Hub its Iconic Bridge."
[97] Marquard, "Designer Gave Hub its Iconic Bridge."

Figure 2.6: The Zakim Bridge today

Source: Vance, Eric. *Zakim Bunker Hill Bridge*. August 4, 2011. https://commons.wikimedia.org/wiki/File:August_4,_2011_beautiful_Boston_vista_(6012618162)_crop.jpg

quickly become the signature of this city, if not of the entire Commonwealth.'"[98] The reception and execution of the Zakim Bridge were vastly different that of Scheme Z. Engineering writer Henry Petroski even described the Zakim Bridge as "arguably the most successful aspect of the Central Artery/Tunnel Project, aesthetically and economically."[99] This is far from how the aesthetic disaster that was the Scheme Z plan was received by the public.[100]

Even though the BRDC did not get their preferred crossing design built, it is important to understand their significance in the Scheme Z saga. The BDRC was the transition point from a secretive Transportation Secretary who refused to concede any ground, to a design process that

[98] Marquard, "Designer Gave Hub its Iconic Bridge."
[99] Henry Petroski, "Engineering: Big Dig, Big Bridge," *American Scientist* 92, no. 4 (2004): 318.
[100] "Ten O'Clock News; Opposition to Scheme Z," December 12, 1990, GBH Archives, accessed April 25, 2024.

put engineers, environmentalists, and community activists at the same table. It may have taken years, but even despite Salvucci's best efforts to push Scheme Z to approval in order to get the Big Dig built, Scheme Z critics had their way. Regardless of whether citizen input was directly incorporated when first designing the Charles River crossing, the Big Dig was constructed without Scheme Z, because of citizen input. "The political process worked exactly the way it was supposed to do. Everybody got to be heard, and it's just a tribute to the fact that our government is laid out in a manner that works."[101] Under the BDRC, a plan was selected that nearly everyone agreed was better than Scheme Z, and the new river crossing made it through the lawsuits and environmental review process more easily than Scheme Z ever could have. Additionally, it largely muted the concerns of those who felt that the citizens impacted by the new Charles River crossing were left out of the decision making for it. As Transportation Secretary Kerasiotes put it:

> The extra time and money is wisely invested … The best Central Artery is the one whose design responds to the needs and concerns of those who will use it or be affected by it. The selection of a final design will have to balance a number of competing concerns, including traffic movement and safety, aesthetics, cost, and environmental impact.[102]

The real value that came from the BDRC was that it allowed for a balancing of values that was acceptable to Boston area residents in a Charles River crossing design. As was mentioned previously, Scheme Z was also selected out of a need to balance priorities. As Salvucci said, tradeoffs had to be made, and Scheme Z was what he believed did it the best. However, because he failed to incorporate citizen input in this balancing of values, it did not reflect their priorities, such as an aesthetically pleasing crossing.

[101] Coss, "Part 4: The Double Cross."
[102] "Crossing the Charles: A Closer Look at The Alternatives." Artery Express: Central Artery/Tunnel Project Newsletter, Fall 1993.

The designing of the Charles River crossing was one of the most defining chapters of the Big Dig. Though it can be easy to look at Scheme Z and take away that Salvucci abandoned the principles that he himself instilled in the project, there is much more to be understood from it. As Boston residents learned in the 1950s and 1960s, public infrastructure is about more than just the main functions of what is being built. Instead, bridges and interchanges have broad impacts on communities, and these impacts need to be balanced to get the best of every world. Sometimes, people are willing to spend more to build a better bridge and a sleeker interchange, but that can only be determined with effective citizen involvement. At a certain point, project leaders do need to step in and make choices in order to get projects done. No amount of community-oriented planning will ever get rid of the lawsuits and critics. However, it is much easier for planners to effectively design, and project leaders to effectively move these designs to approval, when communities are properly consulted.

Chapter 3:

The Distortion of Citizen Participation

Since the 1950s, there has been an increasing number of calls for citizen involvement in public infrastructure projects in Boston. Having learned from the mistakes of the Central Artery and the Inner Belt, an entire generation of public planners understood the necessity of citizen input when it came to building highways. This led to the conception of the Central Artery/Tunnel Project as a highway project to fix past planner's mistakes by heavily incorporating citizen input in order to create the best possible transportation solution for the city of Boston.[1]

Throughout the course of the CA/T project, the principle of citizen involvement in the project was threatened. This particularly happened during the planning of the Charles River crossing, when the plan known as Scheme Z was selected by Transportation Secretary Fred Salvucci. Salvucci fought to get Scheme Z through the environmental review process without offering any say to Boston area residents about the selection of the design. Scheme Z made it through the environmental review process in 1991 after it was approved by Environmental Secretary John DeVillars. Though he gave the certification required to begin building the plan, DeVillars recommended creating a Bridge Design Review Committee in order to study alternatives to Scheme Z due to heavy pushback from Boston area residents against the plan. After Salvucci left the role in 1991, his successor, Transportation Secretary Richard Taylor created the BDRC at DeVillars' recommendation. The committee was filled with engineers, state officials, members of interest groups, and residents of areas impacted by the crossing. Its creation formally incorporated citizen input into designing the Charles River Crossing, and its

[1] See Chapter 1, pages 9-23.

success in creating the Zakim Bridge was a testament to the efficacy of citizen participation in the planning of public projects.[2]

Though the system may have created a better river crossing through citizen involvement, that did not mean it was a perfect one. While the examples of citizen involvement discussed in the second chapter largely show greater Boston residents and environmentalists with the upstanding goals of creating what they viewed as a better CA/T project, not all citizen involvement was as straightforward. Rather, some citizen input was done to achieve agendas not directly pertaining to what they are involved in. This was true during the Scheme Z fight, when multiple different private entities fought for their ulterior interests by fighting against Scheme Z. The two predominant examples of this were the Conservation Law Foundation (CLF) and Park 'N Fly owner Richard Goldberg. The juxtaposition of the resistance that the Conservation Law Foundation and Park 'N Fly each had against Scheme Z with the negotiations they settled upon demonstrate how private entities can use citizen involvement as a means of achieving ulterior goals.

Conservation Law Foundation

The Conservation Law Foundation was one of the most notable legal forces in the Scheme Z fight. Since it was founded as a non-profit 1966, the CLF's, "Staff of attorneys, scientists, and policy specialists," worked towards protecting New England's environment.[3] They fought for a variety of environmental causes, becoming entrenched in the Charles River crossing drama from 1989 to 1992. They fought against Scheme Z both before and after its approval. However, for a period in late 1990 and early 1991, they approved of the plan, agreeing

[2] See Chapter 2, pages 30-58.
[3] Andrew Hamilton and Stephanie Pollack, *Gridlock: Facing Boston's Transportation Dilemma* (Boston: Conservation Law Foundation, 1989), ii.

to defend the CA/T project and Scheme Z against future lawsuits.[4] This was because their fight against the plan had less to do with Scheme Z, and more to do with their own environmental agenda. The Conservation Law Foundation's use of Scheme Z as a leverage point to support their mitigation proposed measures demonstrates how one of the side effects of citizen participation in public projects is that a legally controversial plan can become an anchorage for interest groups to achieve ulterior motives.

Out of all the non-government players involved in the creation of the Charles River Crossing, The Conservation Law Foundation was one of the most powerful. Largely, their power came from three sources.[5] The first was their legal expertise. They had many prominent environmental lawyers, making them fearsome in the court of law. Salvucci's chief of staff, Doug McGarrah said in an interview, "CLF was considered the most feared environmental litigation opponent … They had the resources and the legal horsepower to really be a problem on the project."[6] With CLF lawyers being known as skilled litigators, CA/T planners did not want to risk being involved in a lawsuit with them over the project.[7]

The second reason for their power was their media presence. The cases they worked on often had news outlets such as the *Boston Globe* reporting on them. Additionally, their stances alone could draw media attention to an issue. For example, Douglas Foy and Andrew Hamilton both made 10 O'Clock news appearances in 1989 discussing how they believed that the CA/T project would not be a long-term solution to Boston's traffic problem.[8] Salvucci knew that media attention can be a bad thing when it comes to public projects. Stephen Kaiser, a Cambridge

[4] "Ten O'Clock News; DeVillars Endorses Scheme Z."
[5] Luberoff and Altshuler, *A Political and Institutional Analysis,* IV-16.
[6] Coss, "Part 4: The Double Cross."
[7] Luberoff and Altshuler, *A Political and Institutional Analysis,* IV-18.
[8] "Ten O'Clock News; Central Artery for Better or Worse."

resident, MIT trained engineer, and acquaintance of Salvucci, alleges that had a conversation with Salvucci in 1992, after he left the office of Transportation Secretary. Kaiser said that he asked him about what he would do differently when dealing with Scheme Z. "He replied that first he would do something about the Peter Howe problem. He would take 50 Globe reporters, put them on a bus and take them for a tour of the site."[9] Considering how Salvucci wished he could have avoided bad press from the *Boston Globe*, there's no doubt that Salvucci understood the CLF's threat as a media presence to the project.

Lastly, the CLF was powerful due to their influential supporters and allies. Though they had the support of other community and environmental groups, arguably the most important of their allies was State Environmental Secretary John DeVillars. At the time of the Scheme Z fight, DeVillars recently became the Environmental Secretary in 1989.[10] Known for being decisive and principled, DeVillars was responsible for signing or rejecting the Environmental Impact Statement (EIS) for the CA/T. This meant that he, as well as anyone who influenced him, had a great deal of power over the entire project. DeVillars aligned himself closely with the CLF and other environmental groups, even going as far to say, "I viewed several of the environmental advocacy organizations in many ways as extensions of my own staff. I relied on them a great deal and I trusted their opinions and relied on their analyses."[11] Considering how a certification or rejection of the CA/T project relied on someone who considered the CLF's stance in his decision, the CLF had extensive amounts of power from their network. Combining that power with their litigation threat and media coverage meant the CLF was a force to be reckoned with.

[9] Kaiser, "A Grass-Roots Perspective," 48.
[10] Malone, "New Environmental Chief Strikes A High Profile."
[11] Luberoff and Altshuler, *A Political and Institutional Analysis*, IV-29.

The CLF did not originally take issue with the CA/T because of Scheme Z. In fact, their issue with the project extends to before the bridge design became controversial at all. Instead, their focus remained on the environmental and transportation impacts of the overall project. They understood that the project was both an urban design improvement and, "A necessary component of Boston's transportation future."[12] However, they feared that the project would only increase the amount of traffic in downtown Boston. In a 10 O'Clock News Appearance, CLF member Douglas Foy said:

> What we will do is move the gridlock partly underground and leave it in place in most of the rest of the city, you're not going to improve the traffic and the congestion all that much, because you will keep filling up the new capacity that you build, filling them up with new cars, and we'll be basically standing still.[13]

Not only did they predict the Big Dig to bring in more cars while not fixing traffic, but they also believed that this was a bad thing for the environment. In a report put together by the CLF titled *Gridlock: Boston's Transportation Dilemma*, they talk about how one of the major costs of traffic is air pollution, and how Massachusetts currently performs poorly in that area. "One of the most important indirect costs of traffic congestion is the toll taken on public health by automotive air emissions. Massachusetts is currently in violation of federal air quality standards designed to protect human health."[14] This was not a new stance for the CLF. For the previous decade, the CLF had held a campaign trying to prevent Boston's transportation system from being overwhelmed.[15] Fear that cars would overwhelm Boston's transportation system largely stemmed from the real estate boom that was occurring, the same one that helped to boost the economy of Massachusetts under Governor Mike Dukakis during the "Massachusetts Miracle."

[12] Hamilton and Pollack, *Gridlock,* 38.
[13] "Ten O'Clock News; Central Artery for Better or Worse."
[14] Hamilton and Pollack, *Gridlock*, 2.
[15] Luberoff and Altshuler, *A Political and Institutional Analysis*, IV-16.

In the same 10 O'Clock News appearance, Andrew Hamilton, a veteran staff scientist who also contributed was one of the main contributors to *Gridlock*, said, "The question they're not asking is how are we going to get people to and from the city given that we have 17 million square feet of extra development over what we have today."[16] Overall, the CLF understood the importance of the Big Dig to Boston's transportation system, but they believed that it was only a small piece of what needed to be done. This was evident in the transportation initiatives they supported.

In *Gridlock*, the CLF goes into depth about the solution they saw for Boston's transportation problem. They preached that the MBTA should greatly increase the capacity and function of transit services by doing things such as building a North-South rail link. They also suggested parking freezes to prevent the city from being overrun with parking. They advocated for an increase in bridge and tunnel tolls, as well as commercial parking fees, with the revenue to be used to fund transit development. They also recommended the placing of a transit fee, which are charges imposed by a municipality helping to fund future projects, on all non-residential developments. Lastly, they suggested veto power for Boston's transportation department. While this report was in response to the Big Dig, nothing about the document explicitly opposes the project itself. Rather, it is more about the CLF's larger platform of increased public transportation and preventing Boston from being swallowed by traffic and parking.[17]

Because of the CLF's concerns with the future of Boston's transportation system, they attempted to help the environment through one of the most effective means of doing so: mitigation. As discussed in the previous chapter, for public projects, mitigation meant funding environmental improvements to compensate for environmental disruptions the project creates. In early 1990, The CLF was leading their own mitigation effort where they attempted to negotiate,

[16] "Ten O'Clock News; Central Artery for Better or Worse."
[17] Hamilton and Pollack, *Gridlock*, 37-39; Luberoff and Altshuler, *A Political and Institutional Analysis*, IV-16.

"A multi-billion-dollar program of public transit mitigation, to compensate for the project's impact on traffic and air quality."[18] They looked to fund many of the transportation solutions they deemed necessary in *Gridlock*, such as improved public transit and parking freezes. They saw an opening to negotiate mitigation when the new EIS was released.

The DPW released another draft supplemental EIS in May of 1990. This draft stood in contrast to the draft reviewed in 1986 with its claims on emissions and air quality.[19] While the 1986 draft said that the project would have minimal impacts on air quality, the 1990 version asserted that the project would remove traffic from the city. This removal of traffic would allow highways to move more freely, and thus reduce emissions of key pollutants. They backed this up using specific projects for how much pollutants such as carbon monoxide would be reduced by 2010. They lacked specificity though for where these reductions were coming from. The draft left it ambiguous as to whether these traffic estimates came from the CA/T project itself, or from a combination of transit improvements. "On close examination, the traffic projections seemed to be taken from an earlier analysis that assumed construction of the CA/T project, together with a major set of transit expansion projects and a policy of allowing MBTA fares to rise only at the general rate of inflation."[20] Because of the obscurity of the source of the emissions projects EIS, the CLF was able to argue in its comments on the draft that these air quality improvements came from the MBTA improvements, rather than the CA/T project. Additionally, they made it a point of emphasis that the state should examine High Occupancy Vehicle (HOV) lanes. Along with their other concerns about fare increases and parking freezes, the CLF attempted to pressure the state into a "Formal, court-approved consent decree."[21]

[18] Haglund, *Inventing the Charles*, 336.
[19] Luberoff and Altshuler, *A Political and Institutional Analysis*, IV-17.
[20] Luberoff and Altshuler, *A Political and Institutional Analysis*, IV-18.
[21] Luberoff and Altshuler, *A Political and Institutional Analysis*, IV-18.

Salvucci agreed with some of the measures that the CLF was asking for. According to Luberoff and Altshuler, who wrote *A Political and Institutional Analysis of Boston's Central Artery/Tunnel Project,* Salvucci understood the benefits of transit investments and parking freezes.[22] However, he saw their ideas of parking surcharges and transit impact fees as too controversial. Additionally, Salvucci did not want the state entering a legally binding agreement. In his eyes, going to court risked the project opening to other legal challenges. This was on top of the fact that there was still an argument as to whether federal funds could even be used for mitigation, so funding for these mitigation agreements was no guarantee. However, the CLF was searching specifically for a legally binding agreement. At the time, Governor Dukakis had recently announced his decision to not run for reelection in 1990.[23] Because of this, they wanted to make sure that the mitigation progress they made would persist through the change of administration. Many environmental groups echoed this, with one prominent one saying, "We believe you, you've built a lot of transit. Dukakis has been good. We know all that stuff, but what staying power is there if the next governor isn't a Frank Sargent or a Mike Dukakis?"[24] Because of this, the CLF wanted to do anything in their power to have their goals advanced and enforced through mitigation efforts for the CA/T. They chose to do so through the court of law.

One of the most important legal points that had to be resolved for Scheme Z was the Section 4(f) question. Section 4(f) was a part of the U.S. Department of Transportation Act of 1966, and it, "Provided for consideration of park and recreation lands, wildlife and waterfowl refuges, and historic sites during transportation project development."[25] The Federal Highway

[22] Luberoff and Altshuler, *A Political and Institutional Analysis*, IV-18.
[23] Coss, "Part 4: The Double Cross."
[24] This specific quote came from the environmental group 1,000 Friends of Massachusetts, via: Luberoff and Altshuler, *A Political and Institutional Analysis*, IV-37.
[25] "Section 4(f) Tutorial," U.S. Department of Transportation: Federal Highway Administration, accessed April 25, 2024. https://www.environment.fhwa.dot.gov/env_topics/4f_tutorial/overview.aspx?h=e#h.

Administration (FHWA), which has the power to approve or deny projects based on whether the project adheres to their standards, enforces this section. This meant that, "Before approving a project that uses Section 4(f) property, FHWA must determine that there is no feasible and prudent alternative that avoids the Section 4(f) properties and that the project includes all possible planning to minimize harm to the Section 4(f) properties."[26] This was an important part of the CA/T project planning, as any land that was being used by the project had to either not be considered a park, or any design that did use parkland would have to be scrutinized until it was determined it was the best plan. While this was not a broad issue for the Big Dig, Scheme Z required the use of land around the Charles River, as well as constructing within the Charles itself. For environmentalists looking to protect the Charles and those in support of the CA/T project alike, this proved to be a major interpretive controversy.

The issue with constructing around and in the Charles was that there was debate as to whether the Charles River itself was a park.[27] If it was, that meant that further planning was required in order to determine the least destructive Charles River crossing plan. For Salvucci, this meant further delaying the approval of the project. For the CLF, this threat of a delay was exactly what they were willing to take advantage of to advance their agenda. In a July 1990 letter, CLF lawyer Stephen Burrington made it clear that they would argue that the project is a 4(f) issue, stating, "The Charles River itself, as well as the land along its banks, is a park." For example, in the summer of 1990, the Department of Public Works (DPW) put pressure on the Metropolitan District Commission (MDC) and FHWA in attempt to have the Charles River be officially declared not a park. In response, the CLF called them out on it. "Indeed, the Conservation Law Foundation issued a stern letter last summer chastising DPW for putting

[26] "Section 4(f) Tutorial."
[27] Haglund, Inventing the Charles, 334.

pressure on Commissioner Bhatti of the MDC to declare that the Basin was not a park."[28] Both the statement in the letter by Burrington and the CLF criticizing the DPW seem to show that the CLF was highly concerned about the CA/T project's impact on the Charles River. However, protecting the Charles River and its parks was not a primary goal for the CLF.

The rhetoric that they used about the Charles River and 4(f) laws was not about protecting the Charles. Rather, they knew that Scheme Z's threat to the Charles was a good point of leverage for having their mitigation approved. This is shown in their later responses to the 4(f) question about the Charles. Stephen Burrington, the same lawyer who said that the Charles River and its banks were a park, said in a letter to the Executive Office of Transportation and Construction (EOTC) in November 1990, "As I have said it quite a few points, CLF has been willing to accept a compromise 4(f) statement for the sake of getting an improved set of mitigation measures."[29] As this quote explains, the 4(f) issue of Scheme Z was less important to the CLF than other mitigation measures they looked to impose, such as parking freezes. The CLF's willingness to drop the Charles River 4(f) question as an issue they were pursuing shows the primary motivation they had for attacking Scheme Z. This can be further seen by their actions in November and December of 1990.

On November 21st, another draft of the environmental impact statement was released. This draft differed from the last by including over 1,500 mitigation measures that had been agreed upon since the last draft. However, one thing did not change: Scheme Z. Without any delay, the CLF attacked the plan, "The same day the draft impact statement was released -- surely in less time than it would take to read all 5,000 pages -- the CLF released their own statement, saying the state had to do more to keep cars off the new Artery, and provide

[28] K. Dun Gifford to Julia Belaga, October 4, 1990.
[29] Stephen H. Burrington to Doug McGarrah, November 1, 1990.

alternatives to driving."[30] With this statement came a threat: if further mitigation measures to keep cars off of the road were not included, they would attempt to stop the project with lawsuits. According to their own lawyers, this was not something that they planned on doing. In an interview, Burrington said, "It was just a threat, but we, you know, people's attention was riveted."[31] Burrington saying that it was just a threat shows how they were willing to take action that was not directly related to their goals, if it meant advancing their agenda. The CLF had low concerns for the Charles and no desire to stop the Big Dig, but they knew that through those, they could get the state to agree to the mitigation they sought. This is punctuated by the agreement they made with Salvucci.

Not wanting to risk having to face the CLF in court, Salvucci did everything he could to get them out of the way of an environmental approval. This led to a marathon negotiation session on December 19th, 1990. During this session, an agreement was signed between the CLF, the EOTC, and the DPW. Essentially, it was a memorandum of understanding (MOU) that agreed that the transit extensions, and other mitigation measures that the CLF was asking for, would be included in the final supplemental environmental impact report (FSEIR). In return, the CLF would legally defend Scheme Z in any lawsuits that came its way. For both parties, this was seen as a major win. For the CLF, it meant that the state had to incorporate projects that advanced their agenda for reduced traffic and air pollution. For Salvucci, it meant that one of the most powerful legal forces in the region was now on his side. While the MOU was born out of the threat of legal action over Scheme Z's impact on the Charles, the MOU does not focus on it at all. [32]

[30] Coss, "Part 4: The Double Cross."
[31] Coss, "Part 4: The Double Cross."
[32] Coss, "Part 4: The Double Cross."

In the memorandum of understanding, the Charles River Crossing is only mentioned once in reference to the interstate it is connected to.[33] Nothing about the environmental impacts, aesthetic impacts, or the notorious double-cross is mentioned. There is no mention of parks or Section 4(f) at all. Instead, the emphasis is on parking freezes, mass transit, and how future oversight of this mitigation will take place. This is because, as Burrington said demonstrated in his letters, the CLF was not concerned about the Charles or Scheme Z. Though they threatened Scheme Z, once they were able to receive the mitigation agreement they wanted, not only did they drop the threat of a lawsuit against the plan, but they were willing to go as far as defending it against other lawsuits. This deal angered some citizens. For example, Kaiser, an engineer and Cambridge resident, saw the deal as betrayal. When asked whether he believed the CLF sold out on Scheme Z to get transit mitigation, he responded "Yes. Absolutely."[34] Others were frustrated that the agreement only included the CLF and did not incorporate other organizations that were fighting against the environmental impacts of the project. Leading the charge on a broad environmental movement against the project was never the CLF's goal. As the MOU, their rhetoric, and their negotiation tactics show, they attacked Scheme Z not because they were against the plan, but because they knew it was the best way to achieve their real goal of better transit.

Park 'N Fly

While the CLF demonstrates how an environmental group was able to use Scheme Z as leverage for their agenda, arguably a more impactful instance of a private entity using the plan as leverage for their goals can be found with Richard Goldberg and his business, Park 'N Fly.

[33] Conservation Law Foundation of New England, Inc., "Sweeping Environmental Protection and Transit Plan Announced For Central Artery/Tunnel Project," Press Release, December 19, 1990, 7.
[34] Coss, "Part 4: The Double Cross."

During the Scheme Z saga, Goldberg was responsible for supporting an environmental group, political lobbying, controversial political tactics in the state legislature, lawsuits, and the overall stirring of outrage about Scheme Z. Like with the CLF and their pro-transit agenda, Goldberg's actions were about using Scheme Z to achieve his ulterior motives, and not about outrage over Scheme Z itself.

Richard Goldberg himself was a North End resident.[35] He was descended from immigrants who had built a lumber business in East Boston. Nothing about him was intuitive as to why he opposed Scheme Z. He was not known to be an environmentalist, nor did he live in any of the areas that Scheme Z primarily impacted. However, he had a major grievance with the Big Dig as a whole. Goldberg was a quarter owner of the business Park 'N Fly, a 1,377-space parking lot that sat in East Boston next to Logan Airport. The private lot was a place where travelers could park their cars before flying. In the late 1980s and early 1990s, when Goldberg fought against Scheme Z, the business was lucrative enough to the point where Goldberg was looking to expand it.[36] This was not to mention the incredible location of the land that Park 'N Fly owned, which had the potential to be worth over $50 million if it were ever developed as real estate. However, the Big Dig threatened to take this land and business away from Goldberg.

One of the important plans for the Big Dig was the third harbor tunnel. The third harbor tunnel was supposed to go underneath the Fort Point Channel and come up in East Boston, providing an easier drive to Logan Airport. Originally, the plan did not impact Park 'N Fly, but it would have impacted other businesses and dwellings. With the help of fellow MIT engineer Bill Reynolds, they resituated the tunnel's position in order to make it less destructive to neighborhoods. As a result, the planned tunnel came up into what was Goldberg's Park 'N Fly.

[35] Peter J. Howe, "Anti-Tunnel Group's Link Raises Question," *Boston Globe*, February 4, 1991.
[36] Coss, "Part 4: The Double Cross."

For planners and community activists, the third harbor tunnel coming up through Park 'N Fly was perceived as a good thing due to it being less destructive and easier to take by eminent domain. The land that then was not used for the tunnel was planned for relocating a highway, but more importantly, it would also create a public park.[37]

One of the major issues that grieved East Boston residents was airport expansion. Throughout the 20th century, Logan Airport had slowly been taking more and more land away from residents in order to expand. Most East Boston residents were against airport expansion and wanted to prevent it in the future. One of the ways that they saw this as possible is by dedicating land beside the airport to a park. If they were to achieve this, it meant that it would be incredibly difficult for the airport to expand in that direction, as they would have to go through the same 4(f) legal process that the CLF was threatening to sue the Big Dig over in reference to Scheme Z and the Charles River. Between being able to build a better third harbor tunnel, as well as creating a park, all while stopping airport expansion, using the Park 'N Fly land for the project seemed like an all-around win.

Though taking Park 'N Fly through eminent domain was the best solution for the project, Goldberg did not see it as the pragmatic answer to the Big Dig's problems. He had no concern for the betterment of Boston, and just cared about his business. As one transportation official said, "Goldberg was concerned about his business, and Salvucci's appeal to the larger good didn't wash at all."[38] In his eyes, the reason why they were planning on taking his parking lot was because Salvucci was, "'Out to get me.'"[39] He claimed that because he had been a part of political rivalries against Salvucci within East Boston that spanned back to the 1970s, that

[37] Michael Rezendes, "Panel Sought to Review Tunnel Project Impact on East Boston," Boston Globe, November 15, 1990.
[38] Matthew Brelis, "Land Swap Would Clear Snag to Artery Project," *Boston Globe*, May 30, 1991.
[39] Howe, "Anti-Tunnel Group's Link Raises Question."

Salvucci had a personal vendetta against him that he was taking out through the Big Dig. For example, he engaged in a legal battle with the city of Boston over adding spaces to Park 'N Fly.

> In 1982, the Kevin White administration stopped Goldberg from adding spaces; the corporation sued the city, and early this year the Flynn administration and the company entered into a consent decree that allowed the company to add 267 spaces in return for some perks for the city.[40]

Additionally, he believed that Massport, which runs Logan Airport, viewed Park 'N Fly as a major competitor to state-owned airport parking.[41] Goldberg saw the land takings as a strategy to absorb his parking spaces, thus removing a major competitor. State officials publicly denied these accusations, yet Goldberg maintained this reasoning.

Early on, Salvucci attempted to persuade Goldberg into accepting the plan. When he was interviewed for GBH's podcast on the Big Dig, he said that he told Goldberg that they would be able to give him much more money than the property was worth in attempt to convince him to accept the plan. Telling him that Goldberg could take them to court arguing he was not paid his fair share, Salvucci said, "We'll be defended by some 22-year-old kid that just graduated from law school and you'll have some three-piece suit character from downtown, and you'll beat us in court, and you'll get way more money than you deserve."[42] Still, Goldberg remained unconvinced.

Rather than have his parking lot taken, Goldberg wanted the tunnel to come up through the airport instead. This was a workable plan, but it came at a cost. The only land that was feasible for them to use had an office building on it. Building the third harbor tunnel up through there meant bulldozing the building and losing jobs, "Taking land south of Route 1A would have meant the demolition of a Delta Airlines reservation building and the loss of 400 jobs, state

[40] Alan Lupo, "When Business and Third-Tunnel Plans Clash," *Boston Globe*, November 8, 1989.
[41] Brelis, "Land Swap Would Clear Snag."
[42] Coss, "Part 4: The Double Cross."

officials said."[43] Salvucci, being adamantly against bulldozing businesses and destroying jobs, was against the idea.

Because of the failed early negotiations between Salvucci and Goldberg, Goldberg decided to fund $1 million worth of legal action against the Big Dig. He did this partially by hiring lawyers, a PR team, and environmental consultants. Together, they put together a report that attacked the Big Dig, "So he had his lawyer, Neil, put together pages and pages of comments and criticisms and quotes from court cases and this sort of thing. It was about three inches thick."[44] The attack had nothing to do with the third harbor tunnel or East Boston though. Instead, it was about Scheme Z. Goldberg knew that if he wanted to have a chance at opposing the project, he needed to attack its weak point, which naturally was its most controversial plan in Scheme Z. As GBH's Ian Coss puts it, "Because no amount of documents will get people fired up about the Park 'N' Fly."[45]

Goldberg did not just fund his own lawyers and consultants though. He also contributed to the Committee for Regional Transit (CRT). The facts on the founding of the committee are a little unclear. The committee seems to have sprouted around August 1990, after environmentalists already started critiquing Scheme Z.[46] On August 9th, 1990, a *Boston Globe* article was published referencing it, seemingly the first time it appears in the news. The article discusses how K. Dun Gifford, who was said to be the chief organizer of the committee, commented at a State House news conference about how he believed the state was rushing a

[43] Matthew Brelis, "Accord to Swap Land Pushes Tunnel Project," *Boston Globe,* June 12, 1991.
[44] Coss, "Part 4: The Double Cross."
[45] Coss, "Part 4: The Double Cross."
[46] Ronald Rosenberg, "Small-Business Coalition Urges Focus on Big Dig Environment, Transit Issues," *Boston Globe*, August 9, 1990.

transportation plan against their better judgment. One day later, he, along with the CRT, appeared in the *Boston Globe* again.

Gifford was not someone who was expected to head an environmental organization, and that was reflected in how the committee was originally treated. On August 10th, the *Boston Globe* ran an article titled "Down with the Dig." With the opening line of the article, columnist Alex Beam said, "The downtown crowd was quite bemused to pick up yesterday's paper and read that K. Dun Gifford, a socially prominent connoisseur of fine wines and gourmet foods, had assumed leadership of a newly formed pressure-group-by- press release – the Committee for Regional Transportation."[47] Gifford claimed that he was approached to lead the group, though it is not made clear by who. However, it is specified that Goldberg had supposedly never met Gifford. Gifford expressed that he was approached to lead the group because of history of social activism, "He was chairman of the Massachusetts branch of Common Cause in the early 1970s – and says his status as an 'expert commuter' qualifies him to speak out on Artery issues."[48] Many people did not see it that way though. "Artery spokeswoman Claire Barrett is among those who view Gifford as a Johnny-come-lately to the tunnel debate: 'We've had 1,400 public meetings in three years, and he's never attended one of them.'"[49] Overall, Gifford appeared to be an odd choice to lead the CRT, and this was continually reflected in the papers. Months after the CRT was formed, a Globe article ran in December of 1990 titled, "I Wonder About K. Dun Gifford." In it, columnist Mike Barnicle charges that Gifford's resume is "A fancy way to say coat-holder."[50] In the article, he points out the contradiction of Gifford saying that the Big Dig is bad for the environment, because in the context of an urban project, the "environment" means the

[47] Alex Beam, "Down with the Dig," *Boston Globe*, August 10, 1990.
[48] Beam, "Down with the Dig."
[49] Beam, "Down with the Dig."
[50] Mike Barnicle, "I Wonder About K. Dun Gifford," *Boston Globe*, December 18, 1990.

urban environment as well, which is something that the Big Dig improves upon. The article also points out how Gifford should know this, as he was once "National campaign coordinator for Senator Robert Kennedy during his bid for the Democratic presidential nomination."[51] During his time working for Kennedy, the Kennedy library was supposed to be constructed in Cambridge. However, after Kennedy's assassination in 1968, Gifford contributed to pushing back against the plan as it would have made Cambridge too congested with traffic and tourists, and instead had the library built in Columbia point. Overall, having Gifford lead the CRT was already a choice that left many suspicious of the group, but that was not all that critics had to say against the group.

Even in August of 1990, people considered the CRT a front to push Goldberg's agenda of stopping the Big Dig. Goldberg was a financial supporter for the group. "Goldberg also pays for the group's publicist, Averil Lashley, and chief legal adviser, Neal B. Glick, but the committee says it takes no money from him."[52] On top of this, the CRT met "In the law offices of Brown, Rudnick, Freed and Gesmer, which represents Goldberg."[53] While allegedly none of the individual group members were being financially supported by Goldberg, his financial support for the CRT pushed the narrative that it was a front for his anti-CA/T project agenda. This was especially amplified when the comments that the CRT released comments on the EIS after it was approved that referenced the reports that Goldberg paid for: "When CRT filed official comments on the Artery-Tunnel's environmental impact report with state regulators last month, it 'incorporated by reference' four reports prepared by environmental consultants hired by

[51] Bruce Weber, "K. Dun Gifford Dies at 71; Started Group to Promote Healthy Eating," New York Times. May 15, 2010.
[52] Howe, "Anti-Tunnel Group's Link Raises Question."
[53] Alan Lupo, "Behind the Lobbying," *Boston Globe*, August 11, 1990.

Goldberg and submitted with Goldberg's comments."[54] Essentially, people saw the CRT as performing AstroTurf activism. The reason why it is called "AstroTurf" activism is because it is said to pose as real activism, while actually being about something else, "Just as ever-green Astroturf is only a plastic version of the real thing, 'AstroTurfed' political actions masquerade as grassroots efforts."[55] Though the term did not exist in 1990, the CRT was both perceived and treated as an AstroTurf movement by the public when it was founded.

Even other environmentalists originally saw it as a front and stayed away from it. One August 1990 Globe article implied that it was widely understood that the group was a sham, with the first meeting being "Boycotted by most serious environmentalists."[56] Artery spokeswoman Claire Barrett, who is mentioned in one of the August 1990 articles on the CRT, notes how the CRT reached out to more established environmental groups to join its cause, yet at the time none had accepted.[57] Despite early sentiment about the group, the CRT gained momentum.

By 1991, the CRT gained many reputable members with distinguished backgrounds. MIT professors, Sierra Club activists, Boston developers, and even MIT trained engineer responsible for designing an all-tunnel Charles River crossing: Stephen Kaiser.[58] Despite its sketchy origins, the group became arguably the most successful at putting up a fight against the Big Dig. "The controversy surrounding the committee has taken on a deeper significance because, despite the early attacks against it, the group has managed in recent months to meld what is widely considered the first effective coalition to challenge Boston's Central Artery-Third Harbor Tunnel project."[59] The group quickly became intertwined in the fight against Scheme Z, engaging in

[54] Howe, "Anti-Tunnel Group's Link Raises Question."
[55] Caroline w Lee, "The Roots of Astroturfing," *Contexts* 9, no. 1 (2010): 73.
[56] Lupo, "Behind the Lobbying."
[57] Beam, "Down with the Dig."
[58] Howe, "Anti-Tunnel Group's Link Raises Question."
[59] Howe, "Anti-Tunnel Group's Link Raises Question."

lawsuits against the approval of Scheme Z. By the time that the Bridge Design Review Committee (BDRC) was formed in 1991, Gifford even was included in the selected committee, demonstrating how prominent the CRT became. Considering how the group sprouted after Scheme Z was already controversial, it is difficult to fully grasp how responsible the group was for creating change. However, there is no doubt that the CRT elevated Goldberg's opposition to the project to media headlines and continued attention from planners. This was not the only fight that Goldberg put up against the project though.

Another important way that Goldberg fought against the Big Dig was by lobbying in the state legislature. Most notably, he donated to East Boston Representative Gus Serra. This was a move that many questioned, especially due to Serra's actions in the state senate. In May of 1990, "Rep. Gus Serra (D-East Boston) recently attached to the $1.2 billion tax legislation an amendment to save the Park 'N Fly lot from a necessary highway realignment. Serra is a friend of Richard Goldberg, one of the lot owners. The amendment is now in the Senate."[60] Serra was very willing to try to protect Park 'N Fly through legislative action. Not only did Serra amend a bill in order to save Park 'N Fly, he also attempted to hold up House Bill 1646, "Which would allow the Massachusetts Turnpike Authority to raise $58 million in bonds to renovate the Sumner and Callahan tunnels."[61] In doing so, he hoped that Dukakis would be more willing to accept his amendment to the tax bill in order to get the bond raising bill through. Dukakis did not allow this tactic to work for Serra though. "Governor Dukakis vetoed the amendments and threw his support to a city of Boston plan to take even more private property and create a buffer between Eastie and Logan."[62]

[60] Alan Lupo, "No Golden Leader," *Boston Globe*, May 15, 1990.
[61] Alan Lupo, "Two Harbor Hostages Waiting to Be Rescued," *Boston Globe*, August 22, 1990.
[62] Lupo, "Two Harbor Hostages Waiting to Be Rescued."

Many criticized Serra for taking these political actions on Goldberg's behalf. He denied these charges on the basis that he was speaking out for Eastie. "'Some people are saying this is an example of special interests at work,' Serra said. 'We have a different perspective.'"[63] He claimed that he was taking these actions because he wanted to fight moving of highways closer to residents in Eastie, while also wanting to fight against airport expansion. He did so through a committee called the East Boston Environmental Rights Committee (EBERC), which Goldberg was a donor of. This brought criticism to Serra, which he downplayed, "Serra acknowledged that Goldberg is a member and financial supporter of the East Boston Environmental Rights Committee, but said the organization is acting in the best interest of the neighborhood by fighting to stop state planners from moving a highway closer to local homes."[64] Though this committee and Serra claimed to fight for East Boston, that is not how everyone saw it.

East Boston City Councilor Robert Travaglini charged that the EBERC was more about business interests than it was about protecting East Boston. In a letter sent to Dukakis on November 9, 1990, Travaglini, "Raised questions about the credibility of the East Boston Environmental Rights Committee, which is working to change the current design of the project."[65] Travaglini claimed that it was led by Serra and Goldberg, and because of that, he asked Dukakis to ignore the concerns of the group. "'However honorable the intentions of this committee, there is a question of its credibility,' Travaglini wrote. 'This question arises from the participation of certain business interests who will benefit from the redesign of the existing plan.'"[66] Goldberg's involvement with the CRT and Serra both demonstrate how he was willing to fight the CA/T project in ways that did not directly pertain to his grievance with it. Scheme Z

[63] Rezendes, "Panel Sought to Review Tunnel Project."
[64] Rezendes, "Panel Sought to Review Tunnel Project."
[65] Rezendes, "Panel Sought to Review Tunnel Project."
[66] Rezendes, "Panel Sought to Review Tunnel Project."

had nothing to do with Park 'N Fly. Yet Goldberg funded a group that fought against it while lobbying an East Boston representative to try to protect his business. Even other environmentalists and East Boston residents understood the origins of his actions, regardless of how he carried them out.

Goldberg remained an opponent of the Big Dig until the summer of 1991. He dropped his opposition to the project after negotiating a land swap between the Massport, which controls Logan Airport and Park 'N Fly. This allowed the project to use Park 'N Fly's land, without Goldberg having to lose his business. This negotiation came after he filed suit against the project but said he would drop it if a deal were made.[67] When the deal was settled upon, it was described as, "The first piece of a solution to one of the most troubling problems with the $5 billion Central Artery/Third Harbor Tunnel project."[68] Afterwards, Goldberg said he was pleased with the settlement and the negotiation, saying, "It is win-win for everyone involved–the neighborhood, the state, the port authority and for us."[69]

Whether or not the land swap was a result of Goldberg's lawsuit, the pushback on Scheme Z from the CRT, the support of Serra, or some combination of the three is difficult to determine, but largely irrelevant. Regardless of how Goldberg achieved his goal of saving Park 'N Fly, he attempted to do so by fighting against an aspect of the Big Dig that was irrelevant to him: Scheme Z. In the same way that the CLF fought against Scheme Z in order to achieve their goal of a better transit mitigation package, Goldberg fought Scheme Z because of his ulterior motive of saving his business. Despite citizen involvement in public projects being overall a

[67] Brelis, "Land Swap Would Clear Snag."
[68] Brelis, "Accord to Swap Land Pushes Tunnel Project."
[69] Brelis, "Accord to Swap Land Pushes Tunnel Project."

productive force of good for communities, these examples of opposition to Scheme Z demonstrate how it can be warped by private groups to achieve their agendas.

Conclusion

Boston's history of transportation projects and complex citizen participation dynamics led it to the Zakim Bridge as it stands today. It all started in the 1950s, when planners built the Central Artery without any input from the communities they planned it in. The project left such a lasting impression on the minds of Bostonians that it motivated them to band together and fight against the planned Inner Belt. As opposition to the Inner Belt persevered, so did the idea of the importance of citizen input in highway projects. This idea gained momentum when the Big Dig was conceived.

Faced with a traffic problem, Salvucci nurtured the idea of depressing the Central Artery. Having been an integral part of the Inner Belt fight, the importance of citizen input in the planning process was an idea that was deeply instilled in his mind. When he began officially planning the Big Dig, he originally did incorporate citizen input into some aspects of it. However, he did not incorporate any citizen input into designing the Charles River crossing. The designs were made behind closed doors, and under pressure from the FHWA, he selected the controversial Scheme Z due to its merits as a transportation solution. This decision by Salvucci to choose a plan that even other planners were not fond of in order to bring a planned project closer to construction represents one of the key tensions between citizen input and planners. While it would be great to always incorporate all the desires of residents, priorities must be balanced, and decisions must be made to bring projects to completion.

Despite Salvucci's best efforts to sell Scheme Z to the public, greater Boston residents and environmentalists pushed back against the design nonetheless. Their criticisms were only made worse by Salvucci's unwillingness to entertain the idea of a redesign. Though Scheme Z

made it through environmental approval and thus could begin construction, it was flooded with lawsuits which delayed any progress. The noise from critics only began to quiet when citizen input was formally incorporated into redesigning the Charles River crossing with the creation of the Bridge Design Review Committee. The committee oversaw the planning and selection of a new Charles River crossing that became the Zakim Bridge. Though not every critic went away, the committee made designing a palatable crossing to environmentalists and Bostonians much easier. More importantly though, the creation of the committee was the inflection point in the history of the Big Dig. It was the point from which the project went from being a tightly controlled process, to one that was receptive to public feedback. The success of this inflection is demonstrated by the contrast between how poorly Bostonians reacted to Scheme Z, versus how the Zakim Bridge is one of the focal points of the Big Dig and the city of Boston today.

Citizen input is not always straightforward though. As was seen with the Conservation Law Foundation and Park 'N Fly, citizen input can be used for private entities to fulfill their agendas. While this can be used as a criticism of citizen participation, it is important not to lose sight of the bigger picture. Today, the remnants of the CLF and Park 'N Fly's fights have all but blended into the city landscape. Hardly anyone notices the impacts of the land swap that occurred in Eastie or the mitigation measures to fund transit that were negotiated during the Scheme Z saga. The Big Dig has become a part of Boston that Bostonians live with today. Had it not been for residents who fought to have the project reworked, the inefficient design of having cars cross the Charles twice would be a normalcy of life in the city.

We may never see a highway project as massive as the Big Dig again, yet Scheme Z will always remain an important lesson in planning public projects. While it is important that planners prioritize completing projects, it should not be done at the expense of the area these

projects are built in. Whether it is environmentalists or residents, pushback will come when the voices of citizens are not incorporated into planning. While Salvucci's method of pushing a design through the environmental review process by any means necessary may be able to work, public projects are much more easily built, and much better designed, when citizen input is incorporated.

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