

WAITING FOR THE END OF THE WORLD: A PROTOTYPE FALLOUT SHELTER UNDER INTERSTATE 5 IN NORTH SEATTLE

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ABSTRACT

The Weedin Place Fallout Shelter in Seattle, Washington, was built as a prototype in 1963 to be the model for countless similar shelters that would be installed nationwide under interstate highways. These and other types of shelters were part of the United States civil defense program designed to protect citizens from radioactive debris or fallout resulting from a nuclear attack. The Seattle structure was federally funded, announced as a more efficient use of public rights-of-way. Visitors to the fallout shelter on Weedin Place near Ravenna Boulevard today are struck less by the efficiency of design than by the utter dementia of fallout shelter mentality. Evaluation of such facilities for National Register eligibility must be made within a unique context, as Cold War esthetics are to architecture what Hamburger Helper[®] is to haute cuisine.

Introduction

Odd as it may seem, the Washington State Department of Transportation (WSDOT) Bridge and Structures Office (BSO) recently added a structure to the state's bridge inventory that is not really a bridge. The structure was built as a nuclear fallout shelter during the Cold War that developed between the United States and the Union of Soviet Socialist Republics (USSR) following the end of World War II (WWII). The shelter is technically a bridge since it has supported the south-bound lanes of Interstate 5 (I-5) since its completion in 1963. Despite the WSDOT Northwest Region's having used the shelter for records storage (and the Department of Licensing for issuing drivers licenses before that), the BSO was unaware that the shelter was holding up one the state's most important highways. Discovery of that fact prompted a request for WSDOT's Cultural Resources Program to evaluate the shelter's potential eligibility for inclusion in the National Register of Historic Places. That evaluation has included research to determine the shelter's origins and uses over the years. Attempts to discover other similar structures under highways in the U.S. have thus far been unsuccessful, suggesting that the so-called "prototype community" fallout shelter under I-5 is unique, perhaps the only one of its kind in the world.

Prosaic in its architecture, the shelter is virtually bereft of style, designed for survivability rather than elegance or comfort. Like most Cold War facilities, the shelter was designed by an engineering firm, rather than by architects, because the shelter was basically a functioning machine, not a building. Architects were involved in such undertakings only to the extent that the facilities were to house people. And, like most Cold War artifacts, the shelter is a victim of benign neglect (Vanderbilt 2004:49). Yet it is a vivid reminder of a fearful time in our history.

Unadorned, austere walls, floors and ceilings of cold concrete evoke images of huddled, terrified survivors escaping the horrors of unimaginable nuclear holocaust (Fig. 1). The shelter's appearance as a secure refuge from radioactive fallout is itself illusory and controversial, just as was the nation-wide program promoted as a way for the U.S. to survive, and thus "win," the Cold War. One visit to the shelter's inner sanctum inevitably brings one to question "What were they thinking?"

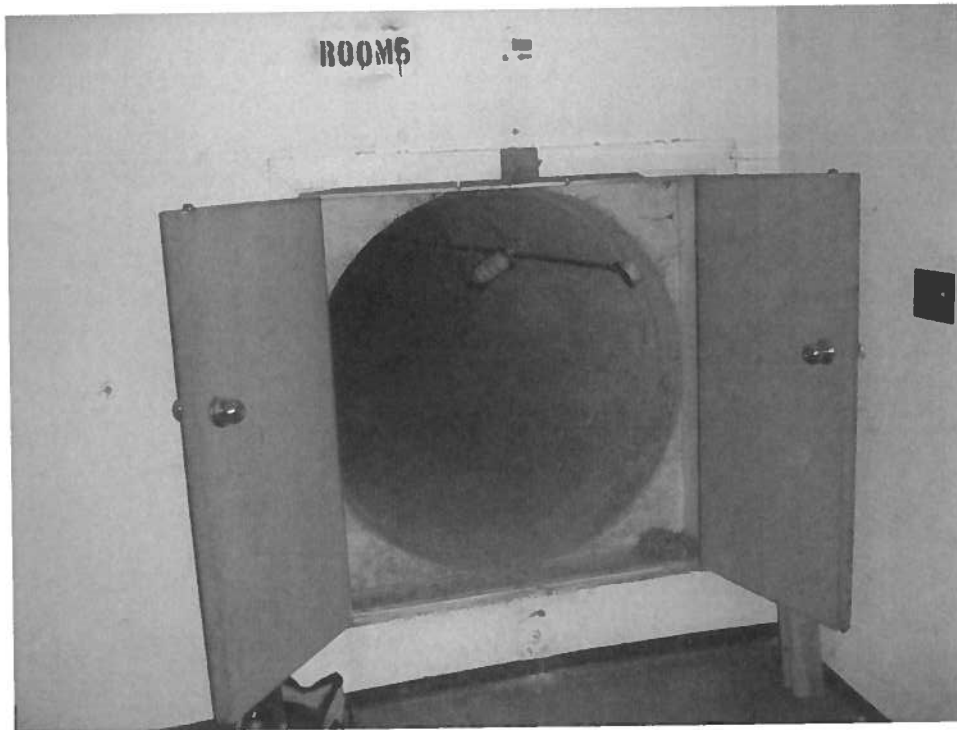


Fig. 1. Double doors close off entrance to the escape tunnel, adjacent to the food distribution window in the fallout shelter. (Photo by Craig Holstine, WSDOT, 2010).

Background

Visiting north Seattle in the mid-1950s, one would have seen modest, single-family houses lining the street called Weedin Place in a typical middle-class neighborhood. That serenity changed forever in the late 1950s with construction of Primary State Highway 1, now I-5. Under the north approach to the Ravenna Boulevard Overcrossing Bridge, excavation began in 1962 on what was to be the first of many fallout shelters under freeways and highways around the country. Unbeknownst to all involved, the facility on Weedin Place was to be the only highway fallout shelter ever built in the U.S. (Fig. 2).

Nowadays, "shelter" has entirely different connotations: battered women and children, the homeless and the hungry unfortunately populate too many of our shelters today. In the early 1960s, everyone knew when a "shelter" was to be used, and its yellow and black distinctive signs were universally recognized. The notion that shelters could preserve enough of the population and its will to fight derived largely from Britains' survival of "The Blitz" during WWII in "bomb" shelters, that is, underground bunkers designed to protect inhabitants from direct hits by



Fig. 2. A prototype highway shelter as envisioned by federal Civil Defense officials. (Photo # 311-M-23-9, Record Group 311, Still Pictures Branch, National Archives, College Park, MD. Courtesy David Monteyne, University of Calgary).

conventional explosives. Despite graphic evidence of the ineffectiveness of most shelters subjected to Allied firestorm bombings of German and Japanese cities, at least some Americans held fast to the notion that shelters were the answer to the question of nuclear holocaust survivability.

The fallout shelter on Weedin Place was a “prototype community” fallout shelter, meant to insulate occupants from the effects of radioactive fallout from a nuclear attack. The facility was federally financed and built on public property for emergency use by common citizens without access to private shelters. In hopes of encouraging families to install their own shelters, the federal government built four other “prototype” shelters in Washington, all “family” facilities on private properties in Everett, Seattle, Spokane, and Yakima (Barton 1960b; Civil Defense Scrapbook 1957–1962).

While thousands of home owners nationwide did install their own underground shelters, the Weedin Place facility was apparently the first, and only, fallout shelter ever constructed in the U.S. under a public roadway. It was built under what would become I-5 at the height of the Cold War in part as a way to demonstrate more effective uses of public rights-of-way. C. D. Curtiss, the Commissioner of Public Roads, head of the Bureau of Public Roads (BPR, predecessor agency to today’s Federal Highway Administration), proposed putting shelters under the interstates as a way to: (1) save costs by combining needs of the national shelter and Federal-aid Highway programs; (2) recover some construction costs by charging parking fees; and (3) provide shelter for the traveling public. Commissioner Curtiss emphasized that putting shelters under freeways was particularly advantageous in residential neighborhoods where costs of acquiring private property would be higher than in rural America, but where relatively denser populations would be served (Curtiss 1957).

At least one attempt to secure federal and state backing for a highway-type shelter ended unsuccessfully when the Washington State Department of Highways (DOH) rejected the idea of shelters under raised portions of Interstate 90 in Spokane, saying the freeway was too far along in design (Friend 1965; *Spokesman-Review* 1965). Its design was no further advanced than the Seattle freeway had been in 1959 when the Weedon Place shelter was approved, but by the mid 1960s the time had passed for building public shelters, under highways or anywhere else.

Charles Ralls, the Director of the Regional Office of Civil and Defense Mobilization, first discussed the idea for this shelter with William Bugge, the Washington DOH Director, on 21 December 1959. Bugge followed up his meeting with Ralls in a letter, stating his approval for the shelter under the future interstate. Only the month before, Bugge had rejected a suggestion by a Washington citizen that spaces under highways should be put to other uses. Bugge recited DOH and BPR policies forbidding facilities that could bring damage via fire or accident to public roadways (Bugge 1959a and b). To Bugge's letter was attached a sketch of the proposed shelter in its present location, shown as a 65 x 40 ft. rectangular shelter. Bjornstad, one of the designers, considered a two-story rectangular structure, but concluded that "the circular single story design appears to be the most economical for this project" (Chick 1961). Records reveal that costs would be a recurring source of dispute in shelter development.

In June 1960, the BPR approved the under-freeway shelter plan, but cautioned that additional costs would not be eligible for interstate funding (Bugge 1960). The federal Office of Civil and Defense Mobilization (OCDM) agreed to pick up costs involved with removing fill from under the Ravenna Boulevard Bridge approach. DOH's cost estimate of \$1,300 was approved (Barton 1960a). Years later, when the DOH billed the Office of Civil Defense (OCD, successor to the OCDM) for \$4,650, OCD refused to pay the invoice until DOH provided an explanation for the 358% increase over the initial estimate. Excess costs apparently resulted from items labeled "Furnish & Place Selected Backfill Material—\$2,642," "Special Sand Bedding—\$1,501," and "Construction Engineering, Prorated—\$341.03." The total included sales tax (Washington State Department of Highways 1968; Office of Civil Defense 1969; Miller 1969).

On 10 October 1960, Washington Governor Albert Rosellini, Seattle Mayor Gordon Clinton, King County Board of Commissioners Chairman Howard Odell, and L. F. Kreiger of OCDM signed an agreement formalizing the project. Its authority was given as the Federal Civil Defense Act of 1950, and Executive Order 10773, authorizing the Director of OCDM to develop shelter designs and "publicly disseminate civil defense information by all appropriate means." Yet another justification was the National Policy on Shelter, in which the federal government "is conducting a program, for research and demonstration purposes," of various kinds of fallout shelters, "including construction and use of highway fill fallout shelters which also may serve a dual use . . ." To satisfy the federal requirement for facilities in public rights-of-way (ROWs) to serve other functions when not in use during emergencies, the state promised to permit the Washington State Patrol to use the shelter. (Until ca. 1977, the Department of Licensing (DOL) issued drivers licenses in the facility. A walled-in space remains in the shelter from the DOL and subsequent WSDOT use.) The City and County agreed to develop emergency occupancy plans and conduct tours of the facility, and to provide food, bedding, and unspecified "Recreational Supplies" sufficient to support 200 people for two weeks (Highway Fill Shelter Project Agreement 1960).

The agreement specified the location of the shelter, and its approximate size of 3,000 square feet (living space for shelterees was less). Per a subsequent "Utilization Plan," "assignment of specific segments of the population to this shelter is not possible and occupation of available shelter spaces will necessarily be transient. . . . Since no specific segment of the population has been assigned to this facility, entry will not be denied to anyone until such time as the maximum

occupancy has been reached.” Shelterees would be permitted to bring in only items that “would increase shelter habitability,” as well as medicines and “special health foods.” “General purpose items will be turned into general supply for possible later re-issue for the good of all. Animals and pets will not be permitted into the shelter for obvious health reasons.” “When the maximum occupancy of the shelter has been reached, . . . the manager will cause the doors to be closed and locked. Any persons remaining outside the shelter will be directed to proceed to the next nearest public shelter.” No other public shelter is known to have existed in the vicinity, however (Public Fallout Shelter Utilization Plan for the State Highway Fill Shelter Prototype 1963).

Design

Andersen Bjornstad Kane, Seattle consulting engineers, designed the shelter in early 1961 (Anonymous 1961; General Services Administration n.d. a). Built to the firm’s specifications, the shelter is virtually invisible to all but the most observant visitors. A sidewalk runs from Weedin Place to a nearly unnoticeable concrete wall in the fill slope of I-5. The shelter’s main entrance is a sliding, heavy metal grate accessing an underground “L”-shaped concrete hallway leading to the facility’s inner sanctum. Along the hallway is a utility/maintenance room, containing a diesel-powered electricity generator; an air circulation system that includes electric heating and air conditioning units; a well, pump and pressure tank; and piping connecting the facility to the city water and sewer systems. (Although the design called for a 2,375 gallon emergency water supply tank, that was apparently never installed.) The shelter is equipped with decontamination showers and toilets (two for women, one for men plus a urinal), situated conveniently off the entrance hallway (Fig. 3). On the far end of the cramped rest rooms, a four-foot diameter, precast concrete culvert exits from a small hallway to its aluminum gate-covered portal off the sidewalk a few feet from the main entrance. Labeled “escape tunnel” on design plans, the burrow-like feature was standard in underground prototype shelters, meant to provide secondary egress in case the overhead structure (in this case, the I-5 freeway) collapsed.

Designed to accommodate 200 people for two weeks, the shelter’s net (communal living) area provided roughly 9.13 sq. ft. of living space for each shelteree. (That’s a little smaller than today’s personal yoga mat.) At the center of the shelter’s circular main interior, which measures approximately 60 ft. in diameter, a 2-ft. 6-in. thick concrete pier supports the 18-in.-thick concrete roof, nearly 5 ft. of roadway fill, and the I-5 south-bound lanes. (Stabilizing the pier and supporting that considerable weight is a concrete footing roughly 12 ft. wide and nearly 3 ft. thick lying beneath the shelter’s concrete floor) (Fig. 4). A monotonous hum from the overhead traffic permeates the cavernous main activity area where shelterees were to sleep in triple-deck bunks, singles segregated by gender with families in between. Meetings, training and religious observances were also to occur in the central room, adhering to strict scheduling per shelter management plans. Behind a drywall originally to be painted “Flat White” to match the concrete walls of the main activity area (now an “institutional green”), an emergency medical center was equipped to provide no more than basic first aid. An office contains a black rotary telephone appearing ready for emergency calls. A second walled-off space across the main room is a later addition, dating to use of the facility for vehicle licensing and records storage. At the outer edge of the central area, a roll-away shutter covers a wide window above a long counter where canned and packaged food was to be distributed from the adjacent storage room. With no kitchen nor stove nor refrigerator, food preparation and preservation of perishables would have been

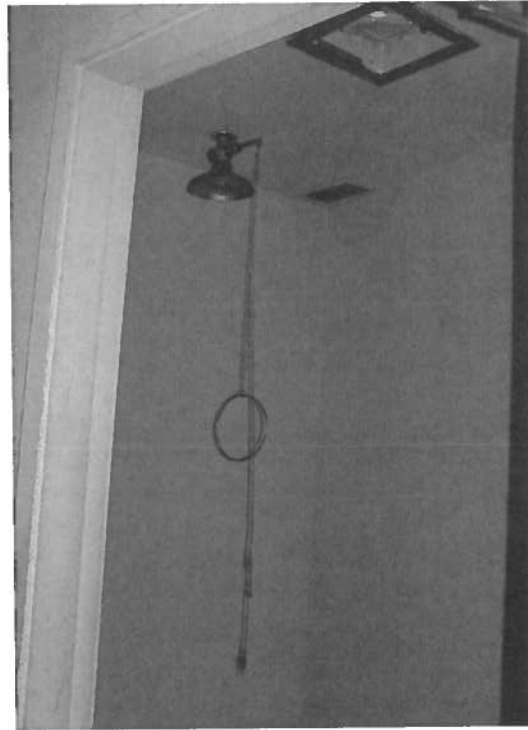


Fig. 3. Decontamination shower in the fallout shelter. (Photo by Craig Holstine, WSDOT, 2010).

impossible. Canned food could be warmed using body heat, suggested an operation manual. Similar Spartan living conditions were anticipated for shelterees' bathing opportunities, as reflected in the small (40-gallon) hot water heater mounted in the men's restroom ceiling. In fact, both "decontamination" and "emergency" labels are applied to the showers on the drawings, implying limited availability for shelter inhabitants. Not surprisingly, the facility's operating manual notes that "survival rather than comfort will be the primary objective" (Seattle-King County Civil Defense Organization 1963; Krier 2010) (Fig. 5).

Construction and Dedication

McDonald Construction of Seattle built what was then called the Seattle Freeway Prototype Community Shelter at a cost of \$67,300. As with most Cold War facilities (such as NIKE missile silos, weapons research and manufacturing plants, communications centers, and the like), the shelter was installed with an urgency reflecting the mood of the nation's defense posture. The General Services Administration's construction contract specified that the shelter be completed within 120 calendar days from the notice to proceed (General Services Administration n.d. b). When dedicated, its capacity had grown: so it was reported to have been built and supplied for use by 300 people, rather than the 200 occupants anticipated by its designers.

Governor Rosellini was scheduled to have given the dedication address on 29 March 1963, but failed to join the Seattle mayor, chairman of the Board of County Commissioners, the State Patrol chief, and OCDM officials. Dignitaries approaching the shelter entrance were met by members of the Seattle Women Act for Peace organization, who offered handouts "attacking the shelter" (Dedication Program 1963; *Seattle Post-Intelligencer* 1963; *Seattle Times* 1963) (Fig. 6).

Although it is not known specifically what the handouts said, by then the country was engaged in a spirited debate about the effectiveness of shelters and the wisdom of President John F. Kennedy's "shelter program" launched in 1961. For the most part, the federal government had dumped shelter preparedness onto private citizens, with very few publicly financed shelters built

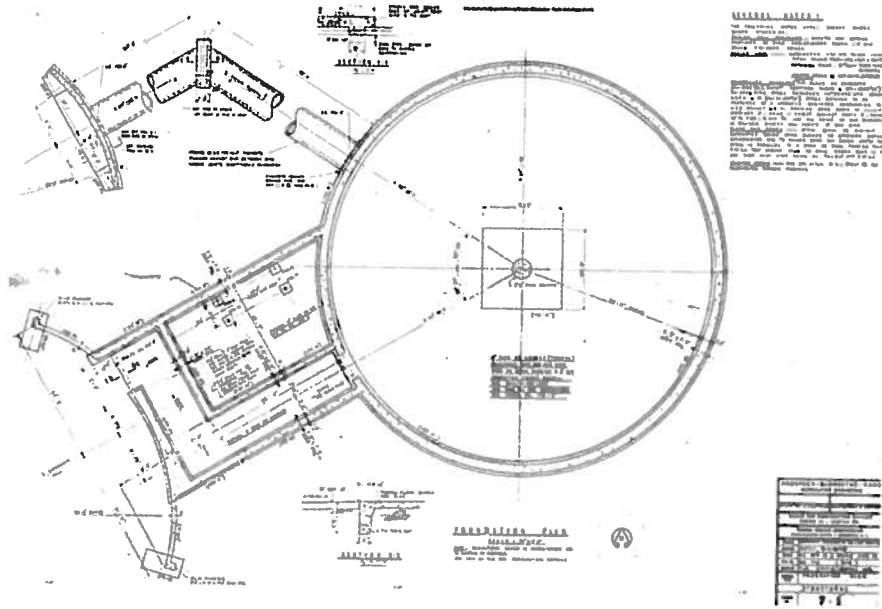


Fig. 4. Foundation plan drawing of the shelter as drawn by designers Andersen, Bjornstad and Kane, Seattle. Drawing 7.1, dated 17 October 1961. (Seattle Freeway Route Material, Record Group 30, Records of the Bureau of Public Roads, National Archives and Records Center, Seattle).

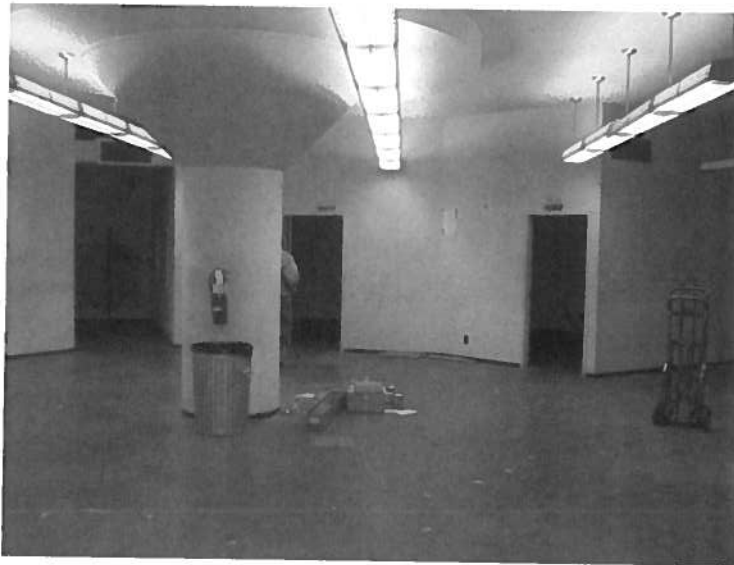


Fig. 5. Activity area surrounding the central pillar supporting 18-in. concrete roof, 5 ft. of highway fill, and the south-bound lanes of I-5. Behind the pillar (left to right) are the escape tunnel hallway, administrative office, and emergency medical room. (Photo by Craig Holstine, WSDOT, 2010).

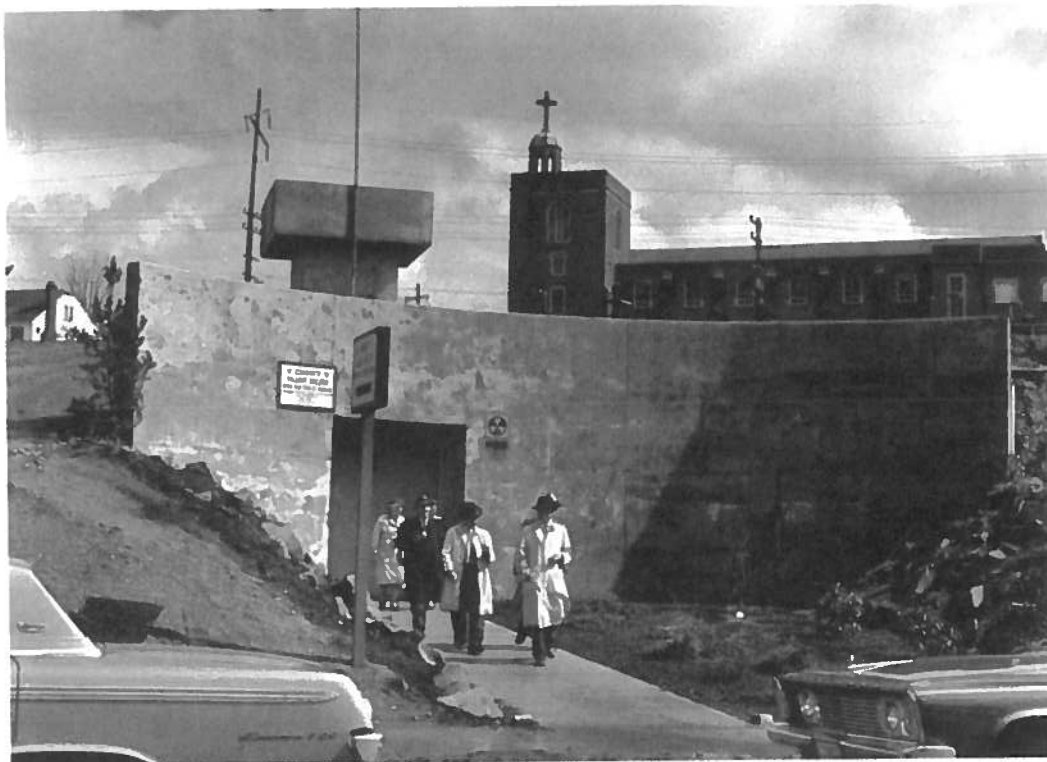


Fig. 6. The recently completed fallout shelter on Weedin Place was dedicated 29 March 1963. (Photo #3, Accession Group 86.5, Accession Item 2092, Museum of History and Industry, Seattle).

across the country. Shelters pitted the rich and well-to-do against the less fortunate, home owners against renters and apartment dwellers. Cost estimates for a bare-bones family shelter were in the neighborhood of \$2,500, when median family income was only \$5,315 in 1961 (Rose 2001:190).

Discussion

The Cuban Missile Crisis of October 1962 revealed the inadequacy of national shelter preparedness: the U.S. had few shelters, and those were largely unstocked; emergency supplies were languishing in warehouses. In 1961 only ca. 60,000 shelters were habitable; by 1965, as many as 200,000, or one shelter for every 900 people, or one for every 266 households, had been built, leaving the vast majority of Americans unsheltered (Rose 2001:202). By 1967, few shelters were under construction, and most shelter “spaces” were in urban downtowns in existing buildings not meeting shelter specifications. In 1969, the civil defense budget hit a record low, allowing very little for the shelter program (Rose 2001:206).

It seems counterintuitive, but the decline in shelter construction anticipated, rather than resulted from, the calming of Cold War hysteria. Businesses specializing in fallout shelter construction were already “faltering badly” in early 1962 (Rose 2001:191). According to a poll taken in 1959, nuclear war had been considered (by 64% of respondents) the nation’s most urgent problem. By 1964, the figure had dropped to 16%. After that, the subject disappeared from the survey (Boyer 1985:355–356). Widespread fear of nuclear war ended abruptly after the Cuban Missile Crisis, as the “unthinkable” became less likely. The U.S., Britain and the USSR banned

atmospheric nuclear tests, thus removing threatening images from view, giving the appearance that something was being done about avoiding nuclear war. Underground testing continued, however, propelling the nuclear arms race. In the period 1963–1980, U.S. nuclear warheads and bombs never numbered below 24,000, contributing to the seductive logic of deterrence theory: U.S. arsenals were seen as invulnerable assurance that the U.S. would not be attacked. In March 1964, our own Senator Henry M. Jackson, chairman of the Senate Armed Services Committee, shelved the Shelter Incentive Bill, effectively shifting funding to missile defense (Rose 2001:204). Contributing to diminishing shelter importance were nuclear missiles on Soviet submarines cruising relatively short distances off U.S. coastlines, rendering shelters virtually useless when attack preparation time would be mere minutes. As the likelihood of scampering underground became more remote, Americans' attention was diverted elsewhere.

Contributing to that happy development was the release in January 1964 of the movie *Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb* (Boyer 1985:357–358). One of the film's many memorable scenes has a bombastic Air Force general lustily anticipating his role in re-populating the country after the approaching doomsday device detonation. Civil defense would never be quite the same, given satirical images of fallout shelters as virtual underground rabbit breeding hutches. One scholar credits the movie with popularizing skepticism of political and military leaders, and even beginning the anti-Vietnam War movement in the U.S. (Henrickson 1997). Construction of publicly funded fallout shelters waned as the climate for spending public money on civil defense passed, eclipsed by seemingly unending expenditures on the quagmire in Southeast Asia.

When theoretical physicist Edward Teller proposed building shelters as a way to survive and win a nuclear war, an array of distinguished scientists wrote a rebuttal in the *Saturday Evening Post*, saying “We regard Dr. Teller's plan for survival as not only an illusion but also a tragic dissipation of all hope for the future. We believe that most Americans will see that this plan is as preposterous as it is dangerous. Just as we reject the choice of being either “Red or dead,” so we also reject the call for escape to an insane world” (*Saturday Evening Post* 1962).

In the late 1960s, long after the zenith of fallout shelter construction, the American Institute of Architecture (AIA) agreed to bestow shelter design awards on behalf of the OCD (Monteyne 2011). Although the AIA is no longer giving out such awards, the National Register of Historic Places recognizes properties over 50 years old that are worthy of preservation. Should the Weedin Place fallout shelter be one of those properties? Are we to enshrine it as a monument to civil defense and preparedness, or as a reminder of the ultimate “escape to an insane world”?

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