

**Phase II
Carlton Street Footbridge
Public Safety Study**

Final Report

conducted and prepared by

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Executive Summary

Part 1. Introduction

The purpose of this study is to identify public safety issues concerning the Carlton Street Footbridge. The primary questions set forth herein are as follows: (1) what impact would keeping the bridge closed (or removal) have on public safety issues?; and (2) what impact would re-opening the bridge have on public safety issues? To this end, a two stage process approach was applied. The first stage entailed a comprehensive data collection strategy. This included: conducting a review of the literature with respect to public thoroughfares; determining police resources and personnel allocations to the area on a regular and irregular basis; conducting a background investigation identifying the scope and nature of prior and existing public safety issues; uncovering police patrol practices and strategies; obtaining reported crime statistics and police call for service records; conducting a survey of park users, neighborhood residents, and police officers assigned to the area; and carrying out a series of physical observations, as well as systematic social observations of the area. In short, a multitude of data collection strategies were employed in an attempt to fully capture potential public safety issues surrounding the Carlton Street Footbridge. Stage two involved analyzing the available data and preparing the present report detailing findings and highlighting potential strengths and weaknesses, from a public safety perspective, of keeping the bridge closed or re-opening the structure.

Part 2. Background

The initial phase of the study involved determining and clarifying both geographic and jurisdictional issues concerning those areas surrounding the footbridge. Geographically, three primary target catchment areas were delineated: (1) the Brookline neighborhood adjacent to the bridge, (2) Riverway Park (from the Longwood bridge to Park Drive), and (3) the Boston neighborhood adjacent to the park (see Appendix A map). Jurisdictionally, four agencies are responsible for public safety in these three catchment areas: the Brookline Police Department, Boston Police Department, State Police, and MBTA. In addition to geographic and jurisdictional issues, current and past patrol strategies within these areas were examined. It was discovered that the areas are patrolled almost exclusively by vehicle patrols, although bike patrols are also used sporadically.

Part 3. Methodology and Data

Data collection efforts centered around four general areas of inquiry: a literature review, surveys, observations, and crime statistics. First, a review of the literature was completed which included scanning various books, academic publications (e.g., journals), and newspaper articles from around the country. The intent was to identify: (a) research evaluation findings from previous studies on public thoroughfares; and (b) whether other jurisdictions have faced similar concerns with respect to the use of pedestrian footbridges. Second, three forms of surveys were undertaken: park, resident, and officer. Each was designed to offer a slightly different picture of public safety issues concerning the Carlton Street Footbridge. Third, two different types of systematic observations were conducted: social and physical. Social observations were designed to identify the number of park users as well as the activities these users were engaged in. Physical observations gauged the degree to which physical incivilities were present. Finally, two forms of crime data were collected: official reported crime and officer calls for service. The former offers insight on the amount and types of crimes citizens have reported, while the latter provides information on the types of problems officers respond too, which may not necessarily lead to an official crime report.

Part 4. Analyses and Findings

Literature Review

A number of previous studies have examined the role of access control (e.g., walkways, barriers, footbridges). Two studies in particular are relevant in terms of the present inquiry. The first study looked at the role of elevated walkways linking various public housing buildings to that of robberies and purse-snatching (Poyner, 1997). In this case, removing the walkways combined with the installation of entry phones decreased access, which subsequently led to few crimes in the public housing complex. The author of the study, however, contributes much of the reduction to the entry phones, as opposed to the removal of walkways. The second study involved the use of a road barrier to limit traffic flow in an area plagued by street-prostitution (Matthews, 1990). By implementing a road barrier, officials were able to alter traffic flow that made it more difficult for potential customers to "cruise" for prostitutes. Findings showed that prostitution declined in the area and did not displace to surrounding areas.

In addition, it was also discovered that the city of Portland, Oregon, recently contemplated re-opening a pedestrian footbridge. In 1991 the city closed a pedestrian footbridge (the Failing Street bridge) spanning Interstate 5. The bridge linked the neighborhoods of Overlook and Boise. Public officials closed the bridge as a result of rising crime rates, particularly in the Overlook neighborhood. However, a major highway project to repave Interstate 5 forced officials to re-examine the footbridge. This sparked debate within each of the neighborhoods, and city and state officials had to decide whether to remove the bridge or alter and reopen it. Headed by the Oregon Department of Transportation (ODOT), a community outreach process was undertaken. Relying on focus groups, interviews, open houses, and crime statistics for the area, ODOT made the decision to alter and re-open the bridge (scheduled to

open later this year). According to the official who headed the outreach process (Holmgren, 2001), the fact that a majority of the community was in favor of re-opening the bridge, combined with the fact that crime decreased on both sides of the bridge since it was closed, prompted ODOT to re-open the structure along with a few changes: increased lighting, trimmed down landscaping, altering the entrance/exit ramps to improve visibility, and installing soundwalls.

Surveys

Survey results show that crime in the Brookline neighborhood is not a major problem. When asked to identify the biggest problems in the area, residents noted such items as litter, traffic/parking, graffiti, homeless persons, and unleashed dogs. Police officer surveys confirm that the biggest problems are traffic/parking and graffiti. The only serious crime problem identified were assaults with eight percent of the residents and three of the officers saying this is one of the top problems. Survey data also suggest that the Riverway park catchment area is relatively crime free. The biggest problems identified by park users were litter, homeless persons, and unleashed dogs. Officer survey data confirms this perception. Officers listed unleashed dogs, homeless persons, litter, assaults, loud music, and drinking in public as the biggest problems in the park. With the exception of assaults, none of the identified problems pose a significant public safety risk at the present time.

Systematic Observations

Physical and social observations show that the Brookline neighborhood is extremely well ordered - to such an extent that disorder problems raised by residents concerning items like graffiti, litter, homeless persons, and unleashed dogs were not found. For instance, in terms of litter and graffiti, physical observations revealed that less than 10 percent of the area contained such signs of physical disorder, while no homeless persons or unleashed dogs were observed during the six social observation sessions. Further, systematic observations revealed that the Riverway park area also poses little threat in terms of physical or social disorder.

Crime Data

Crime data analyses indicate that crime in the Brookline catchment neighborhood is relatively low. Over the five year period ranging from 1996 to 2000 there have been a total of 229 Part I and II reported crimes. This computes to just under 46 crimes per year, or about four per month. In comparison, the Boston neighborhood catchment area (e.g., Wheelock/Hospital area) averaged 117 per year, or about 10 per month. While crime in the Boston neighborhood is somewhat higher, it is still relatively low in comparison to other Boston neighborhoods.

Part 5. Closed versus Opened Footbridge

The reader is referred to the concluding section for the best synopsis concerning a closed versus opened footbridge (page 70).

PART 5

Closed versus Opened Footbridge

As stated at the outset, the primary questions set forth herein center on: (1) what impact would keeping the bridge closed (or removal) have on public safety issues?; and (2) what impact would re-opening the bridge have on public safety issues? In the quest to address these questions a variety of data sources have been collected and analyzed. In this section, discussion centers on trying to predict the answers to these questions based on the available information.

Results indicate that crime in the Brookline catchment neighborhood is relatively low.⁸ Over the five year period ranging from 1996 to 2000 there have been a total of 229 Part I and II reported crimes. This computes to just under 46 crimes per year, or about four per month. In comparison, the Wheelock/Hospital catchment area averaged 117 per year, about 10 per month; and the Fenway catchment area encountered 359 per year, or approximately 30 per month.⁹ Further evidence shows violent crime to be a relatively small problem in the Brookline neighborhood. Property crime, while somewhat higher, is also low. Larcenies (e.g., petty theft, theft vehicles) occur at the most frequent rate compared to burglaries and auto thefts.

Survey results also show that crime in the Brookline neighborhood is not a major problem. When asked to identify the biggest problems in the area, residents noted such items as litter, traffic/parking, graffiti, homeless persons, and unleashed dogs. Police officer surveys confirm that the biggest problems are traffic/parking and graffiti. The only serious crime problem identified were assaults with eight percent of the residents and three of the officers saying this is one of the top problems.

In addition, physical⁸ and social observations show that the Brookline neighborhood is extremely well ordered - to such an extent that disorder problems raised by residents concerning items like graffiti, litter, homeless persons, and unleashed dogs were not found. For instance, in terms of litter and graffiti, physical observations revealed that less than 10 percent of the area contained such signs of physical disorder, while no homeless persons or unleashed dogs were observed during the six social observation sessions.

Despite evidence that the Brookline area encounters low levels of crime and is well

⁸ The catchment area is bounded by Longwood Avenue and Kent Street to the west, Beacon Street to the north, Park Drive to the east, and the Green D-line to the south

⁹ The Wheelock/Hospital catchment area is bounded by Francis Street to the west, the Riverway roadway to the north, Park Drive to the east, and Brookline Avenue to the south; the Fenway catchment area is bounded by Park Drive to the west, the Green-D line to the north, Jersey Street to the east, and Peterborough Street to the south.

ordered and maintained, concern over public safety with respect to the potential re-opening of the Carlton Street Footbridge centers more on the park and Wheelock/Hospital area. Theoretically, the issue revolves around the probability of crime and disorder coming from the other side of the bridge (e.g., the park and Boston neighborhood) and into the Brookline neighborhood. Findings do show that crime is more prevalent in the Wheelock/Hospital area as noted by the above referenced crime statistics. However, both the type and level of crime in this area must be put into perspective. On a relative scale, crime in this area is still fairly low. For instance, there have been zero homicides and three rapes (or attempted) dating back five years. Of the two remaining Part I violent crimes, a robbery occurred in this area at a rate of once every month a half and an aggravated assault about once every six months. Of the Part II crimes, larcenies (e.g., petty theft, theft vehicles) occurred quite regularly, but both burglaries and auto theft were relatively rare. For example, in the entire Wheelock/Hospital area, a burglary occurred at a rate of one every three months on average and assaults at a rate of one every two months. Comparatively, the Fenway has experienced larcenies at a rate twice as high and has an auto theft rate seven times as high. In short, the Wheelock/Hospital area experiences a relatively low crime rate for an urban neighborhood.

Survey data also suggest that the Riverway park catchment area is relatively crime free.¹⁰ The biggest problems identified by park users were litter, homeless persons, and unleashed dogs. Officer survey data confirms this perception. Officers listed unleashed dogs, homeless persons, litter, assaults, loud music, and drinking in public as the biggest problems in the park. With the exception of assaults, none of the identified problems pose a significant public safety risk at the present time. In addition, systematic observations revealed that the park area poses little threat in terms of physical or social disorder.

There does appear to be disjuncture between how park users view the park and how residents view it. Residents consistently rate the park as being more unsafe than park users. For instance, 24 percent of the park users note public safety threats within the park compared to 47 percent of residents; 10 percent of park users believe there are dangerous places in the park, compared to 29 percent of residents. In addition, while 96 percent of the park users feel the park is safe during the day, 79 percent of residents believe this (although park users do view the park as being less safe during the night compared to residents - 55% versus 74% respectively). Moreover, with respect to the impact of re-opening the footbridge, four percent of the park users think it will increase crime in the park, while 22 percent of residents believe it will increase crime in the park and neighborhood.

Interestingly, the group who views the park as more safe (park users) also uses the park much more frequently. While 90 percent of the park users surveyed said they use the park at least a few times a month, only 48 percent of the residents who use the park at all use it as frequently. In addition, none of the individuals surveyed (park users or residents) reported being a victim of a crime in the park during the past six months. The issue appears to be one of "reality" versus "perception." There is clearly a greater perception on the part of residents that the park is somewhat unsafe. However, there is little evidence to support this at least with

¹⁰ Area is bounded by Longwood Avenue to the west, the Green D-line to the north, Park Drive to the east, and the Riverway roadway to the south.

respect to the experiences of those who use the park. In addition, physical and social observations show the area is well maintained. For the most part, those frequenting the park are recreational/commuter users as opposed to potential deviants (e.g., groups of youths hanging out drinking in public).

In attempting to answer the question of whether re-opening the footbridge would lead to an increase in crime in the neighborhood, one has to ask from where would crime come from? The logical answer would be from the other side of the bridge (e.g., the park and surrounding Boston neighborhood). However, results show fairly conclusively that there is not a great deal of existing crime in the general vicinity, unlike the scenarios that played out in Portland, Oregon and the case studies noted in the literature review. In those cases there was a significant amount of existing crime already present on the other side of the thoroughfare. In addition, as in the Portland scenario, the footbridge was the only access point in the general vicinity, which is not the case in the Brookline catchment area (the Longwood T-stop crossing and Park Drive bridge are both approximately 1000 feet from the Carlton Street Footbridge). Hence, the combination of existing crime and singular access (via only one thoroughfare) resulted in increased crime in Portland. In short, for crime to spread into the Brookline neighborhood there needs to be a fair amount of existing crime presently in the area south of the Muddy River, as well as restricted access, which is not the case in either instance.

Nonetheless, adopting a more conservative approach one may assume that since the park and Wheelock/Hospital areas are not completely crime free there is a chance that crime in this area will displace and be drawn to the Brookline area by re-opening the bridge. This cannot be discounted. Further, when more geographically distant areas are considered (e.g., the Fenway), crime increases in frequency. Hence, crime may displace from these areas and gravitate toward the Brookline neighborhood. However, the probability of this occurring appears remote given existing levels of crime, the literature on crime displacement, and two existing entry points within several hundred yards of the footbridge (e.g., Longwood T-stop and Park Drive bridge).

Known in the criminological literature as the "distance-decay function," evidence on crime displacement shows that the number of crimes an offender commits decreases with increasing distance (Rengert et al., 1999). In short, the probability of offenders moving from one location to another decreases as space increases. Hence, the odds of offenders coming from as far away as the Fenway (or further) is fairly remote. In addition, both the Longwood T-stop and Park Drive bridge are both within close proximity of the footbridge, which already offer unrestricted access into the neighborhood.

Perhaps the greatest degree of concern involves increasing the number of people using the bridge. A substantial number of park users and residents surveyed stated they would use the bridge if it were re-opened. This presents a difficult proposition. In one respect, this increases the number of potential victims in the area of the footbridge. Conversely, increasing the number of legitimate users offers more capable guardians (e.g., more "eyes and ears" in the area), thereby providing a deterrent to potential offenders. In this respect, an opened footbridge may actually serve to help reduce crime in the area. To date, this is an unresolved empirical question.

Clearly, a closed footbridge offers the ultimate form of "access control." There is little to no risk of increasing crime rates in the Brookline area should the bridge remain closed. Unless there is a broad and widespread crime trend shift (e.g., a return to high crime rates) throughout

the Boston/Brookline metropolitan region there is no reason to believe crime will increase in the area. Of course, if there is such a shift the probability of increasing crime rates in Brookline is enhanced regardless of whether the bridge is open or closed. Ultimately, the key question shifts to the "degree of risk" one is willing to assume. When put this way, keeping the bridge closed offers the greatest assurance that crime will not increase in the area. Alternatively, an opened footbridge does raise the risk of an increase in crime and disorder. However, this risk would seem extremely small. Further, it is certainly possible that an opened bridge would actually serve to decrease crime in the area given an increase in the number of capable guardians utilizing the structure.

Should the bridge be re-opened officials will certainly want to consider several crime prevention strategies. The first involves the issue of lighting, something mentioned by numerous survey participants. While empirical studies on lighting have shown mixed results in terms of crime fighting effectiveness (Atkins, Husain, Storey, 1991; Painter, 1994; Painter and Farrington, 1997), it is commonly accepted that, at a minimum, it does impact fear of crime. Interestingly, while the park is "officially" closed during the hours of darkness, the Green line train does not stop operating until late night. Thus, with the Longwood T-stop in the area citizens do use the park, although to a lesser extent than during the day. Consistent with the Emerald Necklace master plan that calls for continuous lighting to include the area covering the existing stone footbridge in Riverway park (across from the Longwood T-stop), officials should consider extending lights to also include not only the Carlton Street Footbridge, but also the walkway area that connects Park Drive to the stone footbridge and Longwood T-stop.

Second, police officials may wish to introduce more foot and bike patrols in the area. Currently, with the exception of a few rare bike patrols, the area receives primarily vehicle patrols. As with lighting, while empirical studies have come up short on linking crime reductions to foot patrols, studies have shown that foot patrol reduces fear of crime (Police Foundation, 1981). Research on bike patrol effectiveness is lacking. Nonetheless, altering police patrol practices to increase the frequency of foot/bike patrols is advised.

Third, officials may want to consider installing additional emergency call boxes in the area. There is currently one emergency phone on the park side of the bridge, but another one on the neighborhood side would seem prudent, as well as on any additional light fixtures (should they be installed) along the walkway within the park. Fourth, the use of close circuit television should be considered. Several studies have attributed crime reductions to this strategy (Montalbano, 1996; Nieto, 1997), although this may prove to be cost prohibitive in terms of the present case. Town and police officials should meet and determine the practicality of incorporating such a strategy.

Fifth, while the vegetation in the area is currently well maintained, officials will want to ensure this continues as dense vegetation offers potential hiding spaces for offenders should the bridge be opened. Sixth, fencing in the area should be maintained. Proper fencing helps to prevent access to the Green-line track area, as well as the Brookline neighborhood. Seventh, given the all around perception that the area is less safe during the night compared to the day, officials may want to restrict access to the bridge at night by introducing a gate that can be locked. The police officer assigned to the neighborhood beat may potentially be charged with closing and re-opening the gate.

Finally, if the bridge is to remain closed officials should still consider two changes to the area surrounding the bridge. First, lighting should be enhanced in the area. Although the bridge is closed at night and no one should theoretically be in the park during the hours of darkness, this is an unrealistic expectation (as demonstrated via the social observations). From a practical standpoint, individuals do use the park, especially in the vicinity of the Longwood T-stop. Some degree of lighting will, at a minimum, offer potential users the ability to see where they are going. Currently, potential offenders can easily, if so inclined, use the cover of darkness to prey upon potential victims with little chance of detection. Further, such a strategy will, in probability, at least alter the fear of crime. Second, patrol practices should be altered to include additional foot/bike patrols. Again, while there is no definitive empirical link between such tactics and crime prevention, there is a link in relation to fear of crime. Beyond such strategies, however, it would appear little else needs to be altered. As stated previously, most of the information gathered as part of this study indicates that the area is well maintained and relatively free of crime and disorder.