Pedestrian Safety – Fundamental to a Walkable City

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**Abstract.** This paper considers the safety of pedestrians as paramount in the establishment of a walkable city. To further that objective, we characterize the nature of pedestrian-vehicle accidents. The study combines data sets of NAME THE DATA SETS infrastructure definitions, safety accident reports, and citizen-pedestrian reported observations of local conditions to establish the interaction among environment, human observations, and safety incidents to identify the relevant characteristics that are associated to safety related incidents within the environment of a contemporary mid-size city in the midwestern United States. The results of this evaluation provide opportunity for planning for enhanced safety for pedestrians.

1 Introduction

*An early-morning walk is a blessing for the whole day* – Henry David Thoreau [4] So, begins the choice every day for urban dwellers – to walk or not to walk – to have a blessing as proposed by Thoreau, or to assess the daily commute - as summarized by Jeff Kober [5]: *My intention is to get done with this commute… my intention will not be met until I get out of this car* – as just a rather unpleasant means to get from point A to point B.

As the modern urban landscape has evolved in the US over the last fifty years, pedestrianism was not often on the list of high priorities for inclusion into the development of urban environments. As a result of this trend, there have been real, and negative, consequences: economically, epidemiologically, and environmentally on the inhabitants of many cities in western developed countries CITATION NEEDED. Economically, we can observe that the percentage of income spent on transportation for working families has doubled, from one-tenth to one-fifth of household earnings from the 1970s to current era [6] IS THIS A DIRECT CONSEQUENCE OF WALKABILITY OR OF OTHER FACTORS?. So much so, that working families are currently spending more of their budget on transportation than housing. If we consider the health effects of urban living patterns, we observe that people living in less walkable neighborhoods are nearly twice as likely to be obese than people that live in walkable neighborhoods [6]. This statistic, STATEMENTS DON’T HAVE ANY IMPACT. ONLY FACTS indicate a potential growing health problem due in part by a lack of physical activity. KEEP YOUR OPINIONS TO YOURSELF When constructed on a per-household basis, carbon mapping clearly demonstrates that suburban dwellers generate nearly twice as much carbon-dioxide as urban dwellers due to longer commutes and larger houses [3].

As There is a growing movement in the US and other western nations to promote the concept of walkable cities as healthier places to live - economically, environmentally and physiologically - than the suburban, exurban, drive-till-you-qualify model of modern western development CITE NEEDED.

A significant contributing element to a walkable city is pedestrian safety CITE NEEDED. As identified in the Toronto Pedestrian Charter [7] the six principles for building a vital urban pedestrian environment include: accessibility, equity, health and well-being, environmental sustainability, personal and community safety, and community cohesion and vitality. According to the city of Toronto, this is the first such pedestrian bill of rights in the world and serves to remind us that walking is valued for its social, environmental, and economic benefits. WRITE FORMALLY. “We are …targeting…” IS INFORMAL AND NOT APPROPRIATE. YOU ARE ALSO NOT “TARGETING”. YOU DO NOT HAVE “AIMS” OR “GOALS”. YOU ARE SOLVING A PROBLEM. STATE YOUR PROBLEM!

The US is experiencing an increase in the number of pedestrian fatalities, reaching a 25-year high in 2017, with nearly 6,000 fatalities [8]. Newspaper articles in the Midwest identify an unfortunate occurrence: “An uptick in pedestrians being hit by cars in the Cincinnati and Northern Kentucky area has officials sounding the alarm. Three crashes just this week resulted in the death of three pedestrians.”

As one avenue of response, the City of Cincinnati has requested citizen input to identify specific areas in the city which are pedestrian safety concerns. The city created a web-site, which launched in Feb-2018, that allows citizens to specifically identify a location on a map, within a distance of several feet of the area of concern and report the nature of the concern in a functional user interface. The city plans to use this community input to prioritize maintenance and improvement resources.

**2 A Primer on Pedestrian Safety Measures**

**3 Related work should be integrated into other sections and not be a standalone section. You likely need more than one section on pedestrian safety.**

**4 ???**

**5 Data**

**5 Results**

**6 Analysis**

**7 Ethics**

**6 Conclusions**

**7 Future Areas of Research**

**References**

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