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Creating Good Environment and Building for People with Special Needs: From Definition to Application of Guiding and Warning Blocks

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ABSTRACT

The purpose of writing this paper is to discuss the definition and application of guiding blocks. We analyzed and searched the literature to discuss the definition and application of guiding blocks. This paper can be used as a reference for practitioners in the application of tactile guiding blocks.

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1. INTRODUCTION

Tactile guiding block or tactile paving Tactile guiding block is a media that is embedded in the road that is used to help guide the blind to find a safe and correct path, to avoid dangerous or other unwanted situations. For people with disabilities to be able to walk safely and comfortably in public places, of course, they need special paths that support and help them with what they need. The tactile guiding block is in the form of ceramic tiles on top of which there is a patterned texture that is used to guide people with disabilities (Hakobyan *et al.*, 2013).

These tactile guiding blocks are generally installed on public facility lines, for example at stations, terminals, banks, offices, courts, libraries, and other places. There are also many areas outside the building that are required to install tactile guiding blocks. For outdoor areas, maybe we will often see this Tactile paving Tactile guiding block on sidewalks, parks, queuing areas, areas near stairs, and so on. Tactile guiding blocks are usually made using a yellow polymer material or silver metal which is then mounted on the road. In terms of durability and aesthetics to support the appearance of the city order, guiding blocks are recommended to use materials made of aluminum, especially if they can be rust-resistant. Because the tactile guiding block is very important in its function and meaning, a tactile guiding block is needed that can meet these requirements. In addition, the current tactile guiding block must be able to support the aesthetic value and must be able to support the beauty of the surrounding environment (Khoirunisa & Himawanto, 2018; Kahfi *et al.*, 2020).

In many countries, it is obligatory to install this tactical guiding block, in addition to helping guide persons with disabilities, the installation of this tactile guiding block is also useful for supporting and beautifying the city structure (Khoirunisa & Himawanto, 2018; Kahfi *et al.*, 2020). In Indonesia, the tactile guiding block in its implementation has been regulated in the Regulation of the Minister of Public Works No. 30 of 2006 concerning Technical Guidelines for Facilities and Accessibility in Buildings and the Environment (Utari & Kusuma, 2021).

Because of the importance of information about guiding blocks, the purpose of writing this paper is to discuss the definition and application of guiding blocks.

2. METHODS

We analyzed and searched the literature to discuss the definition and application of guiding blocks.

3. RESULTS AND DISCUSSION

The essence of the Tactile guiding block is to create a path that guides people with disabilities to walk by utilizing the texture of the guiding tiles and warning tiles. The pattern on the Tactile guiding block can be divided into two patterns, including the Tactile guiding block with a pattern of small circles and a pattern of straight lines.

- (i) Tactile guiding block tactile paving in the form of a pattern of straight lines known as Tactile guiding block Line / Go which means "CAN WALK", This pattern informs people with disabilities that they can still walk on that path, that way they will not lose the direction or crash and will remain on a safe course (see **Figure 1**).
- (ii) Tactile guiding block or tactile paving Tactile guiding block with a small circular pattern known as Tactile guiding block Spot which means "Warning", stating that there is a stop or turn. This pattern becomes a guide on the path of blind people to know at which point they have to stop walking (see **Figure 2**).

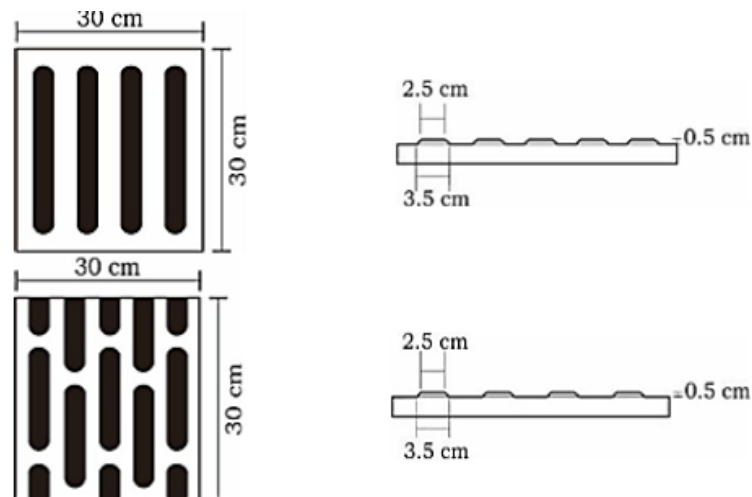


Figure 1. Tactile guiding block type of straight-line strip to notify the user "may walk".

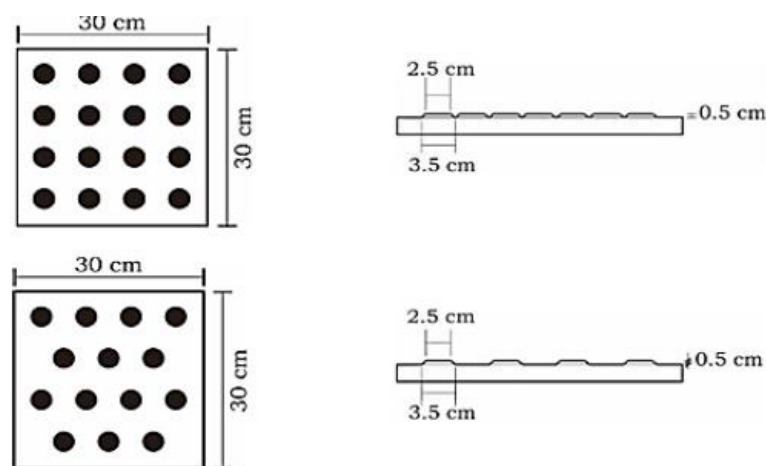


Figure 2. Tactile guiding block dot type to notify the user to "warning" there is a turn or stop.

The installation of this tactile guiding block is usually placed in neat rows along the length of the road. For paths that are installed with Tactile guiding blocks, these are often on the path to the stairs, the path that connects the building and the road, vehicle traffic lanes, and others.

The areas that must use guiding blocks are

- (i) In front of the traffic lane
- (ii) In front of entrances and exits from and to stairs or facilities
- (iii) crosses with different floor heights
- (iv) On a pedestrian street that connects the road and the building
- (v) On the direction guide from public facilities to the stop
- (vi) nearest public transport (by building).

The installation of textured tiles for guide paths on existing pedestrians needs to pay attention to the texture of the existing tiles so that there is no confusion in distinguishing the texture of the guiding tile and the texture of the warning tile. To provide a color difference between the guide tiles and other tiles, the guide tiles can be colored yellow or orange.

Tactile guiding blocks must be made of strong material, not slippery, and given a color that contrasts with the color of the existing tiles such as yellow, orange, or other colors so that

they are easily recognized by people with visual impairments who are only able to see partially (low vision) (Liman, 2020).

Tactile guiding blocks are installed at the edge of the pedestrian path to facilitate the movement of people with visual impairments, including people with visual impairments who are only able to see partially (low vision).

The combination of the dot and strip type tactile guiding block can be seen in **Figures 3, 4, and 5**. Examples of the application for the combination of strip and dot type tactile guiding block can be seen in **Figures 6 and 7**.



Figure 3. Combination of tactile guiding blocks of the strip and dot type for turning.

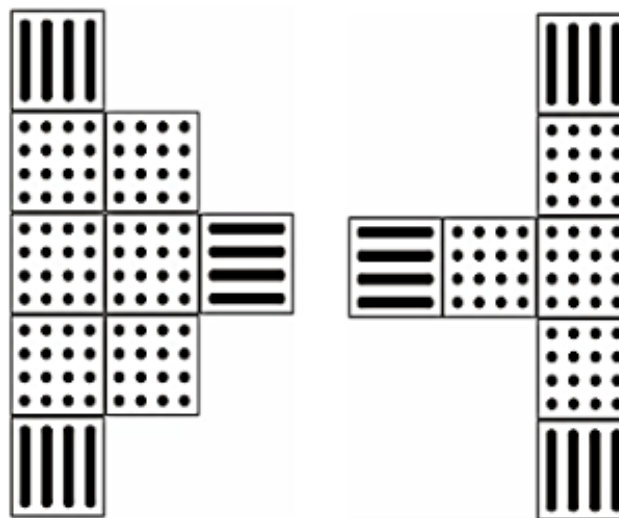


Figure 4. Combination of tactile guiding block type of strip and dot for T-junction.

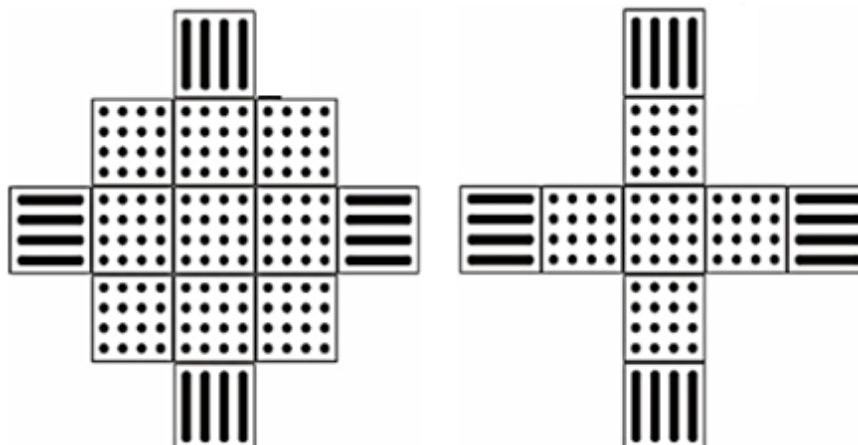


Figure 5. Combination of the strip and dot tactile guiding blocks for intersections.

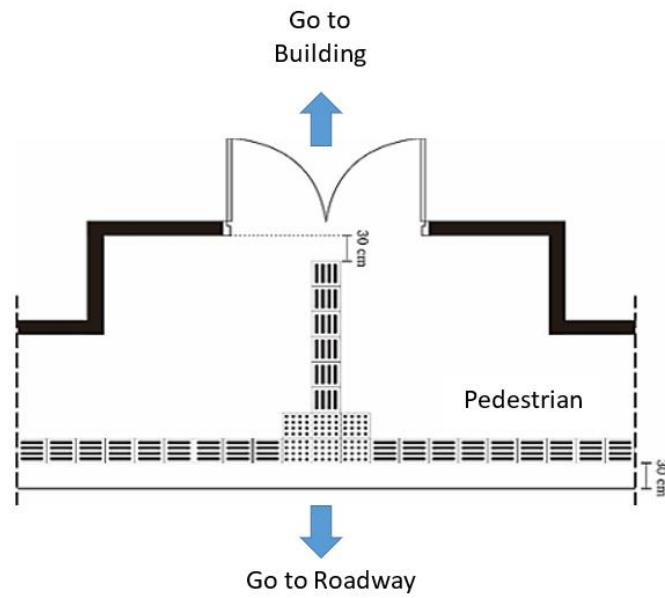


Figure 6. Application of a combination of tactile guiding blocks of strip and dot type.

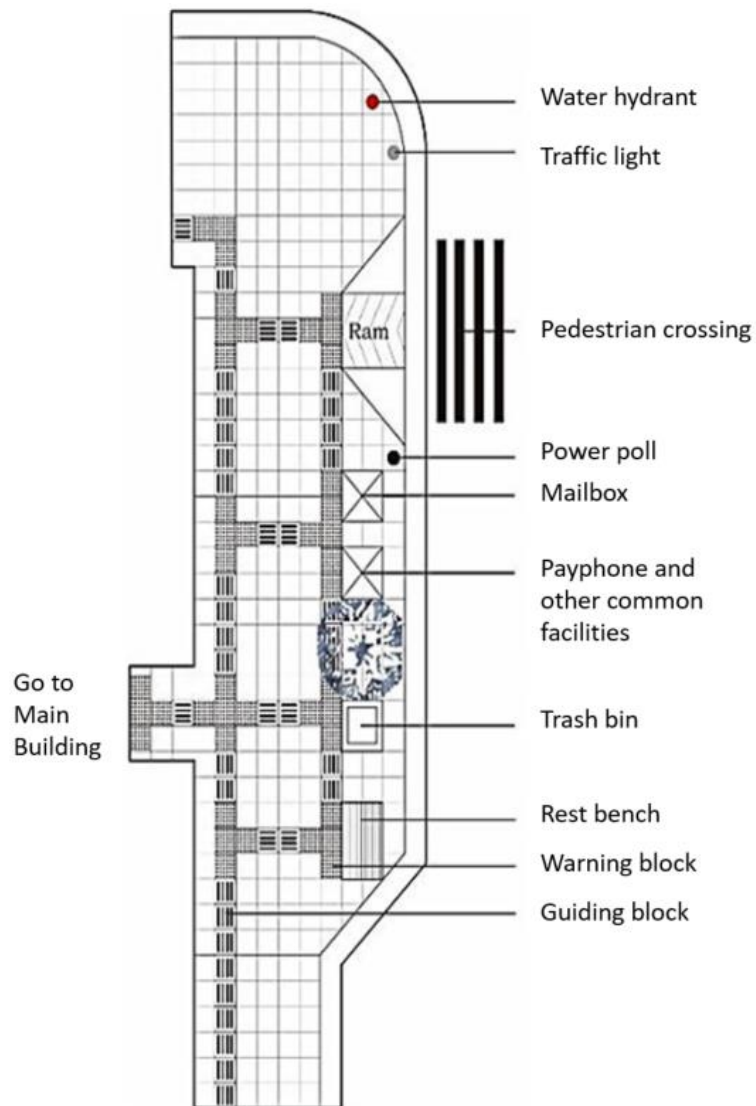


Figure 7. Application of a combination of tactile guiding blocks of strip and dot type.

4. CONCLUSION

Information about guiding blocks is very important. Therefore, this paper discusses the definition and application of guiding blocks. We analyzed and searched the literature to discuss the definition and application of guiding blocks. With the joint role of the community, it is hoped that the progress and procurement of these facilities will continue to be interconnected to create comfort to use the facilities that have been provided. With the maintenance of facilities such as the Tactile guiding block, this will certainly allow people to walk side by side and have the same opportunity to enjoy the existing facilities. In addition, the role of the government is always needed, not only limited to installing and building facilities for people with disabilities, it would be better if there was also socialization of the meaning and function of the facilities provided. So that people can understand and understand the essence of the facilities being built.

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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