

Abstract

The spiking numbers of the population that are being seen in the recent years have led to continuous overcrowding of public places, which made these places vulnerable to waste dumping on daily basis, many solutions are applied to control and manage the waste problems, and this project is one of them.

This project is a small-scale road cleaning machine that aims to reduce dust and waste in narrow roads, public parks, university campuses, and other tight places where cleaning vehicles can't reach. It sweeps and vacuums the road or pavement while it's being driven at low speeds.

In this research, the study was made to find out the advantages of this project which are: small size, high efficiency, and providing the greatest amount of public hygiene while the pollution is increasing on the planet. At the same time, a study of the ability to create it under the available capabilities and the current circumstances had been carried out.

This project was originally intended to be a complete restoration of a mid-size abandoned cleaning vehicle, that was abandoned for over 20 years, but after intense studying of this case, and after going on multiple site tours to the works department facilities of Nablus municipality, and after learning from the engineers in the field, it had been realized that this idea can be hard achieved under the current circumstances, mainly due to financial reasons, and all the complications that come with working on such large machines, therefore, the team for this project opted for another design of a system that could help achieve the desired results using available resources at the lowest price possible.