

Research Paper of Analysis of Storm Water Drainage System for Bridge Underpass

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ABSTRACT:

The underpass of at mominpura located at Nagpur, waterlogged every year during monsoon due to which the whole traffic systems gets blocked for hours. mominpura underpass has a major issue such as traffic, water logging in nearby areas, spreading diseases by water, blockage of storm drain & back flow of suction valve. Surrounding topography, Road gradient, rainfall data of previous year, sewer network analysis and improvement in pump capacity is required to solve this problem. Also drain system, tank system, pump system is the most important possible solution for fight against storm water. Defects in current situation of underpass will overcome by using Google earth, Auto Cad.

Keywords: Storm Water, Storm-Drain System, Underpass, Drain System.

Introduction

• Storm water

Storm water is water that originates during precipitation process & snow melt. Heavy Rains in a day of June to September As per its trends for several years has held less to extensive water logging on several road stretch across India. Storm water is a major cause of urban flooding which includes flash flooding snow melt, heavy rainfall & depends on catchment area. Some of the stretch and major cities where water Logging was seen in major cities Delhi, Mumbai, Pune, Nagpur Also in newly Constructed structures such as Railway Under pass, Road tunnels, Highway Underpass and due to that water logging traffic moved at slow. Public Works Department (PWD) officials said water logging complaints were being desalt with priority. As reported the media, there are challenges and opportunity to provide solution on underpass water logging problem based on civil

engineering concepts and case study.

• Underpass

A place where a road or railroad crosses under another road or railroad is termed as underpass

• Storm Water Drainage

Storm drain system is designed to drain excess rain and ground water from impervious surfaces such as paved streets, car parks, parking lots, footpaths, sidewalks, and roofs.

• Site Information

Mompura underpass lies at Latitude 23.0665694° N Longitude 72.5596109° E. The underpasses of Nagpur city are waterlogged every year during monsoon due to which the whole traffic system gets blocked for hours.

- Height of underpass from road is in between .
- In underpass main drainage line diameter is
- There are 5 no of pumps are used for pumping out of water stored in underpass.
- Pumping water is uplift on the bridge of the underpass.