

GOVERNMENT OF JAMAICA
NATIONAL WORKS AGENCY

**Major Infrastructure
Development Programme**

PROJECT PROFILE

for

Hagley Park Road

National Works Agency
Directorate of Planning and Research
140 Maxfield Avenue
Kingston 10
Jamaica, W.I.

February 2018

1.0 INTRODUCTION

Hagley Park Road is approximately 3.4km in length and is the main thoroughfare between Halfway Tree and Portia Simpson Miller Square. The roadway provides access between primarily Portmore, Spanish Town and Halfway Tree.

2.0 BACKGROUND

The roadway has not seen any significant maintenance or upgrade over the last 30 years despite the multiplication of traffic volume. The roadway currently carries traffic volumes in excess of 30,000 vpd on some sections. The section with the highest volumes is the four lane section 920m long from Portia Simpson Miller Square to Waltham Park Road. The remainder of the roadway carries approximately 24,000 vpd all the way to Halfway Tree.

Hagley Park Road serves a multiplicity of functions. It is firstly a major collector/distributor where it meets with several local and major streets and secondly it has an abundance of private and public businesses with direct access. Thirdly it is a major arterial linking commercial and residential centers. Studies by NWA have identified this corridor as one with the highest traffic interruption rates. This high interruption rate results in very low efficiencies and resulting long travel times and delays. The roadway in its present configuration is very susceptible to minor crashes/incidents which can easily double travel times or force closure of the roadway.

The roadway has two cross sections. The western end is an undivided four lane dual carriageway for a distance of 920 m with paved sidewalk on southern side only. The remainder is a gently winding 2 lane road with access points every 20m or so with sidewalks in some areas.

3.0 LOCATION

Hagley Park Road is at an elevation of 13 m at Portia Simpson Miller Square and rises to 80m at Half Way Tree. It follows a meandering west to east route passing through a heavy mixed residential and commercial area.

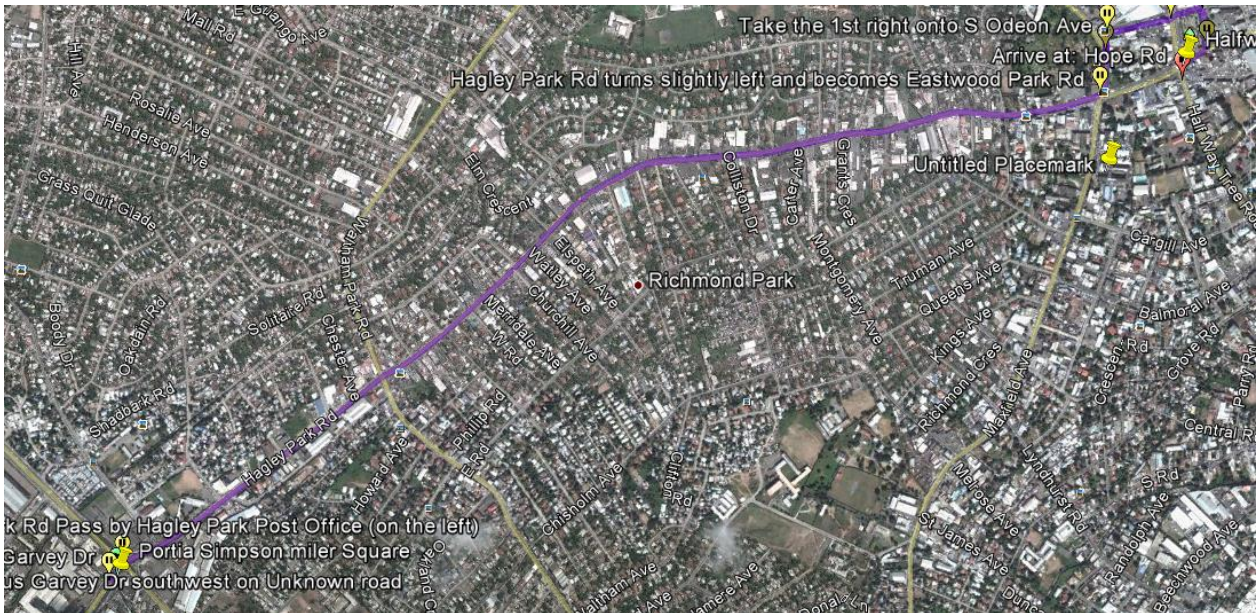


Figure 3:

4.0 EXISTING ROAD/ DESIGN

4.1 Traffic Count

The average annual daily traffic along the corridor during 2017 was approximately 30,000 vpd at the western end and 24,000 vehicles per day at the eastern end near to Half Way Tree. Traffic is projected to grow 2 to 3% per annum and increase to 6% for the two years following completion of the project due to the increased accessibility and reduced vehicle operating cost and travel times. It is to be noted that traffic is suppressed due to the restricted road capacity and considerable growth is expected once the corridor is improved.

4.2 Design speed

The posted speed limit along this thoroughfare is 50km/h. From a safety perspective control of speeds to no more than 50 km/h should be incorporated in the design due to the numerous commercial access points and moderate pedestrian activity.

4.3 Grade

The terrain is gentle with a rise and fall in the range of 19m/km. This is a gently almost imperceptible grade.

4.4 Horizontal Alignment

The horizontal curves satisfy the required sight distance for the posted speed limit of 50km/h.

4.5 Lane width

There are two lanes with widths of 4m and varying sidewalk/verge in the project area. The proposed cross section will have four lanes of 3.35-m each and a 0.6m median with minimum 1.8-m sidewalks.

4.6 Sidewalk Width

In many sections these shoulders have deteriorated due to lack of maintenance and utility installations. Raised concrete sidewalks are to be provided in all sections. Where existing sidewalks have deteriorated they are to be rehabilitated. A minimum width of 1.8 m is to be achieved. Sidewalks are required in all areas being a highly urbanized area with high pedestrian traffic.

4.7 Intersection Rationalization

Currently there are four traffic signal controlled intersections along the project length. It is anticipated that these will require upgrading to accommodate the new width and turning lanes. An additional three intersections are envisaged to be signalized to facilitate major crossing streets/access points to ensure a modicum of access to the surrounding communities and not to unduly lengthen journeys for Hagley Park Road destined traffic

4.8 Right of Way

There are structures and or privately owned parcels of land restricting the right of way throughout the corridor.

This will entail the relocation of several boundaries and demolition of structures.

4.9 Wearing Surface

The existing wearing surface is Asphaltic Concrete. Most of the corridor is in fair to poor condition (International Roughness Index of the order of 5.8m/km) except for a few small areas. The corridor due to heavy patching of an old decayed oxidized asphalt pavement has a quite rough and bumpy surface as evidenced by the IRI of 5.8m/km. This unevenness and other defects contribute to reduced operating speeds and frequent swerving/stopping by motorists to avoid the worst areas as well as higher than desirable vehicle operating cost.

4.10 Project Objective

The intended purpose of this project is to remove a major bottleneck that is a major contributor to congestion on the main road network. This upgrade will increase the capacity of this corridor by at least 60% and will complement investments made in enhanced traffic management by the Government of Jamaica and ensure that its citizens have reliable and efficient access between home, school, healthcare facilities and work.

The project is intended to address primarily

Pedestrian safety	<i>through a continuous pedestrian walkway and rails</i>
Vehicle operating cost	<i>through an improved road condition, reduced congestion</i>
Reduced crashes	<i>better traffic management and traffic separation</i>
Reduced travel time	<i>increased speed and reliability</i>
Reduced congestion	<i>more capacity</i>
Reduce shortcutting	<i>more capacity</i>

4.11 DEMAND ANALYSIS

The demand for this project is fuelled by the increasing blockages along the corridor. Studies undertaken by the NWA indicate that this corridor is severely affected by side street and direct property access adversely affecting traffic flow resulting in tremendous queues which block Hagley Park Road during peak periods. This corridor is one of the

two main links for motorists from the west entering the city and is heavily congested throughout the business day.

4.12 Scope of Works

The works planned for this roadway will entail the following:

1. Road Works is 3.7 km in length and will consist of:
 - a. Provide 4 x 3.35m driving lanes with 100mm thick asphaltic concrete wearing course.
 - b. Provide 3.35m turning lanes at critical intersections
 - c. Provide 1 x 0.6m raised concrete jersey median barrier
 - d. Provide 2 x 1.8m raised concrete sidewalks.
2. Traffic management
 - a. Upgrade existing Three Miles at-grade signalized intersection with a grade separated interchange consisting of a flyover bridge for Spanish Town Road through traffic and a second flyover bridge for Hagley Park Road through traffic. Turning manoeuvres will be signal-controlled at grade.
 - b. Upgrade existing traffic signals at Waltham Park Rd, Woodglen Ave and Maxfield Avenue
 - c. Provide new traffic signals at Hagley Park Prep, Keesing Avenue, Omara Road and Margaret Villa Road intersections
 - d. Installation of surveillance and Licence Plate Recognition (LPR) cameras at signalized intersections
3. Other
 - a. Major drainage improvement along the corridor with the installation of HDPE/concrete pipes
 - b. Streetlights on top of median jersey barrier

5.0 SOURCES OF MATERIALS

All aggregates will be obtained locally from any of several quarries within 50km of the project site

Asphalt/bitumen will be imported through PetroJam in the normal manner as this material is not produced in Jamaica.

HDPE pipes, concrete pipes and the reinforced drop inlet boxes with gratings will be procured from local suppliers.

Road marking and street signs will be supplied locally.

6.0 **COST ESTIMATE**

The Contract Sum is US\$56,496,758.16

7.0 **FEASIBILITY**

The project cost developed above was used as the construction cost of the project

For this analysis a number of assumptions were made as listed below

- The section to be improved has a length of 3.7 km and an existing International Roughness Index (IRI) of 5.8m/km.
- The annual average daily traffic volume on the corridor has been projected to vary between 24,000 and 30,000 vehicles per day over its length.
- The project life for the roadworks is forecasted for 20 years with a construction period of 18 months.

- average vehicle speeds would be 40 km/h
- the newly constructed surface will have an International Roughness Index of 2m/km

A discount rate of 12% was used as well as a growth rate of 2% per annum for traffic.

8.0 FINANCING

The GOJ will provide approximately 15% of the funding for the project.
The remaining 85% will be provided by China EXIM Bank.

9.0 CASH FLOW

The project is expected to run for 18 months.

10.0 TIMELINE

The entire project is expected to be completed by October 2019.

11.0 ORGANIZATION

The NWA will manage the project through its Directorate of Major Projects.