

ROADSTER



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“Paving the Way”

UNDAUNTED BY THE DELUGE: The NWA closed out 2017 mounting successful responses to a flood of rain-related infrastructural damage



Following the worst event in 2017, rain-related infrastructural damage stood at some \$2.1 billion dollars. The National Works Agency (NWA) was made to respond to a series of similar events throughout the year and at the end of 2017 rehabilitation works were ongoing on a number of affected infrastructure islandwide. Above, steel workers stand atop the formwork of a single cell box culvert along the Dykes Hill Road in Northwestern Clarendon. Construction started on the project in September 2017 and is one of three currently being undertaken in one of the worst - affected parishes. The projects are being undertaken at a combined cost of \$120 million. *See related story on pages 9 - 12*

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Washed Out!

Roadways, Embankments and Buildings take a beating from heavy rains



Groceries being thrown out from one of the businesses in Montego Bay that was flooded



Prime Minister Andrew Holness leading a tour party through Flankers, one of the communities in Montego Bay that were impacted by flooding in November



House on the edge in Flankers, Montego Bay



River training work being done in Richmond, St. Mary



Communication and Customer Services Manager, Stephen Shaw, looks at one of the damaged areas along the road from Hope Bay to Fruitfulvale at Shrewsbury, Portland, where the river has taken away a section of the road embankment.

Mandela Highway: Getting the Attention it Deserves

The Mandela Highway, being the most trafficked roadway in the island, has always been an area of high interest. In the past, the attention was generated by the large volumes of motor vehicles that use the roadway; so much so that it was often the scene of several traffic accidents. Over time, as more persons moved away from the Corporate Area into St. Catherine and further west, the thoroughfare gained the nickname "national parking lot" as throughout the day, there were so many vehicles on it that it was often hard to move.

This was especially frustrating for persons who had to use the roadway daily, as it meant spending numerous hours on a four kilometer stretch of roadway, waiting to get to your destination. In 2016, the roadway was once again thrust into the spotlight when it was announced that Mandela Highway would be getting some attention under the National Work Agency's Major Infrastructure Development Programme (MIDP).

The news was greeted by a myriad of reactions, ranging from elation, to anxiety to panic. Persons anticipated that the construction would cause even more delays, and feared that they would have to spend a much longer time on it. Others were more optimistic, especially when they heard that, once completed, there will be three driving lanes in both directions; one more than was there before. The bus and taxi operators were, probably, not so thrilled with the news that there will be a concrete median separating east and west bound traffic, but overall, the plans seemed so grand: a much higher road; two bridges; a service road; three box culverts, streetlights – it almost made the scheduled two year wait more bearable.



A section of the median (Jersey Barrier), now under construction



Left - Underground ducts being laid as part of plans to place street-lamps along the corridor. **Right** - The ducts being encased in concrete.

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Multimillion US Dollar Road Improvement Project for Ferris Cross to Mackfield, Westmoreland under MIDP

The National Works Agency (NWA) in December announced that plans to upgrade the 14 km stretch of roadway between Ferris Cross and Mackfield in Westmoreland were in high gear. This was welcomed news for commuters who traverse the corridor daily.

The Ferris to Mackfield main road is a major component of the north-south link in the parish of Westmoreland. It acts as a link to the town of Savanna-la-Mar, and is also used to access the city of Montego Bay, St. James. Recent traffic counts suggest that over 5,000 vehicles traverse this corridor daily. Currently sections of the corridor are heavily pitted, there are sections that are routinely flooded and some sections are quite narrow making it difficult for large units to navigate the corridor.



A section of the Withorn roadway in Westmoreland

According to Transportation Planner at the NWA, Norman Tai, the project entails the widening and the realignment of sections of the corridor. The realignments will be done at the Haddo and Lime Gate sections of the roadway. The project will also involve significant drainage improvement and the provision of 2.4 m wide shoulders.

Mr Tai, speaking at a recent stakeholder meeting, held at the Mt Shiloh Church of the Nazarene in Lindos Hill Westmoreland, explained that particular emphasis will be placed on mitigating flooding in two flood prone areas, these are the area in the vicinity of the Withorn Police Station and also at Haddo. This aspect of the project will involve the raising of the road level by approximately 3-4 feet and the installation of drainage devices along the roadway.



NWA Transportation Planner, Norman Tai (standing left), in his recent presentation to citizens and stakeholders in Lindos Hill, Westmoreland.

Additionally, the project will involve improvements to the traffic flow at the Galloway and Withorn intersections. This aspect of the project will involve some road widening which will improve the turning radius at these locations.

This project will be executed as major works under the Major Infrastructure Development Programme (MIDP), completing all six legacy projects under the programme. The NWA is now in the design phase, where effort is being made to identify the properties which may be affected by the works and also apprising citizens of plans for the corridor.

Constant Spring Road for Connectivity



A section of Constant Spring Road

Today alone some 30,000 vehicles will either make their way north toward St. Mary or south toward Half-Way-Tree along Constant Spring Road, a heavily trafficked and the main north-south corridor in the parish of St. Andrew. Constant Spring Road starts out at Hagley Park Road in the south and runs all the way north, for 5.6 kilometers, to Old Stony Hill Road carrying about 1600 vehicles per hour but with much difficulty.

With only one major improvement since it was built in the early 1900s, the corridor has remained at the same carrying capacity even with the rapid expansion of residential communities and commercial entities alongside it.

Here's what lies at the heart of Constant Spring Road's bottleneck. Traffic heading to a number of adjoining neighborhoods converges with vehicles travelling north to neighboring parishes and south toward the City Center creating several saturated points along the corridor. This makes for extended peak hour commute and thousands of frustrated commuters who often veer off the main road onto smaller community roads not meant to carry high volumes of through traffic.

Here's what lies at the heart of Constant Spring Road's bottleneck.

Wittingly however, sections of Constant Spring Road were designed to meet future demand for increased carrying capacity. The corridor has the reservation to facilitate needed expansion such as the addition of a two-lane bridge over the Sandy Gully which improved the section between West Kings House Road and Dunrobin Avenue from two to four lanes. Under the recently-announced US 19 million dollar road improvement contract signed between the Government of Jamaica and China Harbour Engineering Company (CHEC) the corridor is earmarked for even more significant improvements. An additional four kilometers of the roadway will be expanded from two to four lanes.

The works form part of the Major Infrastructure Development Programme (MIDP) and will focus on the section of the corridor between Red Hills/Eastwood Park Roads and Norbrook Drive with spot improvements at the Old Stony Hill Road/ Long Lane intersection and Stillwell Road north of the primary project area. The widening and improvement of Constant Spring Road is however just one aspect of the works to be executed under the project.

As the NWA continues to use the opportunity of new road projects to improve traffic management across the Corporate Area, a large component of the current contract is the upgrading of some fourteen critical intersections and junctions along the corridor. A number of solutions have been included in the geometric designs to this end, chief among which is the signalization of an additional eight intersections at Grosvenor Terrace Bridge, Clifton Boulevard, Manor Centre, Norbrook Drive, Mannings Hill Road and Hillman Road, as well as at the Stony Hill and Old Stony Hill Roads and Stony Hill Road and Stillwell Road.

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No Barrier to Road Safety



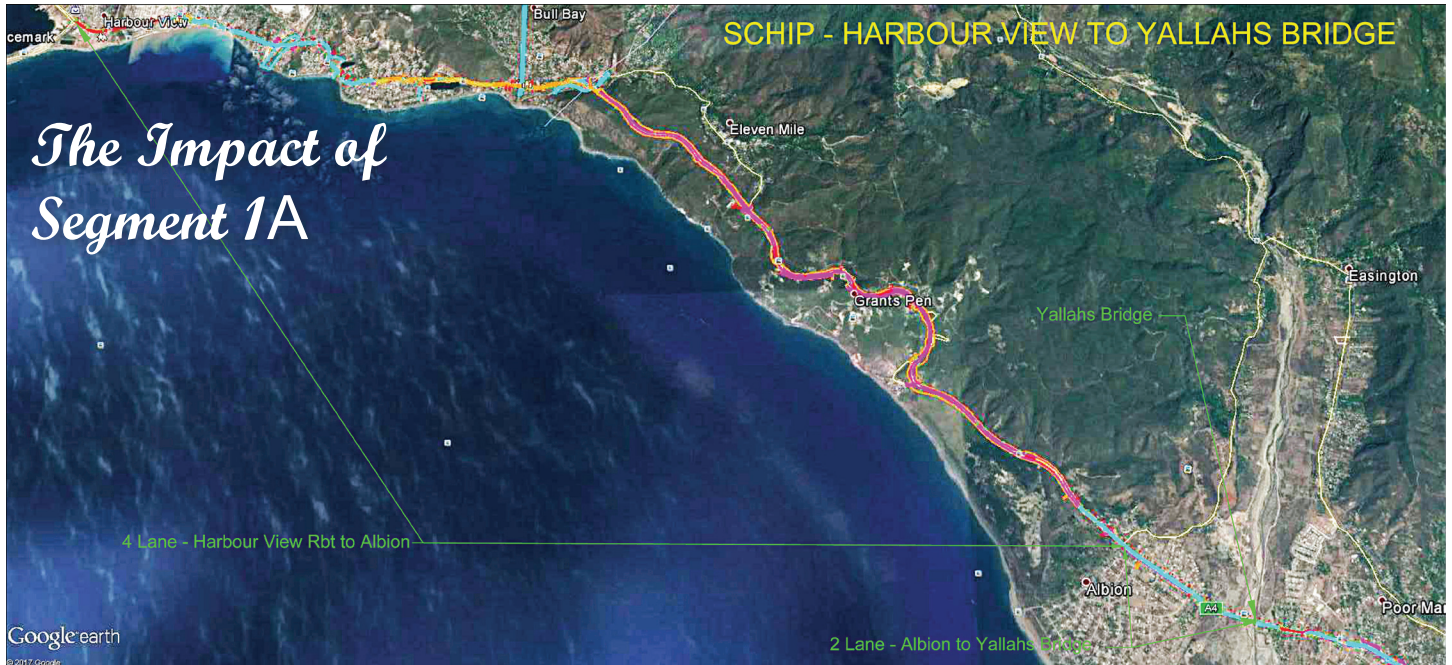
A section of the median (Jersey Barrier) being erected along Barbican Road

Almost four months have elapsed in a six-month contract to construct an upgraded four-lane limited access arterial road for a combined 1.1 kilometers along sections of East Kings House and Barbican Roads, in St. Andrew. The primary purpose of the project is to improve traffic management in the Kingston and St. Andrew Metropolitan area through the application of very practicable solutions, primary of which is eliminating the protracted loop around Barbican Square and creating a more direct and shorter physical route for motorists.

Director of Planning and Research at the National Works Agency (NWA), Patrick Rose told the ROADSTER that it remained his considered position that the lateral expansion of the roadway which will increase the lane count from two to four will effectively improve the road's carrying capacity. Much discussion has gone on in the public about the construction of a concrete median along the road. Mr. Rose said that the NWA's engineers have carefully considered that since several feeder roads discharge large volumes of traffic on to the main corridor, it is imperative that the disruption of traffic flow be constrained through restriction of access and signalization.

Traffic movement will be fully accommodated at the most intuitive points, Birdsucker Lane, East Kings House Road and Jacks Hill Road which are less than 160 meters apart. These will also serve as centralized walking locations where pedestrians are less likely to rely on their discretion and interact with motorists. Jersey Barriers which are incorporated as part of the traffic control mechanisms in this project are commonly used between traffic signals along a heavily-trafficked roadway with regular placement of accesses so as to lessen the frequency of turns that inexorably interrupts the flow of traffic.

The Director of Planning stated that the use of Jersey Barriers to create a dual carriageway is very common along projects like Barbican which is designed to be a 50 km/h corridor in a primary commercial area. These solutions are being implemented concomitantly along what is a major link road in the KMR, to sufficiently improve traffic management, dilate the frustrating Barbican bottleneck and get value for money from the substantial capital investment of 4.4 million US dollars.



Five main communities adjoining the proposed road works to be executed under Segment 1A of the Southern Coastal Highway Improvement Project (SCHIP) from Harbour View, Kingston to Yallahs Bridge, St. Thomas is set to benefit tremendously from the project. The upgraded 17.4km corridor will serve the communities of Bull Bay, Harbour View and Eleven Miles in St. Andrew, as well as Grants Pen and Albion in St. Thomas.

The safety, physical and functional deficiencies of the corridor particularly as it relates to drainage as well as carrying capacity will be improved under the extensive programme of works. The project involves the widening of the existing roadway from two to four lanes between Harbour View and Albion with 2.8 kilometers of the roadway to be constructed in virgin territory, between the general area of the Bull Bay River and the Sun Coast Adventure Park, in 12 Miles, St. Thomas, the National Works Agency (NWA) had to first get a permit from the National Environment and Planning Agency (NEPA) to start the works.

The permit is granted on the NWA satisfying NEPA that all the relevant socioeconomic, commercial, right of way acquisition, traffic and safety factors which could arise during the execution of works are identified and measures satisfactorily articulated to mitigate these if they should become an issue.

It was required that this be submitted as a written report in the form of an Environmental Impact Assessment (EIA) study, which the NWA completed in April of last year and the process concluded with the invitation of public

comments and submissions on the report facilitated at two public meetings on November 21 and 22, 2017 in Albion, St. Thomas and Bull Bay, St. Andrew respectively.

Based on a survey of residents' perception carried out during the course of the EIA study, there were largely no concerns registered about the road construction project with over a third of those polled anticipating that the road widening and realignment will have a positive impact on their communities.

Their expectations are well-informed. On completion, motorists travelling along the upgraded corridor will enjoy reduced congestion during peak hours, more predictable and reduced travel time and a reduction in vehicle operating costs as the road's capacity to handle rain events and its reliability would have been increased considerably during the improvements.



Chairman of the public meeting in Bull Bay, Monoletto Hutchinson, setting out the parameters of the proceedings to residents who turned up to hear about the project. Seated at right is Member of Parliament for East Rural St. Andrew, Juliet Holness. Bull Bay falls within her constituency.

HOPE for Pedestrians in the West

Pedestrians account for a significant portion of road users, and ensuring their safety is a key component of works undertaken by the National Works Agency (NWA).

Recently, the NWA through the Housing Opportunity for Employment Programme (HOPE) targeted two critical corridors, Knockalva in Hanover and Bethel Town in Westmoreland for upgrades to facilitate safe pedestrian access. These areas are heavily used by mostly children on foot, making their way to and from schools located in adjoining communities. Prior to the sidewalk construction projects, there were no designated areas for pedestrians, creating an unsafe situation, especially for the students who traverse these areas.



Sidewalk construction – Knockalva, Hanover

In Hanover, approximately 1,040 square metres of roadway between the Knockalva High School and the Haughton Grove community is being outfitted with sidewalks. This project was still in progress at the end of December, as works have been delayed due to persistent rainfall. While in Westmoreland, approximately 450 metres of sidewalk was constructed between the Bethel Town Primary School and the Bethel Town square. This has been well received by students and staff.

Acting Principal of the Bethel Town Primary School, Ms Sherene Williams, speaking recently with the **ROADSTER** gave the project her stamp of approval. "The sidewalk is well used by students and other members of the community. We are happy for it," she said.

The sidewalks are being completed at a cost of \$20 million under the HOPE programme which undertakes projects geared at improving the lives of citizens across the country. This latest installation of the programme targeted 19 roadways. The projects involved sidewalk construction, the construction of retaining walls, road rehabilitation and drainage improvement works. Among the road improvement projects were Sweetness Lane in Westmoreland; Ginger Hill Road in Hanover; Williamsfield in St. James and Bunkers Hill in Trelawny.

Constant Spring for Connectivity ... continued from page 5

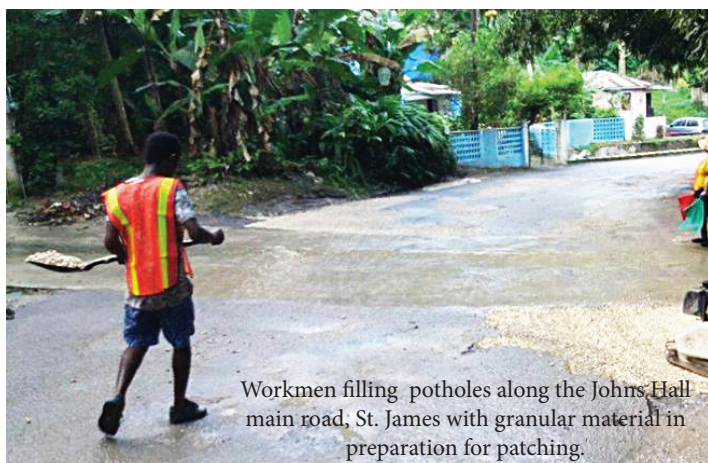
Turning lanes will be created at these intersections and the alignment of connecting roadways with the main corridor will be improved.

The result of these measures will be a modern four-lane corridor more than doubled in its carrying capacity from 1,600 to 3,400 vehicles per hour with little or no conflict with other motorists or pedestrians. This will allow for faster and safer commute along Constant Spring Road from wherever one travels or is destined. The improvements will be done over an 18 month period starting in this financial year.

In preparation for these works, the NWA convened meetings with interested parties and has also engaged the public at

large. A community meeting was held at the Merl Grove High School on November 29, 2017 to discuss among other matters land acquisition to facilitate the civil works which is another critical component of the project.

The NWA has been working with the National Land Agency (NLA), identifying and acquiring lots that are necessary for the works. Some 90 parcels of land are being acquired as part of the plan. At the end of December 2017, more than 40% had either being acquired or agreements for sale drafted. A few lots had also been listed for compulsory acquisition, as the owners had either flatly refused offers or had failed to return the agreements.



Workmen filling potholes along the Johns Hall main road, St. James with granular material in preparation for patching.



Construction Manager Caswell White (right) directs the laying of an improved three-foot pipe culvert in the excavated area along the Hague Main Road, Trelawny following the failure in the road embankment in December 2017.

Rain, Rain and More Rain!!!

.... Torrential rainfall delays road improvement projects in the West

The Western Region experienced unusually high levels of rainfall towards the end of 2017 particularly between the months of October and December. This resulted in extensive damage to road sections and significant delays to the progress of several patching and road rehabilitation projects across the parishes of St. James, Hanover, Trelawny and Westmoreland.

During the rain events many roadways were severely affected through blocked drains, scoured sections, fallen trees, landslides, washed down silt and debris as well as breakaways. The parish of St. James seemed to have been worst-affected, with the highest levels of rainfall being experienced in the month of November. For many in Montego Bay and its environs, the flood event of the afternoon of Wednesday, November 23, 2017, will be forever etched in their minds.

Many road users in sections of Montego Bay and other areas such as Flankers, and Chelsea, were left stranded as the flood waters raged. The downtown area of Montego Bay bore the brunt of the flooding, as the North Gully breached its banks washing through homes, businesses, and over road infrastructure. Moreover several motor vehicles were submerged, with some being swept several feet from where they were moored by the sheer force of the flood waters.

As Kareen Gourzong, Head of the Weather Branch of the Meteorological Services explained, "In four hours, Montego Bay received 94 mm of rain, that's 96 per cent of the rain it would get monthly because on average, the town receives 102 mm in November."



A section of the Johns Hall roadway, in the vicinity of the Johns Hall Adventure Tours, which has been severely eroded due to torrential rainfall.



A section of the Portobello main road in St. James following flood rains. The roadway was affected by washed down silt.

Taking a road from the edge – the story of Knollis

Rainfall is not unique to any particular area on the island. What some would consider unique, however, is the type of damage that is sometimes caused by heavy rains and out of control waterways. It was during one of these downpours that the Rio Magno, which meanders from the hills of Western St. Mary and is one of the tributaries to the Rio Cobre, did significant damage to a section of the main road between Bog Walk and Riversdale.

So treacherous was the impact of the damage right at the road edge that the National Works Agency (NWA) had to spring into action to warn unsuspecting motorists of the danger. Caution tapes were placed along the section of road and a temporary barrier made from the widely available bamboo plant. These worked only for a time but eventually disappeared, due to weathering.

The nature of the damage along the road and its location around a corner, also prompted members of the political directorate to ask questions, as to when action would be taken.

The Agency responded through technical visits and determined that given that the nature of the problem was unique, a special design had to be done. Damage along the Riversdale main road, usually has the Agency thinking about using gabion baskets to construct a wall or the more traditional Random Rubble Wall. The engineers opted for the latter and this was costed and funds sourced.

The project took on added significance following the rains of September 2017, when several nearby communities were left under water. Again the Rio Magno did more damage, taking away additional pieces of the embankment that form the road. The NWA responded by awarding a contract for just under \$39 – million, which had among its scope the installation of 600 millimetre pipe culverts, the construction of a Random Rubble Wall, river training, base work and the laying of Asphaltic Concrete. Some 1,200 square metres of Asphaltic Concrete will be laid as part of the works.

At the end of December, several artisans had been employed on the project. These were mainly masons, who were required to skilfully lay the stones that are expected to keep nature and the raging Rio Magno in check. The wall which is over 10 metres high had seen significant progress, so much so that the road, which had to be closed in November was reopened to vehicular traffic.

One resident of Riversdale told the **ROADSTER** that he was delighted with the nature and pace of works along the road. He said that he felt much better being away from the community when it is raining, without having to worry if the road will collapse due to the fury of the Rio Magno.

The project, which is being implemented through a five month contract is well ahead of schedule and according to the Parish Manager for St. Catherine, Anthony Knight will be completed well within the stipulated time.



Incomplete road works along the Riversdale stretch



Retaining wall underway along road from Bog Walk to Riversdale

New box culvert for Juno Crescent

Five small concrete pipe culverts buckled under the force of a raging channel just outside May Pen, Clarendon during the flood rains of April 2017 seriously undermining the roadway and causing a 2 kilometer diversion of traffic to the small community of Juno Crescent.

The failed pipe culverts are just one on a long list of road infrastructure to be rehabilitated by the NWA in the parish given the extensive damage which befell roadways, bridges and retaining walls during the unprecedented weather events last year.

The April/May flood rains seemed to have triggered a series of similar unseasonal rain-induced infrastructural damage across the island for the remainder of 2017 and into 2018.



A profile of the undermined pipe culvert along the access road to Juno Crescent, Clarendon

The failed pipe culverts are just one on a long list of road infrastructure to be rehabilitated by the NWA ...

Works on the new structure at Juno Crescent is expected to get underway soon after the finalization of some preliminaries with the recommended contractor, Alcar.

The existing pipe culvert which is structurally deficient will be demolished allowing for the erection of a reinforced concrete single cell box culvert, which will accommodate two driving lanes.

When completed, the box culvert will be 9 meters long, 6.7 meters wide and 4.65 meters high, which will significantly improve the capacity of the channel. Sidewalks will be installed on either side allowing for safe pedestrian access.

Rubble masonry walls will be constructed for a total of 15 meters in either direction of the water way over which the box culvert will sit. This forms part of critical river training work to protect the integrity of the structure during future rain events. Sections of the approach roads will also be rehabilitated under the four-month project.

This is one of three projects currently being undertaken in the parish of Clarendon as efforts continue to rehabilitate a number of structures which were impacted by the 2017 April/May flood rains. Repairs are ongoing on the Dykes Hill box culvert in Sanguinetti while works to reconstruct the Jacobs Hut Bridge is expected to begin soon.

All three projects are valued at a combined 117 million Jamaican dollars, which represents just a small dent in the nearly 2.1 billion dollar bill the NWA was left holding in 2017 for infrastructural repairs across the island at the end of the first two weather-related events alone.

Works on in earnest to re-establish access to Dykes Hill, Clarendon

Jamaica witnessed Mother Nature at her devastating best over three unforgettable days in May 2017 as heavy rains brought on major floods in several parts of Clarendon. Homes and yards were inundated while bridges and other road infrastructure were damaged after the flood waters came and went. A culvert beneath the main road in Dykes Hill crumbled during the rains, creating a gaping hole and almost splitting the roadway in half, save for a narrow and treacherous strip of roadway only a few inches wide.

The National Works Agency (NWA) started the reconstruction of the box culvert on September 18 last year at a cost of \$40 million dollars. The project's scope of work includes site clearance, excavation, and gravel fill, demolition of the existing structure, concrete works, and the construction of rubble masonry retaining parapet wall, preparation of formation, sub-base course and asphaltic concrete overlay.

The project ended December 2017 at 35% complete. Work is progressing well at the site with river diversion, site clearance, demolition of old structures and gravel fill already done. Steel works, installation of culverts, as well as headwalls is presently being undertaken.

This 'Capital A' project is of great significance to the several communities served by the access road. Communities affected by the collapsed culvert include the farming-dependent villages of Sanguinetti, Banana Ground, Coffee Piece, Smithfield, Nine Turns, White Shop and Frankfield. Crops such as sugar cane, coconut, citrus and yam are normally transported via the roadway to supply the country's markets. Normalcy should return to these communities when the old culvert, which was originally designed to last 50 years, is replaced along the very important Dykes Hill Road.



The site of the breakaway in May 2017



Communication and Customer Services Manager, NWA, Stephen Shaw, Minister Shahine Robinson Minister and MP Richard Azan look on as Minister Everald Warmington speaks to the media at the collapsed culvert in May 2017



Workmen assisting with the pouring of concrete for the new box culvert

No Sentimental Attachment to Mona Project, but Mission Accomplished

In recent times, the Mona Road drainage improvement and rehabilitation project ranked high among those National Works Agency's (NWA) projects which courted the most negative public sentiment. Truth is despite the attractiveness and efficiency of the completed works, it was not always smooth sailing especially when it came on to the public.



The section of roadway, in the vicinity of Auralia, that was widened to accommodate turning lanes



The improved intersection at Wellington Drive, completed with pedestrian facilities

The project was beleaguered by complaints during the construction phase from residents and motorists who were often frustrated by traffic, and also by persons eager to share their opinions of what should be happening on site. Now that the project is completed, not many accolades have been received but it is hard not to notice that even with the historic levels of rainfall in 2017, the drainage issues along the corridor have seemingly been curtailed.

In the years preceding 2017, Mona Road, in St. Andrew, was a traffic disaster whenever it rained. This because the roadway suffered from drainage capacity issues that saw high volumes of water cascading along the thoroughfare. Of course, this was a major headache for motorists and pedestrians alike who were often inconvenienced by the inundation, partly because just the mere sight of so much water was frightening, added to the fear of being toppled or washed away by the torrents.

2017 was the year that saw that situation being addressed. As part of the Major Infrastructure Development Programme (MIDP) Local Component, Mona Road benefitted from a \$76.4 million Drainage Improvement and Rehabilitation Project, which got underway in April. When it was first announced, there were mixed reactions from stakeholders who, for the most part, misunderstood the nature and scope of the project. After some amount of community engagement, which provided residents with information and clarification, persons agreed to tolerate the project, for the greater good.

The project involved a major drainage overhaul that included the installation of HDPE pipe culverts, the construction of a box culvert and manholes. There was also some amount of road rehabilitation as the roadway was widened to accommodate turning lanes at both Wellington and Auralia Drives.

Sidewalks were constructed within the perimeter of the project to accommodate pedestrians and, to facilitate the widening and sidewalk construction, the fencing at the Blue Castle community was moved back three metres. The intersection at Wellington Drive has also been improved, complete with pedestrian facilities. The original scope of the project was officially completed in December, followed by the construction of an additional quantity of sidewalks up to the Mona High School.

The NWA and NWC Working In Tandem On New Market To Middle Quarters Project, St Elizabeth

The rehabilitation of the New Market to Middle Quarters main road has brought two agencies together to achieve one common goal of improving the delivery and quality of two important amenities to the people of North West St Elizabeth. The National Works Agency (NWA) and the National Water Commission (NWC) are both engaged in aspects of the road infrastructural development project. This is the first such project for the NWC along the corridor. Both agencies have been meeting regularly as they coordinate their approach in order to minimize inconveniences for the other and the public.

The NWA has dedicated some \$285 million dollars under the Local Component of the Major Infrastructure Development Programme to undertake the rehabilitation works.

The works will be completed in phases. Bushing, trimming of banks and the cutting of overhanging trees have already been completed. So too the construction of head walls and the repair of a rubble masonry retaining wall. Drainage work has started along the 15 km stretch of roadway involving the cleaning of earth drains and the paving of side drain outlets.

Soon the installation of concrete pipe culverts, the construction of earth drains and the repair of concrete U drains will begin.

The road rehabilitation component of the project which started back in March last year was expected to last for six months. However, like so many of the NWA's current projects, works have not advanced further owing to the vagaries of the weather in recent times. The unseasonal flood rains of April, May and June last year delayed the progress of pavement works and the installation of water pipes.

The NWC started its pipe-laying and excavation activities on September 9 last year, the nature of which did not allow for the simultaneous execution of road works. Encouragingly however the NWC has completed just about 80% of their works along the corridor. The road rehabilitation works itself is 40% complete and with more than half of this being pavement works, the project should progress quickly after it recommences.



Base protection/prime coating in progress



Excavation and laying of 100mm and 150mm diameter water lines



Preparation being made for the laying of a 500mm culvert along the road

Bridging the Gap

The National Works Agency (NWA) is home to a wealth of expertise in all engineering disciplines with several national and regional standards and best practices in road and bridge construction being honed and shared through the Agency. Over the years, the NWA's most senior engineers have supervised some of the more complex and major road infrastructural development projects in Jamaica and the wider Caribbean.

Among them is forty-year veteran structural engineer Roland Desdunes, who recently spent twenty-five days on the island of Dominica lending his expertise to a bridge construction project following the extensive infrastructural damage the Eastern Caribbean Island suffered during the passage of Hurricane Maria in September 2017.

Now back in Jamaica, Mr. Desdunes along with Earl Patterson, the Agency's deputy CEO continues his tireless efforts to get the Ward River Bridge in eastern St. Thomas completed. Works on the Bridge started back in March 2016 as part of a six month 57 million dollar contract, a project under the Local Component of the Major Infrastructure Development Programme (MIDP).

The ongoing evaluation, supervision and feedback of the Agency's project managers on the progress of works are critical to the timely completion of projects, large and small, but more importantly to the integrity and legacy of all infrastructural works undertaken on behalf of the government and people of Jamaica by the NWA through its



Mr. Desdunes (right) at the assembly and launch of a Bailey Bridge at Springvale, Wakefield, St. Catherine in 2007

independent contractors. Earl Patterson explains aptly in one of his classic quips when he tells the project contractor that the Agency has the technical expertise and staff to guide the works. All they have to do is to turn up at the work site with the material.

Roland Desdunes believes that the works on the Ward River Bridge can be significantly advanced through multi-tasking and he has shared this observation with the contractors. In that last site meeting, he advised that the stem wall, which forms the lower and mid sections of the bridge's concrete abutment, be constructed in two phases instead of one. He recommended that the wall be lifted at least six feet out of the water in the first instance which involves the erection of the requisite formwork and the pouring of concrete hinting to the contractor to pre-position the pre-fabricated steelwork on the site.

If this were to be achieved, only a mere three feet known as the beam seat at the very top would be left to complete the abutment. This would take the project above the water level preventing mud from getting into the steel work and the river water swamping the work area itself. Through experience Mr. Desdunes knows very well that the contractor would prefer to strip a complete 9-foot abutment of its form work as it is admittedly more attractive. However erecting the abutment in just one pour of concrete is risky since persistent rainfall and a flooded channel has plagued the project and stymied its progress.

Getting out of the water! That is the critical undertaking at



Direct access is maintained between Morant Bay and Port Morant via a temporary Bailey Bridge

this stage of the project. A strategy both Mr. Desdunes and Mr. Patterson strongly advocate. After which, the engineers estimate, the Ward River Bridge construction project should not go beyond another two months. Thankfully, the pace of construction has not significantly impacted the flow of traffic along the Morant Bay to Port Morant main road where the bridge is located.

The approach roads to the temporary Bailey Bridge erected as a detour route was recently graded and patched which has maintained driver comfort at a reasonable level. When completed the brand new Ward River Bridge will span 17 meters carrying two lanes, each 3.6 metres wide, complete with sidewalks on both sides allowing for safe pedestrian access. The Bridge will be outfitted with guard rails and road markings. The Ward River Bridge links the major towns of Port Morant and Morant Bay and serves the communities of Lyssons, Retreat and Prospect.



(top) - Workmen briskly pouring concrete in the formwork to start the bridge's abutment

(left) - A void where old Ward River Bridge once was



Mandela Highway: Getting the Attention it Deserves... continued from page 3

Since the inception of the project in August 2016, much has been done. There were several traffic changes as the Contractor worked on varying aspects of the project. The techniques being employed, some of which are new to Jamaica, for example the cement mixing piles, have fueled the interest of passing motorists, many of whom continue to gawk at the works as they pass by. There were also minor mishaps in the form of potholes, traffic accidents and pedestrian woes, some caused by too much attention to the works, and others by not enough attention to the issues on the road; but all in all, the project is progressing steadily and persons are finally beginning to get a glimpse of what they will soon be driving on in the not so distant future.

Currently, the two bridge structures have been completed. The works that are now underway include the construction of three box culverts; cement mixing piles in the vicinity of the overpass bridge; the installation of the foundation for the JPS streetlights within the barriers; the construction of a retaining wall for the overpass bridge approaches; the extension of the median jersey barriers to the end of the project and sub-base works on the westbound lane.

Based on the importance of this arterial road, there is no doubt that the works being undertaken to improve this corridor is well deserved. In fact, this roadway was last improved over fifteen years ago, when a section of the roadway in the Plantation area was rehabilitated to address flooding issues. Though incomplete, based on the skeletal view that we are now seeing, Mandela Highway is shaping up to not only improve the use of the roadway but also contribute to much needed development in its location, and wherever development is an option, then the work done to promote this is well deserved.

More Road Works to come for Irish Town Road

'Irish Town Road' was last featured in the Roadster in June 2017 and is back in this latest edition since much have been achieved over the last nine months to improve driver comfort and safety along the roadway. It isn't that the National Works Agency (NWA) has not paid the requisite attention to the Papine to Redlight road section over the years, but it's that the area's topography has greatly challenged these efforts.



A section of the recently rehabilitated Papine to Redlight roadway, with one of thirteen rubble retaining walls completed with parapet and coping

Major rehabilitative works was carried out along the roadway in 2011 in the form of a multimillion dollar retaining wall programme under the Jamaica Development Infrastructure Programme (JDIP). These works however were hardly enough as the road surface continued to deteriorate and it was found that many drainage facilities along that stretch were inadequate.

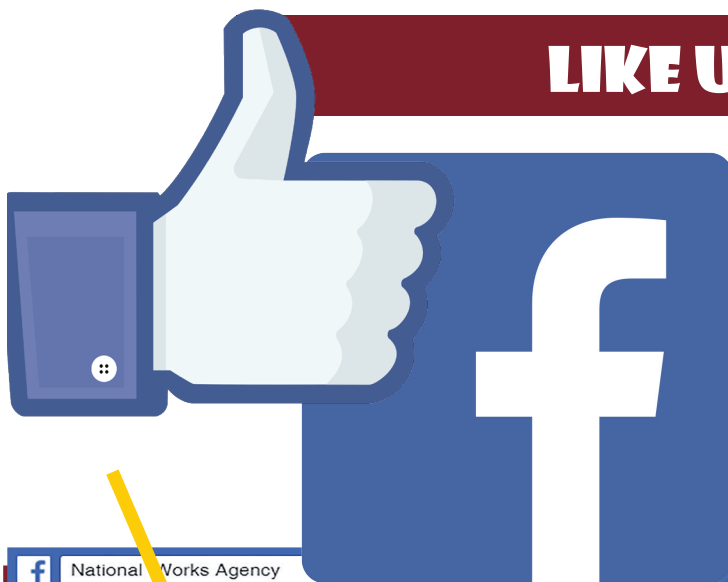
Still an additional kilometer of the roadway is slated for improvement

The story of the Irish Town Road seems to be an unending narrative about the battle between proposed improved road design and a narrow, winding road haunted by landslips and breakaways, a corridor, most would say, is best suited to the intrepid or very skillful driver. Since the roadway is the functional passage to several communities nestled in the highlands which lure adventure seekers to local attractions discomfort grew among residents for a solution to be found to the problem.

So in 2017 the roadway made a list of twenty-four road rehabilitation projects under the Local Component of the Major Infrastructure Development Programme (MIDP). Rehabilitative works valued at \$269 million started along the roadway in March, to address the road surface, drainage issues and several failing embankments along a 13 kilometre section from Skyline Drive to Redlight Square. The project involved the restoration and construction of drainage solutions, the construction of kerbs and channels and thirteen (13) retaining walls, Asphaltic Concrete regulation and pavement. The works were substantially completed by December last year. Once fully completed, it will also boast road markings, guardrails (in sections) and requisite signs.

Still an additional kilometer of the roadway is slated for improvement and will get underway in coming weeks. This work is necessary as, even with the recent project, there are areas along the roadway that could not have been addressed given limited resources. Under this new programme of works, areas susceptible to landslips, especially in light of the consistent rainfall in 2017, will be given attention. Side drains will also be cleaned, soft spots will be taken out, and the section of roadway will be paved with Asphaltic Concrete. Kerb and channels will also be constructed together with 110 cubic metres of rubble masonry retaining wall, completed with road markings. This second phase of works will cost \$26.8 million.

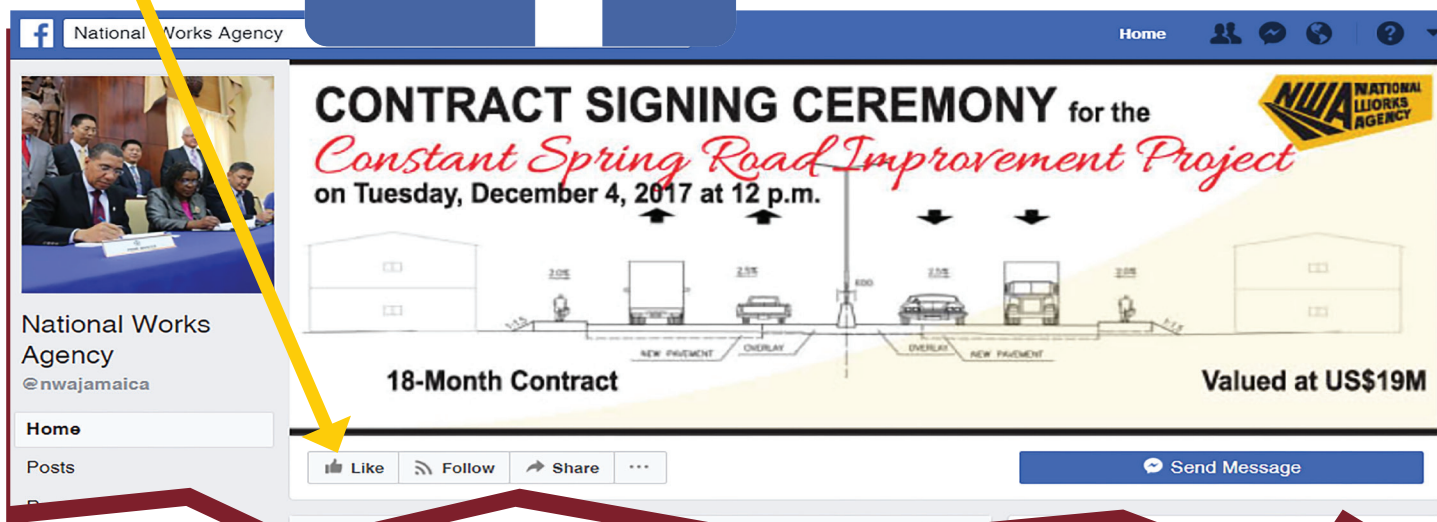
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The National Works Agency (NWA) can now be reached on Facebook.

The page can be accessed at www.facebook.com/nwajamaica for the latest information on the Agency's services, ongoing works and real time information on the state of our main road network.

Send us your comments and questions in relation to road repairs, development plan applications or even government approved garages. We welcome your feedback, photographs and videos.



Rain, Rain and More Rain!!! ... Continued from page 8

Torrential rainfall continued throughout much of November and December damaging roadways such as Johns Hall, St. James, which resulted in excessive scouring and a breakaway at a section of the roadway. Trelawny was also severely impacted, pushing the end of year patching programme for that parish into the New Year. A section of the roadway at Braco has been compromised and sections of the Rio Bueno to Jackson Town corridor have been severely eroded, making for difficult commute especially for operators of small vehicles.

The Hague Main Road in the parish was seriously undermined in December, when heavy rainfall, coupled with the failure of a major culvert spanning a section of the North Coast Highway caused it to give way. A part of the said culvert was previously errantly burnt out, and ultimately caved in under the flood rains. The affected section of the corridor had to be closed and emergency works undertaken to repair the damage and re-establish access along the roadway.

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NWA Staff Social 2017 Highlights



A very shocked but gracious and proud Employee of the Year - Mboya Savoury, Client Support Technician in the Information and Technology Department



Jermaine Johnson, Driver - North East Region, shows off his Certificate as Employee of the Fourth Quarter



Joseph Rose, Site Supervisor - Manchester Parish office is Employee of the Quarter for the Southern Region



The Employee of the fourth Quarter Award was collect by Andre Hardy, Librarian for both himself and Meshia Davidson, Librarian Assistant



And the contestants were from left to right: Paula Ormsby-Duckett, Part-Time Office Attendant; Gaynel Mills, Admin. Assistant and Miscaih Miller (Winner), Admin. Assistant



Mr. NWA - Hopeton Skeen, Security / Watchman (left) being presented with a prize from the Agency's CEO E.G. Hunter after a riveting dance battle



Happy to be out of the office and having fun, these ladies from our Finance and Accounts Department are all smiles from left: Kerene Hunter, Shuroni Vickers and Sakina Tobias



Our resident MC Oral Tracy (centre) engaging and encouraging staff members Katherine Sharpe-Smith and Winsome Thompson to be 'the life of the party'



Comedian Leighton Smith(right) provided hilarious jokes and impromptu dance lesson for one of our guests from China Harbour Engineering Company (CHEC)

NWA Southern Regional Office treats **BROKENHURST BASIC SCHOOL STUDENTS, MANCHESTER**

The proud tradition of the National Works Agency's (NWA) Southern Regional Office continued this past Christmas with the staging of a Treat for the students of Brokenhurst Basic School in Manchester.

The event which has been held unbroken for the last eleven years sees the team contributing to an early childhood institution in the region, which is comprised of the parishes of Manchester, St. Elizabeth and Clarendon. The team historically selects an institution that has an urgent need to enhance the students' welfare and staff members are encouraged to contribute to the efforts to address this need. Brokenhurst welcomed the occasion with much appreciation.

The Brokenhurst Basic School was started through community efforts and first opened its doors to children in 1957. The Principal Miss Heather Thompson guide and teach ten little ones aged two (2) to five (5) years old with the assistance of a teacher. The students are from Brokenhurst, Ellen Street and Patrick Street. Brokenhurst is a rural farming settlement along the Cedar Grove to Woodstock corridor and most of the parents are subsistent potato, yam and citrus farmers who cannot afford to send the children to schools far beyond the community. Providing breakfast and lunch for them is a major challenge.

The buildings which house the basic school were destroyed twice, first by Hurricane Ivan in 2004 and again by Hurricane Dean in 2007. The current building has two classrooms, a bathroom and a kitchen. Parents and volunteers are presently constructing a lunch area for the children. Miss Thompson laments that the children mostly have snacks as there are no facilities to prepare hot meals. The school is in need of a new stove as the table top hotplate they are currently using is not adequately serving its needs.

Administrative Assistant at the NWA's Manchester Office, Clara Morgan, is a resident of Brokenhurst and a past student of the school. She felt proud that she was able to contribute and help to spearhead the treat for her alma mater. Though not yet a parent, she believes that the basic school serves the community well. She too shares the hope of providing the students with hot meals daily and calls on the community to contribute more towards this effort.

The Staff members of the NWA provided a warm lunch for the students, teachers and parents who turned up to share in the occasion. The NWA also donated kitchen utensils and surprised the children with gifts of toys.



Entrance to the Basic School



Children enjoying the snacks provided



Ms. Clara Morgan presents gift to
Ms. Heather Thompson, Principal