

ROADSEER

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"Taving the Way"



In early November 2020 the National Works Agency (NWA) will undergo Stage Two of its external audit by the National Certification Body of Jamaica (NCBJ) as the Agency seeks to obtain ISO 9001:2015 certification. Upon achieving this, the NWA will thereafter be held to certain expressed benchmarks in how it manages select capital projects valued at \$250 million or more. Efforts to prepare Agency staff and departments for the audit exercise and the new work ethos and expectations post-certification is ongoing, involving extensive planning and coordination among senior management and the buy-in and sensitization of staff at all levels of the organization.

So Far, Bridges: Contributing to an Era So Good of Interconnectedness ... p. 3 p. 6

Working Way out West ... p. 13

Southern Region Round – Up ... p. 14



Bridges: Contributing to an Era of Interconnectedness ... continued from page 12

ROCHESTER GULLY BRIDGE

The bridge will be closed during the course of the work, which begins in October, and once completed will be reopened to The Rochester Gully Bridge, in the vicinity of Ziadie Gardens, along Washington Boulevard, had been in place for about ten use by both vehicles and pedestrians as per intended purpose. years and had started to produce loud noises when driven over. An inspection revealed that some parts had surpassed their design life and needed to be replaced.

The work on this bridge began at the end of August and was done mainly at nights over the course of two weekends.

PENFIELD BRIDGE

The Penfield Bridge is located in Gordon Town, St. Andrew. Recently, the wooden plank deck started showing signs of wear, posing a danger to pedestrians. The bridge was not, originally, designed for use by motor vehicles even though this prohibition was not adhered to. A new structure is now being built, which when completed will be accessible to small vehicles.

The project which commenced in September is expected to be completed over the course of two months. The existing bridge has been demolished and will be replaced by a five bay Compact 200 modular bridge. Approach roads will also be constructed as part of this project.

TIBER RIVER BRIDGE

An abutment of the Tiber River Bridge failed, causing a progressive deterioration of the structure. As it now stands the deck of the bridge is lower than the roadway, but this defect will soon be rectified with the use of a cutting edge engineering technique.

In order to remedy the issue, the deck of the bridge will be propped up with a technique similar to "jacking". Once lifted, the compromised abutment will be repaired then the deck will be lowered and secured into place. As part of the works, river training will be done to protect the structure as well as to realign the river to control flow.

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Formwork being done for the repair of the abutment of the Penfield Bridge.



East Palm River Bridge, Portland.

NATIONAL WORKS AGENCY

Celebrating 19 Years of Developing Safe, Reliable and Quality Roads





Going for SO 9001:2015 Certification

A high quality project management enterprise is driven by a COMPETENT WORKFORCE



Commencement of ISO 9001:2015 QMS Certification — Stage Two Audit

I am pleased to announce that the Agency is nearing the culmination of our ISO 9001:2015 certification journey for our Quality Management System (QMS). The National Certification Body of Jamaica (NCBJ) has confirmed that the NWA's Stage Two audit is scheduled for November 9-13, 2020. The audit is scheduled for five and a half days with four and a half days dedicated to the blended approach (remote and on-site) and one for off-site activities. This includes a site visit to an active



E.G. Hunter Chief Executive Officer, NWA.

For the month of October, Directors are required to sensitize staff on our Stage Two Audit Action Plan to ensure our readiness for the audit. In addition, members of staff can contribute to the certification process by getting familiar with our Quality Policy and Objectives, and also your respective department procedures. It is important that we all focus on our individual role, in helping the Agency achieve its mandate to deliver a safe, reliable and quality main road network. The sensitization campaign will be ramped up shortly to gear us up for the final step of the ISO certification effort.

It is also important to remember that what is being certified is our systems and processes, not our projects. ISO certification does not mean that everything is perfect. What it does mean is that the public and our clients are reasonably assured that standards are in place to ensure consistency of service, and our operations are transparent and accord with industry best practice.

Again, I would like to commend all those integral to this endeavor and encourage us all as we near the finish line. Let us get it done! Thank you,

"Paving the Way"

Volume 32

Issue 57 S

September 2020



The scope of the audit covers the Agency's project management services, which include the initiation, planning, execution and closure of projects J\$250M or more including, but not limited to bridge construction and road rehabilitation. The audit will exclude force account, emergency, and periodic and routine maintenance projects.

An ISO audit is the systematic process of reviewing and evaluating information about an organization's processes to determine their level of compliance with the standard they are being audited against. At the Stage Two audit, the auditors will conduct a thorough assessment to establish whether our QMS complies with ISO 9001:2015 quality standard. Core processes that will be audited include planning, design, procurement, construction, practical completion and support services.

What is being certified

projects. ISO certification

is our systems and

processes, not our

does not mean that

So Far, So Good

Hordley to Long Road is contract package eight under Tranche One of the Southern Coastal Highway Improvement Project (SCHIP). At 5.2 kilometers, it is the shortest and the only to extend across parish boundaries. It is also the most advanced to date, with 58% of the physical works completed as at the end of September. The \$551-million dollar contract is slated to come to an end on October 4. It's doubtful this deadline will be met. The progress on the project is nevertheless significant enough to point to a more practical approach, perhaps.

The **ROADSTER** asked Andrew Evans, Project Principal of consulting engineer firm, Stanley, who are overseeing the implementation of works for possible reasons for the contractor's results thus far. They credit it, in part, to the team's professionalism and experience as well as its good record of honoring deadlines. In the early phase of the project, for example, the package's survey information was the first to be submitted which assisted with expediting the design process.

The contractor continues to not only meet targets, Evans says, but to undertake and deliver activities according to required specification. To remain on course however, is going to require an even greater level of coordination as physical works intensify. Based on the project's remote location, the need for more advanced planning between the local contractor, the general contractor and their suppliers is very crucial.

Sustained inclement weather recently, in an area which is very susceptible to heavy rainfall, has not assisted with the progress. The work site and materials have, on occasion, been saturated. Works are also taking place against the backdrop of COVID-19 and activities have not gone unaffected. The impact has been both direct and indirect.

A section of the project area is located in the parish of St. Thomas which has had several communities quarantined as an infection prevention measure. This has restricted the movement of site labourers who live in these communities; adhering to certain protocols on site has also served to reduce output and work crews have had to be reduced to satisfy the need for 'physical distancing'.

It is difficult to say from here what additional time will be needed to complete the remaining works as the contractor is operating in a restrictive and fluid environment. Curfews, for example prevent work hours from being extended to catch up on outstanding activities.

The number of man hours lost due to restrictions is yet to be tabulated, however a revised work plan is currently being fashioned, after which extension of time can be determined. Three additional months have been added to all contracts for pipeline installation works. That will take this project to end of year at least. While this article was being written the project completion increased to 65%.



One of a number of random rubble retaining walls being reconstructed from Hordley to Long Road.



Excavation being done for soil treatment at Williamsfield along the project area.

Southern Region Round – Up: Continued from page 15

ROADSTER

GINGER HILL TO PIZGAH, ST. ELIZABETH

The National Works Agency responded to calls for the correction of a precarious situation along the Pisgah to Ginger Hill road in Northwest St. Elizabeth. Residents were already mobilizing to highlight the dangers and state of disrepair of the road to Huntley Castle, Ginger Hill and Pisgah from Claremont. This is beautiful pineapple country, lush and idyllic, and farmers need to be able to transport their crops to market safely. The serpentine thoroughfare was threatening to undermine the lifeblood of the area.

The National Agency (NWA) has targeted one kilometer of the 5.5 kilometer for rehabilitation during which retaining walls will be constructed, landslides cleared and rip rap drain, kerb and channel installed. The activities which started on August 27 is expected to come in at \$40 million dollars. The project was 50% completed as at the end of September.



Construction of rubble retaining wall.





Excavation for construction of retaining wall.

For ISO 9001:2015 Certification Project delivery has to be ON TIME, WITHIN COST & PER SPECIFICATION

NWA & TPDCO PARTNER TO PROTECT THE ELEGANT CORRIDOR



Elegant Corridor, St. James

The National Works Agency and the Tourism Enhancement Fund (TEF) are partnering to mitigate against the erosion of a section of the Elegant Corridor in St. James, through the construction of a reinforced concrete U-drain in a section of the road reservation. The channel is being created to contain a stream that runs naturally parallel to the roadway. This joint effort, which got underway in September 2020, is valued at \$20 million.

ROADSTER

The Road to Success is Faved with ... asphaltic concrete!

The quiet farming community of Axe and Adze, located in the lush hills of Eastern Hanover, is receiving a much-needed upgrade through a \$15.8 million road improvement project. This parochial roadway links Axe and Adze to the neighbouring communities of Mount Peto and Success in Hanover; as well as Dundee Mountain, located on the border of Hanover and Westmoreland.

Axe and Adze is quite an intriguing name and it took the **ROADSTER** some effort to ascertain its meaning, as most residents were unable to provide any insight. Luckily, on a recent visit to the area, we came upon a quite genial elderly woman, Ida Coombs, who was all too happy to give us the story behind the name. The moniker dates back to the early years when most of the dwellings and other structures in the area were made out of logwood, and each home had two tools to assist with construction, that of an axe and an adze. According to Miss Ida, the axe was used by the men in the community to cut the lumber while the adze used to shape the pieces of lumber into posts and beams.

The community has evolved from its early beginnings and is now well-organized with several residences, churches, corner shops and an early childhood institution. Over time, there have been many calls to have the roadway rehabilitated and those calls have now been answered.

Work on the Axe and Adze roadway commenced in early September and is now well underway, with a view to having the project completed before year end. It is a source of joy for many residents, especially in this time of fear and uncertainty brought on by the Corona Virus.

Dorian Hines, a resident of the community for 61 years, believes the completion of the project will make life easier for residents and help to build the community as many residents have abandoned the area due to the state of the roadway. Similar sentiments were expressed by Winsome Chisholm, another long-time resident of the community. For Ms. Chisholm the challenge regarding public transportation is a vexing one, and makes life extremely difficult.

"Mi glad for the work and I only hope it continue, cause if you sick here, by the time you reach out you stiff dead, cause a crawl the taxi dem haffi a crawl. All if you have doctor in you pocket you dead same way,' said Ms Chisholm. For Ms Chisholm the works represents a first for the community having not received any attention for many years.

The project is being completed by the National Works Agency under the Maintenance of Secondary Roads Programme.



Construction of kerb and channels along a section of the Axe and Adze roadway.



Axe and Adze resident, Winsome Chisholm.



Axe and Adze resident, Dorian Hines.

That Very Important Last Mile

Before the onset of the COVID-19 pandemic in Jamaica, the National Works Agency (NWA) had well-hatched plans to expand its fiber optic network and connect its traffic signals and cameras across the island to one central Traffic Management Centre at HQ.



The onset of 2020's

pandemic however has lassoed the future into the here and now, expediting the need for this envisaged 'new' technology. With its achievements thus far in the field, the NWA easily recommended itself to lead this latest effort. As a member of the COVID-19 National Emergency Communication Backbone taskforce, the Agency is working with the Ministry of Science Energy and Technology (MSET) to achieve two primary objectives in the short to medium term.

As far back as 2004, the NWA recognized the need for an interconnected national traffic network, linked by the best available technology. This, the Agency envisioned, would form the backbone of an Intelligent Transportation System.

The work was to begin in the Kingston Metropolitan Region (KMR) - Kingston, Spanish Town and Portmore - then steadily span out to all relevant locations right around the island. Much of this has already been realized. However, the Inter-American Development Bank (IDB) will provide a fillip with a grant of \$U\$3.25 million dollars, which should complete this phase of the project.

Our first goal is to connect all cable service providers island-wide to the Public Broadcasting Company of Jamaica (PBCJ)

NWA Operations Manager, Michael Saunderson, says our first goal under the initiative is to connect all cable service providers island-wide to the Public Broadcasting Company of Jamaica (PBCJ) such that they can receive PBCJ content, which they will in turn transmit to their subscribers. The second part of the project is the provision of 'last mile' broadband connection to schools, health centers, police stations, seaports and airports that are currently without internet connection.

Saunderson updates that some 240 schools are targeted under this phase and since August, 5% have been outfitted with last mile broadband cable enabling access to the digital classroom and other online resources. The NWA's traffic light infrastructure also supports License Plate Recognition (LPR) cameras as well as CCTV cameras that are a part of the Jamaica Eye Network initiative.

The Agency's fiber optic infrastructure is not only enabling traffic management, security and public order initiatives, it now underpins some education activities in this new-age. For a company known primarily for fixing roads, we have truly made significant strides in the digital space. Timelines and funding for completing the installation of the last mile fiber optic cables are currently being finalized.



ROADSTER

BROCKENHURST TO GINGER HILL. MANCHESTER

Rehabilitation works on the Brokenhurst Parochial road in Central Manchester is now 70% complete. The longawaited project started back on August 10 and is being viewed as an early Christmas gift by road users who are anxiously awaiting its completion.

The works which include bushing and trimming of trees, formation, priming, base course, patching and asphaltic Concrete Overlay cost approximately \$16 million dollars.

Brokenhurst is a rural farming settlement along the Cedar Grove to Woodstock corridor with most residents doing a little subsistence farming, planting potatoes, yam and citrus among their produce. The rehabilitation of this road will benefit neighboring communities such as Patrick Town, Ellen Street, Old England, May Day, Royal Flats and even the town of Mandeville.

The NWA has faced unfair criticism over the years for the poor maintenance of the roadway as residents were long unaware that theirs is in fact a parochial road and does not automatically fall under the purview of the Agency. However, now that it has finally come, the residents are no doubt receptive of our efforts.

SPAULDING TO FRANKFIELD, CLARENDON

The road from Spaulding to Frankfield links the Clarendon's capital, May Pen to other major towns such as Christiana, Mandeville and even as far away as Albert town in Trelawny. The road is the main school route for students of Edwin Alley High, Spaulding High and Knox College. This area is also widely farmed and market vendors make regular visits to purchase crops such as coffee, cocoa, yam, banana and plantain.

The National Works Agency started works on the roadway in July making steady progress to mid-September when practical completion was achieved. Some three kilometers of roadway is being rehabilitated at a cost of approximately \$25 million funded under the NWA's Road Rehabilitation Maintenance of Secondary Road 2020-2021. The residents of Richies, Dyke Hill, Sanguinetti, Grantham and Coffee Piece stand to benefit from the roadworks.





Preparing the new base for the Brokenhurst P.C. Road.



Spreading of base course material.



The application of asphaltic concrete.

Working Way out West

Negril, Westmoreland, the "Capital of Casual" is now benefitting from a \$23.4 million dollar road improvement contract which will see the repair of sections of the roadway in West End. The project involves the repair of a section of the roadway damaged by coastal action, works to improve pedestrian safety as well as pothole patching and repair.

The West End roadway can be considered as the most westerly point of the island, and serves several residences, schools, churches, and commercial interests including boutique hotels, restaurants and tourist attractions such as the Ricks Café and the Negril Lighthouse.



David Clark Parish Manager NWA-Westmoreland (centre), Okieffe Brown (left) Assistant Parish Manager and a representative from Britalex Construction Company Limited, confirm measurements along a section of the West End roadway ahead of the construction of a sidewalk.

Over time, coastal action has undermined a critical section of the roadway in the vicinity of the Negril Branch Library, resulting in that part of the roadway being virtually reduced to single lane. Its location, combined with the relatively narrow width of the roadway presented a real safety concern. As such works to address the situation commenced in early October 2020. This aspect of the project will involve the construction of a gabion retaining wall to mitigate future erosion, the filling of the affected section of the roadway and the restoration of the road surface using Asphaltic Concrete Overlay.

Pedestrian safety, along sections of the West End roadway, which has long been a concern represents another aspect of the contract. The project targets sections of the roadway in the vicinity of the Negril all Age School, and the nearby St. Mary's Anglican Church. These sections of the roadway are used by scores of young children and adults alike and the existing road conditions needs to be improved to allow persons to use the roadway safely.

The project, which represents a joint venture between the National Works Agency and the Tourism Enhancement

Fund, has been contracted to local contractor, Britalex Construction Company Limited.



A view of an undermined section of the West End, Negril roadway.

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Bridges: Contributing to an Era of Interconnectedness

Many of us will remember back in June 2011, how the dangers of water and the importance of bridges were highlighted in the now immortalized phrase "Nobody canna cross it", following a flood event that affected sections of St. Thomas. We found humor in the situation at the time, but what many came to realize was that bridges are just as important as roads in connecting communities, creating continuity and contributing to the productivity of an area as well as an era. This was recently reinforced when Llandewey in St. Thomas lost vehicular access following the collapse of a bridge in that community.

In 2011, as is the case now, many queries were directed at the authorities about which entity was responsible for our nation's bridges, how the need for bridge construction or repair was determined and whether there are the requisite number of bridges in the island to provide the interconnectedness we all need.

The National Works Agency (NWA) is more known for its roadworks chiefly in relation to the island's main road network. What the NWA is less known for is the central role it plays in designing, constructing, rehabilitating and maintaining the country's large inventory of bridges.

The NWA has responsibility for all bridges on the Main Road Network (MRN), except for those on Highway 2000. There are, roughly, 740 bridges in NWA's network and some of these are centuries old. Every year, NWA's technical team targets a minimum of seventy-five (75) bridges for inspection, however for each year of the last decade, no less than 120 bridges have been inspected. Approximately 89% of the bridges in the NWA's database are deemed as being serviceable while just over 11% is classified as defective. As such over the course of the last decade many bridges have come up for repair, maintenance or construction as the Agency aims to reduce the number of deficient bridges by 1% each year.

This bridge is located on the Richmond to Rose Hill control section in St. Mary. It was originally a foot bridge Since the start of 2020, at least ten (10) bridges have been and was damaged during flood rains, prompting the need worked on, outside of those being done as part of the for a replacement. The works, which started last year, was Southern Coastal Highway Improvement Project (SCHIP). completed in the first quarter of 2020. What now exists, at the These include: Liguanea Bridge, Rochester Gully Bridge, location, is a brand new Compact 200 Modular bridge that Penfield Bridge and Bowden Hill Bridge, all in St. Andrew; can now accommodate small and medium sized vehicles. Morant River Bridge and Mahogany Vale Bridge in St. River training was also done as part of the project and as well Thomas; Barracks River Bridge and Tiber River Bridge, both as the paving of the approach roads. in St. Mary and the East Palm Bridge in Portland.



Reinstatement of welds on the Rochester Gully Bridge at Washington Boulevard, St. Andrew.



East Palm River Bridge, Portland.

BARRACKS RIVER BRIDGE

ROADSTER "Paving the Way " Volume 32 Issue 57 September 2020





The last time the **ROADSTER** featured the Junction Road to Agualta Vale started first through a \$626 million-dollar project, the article focused almost entirely on the area known contract in early 2017 while the necessary geotechnical as Chovey and for very good reason. Chovey required a studies were being done at Chovey to finalize a suitable special engineering solution to effectively counteract the design. unstable geotechnical nature of the area. Coming up with an appropriate design has preoccupied the minds of project The project engineers have to contend with a geological anomaly at Chovey as the road there is located on a slip engineers. They know like regular folks do that the Junction plane with a harder encrusted area somewhere beneath the Road couldn't really be considered fixed until they fixed roadway, on top of which water flows naturally, acting as a Chovey. barrier between the earth and the hard rock. So each time In September, that fact was hammered home hard when a the earth becomes saturated the embankment tend to slide section of the road embankment at the location failed, and towards the riverside of the roadway.

not for the first time. But on this occasion the optics were not particularly good since the roadway was freshly-paved and works were still being done at other sections of the project.

To the untrained public eye, the road failed even before it altogether, as possibly another. was finished being built, a conclusion that was married with accusations of poor project management and a waste of A retaining wall design for Chovey has been refined and is public funds. The Junction Road was however not designed being costed. The proposal is to construct an armour block to fail. wall, in the same style as that which is located downstream in the vicinity of Castleton Gardens.

The National Works Agency (NWA) Director of Technical Services, Roger Smith, explains that from the outset, the The wall is expected to cost a tidy sum. However we all approach was to treat Chovey as a separate activity to the acknowledge that any meaningful improvement of the road widening and reconstruction component since the Junction Road cannot exclude the correction of the fault at challenges to be addressed there were so unique. Therefore Chovey and so like every other road user, the **ROADSTER** is the roadworks along the 4.5 kilometer stretch from Broadgate anticipating the commencement of these works.

Stabilizing the embankment and preventing future earth movement requires that a retaining structure be constructed, as one solution or bypassing the problematic location

Intronal ROADSTER "Paving the Way" Volume 32 Issue 57 September 2020

Bridges: Contributing to an Era of Interconnectedness ... continued from page 7



Barracks River Bridge, St. Mary.

BOWDEN HILL BRIDGE

The Bowden Hill Bridge collapsed last year cutting off direct access between Airy Castle and Bowden Hill in St. Andrew. Repairs to the bridge could not be immediately effected as components required for the bridge had to be procured overseas. These parts arrived in the island in the latter part of 2019.

The work to replace the bridge commenced in the first week of February, following the relocation of a National Water Commission (NWC) main that was located on the structure. Fast work was made of the project and the bridge was substantially completed at the end of the same month.

As part of the project, the compromised structure was slab, dec demolished and replaced with a 110 metres long Compact will also 200 modular bridge. Deck pads were installed and concrete back walls as well as concrete slab approach roads were packing.



Bowden Hill Bridge, St. Andrew before and after.

constructed.

MAHOGANY VALE BRIDGE

The Mahogany Vale Bridge is located near Hagley's Gap and spans the Yallahs River. The former bridge, which was over 100 years old, was destroyed some years ago by heavy rains. While the works for the new bridge was being procured, the existing ford allowed commuters to continue to travel across the river when it is not in spate.

The replacement effort started in July of this year and is expected to last until early next year. It is a massive undertaking that will see the construction of a steel reinforced two lane concrete structure. This will include the construction of base slab, deck slab, head walls and wing walls. Approach roads will also be constructed and paved with asphaltic concrete and protective works will be done, in the form of boulder packing.



Excavating for the southern abutment of the Mahogany Vale Bridge.



ROADSTER

"Paving the Way" Volume 32 Issue 57 September 2020

9

"Paving the Way" Volume 32 Issue 57 September 2020 ROADSTER

150 9001:2015 Loading

Q: WHAT DOES IT MEAN TO BE ISO CERTIFIED?

A: If we receive ISO 9001:2015 certification, it will mean that the National Works Agency's quality management system (QMS) would have met the requirements for standardization and quality assurance. ISO standards are in place to ensure consistency of product quality.

Q: WHAT WILL BE AUDITED FOR ISO CERTIFICATION?

A: It is the NWA's processes that are being certified – including Project Planning and Review, Design, Procurement and Tender Evaluation, Supervision of Works and Quality Control, Project Takeover, Delivery and Maintenance and Customer Feedback.

Q: WHO WILL BE CONDUCTING THE AUDIT FOR ISO CERTIFICATION?

A: The National Certification Body of Jamaica (NCBJ) has and will be visiting our offices to carry out various stages of the audit process. The auditors visited previously in July to learn about our operations and processes as well as tools and equipment. They are scheduled to visit again between November 9-13 this year, to look at a project/s within the audit scope, as part of the Stage 2 Audit.

Q: WHAT IS THE SCOPE OF THE AUDIT?

A: The projects for certification includes ONLY construction and rehabilitation projects valued at \$250 million dollars and above with the exception of Force Account, Emergency and Routine Maintenance projects.

WHAT ARE SOME OF THE QUESTIONS I MAY **BE ASKED BY THE AUDIT TEAM?**

Q: HAVE YOU EVER BEEN AUDITED BY THE INTERNAL AUDIT TEAM? A: Yes

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Q: ARE YOU A PART OF THE INTERNAL AUDIT TEAM? A: No

Q: WHAT IS THE NWA'S QUALITY POLICY?

A: The NWA is committed to:

• creating and maintaining a world class, safe, quality main road network and flood control system to continually meet the needs of our customers and clients in the towns, communities and districts where they live, work and vacation,

• complying with requirements and continually improving the effectiveness of the quality management system.

Q: WHAT IS THE QUALITY OBJECTIVE FOR YOUR DEPARTMENT?

A: There are six main quality objectives to be attained and these are built into the Agency's key performance indicators (KPIs). These objectives relate to the functions of one or more departments.

The main objectives are delivering projects on time, within cost and per specification; improving staff competencies and staff morale through continuous training and independent survey and ensuring customer satisfaction.

Q: WHY IS THE ISO CERTIFICATION PROCESS IMPORTANT TO ME? A: During the auditors visit in November, they may randomly ask team members about their knowledge of the ISO Certification process. After all team members are responsible, on a daily basis, for the execution of the various processes that form part of our Quality Management System which is to be

certified.

Volume 32 Issue 57 September 2020 "Paving the Way"

• developing and nurturing strong quality principles in our NWA family;

