



SAFE SCHOOLS AFRICA

**STRENGTHENING ROAD SAFETY ON
DEVELOPMENT BANK-FINANCED ROADS
PROJECTS IN SUB-SAHARAN AFRICA**



Contents

Foreword	3
Executive Summary	5
Why Are Dangerous Roads Still Being Built?	7
The Solution	10
Safe Schools Africa Projects	13
Impact	16
Operating Plan	17
Conclusion	19
Appendix 1: School area infrastructure designs before and after Safe Schools Africa input	21
Appendix 2: Photos, before and after Safe Schools Africa input	32
Appendix 3: School initial visit summary sheets – IRCP, Zambia	37
Appendix 4: Typical layout for a school zone – IRCP, Zambia	42

FOREWORD

Sub-Saharan Africa has the world's highest road traffic injury rates, and these are increasing as the continent develops, urbanises and mobilises. However, roads are a cornerstone of economic development, and so governments across the continent – supported by development banks, such as the World Bank and the African Development Bank – invest heavily in developing their road networks.

As an African mother of a child who was killed in a traffic collision, and as Ambassador of the Child Health Initiative campaigning for safer journeys for all children, I am so impressed by the way Amend listens to communities and delivers pedestrian infrastructure improvements which are both child- and climate-friendly.

I am proud to support Safe Schools Africa, an innovative programme to maximise road safety on development bank-financed roads projects, designed to prevent thousands of deaths and injuries and to tackle climate change from the feet up.



A handwritten signature in black ink, reading 'Zoleka Mandela'.

ZOLEKA MANDELA

Ambassador, Child Health Initiative

FOREWORD

I have led Amend's programme of pedestrian infrastructure improvements since 2015. Together with my team of engineers and community development experts, we have developed Safe School Zones at over 80 schools in nine countries across Africa. Within these, we have provided life-saving infrastructure – such as footpaths, crossing places and speed humps – benefitting over 85,000 school children and hundreds of thousands of members of local communities.

Based on a peer-reviewed population-based study carried out with the US Centers for Disease Control and Prevention, we know that this work prevents deaths and serious road traffic injuries among school children, also averting the financial and emotional burden that families suffer when a child is injured.

Through Safe Schools Africa, our work on World Bank and African Development Bank projects is enabling us to apply our pedestrian infrastructure principles on larger projects, increasing the scale and impact of this work. We are saving lives across the continent, keeping children and others safe.



AYIKAI POSWAYO

Project Director, Safe Schools Africa

EXECUTIVE SUMMARY

Worldwide, road traffic injuries (RTI) kill over 1.3 million people every year and injure an estimated 50 million more. RTI are now the leading cause of death for children and young people between the ages of 5 and 29.¹

Sub-Saharan Africa (SSA) has the highest RTI rates in the world, with pedestrians and other vulnerable road users – including children – being most at risk. Over 95% of roads in SSA are rated only 1- or 2-star for pedestrians, meaning they fail to offer an acceptable level of safety.²

Billions of US dollars are invested in roads projects in Africa each year. But despite the recent introduction of important safeguards, such as the World Bank's Environmental and Social Framework and Road Safety Screening and Appraisal Tool, roads that do not meet the minimum 3-star standard are still being built. The challenges now are to ensure that the existing safeguards are adequately implemented, and that they are applied to all roads projects, not only World Bank projects.

Safe Schools Africa provides proven-effective, targeted technical assistance on roads projects in SSA. In doing so, Safe Schools Africa delivers safe journeys to school for children across the continent while building capacity for long-term, systemic change in the processes that currently result in roads that kill African children at rates much higher than their peers in wealthy countries.

As well as reducing the risk of deaths and injuries, improving safety for pedestrians and other vulnerable road users has environmental, social and health-related benefits. Walking is a solution to multiple transport-related issues.



Amend's input into the designs of road improvements in Tanzania has helped the World Bank and government roads agencies to ensure that safe road infrastructure is provided in all critical areas for vulnerable road users, especially children.

Eng. Fredrick Manase Nkya, Task Team Leader for Tanzania Strategic Cities Project (TSCP), Co-Task Team Leader on Dar es Salaam Metropolitan Development Project (DMDP)

¹ *Global status report on road safety 2018: summary*. Geneva: World Health Organization; 2018 (WHO/NMH/NVI/18.20). Licence: CC BY-NC-SA 3.0 IGO).

² World Bank (2019), *Guide for Road Safety Opportunities and Challenges: Low- and Middle-Income Countries Country Profiles* (Washington, D.C., US: World Bank)

EXECUTIVE SUMMARY

Delivering safer roads supports climate change mitigation and adaptation, reducing both greenhouse gas emissions and local pollution. In Africa – where up to 78% of people walk to reach essential services every day – the challenge is to prevent modal shift away from walking by focusing on the safety, accessibility and comfort of pedestrians.³

Safe Schools Africa is saving lives now – as well improving environments, health and well-being – by changing how roads are designed and built. There is great demand for this work and no one else is doing it. The only limit to scale is funding.



Watch a video about Safe Schools Africa [here](#).

³ UNEP and UN-Habitat (2022). *Walking and Cycling in Africa: Evidence and Good Practice to Inspire Action*. Nairobi. <https://wedocs.unep.org/20.500.11822/40071>

WHY ARE DANGEROUS ROADS STILL BEING BUILT?

No government or development bank wants people – above all children – to be injured or killed on the roads they build or finance. Making roads safe is not a controversial proposition. The challenge lies in changing the existing practices that allow high-risk roads to be built.

There are three essential reasons why dangerous roads are still being designed and built in Sub-Saharan Africa: a lack of local technical capacity; a lack of local political will; and governments' and development banks' inability to procure the necessary resources. We will briefly look at each below.

■ Lack of local capacity

Roads projects in Africa are often financed by institutions such as the World Bank and African Development Bank. Financing is usually via the provision of loans to governments. The roads projects are managed by government roads agencies, which procure consultants and contractors to undertake the design and construction.

As such, the standard to which projects are implemented is heavily dependent on the capacity of the roads agencies and their consultants and contractors.

Most roads engineers trained in SSA were taught to design roads with only one type of road user in mind: the mono-modal motorist, cocooned in an air-conditioned bubble. This is despite the fact that the vast majority of people are multi-modal: walking, taking public minibuses, using motorcycle taxis, and perhaps cycling. But these people – the great majority – are rarely specifically considered in the development of road infrastructure.

In addition to this, at the design stage, many roads engineers in SSA are overstretched and can only focus on the 'high level' task of ensuring workable road alignments within the constraints of land ownership issues, budgets, and the like. They often do not have the capacity to approach road designs with an eye to accommodating specific road users like school children.

With little designed-in segregation of non-motorised users from motorised vehicles, and often ineffective control of vehicle speeds, pedestrians in particular find themselves at great risk.



WHY ARE DANGEROUS ROADS STILL BEING BUILT?

■ Lack of political will

The construction of roads facilitates economic development by reducing journey times. It is seen as a sign of future prosperity, making it understandably popular. As such, politicians in SSA, from the local level to the national and regional level, use road improvements to win votes. Often their priority is to enable people and goods to get from A to B in the shortest possible time – at the highest possible speed – even if these roads pass through communities where there are schools and vulnerable road users.

Project managers in both roads agencies and development banks are constantly performing a balancing act involving politics, timeframes, budgets and safeguards. They can only push to achieve the safeguards as hard as the local politics – and their timeframes and budgets – will allow, for fear of a project failing.

■ Procurement challenges

The processes of road financing, design and construction are deeply embedded within governments' ways of working, and suffer from a degree of inflexibility. The roads agency officials and their consultants implement a project following the same procedures as in the previous project, and the one before that. Even if the officials try to promote a different approach, they often face resistance from the consultants or contractors.

However, governments' and development banks' procurement rules – which are typically rigid and time-consuming – can make the procurement of specialist organisations to assist with ensuring the safety of vulnerable road users very difficult or impossible.



Improving road safety and protecting the planet and our health and well-being go hand-in-hand since so many of the solutions to both issues are linked.

Partnership for Active Travel and Health

WHY ARE DANGEROUS ROADS STILL BEING BUILT?

It is for these three essential reasons (lack of local capacity, lack of political will, and procurement challenges) that while stakeholders at all levels – all the way from the communities where children are being killed and injured to the presidents of countries – want safe infrastructure for children, the ability to deliver on that demand is severely limited.

It is these challenges that Safe Schools Africa is working to address. By providing *pro bono* support to roads projects teams, we provide the capacity to focus on safety, develop the capability of officials and engineers, and change the minds of politicians – all with the aim of creating roads where children can walk safely, also improving their health, well-being and the environment.



THE SOLUTION

The work of Safe Schools Africa is based on the principles of Amend's award-winning SARSAI programme – *School Area Road Safety Assessments and Improvements*.

The SARSAI programme was developed by Amend with the support of the FIA Foundation, starting in Tanzania and expanding to nine African countries. The aim was to prove that the concept of improving pedestrian infrastructure around schools to save children's lives could be effective in African countries. The overarching principle of SARSAI is 'people-centred design' – ensuring that in areas with high levels of pedestrian movement, such as around schools, road design prioritises people over vehicles.

SARSAI involves:

- A standardised assessment of children's journeys and school areas that looks at school routes, the existing behaviour of children, drivers and other road users, and road infrastructure;
- Government and community engagement;
- Design of site-specific infrastructure to improve safety;
- Installation of the new infrastructure – which includes measures such as footpaths, speed humps, bollards, signage, school fences, and new school gates – all designed to separate children from traffic and slow vehicle speeds where children and vehicles must interact;
- Community and school road safety education; and
- Monitoring and evaluation.

Countries in Africa where SARSAI has been implemented to date



Ayikai Poswayo, Safe Schools Africa Project Director accepting the WRI Ross Center Prize for Cities in New York City for Amend's work on SARSAI

THE SOLUTION

A key aim of SARSAI is to separate child pedestrians from vehicles and to reduce speeds where pedestrians and vehicles interact to 30 km/h or less. At above 30 km/h the risk of death or serious injury in case of impact between a vehicle and a pedestrian rises exponentially. For instance, a vehicle-pedestrian collision at 30 km/h has an approximately 10% chance of resulting in the pedestrian's death, while at 50 km/h that figure rises to over 80%.⁴

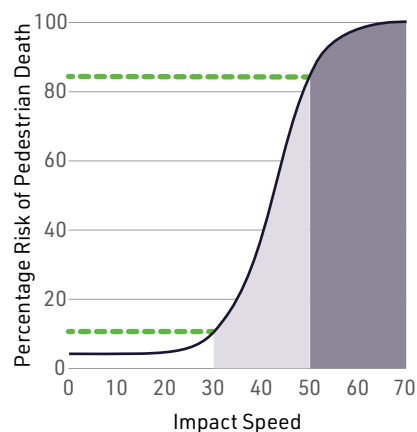
The SARSAI programme has won several awards for innovation, including the WRI Ross Center Prize for Cities.

In partnership with the United States Centers for Disease Control and Prevention (CDC), Amend conducted a multi-year population-based impact evaluation of SARSAI. This study found that the programme results in an over 26% reduction in injuries among children as well as a reduction in the severity of injuries that do occur.⁵ SARSAI is, to our knowledge, the only road safety programme of any type to be proven to reduce RTI rates in SSA via such a control study.

By working on development bank-financed projects, Safe Schools Africa is taking the rigorously evaluated, proven-effective principles contained in SARSAI to scale across the continent. Embedding these principles in large-scale projects ensures that thousands of kilometres of roads that would normally be built with minimal consideration for the safety of vulnerable road users, will be built safely for all.

Safe Schools Africa provides the capacity to save lives on Africa's roads today while building the capability of government roads agencies and their consulting engineers to carry these lifesaving principles forward over the long term.

The relationship between pedestrian safety and the impact speed of vehicles



⁴ Tingvall C, Haworth N. *Vision Zero - An ethical approach to safety and mobility*. 6th ITE International Conference Road Safety & Traffic Enforcement: Beyond 2000; Melbourne. 1999

⁵ Poswayo A, Kalolo S, Rabonovitz K, et al, *School Area Road Safety Assessment and Improvements (SARSAI) programme reduces road traffic injuries among children in Tanzania*, Injury Prevention 2019; 25:414-420

THE SOLUTION

Broadly, the input of Safe Schools Africa can be described in four categories:

1. Planning

Safe Schools Africa can provide planning support at the feasibility study phase of overall roads projects, through which multiple roads will be improved over a number of years, and into which effective community engagement and design for school children and other vulnerable road users can be incorporated from the beginning.

2. Design

We can provide design advice at the preliminary design or detailed design phase, supporting consulting engineers to incorporate effective safety measures, which are in line with the needs of the community, within the designs.

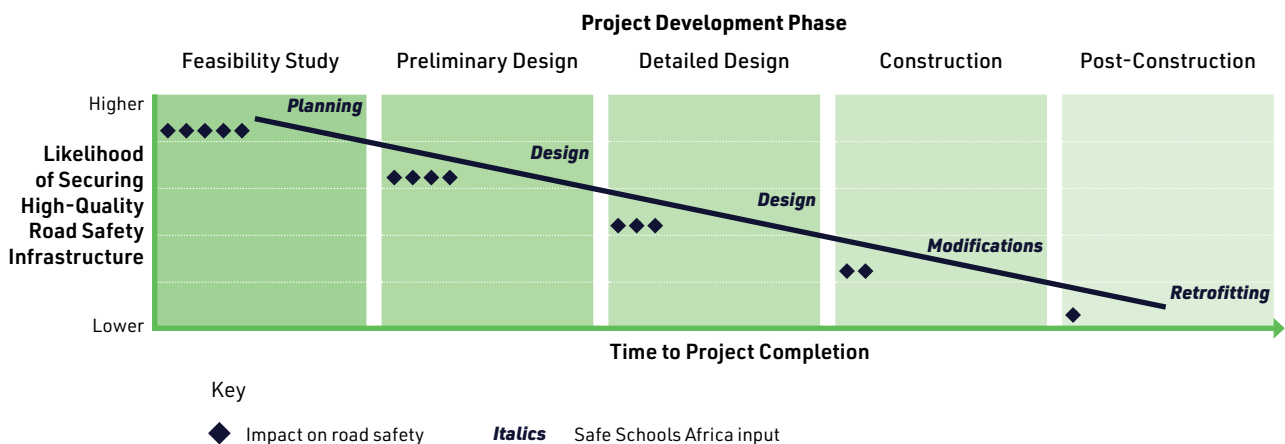
3. Modifications

Later on in projects, towards the construction phase, we can produce specific design recommendations for school areas.

4. Retrofitting

On roads that have already been constructed, but where road safety risk remains high, Safe Schools Africa can provide design recommendations for 'retrofitting' pedestrian infrastructure, installing new features into the existing road infrastructure.

The earlier in the process road safety can be embedded into a project, the greater the impact will be. The graphic below shows the typical stages of a roads project, the timeframes, likelihood of securing high-quality road safety infrastructure and impact.



A development bank-financed project timeline from feasibility to construction can last anywhere from a few years to more than a decade. Safe Schools Africa is able to provide valuable input at any of the phases of a project.



The World Bank will no longer design roads for cars – We will design roads for people.

Said Dahdah from the World Bank's Global Road Safety Facility, speaking at the launch of Safe Schools Africa in June 2022

SAFE SCHOOLS AFRICA PROJECTS

Safe Schools Africa was initially piloted on two projects in Tanzania:

- **Tanzania Strategic Cities Project (TSCP)**

The Tanzania Strategic Cities Project was a US\$175 million World Bank financed project that aimed to help cities in Tanzania improve the quality of and access to basic urban services. A key aspect of the project was the construction of roads across eight cities. In the original road designs for TSCP, no road safety provision had been specifically designed for children and school areas. Amend's teams of roads engineers and community outreach specialists obtained the project road designs, visited the site locations, worked with communities to understand how they use the roads and analysed the designs. Amend then developed and proposed modified road designs, taking the communities into account and recommending proven-effective road safety measures like footpaths, zebra crossings, speed humps, signage, guardrails and more. Many of the recommendations were implemented.

- **Dar es Salaam Metropolitan Development Project (DMDP)**

The Dar es Salaam Metropolitan Development Project was a US\$330 million World Bank financed project which included the construction and rehabilitation of roads across the largest city of Tanzania. Amend carried out road safety audits covering a total length of 31.5km of roads, developing recommendations for improvements to safety for all road users. Amend then provided targeted technical assistance specifically for school areas. The consulting engineers implemented our recommendations on the audited roads and applied the safe infrastructure principles on the wider project.



Amend's work has opened our eyes to things that we don't usually capture in our road safety improvements, and we see the importance of including a road safety expert on all projects

Engineer Jackson Kirungi, DMDP project, Tanzania

SAFE SCHOOLS AFRICA PROJECTS

The below are examples of other projects for which Safe Schools Africa has provided technical assistance since its launch in June 2022:

- **Integrated Feeder Road Development Project (IFRDP), Mozambique**
This US\$185 million World Bank financed project in Mozambique involves the construction of roads in Zambezia and Nampula provinces, as well as the rehabilitation of a section of the N1/N10 trunk road from Quelimane to Namacurra. Amend has identified and visited the schools in the vicinity of the N1/N10 and has worked with communities, government officials and roads contractors to build the will and consensus to modify the road designs with children's road safety as a priority.
- **Improved Rural Connectivity Project (IRCP), Zambia**
IRCP is a US\$ 200 million World Bank financed project which has the objective of improving rural road accessibility for communities. The project is improving feeder roads across ten provinces in Zambia. Safe Schools Africa has provided input at the preliminary design phase.
- **Roads to Inclusion and Socioeconomic Opportunities (RISE), Tanzania**
RISE is a US\$ 350 million World Bank financed project with the objective to improve rural road access and provide employment opportunities for populations in rural areas. Building on Amend's people-centered design input at the project development phase, Safe Schools Africa assessments have been carried out prior to road construction with recommendations for the safety of school children being compiled.
- **Eastern Corridor Road Development Programme (ECRDP), Ghana**
ECRDP Phase 1 is a US\$ 113 million African Development Bank (AfDB) financed project in Ghana. Safe Schools Africa assessments have been carried out at a number of schools close to the project roads.



Amend has been an excellent partner to the World Bank and the Government of Tanzania supporting the operationalization and enrichment of the People-Centered Design Approach (PCD) which was conceptualized during the preparation of the Roads to Inclusion and Socioeconomic Opportunities Program (RISE).

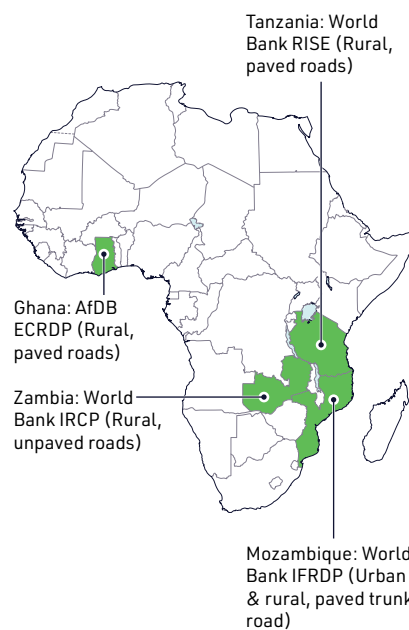
*Ramon Munoz-Raskin, Senior
Transport Specialist, Tanzania RISE
TTL, World Bank*

SAFE SCHOOLS AFRICA PROJECTS

To give a sense of the potential of Safe Schools Africa, the four projects listed above have benefitted approximately 100 schools with more than 100,000 students. These numbers have been achieved within just nine months of the launch of Safe Schools Africa, in June 2022. During the course of 2023, Safe Schools Africa will take on additional development bank-financed roads projects, with the support of the FIA Foundation.

This document's appendices contain examples of Safe Schools Africa's input on various projects to date. Appendix 1 contains examples of road infrastructure designs before and after Safe Schools Africa input on the TSCP project. Appendix 2 contains photos from various Safe Schools Africa projects before and after installation of the infrastructure. Appendix 3 gives examples of the findings and recommendations of initial investigations on the IRCP project. Appendix 4 contains a typical layout for a school zone on the IRCP project.

Safe Schools Africa projects initiated in 2022



IMPACT

Based on our experience to date, technical safe schools support on existing projects results in approximately €10 of safe school infrastructure from project budgets for every €1 invested in Safe Schools Africa. In other words, a contribution of €100,000 to Safe Schools Africa can result in governments and development banks reallocating approximately €1 million of project budgets, that would otherwise have gone to general road infrastructure, to safe school area infrastructure for children. Likewise, a €1 million investment in Safe Schools Africa can result in €10 million of safe infrastructure for children and a €10 million investment in Safe Schools Africa can result in €100 million of safe infrastructure.

The direct impact of a €10 million investment in Safe Schools Africa, based on the published findings of the aforementioned impact evaluation conducted with the United States Centers for Disease Control and Prevention, would be 2,689 child deaths and almost 200,000 serious child injuries averted in just the first five years after the infrastructure's installation. The amount of financial loss and human suffering averted as a result of this level of investment is difficult to calculate, but if one can imagine the impact of the death of a child on just one family, we can begin to understand the value of preventing many thousands of such losses.

The above calculations do not take into account sustainably-changed road design and building practices on the part of governments, consultants and contractors, that will arise through their working with Safe Schools Africa. This secondary impact could result in exponentially more lives saved and injuries averted.

Improving the safety of vulnerable road users not only reduces the risk of deaths and injuries, but also has environmental, social and health-related benefits. For example, enabling people to walk safely reduces the demand for motorised transport so reduces emissions, allows people to undertake daily activity improving their health and wellbeing, and plays a role in reducing congestion, which plagues so many SSA cities.



“I like the works that were done here. For example, at the zebra crossing, vehicles will now stop and let us cross.”

Gabriel Oscar Micaiane from Escola Primária A Luta Continua in Maputo, Mozambique speaking in this video about the SARSAl improvements at his school.

€10 million investment
in Safe Schools Africa



Averts in just the
first five years



2,689 child
deaths



200,000 serious
child injuries



Environmental, social
and health benefits



OPERATING PLAN

Safe Schools Africa is operated and administered by the FIA Foundation and Amend. The FIA Foundation and Amend work together on advocacy and project identification, while Amend carries out the community engagement and technical engineering services, and manages the logistics of project delivery.

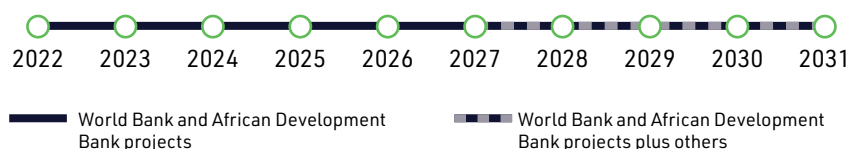
Safe Schools Africa has secured initial seedcorn funding of €1 million from the FIA Foundation. This initial funding of €500,000 per year for two years has allowed us to develop and rank a list of suitable projects, and offer services on eight to ten projects at any given time, resulting in safe infrastructure around hundreds of schools every year.

During the first five years of Safe Schools Africa's work, our focus is on identifying appropriate roads projects, and moving forward as many of them as financial resources allow. We work on a mix of projects at various stages of development and construction so that, at any given time, physical infrastructure is in the process of being put in place, while still influencing and structuring projects that will have impact over the longer term.

In the first five years, 2022-26, there are a sufficient number of projects financed by the World Bank and African Development Bank to occupy Safe Schools Africa at any scale that could realistically be achieved during that time. In the second five years (2027-31), we will expand to include roads projects financed by other entities, while continuing to work with the World Bank and the African Development Bank.



10-year timeline



OPERATING PLAN

Throughout the duration of Safe Schools Africa’s undertakings, activities will be supported by (separately-financed) SARSAI demonstration projects at individual schools in project countries. With SARSAI demonstrations we are able to tightly control the timelines and outputs of the implementations, and hold ribbon-cutting events that bring together all stakeholders and the media to highlight the importance of safe school infrastructure.

The FIA Foundation manages the financial and administrative governance of Safe Schools Africa as a normal grant, so the funds for Safe Schools Africa go directly to programme work with no additional administrative overhead. Further, the FIA Foundation and Amend contribute, at no cost to Safe Schools Africa, senior staff time for high level advocacy at the World Bank and other development banks, and for the identification of further funding partners.

“ People who walk and cycle are the foundation of resilient and sustainable mobility futures. Their experiences and needs should be ascribed the appropriate value to ensure the benefits are realised.

Walking and Cycling in Africa, UN Environment Programme, UN-Habitat and Walk21 Foundation



CONCLUSION

Whenever we knock on the door of a lending institution or a government roads agency in Africa, we find people eager for our help in making roads safe because they realise that business as usual results in needless death and suffering.

Safe Schools Africa presents a unique, focused, time-sensitive opportunity for funding partners to save children's lives on roads that are being built now.

From a funding partner's perspective, Safe Schools Africa is an attractive proposition: the work is highly-focused and proven effective, and 100% of donor funds go directly to programme work, which is immediately ready to scale up.

This work is pressing: roads are being financed and built throughout SSA at a rapid pace (the process did not slow down at all during COVID-19), and there is no other entity that is providing consulting on these projects to make sure that the roads are designed and built with the safety of children in mind.

Put simply, these roads are being built, and they are being built today, and there is no one else making sure that they are being built safely specifically for children. The demand for the work of Safe Schools Africa is enormous, and if Safe Schools Africa does not do the work, no one will, and the roads will kill and injure many more children.

There is immense opportunity for the incorporation of proven, lifesaving infrastructure measures in roads projects in the near term and at considerable scale and, over the longer term, to change expectations about how roads in Africa are designed and built. Safe Schools Africa's aim is that one day, all roads on the continent will be designed and built safely for all road users as a matter of course, and no one will be able to imagine that it was ever any other way.



For more information, please contact:

Jeffrey Witte, Executive Director, Amend, jwitte@amend.org

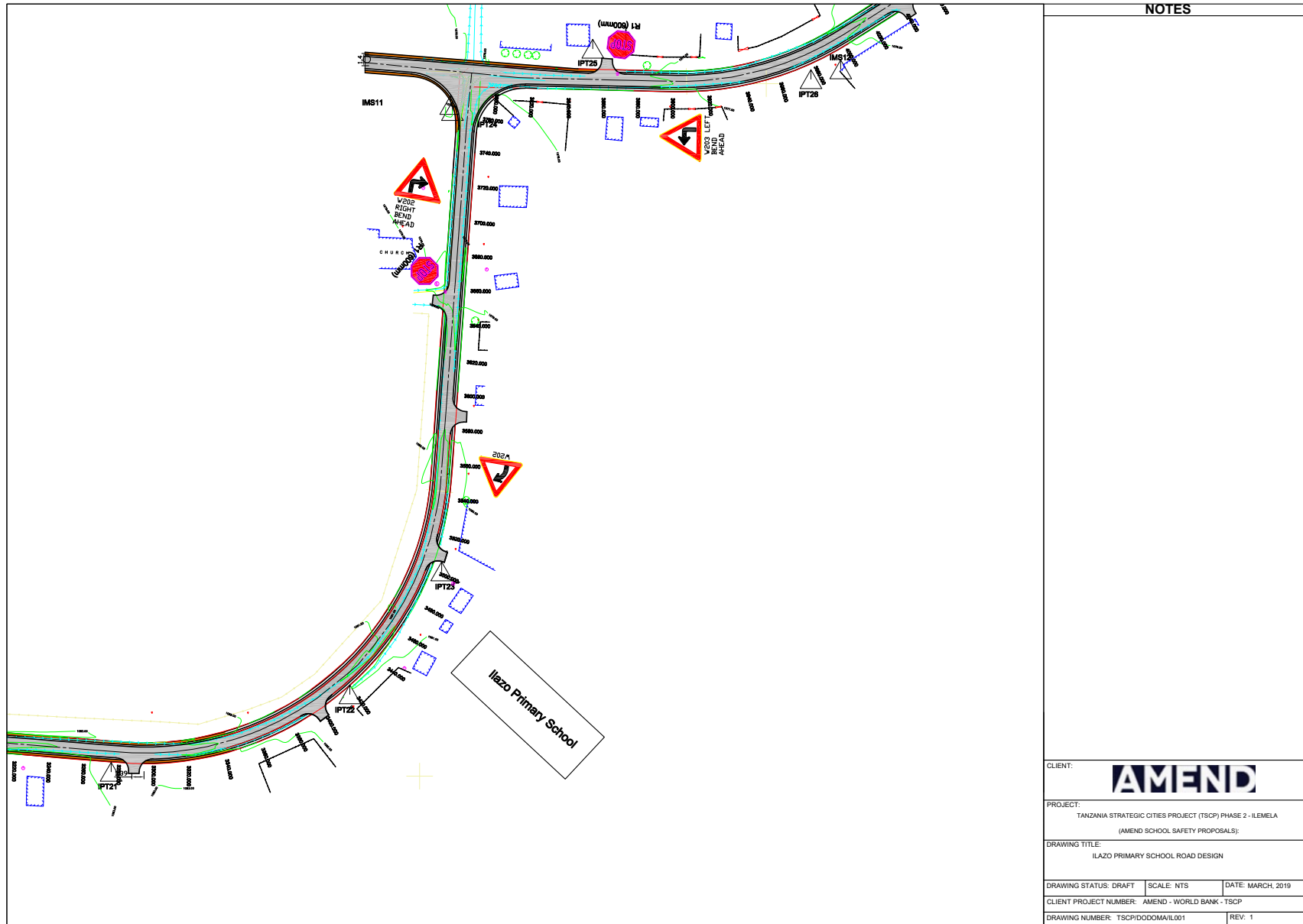
Saul Billingsley, Executive Director, FIA Foundation, s.billingsley@fiafoundation.org

APPENDIX 1

School area infrastructure designs before
and after Safe Schools Africa input



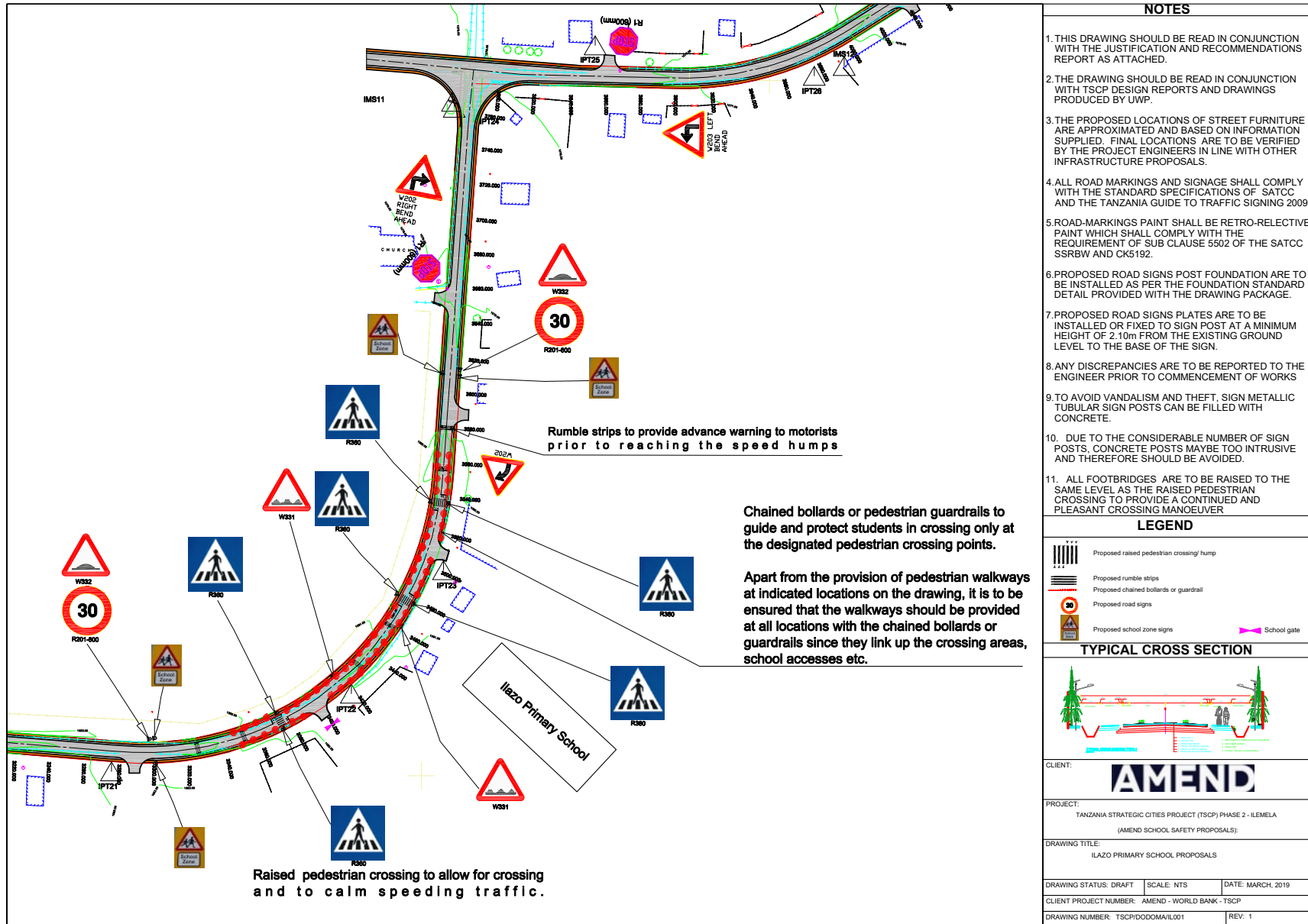
SITE 1: BEFORE SAFE SCHOOLS AFRICA INPUT



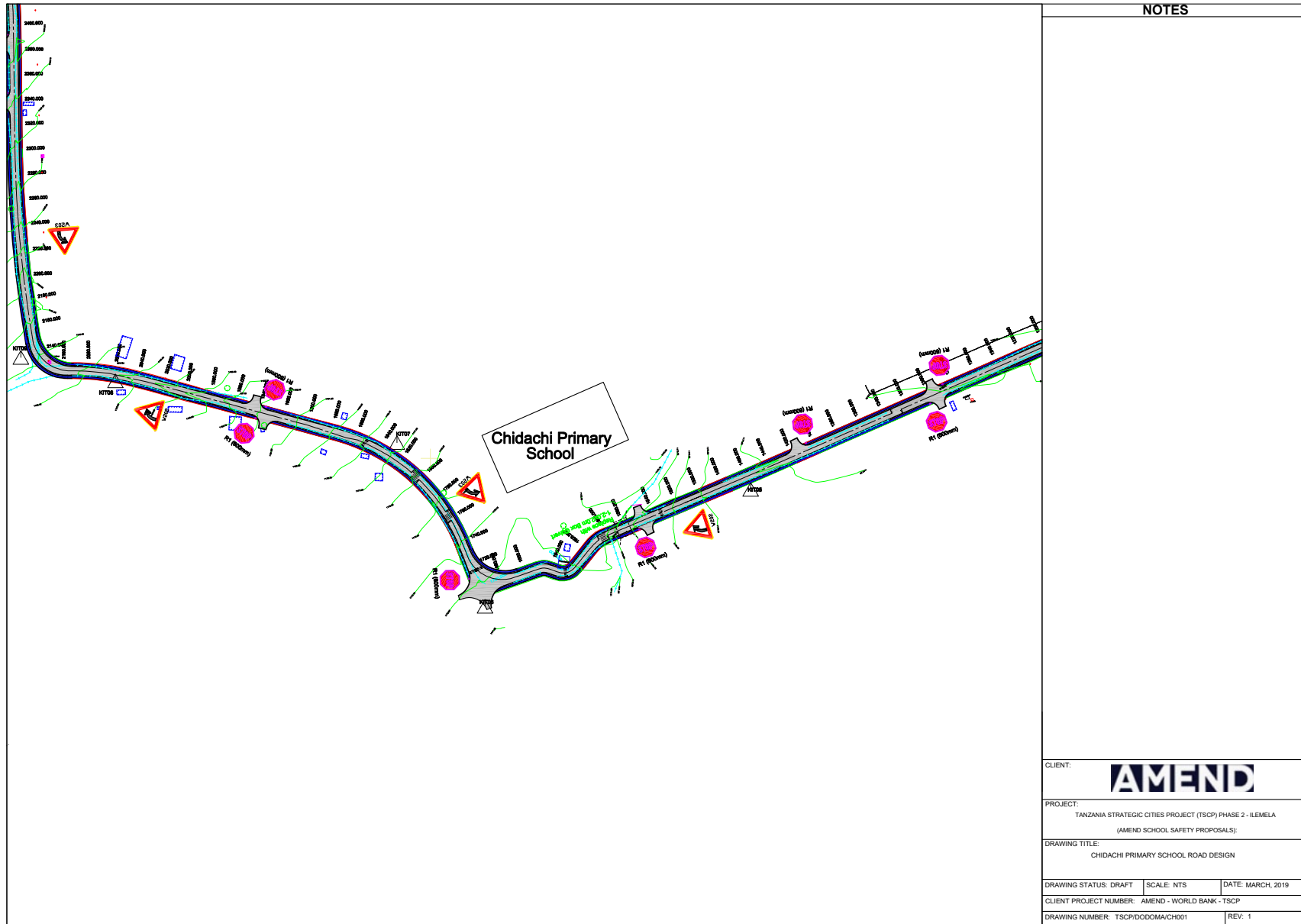
NOTES

CLIENT:		
AMEND		
PROJECT:		
TANZANIA STRATEGIC CITIES PROJECT (TSCP) PHASE 2 - ILEMELA (AMEND SCHOOL SAFETY PROPOSALS)		
DRAWING TITLE:		
ILAZO PRIMARY SCHOOL ROAD DESIGN		
DRAWING STATUS: DRAFT	SCALE: NTS	DATE: MARCH, 2019
CLIENT PROJECT NUMBER: AMEND - WORLD BANK - TSCP		
DRAWING NUMBER: TSCP/DODOMA/IL001		REV: 1

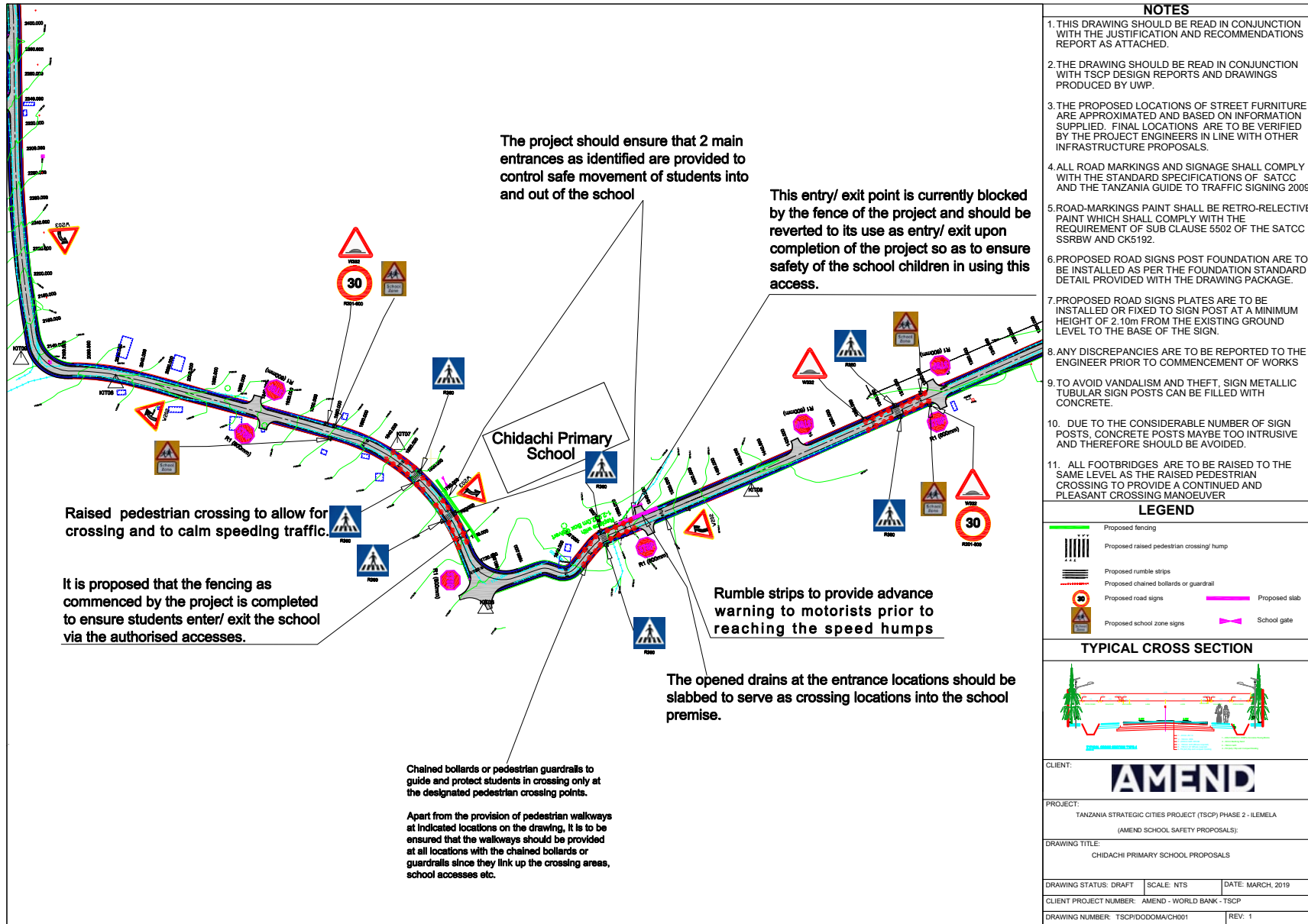
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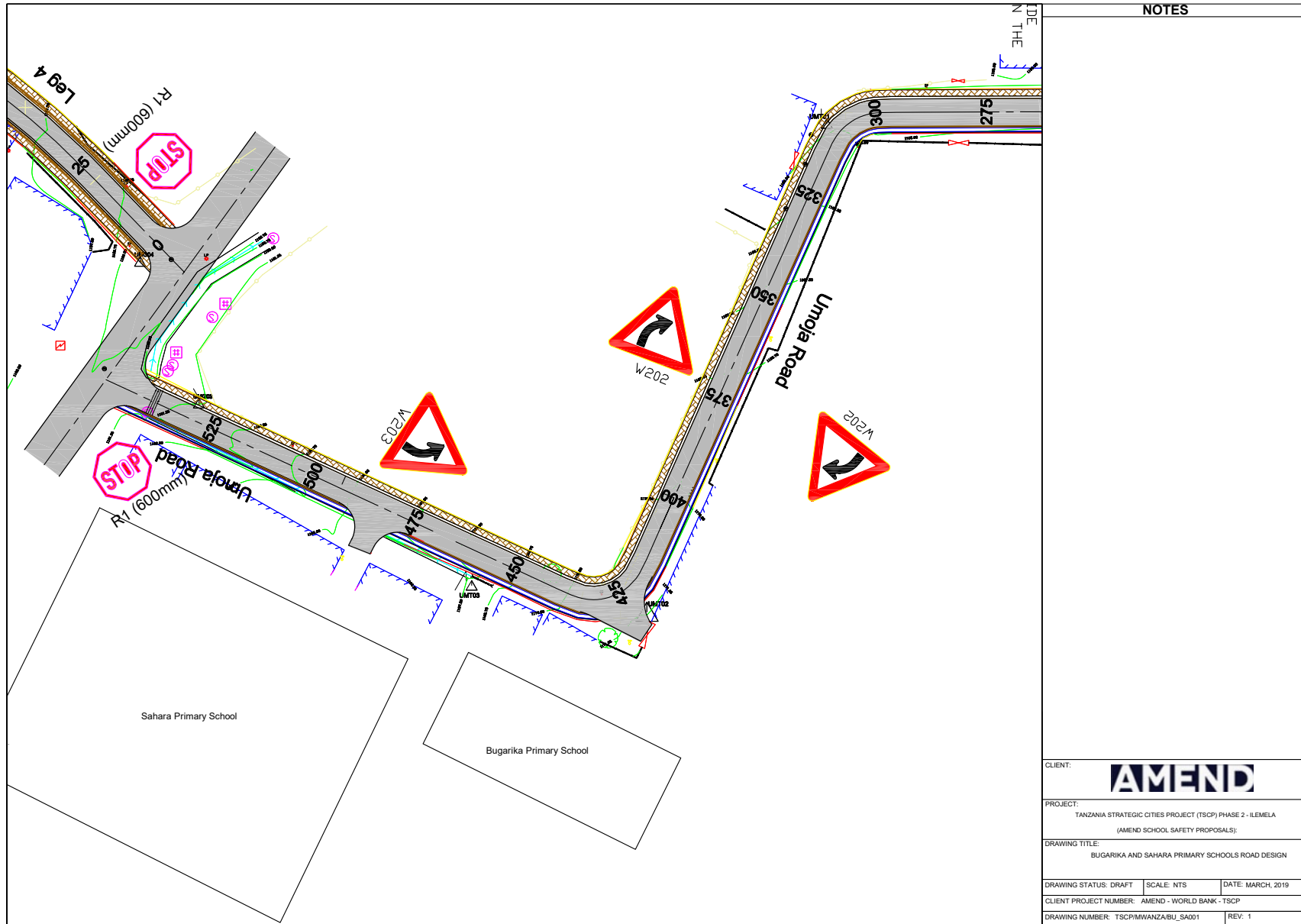
SITE 2: BEFORE SAFE SCHOOLS AFRICA INPUT



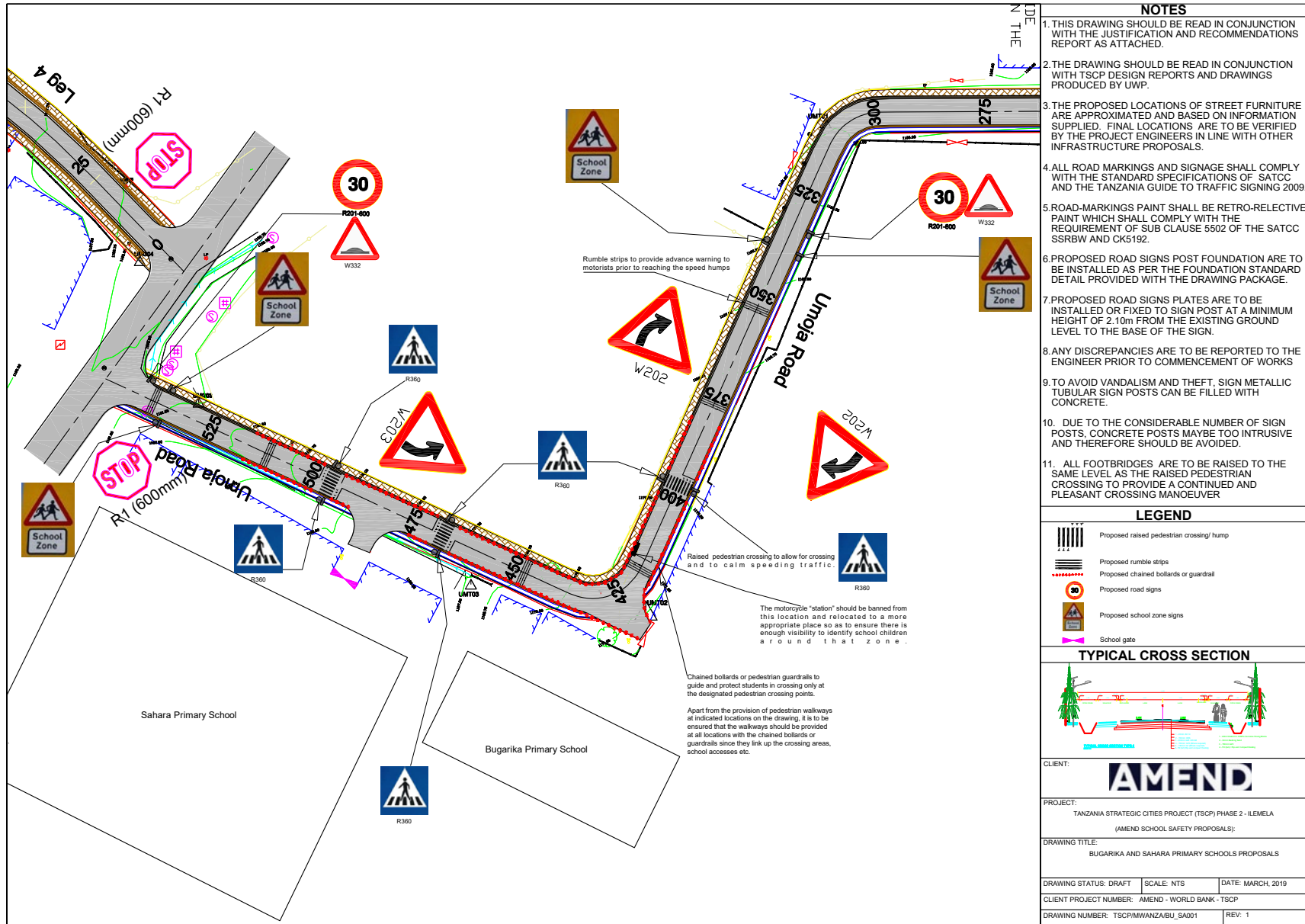
SITE 2: AFTER SAFE SCHOOLS AFRICA INPUT



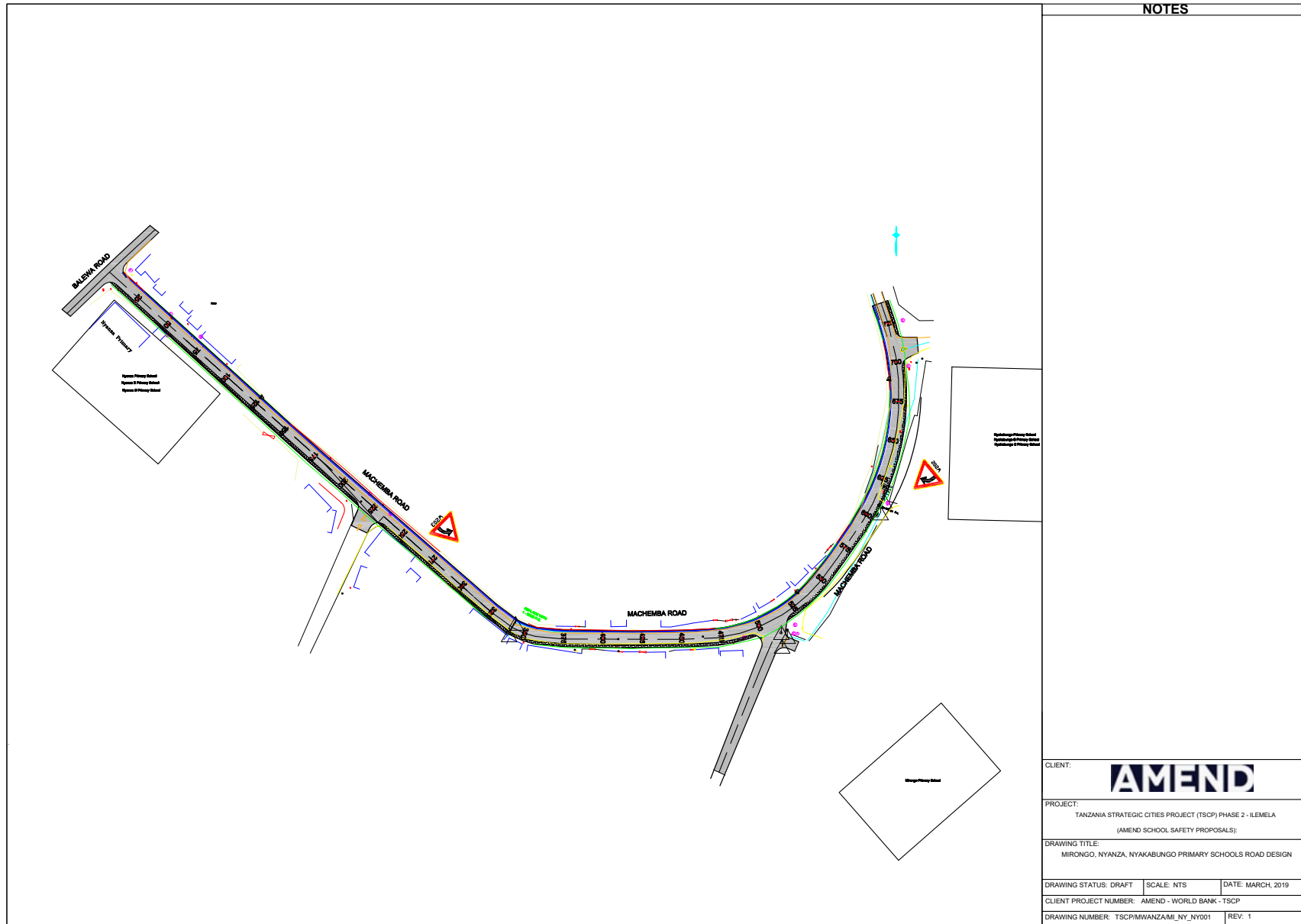
SITE 3: BEFORE SAFE SCHOOLS AFRICA INPUT



SITE 3: AFTER SAFE SCHOOLS AFRICA INPUT



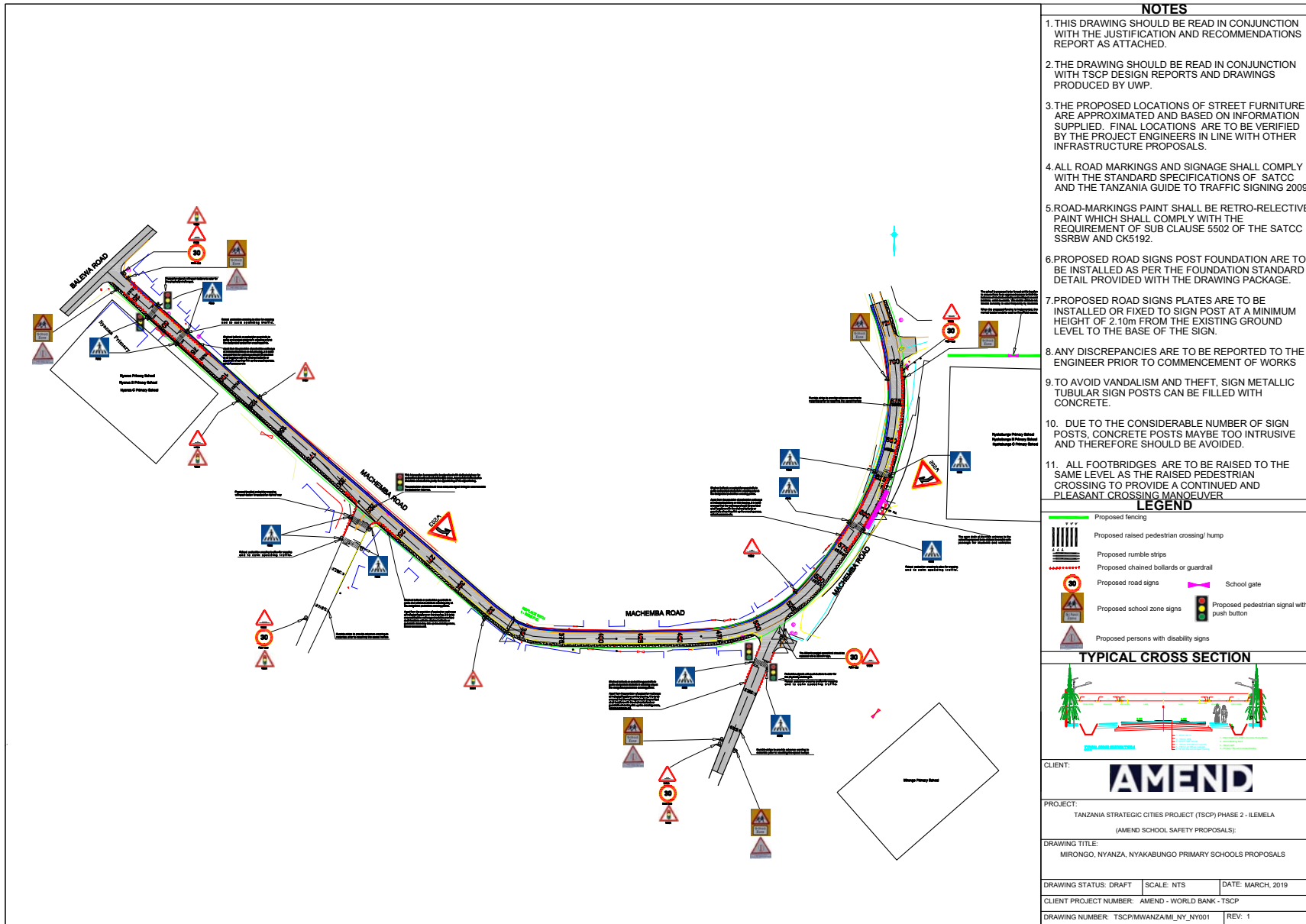
SITE 4: BEFORE SAFE SCHOOLS AFRICA INPUT



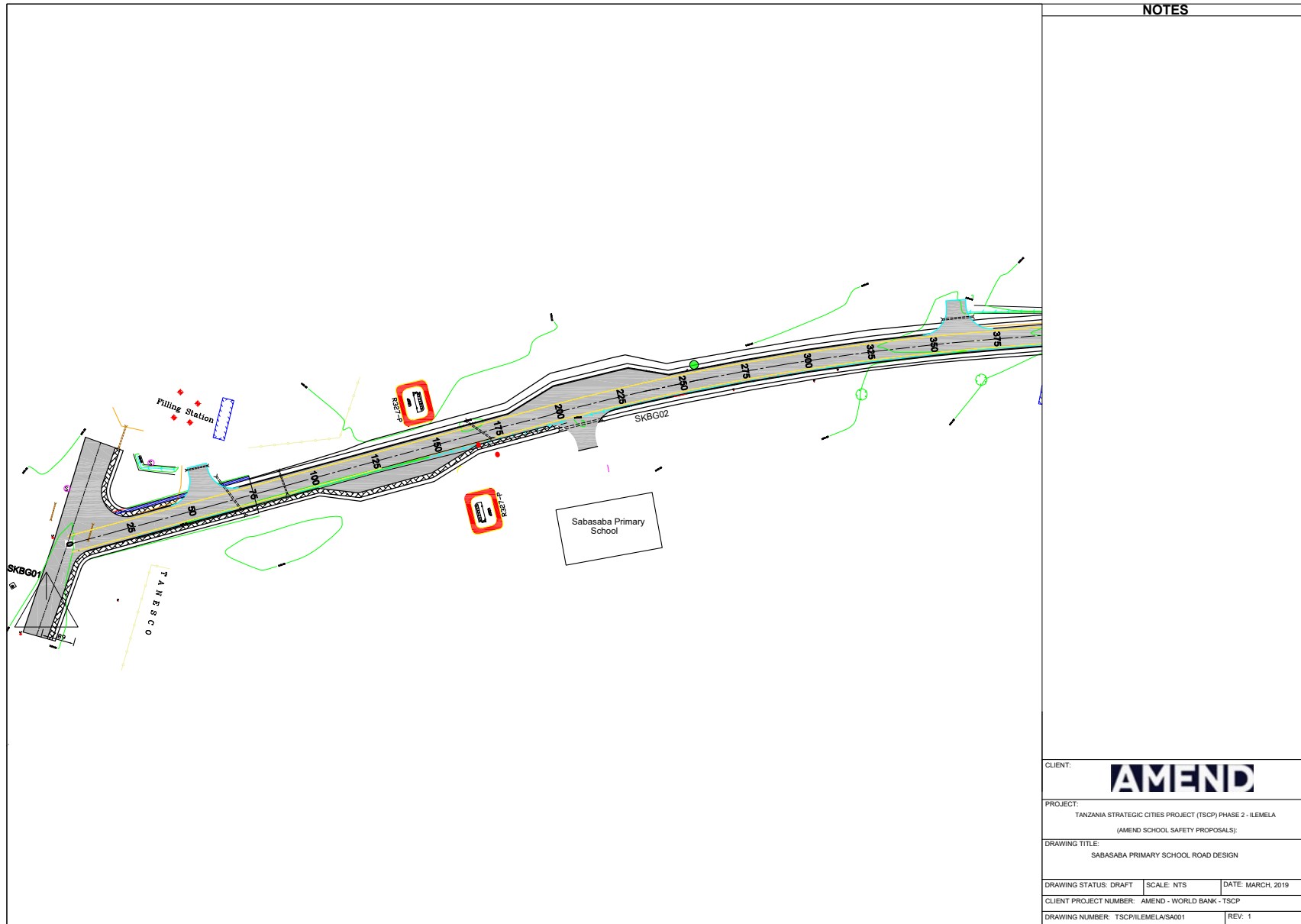
NOTES

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AMEND		
PROJECT:		
TANZANIA STRATEGIC CITIES PROJECT (TSCP) PHASE 2 - ILEMELA (AMEND SCHOOL SAFETY PROPOSALS)		
DRAWING TITLE:		
MIRONGO, NYANZA, NYAKABUNGO PRIMARY SCHOOLS ROAD DESIGN		
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DRAWING NUMBER: TSCP/MWANZAI/NY_NY001	REV: 1	

SITE 4: AFTER SAFE SCHOOLS AFRICA INPUT



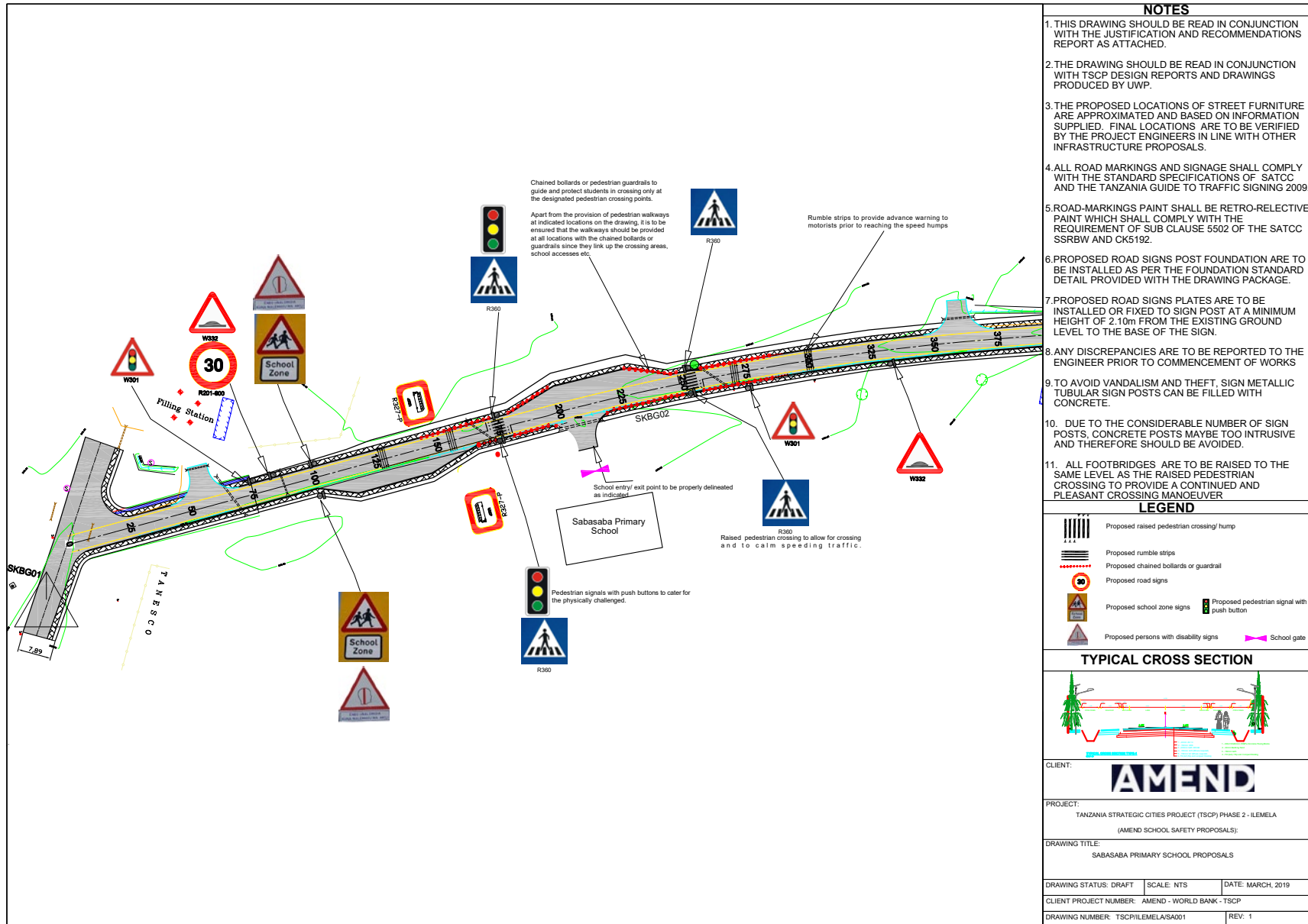
SITE 5: BEFORE SAFE SCHOOLS AFRICA INPUT



NOTES

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AMEND		
PROJECT: TANZANIA STRATEGIC CITIES PROJECT (TSCP) PHASE 2 - ILEMELA (AMEND SCHOOL SAFETY PROPOSALS):		
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CLIENT PROJECT NUMBER: AMEND - WORLD BANK - TSCP		
DRAWING NUMBER: TSCP/ILEMELA/SA001		REV: 1

SITE 5: AFTER SAFE SCHOOLS AFRICA INPUT



APPENDIX 2

Photos, before and after Safe Schools Africa input



MADENGE PRIMARY SCHOOL, DAR ES SALAAM, TANZANIA

Before Safe Schools Africa Input



After Safe Schools Africa Input



WAILES PRIMARY SCHOOL, DAR ES SALAAM, TANZANIA

Before Safe Schools Africa Input



After Safe Schools Africa Input



JUSTIN KABWE PRIMARY SCHOOL, LUSAKA, ZAMBIA

Before Safe Schools Africa Input



After Safe Schools Africa Input



BOPHIRIMA PRIMARY SCHOOL, GABORONE, BOTSWANA

Before Safe Schools Africa Input



After Safe Schools Africa Input



APPENDIX 3

School initial visit summary sheets – IRCP, Zambia



Roads

U003 [D145 (Chitope) to Banana Farms]

U004 [D145 – Membe]

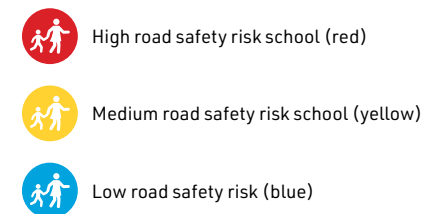
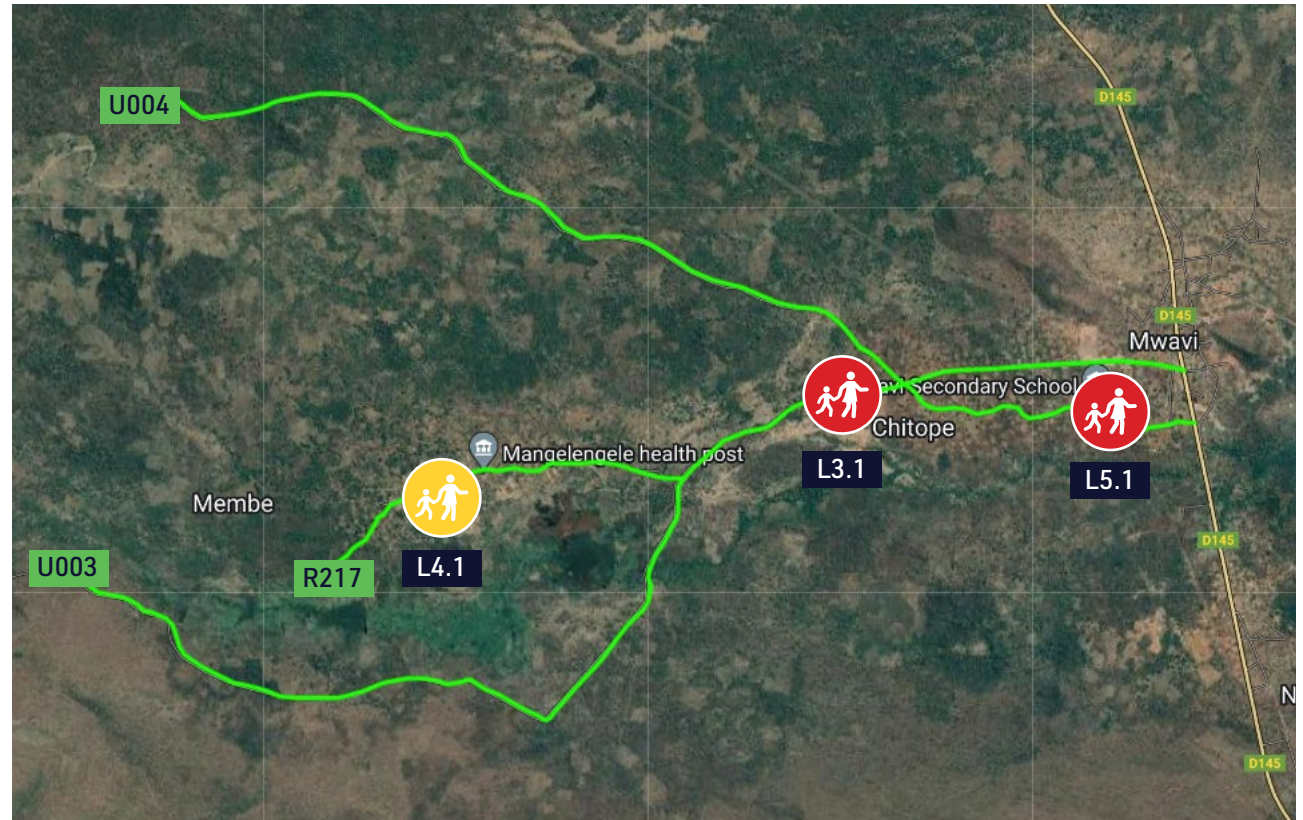
R217 [U3 to Mangelengele]

District

Luangwa

Brief Description:

- **U003**
The road is an important transportation route for the bananas grown on farms along it. Only the first 8.4Km is recommended for construction in the project due to lack of activity or settlements in the last 4Km.
- **U004**
Several settlements are found along the road followed by farming blocks. There is little activity after Membe village
- **R217**
Settlements are found throughout the road and the main economic activity is peasant agriculture.



Mwavi Primary School

Map Ref	L3.1
Approx. Distance of School Compound/ Entrance from Project Road	0 – 50 metres
School Fence/ Wall?	No
School Population	1,104
School Grades	Nursery to Grade 9
Modes of Transport to School	Majority walking, a few ride bicycles
Do Students cross project road?	Yes
Main Student Catchment Areas/Where Students Live	Linga, Mwavi, Mwandega, Milinda Ng'ombe, Manyenda, Membe, Ndalakwazi, and Limbani Villages.

Road Safety Situation

High Risk School

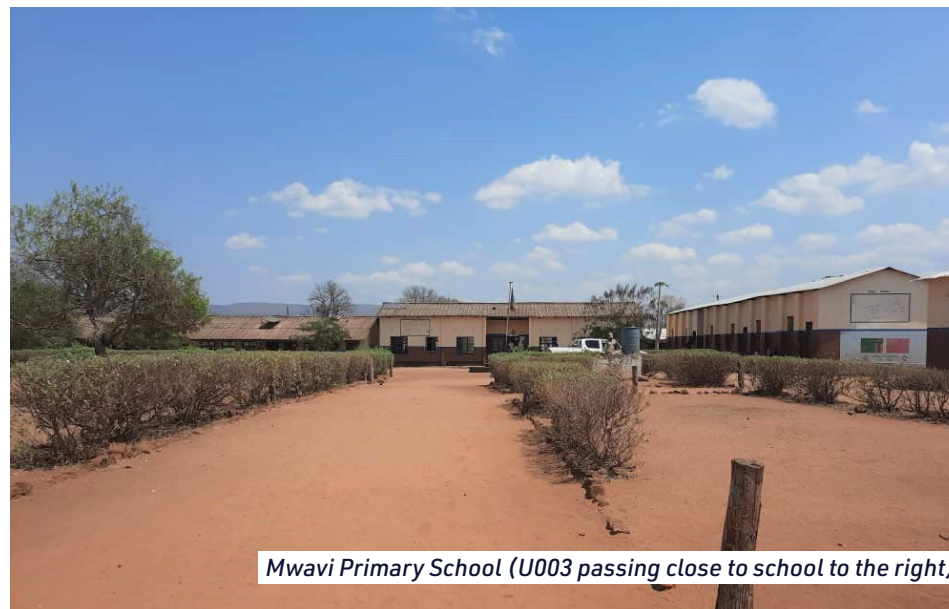
Project road next to school is relatively busy and speeds are likely to increase once road is complete.

The greatest risk is the tarmac road (D145) which some children cross to get to school. According to the head teacher, a child from this school was unfortunately killed on this road in the previous year.

The school could benefit from a wall/fence to channel children to one main entry/exit between speed control measures.

High Road Safety Risk School:

Road traffic injury amongst school children currently a challenge and/or high possibility of traffic injuries occurring amongst school population once road is improved if no specific interventions are provided for child safety.



Mwavi Primary School (U003 passing close to school to the right)

Road Safety Recommendations

School Zone Standard Layout Option 1 recommended outside school.

Special attention to be given to road safety measures on D145 (tarmac road where children cross).

These options have been recommended because of the proximity of the school to the road, the high proportion of vehicles and the existing road safety challenges.

Mangelengele Primary School

Map Ref	L4.1
Approx. Distance of School Compound/ Entrance from Project Road	0 – 10 meters
School Fence/ Wall?	No
School Population	370
School Grades	Nursery to Grade 7
Modes of Transport to School	Walking
Do Students cross project road?	Yes (some) from Mangelengele and Mumembe villages
Main Student Catchment Areas/Where Students Live	Chilimanga, Mangelengele, Mundela, Nakachombwe and Mumembe Villages

Road Safety Situation

Medium Risk School

Road is generally not busy but gets busy during political campaigns and elections



Mangelengel Primary School (U003 passing close to school)

Road Safety Recommendations

School Zone Standard Layout Option 3 recommended outside school.

This option is recommended because this section of the road is not generally very busy.

Medium Road Safety Risk School:

Road traffic injury amongst school children likely to become a challenge once road is improved if no specific interventions are provided for child safety.

Mwavi Secondary School

Map Ref	L5.1
Approx. Distance of School Compound/ Entrance from Project Road	0 metres
School Fence/ Wall?	No
School Population	500
School Grades	Grade 9 to Grade 12
Modes of Transport to School	Walking for day scholars
Do Students cross project road?	Yes
Main Student Catchment Areas/Where Students Live	Chilimanga, Mwavi, Membe, Limbani, Mangelengele and Zalapango Villages.

Road Safety Situation

High Risk School

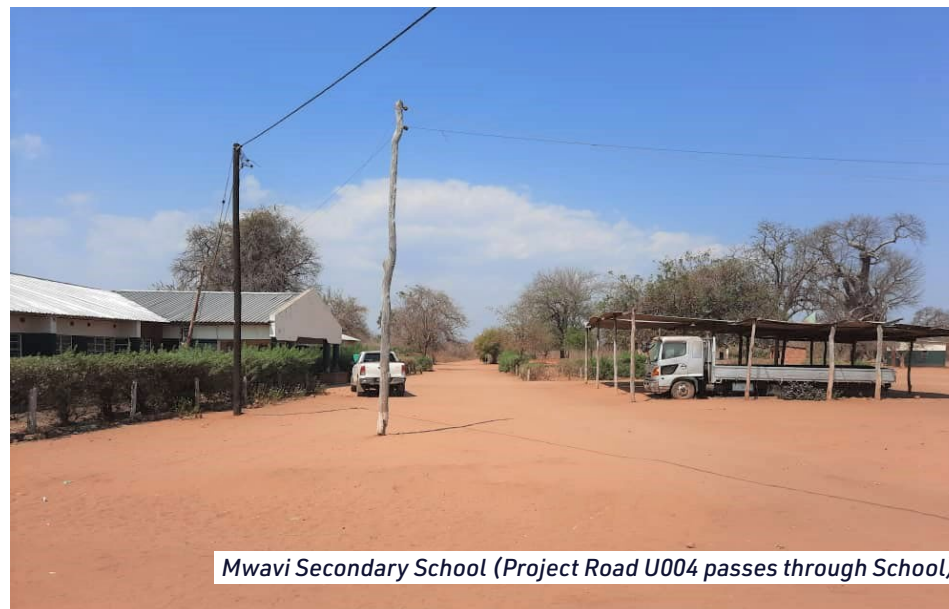
The project road (U004) passes through the school with classrooms on either side. This will pose a road safety challenge once the road is constructed, if not diverted.. In the past the school tried to block the road because of road safety concerns as well as noise.

Another risk is the tarmac road (D145) where children also cross to get to school.

The school could benefit from a wall/fence to channel children to one main entry/ exit between speed control measures.

High Road Safety Risk School:

Road traffic injury amongst school children currently a challenge and/or high possibility of traffic injuries occurring amongst school population once road is improved if no specific interventions are provided for child safety.



Mwavi Secondary School (Project Road U004 passes through School)

Road Safety Recommendations

Road diversion recommended around classrooms and sports field.

If not possible, Standard School Zone Layout Option 1 recommended on project road which runs between classroom blocks.

Special attention to be given to road safety measures on D145 (tarmac road where children cross)

These options have been recommended because of the proximity of the school to the road and the existing road safety challenges.

APPENDIX 4

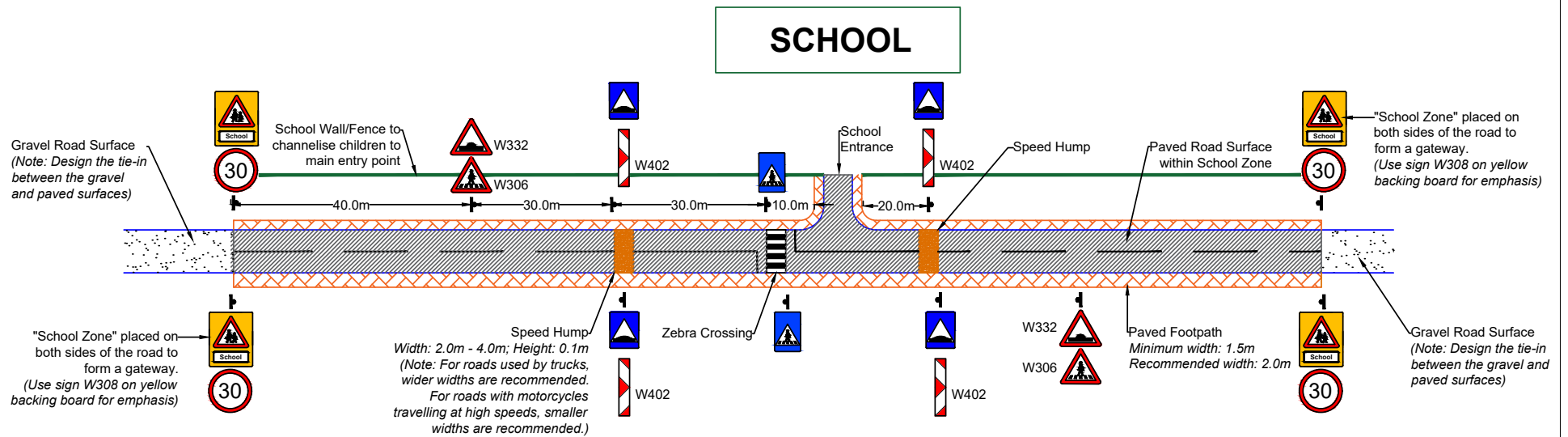
Typical layout for a school zone – IRCP, Zambia

IMPROVED RURAL CONNECTIVITY PROJECT, ZAMBIA

TYPICAL LAYOUT FOR A SCHOOL ZONE

OPTION 1

Paved Road Surface within School Zone (School Wall Provided)



Note:
This layout is generally recommended for individual schools. However, this would need to be looked at and modified where necessary for site-specific conditions. Consideration would need to be given to aspects such as the road alignment at each location. For each road, the recommended interventions for the individual schools will also need to be considered in light of other schools and facilities (clinics, markets, etc.) along the entire stretch and surrounding areas.

