INFRASTRUCTURE ASSESSMENT AUDIT FOR SUVA – NAUSORI URBAN SCHOOLS

MARIST BROTHERS HIGH SCHOOL (REG 2309)

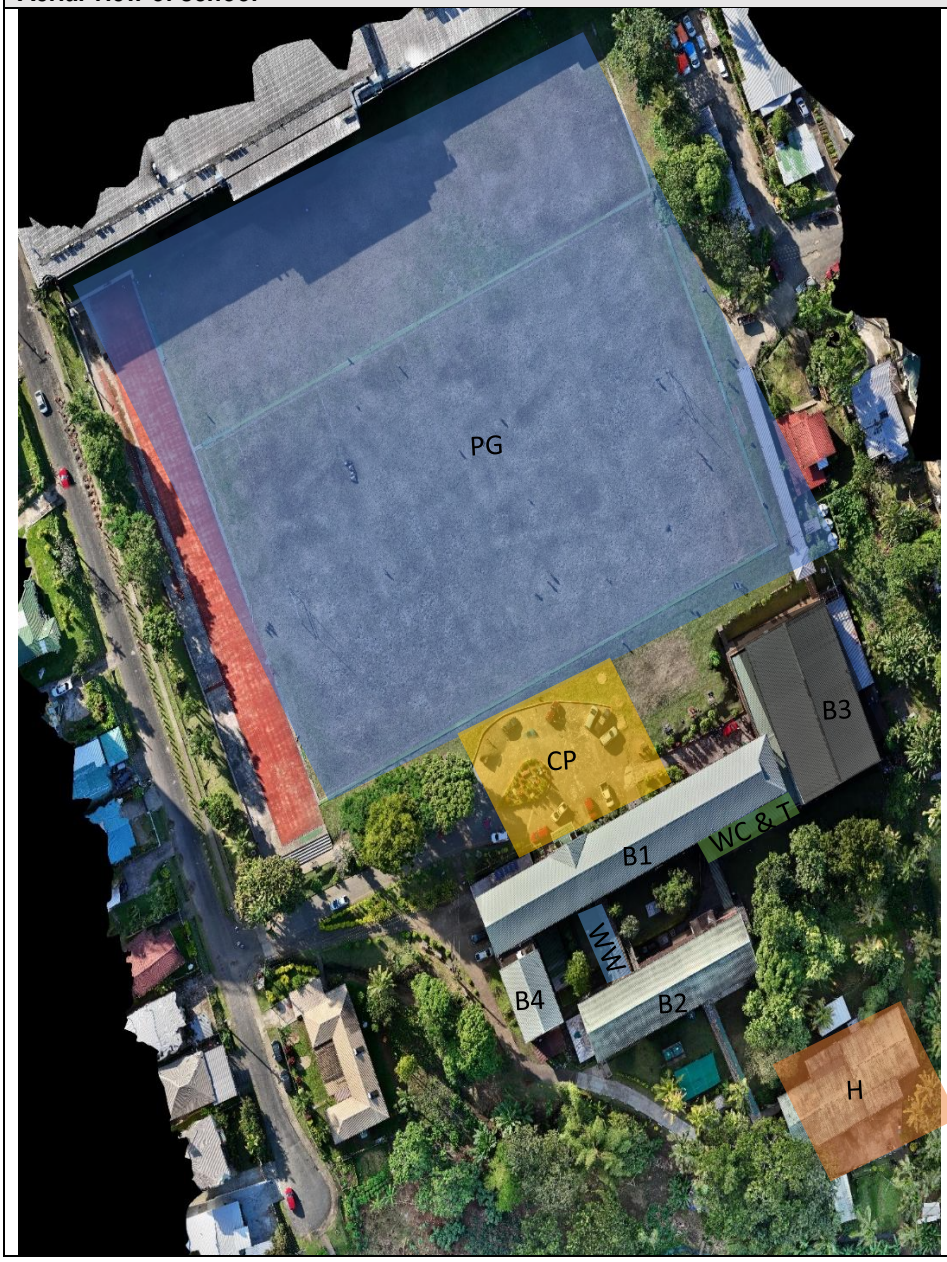
SUMMARY REPORT

TABLE OF CONTENTS

1) INSPECTION SUMMARY

School Inspection Summary	
School name:	MARIST BROTHERS HIGH SCHOOL
Overall condition state:	FAIR
Key recommendations:	
- Overcrowding – 10 new classrooms required based on FNBC standards - WASH – Maintenance of ablution blocks required - Accessibility –All buildings require accessibility ramps, accessible doorways - Disaster resilience – Windows to include cyclone shutters and roof cladding fastened with Cyclone roofing screws.	
Comments:	
Major defects were noted as follows: • Damaged ceiling with water leakage stain Cracks on walls • Missing ramps • Inadequate stairway width. • Girls' toilet cubicles in poor condition. • Dented and dislodged handrails. • Rusted roof cladding, gutter and roofing nails	

Aerial view of school



General view of school

School type:	**Primary**		**Secondary**	✓	**Year levels**	9,10,11,12,13
School address:	CAREW STREET, FLAGSTAFF, SUVA					
School enrolment and staff figures	**No. of Students (Male)**	**No. of Students (Female)**	**No. of Students with Disability**	**No. of Teachers (Male)**	**No. of Teachers (Female)**	
	804	0	0	24	18	
School building arrangement	TOTAL NUMBER OF BUILDINGS: 4 **B1** – 3 STOREYS / **B2** – 3 STOREYS / **B3** – 2 STOREYS / **B4** – 3 STOREYS					
Local government area:						
Date of inspection:	11TH JUNE, 2024					
Inspection team:	KUNAAL NAND (KN) HENDRY TABULAWAKI (HT) CLIFFTON RAITAVOWAI (CR) MARIA LUTUA (ML)					
Data collection methods	Visual inspection	✓	Onsite measurement	✓		
	Interviews with school staff	✓	Drone / aerial imagery	✓		
	Survey form	✓	Desktop research	✓		
	Other:					
Assumptions:	NONE					
Limitations:	UNAVAILABILITY OF ALL SCHOOL DOCUMENTS SUCH AS BOUNDARY AREA.					

2) ASSESSMENT OF OVERCROWDING

An assessment for overcrowding was undertaken based on FNBC standards and 2024 enrolment data. The table below summarises the data collected through visual inspection and interrogation of enrolment data and compares this against the FNBC standard student to classroom size ratio of 2 m^2 per student.

The results of the assessment are based on the recommended sizing (1.5m^2), according to 2024 data, an additional 1 classrooms are required across each year levels 9, 10, 12, and 13, 2 additional classroom required for year 11 for Marist Brothers High School.

Year	Stream	Number of students	Current number of classrooms	Number of extra classrooms required based on FNBC on 2024 data
9	01	35	4	1
	02	35		
	03	35		
	04	35		
10	01	35	4	1
	02	35		
	03	34		
	04	35		
11	01	42	4	2
	02	46		
	03	51		
	04	48		
12	01	48	5	1
	02	41		
	03	47		
	04	39		

	05	45		
13	13A	33	3	1
	13B	28		
	13C	30		

3) EXISTING INFRASTRUCTURE CONDITIONS

Given the outlined procedure, the following observations were made:

Block Code	Length (m)	Width (m)	Height (m)	No. of Levels	Type	Room List
B1	77.4	9.5	10.1	3	Concrete Structure with cladding on timber framed roof structure	- **Basement Floor** – 1 x canteen / 1 x storeroom / 1 boys toilet/ 1 x staffroom **- Ground Floor** – 1 x principal's office / 1 x vice principal's office / 1 x assistant principal's office / 1 x admin office / 5 x Classrooms **- Top Floor** – 8 x classrooms / 1 x Hall
B2	41.7	10	9.8	3	Concrete Structure with cladding on timber framed roof structure	**- Ground Floor** – 1 x boy's toilet / 2 x Physics Lab **- 1st Floor** – 1 x Library / 2 x Classrooms **- 2nd Floor** – 5 x Classrooms
B3	30.9	23.5	9.9	2	Concrete Structure with cladding on timber framed roof structure	**- Basement Floor** – Multi purpose Court 2 (For Rugby) **- Ground Floor** – Multi purpose Court 1
B4	14.5	7.8	9.8	3	Concrete Structure with cladding on timber framed roof structure	**- Ground Floor** – 3 x Optional Classroom **- 1st Floor** – 3 x Optional Classroom **- 2nd Floor** – 3 x Storage rooms

NOTE: Toilets mentioned refers to a set of cubicles.

Summary Table for Classrooms

This table provides a quick overview of the assessment findings, helping to identify areas that need immediate attention and those that are in good condition. The following criteria was used:

- Good - No additional works / intervention required
- Fair - Remedial works required
- Poor - Demolition and replace with new

Assessment Area	Criteria	Conditions
Structural Integrity	Walls, ceiling, floor, foundation and roofs	Fair
General upkeep	Exterior, interior, furniture and fixtures	Fair
Safety compliance	Fire safety, electrical safety,	Fair
Disability	Accessibility	Poor
Ventilation and lighting	Ventilations, Natural Lighting, Artificial Lighting.	Fair

Observations on Structural Elements

- **Walls and Ceiling** – Cracks on concrete observed at the rear of building AT. There was water leak marks in the ceiling of AT technical department staff room and library communications room. There were no signs of wear and tear on walls. The walls and ceiling were well painted.
- **Floors and Foundation** – the floor and foundation for the entire school is found to be stable. There were no visible or sign of cracks or uneven surface. However, the floor is mostly covered with titles.
- **Roofs** – the school reported that there are no leaks. It was found that roof materials are in good condition. However, some roof cladding and fastenings are partially rusted and requires upgrading works.

- **Windows** – some missing window louvre blades were recorded at various buildings
- **Earthquake –** The three-storey concrete buildings indicates resistance to earthquake based on suitable column, beam and slab size and design.
- **Cyclone** – minor roof upgrading works required to increase cyclone resilient capacity of the structures.

Existing Conditions of Building and Maintenance

- **Exterior –** the building is in fair condition as the wall, beam, column, window seal, doors, eaves, fascia boards and gutters are intact and coated with paint. The school executes periodical maintenance.
- **Interior –** the building is in fair condition as the walls, beams, columns windows, doors and ceiling are intact and coated with paint. The school executes periodical maintenance. The classrooms were found to be clean with proper waste disposal.
- **Furniture and Fixtures –** the classrooms and offices have adequate furniture and fixtures that do not impede on the function of the buildings.

Safety and compliance with standards

- **Fire Safety –** the school does not possess adequate fire safety mechanisms. Present fire Extinguishers need maintenance and commissioning. No fire hydrants and alarm systems were found. The school has Emergency exit plan and designated assembly area provisioned.
- **Electrical Safety –** The school is connected to EFL Grid. The school has surface wiring with no fault outlets. All electrical systems are measured to be safe.
- **Accessibility –** the school does not meet disability accessibility standards. The school does not have facilities such as ramps, handrails and accessible restrooms.

Lighting and Ventilation

- **Ventilation –** HVAC system (Heating, Ventilation, and Air Conditioning) is centrally located in the school, in particular, offices and Computer Labs.
- **Natural Lighting –** there are adequate number of windows installed in classrooms, that are regularly cleaned to allow natural light to enter into classrooms unobstructed.
- **Artificial Lighting –** it was found that all light fixtures are working and provides adequate illumination.

4) WATER SANITATION HYGIENE (WASH) FACILITIES

Condition of Toilets and Washrooms

Marist Brothers High School has 2 blocks with toilet facilities. The facilities have some minor defects such as:

- The cubicle doors were damaged.
- Some toilet seat pans were missing.
- Rust was found on the door hinges and steel connectors of the PVC pipe outlets in the toilet system.
- The floor and walls had damaged and missing tiles.

The WASH facilities were unclean and lacked maintenance .

The Table below presents wash facilities data.

TOILET CUBICLE(S)		No. of Cubicles		Toilet Ratio (1 cubicle: students)		Compliance of Student to Toilet Cubicle Ratio (FNBC).	
Building Index	Used by Years	Female	Male	Female	Male	Female Requirement (1:20) Extra Toilets?	Male Requirement (1:30) Extra Toilets?
B1	All Years	0	9	0	45	N/A	0
B2	All Years	0	9	0	45	N/A	0

HAND BASINS IN THE TOILET		No. of Hand Basins		Handbasin Ratio 1:		Compliance of Student to Hand Basin Ratio (FNBC).	
Building Index	Used by Years	Female	Male	Female	Male	Female Requirement (1:60) Extra Handbasins?	Male Requirement (1:60) Extra Handbasins?
B1	All Years	0	5	0	80	N/A	N/A
B2	All Years	0	5	0	80	N/A	N/A

GENERAL OUTDOOR TAPS		No. of General Outdoor Taps	Outdoor Taps Ratio 1:	Compliance of Student to Outdoor Taps Ratio Requirement (1:60) (FNBC) Does it require additional hand basins?
Building Index	Used by Years			
All Building	All Years	21	39	0

5) DISASTER RESILIENCE ASSESSMENT

This infrastructure condition assessment aims to evaluate the architectural, structural, and non-structural features of the school to ensure it is resilient to natural disasters and provides a safe learning environment for students. The assessment also identifies areas for improvement and highlights the measures already in place to enhance overall resilience. FNBC 1990 and basic loading, wind and seismic AS/NZS codes typical details were utilized during and after inspection.

Architectural

- Cyclonic Roof: The school has a cyclonic roof designed to withstand strong winds and seismic activity. However, replacement with new roof cladding and roofing screws is needed.
- Central Location: The school is centrally located, allowing easy access to main streets and relief services.

Structural

- Material Quality: The school buildings are constructed using reinforced concrete and follow acceptable engineering design principles.
- Structural Integrity: Buildings have demonstrated the capability to withstand and recover from natural disasters like earthquakes, category 3 cyclones, and floods.

Non-Structural

- Disaster Preparedness: Implementation of disaster evacuation plans, emergency exit routes, and safety protocols.
- Fire Safety: Equipped with a fire alarm system and strategically placed fire extinguishers to mitigate fire-related risks.

6) ACCESSIBILITY ASSESSMENT

1. **Compliance with Accessibility Standards:**
   - Educational facilities did not meet accessibility standards, such as the Fiji Disable People Federation Access Audit Tool 1.0. This toolkit covers aspects like ramps, door widths, signage,

and accessible routes, also the noncompliance extends beyond physical structures to digital accessibility.

2. **Facilities for Students with Disabilities:**

- Classrooms did not have adjustable seating arrangements, clear sightlines, and adequate space for mobility aids also including accessible desks and adjustable podiums.
- Laboratories are not able to accommodate students with various disabilities with the absence of adjustable lab benches, accessible sinks, and clear pathways.
- Libraries require accessible shelving, reading stations, and assistive technology (such as screen readers) to enhance library usability.
- Restrooms (WASH facilities) were not wheelchair-accessible or have grab bars and sinks at an appropriate height.
- Common Areas: the cafeterias and outdoor spaces were not designed inclusively. Benches, seating areas, and a few pathways are not able to accommodate everyone.

3. **Access to Classrooms, WASH Facilities, and Common Areas:**

- Classrooms do not have wide doorways and ramps to ensure access to classrooms. Additionally, acoustics are not considered for students with hearing impairments.
- WASH Facilities do not have accessible restrooms with proper signage and a clear pathway to the wash facilities.

  Common Areas like corridors, courtyards, and gathering spaces are not barrier-free and are without proper lighting and contrasting floor materials to aid navigation.

7) SUMMARY OF FINDINGS

The following summarizes the individual characteristics assessed during the Suva-Nausori school audit for Jai Narayan College:

Categories of Assessment	Existing Condition / State	Required as per Standards	Gaps Observed
Existing Infrastructure Condition	- Structural Integrity – Columns, slabs, beams, rafters, purlins of adequate size. - General upkeep – Minor irregular maintenance. - Safety compliance- handrails where necessary. - Disability- no consideration when constructed. - Ventilation and lighting – damaged and missing lights at some sections of buildings.	- Structural Integrity – Columns, slabs, beams, rafters, purlins sizes to follow FNBC 1990. - General upkeep –routine checkup as per MOE policies with major defects requiring immediate intervention. - Safety compliance- handrails, extra doors and signage where necessary. - Disability- to comply with FDPF Disability audit tool - Ventilation and lighting – adequate windows and doors required as per FNBC 1990.	- Structural Integrity – Columns, slabs, beams, rafters, purlins sizes to follow FNBC 1990. - General upkeep –requires immediate intervention to major defects. - Safety compliance- safety handrails were only present in suspended floors while ground floor rails beside drain had missing rails (not fully safety compliant). FDPF requires signage which was absent from the school. - Disability- not fully compliant with FDPF Disability audit tool - Ventilation and lighting – limitations in the count of windows and lightings compared to required FNBC.
Assessment of Overcrowding	- The classrooms are accommodating an average of 807 roll/20 classrooms of 41 students.	- FNBC 1990 requires classroom occupancy to have 2m^2 per person. Based on that, the required roll per classroom was calculated.	- 14/20 classrooms were accommodating more roll than the required FNBC standard. - Given the recommended sizing (1.5m^2), about 6 extra classrooms are required to address overcrowding in school.
Water Sanitation Hygiene (WASH) facilities	Toilets (students: Cubicle) - Boys – 45:1 Taps (students: tap) - Students – 39:1 (21 taps)	Toilets Ratio (students: Cubicle) - Boys – 30:1 Taps Ratio (students: tap) - Students – 60:1 **Please note: Above number of cubicles and taps are respective of 2024 enrolment numbers. Due to variation of ratio with student population in FNBC, the initial ratio is referred ONLY for reporting.**	- Boys toilet ratio was in par with the FNBC 1990 ratio. This may hinder later on with growing population. - The tap ratio was below the FNBC requirement indicating extra taps are in the school. - school require maintenance of rusting pipes and algae buildup in WASH facilities.
Disaster Resilience Assessment	- columns, beams, slabs had hairline cracks. - All roof had truss roof frames. - The windows only have burglar shutters at some sections. - Roof cladding is rusted at B2 toilet block and partially at patches across B2 and B1A - roofing nails show rusting.	Fiji Building Code 1990. Requirement is that roof cladding be free of rust and fastened securely with type 17 cyclonic screws with neoprene washers. Additionally, cyclone brackets to be fixed on every window frame.	- Rusting of cladding contradicts to the cyclone certification requirement requiring replacement. - Absence of cyclone brackets are not acceptable as per the cyclone certification.
Accessibility Assessment	-Handrails partially damaged in corridors.	**The following are requirements from Fiji Disabled People's Federation Access Audit Tool**	The following facilities are missing. - Ramps and elevators for vertical access - Wide doorways and clear pathways

	- Classrooms and labs have typical door size of 0.8 – 0.9m width. - Stairway – average 0.9m width.	- Ramps – required wherever elevation with minimum 1:8 maximum 1:20 - Walkway clearance - - Handrails to be 0.76m to 0.9m. - Doors and Door size – minimum 0.9m. - Clearance required of 1.2m and tread width of minimum 310mm. (National Building Code Table D2.1)	- Proper signage - Wheelchair-accessible restrooms - Grab bars - Proper signage - Inclusive seating areas and pathways - Proper lighting - Contrasting floor materials

8) RECOMMENDATIONS

- In order to comply with the FNBC, the school will require the following:
  - Classrooms: An additional 8 new classrooms for students in years 9-12. This expansion aims to accommodate the growing number of students and provide them with an enhanced learning environment.
- WASH Facilities. Consideration could be given to the boys' toilet cubicles as the ratio is in par with the FNBC ratio. The exact number could be discussed upon further analysis.

Weekly routine maintenance work and daily cleanup directive from MOE is also a critical component of the plan which includes:

- Roof repairs due to rusting of cladding, roofing nails, gutter and gutter straps.
- Plumbing fixes due to algae buildup.
- New paint application on rails and walls

These maintenance activities are designed to address existing wear and tear and to ensure that the school buildings remain in good condition. It is recommended that maintenance be carried out at regular intervals, ideally every 12 months, to prevent deterioration and to maintain a safe and functional environment.

- Accessibility: Prioritize building accessibility features, such as ramps and handrails, to ensure compliance with standards. These features are vital for providing all students, including those with disabilities, with equal access to the school's facilities.

9) COMPLIANCE

Upon inspecting Jai Narayan College, the following conclusions were drawn:

- **MEHA Compliance:** Compliant
- **WASH Facilities:** The school has ample taps.
- **Land Availability:** There is sufficient land for additional blocks.
- **NFA Compliance:** Compliant with NFA basic guidelines but does not have NFA certification.
- **WAF Compliance:** Adequate water supply, but no backup system for water cuts.
- **FNBC Compliance:** The school is not fully compliant with the occupancy requirements as well as the category 5 cyclone standards based on the windows and roofing requirements.
- **NDMO Compliance**: Targeting NFA and NBC compliance for safety.
- **EFL Compliance:** Assumed to be compliant with EFL standards.
- **DISABILITY Accessibility:** non-compliant

10) APPENDIX

Appendix A – Marist Brothers High School Site Inspection Report

Appendix B – Excel Scoring Sheet

Appendix C – Land Available for Expansion

Appendix A - Site Inspection Report

INFRASTRUCTURE ASSESSMENT AUDIT FOR SUVA – NAUSORI URBAN SCHOOL

INFRASTRUCTURE ASSESSMENT FOR MARIST BROTHERS HIGH SCHOOL (2309)

SITE INSPECTION REPORT

TABLE OF CONTENTS

List of Abbreviations

NRWM	NRW Macallan (Fiji) Pte Ltd
TT	Tetra Tech International Development Pty Ltd
DFAT	Department of Foreign Affairs and Trade (Australia)
FEG	Free Education Grant
OHS	Occupational Health and Safety
NFA	National Fire Authority
WAF	Water Authority of Fiji
NBC	National Building Code
NDMO	National Disaster Management Office
EFL	Energy Fiji Limited

1) SCHOOL BACKGROUND

Marist Brothers High School in Fiji has a rich history dating back to the late 19th century. The Marist Brothers, a Catholic religious order, first arrived in Fiji in 1888 and began their educational mission. The school itself was officially established in 1937, initially operating from a house on Waimanu Road in Suva. Over the years, it moved to its current location on Bau Street, where it opened its doors in 1949.

The school has been a pioneer in multiracial education in Fiji, opening its secondary classes to all races in 1936 despite initial resistance from civil authorities. Known for its academic and sporting excellence, Marist Brothers High School has played a significant role in the educational landscape of Fiji, fostering a tradition of holistic education and community service.

TABLE 1: SCHOOL DETAILS

NAME OF SCHOOL	MARIST BROTHERS HIGH SCHOOL
SCHOOL REGISTRATION NUMBER	2309
SCHOOL LOCATION	CAREW STREET, FLAGSTAFF, SUVA
SCHOOL TYPE	HIGH SCHOOL
FEEDER SCHOOL	
DATE OF INSPECTION	11TH JUNE, 2024
MILESTONE	(21/ 86 SCHOOLS)
INSPECTED BY (TEAM 2)	KUNAAL NAND (KN)
	HENDRY TABULAWAKI (HT)
	CLIFFTON RAITAVOWAI (CR)
	MARIA LUTUA (ML)

TABLE 2: SCHOOL ENROLMENT FIGURES

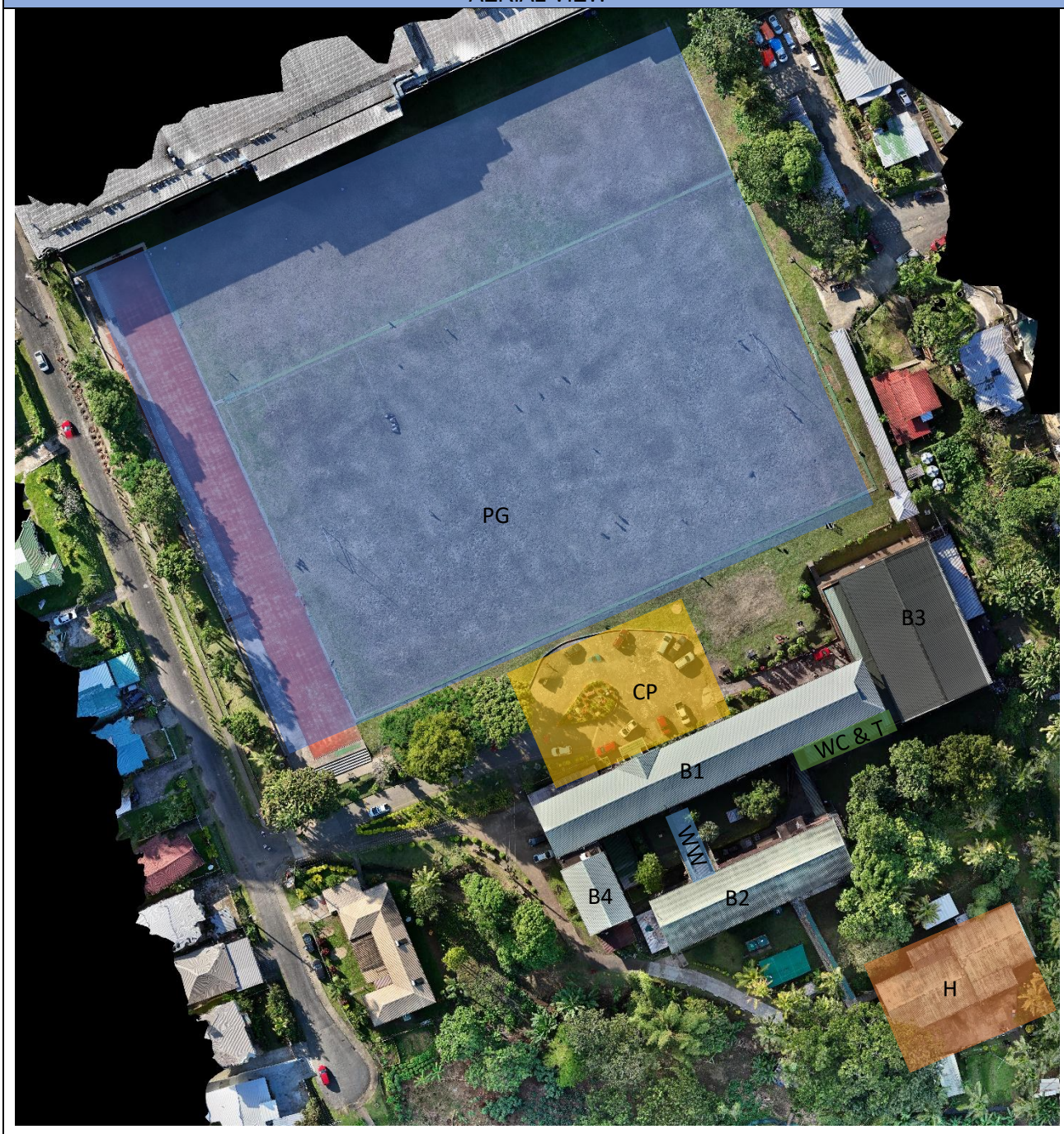
Year of Enrolment	Number of Students			Students with Disability	Number of Teachers			Comments
	Male	Female	Total		Male	Female	Total	
2024	804	0	804	0	24	18	42	• 20 Classrooms • Student to stream average ratio is 35:1 for 2024 school calendar. • WASH ratio = 60: 1
2023	878	0	878	0	19	21	31	
2022	909	0	909	0	22	19	41	
2021	924	0	924	0	20	21	41	
2020	859	0	859	0	22	23	45	
2019	825	0	825	0	20	23	43	

TABLE 3: 2024 CLASSROOM ENROLLMENT DETAILS

GRADE	CLASS NUMBER	TOTAL STUDENT ROLL	NUMBER OF TEACHERS	DIMENSIONS (m)		ACCESS WAY COUNT		OVERCROWDING
				LENGTH	WIDTH	NO. OF DOORS	NO. OF WINDOWS	
9	01	35	1	6	7.4	2	10	☒YES ☐NO
	02	35	1	6	7.4	2	10	☒YES ☐NO
	03	35	2	6	7.4	2	10	☒YES ☐NO
	04	35	1	6	7.4	2	10	☒YES ☐NO
10	01	35	1	6	7.4	2	9	☒YES ☐NO
	02	35	1	6	7.4	2	10	☒YES ☐NO
	03	34	1	6	7.4	2	9	☒YES ☐NO
	04	35	1	6	7.4	2	9	☒YES ☐NO
11	01	42	1	6	7.4	2	10	☒YES ☐NO
	02	46	2	6	7.4	2	10	☒YES ☐NO
	03	51	2	6	7.4	2	10	☒YES ☐NO
	04	48	1	6	7.4	2	10	☒YES ☐NO
12	01	48	1	8	10	1	15	☐YES ☒NO
	02	41	2	8	7.7	3	17	☐YES ☒NO
	03	47	2	8	7.7	3	17	☒YES ☐NO
	04	39	1	8	7.7	3	17	☐YES ☒NO
	05	45	2	8	10	1	18	☐YES ☒NO
13	01	41	1	8	7.4	2	14	☒YES ☒NO
	02	37	2	8	7.4	3	15	☐YES ☒NO
	03	40	1	9.7	7.4	3	9	☐YES ☒NO

2) SCHOOL SITE PLAN (DRONE IMAGERY OF SCHOOL)

AERIAL VIEW



LEGEND			
B#	BUIDLINGS	DR#	PONDS/CREEKS/DRAINAGE
PG#	PLAYGROUND	H#	HOSTELS
WC#	TOILETS	ST#	STAFF QUARTERS
T#	TAP / WASH AREA	F#	DINING/FOOD AREA
WS#	WATER STORAGE FACILITY	EFL#	EFL POSTS/ JUNCTION BOX
SEP#	SEPTIC TANK	CP	CAR PARK
LA#	LAND AVAILABILITY	WW#	WALKWAY

3) VISUAL INSPECTION RESULTS

EXISTING BUILDING INFORMATION

Building Index	B1: Classrooms, Administration Office & Toilet Facility	Year built: #### (Age: #### years old)
Type:	Triple storey concrete structure that consists of reinforced concrete columns and beams with masonry external walls and timber framed roof structure.	No. of Levels: 3
Dimensions	Length (m): 77.4	Width (m): 9.5	Height (m): 10.1 (from eaves end)

Existing State of Building

REF. No.	Building Component	Good[1]	Fair[2]	Poor[3]	Structure Type [4]	Comments	
1	Roof Lining		✓		Steel	Could not be accessed during the inspection.	
2	Roof Structure		✓		Timber	No access during the inspection. The structure type is assumed to be present on site.	
3	Walls		✓		Masonry		
4	Columns		✓		Concrete		
5	Beams		✓		Concrete		
6	Floor		✓		Concrete		
7	Handrails		✓		Steel	1.1m high safety hand rails	
8	Walkway(s)		✓		Concrete		
9	Services – water supply		✓				
10	Available taps for general use		✓			7 taps	Student – tap ratio = 60: 1
11	Services – electricity			✓		Faulty lights	
12	Services – communication (internet)		✓				
13	Drainage		✓				

Comments

- Surface cracks (i.e. hairline cracks) are visible along the floor slabs along the corridor and steps of each level.
- Surface cracks are visible along the column at some locations.
- Handrails installed along the stairs display signs of corrosion.
- There were no fire extinguishers available in the school.
- Cyclone Mesh shutters were present at some locations only.
- The dimensions of a sample classroom were taken and are as follows:
  - Level 1: Length (m): 6.0, Width (m): 11, Height (m): 3.7
  - Level 2: Length (m): 9.5, Width (m): 7.4, Height (m): 3.4

[1] Good - No additional works / intervention required
[2] Fair - Remedial works required – min CAT 3 standard
[3] Poor - Demolition and replace with new - min CAT 4 standard
[4] Type of structure - Timber/concrete/steel

EXISTING BUILDING AND TOILET BLOCKS ACESS INFORMATION FOR DISABILITY AUDITS

Building Index	B1 - Classrooms, Administration Office & Toilet Facility		
Type:	Triple storey concrete structure that consists of reinforced concrete columns and beams with masonry external walls and timber framed roof structure.		No. of Levels: 3
Dimensions	Length (m):	Width (m):	Height (m):

Existing State of Building

REF. No.	Building Component	Good[5]	Fair[6]	Poor[7]	Structure Type [8]	Dimensions (m)	Comments
1	Ramps			✓		N/A	No disability accessibility
2	Walkway clearance space		✓		Concrete	2.1m Wide	
3	Handrails		✓		Steel	1.1m Height	
4	Doors and Door Size (typical)		✓		Timber	1.0m Wide	
5	Stairway		✓		Concrete		

Comments

- There were no ramps throughout the school.
- There was no disability provision within the building.
- The school shall provide disability provisions if there is a demand to provide these provisions.

[5] Good - No additional works / intervention required
[6] Fair - Remedial works required – min CAT 3 standard
[7] Poor - Demolition and replace with new - min CAT 4 standard
[8] Type of structure - Timber/concrete/steel

TOILET BLOCKS (BOYS)

Building Index	B1 - Classrooms, Administration Office & Toilet Facility		
Type:	Triple storey concrete structure that consists of reinforced concrete columns and beams with masonry external walls and timber framed roof structure.		No. of Levels: 3
Dimensions	Length (m):	Width (m):	Height (m):

Existing State of Building

REF. No.	Building Component	Good[9]	Fair[10]	Poor[11]	Structure Type [12]	Count [13]	Comments
1	Toilet Bays – male		✓			8	6 toilet bays, 1 toilet bay for disability & 1 urinal
2	Toilet Bays – female						
3	Toilet Partition between boys and girls.		✓				
4	Shower bay		✓				
5	Toilet Bays – accessible		✓			6	
6	Entry to toilet building		✓			2	
7	Exit to toilet building		✓			2	
8	Menstrual Hygiene facilities					N/A	
9	Students to **WASH** ratio	Toilet taps:		Male	# 7	Female	#:

Comments

- The toilets are required to be maintained and clean on a regular basis.
- The shower area is required to be maintained and clean on a regular basis.

[9] Good - No additional works / intervention required
[10] Fair - Remedial works required – min CAT 3 standard
[11] Poor - Demolition and replace with new - min CAT 4 standard
[12] Type of structure - Timber/concrete/steel
[13] Count - Used for identifying number of toilet bays and menstrual hygiene facilities

EXISTING BUILDING INFORMATION

Building Index	B2: Classrooms, Library, Science Labs & Toilet Block	Year built: #### (Age: #### years old)
Type:	Triple storey concrete structure that consists of reinforced concrete columns and beams with masonry external walls and timber framed roof structure. ➢ Ground floor: Science Labs and Toilet Block ➢ Level 1: Classrooms and Library ➢ Level 2: Classrooms	No. of Levels: 3

Dimensions	Length (m): 41.7	Width (m): 10	Height (m): 9.8 (from eaves end)

Existing State of Building

REF. No.	Building Component	Good[14]	Fair[15]	Poor[16]	Structure Type [17]	Comments	
1	Roof Lining				N/A	Could not be accessed during the inspection.	
2	Roof Structure		✓		Timber	No access during the inspection. The structure type is assumed to be present on site.	
3	Walls		✓		Masonry		
4	Columns		✓		Concrete		
5	Beams		✓		Concrete		
6	Floor		✓		Concrete		
7	Handrails		✓		Steel	1.0m high safety hand rails	
8	Walkway(s)		✓		Concrete		
9	Services – water supply		✓				
10	Available taps for general use		✓			7 taps	Student – tap ratio = 60: 1
11	Services – electricity			✓		Faulty lights	
12	Services – communication (internet)		✓				
13	Drainage		✓				

Comments

- Surface cracks (i.e. hairline cracks) are visible along the floor slabs along the corridor and steps of each level.
- Handrails installed along the stairs display signs of corrosion.
- Surface cracks are visible along the column at some locations.
- No Cyclone Mesh shutters.
- The dimensions of a sample classroom were taken and are as follows:
  - Ground floor: Length (m): 11.7, Width (m): 8.2, Height (m): 3.2
  - Level 1: Length (m): 12.4, Width (m): 10, Height (m): 3.2
  - Level 2: Length (m): 8.2, Width (m): 7.5, Height (m): 3.3

[14] Good - No additional works / intervention required
[15] Fair - Remedial works required – min CAT 3 standard
[16] Poor - Demolition and replace with new - min CAT 4 standard
[17] Type of structure - Timber/concrete/steel

EXISTING BUILDING AND TOILET BLOCKS ACESS INFORMATION FOR DISABILITY AUDITS

Building Index	B2 – Classrooms, Library, Science Labs & Toilet Block	
Type:	Triple storey concrete structure that consists of reinforced concrete columns and beams with masonry external walls and timber framed roof structure. ➢ Ground floor: Science Labs and Toilet Block ➢ Level 1: Classrooms and Library ➢ Level 2: Classrooms	No. of Levels: 3

Dimensions	Length (m):	Width (m):	Height (m):

Existing State of Building

REF. No.	Building Component	Good [18]	Fair[19]	Poor[20]	Structure Type [21]	Dimensions (m)	Comments
1	Ramps			✓		N/A	No disability accessibility
2	Walkway clearance space		✓		Concrete	2.0m Wide	
3	Handrails		✓		Steel	1.0m Height	
4	Doors and Door Size (typical)		✓		Timber	900mm Wide	
5	Stairway		✓			N/A	

Comments

- There was no disability provision within the building.
- The school shall provide disability provisions if there is a demand to provide these provisions.

[18] Good - No additional works / intervention required
[19] Fair - Remedial works required – min CAT 3 standard
[20] Poor - Demolition and replace with new - min CAT 4 standard
[21] Type of structure - Timber/concrete/steel

TOILET BLOCKS (BOYS)

Building Index	B2 - Classrooms, Library, Science Labs & Toilet Block	
Type:	Triple storey concrete structure that consists of reinforced concrete columns and beams with masonry external walls and timber framed roof structure. ➢ Ground floor: Science Labs and Toilet Block ➢ Level 1: Classrooms and Library ➢ Level 2: Classrooms	No. of Levels: 3

Dimensions	Length (m):	Width (m):	Height (m):

Existing State of Building

REF. No.	Building Component	Good[22]	Fair[23]	Poor[24]	Structure Type [25]	Count [26]	Comments
1	Toilet Bays – male		✓			7	6 toilet bays & 1 urinal
2	Toilet Bays – female						
3	Toilet Partition between boys and girls.						
4	Shower bay		✓				
5	Toilet Bays – accessible		✓				
6	Entry to toilet building		✓			1	
7	Exit to toilet building		✓			1	
8	Menstrual Hygiene facilities					N/A	
9	Students to **WASH** ratio	Toilet taps: #	Male	# 8	Female	#:	

Comments

- The toilets are required to be maintained and clean on a regular basis.
- The shower area is required to be maintained and clean on a regular basis.

[22] Good - No additional works / intervention required
[23] Fair - Remedial works required – min CAT 3 standard
[24] Poor - Demolition and replace with new - min CAT 4 standard
[25] Type of structure - Timber/concrete/steel
[26] Count - Used for identifying number of toilet bays and menstrual hygiene facilities

EXISTING BUILDING INFORMATION

Building Index	B3: School Hall		Year built: #### (Age: #### years old)
Type:	Single storey steel structure that consists of reinforced concrete columns and beams with masonry external walls and steel framed roof structure.		No. of Levels: 1
Dimensions	Length (m): 30.9	Width (m): 23.5	Height (m): 9.9 (from eaves end)

Existing State of Building

REF. No.	Building Component	Good[27]	Fair[28]	Poor[29]	Structure Type [30]	Comments	
1	Roof Lining		✓		Steel	Could not be accessed during the inspection.	
2	Roof Structure		✓		Steel	No access during the inspection. The structure type is assumed to be present on site.	
3	Walls		✓		Masonry		
4	Columns		✓		Concrete		
5	Beams		✓		Concrete		
6	Floor		✓		Timber		
7	Handrails			✓		No Handrails	
8	Walkway(s)		✓		Concrete		
9	Services – water supply		✓				
10	Available taps for general use		✓			7 taps	Student – tap ratio = 60: 1
11	Services – electricity		✓				
12	Services – communication (internet)		✓				
13	Drainage		✓				

Comments

- Surface cracks (i.e. hairline cracks) are visible along the floor slabs along the corridor.
- Surface cracks are visible along the column at some locations.
- There are no fire extinguishers and fire hose reels installed along the veranda.
- No Cyclone Mesh shutters.

[27] Good - No additional works / intervention required
[28] Fair - Remedial works required – min CAT 3 standard
[29] Poor - Demolition and replace with new - min CAT 4 standard
[30] Type of structure - Timber/concrete/steel

EXISTING BUILDING AND TOILET BLOCKS ACESS INFORMATION FOR DISABILITY AUDITS

Building Index	B3 – School Hall						
Type:	Single storey steel structure that consists of reinforced concrete columns and beams with masonry external walls and steel framed roof structure.						No. of Levels: 1
Dimensions	Length (m):		Width (m):			Height (m):	
Existing State of Building							
REF. No.	Building Component	Good [31]	Fair[32]	Poor[33]	Structure Type [34]	Dimensions (m)	Comments
1	Ramps			✓		N/A	No ramps found.
2	Walkway clearance space		✓		Concrete	1.2m Wide	
3	Handrails			✓		N/A	No Handrails
	Doors and Door Size (typical)		✓		Timber	1.5m Wide	
4	Stairway			✓		N/A	Single storey with mostly flat surfaces.
5							

Comments

- There was no disability provision for this building.
- The school shall provide disability provisions if there is a demand to provide these provisions.

[31] Good - No additional works / intervention required
[32] Fair - Remedial works required – min CAT 3 standard
[33] Poor - Demolition and replace with new - min CAT 4 standard
[34] Type of structure - Timber/concrete/steel

EXISTING BUILDING INFORMATION

Building Index	B4: Classrooms & Toilet Block		Year built: #### (Age: #### years old)
Type:	Triple storey concrete structure that consists of reinforced concrete columns and beams with masonry external walls and timber framed roof structure.		No. of Levels: 3
Dimensions	Length (m): 14.5	Width (m): 7.8	Height (m): (from eaves end)

Existing State of Building

REF. No.	Building Component	Good[35]	Fair[36]	Poor[37]	Structure Type [38]	Comments	
1	Roof Lining		✓		Steel	Could not be accessed during the inspection.	
2	Roof Structure		✓		Timber	No access during the inspection. The structure type is assumed to be present on site.	
3	Walls		✓		Masonry		
4	Columns		✓		Concrete		
5	Beams		✓		Concrete		
6	Floor		✓		Concrete		
7	Handrails		✓		Steel		
8	Walkway(s)		✓		Concrete		
9	Services – water supply		✓				
10	Available taps for general use		✓			0 Taps	Student – tap ratio = - N/A: 1
11	Services – electricity		✓				
12	Services – communication (internet)		✓				
13	Drainage		✓				

Comments

- Surface cracks (i.e. hairline cracks) are visible along the floor slabs along the corridor.
- Surface cracks are visible along the column at some locations.
- There are no fire extinguishers and fire hose reels installed along the veranda.
- No Cyclone Mesh shutters.

[35] Good - No additional works / intervention required
[36] Fair - Remedial works required – min CAT 3 standard
[37] Poor - Demolition and replace with new - min CAT 4 standard
[38] Type of structure - Timber/concrete/steel

EXISTING BUILDING AND TOILET BLOCKS ACESS INFORMATION FOR DISABILITY AUDITS

Building Index	B4 – Classrooms & Toilet Block		
Type:	Triple storey concrete structure that consists of reinforced concrete columns and beams with masonry external walls and timber framed roof structure.		No. of Levels: 3
Dimensions	Length (m):	Width (m):	Height (m):

Existing State of Building

REF. No.	Building Component	Good [39]	Fair[40]	Poor[41]	Structure Type [42]	Dimensions (m)	Comments
1	Ramps			✓		N/A	No ramps found.
2	Walkway clearance space		✓		Concrete	2.0m Wide	
3	Handrails		✓		Steel	1.0m Height	
	Doors and Door Size (typical)		✓		Timber	900mm Wide	
4	Stairway		✓		Concrete		
5							

Comments

- There was no disability provision for this building.
- The school shall provide disability provisions if there is a demand to provide these provisions.

[39] Good - No additional works / intervention required
[40] Fair - Remedial works required – min CAT 3 standard
[41] Poor - Demolition and replace with new - min CAT 4 standard
[42] Type of structure - Timber/concrete/steel

TOILET BLOCKS (MALE & FEMALE)

Building Index	B4 – Toilet Block		
Type:	Triple storey concrete structure that consists of reinforced concrete columns and beams with masonry external walls and timber framed roof structure.		No. of Levels: 1
Dimensions	Length (m):	Width (m):	Height (m):

Existing State of Building

REF. No.	Building Component	Good[43]	Fair[44]	Poor[45]	Structure Type [46]	Count [47]	Comments
1	Toilet Bays – male		✓			3	2 toilet bays & 1 urinal
2	Toilet Bays – female		✓			2	
3	Toilet Partition between boys and girls.		✓				
4	Shower bay						
5	Toilet Bays – accessible		✓				
6	Entry to toilet building		✓			1	
7	Exit to toilet building		✓			1	
8	Menstrual Hygiene facilities		✓			1	
9	Students to **WASH** ratio	Toilet taps:		Male	# 1	Female	#: 1

Comments

- There were no toilet bays for disability in both the female and male toilets.

[43] Good - No additional works / intervention required
[44] Fair - Remedial works required – min CAT 3 standard
[45] Poor - Demolition and replace with new - min CAT 4 standard
[46] Type of structure - Timber/concrete/steel
[47] Count - Used for identifying number of toilet bays and menstrual hygiene facilities

4) PHOTOGRAPHIC REPORT

Client:	**TETRA TECH INTERNATIONAL DEVELOPMENT (PTY) LTD**	**School Name:**	**MARIST BROTHERS HIGH SCHOOL**
Project:	**INFRASTRUCTURE PLAN FOR SUVA – NAUSORI URBAN SCHOOL.**	**Building Index:**	**B1**

PHOTOGRAPH No. 1: FRONT

PHOTOGRAPH No. 2: LEFT SIDE

PHOTOGRAPH No. 3: BACK

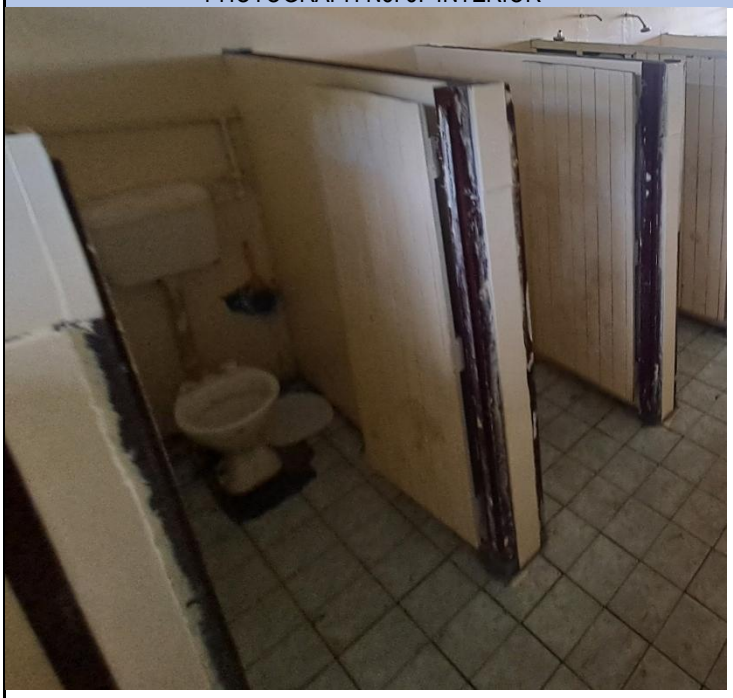
- No pictures were taken due to building 1 side view wall being conjoined with building 3.

PHOTOGRAPH No. 4: RIGHT SIDE

PHOTOGRAPH No. 5: INTERIOR

- No pictures were taken due to the lack of roof access.

PHOTOGRAPH No. 6: ROOF SPACE



PHOTOGRAPH NO 7 - TOILETS

PHOTOGRAPH NO 8 - TAPS

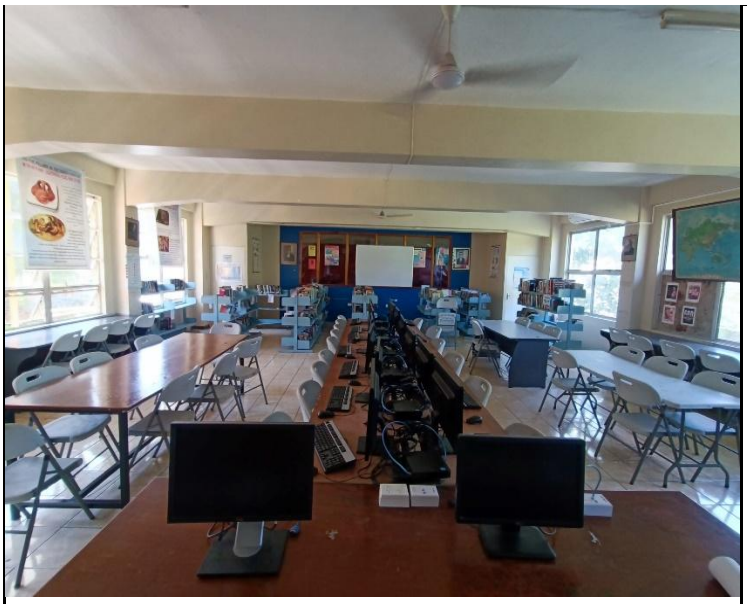
Client:	TETRA TECH INTERNATIONAL DEVELOPMENT (PTY) LTD	School Name:	MARIST BROTHERS HIGH SCHOOL
Project:	INFRASTRUCTURE PLAN FOR SUVA – NAUSORI URBAN SCHOOL.	Building Index:	B2

PHOTOGRAPH No. 1: FRONT

PHOTOGRAPH No. 2: LEFT SIDE

PHOTOGRAPH No. 3: BACK

PHOTOGRAPH No. 4: RIGHT SIDE



PHOTOGRAPH No. 5: INTERIOR

- No pictures were taken due to the lack of roof access.

PHOTOGRAPH No. 6: ROOF SPACE

- No pictures were taken due to WC being locked.

PHOTOGRAPH NO 7 - TOILETS

- No pictures were taken due to WC being locked.

PHOTOGRAPH NO 8 - TAPS

Client:	TETRA TECH INTERNATIONAL DEVELOPMENT (PTY) LTD	School Name:	MARIST BROTHERS HIGH SCHOOL
Project:	INFRASTRUCTURE PLAN FOR SUVA – NAUSORI URBAN SCHOOL.	Building Index:	B3

PHOTOGRAPH No. 1: FRONT

PHOTOGRAPH No. 2: LEFT SIDE

PHOTOGRAPH No. 3: BACK

PHOTOGRAPH No. 4: RIGHT SIDE

PHOTOGRAPH No. 5: INTERIOR

- No pictures were taken due to the lack of roof access.

PHOTOGRAPH No. 6: ROOF SPACE

PHOTOGRAPH NO 7 - TOILETS

PHOTOGRAPH NO 8 - TAPS

Client:	TETRA TECH INTERNATIONAL DEVELOPMENT (PTY) LTD	School Name:	MARIST BROTHERS HIGH SCHOOL
Project:	INFRASTRUCTURE PLAN FOR SUVA – NAUSORI URBAN SCHOOL.	Building Index:	B4

PHOTOGRAPH No. 1: FRONT

PHOTOGRAPH No. 2: LEFT SIDE

PHOTOGRAPH No. 3: BACK

- No pictures were taken due to building 4 side view walls being conjoined with building 1.

PHOTOGRAPH No. 4: RIGHT SIDE

PHOTOGRAPH No. 5: INTERIOR

- No pictures were taken due to the lack of roof access.

PHOTOGRAPH No. 6: ROOF SPACE

- No pictures were taken due to WC being locked.

PHOTOGRAPH NO 7 - TOILETS

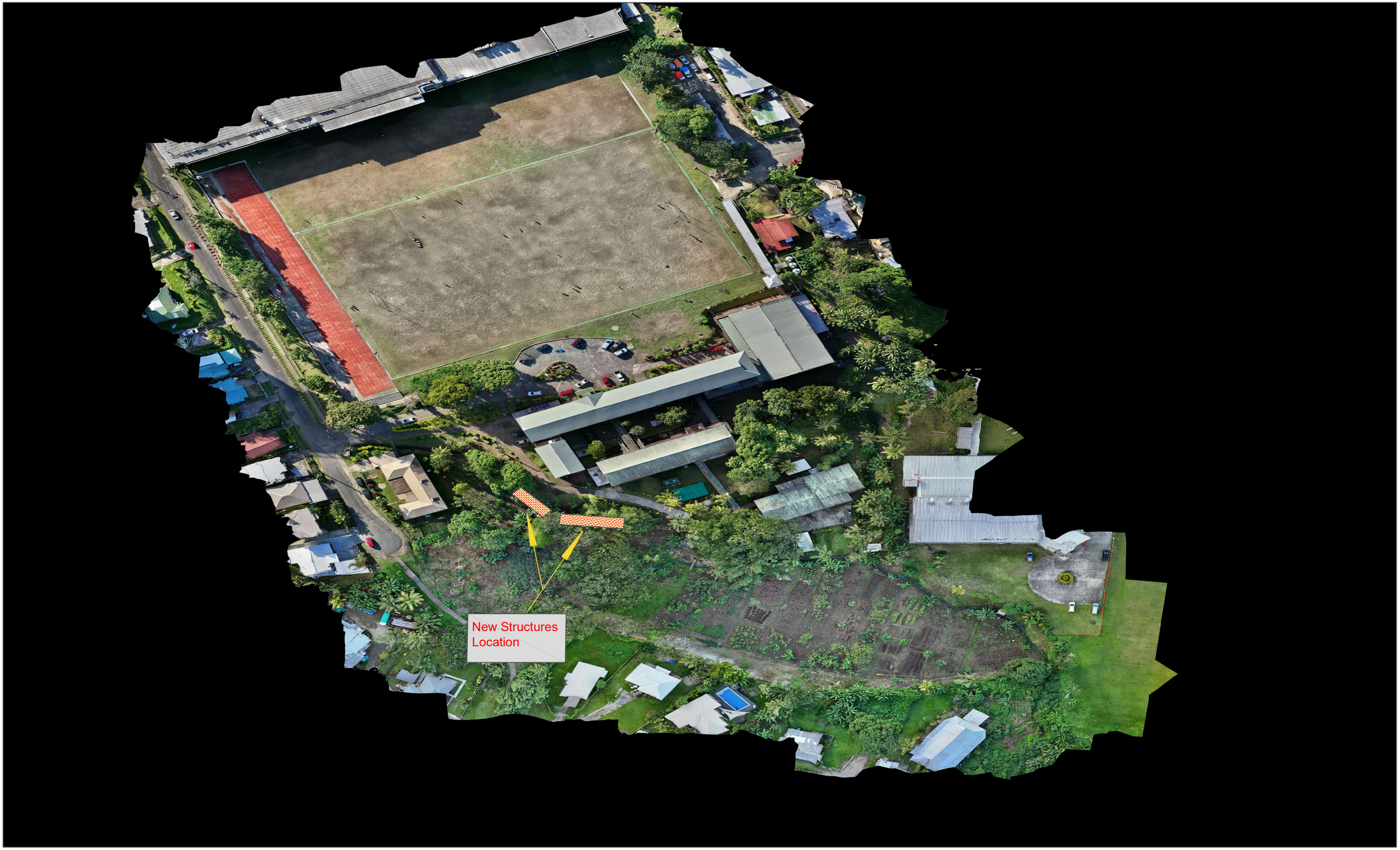
- No pictures were taken due to WC being locked.

PHOTOGRAPH NO 8 - TAPS

Appendix B – Excel Scoring Sheet

	WEIGHTED CRITERIA		
1	**PART A - CLASSROOM OVERCROWDING (40%)** **Classrooms facilitating students beyond room capacity, determined through number of students per classroom and classroom size**		
	Fair - some classrooms are accommodating students above capacity.	24 to 31	**28**
	Criteria Item Score		**28.0**
2	**PART B - WASH FACILITIES (20%)** **WASH- Student ratio based on the Fiji National Building Code (FNBC) Infrastructure Standards (10%)**		
	Good - WASH-Student ratio for school toilet blocks meets or exceeds the ratio in the standard specified by FNBC.	0 to 5.9	**5**
2.1	**Quality of facilities and current condition such as funtionality and maintenance (10%)**		
	Poor - school toilet facilities are not maintained and the physical infrastructure cause major disturbances to end users.	8 to 10	**8**
	Criteria Item Score		**13.0**
3	**PART C - CONDITION OF INFRASTRUCTURE (20%)** **Building structure and condition of walls, floors, ceilings, overall structural integrity (10%)**		
	Fair - some building structures require more intervention to improve structural integrity and condition.	6 to 7.9	**6**
3.1	**Maintenance and assessment of the upkeep of facilities including painting and repairs (10%)**		
	Poor - school facilities are not maintained and the physical infrastructure cause major disturbances to end users.	8 to 10	**8**
	Criteria Item Score		**14.0**
4	**PART D - DISABILITY ACCESSIBILITY (10%)** **Accessibility features such as the presence of existing ramps, handrails, accessible toilets etc**		
	Poor - School buildings and facilities do not have accessibility features.	8 to 10	**10**
	Criteria Item Score		**10.0**
5	**PART E - DISASTER RESILIENCE (10%)** **Presence and quality of measures for disaster resilience of buildings including structural measures, cyclone shutters and fire safety systems**		
	Fair - some school building structures are not resilient to natural disasters and do not have safety systems in place.	6 to 7.9	**6**
	Criteria Item Score		**6.0**
	TOTAL CRITERIA SCORE		**71.0**

Appendix C – Land Available for Expansion



Australian Government
Department of
Foreign Affairs and Trade

TETRA TECH

Disasters DO Happen
Are YOU Prepared?

NRW MACALLAN (FIJI) LTD
CONSULTING ENGINEERS

CIVIL, STRUCTURAL, ELECTRICAL, MECHANICAL & PROJECT MANAGEMENT
79 RATU MARA ROAD, SAMABULA, SUVA
P O BOX 1208, SUVA. PHONE: (679) 3313 388, FAX (679) 3302 903
EMAIL: info@nrwmacallan.com.fj

SCHOOL NAME:

MARIST BROTHERS HIGH SCHOOL