QUALIFICATION				**SPECIFICATION**		**SECTION A**	
QUALIFICATION DEVELOPER	**CONSTRUCTION INDUSTRY TRUST FUND**						
TITLE	Certificate III in Steel Fixing					**NCQF LEVEL**	**3**
FIELD	Physical Planning and Construction			**SUB-FIELD**	Construction		
New qualification	√	Review of existing qualification					
SUB-FRAMEWORK	General Education		TVET	√	Higher Education		
QUALIFICATION TYPE	Certificate	√	Diploma		Bachelor		
	Bachelor Honours		Master		Doctorate/ PhD		
				CREDIT VALUE	44		

RATIONALE AND PURPOSE OF THE QUALIFICATION

Rationale

Government has identified high unemployment and poverty amongst youth as a national security risk, hence the need to train this section of the population in productive and income generating skills.

Despite the country continuing to receive investments, these investments are biased towards capital intensive ventures. This situation has the inherent risk of unemployment continuing to surge, and the government, through its vital development policy paper, National Development Plan 11 (NDP 11), has identified areas of potential high employment uptake such as services, and manufacturing and has made a commitment to give these sectors extensive support with a view of making a meaningful contribution to the growth of the economy.

Another policy document that make mention of skills development as a vehicle towards inclusivity and provision of opportunities for all, is the Vision 2036 document under the Human and Social

Development (Pillar 2) which states that “Botswana society will be knowledgeable with relevant quality education that is outcome based, with emphasis on technical and vocational skills as well as academic competencies.”

Civils Construction is a sector that in any society appeals to all age brackets, including the youth. The sector provides opportunities to gain the requisite skills necessary to combine their cognitive skills with their psychomotor skills and put them to good use. There are a lot of career opportunities in this sector and it is an area where education and brevity combine to bring out a well-rounded individual capable of actively participating in the mainstream economy of the country.

Surveyors has also been forecasted as one of the top occupations in demand for the future (HRDC, 2019)

This qualification provides qualifying learners with the underlying Sit Surveying knowledge, skills and values in order to become competent practitioners of the Construction Industry; be employed or self-employed within the industry and pursue further learning in specific areas of Civil Engineering.

Purpose

The purpose of this qualification is to equip graduates with knowledge, skills and competences to:

- Prepare bending schedule to calculate material list.
- Prepare steel to use for different structures.
- Apply different techniques for tying different types of steel.

ENTRY REQUIREMENTS (including access and inclusion)

Entry Requirements:

- Certificate II in Steel Fixing (NCQF Level 2) or equivalent.
- There shall be access through RPL and CAT in line with the National RPL and CAT Policies.

QUALIFICATION SPECIFICATION SECTION B

GRADUATE PROFILE (LEARNING OUTCOMES)	ASSESSMENT CRITERIA
1.0 Prepare a bending schedule for steel.	1.1 Draw up bending schedule table 1.2 Interpret the drawing to get information for steel required. 1.3 Record information on the table as per the drawing.
2.0 Cut steel with steel fixing tools/ equipment.	2.1 Measure the material to the required dimensions. 2.2 Cut steel with appropriate tools. 2.3 Stack the steel as per its dimensions. 2.4 Label the steel for identification purpose.
3.0 Bend steel as per Standard shape Codes.	3.1 Make a templates for bending shapes 3.2 Mark all steel with templates for bending. 3.3 Bend steel using bending tools 3.4 Stack all steel according to their shapes and sizes for identification. 3.5 Label all stacking with necessary labels.
4.0 Tie steel using tying techniques.	4.1 Prepare a working table for tying steel 4.2 Select the steel from stacking as per working drawing. 4.3 Mark positions of stirrups on main bars. 4.4 Tie steel with binding wire as per industry standards.
5.0 Place fabricated steel in position'.	5.1 Prepare the place/formwork for steel placing. 5.2 Place the steel in position. 5.3 Join the fabricated steel with splices as the working drawing 5.4 Position the spacer blocks around the steel.

1.0 Apply the principles of Occupational Health and Safety in the Work Environment.	6.1 Identify hazards in the Workplace. 6.2 Asses possible risks in the workplace. 6.3 Practice Good Housekeeping. 6.4 Wear Appropriate Personal Protective Equipment.
7.0 Demonstrate knowledge of Entrepreneurial principles in the workplace.	7.1 Plan for given work assignments. 7.2 Solve problems creatively in the workplace. 7.3 Mobilise people and resources to execute tasks. 7.4 Create value through implementation of innovative ideas.

QUALIFICATION STRUCTURE SECTION C			
	Title	**Level**	**Credits**
FUNDAMENTAL COMPONENT Subjects / Units / Modules /Courses	Health And Safety Procedures for a Building And Construction Site	3	3
	Fundamental Entrepreneurial Principles	3	3
	Erect and dismantle Scaffolding	3	3
	Total		**9**
CORE COMPONENT Subjects / Units / Modules /Courses	Read and interpret working drawings plans	3	2
		3	3
	Reinforcing Steel	3	2
	Bending and Cutting of Reinforcement Steel	3	5
	Tying Techniques	3	4
	Fixing of Reinforcing Steel	4	4
	Bend stirrups and stools	3	3
	Work site safety and health procedures maintenance	3	3
	Tools and equipment used in building and construction	3	2

	Total		**31**
ELECTIVE COMPONENT Subjects / Units / Modules /Courses	Introduction To Personal Computer	3	4
	Prepare The Business Plan	3	4
	Procure building and civil construction materials, tools and equipment	3	4
	Total		**4**
	Grand Total		**44**

Rules of combinations, Credit distribution(where applicable):

The qualification consists of Fundamental, Core and elective Components.

To be awarded the Qualification learners are required to obtain a minimum of **44** credits as detailed below.

Fundamental Components:

The Fundamental components consist of foundational knowledge in Steel Fixing to the value of **9** credits all of which are compulsory

Core Components:

The core components consist of modules containing applied knowledge and practical skills to the value of **31** credits which are compulsory.

Elective Components:

Learners are to choose elective unit standard to the value of at least **4** credits so as to attain a minimum of **44** credits for the qualification.

Modules	Fundamental	Core	Electives	Sub total
LEVEL 3	9	7	4	
LEVEL 4	0	24	4	
Total Credit	9	31	4	
Total Credit Value			44	

ASSESSMENT AND MODERATION ARRANGEMENTS

Assessment Strategies, Requirements And Weightings

All assessments leading/contributing to the award of credits or a qualification shall be based on learning outcomes and/or sub-outcomes.

1 Formative assessment :

Formative or continuous assessment would be conducted to inform teaching and learning and establish the learner's level of readiness for progression to the next learning unit or module.

Formative assessment shall constitute 60% of the Final Mark

2 Summative assessment :

Internal summative assessments shall be carried out in accordance all applicable examination rules, and the weighting of the assessment shall constitute 40% of the Final Mark

All assessment shall be carried out by BQA registered and accredited Assessors.

Moderation

There shall be internal and external moderation carried out by BQA registered and accredited Moderators.

RECOGNITION OF PRIOR LEARNING (if applicable)

Candidates may submit evidence of prior learning and current competence and/or undergo appropriate forms of RPL assessment for the award of credits towards the qualification in accordance with applicable RPL policies and relevant national-level policy and legislative framework.

PROGRESSION PATHWAYS (LEARNING AND EMPLOYMENT)

Articulation and Education Pathways

Horizontal Articulation:

Graduates of this qualification may consider pursuing to other qualifications on the same levels in the field of building construction such as

- Certificate III in Shuttering
- Certificate III in Concrete Technology
- Certificate III in Construction Carpentry

Vertical Articulation:

Learners may progress to higher level in the same field such as

- Certificate IV in Building Construction
- Certificate IV in Shuttering

Employment Pathways

Learners who attain this qualification will have competencies and attributes to work as:

- Steel Fixer

QUALIFICATION AWARD AND CERTIFICATION

Minimum standards of achievement for the award of the qualification.

Individuals who study this qualification shall be deemed competent when they achieve 80% in a Knowledge test and 100% in all performance tests.

The candidate must have met the following requirements:

- All exit level outcomes
- Minimum **44** credit requirements
- All qualification requirements including modules.

Certification

Upon completion of the qualification the candidate will be awarded a Certificate III in Steel Fixing

REGIONAL AND INTERNATIONAL COMPARABILITY

This qualification was compared with similar qualifications in South Africa and Australia and below is the summary of the comparison.

The Australian qualification allows graduates to further their training to the Diploma level and also prepares graduates to establish own businesses. This proposed qualification prepares candidates to undertake a construction qualification and more emphasis is on practical tasks with a less incorporation of theoretical aspects. Problem solving, communication, and other generic skills like financial management and micro business are also covered to empower graduates to have a choice of going into self-employment.

The South African qualification at Tjeka compares very well with this proposed qualification as there are a lot of similarities on exit outcomes and modules. Both qualifications are skills based.

Conclusions

The proposed qualification generally compares well with all the qualifications studied since the exit outcomes cover similar scope and depth and are aligned to exit-level descriptors typical of this level and

type of qualification as done within the region and beyond as well as competencies required for registration and accreditation with professional bodies such as Botswana Qualification Authority (BQA). However, what sets it apart from the qualifications examined, is that there is provision for application of attributes such as hands on and intense practice on every component which are critical for the current job market.
REVIEW PERIOD
This qualification shall be reviewed after 5 years from the date of registration. Should there be a need for a review of the qualification before the elapse of the 5year stated period, the review process shall be carried out, and all the concerned stakeholders shall be involved in the process.
Other information – please add any supplementary information to help the application for this qualification for NCQF Registration.
This qualification is Outcome- Based and modularized. It is suitable for beginners as well as for technicians and engineers who may need to polish their practical site surveying skills as the qualification is skills-based.

For Official Use Only:

CODE (ID)			
REGISTRATION STATUS	**BQA DECISION NO.**	**REGISTRATION START DATE**	**REGISTRATION END DATE**
LAST DATE FOR ENROLMENT		**LAST DATE FOR ACHIEVEMENT**	