

Accredited Professional Quantity Surveyor (APQS) Competencies Requirements

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(A) APQS Tier 1 Skills Map

- Associate Director (Quantity Surveying) /Contracts Director

1. <u>Tier 1 Critical Work Functions and Key Tasks/ Experience</u>

- Applicants must demonstrate an appropriate level of competence in at least 4 of the 6 Core Competencies
- Applicants to select at least 2 projects and provide his experience/lessons learnt for each Core Competency

	Work Functions	Kev	/ Tasks
Core 1	Measurement and	a.	Drive best practices to support usage of BIM models/Digital drawings
	Tender	b.	Validate contract bills
	Documentation	c.	Endorse schedule of rates
		d.	Implement edits to preliminaries and trade preambles
		e.	Validate technical specifications prepared by technical consultants
		f.	Oversee measurement, admeasurements, and re-measurements (Pre-or post-
		۱۰.	tender)
Core 2	Cost Planning and	a.	Drive strategic use of data for enhanced cost analyses
	Control	b.	Validate outline and detailed approximate cost estimates
		c.	Endorse cost plans and detailed budgets
		d.	Drive use of life cycle costing for a more holistic approach to costing
		e.	Oversee cashflow projections
		f.	Keep abreast of cost checking during design development
		g.	Keep abreast of latest alternative designs and methods of construction
		h.	Endorse periodic cost reports
Core 3	Tender and	a.	Establish procurement strategies
	Procurement	b.	Advise on various forms of contract for contractors, specialists, or sub-
			contractors
		c.	Establish pre-qualifications processes
		d.	Recommend awards based on tender returns
		e.	Lead benchmarking initiatives
Core 4	Post Contract	a.	Establish payment regime policies and procedures
	Administration	b.	Implement policies and procedures to review valuations for interim payments to
			contractors, specialists and sub-contractors
		c.	Authorise variation cost claims
		d.	Define policies to reduce contractual risks
		e.	Endorse final accounts
		f.	Oversee contractual claims administration on behalf of relevant parties
		g.	Lead project meetings
		Ο.	Lead project meetings
		h.	Advise on various techniques in dispute resolution
Core 5	Tendering and		
Core 5	Tendering and Estimation	h.	Advise on various techniques in dispute resolution
Core 5	Estimation	h.	Advise on various techniques in dispute resolution Anticipate price fluctuations based on external factors
Core 5	Estimation (Only applicable to	h. a. b.	Advise on various techniques in dispute resolution Anticipate price fluctuations based on external factors Establish margins for overheads and profits in tender sums
Core 5	Estimation (Only applicable to Contracting	h. a. b.	Advise on various techniques in dispute resolution Anticipate price fluctuations based on external factors Establish margins for overheads and profits in tender sums Evaluate tenders received from contractors, specialists, or sub-contractors
Core 5	Estimation (Only applicable to Contracting Quantity Surveyor)	h. a. b. c. d.	Advise on various techniques in dispute resolution Anticipate price fluctuations based on external factors Establish margins for overheads and profits in tender sums Evaluate tenders received from contractors, specialists, or sub-contractors Lead cost adjustment exercises and negotiations with shortlisted tenderers
	Estimation (Only applicable to Contracting Quantity Surveyor) Construction	h. a. b. c. d.	Advise on various techniques in dispute resolution Anticipate price fluctuations based on external factors Establish margins for overheads and profits in tender sums Evaluate tenders received from contractors, specialists, or sub-contractors Lead cost adjustment exercises and negotiations with shortlisted tenderers Forecast resource and programming needs based on project pipeline
	Estimation (Only applicable to Contracting Quantity Surveyor)	h. a. b. c. d.	Advise on various techniques in dispute resolution Anticipate price fluctuations based on external factors Establish margins for overheads and profits in tender sums Evaluate tenders received from contractors, specialists, or sub-contractors Lead cost adjustment exercises and negotiations with shortlisted tenderers
	Estimation (Only applicable to Contracting Quantity Surveyor) Construction Management and	h. a. b. c. d.	Advise on various techniques in dispute resolution Anticipate price fluctuations based on external factors Establish margins for overheads and profits in tender sums Evaluate tenders received from contractors, specialists, or sub-contractors Lead cost adjustment exercises and negotiations with shortlisted tenderers Forecast resource and programming needs based on project pipeline Provide strategic subject matter expertise on matters of cost, contractual
	Estimation (Only applicable to Contracting Quantity Surveyor) Construction Management and Resources Procurement	h. a. b. c. d.	Advise on various techniques in dispute resolution Anticipate price fluctuations based on external factors Establish margins for overheads and profits in tender sums Evaluate tenders received from contractors, specialists, or sub-contractors Lead cost adjustment exercises and negotiations with shortlisted tenderers Forecast resource and programming needs based on project pipeline Provide strategic subject matter expertise on matters of cost, contractual implications, procurement of resources, or progress during the period of works Oversee cashflow forecasting and monitoring
	Estimation (Only applicable to Contracting Quantity Surveyor) Construction Management and Resources Procurement (Only applicable to	h. a. b. c. d. a. b.	Advise on various techniques in dispute resolution Anticipate price fluctuations based on external factors Establish margins for overheads and profits in tender sums Evaluate tenders received from contractors, specialists, or sub-contractors Lead cost adjustment exercises and negotiations with shortlisted tenderers Forecast resource and programming needs based on project pipeline Provide strategic subject matter expertise on matters of cost, contractual implications, procurement of resources, or progress during the period of works Oversee cashflow forecasting and monitoring Establish guidelines for placing orders with sub-contracts and suppliers
	Estimation (Only applicable to Contracting Quantity Surveyor) Construction Management and Resources Procurement (Only applicable to Contracting	h. a. b. c. d. b.	Advise on various techniques in dispute resolution Anticipate price fluctuations based on external factors Establish margins for overheads and profits in tender sums Evaluate tenders received from contractors, specialists, or sub-contractors Lead cost adjustment exercises and negotiations with shortlisted tenderers Forecast resource and programming needs based on project pipeline Provide strategic subject matter expertise on matters of cost, contractual implications, procurement of resources, or progress during the period of works Oversee cashflow forecasting and monitoring
	Estimation (Only applicable to Contracting Quantity Surveyor) Construction Management and Resources Procurement (Only applicable to	h. a. b. c. d. b.	Advise on various techniques in dispute resolution Anticipate price fluctuations based on external factors Establish margins for overheads and profits in tender sums Evaluate tenders received from contractors, specialists, or sub-contractors Lead cost adjustment exercises and negotiations with shortlisted tenderers Forecast resource and programming needs based on project pipeline Provide strategic subject matter expertise on matters of cost, contractual implications, procurement of resources, or progress during the period of works Oversee cashflow forecasting and monitoring Establish guidelines for placing orders with sub-contracts and suppliers Define thresholds for variation instructions affecting sub-contractors and
	Estimation (Only applicable to Contracting Quantity Surveyor) Construction Management and Resources Procurement (Only applicable to Contracting	h. a. b. c. d. b. c. d.	Advise on various techniques in dispute resolution Anticipate price fluctuations based on external factors Establish margins for overheads and profits in tender sums Evaluate tenders received from contractors, specialists, or sub-contractors Lead cost adjustment exercises and negotiations with shortlisted tenderers Forecast resource and programming needs based on project pipeline Provide strategic subject matter expertise on matters of cost, contractual implications, procurement of resources, or progress during the period of works Oversee cashflow forecasting and monitoring Establish guidelines for placing orders with sub-contracts and suppliers Define thresholds for variation instructions affecting sub-contractors and suppliers work

2. <u>Tier 1 Technical Skills & Competencies (TSC) - Proficiency Requirement</u>

	nical Skills &	Proficiency	Proficiency Description	
Competencies (TSC)		Level	For detail (except M5), see <u>here</u>	
M	MANDATORY	Candidate to demonstrate required level of competency for <u>all these</u> 6 skills		
M1	Construction Technology	Level 4	Evaluate identified construction processes and technologies	
M2	Contract Administration and Management	Level 5	Formulate strategies for contract administration and management	
M3	Measurement of Building and Construction Works	Level 5	Evaluate measurement reports to identify opportunities for improvements	
M4	Procurement Coordination and Policy Development	Level 5	Devise procurement policies and drive workflow optimisation	
M5	Professional and Business Ethics	Refer to Appendix A for detail		
M6	Project Cost	Level 5	Approve project budgets and costs projections in accordance with project plans and timelines.	

Е	ELECTIVE	Candidate to	o demonstrate required level of competency for any 3 of
		these 11 ski	
E1	Building Information Modelling Application	Level 4	Manage Building Information Modelling (BIM) technologies and workflows throughout the project lifecycle
E2	Data Collection and Analysis	Level 6	Engage stakeholders to communicate findings of data analysis and opportunities and high-risk areas identified.
E3	Design for Manufacturing and Assembly	Level 3	Identify areas for Design for Manufacturing and Assembly (DfMA) use throughout project lifecycle.
E4	Dispute Resolution	Level 5	Lead dispute mediation to achieve mediation objectives and outcomes for the organisation.
E5	Integrated Digital Delivery Application	Level 5	Lead the adoption of Integrated Digital Delivery (IDD) technologies to manage projects and building life cycle efficiently
E6	Life Cycle Costing and Analysis	Level 5	Endorse cost estimates for project life cycle
E7	People Management	Level 4	Manage performance and development of the team
E8	Project Feasibility Assessment	Level 4	Assess the business environment and organisational capabilities and prepare financial projections, as well as report findings to relevant stakeholders
E9	Project Risk Management	Level 5	Formulate risk management policies and processes across the project portfolio in order to mitigate project's exposure to internal and external vulnerabilities
E10	Stakeholder Management	Level 5	Cultivate relationships that create trust, long-term partnership, collaboration and driving engagement with stakeholders.
E11	Value Management & Engineering	Level 4	Develop processes and procedures that minimises the operational costs by reviewing value analysis reports.

0	OPTIONAL	Candidate to	Candidate to demonstrate required level of competency for any <u>5</u> of		
		these 12 ski	lls		
01	Business Development	Level 4	Develop business opportunities in target segments, review market needs and opportunities, and develop customer relationships.		
02	Business Negotiation	Level 5	Manage and direct negotiations and refine negotiation policies.		
О3	Business Performance Management	Level 3	Monitor performance of the department		
04	Competitive Business Strategy	Level 3	Identify opportunities for competitive advantage in the organisation.		
O5	Continuous Improvement Management	Level 4	Manage the overall implementation of continuous improvement plans.		
O6	Critical Thinking	Level 4	Manage problems from multiple stakeholder perspectives to ensure that the ideas generated are best suited to address the problems.		
07	Design Thinking Practice	Level 4	Facilitate and guide stakeholders to apply design thinking methodologies and processes.		
O8	Research and Information Synthesis	Level 4	Identify clear research objectives and methodologies to facilitate identification of patterns and relationships between findings from various sources to form an informed opinion on a specific area.		
O9	Technical Presentation	Level 5	Deliver impactful presentations to senior stakeholders with a clear agenda, concise topics, logical progression and strong conclusion.		
O10	Technical Writing	Level 4	Develop technical report structures, writing guidelines and standards for the organisation.		
011	Technology Application	Level 4	Review the practicality, feasibility and risks of new technologies in relation to business processes		
O12	Technology Scanning	Level 4	Review emerging technology, evaluate and determine relevance of emerging technologies to the organisation.		

3. <u>Tier 1 Generic Skills and Competencies (GSC) - Proficiency Requirement</u>

Generic Skills and Competency (GSC)		Proficiency Level / Description
Leadership Lead others to achieve objectives in the most effective way. Provide an inclusive workplace that cultivates workplace relationships and teamwork, and fosters the development of others.	Intermediate	Lead by example at team level. Encourage and guide others to adopt a point of view, make changes or take action. Provide a team environment that facilitates relationships building, teamwork and the development of others.
Decision Making Choose a course of action from various alternatives using a reasoned process to achieve intended goal.	Intermediate	Make decision in a complex setting to achieve intended goals using a structured process and multiple sources of available information.
Developing People Help others to learn and develop their capabilities to enhance their performance and achieve personal or professional goals.	Advanced	Provide mentorship to help others to develop their professional and personal development to improve performance and further their careers.
Teamwork Work collaboratively and effectively with others to contribute to group efforts to achieve identified objectives.	Intermediate	Facilitate work team activities, provide assistance and support needed by team members and promote ownership and commitment among team members to work goals to improve team performance.
Problem Solving Generate feasible and efficient solutions to solve problems and capitalise on new opportunities.	Advanced	Anticipate potential problems beyond the current scope and apply higher order problem solving tools and techniques to turn problems into opportunities.
Interpersonal Skills Manage relationships efficiently and communicate with others effectively to achieve mutual consensus and outcomes.	Advanced	Influence, guide and handle others' emotions to build instrumental relationships and manage conflicts and disagreements.

(B) APQS Tier 2 Skills Map

- Senior Quantity Surveyor/Senior Contracts Manager/Senior Cost Manager

- 1. Tier 2 Critical Work Functions and Key Tasks/ Experience
 - Applicants must demonstrate an appropriate level of competence in at least 4 of the 6 Core Competencies
 - Applicants to select at least 2 projects and provide his experience/lessons learnt for each core competency.

Critical Work Functions		Key	7 Tasks
Core 1	Measurement and	a.	Analyse measurement from digital drawings / BIM extraction and validate
	Tender		quantities
	Documentation	b.	Edit contract bills
		c.	Analyse schedule of rates
		d.	Draft preliminaries and trade preambles
		e.	Review technical specifications prepared by technical consultants
		f.	Analyse measurements, admeasurements, and re-measurements (Pre-or post-
			tender)
Core 2	Cost Planning and	a.	Review cost analysis
	Control	b.	Review outline and detailed approximate cost estimates
		c.	Analyse cost plans including detailed budgeting
		d.	Review cost-in-use studies and life-cycle costing of building and installation or
			components
		e.	Review cash flow projections
		f.	Review cost checking during design development
		g.	Interface with relevant stakeholders to advise alternative designs or methods of
			construction
		h.	Review periodic cost reports
Core 3	Tender and	a.	Carry out pre-qualifications
	Procurement	b.	Implement/advise procurement strategies
		c.	Review documentation to invite tenders from contractors, specialists or sub-
			contractors on a competitive or negotiated basis
		d.	Evaluate tender returns
		e.	Undertake benchmarking activities
Core 4	Post Contract	a.	Advise on payment regimes
	Administration	b.	Review valuations and recommendations for interim payments to contractors,
			specialists and sub-contractors
		C.	Review and price assessment of variation claims
		d.	Analyse contractual claims on behalf of relevant parties
		e.	Review final accounts
		f.	Conduct contractual risk evaluations
		g.	Lead project meetings
		h.	Support development of dispute resolution strategies
Core 5	Tendering and	a.	Review build up prices for unit rates and preliminary items
	Estimation (Only applicable to	b.	Compile tender sums in accordance with defined margins for overheads and
	Contracting		profits
	Quantity Surveyor)	C.	Report tenders received from contractors, specialists or sub-contractors
		d.	Manage cost adjustment exercises and negotiations with shortlisted tenderers
Core 6	Construction	a.	Formulate resource plans and programmes based on requirements
		b.	Liaise with relevant stakeholders to advise on matters of cost, contractual
	Procurement		implications, procurement of resources, or progress during the period of works
	Jear ement	C.	Review cash flow forecasts and monitoring
	(Only applicable to	d.	Place orders with sub-contractors and suppliers
	Contracting	e.	Issue variation instructions affecting sub-contractors and suppliers work
	Quantity Surveyor)	f.	Conduct cost studies on site activities
	·	g.	Monitor profitability of construction works
		h.	Liaise with employer, consultants, statutory and services authorities

2. Tier 2 Technical Skills & Competencies (TSC) - Proficiency Requirement

Tech	Technical Skills &		Proficiency Description
Comp	etencies (TSC)	Level	For detail (except M5), see <u>here</u>
M	MANDATORY	Candidate to these 6 skills	demonstrate required level of competency for <u>all</u>
M1	Construction Technology	Level 4	Evaluate identified construction processes and technologies.
M2	Contract Administration and Management	Level 4	Advise on contracts and overall contract management
M3	Measurement of Building and Construction Works	Level 4	Evaluate measurement reports to identify opportunities for improvements.
M4	Procurement Coordination and Policy Development	Level 4	Develop procurement Standard Operating Procedures (SOP)
M5	Professional and Business Ethics	Refer to Appendix A for detail	
M6	Project Cost	Level 4	Develop project budgets, review and manage project costs and make adjustments where required to reconcile resource costs with project schedules and outcomes.

E	ELECTIVE		Candidate to demonstrate required level of competency for any $\underline{3}$ of these 11 skills		
E1	Building Information Modelling Application	Level 4	Manage Building Information Modelling (BIM) technologies and workflows throughout the project lifecycle.		
E2	Data Collection and Analysis	Level 5	Examine data to form project insights to focus on identifying value-added opportunities or high-risk areas		
E3	Design for Manufacturing and Assembly	Level 2	Manage dispute resolution to mitigate conflict situations and reach agreeable outcomes		
E4	Dispute Resolution	Level 4	Lead dispute mediation to achieve mediation objectives and outcomes for the organisation.		
E5	Integrated Digital Delivery Application	Level 4	Assess the viability of the adoption of Integrated Digital Delivery (IDD) technologies to manage projects and building life cycle efficiently		
E6	Life Cycle Costing and Analysis	Level 4	Review cost estimates for project life cycle		
E7	People Management	Level 3	Provide guidance to junior team members.		
E8	Project Feasibility Assessment	Level 4	Assess the business environment and organisational capabilities and prepare financial projections, as well as report findings to relevant stakeholders		
E9	Project Risk Management	Level 4	Review project risks, causes and impact to implement risk control policies and procedures		
E10	Stakeholder Management	Level 4	Develop relationships, engage relevant stakeholders and facilitate alignment of stakeholders' and project bjectives.		
E11	Value Management & Engineering	Level 3	Detect shortcomings in the processes and procedures by carrying out value analyses and propose improvements		

0	OPTIONAL	Candidate to these 10 ski	demonstrate required level of competency for any <u>5</u> of lls
01	Business Development	Level 3	Analyse customer needs and expectations to determine business opportunities
O2	Business Negotiation	Level 4	Participate in negotiations
О3	Continuous Improvement Management	Level 3	Implement plans to monitor the progress of improvement activities against action plans
04	Critical Thinking	Level 4	Manage problems from multiple stakeholder perspectives to ensure that the ideas generated are best suited to address the problems.
O5	Design Thinking Practice	Level 3	Apply design thinking methodologies and execute design thinking processes to challenge norms and conventions.
O6	Research and Information Synthesis	Level 3	Source and gather information for analysis and interpretation to form observations and discover insights in line with defined research objectives
07	Technical Presentation	Level 5	Deliver impactful presentations to senior stakeholders with a clear agenda, concise topics, logical progression and strong conclusion.
08	Technical Writing	Level 3	Review technical reports for information accuracy and validity.
О9	Technology Application	Level 3	Implement technology plans and supervise the use of technology to execute tasks
O10	Technology Scanning	Level 3	Perform cost-benefit analysis and evaluation of the relevance, viability, sustainability and potential value-add of emerging technologies to the business and identify and select compatible emerging technologies.

3. Tier 2 Generic Skills and Competencies (GSC) - Proficiency Requirement

Generic Skills and Competency (GSC)	Р	roficiency Level / Description
Leadership Lead others to achieve objectives in the most effective way. Provide an inclusive workplace that cultivates workplace relationships and teamwork, and fosters the development of others.	Intermediate	Lead by example at team level. Encourage and guide others to adopt a point of view, make changes or take action. Provide a team environment that facilitates relationships building, teamwork and the development of others.
Communications Convey and exchange thoughts, ideas and information effectively through various mediums and approaches.	Intermediate	Articulate and discuss ideas and persuade others to achieve common outcomes.
Problem Solving Generate feasible and efficient solutions to solve problems and capitalise on new opportunities.	Intermediate	Identify less perceivable problems and use problem solving tools and techniques to solve the problems.
Resource Management Efficient and effective deployment and allocation of resources when and where they are needed. Include planning, allocating and scheduling of resources to tasks, which typically include manpower, machines, money and materials.	Intermediate	Deepen insights into the planning, allocation and deployment of resources to anticipate needs. Plan the allocation and deployment of resources efficiently and effectively.
Decision Making Choose a course of action from various alternatives using a reasoned process to achieve intended goals.	Intermediate	Make decision in a complex setting to achieve intended goals using a structured process and multiple sources of available information.

(c) APQS Tier 3 Skills Map

- Quantity Surveyor/Contracts Manager/Cost Manager

- 1. Tier 3 Critical Work Functions and Key Tasks/ Experience
 - Applicants must demonstrate an appropriate level of competence in at least <u>3</u> of the 6 Core Competencies
 - Applicants to select <u>at least 1 project</u> and provide his experience/lessons learnt for each core competency

Critical	Work Functions	Key	[,] Tasks
Core 1	Measurement and Tender	a.	Use relevant software for measurement of digital drawings / extraction of BIM quantities
	Documentation	b.	Process measurements into various forms of contract bills
		C.	Prepare schedule of rates
		d.	Assist to draft preliminaries and trade preambles
		e.	Assist in the review of technical specifications prepared by technical consultants
		f.	Conduct / Review measurements, admeasurements, and re-measurements (Pre-or post-tender)
Core 2	Cost Planning and	a.	Conduct cost analysis
	Control	b.	Prepare outline and detailed approximate cost estimates
		C.	Prepare cost plans
		d.	Prepare cost-in-use studies and life-cycle costing of building and installation or components
		e.	Prepare cash flow projections
		f.	Conduct cost checking during design development
		g.	Conduct cost evaluation of alternative design or method of construction
		h.	Prepare periodic cost reports
Core 3	Tender and	a.	Assist with pre-qualifications
	Procurement	b.	Implement/advise procurement strategies
		C.	Prepare tender documents (including appropriate Conditions of Contract) to invite tenders from contractors, specialists or sub-contractors on a competitive or negotiated basis
		d.	Analyse tender returns
		e.	Support benchmarking activities
Core 4	Post Contract	a.	Communicate payment regime to relevant stakeholders
	Administration	b.	Prepare valuations for interim payments to contractors, specialists and sub-contractors including recommendations for payment
		c.	Review and price assessment of variation claims
		d.	Prepare contractual claim's response on behalf of relevant parties
		e.	Prepare final accounts including any relevant pricing variations
		f.	Attend project meetings
Core 5	Tendering and	a.	Build up prices for resources
	Estimation (Only applicable to	b.	Seek correction of errors on tenders received from contractors, specialists or sub-contractors
	Contracting Quantity Surveyor)	c.	Participate in cost adjustment exercises
Core 6	Construction	a.	Conduct cash flow forecasting and monitoring
	Management and	b.	Support placing orders with sub-contractors and suppliers
	Resources Procurement	C.	Support information gathering for cost studies on site activities
	(Only applicable to	d.	Draft management reports on profitability
	Contracting Quantity Surveyor)	e.	Coordinate communications with employer, consultants, statutory and services authorities

2. Tier 3 Technical Skills & Competencies (TSC) - Proficiency Requirement

Technical Skills & Competencies (TSC)		Proficiency Level	Proficiency Description For detail (except M5), see here
M	MANDATORY	Candidate to demonstrate required level of competency for all these 6 skills	
M1	Construction Technology	Level 3	Identify and apply suitable construction processes and technologies
M2	Contract Administration and Management	Level 4	Advise on contracts and overall contract management
M3	Measurement of Building and Construction Works	Level 3	Manage drawings, models, measurements and dimensions to prepare cost estimates
M4	Procurement Coordination and Policy Development	Level 4	Develop procurement Standard Operating Procedures (SOP)
M5	Professional and Business Ethics	Refer to Appendix A for detail	
M6	Project Cost	Level 3	Assess project budget implications on operations, monitor project costs, as well as identify potential cost issues

E	ELECTIVE	Candidate to demonstrate required level of competency for any <u>2</u> of these 10 skills		
E1	Building Information Modelling Application	Level 3	Apply Building Information Modelling (BIM) across the project lifecycle	
E2	Data Collection and Analysis	Level 4	Analyse and interpret findings for project insights and make recommendations to value add to decision making	
E3	Design for Manufacturing and Assembly	Level 2	Manage dispute resolution to mitigate conflict situations and reach agreeable outcomes	
E4	Dispute Resolution	Level 4	Lead dispute mediation to achieve mediation objectives and outcomes for the organisation	
E5	Integrated Digital Delivery Application	Level 3	Implement Integrated Digital Delivery (IDD) technologies to manage projects and building life-cycle efficiently	
E6	Life Cycle Costing and Analysis	Level 3	Estimate costs for the project life cycle	
E7	Project Feasibility Assessment	Level 4	Assess the business environment and organisational capabilities and prepare financial projections, as well as report findings to relevant stakeholders	
E8	Project Risk Management	Level 4	Review project risks, causes and impact to implement risk control policies and procedures	
E9	Stakeholder Management	Level 4	Develop relationships, engage relevant stakeholders and facilitate alignment of stakeholders' and project objectives	
E10	Value Management & Engineering	Level 2	Apply developed processes and procedures to minimise operational costs and waste in daily activities based on instructions	

0	OPTIONAL	Candidate to demonstrate required level of competency for any $\underline{4}$ of these 8 skills		
01	Business Negotiation	Level 3	Apply negotiation skills and techniques and document negotiations	
02	Continuous Improvement Management	Level 2	Implement plans to monitor the progress of improvement activities against action plans	
О3	Critical Thinking	Level 3	Identify and examine problems to generate ideas and solutions	
04	Research and Information Synthesis	Level 2	Conduct initial research to discover and compile information and/or information sources for research analysis and interpretation	
O5	Technical Presentation	Level 4	Develop engaging presentations for the target audience in the relevant context by adopting widely used communication techniques and visual templates	
O6	Technical Writing	Level 3	Review technical reports for information accuracy and validity	
07	Technology Application	Level 3	Implement technology plans and supervise the use of technology to execute tasks	
O8	Technology Scanning	Level 3	Perform cost-benefit analysis and evaluation of the relevance, viability, sustainability and potential value-add of emerging technologies to the business and identify and select compatible emerging technologies	

3. Tier 3 Generic Skills and Competencies (GSC) - Proficiency Requirement

Generic Skills and Competency (GSC)		Proficiency Level / Description
Teamwork Work collaboratively and effectively with others to contribute to group efforts to achieve identified objectives.	Intermediate	Facilitate work team activities, provide assistance and support needed by team members and promote ownership and commitment among team members to work goals to improve team performance.
Communications Convey and exchange thoughts, ideas and information effectively through various mediums and approaches.	Intermediate	Articulate and discuss ideas and persuade others to achieve common outcomes.
Interpersonal Skills Manage relationships efficiently and communicate with others effectively to achieve mutual consensus and outcomes.	Intermediate	Detect and decipher emotions of others to manage interpersonal relationships in social situations.
Problem Solving Generate feasible and efficient solutions to solve problems and capitalise on new opportunities.	Intermediate	Identify less perceivable problems and use problem solving tools and techniques to solve the problems.
Creative Thinking Adopt a fresh perspective to combine ideas or information in new ways and make connections between seemingly unrelated fields to create new ideas and applications.	Intermediate	Connect or combine ideas or information from unrelated fields or applications to generate multiple ideas to bring about a specific outcome.

(D) APQS Tier 4 Skills Map

- Assistant Quantity Surveyor/Assistant Cost Manager

- 1. Tier 4 Critical Work Functions and Key Tasks/ Experience
 - Applicants must demonstrate an appropriate level of competence in at least <u>2</u> of the 6 Core Competencies
 - Applicants to select <u>at least 1 project</u> and provide his experience/lessons learnt for each core competency

Critical Work Functions		Key Tasks		
Core 1 Measurement and Tender		a.	Use relevant software for measurement of digital drawings / extraction of BIM quantities	
	Documentation	b.	Gather measurements for various forms of contract bills	
		c.	Update schedules of rates	
		d.	Conduct taking of measurements, admeasurements and re-measurements (Pre-or post tender)	
Core 2	Cost Planning and	a.	Compile cost data	
	Control	b.	Assist to prepare cost estimates	
		c.	Support preparation of cost plans	
		d.	Assist with cash flow projections	
		e.	Assist with preparation of periodic cost reports	
Core 3	Tender and	a.	Support preparation of tender documents	
	Procurement	b.	Collate information from tenderers submission for evaluation	
Core 4	Post Contract Administration	a.	Support preparation of valuations for interim payments to contractors, specialists and sub-contractors including recommendations for payment	
		b.	Verify claims and payment documents for final accounts	
		c.	Support communication of payment regimes to relevant stakeholders	
		d.	Record project meeting notes	
Core 5	Tendering and	a.	Gather market research on prices for resources	
	Estimation (Only applicable to Contracting	b.	Compile tenders received from contractors, specialists or sub-contractors	
Coro C	Quantity Surveyor)	_	Assist with each flow foregoeting	
Core 6	Construction Management and	a. b.	Assist with cash flow forecasting	
	Resources	υ.	Compile information for management reports on profitability	
	Procurement			
	(Only applicable to Contracting			
	Quantity Surveyor)			

2. Tier 4 Technical Skills & Competencies (TSC) - Proficiency Requirement

	nical Skills &	Proficiency	Proficiency Description
Comp	etencies (TSC)	Level For detail, see <u>here</u>	
M	MANDATORY	Candidate to demonstrate required level of competency for <u>all these</u> <u>5 skills</u>	
M1	Construction Technology	Level 2	Acquire information on construction processes and technologies
M2	Contract Administration and Management	Level 2	Support the documentation processes of contract administration and management
M3	Measurement of Building and Construction Works	Level 2	Measure drawings, models and dimensions of works using measurement skills and methods
M4	Procurement Coordination and Policy Development	Level 3	Apply procurement procedures and support workflow optimisation
M5	Professional and Business Ethics	Refer to Appendix A for detail	

E	ELECTIVE	Candidate to demonstrate required level of competency for any $\underline{2}$ of these 11 skills		
E1	Building Information Modelling Application	Level 3	Apply Building Information Modelling (BIM) across the project lifecycle	
E2	Data Collection and Analysis	Level 3	Collect data using appropriate techniques and business intelligence tools to extract meaningful data for preliminary analyses according to requirements	
E3	Design for Manufacturing and Assembly	Level 2	Manage dispute resolution to mitigate conflict situations and reach agreeable outcomes	
E4	Dispute Resolution	Level 4	Lead dispute mediation to achieve mediation objectives and outcomes for the organisation	
E5	Integrated Digital Delivery Application	Level 2	Support Integrated Digital Delivery (IDD) implementation	
E6	Life Cycle Costing and Analysis	Level 2	Collate information for cost estimates for project life cycle	
E7	Project Cost	Level 3	Assess project budget implications on operations, monitor project costs, as well as identify potential cost issues	
E8	Project Feasibility Assessment	Level 4	Assess the business environment and organisational capabilities and prepare financial projections, as well as report findings to relevant stakeholders	
E9	Project Risk Management	Level 3	Identify project-related risks for a specified functional area	
E10	Stakeholder Management	Level 3	Maintain working level relationships to support project implementation activities and foster partnerships	
E11	Value Management & Engineering	Level 2	Apply developed processes and procedures to minimise operational costs and waste in daily activities based on instructions.	

0	OPTIONAL	Candidate to demonstrate required level of competency for any 2 of these 4 skills		
01	Critical Thinking	Level 3	Identify and examine problems to generate ideas and solutions	
O2	Research and Information Synthesis	Level 2	Conduct initial research to discover and compile information and/or information sources for research analysis and interpretation	
О3	Technical Writing	Level 2	Draft technical reports according to established technical writing guidelines	
04	Technology Application	Level 2	Adopt new technologies to enhance operations or processes	

3. Tier 4 Generic Skills and Competencies (GSC) - Proficiency Requirement

Generic Skills and Competency (GSC)		Proficiency Level / Description
Teamwork Work collaboratively and effectively with others to contribute to group efforts to achieve identified objectives.	Basic	Contribute to a positive and cooperative working environment by fulfilling own responsibilities and providing support to co-workers to achieve team goals.
Service Orientation Commit to exceeding both internal and external customers' needs. Proactively identify customer needs and sustain a culture of service excellence within the organisation.	Basic	Exceed customer needs and expectations and handle service challenges with a positive mindset. Demonstrate an understanding of the organisation's service vision, mission and values.
Interpersonal Skills Manage relationships efficiently and communicate with others effectively to achieve mutual consensus and outcomes.	Basic	Recognise own internal feelings and emotional states to manage interpersonal relationships in social situations.
Communications Convey and exchange thoughts, ideas and information effectively through various mediums and approaches.	Basic	Communicate information with others to respond to general inquiries and to obtain specific information.
Problem Solving Generate feasible and efficient solutions to solve problems and capitalise on new opportunities.	Basic	Identify easily perceivable problems and follow given guidelines and procedures to solve the problems.

Appendix A

(M5) Professional and Business Ethics

The twelve (12) Professional and Ethical Standards are as follows:

1. Act honourably

Never put your own gain above the welfare of your client or other to whom you have a professional responsibility. Always consider the wider interests of society in your judgement.

2. Act with integrity

Be trustworthy in all that you do – never deliberately mislead, whether by withholding or distorting information.

3. Be open and transparent in your dealings

Share the full facts with your clients, making things as plain and intelligible as possible.

4. Be accountable for all your actions

Take full responsibility for your actions and do not blame others if things go wrong.

5. Know and act within your limitations

Be aware of the limits of your competence and do not be tempted to work beyond these. Never commit to more than you can deliver.

6. Be objective at all times

Give clear and appropriate advice. Never let sentiments or your own interests cloud your judgement.

7. Always treat others with respect

Never discriminate against others.

8. Set a good example

Remember that both your public and private behaviour could affect your own, SISV's and other members' reputation.

9. Have the courage to make a stand

Be prepared to act if you suspect a risk to safety or health or malpractice of any sort.

10. Comply with relevant laws and regulations

Avoid any action, illegal or litigious, that may bring the profession into disrepute.

11. Avoid conflicts of interest

Declare any potential conflicts of interest, personal or professional, to all relevant parties.

12. Respect confidentiality

Maintain the confidentiality of your clients' affairs. Never divulge information to others unless it is necessary.