DUBAI AVIATION CITY CORPORATION OHSE CODE OF PRACTICES

DACC CODE OF PRACTICE – WORK AT HEIGHTS

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1.0 INTRODUCTION

(a) This Code of Practice (CoP) are mandatory to all duty holders, entities or organizations constructing within the Dubai South jurisdiction. This CoP is designed to incorporate requirements set by Dubai Aviation City Corporation (DACC) Occupational Health, Safety and Environment (OHSE) Department and Dubai South Management. If requirements of this document conflict with requirements set by another regulatory authority, employers / organizations are required to follow the more stringent requirement.

(b) The duty holders, employers, entity or organization refers to the developer, client, stakeholder, consultant and contractor who construct within Dubai South jurisdiction.

(c) The Client also refers to any tenant / occupants / lessee within Dubai South jurisdiction with construction activities within their premises.

(d) This CoP covers the requirements relevant to the planning, preparation and conduct of health and safety work practices in connection with working at heights

(e) Working at heights in this CoP includes:

(i) Existing places of work and means of access and egress for working at height;

(ii) Ladders;

(iii) Working platforms;

(iv) Tower cranes and MEWP's;

(v) Roof works;

(vi) Guardrail systems;

(vii) Fall prevention;

(viii) Safety nets; and

(ix) Fall arrest systems.

(f) The following definitions applies for the purpose of this Code of Practice:

(i) Working at heights is work in which there is a risk of an employee falling from any height from, through, and into or onto a place or structure.

(ii) A place is 'at height' if a person could be injured falling from it, even if it is at or below ground level.

(iii) "Anchorage" means a secure point of attachment for lifelines, lanyards or deceleration devices. "Anchorage" shall be independent of – in that it shall not be part of, or directly connected to, or have any structural integrity with – the means of supporting or suspending the employee or the structure upon which the employee is directly engaged on. "Anchorage" shall be tested and certified by a competent person. The anchorage should be rigid and should not have a deflection greater than .04 inches (1 mm) when a force of 2,250 pounds (10 kN) is applied. Anchorages to which personal fall arrest equipment is attached shall be capable of supporting at least a minimum dead weight of 2450 kg per person attached.

(g) Developer, client, stakeholder, consultant and contractor are responsible for activities undertaken on the site. Contractor overseeing and the main responsible for any activities and consultant to ensure contractors adhered to this CoP.

2.0 COMPETENCE, TRAINING AND AWARENESS

(a) Developers, clients, stakeholders, consultants and contractors shall ensure that OHSSE training complies with the requirements of:

(i) *Dubai Aviation City Corporation (DACC) OHSERF - Regulations 6 – Competence, Training and Awareness.*

(b) Developer / client / stakeholder / consultant and contractor shall provide a training program appropriate to ensure that all persons involved in working at heights acquire the understanding, knowledge and skills necessary for the safe performance of all duties.

(c) Training is to be provided to exposed employees prior to assignment to jobs where fall hazards exist. The training shall include the following, but not limited to:

(i) Fall hazards associated with the work to be done;

(ii) The Fall Prevention Plan and the types of fall protection to be used on the activity;

(iii) The role of employees in fall protection plan;

(iv) The role of each employee in the safety monitoring system, if this system is used;

(v) Fall protection equipment identification methods;

(vi) Equipment strengths and weight limitations;

(vii) Equipment maintenance, inspection, tagging and certification requirements;

(viii) Procedures for removal of fall protection devices from service for repair or replacement;

(ix) The use and operation of guardrail systems, personal fall arrest systems, safety net system, warning line systems, safety monitoring systems, controlled access zones, or any other fall protection method to be used at the site;

(x) Emergency rescue procedures. Practical and theoretical training on the actions to be taken in an emergency situation.

(d) Prior to use fall arrest equipment, each employee shall be competent to use the equipment, assessed by contractor appointed competent trainer and final assessed by the consultant.

(e) Refresher training shall be conducted when the consultant and contractor has the reason to believe that any affected employee who has already been trained does not have the understanding and skill required by this CoP. The training content shall be identical to the initial training. Circumstances where retraining is required including, but are not limited to, the following conditions:

(i) Whenever (and prior to) a change in job assignment is made;

(ii) When there is a change in the type of fall protection equipment used; or

(iii) When a known hazard is added to the work environment that affects the Fall Prevention Plan.

(f) Developer, client, stakeholder, consultant and contractor shall conduct additional retraining whenever a periodic inspection reveals, or there is a reason to believe that there are deviations from or inadequacies in the employee's knowledge or use of fall protection equipment or procedures.

(g) Developer, client, stakeholder, consultant and contractor shall conduct additional retraining whenever a fall protection procedure falls.

(h) Developer, client, stakeholder, consultant and contractor shall ensure that the training shall be competency-based and include:

(i) Company, name and company employee ID number;

(ii) Emirates ID number / Dubai South ID Pass;

(iii) Topic / subject of training;

(iv) Training provider;

(v) Date of training; and

(vi) Person conducting the training.

3.0 REQUIREMENTS

3.1 Roles and Responsibilities

3.1.1 Developers, clients , stakeholders, consultants and contractors

(a) Developers, clients, stakeholders, consultants and contractors shall undertake their roles and responsibilities in accordance with the general requirements of ***Dubai Aviation City Corporation (DACC) OHSERF – Regulation 5 – Leadership, Roles, Responsibility and Self-Regulation***.

(b) Developers, clients, stakeholders, consultants and contractors shall be responsible for performing a risk assessment in accordance with ***Dubai Aviation City Corporation (DACC) OHSERF – Regulation 2 – Risk Management*** to determine the risks associated with the work at heights activities. Contractor shall include control measures and safe work practices with the advice from consultant or client representative to reduce employee's exposures that could cause an injury.

(c) Developers, clients, stakeholders, consultants and contractors shall undertake their specific roles and responsibilities in accordance with the following:

- (i) All work at height is appropriately planned, assessed, organized and supervised;
- (ii) Development of Fall Prevention Plan and Emergency Rescue Plan
- (iii) All work at height takes account of weather conditions that could endanger health and safety;
- (iv) Those involved in work at height are trained and competent;
- (v) The place where work at height shall be done is safe;
- (vi) Equipment for work at height is appropriately inspected;
- (vii) The risk from fragile surface and roof are appropriately controlled; and
- (viii) The risk from falling objects are appropriately controlled.

3.1.2 Employees

(a) Employees shall undertake their roles and responsibilities in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) OHSERF – Regulation 5 - Leadership, Roles, Responsibility and Self-Regulation***.

(b) Employees shall ensure that prior to undertake work at heights they are competent and trained to do so.

(c) Employees shall ensure they follow all the rules and regulation set by the employer with regards to work at heights.

(d) Employees shall report any activity or defect relating to work at height which they believe is reasonably foreseeable to endanger their safety or that of another person.

(e) Employees shall use appropriate PPE and safety equipment or devices provided for work at height by the employer in accordance with the training and instruction received.

3.2 Planning and Assessment

(a) Developer, client, stakeholder, consultant and contractor shall ensure that planning and design is developed for work at heights in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.43.SD - Safety in Design (Construction)***, other relevant and applicable regulatory authority requirements and proven international best practices.

(b) The risk assessment shall follow the hierarchy of control as described within Section 3.2.1 of this CoP.

(c) Where fall hazards are present, procedures shall be developed, documented and utilized for the control of those fall hazards.

(d) Developer, client, stakeholder, consultant and contractor shall ensure the following:

(i) An assessment of the various risks is undertaken and system of work are established which are safe to all parties involved, other employees or affected including the public;

(ii) That effective procedures and control measures are in place which are implemented in order to manage working at height activities safely and without risk to health;

(iii) That for the management of working at height requirements are included in the HSE Plan and in accordance with ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.02.CW - OHSE Management for Construction Work***; and

(iv) That associated safe systems of work and site rules are included in the Occupational Health, Safety and Environment Plan (OHSE-Plan) in accordance with ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.01.HP – Occupational Health, Safety and Environment Plan (OHSE-Plan) for Construction*** and ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.02.CW - OHSE Management for Construction Work***.

3.2.1 **Hierarchy of Control**

(a) Developer, client, stakeholder, consultant and contractor shall ensure that when undertaking a risk assessment for work at height activity, the following hierarchy of control shall be adopted:

(i) Avoid: ensure that no work is done at height if it is safe and reasonably practicable to do it other than at height;

(ii) Prevent Falls: where it is not reasonably practicable to avoid working at height, the employer shall ensure that appropriate equipment or other control measures are in place to prevent persons falling from a place at height; and

(iii) Minimize the distance and consequences of a fall: where it is not reasonably practicable to prevent falls, work equipment or other means shall be provided that will reduce the distance a person could fall and the consequences of this fall.

3.3 Equipment Selection

(a) When selecting equipment for working at height, developer, client, stakeholder, consultant and contractor shall:

(i) Use the most appropriate equipment available taking into account technological advances that may introduce new means of controlling working at height risks;

(ii) Give collective protection measures priority over personal protective equipment;

(iii) Implement control measures effectively and monitor implementation through inspections and audits of the workplace; and

(iv) Take account of:

1. The working conditions;
2. Risks to the safety of all those at the place where the work equipment is to be used;
3. The distance to be negotiated, in the case of work equipment for access and egress;
4. The distance and consequences of a potential fall;
5. The duration and frequency of equipment use;
6. The need for easy and timely evacuation and rescue in an emergency;
7. Any additional risk posed by the use, installation or removal of work equipment or by evacuation and rescue from it.

3.4 Selection of Work at Height Personnel

(a) Developer, client, stakeholder, consultant and contractor shall ensure that working at heights activity shall be supervise and closely monitored by competent supervisor appointed in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.05.AP - Assigned / Appointment of Responsibilities***.

(b) Developer, client, stakeholder, consultant and contractor shall ensure personnel required to work at height are selected for their ability to perform the work. The following persons may be excluded from being required to work at height:

(i) Persons who suffer from vertigo or who are afraid of heights;

(ii) Persons who are not physically fit enough to undertake climbing activities;

(iii) Persons who suffer from dizziness; and

(iv) Persons who have a physical shape or weight which may affect the safe operation of working at height equipment or devices.

(c) Developer, client, stakeholder, consultant and contractor shall ensure that working at height personnel shall be health assessed in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.WRH.04.HM - Occupational Health Screening and Medical Surveillance***.

(d) Developer, client, stakeholder, consultant and contractor shall ensure that personnel working at height shall receive training in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.20.TB - HSE Induction, Pre-Task Briefing and Toolbox Talks***.

3.5 Personal Protective Equipment (PPE)

(a) Developer, client, stakeholder, consultant and contractor shall ensure that in addition to hazard-specific PPE such as high visibility clothing / vest, the following PPE shall be available when required:

(i) Footwear that is appropriate to prevent slips;

(ii) As a minimum, low impact eye protection such as sunglasses to make sure that an employee at height is not at risk due to glare or reflection; and

(iii) Safety helmets that will remain in place in the event of a fall.

(b) All PPE requirements shall be in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.36.PP - Personal Protective Equipment***.

3.6 Preventing Injuries from Falling Object

(a) When work is conducted at height, developer, client, stakeholder, consultant and contractor shall implement the following controls:

(i) Establish exclusion zones and enforce them under work at height areas to prevent unauthorized access to the area in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.07.HN - Barricading of Hazards***;

(ii) Work is to stop while people traverse the exclusion zone;

(iii) Place warning signs to warn people of hazards, all safety signage shall in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.45.SS - Safety Signage and Signals***;

(iv) Contractor shall use bolt bags and tool carriers to carry small items and tools – these are not to impede the employee;

(v) Make sure that employees required to be in the exclusion zone including persons holding the ladders and banksman, wear hard hats;

(vi) Implement safe working platforms with appropriate toe boards to prevent falling objects; and

(vii) Prevent tools and equipment used at heights from falling by securing them with lanyards.

3.7 Protection of Relevant Party and Public

(a) Developer, client, stakeholder, consultant and contractor shall ensure that any work at height takes into account, necessary protection to the public from potential falls of tools or materials or from use of mechanical platforms. Protection measures shall include, but not limited to:

(i) Diversion of pedestrian walkways away from any overhead activities;

(ii) Temporary closure of footpaths for specific operations after authorization from Dubai South and ***Dubai Aviation City Corporation (DACC) OHSE*** has been sought and obtained;

(iii) Provision of a walkway with overhead protection from falling objects and shall be strong enough to prevent collapse and to prevent penetration by any objects that may fall;

(iv) Use of debris netting to prevent material falling outside the perimeter;

(v) Tying down or securing of tools and materials to prevent them from being blown off; and

(vi) Avoidance of work at height during busy times of the day when large numbers of members of the public are in the area.

3.8 Danger Areas

(a) Where a workplace contains an area where there is a risk of any person at work falling a distance; or being struck by a falling object, then developer, client, stakeholder, consultant and contractor shall ensure that means of preventing unauthorized persons from entering the area shall be in place, and clearly indicated.

3.9 PTW Requirements

(a) Developer, client, stakeholder, consultant and contractor shall ensure that Permit to Work (PTW) procedure for working at heights shall be developed, implemented and maintained. PTW procedure shall be review and approved by the consultant. PTW shall be in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.35.PT - Permit to Work Systems.***

3.10 Working Platforms

3.10.1 Protection of Open Sided Floors, Runways and Platforms

(a) Developer, client, stakeholder, consultant and contractor shall ensure that every open floor or platform with a height or deep 1.2 meters or more above an adjacent floor or ground level shall be guarded by a standard railing on all open sides except where there is entrance to a ramp, stairway or fixed ladder. The railing shall be provided with a toe board.

(b) Every runway shall be guarded by a standard railing on all open sides 1.2 meters or more above floor or ground level. Wherever tools, machine parts or materials are likely to be used on the runway, toe board shall also be provided on each exposed side.

(c) Regardless of height, open-sided floors, walkways, platforms or runways above or adjacent to dangerous equipment, open tanks, and similar hazards shall be guarded with a standard railing and toe board.

(d) A standard railing shall consist of top rail, mid-rail, post and shall have a vertical height of 95 cm nominal from upper surface of top rail to floor/platform, runway or ramp level. The mid-rail or intermediate rail be approximately halfway between the top rail and the floor taking into consideration that the distance of between mid-rail and the top rail or toe board shall not exceed than 47 cm.

(e) The anchoring of posts and framing of members for railing of all types shall be of such construction that the completed structure shall be capable of withstanding a load of at least 90 kg applied in any direction at any point on the top rail.

3.10.2 Fragile Surfaces

(a) Developer, client, stakeholder, consultant and contractor shall ensure that no one goes onto or near fragile surface unless that is the only reasonably practicable way for the employee to carry out the work safely, having regard to the demands of the task, equipment or working environment.

(b) If anyone does work on or near a fragile surface, developer, client, stakeholder, consultant and contractor shall:

  (i) Ensure that appropriate platforms, coverings, guard rails, and the equivalent are provided and used to minimize the risk; and

  (ii) Ensure to minimize the distance and effect of a fall if any risk of a fall remains.

(c) If anyone goes onto or near a fragile surface, developer, client, stakeholder, consultant and contractor shall ensure that awareness are given to all persons involved and might be exposed of the danger and prominent warning notices fixed at the approaches to the danger zone. Warning notices/signage shall be in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.45.SS - Safety Signage and Signals***.

3.10.3 Fall Protection Requirements for Unprotected Edges

(a) Developer, client, stakeholder, consultant and contractor shall ensure that each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is 2 meters or more above a lower level shall be protected from falling by the use of guardrail systems, safety net systems or personal fall arrest systems or other combination of fall protection as addressed in the sections below:

(i) Regardless of height above the equipment, each employee above dangerous equipment shall be protected from falling into or onto the dangerous equipment by guardrail systems or by equipment guards;

(ii) Each employee engaged in roofing activities on low-slope roofs, with unprotected sides and edges 2 meters or more above lower levels shall be protected from falling by guardrail systems, safety net systems, personal fall arrest systems or a combination of warning line system and guardrail system, warning line system and safety net system or warning line system and personal fall arrest system, or warning line system and safety monitoring system. On roofs 15.25 meters (50 feet) or less in width the use of a safety monitoring system alone without the warning line system is permitted; and

(iii) Each employee on a steep roof with unprotected sides and edges with a height of 2 meters or more above lower levels shall be protected from falling by guardrail systems with toe boards, safety net systems or personal fall arrest systems.

3.10.4 Protection from Falling Objects

(a) Developer, client, stakeholder, consultant and contractor shall ensure that all employees exposed to falling objects shall wear a hard hat and the employer shall implement one of the following measures:

(i) Erect toe boards, screens or guardrail systems to prevent objects from falling from higher levels; or

(ii) Erect a canopy structure and keep potential fall objects far enough from the edge of the higher level so that those objects would not go over the edge if they were accidentally displaced; or

(iii) Barricade the area to which objects could fall, prohibit employees from entering the barricaded area, and keep objects that may fall far enough away from the edge of a higher level so that those objects would not go over the edge if they were accidentally displaced.

3.10.5 Stairs Protection

(a) Developer, client, stakeholder, consultant and contractor shall ensure that having four or more risers shall be equipped with standard stair railings or standard handrails as provided below:

(i) On stairways less than 1 meter wide having both sides enclosed, at least one handrail, preferably on the right side descending;

(ii) On stairways less than 1 meter wide, having one side open, at least one stair railing on open side; and

(iii) On stairways less than 1 meter wide, having both sides open, one stair railing on each side.

(b) A standard stair railing shall be of construction similar to a standard railing but the vertical height shall be not more than 860 mm or less than 760 mm from upper surface of top rail to surface of tread in line with face of riser at forward edge of tread.

(c) Vertical clearance above any stair tread to an overhead obstruction shall be at least 2.1 meters measured from the leading edge of the tread.

3.10.6 Requirements for Fixed Stairs

(a) Developer, client, stakeholder, consultant and contractor that fixed stairs provided for access from one structure level to another where regular travel is necessary between levels and for access to platforms or offices which requires attention routinely during construction.

(b) Fixed stairs shall also be provided where access to elevations is required daily or at each shift for purposes such as:

(i) Gauging, inspection, regular maintenance, etc., where such work may expose employees to hazardous substances; or

(ii) Where carrying of tools, equipment or materials by hand is normally required.

3.10.7 Access Ladders

(a) Developer, client, stakeholder, consultant and contractor shall ensure that ladders shall be used only where infrequent access to the working platform is required; and

(b) Ladders shall be used and inspected in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.24.LD – Ladders***.

3.11 Roof Works

3.11.1 Designer Responsibilities

(a) Developer, client, stakeholder, consultant and contractor performing designer's duties shall consider health, safety and environment in the design of every roof structure in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.43.SD - Safety in Design (Construction)***. This shall include the health, safety and environment considerations for the construction, maintenance, repair and demolition of the roof.

(b) Developer, client, stakeholder, consultant and contractor performing designers duties shall consider the following:

(i) Elimination / reduction of the risk of falling by designing out the fall potential through the construction of permanent walls, cast-in mesh, specification of non-fragile materials or similar.

(ii) Provision of collective protective measures such as permanent guardrails and toe boards to roof edges;

(iii) Provision of anchorage points for static lines or built in fixings for safety nets;

(iv) Accelerated preparation of the floor level below the roof area to allow for mobile elevated work platforms (MEWP's) to be used for the roof installation process;

(v) Where reasonably practicable, the provision of safe access in the design such as stairs as opposed to vertical ladders; and

(vi) Consideration of off-site assembly or prefabrication to reduce the amount of work undertaken on site.

(c) Developer, client, stakeholder, consultant and contractor acting as designers shall keep a record of the health, safety and environment design risk that they have considered and the measures that they have taken to mitigate these risks where reasonably practicable.

3.11.2 Preparation of Roof Work Areas

(a) Developer, client, stakeholder, consultant and contractor shall ensure the following before allowing roof works to commence:

(i) Edge protection systems are installed, inspected and signed off by a competent person;

(ii) Safety harness are available where required and employees are trained to use;

(iii) Employees involved with roof working are briefed specifically on the safe system of work;

(iv) Emergency and rescue arrangement are in place to deal with any employee who may fall and become suspended by their safety harness and shall be in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) OHSERF – Regulation 13 – Emergency Management***;

(v) Areas below where roof works are to be undertaken are barricaded off and warning signs are clearly displayed in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.07.HN - Barricading of Hazards*** and ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.45.SS - Safety Signage and Signals***.

(vi) Weather conditions are assessed and within the limits for work to start safely; and

(vii) Fragile roof materials are identified and access to these areas are restricted with the use of rigid barriers and warning signs in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.07.HN - Barricading of Hazards*** and ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.45.SS - Safety Signage and Signals.***

3.11.3 Roof Works Access

(a) Developer, client, stakeholder, consultant and contractor shall ensure that safe access is provided to each roof work area in accordance with the following:

(i) Access stairs shall be provided where regular access to the roof is required;

(ii) Ladders shall be used only where infrequent access to the roof is required;

(iii) Clear designated walkways shall be established on the roof;

(iv) Access requirements shall take into account the requirements for employees to carry any necessary tools and materials; and

(v) Signage shall be provided to indicate any special access requirements or warnings.

3.11.4 Work on Fragile Roofs

(a) Fragile roof materials include any material that is not capable of supporting the weight of a person and are typically moulded or fabricated sheet materials including but not limited to:

(i) Asbestos cement sheeting / cellulose cement sheet;

(ii) Slate;

(iii) Glass;

(iv) Fiberglass; and

(v) Acrylic or other similar synthetic materials.

(b) Developer, client, stakeholder, consultant and contractor shall identify fragile roof materials and where work is required on the roof a risk assessment must be undertaken.

(c) Developer, client, stakeholder, consultant and contractor shall ensure that fragile areas of roofs are provided with appropriate walkways including guardrails and toe boards to allow for safe access on the roof.

(d) Developer, client, stakeholder, consultant and contractor shall ensure that warning signs are clearly displayed at the access point to roofs fabricated with fragile materials.

(e) Developer, client, stakeholder, consultant and contractor shall take appropriate precautions where fragile roof lights are present on a roof. Precautions shall include the following:

(i) A permit to work system for all roof works especially where fragile roof lights are present;

(ii) All personnel working on roofs where fragile roof lights are present shall be trained in the specific control measures of the access and work requirements;

(iii) Fragile roof lights shall be barricaded off where reasonably practicable. Where this is not reasonably practicable fragile roof lights shall be securely boarded over; and

(iv) Proximity restraints may be used in the case of short duration work to prevent access to areas where fragile roof lights are present.

3.12 Guardrail Systems

3.12.1 Provision of Guardrails

(a) Developer, client, stakeholder, consultant and contractor shall provide guardrails to all edges where there is a fall potential of 2 meters or more.

(b) In the case where a fall potential of less than 2 meters is identified, developer, client, stakeholder, consultant and contractor shall undertake a risk assessment and determine the level of protection required. As a minimum requirement for edges where a fall potential of less than 2 meters exist employers shall provide a single guardrail 95 cm form the walking/working level.

(c) Developer, client, stakeholder, consultant and contractor shall ensure guardrails are used on the edge of working platforms, walkways, stairways, ramps or landing and at:

(i) The perimeters of buildings or other structures;

(ii) The perimeters of skylight or other fragile roof materials;

(iii) Openings in floor or roof structures; and

(iv) Edges of shafts or excavations.

(d) Proprietary systems are to be configured, installed, used and dismantled in accordance with the manufacturer's instructions.

3.12.2 Requirements for Guardrail Systems

Developer, client, stakeholder, consultant and contractor shall ensure:

(a) That guardrails are provided to all edges where there is a risk of falling 2 meters height or more. Guardrails shall be provided a minimum of 95 cm above the walking/working platform level.

(b) That toe boards shall be provided at least 15 cm high and run continuously along the edge where guardrail protection is provided.

(c) That mid-rail shall be fitted to all edges where there is a risk of falling 2 meters height or more. The mid-rail shall be installed so that the gap between any guardrail and mid-rail or toe board and mid-rail does not exceed 47 cm.

(d) That screens and mesh shall extend from the guardrail to the walking/working level and along the entire opening.

(e) That other structural members such as additional mid-rails and architectural panels shall be installed such that there are no openings in the guardrails system that are more than 47 cm wide.

(f) That guardrail systems shall be capable of withstanding, without failure, a force or at least 1.25 kN point load in any outward or downward direction, at any point along the top edge.

(g) That when the 1.25 kN point load test specified in this section is applied in a downward direction, the top edge of the guardrail shall not deflect to a height less than 90 cm above the walking/working level.

(h) That guardrail system shall be surfaced to prevent injury to an employee from punctures or lacerations and to prevent snagging of clothing.

(i) That top rails and mid-rails shall be at least 6 cm nominal diameter or thickness to prevent cuts and lacerations. If wire rope is used for top rails, it shall be flagged at not more than 2 meter intervals with high-visibility material.

(j) That when guardrail systems are used at hoisting areas, a chain, gate or removable guardrail section shall be placed across the access opening between guardrail sections when hoisting operations are not taking place.

(k) That when guardrail systems are used at holes, they shall be erected on all unprotected sides or edges of the hole.

(l) That when guardrail systems are used are used around holes for the passage of materials, the hole shall have not more than two sides provided with removable guardrail sections to allow the passage of materials. When the hole is not in use, it shall be closed over with a cover, or a guardrail system shall be provided along all unprotected sides or edges.

(m) That when guardrail systems are used around holes that are used as points of access (such as ladder ways), they shall be provided with a gate or be offset so that a person cannot walk directly into the hole.

(n) That guardrail systems used on ramps and runways shall be erected along each unprotected side or edge.

(o) That before using a guardrail system, consider the factors that will influence the load on the guardrail. The force applied from the momentum of a falling person, the pitch of the roof and the length of the rafter to which the guardrail is attached will determine whether the guard railing is appropriate.

(p) Guardrail installed in the floor slab using bolts shall be load tested by a competent person and result shall be approved by the consultant.

3.13 Fall Arrest Systems (FAS)

3.13.1 Selecting FAS and Equipment

(a) Developer, client, stakeholder, consultant and contractor shall ensure when selecting the type of equipment to be used, the following factors shall be considered:

- (i) The type of work;
- (ii) The potential for a fall, and the fall's potential severity;
- (iii) Task mobility requirements; and
- (iv) Constraints on fall distances and clearances.

(b) Developer, client, stakeholder, consultant and contractor shall ensure when selecting equipment for any particular task the equipment shall give the wearer:

(i) The maximum degree of comfort and freedom of movement;

(ii) In the event of a fall, the most reasonably practicable protection against injury from:

1. Impact with the ground or other objects below the wearer; or
2. Impacting surrounding structures.

(c) FAS users:

(i) Shall ensure that the equipment combination is in accordance with the manufacturer's instructions; and

(ii) Cannot make any alterations that may adversely affect safe operation of any part of a FAS.

3.13.2 Inspection and maintenance of FAS and Equipment

(a) Developer, client, stakeholder, consultant and contractor shall ensure inspection and maintenance in compliance with:

(i) **Ministerial Order No. 37/2 (1982);** and

(ii) ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.42.LO - Safe Lifting Operations.***

(b) Developer, client, stakeholder, consultant and contractor shall ensure that fall arrest equipment is inspected and maintained in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.23.IT - Inspection, Testing and Tagging*** and that any defective item found during inspection and maintenance shall be segregated, tagged with a cautionary "Out of Service - Unsafe" and not used until it has been repaired and tested or replaced. Repair of defective equipment can be re-used.

(c) Developer, client, stakeholder, consultant and contractor shall ensure that in the event of a fall arrest, each item of equipment involved shall be tested and inspected before re-use. Any items found to have been stretched or damaged shall be replaced before the equipment can be re-used.

(d) Users shall inspect the following items before and after each use:

(i) Harnesses, lanyards, connectors, fall arrest devices, ropes, slings, and any other mobile attachment devices, e.g. snap-hooks, karabiners, rope grabs.

(e) Developer, client, stakeholder, consultant and contractor shall ensure the following when conducting inspection :

(i) Be by touch as well as sight;

(ii) Include the opening of any equipment where access for daily inspection is provided to make sure that internal components are in satisfactory condition;

(iii) Include the opening or removal of temporary rope or line protectors to enable rope to be appropriately inspected;

(iv) Include operation of the locking mechanism of fall arrest devices;

(v) For ropes, include running the rope through the hands; and

(vi) For portable pole platforms, include checks to make sure that:

1. Surfaces have no cracks;
2. There is no deformation, permanent bending, excessive corrosion, modification, and lack of insulation in recessed screw holes;
3. Non-slip surfaces are functional;
4. Welds are sound and joints and fastenings are tight; and
5. The safe working load markings are clearly legible.

(f) Developer, client, stakeholder, consultant and contractor shall ensure inspections of belts, harnesses and lanyards are to be conducted every 6 months by a competent person approved by ***Emirates International Accreditation Centre (EIAC)*** and ***Dubai Aviation City Corporation (DACC) OHSE Department*** and certified safe prior to use. Items are to be checked internally in accordance with the manufacturer's instructions to determine whether there is excessive wear or any other fault liable to render the item unsafe during a fall arrest.

(g) Developer, client, stakeholder, consultant and contractor shall ensure anchorages are to be inspected and certified before use after initial installation and inspected every 12 months thereafter by a competent person approved by ***Emirates International Accreditation Centre (EIAC)*** and ***Dubai Aviation City Corporation (DACC) OHSE Department***. Anchorages are to be visually inspected for signs of deterioration which might make them unserviceable together with any other requirements contained in the manufacturer's instructions.

(h) Developer, client, stakeholder, consultant and contractor shall ensure the parent structure is visually inspected for modifications or deterioration which might lead to loss of anchorage strength and drilled-in anchorages such as friction or glued-in anchorages shall be proof-tested as part of each inspection.

(i) Developer, client, stakeholder, consultant and contractor shall ensure inspections of fall-arrest devices are to be conducted in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.23.IT - Inspection, Testing and Tagging*** by a person who has been trained and is competent.

(j) Developer, client, stakeholder, consultant and contractor shall ensure that horizontal life lines and vertical life lines used with fall arrest devices shall be inspected and certified safe before use after initial installation and horizontal or vertical rails inspection is to be undertaken every 12 months.

(k) Developer, client, stakeholder, consultant and contractor shall make sure that:

(i) Slings are inspected in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.23.IT - Inspection, Testing and Tagging*** by a banksman or operator or equivalent and tested every 12 months by a competent testing company approved by *Dubai Accreditation Centre (DAC)* and ***Dubai Aviation City Corporation (DACC) OHSE Department*** and in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP - DS.PROJ.OHSE.CST.42.LO - Safe Lifting Operations, Lifting Equipment and Lifting Accessories.***

(ii) Ropes used to suspend a person are inspected before and after each use;

(iii) Ropes are not pull tested as this can cause damage to the rope.

(l) Developer, client, stakeholder, consultant and contractor shall ensure fall arrest devices are to be fully serviced and re-tested and certified safe by competent person approved by ***Emirates International Accreditation Centre (EIAC)*** and ***Dubai Aviation City Corporation (DACC) OHSE Department*** if they have been in storage for longer than 12 months.

(m) Developer, client, stakeholder, consultant and contractor shall ensure synthetic textile materials are to be maintained by cleaning with mild soap and water. If more severe cleaning is required reference is to be made to the recommendations of the manufacturer of the item.

(n) Developer, client, stakeholder, consultant and contractor shall ensure that fall arrest equipment is stored and transported in conditions which avoid dampness, heat and stress on components.

3.14 Safety Nets

(a) The use of safety nets shall only be considered where measures that prevent a fall of persons or objects are not reasonably practicable to implement.

(b) Where safety nets are used, developer, client, stakeholder, consultant and contractor shall put in place measures to ensure in so far as is reasonably practicable they are stored, handled and installed to prevent damage to the net from occurring.

(c) Developer, client, stakeholder, consultant and contractor shall regularly inspect nets for any signs of damage in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.23.IT - Inspection, Testing and Tagging*** and remove nets that show signs of damage or wear and tear from service.

(d) Safety nets shall be erected as close as reasonably practicable to the working level and if on the outside of the structure shall be slightly higher at the outer edge that at the inner.

(e) Two main types of safety nets are available:

(i) Personnel nets – 100 mm mesh. Intended to catch a person falling from above; and

(ii) Material or debris protection nets – Smaller mesh 12 mm – 19 mm. Intended to minimize risks to those below from falling objects.

3.14.1 General Requirements for Safety Nets

Developer, client, stakeholder, consultant and contractor shall ensure:

(a) That where safety nets are used the maximum distance a person can fall before encountering a net is 2 meters.

(b) That erection / installation of safety nets shall be carried out by competent persons under competent supervisor and shall ensure that any supporting framework can withstand impact or shock loading, and that the framework itself does not present a hazard to personnel who may fall into the net.

(c) That when erecting nets in the vicinity of electricity lines or overhead power cables, the appropriate Dubai South Department and relevant authority shall be consulted before work commenced.

(d) That configuration and rigging methods of the safety nets shall never be altered without the erector's consent and then only by persons competent to do so.

(e) That nets that have been used to arrest falls shall not be used again until a competent person checks them and ensuring that it is safe to use.

(f) That nets shall be securely attached to support framework with tie cords, hooks rings or thimbles spaced in accordance with the net manufacturer's specification. The actual tie shall be at least double the strength of the net, and if hooks are used, they shall have positive locking of some description.

(g) That nets can be outrigged on scaffolding provided with structural engineer approving that the scaffold structure is appropriately secured into a building or similar.

3.14.2 Safety Net System

Developer, client, stakeholder, consultant and contractor shall ensure:

(a) That safety nets shall be installed as close as reasonably practicable under the walking/working surface on which employees are working, but in no case more than 2 meters below such level. When nets are used on bridges, the potential fall area from the walking/working surface to the net shall be unobstructed.

(b) That safety nets shall extend outward from the outermost projection of the work surface as follows:

VERTICAL DISTANCE FROM WORKING LEVEL TO HORIZONTAL PLANE OF NET	MINIMUM REQUIRED HORIZONTAL DISTANCE OF OUTER EDGE OF NET FROM THE EDGE OF THE WORKING SURFACE
Up to 1.5 meters	2.5 meters
Between 1.5 and 2.0 meters	3.0 meters

(c) That safety nets shall be installed with appropriate clearance under them to prevent contact with the surface or structures below when subjected to an impact force equal to the drop test specified in this section.

(d) That safety nets and their installations shall be capable of absorbing an impact force equal to the produced by the drop test specified below.

(e) That safety nets and installations shall be drop-tested at the jobsite after initial installation, before being used as a fall protection system, after any fall, whenever relocated, after major repair and at 6 month intervals if left in one place:

(i) The drop-test shall consist of a 180 kg bag of sand 750 mm ± 50 mm in diameter dropped into the net from the highest walking/working surface at which employees are exposed to fall hazards, but not from less than 1 meter above that level;

(ii) When the developer, client, stakeholder, consultant and contractor can demonstrate that it is unreasonable to perform the drop-test required by this section, they shall certify that the net and the net installation is in compliance with the provisions of this section by preparing a certification record prior to the net being used as a fall protection system. The certification record shall include an identification of the net and the net installation for which the certification record is being prepared; the date that it was determined that the identified net and net installation were in compliance with this section and the signature of the competent person making the determination and certification; and

(iii) The most recent certification record for each net and net installation shall be available at the jobsite for inspection.

(f) That defective nets shall not be used. Safety nets shall be inspected at least once a week for wear, damage and other deterioration. Defective components shall be removed from service. Safety nets shall also be inspected after any occurrence which could affect the integrity of the safety nets system. Inspection and tagging of nets shall be in accordance with the requirements of *Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.23.IT - Inspection, Testing and Tagging*.

(g) That materials, scrap pieces, equipment and tools which have fallen into the safety net shall be removed as soon as reasonably practicable from the net and at least before the next shift.

(h) That the maximum size of each safety net mesh opening shall not exceed 230 cm² nor be longer than 15 cm on any side, and the opening, measured center-to-center of mesh ropes or webbing, shall not be longer than 15 cm. all mesh crossings shall be secured to prevent enlargement of the mesh opening.

(i) That each safety net and its section shall have a border rope for webbing with a minimum breaking strength of 22.2 kN.

(j) That connections between safety net panels shall be as strong as integral net components and shall be spaced not more than 150 mm apart.

3.14.3 Markings on Safety Nets

(a) Developer, client, stakeholder, consultant and contractor shall ensure that safety net bears a label marked with:

- (i) Name/trade mark to identify the manufacturer;
- (ii) Normal size of the safety net;
- (iii) Recognized international standard;
- (iv) Date of manufacture;
- (v) Deflection at center of net during prescribed test; and
- (vi) Maximum distance below the working height at which the net is designed for use.

3.14.4 Test Certificate

(a) Developer, client, stakeholder, consultant and contractor shall ensure that Test Certificates supplied by the manufacturer state the following:

- (i) Type of net;
- (ii) Breaking strength of:
  1. Mesh;
  2. Border cord; and
  3. Net to failure.
- (iii) Height of drop withstood and deflection at center when proof tested.

3.14.5 Periodic Testing

(a) Developer, client, stakeholder, consultant and contractor shall ensure:

- (i) That safety nets are provided with short lengths of test cord attached, (normally eight lengths).

(ii) That at intervals not exceeding three months one cord shall be tested and a record kept. For net use after two years or if there is any deterioration, advice shall be sought from the manufacturers.

(iii) That nets shall be inspected and deemed fir for purpose immediately after erection, then weekly for damage, loose ties, etc. together with the framework and anchorage points. All such inspections shall be recorded.

(iv) That the test cords shall never be used as tie cords.

(v) Inspection, testing and tagging shall be in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.23.IT - Inspection, Testing and Tagging***.

3.14.6 Care of Nets

(a) Developer, client, stakeholder, consultant and contractor shall ensure:

(i) That care shall be taken to reduce to a minimum unnecessary wear and mechanical damage likely to weaken the net. Materials shall not be stacked on a net and deliberate jumping onto or dropping of objects into nets shall be prohibited.

(ii) That the following sources of damage or wear shall be avoided as far as reasonably practicable:

1. Dragging over rough surfaces;
2. Contact with sharp edges;
3. Accumulation of debris in the net;
4. Sparks and other sources of ignition from welding and burning operations, hot gases from blow lamps, hot ash from chimneys or fumes; and
5. Chemical spills / leaks.

3.14.7 Maintenance of Nets

(a) Developer, client, stakeholder, consultant and contractor shall ensure that:

(i) Regular inspection is necessary to ensure the nets remain serviceable. The net manufacturer shall be consulted when there is any doubt about the suitability of nets for use in hazardous conditions, or after any known contamination.

(ii) It is necessary to wash nets occasionally and always before storing in order to remove grit and soot and to prevent abrasion. If contaminated by acids or alkalis, nets shall be well washed, preferably by hosing and allowed to dry naturally away from the heat.

3.14.8 Storage of Safety Nets

(a) Developer, client, stakeholder, consultant and contractor shall ensure that:

(i) Wet nets shall be dried naturally.

(ii) Man-made fibre nets may be stored wet without loss of strength but natural fibre nets shall always be dried first.

(iii) Storage cupboards to be well ventilated (nets hung if reasonably practicable).

(iv) Nets shall be turned periodically to allow air circulation.

3.14.9 Safety Nets Repair

(a) Developer, client, stakeholder, consultant and contractor shall ensure that:

(i) Only a competent person shall carry out repairs and assess the repaired net for its suitability for continued use. It is good practice to effect repairs away from site to ensure that the quality of repair is in line with the manufacturer's instructions.

(ii) A tag shall be fixed to each repair, carrying identification of the repairer and date of repair.

(iii) Any repairs undertaken shall not be detrimental to the strength of the net or impede its performance.

(iv) Repairs shall only be carried out using materials that are compatible with the net. Any damaged border ropes, coupling ropes or ties shall be scrapped and not repaired.

3.15 Inspections

(a) Developer, client, stakeholder, consultant and contractor shall ensure that fall protection system are ready and able to perform their required purpose. To achieve this, an inspection and maintenance procedure shall be implemented and maintained.

(b) The following as a minimum, shall be included in the inspection and preventive maintenance procedure:

(i) Equipment manufacturer's instructions;

(ii) A requirement that all fall protection equipment shall be inspected prior to each use and a documented inspection at intervals not to exceed 6 months and in accordance with the manufacturer's instruction; and

(c) Developer, client, stakeholder, consultant and contractor shall ensure that working at height equipment and device are inspected:

(i) After it is assembled and before use;

(ii) Following any substantial alterations;

(iii) Following any impact or extreme conditions that may affect the stability of the platform; and

(iv) Inspection, testing and tagging shall be in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) CoP – DACC.DS.PROJ.OHSE.CST.23.IT - Inspection, Testing and Tagging***.

(d) Developer, client, stakeholder, consultant and contractor shall ensure that for mobile platform, inspection at the site is appropriate without the need for re-inspection every time the platform is moved.

(e) Developer, client, stakeholder, consultant and contractor shall keep the report and record of a platform inspection in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) OHSERF – Regulation 8 – Document Control and Record Management*** and shall be placed a copy on the site and original shall be placed at the office until the construction work is completed.

(f) Developer, client, stakeholder, consultant and contractor shall ensure that all user shall inspect fall protection equipment prior to each use and inspection shall include the following:

(i) Carefully inspect body belts, safety straps, harnesses, lanyards, lifelines and connectors for indicators of wear and deterioration or evidence of impact loading;

(ii) Visually inspect for the following:

1. Webbing or rope cuts, loose stitching, kinks, knots, abrasions, burns, excessive swelling, discoloration, cracks, charring, broken fibers and chemical or physical exposure;
2. Loose, bent or pulled rivets, bent grommets and broken cuts or burned threads;
3. Nicks, cracks, distortion or corrosion of hardware (buckle, D ring, snap hook);
4. Breakaway jacket on deceleration unit of shock absorbing lanyard is intact and has no broken stitches, tears, stretch marks or other evidence of impact loading;
5. Check all equipment for damage, wear, mildew or distortion;
6. Hardware shall be free of cracks, sharp edges or burns; and
7. Ensure that no straps are cut, broken, torn or scraped.

(iii) Any fall protection equipment subjected to a fall or impact load shall be removed from service immediately for examination;

(iv) Equipment that is damaged or in need of maintenance shall be tagged as unusable and shall not be stored in the same area as serviceable equipment; and

(v) Anchors and mountings shall be inspected by the user and supervisor for any signs of damage before each use. The anchor point and mountings shall be inspected and certified by the 3rd party prior to use.

3.16 Emergency Planning

(a) Developer, client, stakeholder, consultant and contractor shall ensure that appropriate emergency response procedure are developed in accordance with the requirements of ***Dubai Aviation City Corporation (DACC) OHSERF – Regulation 13 –Emergency Management*** for work at heights and in place before any work starts on a site, especially when the work involves:

(i) Electrical hazards;

(ii) The use of power equipment;

(iii) Hot work (cutting, grinding, welding, etc.); and

(iv) Chemicals.

(b) Developer, client, stakeholder, consultant and contractor shall include emergency rescue plan and incident response procedures where fall arrest systems are being adopted. The rescue plan is to identify:

(i) How incapacitated employees will be retrieved to a safe location if they fall;

(ii) How many employees are needed to rescue fallen employee;

(iii) What additional equipment is needed for rescues; and

(iv) The training required for rescuers.

(c) Developer, client, stakeholder, consultant and contractor shall ensure that employees have:

(i) Information on site incident response and emergency rescue procedures;

(ii) Procedures in the event of emergencies such as rescues, incidents or injuries;

(iii) An induction on the emergency rescue procedures for the site;

(iv) Training in the site incident response and rescue procedures;

(v) Training in the use of fall arrest systems; and

(vi) Training in suspension trauma.

3.16.1 Rescue Equipment

(a) Developer, client, stakeholder, consultant and contractor shall ensure: That when

(i) That when employees are using fall arrest systems, rescue equipment shall be available in the area to retrieve employees in the event of an incident;

(ii) That when rescuing an injured or unconscious person at height that they act quickly to prevent possible suspension trauma which can cause death very quickly; and

(iii) That when employees who are working on or near electrical equipment, safety and rescue equipment approved for electrical work is available.

4.0 RECORD KEEPING

(a) Contractor shall ensure records of the below but not limited to:

(i) Erector / installer competency;
(ii) Personnel training and awareness;
(iii) Inspector competency certificate;
(iv) Inspection and test report;
(v) Periodic maintenance report;
(vi) Damage and repair report;
(vii) Equipment / device registers;
(viii) Equipment / device receiver; and
(ix) Mobilization and demobilization of equipment / device.

5.0 REFERENCES

NO.	DOCUMENT NAME	DOCUMENT NO.
1	Risk Management	DACC OHSE – Regulation 2
2	Leadership, Roles, Responsibilities and Self-Regulations	DACC OHSE – Regulation 5
3	Competence, Training and Awareness	DACC OHSE – Regulation 6
4	Document Control and Record Management	DACC OHSE – Regulation 8
5	Emergency Management	DACC OHSE – Regulation 13
6	Occupational Health, Safety, Security and Environment Plan (OHSSE-Plan) for Construction	COP - DACC.DS.PROJ.OHSE.CST.01.HP
7	OHSSE Management for Construction Work	COP - DACC.DS.PROJ.OHSE.CST.02.CW
8	Assigned / Appointment of Responsibilities	COP - DACC.DS.PROJ.OHSE.CST.05.AP
9	Barricading of Hazards	COP - DACC.DS.PROJ.OHSE.CST.07.HN
10	HSE Induction, Pre-Task Briefing and Toolbox Talks	COP - DACC.DS.PROJ.OHSE.CST.20.TB
11	Inspection, Testing and Tagging	COP - DACC.DS.PROJ.OHSE.CST.23.IT
12	Ladders	COP - DACC.DS.PROJ.OHSE.CST.24.LD
13	Permit to Work Systems	COP - DACC.DS.PROJ.OHSE.CST.35.PT
14	Personal Protective Equipment	COP - DACC.DS.PROJ.OHSE.CST.36.PP
15	Safe Lifting Operations, Safe Use of Lifting Equipment and Lifting Accessories	COP - DACC.DS.PROJ.OHSE.CST.42.LO
16	Safety in Design (Construction)	COP - DACC.DS.PROJ.OHSE.CST.43.SD
17	Safety Signage and Signals	COP - DACC.DS.PROJ.OHSE.CST.45.SS
18	Occupational Health Screening and Medical Surveillance	COP - DACC.DS.PROJ.OHSE.WRH.04.HM
19	Medical care which the employer is obliged to provide to his workers	Ministerial Decision No. 37/2 of 1982