

CHAPTER 3 CONTRACTUAL PROVISIONS ON CONSTRUCTION SAFETY

3.1 INTRODUCTION AND GUIDANCE NOTES

- 3.1.1 The Construction Site Safety Manual (the Manual) is mandatory for all construction works contracts and term contracts, undertaken by contractors on the List of Approved Contractors for Public Works or those on the List of Approved Suppliers of Materials and Specialist Contractors for Public Works (e.g. piling, electrical and mechanical engineering works), and Design and Build contracts. However, there may be contracts which, owing to their small size and/or nature, will warrant changes to the contractual provisions set out in this chapter. Each works department will be the best judge of its own situation and needs. Contract drafters shall seek advice from Departmental Safety Advisers and the agreement of the appropriate (D2 or above) officer for such changes.
- 3.1.2 The appendices to this Chapter set out the contractual provisions on construction safety to be incorporated into the relevant type of contract documents. They include Special Conditions of Tender, Special Conditions of Contract, Particular Specifications, and Methods of Measurement associated with requirements related to the submission of a Safety Plan and the Pay for Safety Scheme (PFSS) and should be incorporated in the appropriate contract documents. It should be noted that the Particular Specification clauses contained in Appendix III are general requirements applicable to all works and term contracts. Individual departments should incorporate additional clauses to suit the specific nature of works within their departments.
- 3.1.3 One of the major provisions is the inclusion of a Safety Plan, which is a document setting out details of the Contractor's safety management system that he will implement on the Site to ensure safety and health in the execution of the Works. A good Safety Plan should set out the Contractor's management policy and commitment, organization and detailed arrangements and

procedures to achieve the best safety performance.

3.1.4 A Safety Plan shall be a mandatory requirement for the following contracts :

- (i) works contracts, undertaken by contractors on the List of Approved Contractors for Public Works or those on the List of Approved Suppliers of Materials and Specialist Contractors for Public Works, with estimated contract sums of \$ 20M and above,
- (ii) term contracts, undertaken by contractors on the List of Approved Contractors for Public Works or those on the List of Approved Suppliers of Materials and Specialist Contractors for Public Works, with total estimated expenditure of \$ 50M and above, and
- (iii) Design and Build contracts with estimated contract sums of \$ 20M and above.

For works contracts and Design and Build contracts with estimated contract sums of less than \$ 20M and term contracts with total estimated expenditure of less than \$ 50 M, the criterion to decide whether safety plans are required or not is whether dangerous situations are anticipated by virtue of the site location or the operation involved in the construction work within the scope of the contract. Departmental Safety Advisers should be consulted for advice on specific requirements.

3.1.5 Notwithstanding the statutory requirement under the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations that a contractor shall employ one full-time Safety Officer (SO) where the total number of persons employed at all of his construction sites, not being persons employed by a specialist contractor, is 100 or more, Particular Specification clause no. 5(2) requires the employment of full-time SO in works contracts in accordance with the total no. of workers employed

on the Works or in conjunction with the Contract whether in the employ of the Contractor or his sub-contractor as follows:

<u>Total no. of workers</u>	<u>Minimum no. of full-time Safety Officer</u>
50 to 200	1 -
201 to 700	2 (at least 1 of them shall be a safety officer who has been qualified and registered under the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations as a safety officer for at least 3 years and during which has gained the relevant experience in site safety administration of the Contract)
701 to 1200	3 (at least 1 of them shall be a safety officer who has been qualified and registered under the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations as a safety officer for at least 3 years and during which has gained the relevant experience in site safety administration of the Contract)
1201 and above	4 (at least 2 of them shall be safety officers who have been qualified and registered under the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations as a safety officer for at least 3 years and during which have gained the relevant experience in site safety administration of the Contract)

Other factors to be considered in deciding whether a full time or part time Safety Officers needs to be employed include :

- (a) the nature and the complexity of the Works, the number of isolated sites and the potential risks anticipated on Site; and
- (b) the estimated contract sum, e.g. at least one for \$ 100M.

For term contracts, a full time safety officer shall be required in accordance with Particular Specification clause no. 5(2). However, the two factors mentioned above shall be taken into consideration.

If in doubt, the advice of the departmental Safety Adviser should be sought.

3.1.6 For exceptionally complex contracts involving potentially high risk works and with estimated Contract sums of \$ 100M, consideration shall be given to allow a longer tender period for tenderers to develop the Outline Safety Plan.

3.1.7 All works contracts, term contracts, and Design and Build contracts where Safety Plans are required , irrespective of whether the contract is Bills of

Quantities (BQ) or Schedule of Rates (SOR) based, and which tenders are called on or after 1 December 2000 shall be included in the Pay for Safety Scheme (PFSS). For works contracts and Design and Build contracts to be included in PFSS, the estimated contract sum shall be \$ 20M and above, and for term contracts the total estimated expenditure shall be \$ 50M and above. For contracts where a great portion of the value is on the cost of equipment, the cost of equipment shall be excluded from the estimated from the contract sum or total estimated value in determining whether the contract should be included in PFSS. Irrespective of the value of the contract, term contracts solely for maintenance works (e.g. some E&M maintenance contracts) and contracts with duration of 12 months or less shall not be included in PFSS.

- 3.1.8 Independent Safety Audit Scheme (ISAS) is applicable to mega capital works contracts (i.e. estimated contract sums exceeding \$1,000 million) or capital works contracts involving unconventional construction method. Contractual provisions, background and practice note on the ISAS are set out in the Works Bureau Technical Circular No. 32/99.
- 3.1.9 In the preparation of contract documents, the relevant contractual provisions set out in the appendices to this Chapter **shall be incorporated in the contract documents.**
- 3.1.10 For contracts where Safety Plans are not required and therefore not included in the Pay for Safety Scheme, the Special Conditions of Tender (Appendix I), Special Conditions of Contract (Appendix II) and

Method of Measurement (Appendix VI) shall not be included. However, the following deletion/amendments to the Particular Specification (PS) clauses are to be incorporated :

- (i) Deletion of PS clause no. 3, 5(4)(d), 8(4), 8(5), 8(7)(e), 8(11), 10 and 11;
- (ii) Replace the words "Safety Plan" in PS clause nos. 5(4)(b), 5(4)(c), 5(6), 9(1) 9(2) and 13(4)(e) with "Contractor's site safety obligations set out in the Contract";
- (iii) Replace PS clause no. 9(4)(a) with the following :

“Review of the Contractor’s safety and health provisions and measures, safe working procedures and method statements and update of emergency and rescue procedures”, and
- (iv) Replace the words “for consideration at each Site Safety Management Committee Meeting” in PS clause no. 13(4) with “for consideration at the monthly progress meeting with the Architect/Engineer*”.

3.1.11 For contracts where a Specialist Contractor is employed, the Specialist Contractor shall provide a copy of his Safety Plan to the Contractor. Any discrepancies between the Safety Plan prepared by the Specialist Contractor and that of the Contractor shall be discussed between them and reconciled under the co-ordination of the Contractor. The Site Agent, project manager, Safety Officer and Safety Supervisor of the Specialist Contractor shall also attend the Site Safety Management Committee chaired by the Architect/Engineer* or his representative.

- 3.1.12 Guidance Notes on PFSS are set out in Chapter 12 of this Manual.
- 3.1.13 A "Checklist for Safety Plan" is attached in Appendix VII to assist the Architect/Engineer* and his staff in checking the Safety Plan(s) submitted under PS clause no. 3. The checklist is an administrative guideline and should not be included in the contract documents.

(Note : * delete or amend as appropriate to suit departmental contract arrangements)

3.2 Implementation of Site Safety Cycle and Provision of Welfare Facilities for Workers at Construction Sites
(Incorporating ETWB TC(W) No. 30/2002 with amendments to Sections 3.2.9, 3.2.10, 3.2.13, 3.2.14 and 3.2.15)

Scope

3.2.1 Section 3.2 promulgates the second stage of implementation of Site Safety Cycle (SSC) and the provision of welfare facilities for workers at construction sites. It shall apply to all capital works contracts including Design and Build contracts that are included in the Pay for Safety Scheme (PFSS), tenders of which are invited on or after 15 August 2002.

3.2.2 Where there are practical difficulties to implement the requirements of SSC for a Contract, the project officer concerned shall seek advice from the Departmental Safety Adviser, and if agreed obtain the approval from an appropriate D2 officer for the exemption of the requirements.

Background

3.2.3 SSC was introduced to the construction industry of Hong Kong in 2000, modelled on the basis of "Safety Work Cycle" of Japan. The practising of SSC in public works sites was initially on a voluntary basis, and subsequently put for trial under the PFSS in six selected contracts. The SSC is successful in demonstrating

six selected contracts. The SSC is successful in demonstrating that the implementation of the activities enhances the communication between site management and working levels on safety and health matters, promotes workers' safety awareness and improves housekeeping and site tidiness. All these contribute towards the improvements of safety performance and prevention of accidents at construction sites. Furthermore, the trial implementation of SSC under the PFSS also showed that it helped promote and strengthen the practising of SSC. It is therefore decided to extend the second stage of the implementation of SSC to all capital works contracts including Design and Build contracts that are included in the PFSS. The practising of SSC in term contracts will be considered at a later stage when more experience is gained for the implementation due to the special work nature for term contracts.

3.2.4 The trial contracts for implementation of SSC have also included the requirement for provision of welfare facilities for workers at construction sites including lockers and showering facilities. The feedback on the provisions are positive in that it improves the site conditions particularly in hygiene and promotes the collaboration of workers in keeping sites clean and tidy.

Policy

3.2.5 All capital works contracts including Design and Build contracts that are included in the PFSS, tenders of which are invited on or after 15 August 2002 (except for those contracts with approval for exemption pursuant to Section 3.2.2 above), shall incorporate the contractual provisions contained in this Manual for the implementation of SSC and the provision of welfare facilities for workers at construction sites.

Site Safety Cycle

3.2.6 The activities of SSC are classified into three categories, viz. Daily Cycle, Weekly Cycle and Monthly Cycle. Details of each category of SSC are given below:

Daily Cycle

- (a) Pre-work Exercise and Safety (PES) meeting;
- (b) Hazard Identification Activity (HIA) meeting;
- (c) Pre-work Safety Checks;
- (d) safety inspection by Site Agent or his/her representatives;
- (e) guidance and supervision during work;
- (f) safety co-ordination meeting;
- (g) daily cleaning and tidying up of the Site;
- (h) checking of the Site after each day's work;

Weekly Cycle

- (i) Weekly Safety Walk by Site Agent and Safety Officer in company with the Architect/Engineer's Representative;
- (j) weekly co-ordination meeting with Site Agent and the Architect/Engineer's Representative;
- (k) weekly overall cleaning and tidying up of the Site;

Monthly Cycle

- (l) Site Safety Management Committee meeting (including pre-meeting inspection); and
- (m) Site Safety Committee meeting.

3.2.7 The Particular Specification (PS) and the Method of Measurement (MoM) for the implementation of SSC are given in **Appendices III and VI(a)** respectively. It should be noted that the PS and the MoM for items (g) and (k) of Section 3.2.6 for daily and weekly overall cleaning and tidying up of the Site respectively have been given in DEVB TC(W) No. 8/2010. Moreover, the requirements for items (i), (l) and (m) for Weekly Safety Walk, Site Safety Management Committee meeting and Site Safety Committee meeting respectively are the existing requirements for a safety management system under the PFSS.

3.2.8 To encourage practising of SSC, payment shall be made to Contractors under the PFSS for persons attending all three activities of Daily Cycle in one day, viz. PES meeting, HIA meeting and Pre-work Safety Checks (hereafter collectively referred to as the “Pre-work Activities”). The Pre-work Activities shall be arranged and held for attendance by persons employed on the Works (excluding clerical and administrative staff in site office), irrespective of whether they are in the employment of the Contractor or his sub-contractors.

3.2.9 The Contractor is encouraged to arrange the Pre-work Activities to be held daily, but in any case the frequency of the Pre-work Activities for attendance by each person employed on the Works shall be not less than once in a week. Where necessary, the Contractor can arrange more than one session of Pre-work Activities to be held in a day in order to suit the large workforce or the different times of arrival of workers at the Site. The Pre-work Activities shall be carried out prior to any work carried out by the persons attending the Pre-work Activities on that day. Measurement shall not be made if the Architect/Engineer's Representative is dissatisfied with the content and/or arrangement for that activity.

3.2.10 To promote participation of SSC by persons working on the Site, measurement and payment for “arrange and hold Pre-work Activities” for the number of attendance in a month shall be made only if the number of individual persons who have attended the Pre-work Activities to the satisfaction of the Architect/Engineer's Representative within that month is 70% or more of the average number of persons working on the Site. For the avoidance of doubt, the average number of persons working at the Site in a month shall be the quotient of the total number of man-days worked for the Contract in that month divided by the number of working days within that month.

3.2.11 Other activities of SSC not mentioned in Sections 3.2.7 and 3.2.8 above, such as safety inspection, guidance and supervision, daily

and weekly safety co-ordination meetings and checking of the Site after each day's work etc. are the general obligation of Contractors, which shall be deemed to have been included in the Contract Rates.

3.2.12 The PES meeting shall be led by the Site Agent or a senior staff of the site management of the Contractor, who has attended the training course on SSC, or the Safe Working Cycle organized by the Occupational Safety & Health Council (OSHC) or Construction Industry Council (CIC), or other relevant training courses notified by the Works Bureau. Furthermore, the HIA meetings shall be led by persons who have attended, in addition to the SSC course, the presentation skill course such as the Occupational Safety and Health Trainer Course of OSHC or the Safety Training Techniques Course of CIC, or other relevant training courses notified by the Works Bureau. The leader of the HIA meeting shall prepare the training materials before conducting the meeting.

3.2.13 Sample BQ for contracts with contract sums \$200M or below and \$500M are given at **Appendices I(a) and I(b) of Chapter 12 of this Manual** respectively for reference by works departments in preparing the contract documents. A sample Summary of Tender for Design and Build contracts showing how the Provisional Sum of PFSS is included is given in **Appendix II(c) of Chapter 12 of this Manual.**

3.2.14 The Architect/Engineer's Representative shall closely monitor the Contractor's performance on practising SSC on the Site. Any irregularity observed for the Pre-work Activities shall be put up to the Contractor for improvement in the weekly co-ordination meetings and/or Site Safety Management Committee meetings as appropriate. The Contractor shall be warned if his performance on practicing SSC is not satisfactory resulting in non-payment for "arrange and hold Pre-work Activities" for two consecutive months. If the non-payment continues, this should be duly reflected in the Contractor's quarterly performance report.

Safety Bulletin Board and Hard-paved Area

3.2.15 To promote SSC, a safety bulletin board shall be erected on the Site and where necessary, a hard-paved area shall be provided for holding of Pre-work Activities. The location for erection of the safety bulletin board and the hard-paved area shall be proposed by the Contractor and approved by the Architect/Engineer's Representative. If the location of the hard-paved area is outdoors, a cover shall be provided for the attendance of Pre-work Activities unless otherwise approved by the Architect/Engineer that the provision is not necessary. Furthermore, additional safety bulletin board and hard-paved area can be provided on the Site subject to the approval of the Architect/Engineer if the Pre-work Activities have to be held at more than one location. The provision of safety bulletin board and the provision of the hard-paved area shall be included in the Preliminary Item for "Temporary Accommodation for the Contractor" or "Contractor's Site Accommodation in the Preliminaries" as appropriate.

Welfare Facilities for Workers

3.2.16 To take care of the needs and welfare of workers and to promote site cleanliness and hygiene, the Contractor shall provide storage compartments, drinking water facilities, toilet facilities, hand-wash facilities and rubbish bins on the Site. Where the number of workers working on the Site will likely be exceeding 100 in one day for a continuous period of twelve months or more during the Contract, the Contractor shall provide showering facilities for workers on the Site also.

3.2.17 The provisions of welfare facilities for workers and the hard-paved areas pursuant to Section 3.2.13 above shall be included in the Preliminary Item "Temporary Accommodation for the Contractor" or "Contractor's Site Accommodation in the Preliminaries" as appropriate. The PS and the Particular Preamble for the provision are given in **Appendices III and VI(c)** respectively.

Notes for Tenderers

3.2.18 The following shall be included in the Notes for Tenderers in each tender document for which this Section 3.2 shall apply to draw the attention of tenderers to the requirements for the implementation of SSC and the provisions of welfare facilities for workers under the Contract:

“Tenderers should note that this Contract includes the Particular Specification on Site Safety Cycle and the provision of welfare facilities for workers at construction sites. Tenderers should also note the Particular Preamble for the provision of safety bulletin board and hard-paved area for the Pre-work Activities of Site Safety Cycle and the provision of welfare facilities for workers under the Preliminary Item “Temporary Accommodation for the Contractor” [or “Contractor’s Site Accommodation in the Preliminaries” as appropriate].”

Appendices to Chapter 3

- Appendix I - Special Conditions of Tender for contracts with Safety Plan requirement.
- Appendix II(a) - Special Conditions of Contract for works contracts with Safety Plan requirement
- Appendix II(b) - Special Conditions of Contract for term contracts with Safety Plan requirement
- Appendix III - Particular Specifications
- Appendix IV - Proforma on “Monthly Statement of General Safety Induction Training for Workers”
- Appendix V - Colour Coding of Lifting Gear
- Appendix VI(a) - Method of Measurement for works contracts included in the Pay for Safety Scheme
- Appendix VI(b) - Method of Measurement for term contracts included in the Pay for Safety Scheme
- Appendix VI(c) - Method of Measurement for Hard-Paved Area for Pre-work Activities of Site Safety Cycle and Welfare Facilities for Workers
(Incorporating Appendix E of ETWB TC(W) No. 30/2002 with necessary amendment)
- Appendix VII - Checklist for Safety Plan (not to be included in contract documents)

Appendix I - Special Conditions of Tender

(Applicable to contracts with Safety Plan requirement)

- SCT 1
- (1) The tenderer shall submit with his Tender an Outline Safety Plan which shall be the tenderer's proposals to ensure safety and health in the execution of the Works. Failure to submit the Outline Safety Plan may invalidate the Tender. Outline Safety Plan
- (2) The Outline Safety Plan shall start with a formal statement of policy on safety and health and shall include :
- (a) identification of safety and health hazards which may be countered in the execution of the Works,
 - (b) an outline of proposed safety and health measures for the control and prevention of such safety and health hazards, and
 - (c) the manner by which safety and health measures will be implemented and monitored.
- (3) The Outline Safety Plan shall be used for the purpose of tender assessment and shall not form part of the Contract.

Appendix II(a) - Special Conditions of Contract

(Applicable to works contracts with Safety Plan requirement)

- SCC 1
- (1) "Safety Plan" means the Safety Plan Safety Plan referred to in sub-clause (4) of this Special Condition of Contract, including any revised or updated version, setting out details of the safety management system that the Contractor will implement on the Site, together with any other measures and information required by the Contract to ensure safety and health in the execution of the Works.
 - (2) The Contractor shall submit within 14 days of the date of the Employer's letter of acceptance of the Tender three copies of a draft Safety Plan to the Architect/Engineer*.
 - (3) Within 7 days from the submission of the draft Safety Plan, the Contractor shall arrange and hold an ad hoc meeting (or meetings if necessary) with the *Architect/Engineer's representatives to discuss the draft Safety Plan. Where the Architect/Engineer* is of the opinion that the draft Safety Plan does not meet the requirements of the Contract he shall request that the Contractor remedy the deficiency prior to submitting the Safety Plan to the Architect/Engineer* in accordance with sub-clause (4) of this Special Condition of Contract.

- (4) The Contractor shall submit within 35 days of the date of the Employer's letter of acceptance of the Tender six copies of the Safety Plan to the Architect/Engineer*.
- (5) The Contractor shall review the Safety Plan at monthly intervals and shall revise and update the Safety Plan if necessary.
- (6) The Contractor shall comply with the Safety Plan in the execution of the Works and ensure his employees and sub-contractors of all tiers comply with the Safety Plan. The Contractor shall provide any other party working on the Site including Specialist Contractors and utility undertakings with a copy of the Safety Plan and shall request those parties comply with it. The Contractor shall report any person who fails to comply with the Safety Plan to the Architect/Engineer.
- (7) If the Architect/Engineer* is of the opinion that the Safety Plan does not meet the requirements of the Contract, the Architect/Engineer* may by notice in writing require the Contractor to revise or update the Safety Plan and the Contractor shall comply with that requirement within 7 days of the date of the notice.
- (8) The Contractor shall provide all facilities, access and assistance to the Architect/Engineer* to periodically verify that the Safety Plan is being properly and

fully implemented. If the Architect/Engineer* is of the opinion that the Safety Plan is not being properly and fully implemented and the failure may adversely affect the safety and health of any person or the safety of any property on or adjacent to the Site, the Architect/Engineer* may notify the Contractor in writing of such failure and the Contractor shall then take all necessary steps to rectify that failure immediately. For the avoidance of doubt, this Special Condition of Contract does not limit or take away from the Architect/Engineer* any power under the Contract including the power to suspend the progress of the Works or any part thereof pursuant to General Conditions of Contract Clause 54(1).

- (9) This Special Condition of Contract shall not relieve the Contractor from any of his obligations or responsibilities under the Contract.

SCC 2#

The Contractor shall be entitled to the sums set out in the Site Safety section of the Bills of Quantities, provided that the Contractor shall have complied to the extent specified for each item.

Payment for Site Safety

(* delete or amend to suit departmental contract arrangements)

(# applicable only to PFSS contracts)

Appendix II(b) - Special Conditions of Contract

(Applicable to term contracts with Safety Plan requirement)

- SCC 1
- (1) “Safety Plan” means the Safety Plan referred Safety Plan to in sub-clause (4) of this Special Condition of Contract, including any revised or updated version, setting out details of the safety management system that the Contractor will implement on *the Site/all Sites, together with any other measures and information required by the Contract to ensure safety and health in the execution of the *Works/Whole of the Works.
 - (2) The Contractor shall submit within*14 days of the date of the Employer’s letter of acceptance of the Tender/7 days of the date for commencement of the first WorksOrder/7 days of the commencement of the Contract Period three copies of a draft Safety Plan to the Engineer/Maintenance Surveyor*.
 - (3) Within 7 days from the submission of the draft Safety Plan, the Contractor shall arrange and hold an ad hoc meeting (or meetings if necessary)with the *Engineer/Maintenance Surveyor’s representatives to discuss the draft Safety Plan. Where the Engineer/Maintenance Surveyor* is of the opinion that the draft Safety Plan does not meet the requirements of the Contract he shall request that the Contractor remedy the deficiency prior to submitting the Safety Plan to the Engineer/Maintenance Surveyor*in accordance with sub-clause (4) of this Special Condition of Contract.

- (4) The Contractor shall submit within*35 days of the date of the Employer's letter of acceptance of the Tender/21 days of the date for commencement of the first Works Order/21 days of the date for commencement of the Contract Period six copies of the Safety Plan to the Engineer/Maintenance Surveyor*.
- (5) The Contractor shall review the Safety Plan at monthly intervals and shall revise and update the Safety Plan if necessary.
- (6) The Contractor shall comply with the Safety Plan in the execution of the Works/Whole of the Works* and ensure his employees and sub-contractors of all tiers comply with the Safety Plan. The Contractor shall provide any other party working on *the Site/all Sites including Specialist Contractors and utility undertakings with a copy of the Safety Plan and shall request those parties comply with it. The Contractor shall report any person who fails to comply with the Safety Plan to the Engineer/Maintenance Surveyor*.
- (7) If the Engineer/Maintenance Surveyor* is of the opinion that the Safety Plan does not meet the requirements of the Contract, the Engineer/ Maintenance Surveyor* may by notice in writing require the Contractor to revise or update the Safety Plan and the Contractor shall comply with that requirement within7 days of the date of the notice.

- (8) The Contractor shall provide all facilities, access and assistance to the Engineer/Maintenance Surveyor*to periodically verify that the Safety Plan is being properly and fully implemented. If the Engineer/Maintenance Surveyor* is of the opinion that the Safety Plan is not being properly and fully implemented and the failure may adversely affect the safety and health of any person or the safety of any property on or adjacent to*the Site/all Sites, the Engineer/Maintenance Surveyor* may notify the Contractor in writing of such failure and the Contractor shall then take all necessary steps to rectify that failure immediately. For the avoidance of doubt, this Special Condition of Contract does not limit or take away from the Engineer/ Maintenance Surveyor* any power under the Contract including the power to suspend the progress of*the Works/any Works or any part thereof pursuant to General Conditions of Contract Clause56(1)/57(1)*.
- (9) This Special Condition of Contract shall not relieve the Contractor from any of his obligations or responsibilities under the Contract.

SCC 2#

The Contractor shall be entitled to the sums set out in the Site Safety section of the Schedule of Rates, provided that the Contractor shall have complied to the extent specified for each item.

Payment
for
Site Safety

(* delete or amend as appropriate to suit departmental contract arrangements)

(# applicable only to PFSS contracts)

Appendix III - PARTICULAR SPECIFICATIONS ON SITE SAFETY

Note : Particular Specification clauses hereinafter referred to in this Appendix shall mean the Particular Specification clauses under this Appendix.

1 General

- (1) The Contractor shall ensure as a priority in all activities connected with the Works, the safety and health of all persons on or adjacent to the Site.
- (2) The Contractor shall provide and employ on the Site only such personnel who have received adequate training including safety and health training relevant to their tasks and adopt safe working practices at all times and shall ensure his subcontractors comply with this requirement.
- (3) The Contractor shall not allow any person to work on the Site who has repeatedly breached safety requirements. A notice of such sanction shall be displayed at a prominent place on the Site.

2 Legislation, Regulations and/or Codes of Practice

- (1) The Contractor shall keep one set each of the following legislation, regulations and/or codes of practice on the Site including, but not limited to :-

Legislation

- the Factories and Industrial Undertakings Ordinance
- the Construction Sites (Safety) Regulations
- the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations
- the Factories and Industrial Undertakings (Lifting Appliances and Lifting Gear) Regulations
- the Factories and Industrial Undertakings (Woodworking Machinery) Regulations
- the Factories and Industrial Undertakings (Abrasive Wheels) Regulations
- the Factories and Industrial Undertakings (Confined Spaces) Regulations
- the Factories and Industrial Undertakings (Dangerous Substances) Regulations

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- the Factories and Industrial Undertakings (Protection of Eyes) Regulations - the Factories and Industrial Undertakings (Cartridge-Operated Fixing Tools) Regulations
- the Factories and Industrial Undertakings (Electricity) Regulations
- the Factories and Industrial Undertakings (Suspended Working Platforms) Regulations
- the Factories and Industrial Undertakings (Noise at Work) Regulations
- the Dangerous Goods Ordinance (Section 6)
- the Electricity Ordinance (Part VII)
- the Electricity (Wiring) Regulations
- the Builders' Lifts and Tower Working Platforms (Safety) Ordinance
- the Occupational Safety and Health Ordinance
- the Occupational Safety and Health Regulations
- the Boiler and Pressure Vessel Ordinance
- Electricity Supply Lines (Protection) Regulations

Codes of Practice, Guides and others

- “Code of Practice for Bamboo Scaffolding Safety”, published by the Labour Department, where applicable
- “Code of Practice for Metal Scaffolding Safety”, published by the Labour Department, where applicable
- “Code of Practice for Safe Use of Mobile Cranes”, published by the Labour Department, where applicable
- “Code of Practice for Safe Use of Tower Cranes”, published by the Labour Department, where applicable
- “Code of Practice on Safety and Health at Work for Industrial Diving”, published by the Labour Department, where applicable
- “Code of Practice on Safety at Work (Lift and Escalator)”, published by the Labour Department, where applicable
- “Code of Practice for Safety and Health at Work in Confined Spaces”
- “A Guide to the Factories and Industrial Undertakings Ordinance (Section 6A & 6B) – Know Your General Duties” published by the Labour Department

- “A Guide to the Construction Sites (Safety) Regulations” published by the Labour Department
 - “Code of Practice on Safety Management” published by the Labour Department
 - “Guidance Notes for the Electrical Products (Safety) Regulation” published by the Electrical and Mechanical Services Department
 - "Guidelines on Safe Use of Lifting Frames and Launching Girders for Bridge Construction" published by the Labour Department
 - “Guidelines on Safety of Vehicles and Mobile Plant on Construction Site” published by Construction Industry Council
 - “Guidelines on Work-Above-Ground Safety” published by Construction Industry Council
 - other safety and health related legislations, codes of practice and guides relevant to the execution of the Works.
- (2) The Contractor shall display advisory and warning signs, labels and/or posters for the promotion and enhancement of safety and health and notices concerning the availability of the legislations and documents stated above at prominent locations around the Site including site offices, workshops and rest areas.
- (3) All legislations and documents referred to in this Clause shall be kept in both Chinese and English insofar as available.

3 Safety Plan

The Contractor shall in accordance with SCC () prepare and submit to the Architect/Engineer* six copies of the Safety Plan signed by the Site Agent and the Safety Officer. It shall contain details of the following 14 key elements of a safety management system :-

- safety policy
- safety organization
- safety and health training
- safety rules and regulations
- safety committees
- safety and health inspections
- job hazard analysis

- personal protective equipment
- accident/incident investigation
- emergency preparedness
- safety promotion
- health assurance programme
- evaluation, selection and control of sub contractors
- process control programme.

Details shall contain, without limitation, the following:-

(1) Safety Policy

A policy statement setting down in clear and unambiguous terms the management's approach and commitment to communicate, implement and maintain health and safety for those involved in the Works and others who may be affected by the Works; it shall :

- (a) be signed by the managing director of the Contractor, or the managing directors of companies of the consortium, partnership or joint venture comprising the Contractor,
- (b) declare that safety and health are given priority in all aspects of the Works and in discharging its contractual obligations,
- (c) state the Contractor's commitment to comply with relevant statutory and contractual obligations regarding safety and health and the means by which the Contractor will supervise, monitor and audit the safety assurance system to achieve due compliance,
- (d) identify the key senior personnel for overall co-ordination and implementation of the policy,
- (e) state the general responsibilities and duties of the Contractor's employees and subcontractors in upkeeping safety and health,
- (f) state the safety targets to be achieved,
- (g) be communicated to all levels of persons involved in the Works,

and

- (h) be dated, reviewed periodically and revised.

(2) Safety Organisation

The safety organisational structure and the manpower resources to implement the management's commitments; it shall :

- (a) define clearly the safety and health responsibilities of staff at all levels including those of sub-contractors,
- (b) describe the arrangements for a regular communication and reporting system on safety and health amongst all levels from top management down to labour force and vice versa,
- (c) list the names and telephone numbers of the senior manager, site agent, Safety Officer and Safety Supervisors administering and ensuring compliance with the Safety Plan, together with their disciplines and the geographical area of the Works under the supervision of each Safety Supervisor, revised and re-issued at any time necessary to reflect accurately the current arrangement for safety supervision,
- (d) state the powers vested in the safety staff which would enable them to take urgent and appropriate action to make safe the Site and the Works and to prevent unsafe working practices or other infringements of the Safety Plan or statutory regulations,
- (e) state the name of the personnel responsible for updating the Safety Plan, and
- (f) maintain and upkeep a register of first aiders, competent persons and examiners required under the relevant legislations and persons responsible for conducting different levels of safety training.

(3) Safety and Health Training

Procedures established to ensure that all staff working on the Site, and in particular those joining the Site to work for the first time or staff transferred to new assignments are given proper general safety and health

training as well as job specific training relevant to their duties; a programme shall be developed to identify and review the training need which shall contain the frequency, coverage and application of training ranging from safety management training to toolbox talks and to check that the knowledge covered in the safety trainings are applied by the Contractor's staff.

(4) Safety Rules and Regulations

- (a) Arrangements for safety rules and regulations including those specific rules laid down by the Employer/clients to be documented, reviewed, amended and communicated to all appropriate levels of staff working on the Site including means and disciplinary action to ensure that they are implemented and enforced,
- (b) Arrangements for method statements and permit-to-work systems to be implemented for high risk activities carried out on site including the provision of details such as persons identified by job titles who will be authorising the issue of permits. These activities should include, but not limited to hot work, electrical work, slope works, confined spaces work, release of flammable/toxic liquid or gas etc.,
- (c) Specific rules and regulations laid down by the Employer/client for Works to be carried out within premises that are occupied, partially occupied and/or controlled by the Employer/client, and
- (d) Rules and regulations to protect authorized visitors and prevent entry of unauthorized persons to the Site.

(5) Safety Committees

The objectives, powers, functions, terms of reference, membership, frequency of meetings, agenda and distribution of minutes of meetings of the safety committee.

(6) Safety and Health Inspections

Arrangements to establish procedures for the identification, recording and reporting of hazardous conditions and their rectification; they shall include :

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- (a) planning and review of the frequency, coverage and extent of inspections conducted by safety staff, supervisory staff and senior management,
- (b) developing a comprehensive safety inspection checklist for use in safety inspections to record irregularities or hazards identified and a scheme for them to be reported and prompt corrective actions to be taken by the appropriate staff, and
- (c) developing a preventive maintenance programme for the workplace, electrical installations and equipment, plants (fixed and mobile) and equipment (including emergency equipment), in particular lifting plant and equipment to ensure that statutory tests, examinations, and inspections are carried out at required intervals and for such records to be made available for inspection by the Architect/Engineer*.

(7) Job Hazard Analysis

Arrangements for identification of potential hazards and assessment of health and safety risks associated with Works are carried out by trained safety personnel for the development of safe working procedures and method statements to ensure the satisfactory elimination, reduction or control of such risks before work starts; they shall include:

- (a) procedures for the recording and regular review of the risk assessments and the developed safe working procedures and method statements to ensure that the risk control measures contained therein are suitable and relevant to the Works being undertaken; these should include those prepared by sub-contractors, and
- (b) means to ensure that the risk control measures contained in the risks assessments, safe working procedures and method statements are clearly written down and communicated to those supervising and carrying out the Works and that their implementation are being regularly monitored.

(8) Personal Protective Equipment

Procedures for the identification and selection of suitable personal

protective equipment and their issue, including the means and frequency by which personal protective equipment will be inspected, tested and maintained and records kept and the standard below which the equipment will be removed from the Site and replaced; they shall include :

- (a) means to ensure that proper and, where appropriate, mandatory use by all persons on the Site,
- (b) arrangement to ensure that information, instruction and training in the safe use, storage and maintenance of such equipment are provided, and
- (c) arrangement to ensure adequate supply and for replacement.

(9) Accident/Incident Investigation

Procedures for the prompt reporting, recording and investigation of accidents/incidents including dangerous occurrences occurred on Site or related to the Works ; they shall include :

- (a) the keeping of accidents statistics and their analysis with a view to identifying causes/trends and developing measures for prompt implementation against recurrences, and
- (b) means to communicate accident statistics, recommendations against recurrences and lessons learnt from previous accidents to all persons working on the Site.

(10) Emergency Preparedness

Arrangements for the establishment of procedures to deal with emergency situations on the Site (e.g. any situation requiring rescue) prior to arrival of the Police, the Fire Services Department or Marine Department and procedures during tropical cyclones, thunderstorm warnings, rain alert warnings, flooding warnings, landslip warnings and heavy rainstorm warnings, outbreak of a fire, etc.; they shall include :

- (a) means to communicate the emergency procedures to all personnel on the Site and to promote their emergency awareness,
- (b) the organisation and training of emergency and/or rescue teams,

- (c) checklists on steps to be taken during emergency,
- (d) means of receiving and communicating adverse weather information to site staff,
- (e) emergency equipment to be provided and their locations,
- (f) drills and exercises to test the preparedness for emergency actions which shall be carried out at not less than 6 months intervals or as stated in the Contract,
- (g) the first aid personnel and facilities, including arrangements for transporting the injured,
- (h) arrangements for the review and regular updating of emergency procedures and telephone list, and
- (i) detailing the site arrangements of continuing, suspending and resuming the outdoor confined space works under different adverse weather conditions and warning signals.

(11) Safety Promotion

Methods of promoting and maintaining safety awareness and developing a safety and health culture amongst all persons on the Site; they shall include :

- (a) the display of the company safety policy, accident statistics, safety signs and posters and the showing of safety videos and films,
- (b) procedure for the selection of appropriate safety promotion items for displaying on Site,
- (c) the conduct of talks and campaigns and distribution of safety bulletins or newsletters drawing attention to particular special safety issues and emergency procedures, and
- (d) procedure to recognize and commend those site personnel, teams, sections or sub-contractors with good safety performance.

(12) Health Assurance Programme

The programme shall contain :

- (a) arrangements for pre-job and regular medical examinations of workers exposed to health hazards,

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- (b) arrangements for the identification, assessment, regular monitoring of health hazards and the reduction of exposure through technological and administrative control measures; they shall include :
 - (i) arrangement to ensure that all persons at the Site are aware of the health risks associated with their work and those in their vicinity and are fully informed of the necessary precautions in controlling the risks,
 - (ii) procedures for the selection, provision, training and supervision on the use of suitable personal protective equipment to supervisors and workers, in particular to those working in an environment potentially hazardous to health,
 - (iii) the seeking of outside specialist assistance for assessment and monitoring of health hazards where necessary, and
 - (iv) the provision of welfare facilities on the Site.

(13) Evaluation, Selection and Control of Sub-contractors

Arrangements for the evaluation, selection and control of sub-contractors working on the Site; they shall include :

- (a) provision to each sub-contractor with a copy of the Safety Plan and the list of safety obligations and requirements which must be met for incorporation into the sub-contract agreement before works commence for ensuring compliance,
- (b) means to ensure that only sub-contractors with satisfactory safety performance will be employed and procedures for evaluating the safety performance of sub-contractors employed on the Site at regular intervals,
- (c) the timely provision of adequate safety and health information to suppliers of materials to the Site for their compliance,
- (d) means by which safety procedures and method statements proposed by sub-contractors, whether directly employed or not,

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will be reviewed for compliance with the Safety Plan and the statutory regulations,

- (e) arrangements to ensure that machinery and other plants used on Site by sub-contractors are appropriate to the nature of the task and that they are properly operated and maintained,
- (f) the safety co-ordination system established to liaise between various sub-contractors, and
- (g) ensure that sub-contractors' workers have received proper training appropriate and relevant to the type and level of work to be undertaken.

(14) Process Control Programme

The programme shall contain :

- (a) The formulation of policy on the review of accident control and hazards elimination measures during the conception and design stages, the setting of parameters for processes and materials to take into account of any changes in site conditions and the development of a regular monitoring mechanism,
- (b) Arrangements and means for the effective implementation of accident control and hazards elimination measures described in the Safety Plan to ensure safety and health in the execution of the work processes, they shall include safety rules, regulations, safe working procedures, and in particular method statements and permit-to-work systems incorporating the findings of risk assessments conducted for identified high risk processes including, but not limited to the following –
 - Housekeeping
 - Traffic control and transportation
 - Fire prevention measures and fire fighting equipment
 - Excavation
 - Working in confined spaces

- Hand dug caissons
 - Diving
 - Hot work
 - Electrical equipment and installations
 - Welding/cutting operations
 - Personal protective equipment
 - Conveyance, handling and use (blasting) of explosives
 - Lifting operations involving cranes and hoists etc.
 - Manual handling- Scaffolding and working platforms
 - Ladders and accesses- Hand tools and portable power driven tools
 - Use and storage of hazardous substances including chemicals
 - Working over water or adjacent to water
 - Working at height- Structural steel erection
 - Floor and wall openings and stairways
 - Lighting
 - Protection against falling objects
 - Protection against lightning
 - Demolition
 - Tunnelling
 - Operation of launching girders and/or lifting frames
- (c) The risk assessment should also identify whether there are works that cannot be done safely by a person working alone. In general, a co-worker system shall be put in place in the following situations:-

- (i) Temporary access equipment for working at height, including portable ladders or trestles that cannot be safely handled by one person.
- (ii) The plant, substances and goods cannot be safely handled by one person.
- (iii) Working near or over water, or electrical work at or near exposed live conductors.
- (iv) There is a risk of violence.

4 Safety Organisation

The Contractor shall provide to the *Architect/Engineer's Representative at monthly intervals an updated safety organisation chart containing a complete list of all sub-contractors, whether directly employed by the Contractor or not, on the Site and the Works and the name of the Safety Supervisor for each such sub-contractor, insofar as the employment of a Safety Supervisor is expressly set out in the Contract or in the absence of such requirement then by any enactment or statutory requirement. The list shall also include the names of the Safety Officer and Safety Supervisors, and the names of Safety Representatives and the respective labour groups or teams they belong. Telephone numbers of these safety staff shall also be shown on the chart.

5 Safety Officer

- (1) "Safety Officer" means a person registered as a safety officer in accordance with the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations (FIU(SO&SS)R) and employed by the Contractor to carry out the duties of a Safety Officer as specified in the Contract and duties specified in the FIU(SO&SS)R.
- (2)+ The Contractor shall employ at least one Safety Officer who shall be approved by the Architect/Engineer*. If the total number of workers employed on the Works or in connection with the Contract whether in the employ of the Contractor or his sub-contractor is equal to or more than 50, the Safety Officer shall devote the whole of his time to this Contract in the discharge of his duties. Where the number of workers thus employed exceeds 200, then the number of full-time Safety Officer to be provided

shall be :

<u>Total no. of workers</u>	<u>Minimum no. of full-time Safety Officer</u>
50 to 200	1
201 to 700	2 (at least 1 of them shall be a safety officer who has been qualified and registered under the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations as a safety officer for at least 3 years and during which has gained the relevant experience in site safety administration of the Contract)
701 to 1200	3 (at least 1 of them shall be a safety officer who has been qualified and registered under the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations as a safety officer for at least 3 years and during which has gained the relevant experience in site safety administration of the Contract)
1201 and above	4 (at least 2 of them shall be safety officers who have been qualified and registered under the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations as a safety officer for at least 3 years and during which have gained the relevant experience in site safety administration of the Contract)

If the total number of workers employed is less than 50, the Safety Officer may be engaged part time for this Contract but with sufficient presence on the Site to perform the duties of a Safety Officer. The time thus spent on site shall be not less than 12 hours per week excluding attendance of progress meetings, the Site Safety Management Committee meetings and the Site Safety Committee meetings.

(+ Applicable to works contract)

- (2)# The Contractor shall employ one Safety Officer to be present full time on Site under the Contract who shall be approved by the Architect/Engineer*. Where the total number of workers employed on the Works or in connection with the Contract exceeds 200, the number of full-time Safety Officers to be provided shall be :

<u>Total no. of workers</u>	<u>Minimum no. of full-time Safety Officer</u>
201 to 700	2 (at least 1 of them shall be a safety officer who has been qualified and registered under the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations as a safety officer for at least 3 years and during which has gained the relevant experience in site safety administration of the Contract)
701 to 1200	3 (at least 1 of them shall be a safety officer who has been qualified and registered under the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations as a safety officer for at least 3 years and during which has gained the relevant experience in site safety administration of the Contract)
1201 and above	4 (at least 2 of them shall be safety officers who have been qualified and registered under the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations as a safety officer for at least 3 years and during which have gained the relevant experience in site safety administration of the Contract)

(# Applicable to term contract)

- (3) The Contractor shall not commence any construction work on the Site without the appointment and attendance of the required number of Safety

Officer(s) unless expressly permitted by the Architect/Engineer* in writing.

- (4) The duties of the Safety Officer shall be solely directed towards safety and health matters. In addition to the duties stipulated in the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations, the Safety Officer shall:
 - (a) carry out safety inspections and prepare inspection reports,
 - (b) supervise and monitor implementation of the Safety Plan,
 - (c) ensure that sub-contractors and all persons working on the Site are made aware of and comply with the Safety Plan, and
 - (d) carry out internal safety audits for the Safety Plan at intervals of not less than once every six months, which format, scope and programme are to be proposed and agreed with the Architect/Engineer*. In this respect, the internal safety audits can be carried out either by the Safety Officer or a Registered Safety Auditor (RSA).
- (5) The Safety Officer shall maintain a safety diary which shall record all matters related to safety Revision and health, including Safety Supervisors' reports, details of safety inspections and audits, accidents, dangerous occurrences, safety related incidents, etc. The Safety Officer shall check to ensure that all unsafe situations are promptly rectified and the dates of their completion duly recorded in the safety diary. The safety diary shall be made available for inspection by the Architect/Engineer* upon request and copy thereof shall be submitted to the Architect/Engineer* upon request.
- (6) The Contractor shall empower the Safety Officer to order any person working on the Site to suspend any unsafe operation or to take urgent action to make safe the Site or the Works or to disallow any practice which may infringe the Safety Plan or any statutory safety requirement.
- (7)+ The Safety Officer shall carry out comprehensive safety inspections on all activities on the Site at weekly intervals. The safety inspection shall identify any unsafe operation or potential hazards using a check-list agreed by the *Architect/Engineer's Representative. The Safety Officer shall give prior notice to the *Architect/Engineer's Representative of the date and time of the weekly inspection and shall allow the *Architect/Engineer's Representative to attend the inspection.

(+ Applicable to works contract)

- (7)# The Safety Officer shall carry out comprehensive safety inspections on all activities on the Site at weekly intervals. He shall prepare a written safety

inspection report every week on the works for each Works Order with an estimated value in excess of \$ 100,000. These reports shall be provided in the form of a comprehensive checklist agreed by the*Architect/Engineer's Representative and shall be submitted to the Architect/Engineer* at the beginning of the following week.

Provided that nothing in this sub-clause shall prevent the Safety Officer from submitting reports or prevent the Architect/Engineer* from requesting additional reports on any job with any estimated value or requesting reports in any format as directed by the Architect/Engineer*.

(# Applicable to term contracts and can be modified by works departments to suit the nature of work, or size of their term contracts.)

- (8) If the Safety Officer is unable to perform his duties for any reason, the Safety Officer shall be replaced as soon as practicable but in any case within 14 days. The Safety Officer shall not be replaced without consent by the Architect/Engineer*.
- (9) The Safety Officer shall be clearly identified on the Site by wearing an armband or a safety helmet appropriately marked in Chinese and English.
- (10) When the nature of the Works of the relevant Contract is complex, or involves high risk operations, the proposed RSO should possess relevant engineering background and adequate experience meeting the requirements of the Contract.

6 Safety Supervisors

- (1) "Safety Supervisor" means a person employed by the Contractor or sub-contractors of all tiers on the Site to carry out the duties of a Safety Supervisor as stipulated in the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations. The Safety Supervisor shall carry out safety inspections on all active parts of the Site for which he is responsible at least at daily intervals using an appropriate comprehensive checklist agreed by the Architect/Engineer*. All completed safety checklist shall be signed by the Safety Officer to ensure prompt follow-up actions have been taken on unsafe situations.
- (2) The Contractor shall employ at least one Safety Supervisor to be present full time on Site. Where the number of workers employed on the Works or in connection with the Contract whether in the employ of the Contractor or by his sub-contractor exceeds 50, the number of Safety Supervisors to be provided shall be increased by one for every additional 50 workers.

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- (3)+ Notwithstanding the requirements stated in sub-clause no. 6(2) above, each sub-contractor of the first tier (directly employed by the Contractor) engaging 20 persons or more in the activities for which he is responsible shall provide at least one full-time Safety Supervisor to oversee the safety of his own activities.

(+ Applicable to works contracts)

- (3)# Notwithstanding the requirements stated in sub-clause no. 6(2) above, the Contractor shall provide at least one full-time Safety Supervisor at one work location where the workers engaged there exceeds 20.

(# Applicable to term contracts)

- (4) Safety Supervisor shall have at least three years' experience on construction work and have completed an appropriate training course provided for safety supervisors.
- (5) Safety Supervisors shall be clearly identified on the Site by wearing an armband or a safety helmet appropriately marked in Chinese and English.

7 Safety Representatives

- (1) In addition to the Safety Officer and Safety Supervisors, the Contractor shall appoint the foreman or ganger of each labour group or team working on the Site to act as Safety Representative. The Safety Representative shall be responsible for ensuring that the directives from the Contractor, the Safety Officer and Safety Supervisors on safety and health matters are duly carried out, safety practices are adopted and protective clothing and equipment are used by the work force at all times on the Site. Normally, each gang of workers shall have one Safety Representative. He shall be made aware of his responsibilities and the group of workers on the Site whose activities he is required to supervise. Every worker working on the Site shall be made aware of the roles of the Safety Representatives and from which Safety Representative he may seek advice or receive instructions on safety and health matters.
- (2) Safety Representatives shall be clearly identified on the Site by wearing

an armband or a safety helmet appropriately marked in Chinese and English.

8 Safety Training

- (1) The Contractor shall regularly review the training needs of all persons employed on the Works or in connection with the Contract and prepare a long-term training programme. Each month the Contractor shall submit a proposed training programme to be provided in the next month for the *Architect/Engineer's approval. It shall contain the topics, dates, venues, the target participants of the proposed training and the names and qualification of the trainers.
- (2) All persons carrying out construction work including general workers, skilled workers, foremen, gangers, drivers and plant operators, who are employed on the Works or in connection with the Contract whether in the employ of the Contractor or sub-contractors of all tiers must have completed the mandatory basic safety training course for the construction industry under the Factories and Industrial Undertakings (Amendment) Ordinance 1999 and hold the relevant valid certificate which shall be referred to hereafter as the Labour Department Recognised Green Card (LDRGC).
 - (2)(A)(i) In addition to clause 8(2) above, skilled workers of specific trades set out below in this sub-clause who are employed on the Works or in connection with the Contract whether in the employ of the Contractor or sub-contractors of all tiers shall attend the relevant Safety Training Course for Construction Workers of Specified Trades (also known as the Silver Card course) organised by the Construction Industry Council ~~Training Academy (CICTA(CIC))~~ :
 - painter and decorator
 - carpenter
 - demolition worker (building)
 - plumber
 - bar bender and fixer
 - plasterer and tiler
 - bamboo scaffolder and metal scaffolder
 - curtain wall installer
 - construction materials rigger

- lift mechanic (installation and maintenance)
- tower crane worker (erecting, dismantling, telescoping & climbing)
- tunnel worker

Any other recognised courses as notified by the Architect/Engineer*.

- (2)(A)(ii) If the Contractor intends to employ or permit the employment of any skilled workers of trades specified in sub-clause (i) but do not possess the Silver Card that is relevant to the trade and work in which he/she is working on the Site for the execution of the Works, he shall arrange within 2 working days of such skilled workers commencing work on the Site to attend the course specific to the trade and work in which he/she is employed under the Contract. A skilled worker who passes the test at the end of the course will be awarded with a Construction Industry Silver Card (Silver Card). For the purpose of this Contract, this course shall be referred to hereafter as the “trade specific advanced safety training” course.
- (3) The Contractor shall also ensure that all card holders will carry their LDRGC and Silver Card, or their Construction Workers Registration Cards with record of valid LDRGC and/or Silver Cards information as equivalent document of the LDRGC and/or Silver Card as applicable, whilst working on the Site.
- (4) The Contractor shall pay a token allowance as specified in relevant item in the Bills of Quantities/Schedule of Rates to each skilled worker of a specific trade set out in clause 8(2)(A)(i) above after he or she has successfully completed a Silver Card Course and received a Silver Card. If a skilled worker of a specific trade set out in clause 8(2)(A)(i) above has completed a revalidation course and received a revalidated Silver Card, the Contractor shall pay a token allowance as specified in relevant item in the Bills of Quantities/Schedule of Rates to the skilled worker. The skilled worker is responsible for the payment of the course fee. However, the token allowance will not be paid if the course is attended:
- (i) before the skilled worker starts works on the Site; or
 - (ii) after the skilled worker has left the Site.

At the end of each month, the Contractor shall prepare and submit a certified monthly statement of workers who have successfully completed the trade specific advanced safety training course to the Architect/Engineer* using the proforma attached in Appendix IV**.

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Copies of the Silver Card, the original receipts signed by the workers for the receipt of the token allowance and a certified payroll record indicating the trades and salaries of the workers shall be made available for inspection if requested by the Architect/Engineer*.

(** Amend appendix no. where appropriate)

- (5) The Contractor shall only arrange skilled workers to attend the trade specific advanced safety training course that is relevant to the trades and works in which he/she is employed under the Contract. The Architect/Engineer* has a right to disapprove the payment on the trade specific advanced safety training to a skilled worker if he/she is found on the Site and not working for the trades and works in which he/she has received the training.
- (6) (a) All persons employed on the Works or in connection with the Contract whether in the employ of the Contractor or sub-contractors of all tiers shall receive “site specific induction training”.
- (b) Site specific induction training and its refresher shall take the form of an one-hour talk conducted by the Safety Officer in accordance with sub-clause 6(e) below.
- (c) The talk shall be conducted as follows:
- | | | |
|-------|--|----------------|
| (i) | Safety Policy | 10 mins |
| (ii) | General particulars of the Site | 10 mins |
| (iii) | Special characteristics of the Works and inherent hazards on the Site, highlights of particular safety measures and use of personal protective equipment | 15 mins |
| (iv) | Emergency procedures and first-aid facilities | 10 mins |
| (v) | Reporting of accidents and injury compensation procedures | 5 mins |
| (vi) | Questions and answers | <u>10 mins</u> |
| | total | 60 mins |
- (d) The Safety Officer shall prepare the talk based on Part II of the “Site Safety & Health Induction Training Manual” published by the Hong Kong Construction Association Ltd.

- (e) An outline of the talk and every update of it shall be provided to the *Architect/Engineer’s Representative for approval. The talk shall be carried out within 2 working days of any such employee commencing work on the Site. Thereafter, he/she shall be given refresher talks at intervals of 6 months depending on the amount of changes to the site condition.
 - (f) The Contractor shall ensure that “site specific induction training” talks are carried out by Safety Officers who are competent trainers and have received training on safety training techniques organised by the Hong Kong Construction Association Ltd. (HKCA), Construction Industry Council (CIC), Occupational Safety and Health Council (OSHC) or other approved training organisations.
- (7)
- (a) The Contractor shall provide toolbox talks at a frequency of one talk per worker on Site every two weeks commencing from the date of commencement of the Works/Contract Period* subject otherwise to any change in frequency as may be approved by the Architect/Engineer*. The Contractor shall also ensure that the topic of every talk given to a worker is relevant to his/her trade and the work that he/she will perform under the Contract and a worker shall attend no more than one talk on the same topic in any two-month period.
 - (b) The Contractor shall propose the topics of the toolbox talks at a frequency specified in sub-clause (a) having regard to the activities of the Site and the prevailing safety concern at that time. They shall be submitted with the proposed monthly training programme to the Architect/Engineer* for his approval. The Architect/Engineer* has the right to disapprove the training programme when the proposed topic is considered not relevant to the trade of the workers or the prevailing work activities. Moreover, the Architect/Engineer can request the Contractor to review the topics to cater for special safety concern. For workers undertaking scaffolding work including truss-out bamboo scaffolds, demolition work and works in confined spaces, they should be provided with suitable toolbox talks prior to the commencement of these works. Workers not having attended the concerned toolbox talks shall not be allowed to undertake these works. For workers carrying out road works, they should be provided with specific toolbox talks, and be arranged to attend training course “Safety at Road Works” by OSHC or other equivalent training course by other approved training organisations, prior to the commencement of these works. Workers not having attended the relevant training shall not be allowed to carry out any road works with risk of exposing to the potential hazards of live vehicular traffic.
 - (c) The content of the toolbox talks shall be based on training kits published by HKCA.

Where such a proposed topic is not amongst one of those in the training kits published by the HKCA, the Contractor shall develop training kits to a similar standard for approval by the*Architect/Engineer’s Representative.

(d) The Contractor shall ensure that “toolbox talks” are conducted by Safety Officers or Safety Supervisors or gangers who are competent trainers and have received training on safety training techniques organised by the ~~—Hong—Kong—Construction Association Ltd.,~~HKCA, CIC, OSHC or other approved training organisations.

(e) Payment for this item shall be made ~~on a per worker per talk basis based on a frequency of one talk per worker every two weeks subject otherwise to any change in frequency approved by the—monthly provided that the~~ Architect/Engineer* ~~—and the Architect/Engineer*—being~~is satisfied that the talks have been conducted in accordance with this clause.~~Any tool box talks conducted in excess of the specified—frequency—and without—approval—from—the Architect/Engineer* shall be deemed to have been borne by the Contractor in the rates inserted elsewhere in the Bills of Quantities/Schedule of Rates.~~

(8) (not used)

(9) (not used)

(10) The Contractor shall prepare attendance records on site specific induction training and toolbox talks which shall include the topics and dates of the talks, the names of the trainers, names and trades of the persons receiving the talks and their signatures.

(11) The Contractor’s Site Agent or Safety Officer shall certify the accuracy of attendance records on site specific induction training and toolbox talks

before they are submitted to the Architect/Engineer* for payment. If requested by the Architect/Engineer*, the Contractor shall give at least 24-hour notification on the time and venue of each toolbox talk to be held, so that the Architect/Engineer* could arrange his/her staff to take attendance record for measurement.

- (12) The Contractor shall ensure that all site management and supervisory staff,

who are employed on the Works whether employed by the Contractor or sub-contractors of all tiers, shall attend, if they have not done so, and complete the basic training commensurate with their duties, as follows:-

- (a) The term “site management staff” means persons engaged in the senior or managerial posts such as project managers, site agents, sub-agents, superintendents and site engineers. The basic training required to be attended by site management staff shall include :-
 - (i) Appropriate training course such as the Safety Training Course for Site Management Staff run by OSHC/CIC or other approved training organizations; or the corresponding revalidation course as appropriate. The course should cover amongst others: safety legislation and safety management techniques, risk assessment and safety inspection, accident investigation and accident prevention, Construction and Design Management (renamed as Design for Safety since 2016), work safe behaviour and safety climate index.
 - (b) The term “supervisory staff” means gangers and foremen. The basic training required to be attended by supervisory staff shall include:-
 - (i) Appropriate training course such as the Safety and Health Supervisor (Construction) Course run by OSHC or the Construction Safety Supervisor Course run by CIC or other approved training organizations; or the corresponding revalidation course as appropriate, such as the Enhancement Course for Safety Supervisors (Construction) run by OSHC or the Construction Safety Supervisor Enhancement Course run by CIC. The course should cover amongst others: safety legislation, safety management & training techniques, principle of accident prevention, safety at work and safety inspection techniques on construction sites.
- (13) The Contractor shall keep on Site records of all safety training received by his staff including those on refresher training and make them available for inspection by the *Architect/Engineer’s Representative upon request.

(** Amend appendix no. where appropriate)

8A Risk Assessment

The Contractor shall carry out, review and submit to the Architect/Engineer* risk assessments for works scheduled to start at least for the next two months. The works shall be broken down into jobs/tasks

for hazard identification and evaluation of the level of risk by competent persons. The documentation shall contain the hazards identified, the likelihood and consequence of the hazards occurring, the level of risk thus evaluated, the proposed risk mitigation/control measures and the anticipated residual risks, and identify the respective risk controller. The results of such risk assessments and documentation shall be endorsed by the Safety Officer and the Site Agent. In addition, they shall be incorporated into the Safety Plan or relevant safety working procedures or method statements. In addition, the Contractor shall also maintain an updated register of all risk assessments carried out, and update the relevant safety checklist based on the safety measures recommended in each new risk assessment.

9 Site Safety Committee

- (1) The Contractor shall establish a Site Safety Committee which shall be responsible for ensuring the implementation of the Safety Plan, reviewing and monitoring the effectiveness of the safety and health measures taken and seeking the co-operation and commitment of staff at all levels.
- (2) The Site Safety Committee shall be chaired by the Site Agent with members comprising a representative at senior management level from the Contractor's headquarters or the project manager, the Safety Officer, all Safety Supervisors, selected Safety Representatives and other staff of the Contractor or sub-contractors as may be considered necessary. It shall meet at monthly or more frequent intervals discussing all matters relating to the implementation of the Safety Plan. The first meeting shall be held no later than 30 days after the date for commencement of *Works/the first Works Order/the Contract Period. The Contractor may invite any other party such as the Labour Department, Marine Department, Fire Services Department, Police or representatives of utility undertakers to attend the meeting and provide advice as necessary.
- (3) The Contractor shall give an advance notice of every Site Safety Committee meeting to the*Architect/Engineer's Representative who will attend the meeting in person or nominate a representative to attend the meeting as an observer.
- (4) The following items shall, amongst others, be discussed at the Site Safety Committee meeting :

- (a) Review of the Safety Plan
 - update risk assessment for the work scheduled at least for the next two months,
 - review and establish safety and health provisions, safe working procedures and method statements,
 - update the emergency and rescue procedures
 - discuss and reconcile any discrepancies between the Safety Plan prepared by the Specialist Contractor and that of the Contractor,
 - (b) Update of the safety organisation chart and review of the adequacy of safety personnel,
 - (c) Review of the safety performance of sub-contractors,
 - (d) Any unsafe practices and conditions identified during safety inspections/audits and any follow up action,
 - (e) Advisory/warning letters issued by Marine Department and Labour Department and any Improvement/Suspension Notices received,
 - (f) Review of accident frequency rates and statistics of the Contractor and sub-contractors and identification of trends,
 - (g) Details of the Contractor's accident and dangerous occurrence experience,
 - (h) Safety and health training undertaken in the previous month and the proposed training programme for the following month,
 - (i) Details of safety promotional activities,
 - (j) Safety co-ordination between various sub-contractors working in close proximity to each other, and
 - (k) Monitoring of the follow-up action on defects and deficiencies identified.
- (5) Minutes of the Site Safety Committee meeting shall be prepared by the Contractor and copied to the*Architect/Engineer's Representative within 10 working days of the meeting. One copy of the minutes in Chinese, and English if necessary, shall be posted at a prominent place on the Site.

10 Site Safety Management Committee

- (1) The Architect/Engineer* shall establish a Site Safety Management Committee to monitor the adequacy of the Safety Plan and ensure its implementation on Site by the Contractor, and to enhance communication between the Architect/Engineer* and the Contractor on safety and health matters. The Site Safety Management Committee shall be chaired by the Architect/Engineer* or his Representative and shall meet at monthly or more frequent intervals. The first meeting shall be held no later than 30 days after the date for commencement of *Works/the first Works Order/the Contract Period.
- (2) The Contractor shall provide all necessary assistance required for the proper functioning of the Site Safety Management Committee and shall be represented on the Committee by a representative at senior management level from the Contractor's headquarters or the project manager, the Site Agent, the Safety Officer and Safety Supervisors. The Contractor shall act without delay upon the decisions or recommendations made by the Committee on matters of safety and health. The above arrangements are entirely without prejudice to and do not relieve the Contractor from any contractual or legal obligation with respect to safety and health. Where a Specialist Contractor is directly employed, a representative at the senior management level from the Specialist Contractors' headquarter or his project manager, Site Agent, Safety Officer and Safety Supervisors shall also attend this meeting.
- (3) Prior to every meeting of the Site Safety Management Committee, the Contractor shall arrange an inspection of the Site by those who are to attend the meeting and/or any other members nominated by the Architect/Engineer*. This inspection shall be taken as one of the weekly safety walk.
- (4) The following items shall, amongst others, be included in the agenda of each Site Safety Management Committee meeting :-
 - (a) Review of the Safety Plan- update risk assessment for the work scheduled at least for the next 2 months
 - review and establish safe working provisions, safe working procedures and method statements,
 - update the emergency and rescue procedures

- discuss and reconcile any discrepancies between the Safety Plan prepared by the Specialist Contractor and that of the Contractor,
 - (b) Update of the safety organisation chart and review of the adequacy of safety personnel,
 - (c) Review of safety performance of sub-contractors,
 - (d) Any unsafe practices and conditions identified during safety inspections/audits and any follow up action,
 - (e) Advisory/warning letters issued by Marine Department and Labour Department and Improvement/Suspension Notices,
 - (f) Public concern/complaint,
 - (g) Review of accident frequency rates and statistics of the Contractor and sub-contractors and identification of trends,
 - (h) Details of the Contractor's accident and dangerous occurrence experience,
 - (i) Monitoring of the follow-up action on defects and deficiencies identified,
 - (j) Safety and health training undertaken in the previous month and the proposed training programme for the following month,
 - (k) Details of safety promotional activities,
 - (l) Contractor's monthly safety report,
 - (m) Safety co-ordination between various sub-contractors including Specialist Contractor working in close proximity to each other and
 - (n) Reports on safety audits conducted by internal or external safety auditors and action plans prepared by the Contractor.
- (5) The Architect/Engineer* may invite any other parties, such as Labour Department, Marine Department, Fire Services Department, Police, representatives from utility undertakers and the departmental Safety and Environmental Advisory Unit to attend the Site Safety Management Committee meeting and provide advice as necessary.

- (6) The Architect/Engineer* or his Representative shall prepare the minutes of the Site Safety Management Committee meeting for distribution to all attending parties within 10 working days of the meeting. The minutes of each meeting shall be signed by the Architect/Engineer* or his representative and the Site Agent.

11 Weekly Safety Walk

- (1)+ The Contractor should arrange a weekly safety walk attended by the Contractor's Safety Officer and Site Agent or his delegate and the *Architect/Engineer's nominated site representative to inspect the Site checking that safety and health conditions are being maintained on the Site. It shall include, but not be limited to :-

- (a) Checking scaffolding in current use to be in compliance with the approved Codes of Practice for Bamboo and Metal Scaffolding Safety issued by the Commissioner of Labour,
- (b) Checking that the temporary lighting and electrically powered hand-held tools and equipment are all rated at 110V CTE (centre tapped to earth) in compliance with Particular Specification clause no. 15(3), and
- (c) Checking that site tidiness and cleanliness are conducive to avoiding accidents and mosquito breeding.

Weekly safety walks conducted under this clause are entirely without prejudice to and do not relieve any of the Contractor's responsibility to carry out regular inspections to upkeeping safety and health conditions on Site required by the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations.

(+ Applicable to works contracts)

- (1)# The Contractor should arrange a weekly safety walk attended by the Contractor's Safety Officer and Site Agent or his delegate and the *Architect/Engineer's nominated site representative to inspect active parts of the Site checking that safety and health conditions are being maintained on the Site. The details of inspection for the weekly safety walk shall be determined by the *Architect/Engineer's nominated site representative on the day of the walk. The weekly safety walks shall include inspection of

maintenance depots and any other areas occupied by the Contractor in connection with the Works to a frequency of not less than once per month. It shall include, but not be limited to :-

- (a) Checking scaffolding in current use to be in compliance with the approved Codes of Practice for Bamboo and Metal Scaffolding Safety issued by the Commissioner of Labour,
- (b) Checking that the temporary lighting and electrically powered hand-held tools and equipment are all rated at 110V CTE (centre tapped earth) in compliance with Particular Specification clause no. 15(3), and
- (c) Checking that site tidiness and cleanliness are conducive to avoiding accidents and mosquito breeding.

Weekly safety walks conducted under this clause are entirely without prejudice to and do not relieve any of the Contractor's responsibility to carry out regular inspections to upkeeping safety and health conditions on Site required by the Factories and Industrial Undertakings (Safety Officers and Safety Supervisors) Regulations or any other clauses under this Contract.

(# Applicable to term contracts and can be modified by works departments to suit the nature of work, or size of their term contracts)

- (2) The Contractor shall prepare and agree with the *Architect/Engineer's Representative a comprehensive check-list for use during safety walk and site inspections. It shall contain a table listing out the deficiencies identified during the walk /inspection with the proposed rectification measures, the names of the persons responsible for taking any necessary rectification measures and the corresponding completion dates. More than one comprehensive checklist may need to be prepared by the Contractor to suit the variety of works at various portions of the Site.
- (3) Immediately after the safety walk, the comprehensive checklist shall be agreed and signed by the Safety Officer and the *Architect/Engineer's nominated site representative and a copy kept by the *Architect/Engineer's Representative. The Contractor shall take prompt action to rectify those deficiencies identified during the walk and shall report the status of actions taken at the forthcoming Site Safety Management Committee meeting.

12 Sub-contractors

- (1) The Contractor shall provide each sub-contractor with sets of site rules and regulations, safe working procedures and safety obligations to ensure compliance.
- (2) The Contractor shall, for contracts where more than two contractors are working in close proximity, establish a safety co-ordination system to liaise amongst the sub-contractors and to maintain a safe working environment.

13 Reporting

- (1) In addition to the requirements of the General Conditions of Contract clause no. 27**, the Contractor shall complete any other forms as the Commissioner for Labour may require including, but not limited to, forms requesting supplementary information used by the Labour Department for the purpose of accident analysis. Copies of such forms should be made available for inspection by the Architect/Engineer* upon request.

(** Amend clause no. where appropriate)

- (2) Further to sub-clause (1) above, the Contractor shall notify the Architect/Engineer* immediately of any accident/incident occurring on the Site or related to the Works involving dangerous occurrence or death or serious personal injury or with worker(s) admitted to the hospital. The initial notification may be made verbally. A written notification with details shall be made within 24 hours of the occurrence of the accident.
- (3) The Contractor shall then investigate the incident/accident and complete any further report as may be required by the Architect/Engineer* on the detailed cause of the accident or dangerous occurrences, measures to prevent recurrence and complete standard forms provided by the Architect/Engineer* to enable the Employer to prepare an up-to-date database on site accident statistics.
- (4) The Contractor shall submit a monthly report for consideration at the meeting of the Site Safety Management Committee. It shall be prepared by the Safety Officer and duly endorsed by the Site Agent, to the Architect/Engineer* containing the following information:

- (a) all accidents involving dangerous occurrence, death, personal injury irrespective of severity or damages to properties in or adjacent to the Site,
 - (b) results of any Labour Department's inspections, advice, warning, Improvement/Suspension Notices and prosecutions,
 - (c) proposed training programme for the next month and training carried out in the previous month,
 - (d) a list of all competent persons and a summary record of all examination and test certificates required by any legislation or the Contract, and
 - (e) Safety Officer's inspection reports, reports on follow up action taken on irregularities identified during safety inspections (and weekly safety walks)***, and safety audit reports on the implementation of the Safety Plan
- (5) Within 14 days from the request of the Architect/Engineer, the Contractor shall submit a written report to explain the high accident rates and to propose measures to improve the safety performance of the Site.
- (()*** delete for contracts not included in PFSS)
- (6) Further to sub-clause (2) above regarding incident/accident with hospitalization of worker(s), the Contractor shall notify the *Architect/Engineer's representative immediately when the injured worker(s) has been discharged from the hospital, by provision of the relevant medical certificate or report with declaration detailed in paragraph 9.3.5 of Chapter 9 of the Construction Site Safety Manual.

14 Further Safety Measures

- (1) Safety, rescue and health matters shall be given a high degree of publicity on the Site. The Contractor's safety policy statement, emergency procedures and any rescue organisation shall be made known to all persons on the Site. Such information shall include an emergency telephone list including the names and contact telephone numbers (such as mobile phone number and pager number) of at least two key members of the Contractor's emergency organisation, and the telephone numbers of the appropriate divisional police, fire and ambulance stations, utility undertakers, Labour Department's Operation Division and Marine Department. Copies of the above information and safety posters, in Chinese and English languages, shall be displayed at prominent places on the Site. A notice board shall be erected near the entrance of the Site for the display of safety posters, up-to-date accident records and the names of the Safety Officer and the Site Agent.

- (2) The Contractor shall ensure that all tools, plant, equipment and temporary facilities and all other items used in carrying out the Works how-so-ever provided are in a safe, sound and good condition, are capable of performing the functions for which they are intended, and where required by the law or by the relevant codes of practice, are licensed and/or have been issued with the necessary permits for use.
- (3) Not used.
- (4) Not used.
- (5) Fences and/or nets of adequate strength shall be provided along all edges where workers may be liable to fall into water. If it is not possible to provide such fences and nets, persons working over or immediate adjacent to water shall wear a life jacket or a suitable buoyancy aid or a personal fall arrestor (as is appropriate) when so working. If there is a risk of the personnel becoming unconscious after falling into water, the life jacket shall be a self-inflatable type of the appropriate buoyance.
- (6) If required by the Contract, the Contractor shall provide a suitably equipped and dedicated rescue launch, manned and available whenever work is being carried out on or over water. Adequate rescue equipment and personal protection equipment (PPE) shall be provided and maintained according to the manufacturer's specifications and recommendations.
- (7) Alcoholic drinks and other substances which may impair judgement shall be prohibited from the Site. The Contractors shall remove any person under the influence of such substances from the Site immediately.
- (8) Personal protective equipment provided by the Contractor for use in confined spaces and for protection against falling from height shall be full-body type safety harnesses with suitable lanyards. Safety belts shall not be permitted except for use as a means of positioning to restrict horizontal movement. The Contractor shall also provide secure anchorages for the attachment of safety harnesses/safety belts.
- (9) Permit-to-work systems shall be implemented to control access to hazardous areas or the carrying out of any hazardous operations including, but not limited to, hot work, electrical work, work in confined

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space, maintenance of material hoist, area or operation liable to release of flammable or toxic liquid or gas, etc.

- (10) All lifting gear including slings, shackles and suchlike equipment shall be colour coded for identifying lifting gear which require re-inspection or disposal. Details of the colour coding system are given in Appendix V**. (** amend appendix no. where appropriate)
- (11) All material hoists installed shall be fitted with fail-safe interlocking hoistway gates such that the driving mechanism is operable only when all gates are closed and latched; and hoists shall not be operated manually when one gate is opened. A single channel communication from the user to the operator of the hoist shall also be provided.
- (12) All persons engaged in works with risks of receiving foot injuries including but not limited to pneumatic drilling work and manual handling work shall be provided with safety boots when they are engaged in such works. The cost of provision of safety boots shall be deemed to have been allowed in the Contract Rates. Safety boots shall comply with BS EN 345-Part1, BS 345-Part 2 or equivalent standards.
- (13) Further to the requirements under the Factories and Industrial Undertakings (Noise at Work) Regulations, the Contractor shall provide approved ear protectors to all persons working on the Site who are exposed to noise level of 90 dB(A) or above.
- (14) The Contractor shall keep a register of all dangerous substances including those hazardous to health which are delivered to and stored for use on the Works. The register shall include information on :
 - (a) their physical and chemical properties,
 - (b) hazards,
 - (c) safe handling and storage,
 - (d) precautionary measures to be taken, and
 - (e) first aid measures,extracted from the manufacturers' material safety data sheets.
- (15) Receptacles with full containment on four sides to prevent the falling

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out of materials shall be used for the lifting and transportation of reinforcement links, stirrups, short pieces of splice or reinforcement U-bars, couplers and the like. The safe working load shall be marked on the receptacle after being tested by a competent examiner. The colour coding system for lifting gear shall also apply to these receptacles.

- (16) The lifting of reinforcement bars shall be by the use of wire slings. No cradles shall be used for the lifting of reinforcement bars unless they are properly designed and with their safe working load certified.
- (17) Roads and footways below suspended precast concrete/steel segments or the like, shall be closed until such time the segments are secured in their permanent locations unless measures are taken to the *Architect/Engineer's satisfaction to prevent the segments from falling in the event of the failure of the equipment used to suspend the segments. The Contractor shall seek approval from the relevant authorities for the closure of the concerned sections of roads and footways. Adequate measures including the use of barricades and warnings shall be provided to ensure that no person shall inadvertently enter the area below any suspended segments.
- (18) Construction vehicles and plant used on Site shall be equipped with audible signals on reversing. Other form of warning signals and/or banksman shall be provided as necessary to guide such reversing movements if audible signals are causing nuisance to nearby residents particularly at night. For quarry operations, no person shall operate or drive any mechanical equipment at or near the edge of any face, side, tip or embankment in a quarry unless a banksman is in attendance.
- (19) Where there are more than one tower cranes operating within the Site and there is a possibility of overlapping crane movements, the Contractor shall develop, implement and maintain a safe system of work to prevent the overlapping of tower cranes lifting operation. The system shall include, but not limited to, the following:
 - the provision of a warning system in the form of light and/or sound to alert the crane operator of the approach of cranes in the overlapping area;
 - the appointment of Overlapping Area Lapping Supervisor (OALS)

to co-ordinate and control the lifting operation in the overlapping area or the provision of an automatic control device to prevent the occurrence of overlapping situation;

- the provision of adequate buffer zone on both sides to slow down the slewing movement of cranes Revision so as to prevent a sudden stop which might induce an inertia to the moving load; and
- regular inspection and maintenance of the warning system and automatic control device.

Appropriate measures shall also be implemented to address the possible overlapping crane movement for a mobile crane movement and a tower crane operating within the Site.

- (20) The Contractor shall actively organise safety promotional activities to promote and enhance the standards of health and safety on the Site. In addition, the Contractor shall also participate in other territory-wide safety promotional campaigns as instructed by the Architect/Engineer*.

- (21) Protection to protruding steel reinforcement

The Contractor shall provide protection to protruding steel reinforcements which may cause impalement injury. The protection can be by means of reinforcement caps; dowel bar sleeves; covering of the protruding steel reinforcement by wooden or metal troughs, steel planks and angles; or other means as agreed by the *Architect/Engineer. Depending on the actual conditions of the site works, protection to the protruding steel reinforcements locating at the areas non-accessible to the workers may not be required subject to the approval of the *Architect/Engineer's representative.

- (22) Wearing of chin straps attached to safety helmets

The Contractor shall ensure all persons on site to fasten chin straps attached to their safety helmets when performing works to avoid accidental detachment of the safety helmets. Safety helmets shall comply with the "Guidance Notes on the Selection, Use and Maintenance of Safety Helmets" published by the Labour Department.

15 Electrical Safety

- (1) A Registered Electrical Worker (REW) of the appropriate grade under the Electricity Ordinance (EO) shall be employed by the Contractor throughout the Contract to handle the entire temporary electrical systems and installations on the Site.

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- (2) Upon completion of the temporary electrical system (TES) and after each alteration/repair to the existing TES, the Contractor shall arrange his REW/Registered Electrical Contractor (REC) under the EO to complete an individual Work Completion Certificate (WR1) as required by the Code of Practice for the Electricity (Wiring) Regulations (COP) issued by the Electrical and Mechanical Services Department. If a REC is not employed, the Contractor shall then assume the responsibilities of a REC and sign on the WR1 together with the REW employed by the Contractor as per Code No. 19B(d) of the COP. Each of such Certificates shall include a circuit diagram clearly indicating which portion(s) of the TES is/are covered, and, where appropriate, other necessary supporting documents.
- (3) Temporary electrical installations, such as lighting fittings, distribution boards, socket outlets, plugs and cable couplers in outdoor or damp environment shall be of splash-proof type to IP 54 or above.
- (4) The sheath of all electric portable cables shall be of heavy-duty type or otherwise adequately protected against mechanical damage if laid on ground. They shall be hung overhead as far as possible. Ordinary PVC cables, if employed, shall be enclosed in metallic conduits or trunkings and properly maintained.
- (5) The Contractor shall develop checklists for carrying out regular routine inspections and checking and monthly comprehensive checking of the TES. The checklists shall be developed by the Contractor and agreed by the Architect/Engineer's*Representative. Comprehensive checking shall include, but not be limited to, checking of temporary generators, functional test of earth leakage circuit breakers, integrity of cables and connections, measurement of earthing resistance and those items listed in Checklists Nos. 3 and 4 of the COP where appropriate. The checklist should be signed by the REW after each inspection and/or checking.
- (6) Adequate precautionary measures shall be adopted to ensure safety during inspection, repair and maintenance of the temporary electrical installations including the use of permit-to-work system and/or lock-off system. The Contractor shall establish and review regularly the maintenance programme and logging system for the TES.
- (7) The Contractor shall keep and maintain updated circuit diagrams, WR1 (complete with supporting documents) and records of inspection and

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checking of the TES by REW/REC in a dedicated file for inspection by the Architect/Engineer's site supervisory staff upon request.

- (8) During weekly safety walks and when requested by the *Architect/Engineer's site supervisory staff, the Contractor shall open the cover plates of temporary electricity distribution boards for inspection of the conditions of the internal wiring and/or carry out testing immediately. Updated schematic circuit diagram shall also be affixed inside the cover of the temporary distribution boards.
- (9) All temporary electrical distribution boards shall be kept locked and accessible only by authorized persons appointed by the Contractor, e.g. REW and/or general foreman. Legible warning notices (Danger-Electricity) in both Chinese and English, names and telephone numbers of such authorized persons shall be posted on the temporary distribution boards.
- (10) For work carried out in occupied buildings, unless prior approval has been obtained and proper and safe arrangement has been made, the Contractor shall not connect his fixed electric equipment directly to any existing permanent distribution boards. Such connection shall only be made through temporary distribution boards equipped with proper protective devices.
- (11) All arc welding machines and electrode holders shall comply with BS 638 : Part 7, IEC 60974 – 1 (or BSEN60974 – 1) and BS EN 60974 – 11 or equivalent standards. The welding machines should be fitted with no-load voltage reducing device for protection against electric shock at the output side. Welding machines shall be enclosed and the metal casing shall be effectively connected to earth. Cable terminals of the welding machines shall be effectively insulated.
- (12) All hand-held electrical tools and portable equipment (e.g. submersible pumps), whether they belong to the Contractor or sub-contractors of all tiers, Nominated Sub-contractor or Specialist Contractors under domestic sub-contract, shall be examined by the REW before they are used on Site. The examination shall include visual inspection for the general conditions of the tools and equipment and also tests for checking the functional, protective conductor continuity, polarity and insulation aspects. After passing the examination, all hand-held tools and equipment shall be registered and recorded. Identification labels showing

the registration number, type of the tool, name of the owner and date of examination stamped with the Contractor's company chop shall be affixed to these tools and equipment. Re-examination of the registered hand-held tools shall be carried out at 3-month intervals or each time after repairs to damages.

- (13) Voltage in excess of 110V shall only be used for heavy equipment such as hoists, tower cranes, etc. with an earth leakage circuit breaker installed and in proper function. Portable and hand-held tools and temporary site lighting shall be operated at a voltage of 110V or less supplied from a step-down transformer with its output winding centre-tapped to earth and comply with BS EN 61558-1 and BS EN 61558-2-23 or equivalent. All cables shall be terminated within the transformer enclosure of Class I and IP55 and the outgoing circuit shall be provided with short circuit protection. In confined and damp environment, the voltage of temporary lighting and hand-held tools shall not exceed 25V.

16 Workplace Amenity

Workplace Sheltered Rest Area

(Note: It is recognized that the feasibility of providing workplace sheltered rest area is dependent on the site conditions, such as site area available for the purpose, scattering of the sites, etc. It is therefore proposed that the project office should decide whether workplace sheltered rest area shall be provided based on the conditions of the particular contract. Nevertheless, project office is encouraged to provide workplace sheltered rest area as far as possible for the welfare of the workers. In this connection, if the project office decides not to provide sheltered rest area under the contract, exemption of the provision shall be approved by an officer of D2 level or above, and the reason(s) should be properly documented in file.

If workplace sheltered rest area is to be provided, the following particular specifications shall be included in the contract.)

- (1) The Contractor shall provide workplace sheltered rest areas for use by workers irrespective whether they are employed by the Contractor or his sub-contractors. The sheltered rest areas shall be able to provide sun shade and wind screen for the workers.

- (2) Workplace sheltered rest areas shall be located at convenient locations close to working places of workers for them to take rest break or meal break. The rest areas should be provided with seats and tables, hand-wash facilities, rubbish bins, drinking facilities (*other facilities to be specified by the project office*) and with proper ventilation. The Contractor shall be responsible for maintaining cleanliness and hygiene of the rest areas.
- (3) The Contractor shall provide adequate number of workplace sheltered rest areas taking into account the number of workers and their locations on the Site. The Contractor shall submit the proposal for these rest areas including their sizes, locations, layout, facilities to be provided for approval of the *Architect/Engineer's Representative. The approved workplace sheltered rest area proposal shall be reviewed and updated by the Contractor as required by the *Architect/Engineer's Representative.

17 Measures for Working in Hot Weather

- (1) The Contractor shall set up a hot weather safety and health system for workers in accordance with the latest version of the "Guidelines on Site Safety Measures for Working in Hot Weather" issued by the CIC (current edition of the Guidelines is Version 2 published in April 2013). The hot weather safety and health system shall be included in the Contractor's Safety Plan.

18 Report on Safety Performance and Payment for Performance-tied Payment Items

- (1) The payments on safety cover both the task-tied payment items for the implementation of stipulated safety measures such as attending safety meetings and safety walks, provision of safety officers and safety training etc. and the performance-tied payment items which are measured according to the Contractor's achievements in the performance indicators such as no reportable accident in a month, accident frequency rate, no notice of safety and environmental prosecution, etc. The task-tied payment items are payment items under the Pay for Safety Scheme (PFSS) and are listed in Bills of Quantities Bill No. [#] / Schedule of Rates Schedule No. [#]. The performance-tied payment items are

payment items under the Pay for Safety Performance Merit Scheme (PFSPMS) and are listed in the Schedule of Performance-tied Payment Items of the PFSPMS in Appendix [#] to the Special Conditions of Contract. Measurement and payment for the performance-tied payment items shall be in accordance with the Special Conditions of Contract Clause SCC[#]. A Provisional Sum for the performance-tied payment items under the PFSPMS is stated in the General Summary in the Bills of Quantities / Summary of Tender*.

- (2) In the performance-tied payment items of the PFSPMS, “reportable accident” means accidents arising from activities of the Works (including those accidents which happen in Civil Engineering and Development Department’s sorting facilities)* resulting in any person suffers death or injury with incapacity for more than three days but excluding the following types of accidents:
 - (a) accident occurred in a site office but was not related to any activity of the Works;
 - (b) accident concerning the injury of a government staff;
 - (c) accident concerning the injury of resident site staff of the HKSAR Government or its agents including those employed by consultants; and
 - (d) accident concerning the injury of visitors or the public to the Site and was not related to any activity of the Works.

- (3) The accident frequency rate is calculated as the number of reportable accidents per 100,000 man-hours worked in which:
 - (a) wherever appropriate, the rules for counting reportable accidents for accidents statistics in Section 9.3 in Chapter 9 of Construction Site Safety Manual published by the Development Bureau shall be followed; and
 - (b) “man-hours worked” is the man-hours worked by all persons employed by the Contractor and his sub-contractors who are exposed to risk, including the Contractor’s site supervisory staff, site agent and engineer(s), workers and watchmen etc., and the man-hours of Architect/Engineer/Supervising Officer’s* site staff are to be excluded.

- (4) The Contractor shall submit a “Monthly Report on Safety Performance” (the Monthly Report) to the Architect/Engineer/Supervising Officer* using the prescribed proforma in [Appendix I of the guidelines on the

inclusion of PFSPMS] on the measurement of the performance-tied payment items of the PFSPMS for each month falling within the period which commences on the earliest date of possession of the Site and ends on the date six months after the date of substantial completion of the Works or if the Works are divided into Sections, the time for substantial completion of the last Section or on an earlier or later date notified by the Architect/Engineer/Supervising Officer* provided that such date shall not be earlier than the last date of the time for substantial completion of the Works or the last Section, as the case may be. The first month shall commence on the earliest date of possession of the Site and end on the last day of the calendar month within which the earliest date of possession of the Site falls. The second month shall commence on the first day of the second calendar month and end on the last day of the second calendar month and the subsequent months shall run in a similar way. The last month shall end on the date on which the said period ends. The Monthly Report shall be prepared and signed by the Safety Officer and endorsed by the Site Agent of the Contractor. For the purposes of this Clause, the terms “calendar month”, “earliest date of possession of the Site”, “time for completion” and “last Section” shall have the meaning assigned to those terms in the Measurement Rules for the Performance-tied Payment Items of the PFSPMS in Appendix [#] to the Special Conditions of Contract.

- (5) The Contractor shall submit documentary proof for the performance achievements stated in the “Monthly Report on the Safety Performance” to the Architect/Engineer/Supervising Officer*.
- (6) If it is subsequently aware by the Contractor or the Architect’s/Engineer’s/Supervising Officer’s* Representative that adjustment(s) on any of the Monthly Reports on the Safety Performance, including those submitted and agreed by the Architect’s/Engineer’s/Supervising Officer’s* Representative previously, is/are required, it is the responsibility of the Contractor to revise and re-submit the concerned Monthly Report with adjustment(s) to the Architect/Engineer/Supervising Officer* for correction and agreement. Any previous measurement(s) and payment(s) made to the Contractor shall be deducted or adjusted accordingly.

(*Delete as appropriate.)

(# Insert relevant information.)

19 Safety Measures of Trenches and Excavation

- (1) The Contractor shall observe and comply with the relevant requirements under the Construction Sites (Safety) Regulations (Cap. 59I) and the Electricity Supply Lines (Protection) Regulation (Cap. 406H) when the works activities are carried out in the vicinity of electricity supply lines. He shall follow the practical guidance detailed in the Code of Practice which has been prepared by the Electrical and Mechanical Services Department (EMSD). Further to the requirements under the Electricity Supply Lines (Protection) Regulation, the Contractor shall comply in particular with the following safety measures with regard to trench and other excavation works:
 - (a) Before the commencement of any excavation work, sufficient information shall be obtained from the utility undertakings and by inspection pits or, if agreed by the *Architect/Engineer, by other means including referring to the investigation data obtained from the *Architect/Engineer to verify the locations of underground installations.
 - (b) A competent person approved by the Electrical and Mechanical Services Department shall be appointed to locate the alignment and depth profile of all underground cables in the areas irrespective of the excavation depth.
 - (c) Ensure that any underground cable alignment and depth profile as identified by the competent person in the area are clearly marked on the ground.
 - (d) Excavation shall be carried out by trained and experienced workers who shall be fully informed of the possible dangers and safety precautions, before work is commenced.
 - (e) Hand digging method shall always be employed as part of trench / open cut excavation where there are utilities adjacent to or within the trench / open cut excavation works. Portable mechanical tools may be used but shall be restricted to the breaking of the pavement surface. Due care shall be exercised to prevent damage to the underground cables, water pipes, gas pipes or other utility installations. The Contractor shall adopt his own working method to overcome the obstruction encountered by utilities in trench /

open cut excavation, including but not limited to the excavation by hand digging. The Contractor shall adopt hand digging or other method in trench excavation instead of awaiting diversion of utilities unless the obstruction is substantial which covers more than half width of a trench and extends more than 10 metres. Adequate utility support works shall be carried out so that safety of working underneath utilities can be achieved and the damage or disruption to utilities can be avoided. Safety measures shall be adopted for the hand digging work.

- (f) Exposed utility installations shall be adequately supported and protected from accidental damage. The requirement /recommendations by Joint Utilities Policy Group (JUPG) shall be followed. “Detailed Requirements on Support of Utility Services” published by JUPG shall be complied with. The Contractor shall be responsible for liaising with and seeking approval from the relevant utility undertakings in relation to the handling or supporting of utilities. The Contractor shall liaise and seek approval from relevant utility undertaking if any requirements are proposed to be relaxed or waived for the construction. The Contractor shall be entitled to no claim for extension of time or payment in any form for complying with such requirement / recommendation and/or delaying in making liaison or seeking approval.
- (g) Smoking and use of naked flames shall be prohibited if gas pipes are present.
- (h) The side of an excavation shall be properly shored and adequately supported so as to avoid dangers arising from dislodgement of earth or other materials and instability of adjacent buildings/structures/services.
- (i) Every excavation shall be examined by a competent person daily who shall submit to the *Architect/Engineer’s Representative a report, in the format to be agreed by the *Architect/Engineer, stating the safety and stability conditions of every excavation and its supporting structures. Work in the excavation shall not be carried out unless the written report of the examination shows that the excavation and its supporting structures are safe and secure.
- (j) No materials, plant or other loads shall be placed or stacked close to the edges of an excavation.
- (k) Ready means of evacuation shall be provided for the workers to

escape from an excavation in the event of emergency.

- (l) Suitable barriers shall be provided to the edges of an excavation.
- (m) When temporary covers/decking to the trenches and barriers at the edges of excavation are being installed, the Contractor shall ensure that they are safely and securely installed at all times, especially during adverse weather conditions, and shall be flush and continuous with the surrounding carriageway and pavement.
- (n) The site with excavated trenches or pits should be securely fenced off with notices posted to warn on danger and against trespassing. Should there be any possibility of ponding of water, life saving rings should be placed at the edge of excavation for emergency use.

(*Delete as appropriate)

20 Site Traffic Safety Management Plan

- (1) The Contractor shall prepare, update and submit to the *Architect/Engineer the Site Traffic Safety Management Plan (STSMP) for the Works under the Contract. The STSMP shall be submitted within 42 days after the commencement of the Contract. They shall be updated monthly and whenever there are significant changes to the conditions of the Site. The STSMP shall be discussed in the Pre-work Exercise and Safety meetings, daily/weekly safety coordination meetings, where appropriate. The STSMP shall include the following:
 - (a) risk assessment associated with the site traffic;
 - (b) safe working procedures;
 - (c) safety training for site personnel;
 - (d) site traffic layout design and safety measures with due consideration to planning of traffic routes such as designing routes of traffic and ingress and egress points for vehicles; minimizing the movements of vehicles and mobile plant, and reversing movements of vehicles; designating loading and unloading areas; providing facilities such as segregation of pedestrian and vehicular traffic and pedestrian crossing points to facilitate safe movement of personnel within the Site; and imposing speed control measures;
 - (e) site traffic layout plans which provides traffic layouts for the Site

- and related haul roads;
- (f) an assessment on feasibility of installation of reversing video devices or other reversing safety devices, and preparation of implementation plan; and
 - (g) an inventory of vehicles and mobile plant which lists out the type, model and statutory certificates of the vehicles and plant being used in the Contract.
- (2) The Contractor shall display the site traffic layout and the safety measures on the safety bulletin board at the location where the Pre-work activities pursuant to subclauses [#] under the PS Clause of “Site Safety Cycle” shall be held.
- (3) The Contractor shall take note of the “Publication No. 3 – Guidelines on Safety of Vehicles and Mobile Plant on Construction Site” published by the CIC in preparing the STSMP.

(*Delete as appropriate.)
 (# Insert relevant information.)

21 Site Safety Cycle/~~Welfare Facilities for Workers~~

- ~~(1) [Clauses introduced by ETWB TCW No. 30/2002 shall be added to Particular Specification on Site Safety for capital works contracts and Design and Build contracts that are included in the PFSS / PFSES or/and PFSPMS shall be added as Clauses “Site Safety Cycle” and “Welfare Facilities for Workers” in the Particular Specification on Site Safety and/or Temporary Accommodation for the Contractor/Contractor's Site Accommodation as appropriate.]~~

(Incorporating Appendix A of ETWB TC(W) No. 30/2002 with necessary amendment)

- xx. The Contractor shall practise “Site Safety Cycle” (SSC) to improve and promote the safety and health of the Site. Site Safety Cycle shall begin when there are workers working on the Site, and shall cease by the date of substantial completion of the Works, or at a date proposed by the Contractor and approved by the *Architect/Engineer. The activities for Site Safety Cycle for one day, one week and one month are referred to as the “Daily Cycle”, “Weekly Cycle” and “Monthly Cycle” respectively. Details of the activities and the provisions for holding the activities are described below. For simplicity, the Pre-work Exercise and Safety (PES) meeting, Hazard Identification Activity (HIA) meeting and Pre-work Safety Checks of the Daily Cycle are collectively referred to as the “Pre-work Activities”.

The Contractor shall arrange Pre-work Activities to be held for attendance by persons employed on the Works (excluding clerical and administrative staff in site office), irrespective of whether they are in the employment of the Contractor or his sub-contractors. For the avoidance of doubt, persons employed on the Works are those persons whose number of man-hours worked on the Site are to be included in the number of man-hours worked for the Contract. The Contractor is encouraged to arrange Pre-work Activities to be held

daily, but in any case the frequency of Pre-work Activities for attendance by each person employed on the Works shall be not less than once in a week (commencing on Monday). Where necessary, the Contractor can arrange more than one session of Pre-work Activities to be held in a day in order to suit the large workforce or the different times of arrival of workers at the Site. The Pre-work Activities shall be carried out prior to any work carried out by the persons attending the Pre-work Activities on that day. Furthermore, the number of persons attending the Pre-work Activities in a session shall be governed by the hard-paved area which shall be sized based on the rate for a person specified in sub-clause 5 below.

1 Daily Cycle

1.1 PES Meeting

1.1.1 The Contractor shall arrange and hold PES meetings each about 10 to 15 minutes for all the persons employed on the Works.

1.1.2 The PES meeting shall be led by the Site Agent or a senior staff of site management of the Contractor, who has attended the training course on SSC or the Safe Working Cycle of the Occupational Safety & Health Council (OSHC) or Construction Industry Council (CIC), or other relevant training courses notified by the *Architect/Engineer.

1.1.3 The first few minutes of PES meeting shall start with a physical exercise set by the Contractor. After that, the leader of the PES meeting shall address the attendees on the prevailing safety and health matters related to the Site, such as common hazards and control measures, general fire and safety precautions, specific safety concerns, general defects and irregularities observed in inspections, accidents or near misses etc.. Besides, the Contractor shall also make use of the PES meetings to announce common safety matters in execution and co-ordination of the Works on the Site among sub-contractors and workers, or presenting awards to workers and/or sub-contractors in recognition of their good safety performance.

1.1.4 The Contractor shall maintain a brief record of the run-down programme and a register of the persons attended for each PES meeting, or keeping photo records showing the attendance. The *Architect/Engineer's Representative and/or his/her staff shall attend the PES meetings regularly to ensure their quality for certifying payment.

1.2 HIA Meeting

- 1.2.1 The Contractor shall arrange and hold HIA meeting of about 10 minutes for the attendees immediately after the PES meeting.
- 1.2.2 To strengthen the communication on the Site, the Contractor shall arrange persons on the Site to take turn to lead the HIA meeting. Such person can be either a foreman, ganger, Safety Officer, Safety Supervisor or Safety Representative who has attended, in addition to the SSC course as mentioned in sub-clause 1.1.2 above, the presentation skill course such as the Occupational Safety and Health Trainer Course of OSHC or the Safety Training Techniques of CIC or other relevant courses notified by the *Architect/Engineer. The Contractor shall ensure that sufficient persons on the Site have received the training to lead the HIA meetings as soon as the Contract commences.
- 1.2.3 The leader of each HIA meeting shall prepare the training materials before conduction, which shall include, but is not limited to, hazards and control measures specific to the works or trades, special safety concerns, assurance of safety requirements and measures, reprimand of repeated irregularities and malpractice etc.. Besides, the leaders of the HIA meetings shall also encourage workers to give their views in the HIA meetings. Where necessary, Site Agent, Safety Officer and/or Safety Supervisors who are more experienced in provision of training shall provide guidance and assistance to the leaders of HIA meeting before conducting the meeting. The training materials prepared for and the discussion during the HIA meeting shall be recorded in a HIA table, a sample of which is shown in **Annex A**. The HIA Table shall be kept in the Contractor's site office for ready inspection by the *Architect/Engineer's Representative or his/her staff upon request.
- 1.2.4 Subject to the agreement of the *Architect/Engineer's Representative, the Contractor can alternatively arrange the HIA meetings to be held in small groups according to the trades, work teams or works areas set out by the Contractor for the Site. If so, the Contractor shall ensure that the assigned persons are competent to lead the HIA meetings, whose names and curriculum vitae shall be submitted to the Architect/Engineer's Representative for approval. The *Architect/Engineer's Representative or his/her staff shall attend the HIA meetings regularly to ensure their quality for certifying payment. The *Architect/Engineer's Representative shall not certify payment if the Architect/Engineer's Representative is dissatisfied with the content and/or the arrangement of the HIA meeting for that group.
- 1.2.5 The Contractor can use the register or photo records for the PES meeting for taking attendance of the HIA meeting if the attendees have not split up into small groups. Furthermore, the Contractor shall complete one HIA table for each HIA meeting held for individual groups pursuant to sub-clause 1.2.4 above.

1.3 Pre-work Safety Checks

1.3.1 The Contractor shall arrange and hold Pre-work Safety Checks for the attendees immediately after the HIA meeting. The Pre-work Safety Checks shall be carried out by foremen, gangers, Safety Supervisors or Safety Representatives of the attendees according to the trades, work teams or works areas set out by the Contractor for the Site. The Pre-work Safety Checks shall include the checking of personal protective equipment worn by attendees before they start working on that day such as safety helmet, reflective vest, ear protectors, eye protectors, safety harness, safety footwear etc.. The *Architect/Engineer's Representative or his/her staff shall attend the Pre-work Safety Checks regularly to ensure the proper checking by the Contractor for certifying payment.

1.3.2 The Contractor shall assign persons who are competent with the relevant knowledge, experience and training to check and ascertain the safety conditions of facilities, machinery, plant and equipment and materials before commencing work on that day. The Contractor shall propose a list of facilities, machinery, plant and equipment to be checked and develop relevant checklists for such checking for the approval of the *Architect/Engineer's Representative. The assigned persons shall use the checklists for Pre-work Safety Checks of facilities, machinery, plant and equipment, and the completed checklists shall be kept at the Contractor's site office for ready inspection by the *Architect/Engineer's Representative or his/her staff upon request.

1.4 Safety Inspection by the Site Agent or his Representative

1.4.1 The Contractor shall arrange the Site Agent or his/her representative to carry out safety inspection of the Site daily, particularly for those areas identified for improvements in weekly safety co-ordination meetings, Weekly Safety Walks, Site Safety Management Committee meetings or Site Safety Committee meetings pursuant to sub-clause 2.1, 2.2, 3.1 and 3.2 respectively. The Site Agent or his/her representative shall check and ensure that the safety instructions given in PES meetings or HIA meetings have been observed and carried out.

1.4.2 Any unsafe act or unsafe conditions observed during inspections shall be recorded in a diary maintained by the Site Agent, who shall promptly communicate the irregularity to the respective party concerned for follow-up actions. The Site Agent shall check and ensure that the unsafe acts or unsafe conditions are rectified promptly, and the date is duly recorded in the diary after completion. The safety diary shall be made available for inspection by the *Architect/Engineer's Representative and copying thereof upon request.

1.5 Guidance and Supervision during Work

The Contractor shall assign sufficient supervisory staff to be responsible for the safety and health of workers on the Site. The names of the assigned supervisory staff shall be shown in the site safety organization chart posted up in the safety bulletin board pursuant to sub-clause 4.2 below. The assigned supervisory staff shall provide guidance and supervision for the workers under his/her control, and rectify any irregularities, unsafe acts or unsafe conditions for the works on the Site. Guidance and supervision provided shall also include the implementation of safety instructions given in PES or HIA meetings.

1.6 Safety Co-ordination Meeting

The Contractor shall arrange and hold safety co-ordination meeting each day to coordinate safety and health work to be carried out on the Site on the following day. The meeting shall be chaired by the Site Agent or a senior staff of site management of the Contractor, and attended by assigned supervisory staff pursuant to sub-clause 1.5 above where necessary. The meeting shall be used to discuss the findings in safety inspections and/or the matters to be announced in the next PES or HIA meeting. It can also be used for discussion and co-ordination of site safety matters, such as sequence of works, usage times for shared machinery and equipment and works areas, phasing of works at various interfaces, delivery and storage of materials and equipment to the Site etc.

1.7 Daily Cleaning and Tidying up of the Site

Detailed requirements are specified in PS Clause No. (). [to be inserted by works department on the same subject]

1.8 Checking of the Site after Each Day's Work

The Contractor shall assign designated person to check the safety of the Site after each day's work including, but is not limited to, the following:

- i. all flames and heat sources have been extinguished (particularly for welding and hot-work operations);
- ii. keys have been removed from construction machinery and plant and kept in a safe place;
- iii. all construction plant are parked properly on level and stable ground;
- iv. all machinery and power sources have been turned off;
- v. all openings are properly covered and all edges are provided with fall protection measures;

- vi. all nailed timber, planks and/or sheets are piled and put aside away from main accesses;
- vii. excavated surfaces on soil slopes are provided with temporary protection;
- viii. all temporary works are properly maintained;
- ix. signing, lighting and guarding are provided in accordance with the approved temporary traffic management scheme;
- x. hoarding and/or covered walkways along the periphery of the Site are maintained in proper condition; and
- xi. the Site has been fenced and guarded against unauthorized entry.

The designated person shall, after completion of checking, notify the Site Agent any unsafe conditions or imminent danger that require immediate follow-up actions. The designated person shall also draw the attention of the Site Agent about the minor irregularities to arrange rectification on the following day.

2 Weekly Cycle

2.1 Weekly Safety Walk

Detailed requirements are specified in PS Clause No. (). [to be inserted by works department on the same subject]

2.2 Weekly Safety Co-ordination Meeting

The Contractor shall arrange the Site Agent or a senior staff of the site management of the Contractor together with the Safety Officer, Safety Supervisor and/or supervisory staff of sub-contractors to attend the weekly safety co-ordination meeting chaired by the *Architect/Engineer's Representative. The meeting shall discuss or coordinate safety and health matters including, but is not limited to, safety performance, housekeeping and tidiness of the Site, together with the specific areas of concern, defects and deficiencies observed in Weekly Safety Walks, accidents and near misses occurred on the Site, etc. A brief notes of the meetings shall be prepared by the Contractor and endorsed by the *Architect/Engineer's Representative after the Meeting.

2.3 Weekly Overall Cleaning and Tidying up of the Site

Details requirements are specified in PS Clause No. (). [to be inserted by works department on the same subject]

3 Monthly Cycle

3.1 Site Safety Management Committee Meetings

Detailed requirements are specified in PS Clause No. (). [to be inserted by works department on the same subject]

3.2 Site Safety Committee Meetings

Detailed requirements are specified in PS Clause No. (). [to be inserted by works department on the same subject]

4 Safety Bulletin Board

4.1 The Contractor shall provide a safety bulletin board at the location where Pre-work Activities pursuant to sub-clauses 1.1 to 1.3 shall be held. Subject to the approval of the *Architect/Engineer, additional safety bulletin board can be provided where Pre-work Activities have to be held at more than one location of the Site.

4.2 The safety bulletin board shall be made of recycled materials with a size approximately 6m x 1.5m which can be varied to suit the site condition subject to the approval by the *Architect/Engineer's Representative. The board shall contain, but is not limited to, the following information:

- i. the design by the Contractor on promotion of Site Safety Cycle;
- ii. a chart with names and contact telephone numbers showing the site safety organizational structure from senior site management down to sub-contractors, gangers, foremen, Safety Officer, Safety Supervisors and Safety Representatives according to works trades, work gangs or works areas, together with the emergency teams, first aid personnel etc.;
- iii. accident statistics with breakdown to sub-contractors; and
- iv. a figure showing a worker wearing all the personal protective equipment plus a mirror to cover the full view of the person when standing in front.

The safety bulletin board may contain other safety information related to the Site such as Site plan, safety policies, in-house safety rules and regulations, slogans, colour coding systems for lifting gears, important safety and health issues etc..

4.3 The Contractor shall propose the location for the erection of the safety bulletin board and the hard-paved area pursuant to sub-clause 5

where Pre-work Activities will be held for the approval of the *Architect/Engineer's Representative.

5 Hard-paved area

- 5.1 The Contractor shall arrange and provide a hard-paved area on the Site for holding Pre-work Activities pursuant to sub-clauses 1.1 to 1.3 above under the provision of * “Temporary Accommodation for the Contractor” [or “Contractor's Site Accommodation in the Preliminaries” as appropriate]. The hard-paved area shall be sized based on a rate of 1.5 m² per person multiplied by the maximum number of persons to be arranged for one session of Pre-work Activities. The hard-paved area shall be designed to be able to sustain the load at that area throughout the Contract. Details of construction of the hard-paved area shall be submitted to the *Architect/Engineer's Representative for approval.
- 5.2 Subject to the agreement of the *Architect/Engineer's Representative, the Contractor can arrange Pre-work Activities to be held at more than one location, and the hard-paved areas at each venue shall be sized separately based on the specified requirement given in sub-clause 5.1 above. The hard-paved area can be an open area in front of the site office, or an area inside building structure under construction, or at the main works areas in case of roadworks or mains laying contracts, or near shaft opening for a tunnelling contract, whichever is appropriate. The Contractor shall submit the proposed location and its area for holding Pre-work Activities for the approval of the *Architect/Engineer's Representative within 14 days from the date of commencement of the Works on the Site.
- 5.3 If the proposed location for holding of Pre-work Activities is outdoors, consideration shall be given to provide a cover for the hard-paved area unless otherwise approved by the *Architect/Engineer's Representative that the provision is not necessary. Details of construction of the cover shall be submitted to the *Architect/Engineer's Representative for approval.
- 5.4 The Contractor shall maintain the hard-paved area and the cover throughout the Contract, and shall demolish and reinstate the area to the satisfaction of the *Architect/Engineer' Representative prior to completion of the Works unless otherwise agreed by the *Architect/Engineer.

22 Welfare Facilities for Workers

(to be included to form part of the Particular Specification for “Temporary Accommodation for the Contractor”)

for “Contractor’s Site Accommodation in the Preliminaries” as appropriate]

(Incorporating Appendix D of ETWB TC(W) No. 30/2002 with necessary amendment)

zz. Immediately after the award of the Contract, the Contractor shall arrange to provide welfare facilities specified below for workers employed on the Works, irrespective of whether they are in the employment of the Contractor or his sub-contractors. The Contractor shall maintain the welfare facilities provided on the Site throughout the Contract, and shall remove the facilities and reinstate the areas after removal of the facility or upon completion of the Works where necessary. The costs for the provisions shall be priced in the Bills of Quantities under the Item “Temporary Accommodation of the Contractor” [or “Contractor’s Site Accommodation in the Preliminaries” as appropriate]. The sufficiency of provision for the welfare facilities shall be monitored and reviewed in the Site Safety Management Committee meetings. The Contractor shall replenish the insufficiency of provision to meet the specified requirements and shall not be entitled to claim the cost of such replenishment after commencement of the Works.

1 Storage Compartments

The Contractor shall provide storage compartments for use by workers. The storage compartment shall be placed at a location close to the Site entrance to facilitate workers to obtain/place their personal protective equipment such as safety helmet, reflective vest, eye protectors, safety harness etc. when they enter/leave the Site.

The Contractor shall ensure adequate provision of storage compartments taking into account the fluctuation in labour workforce. The Contractor shall determine the dimensions of the storage compartments. To facilitate monitoring and control, each storage compartment shall be designed for use by not more than five persons unless otherwise approved by the *Architect/Engineer’s Representative. The Contractor shall propose the number, location and layout arrangement for the placement of storage compartments on the Site for the approval of the *Architect/Engineer’s Representative within 14 days from the date of commencement of the Works on the Site. The *Architect/Engineer’s Representative shall review regularly the adequate provision of storage compartments on the Site for use by workers throughout the Contract.

2 Drinking Water Facilities

The Contractor shall provide free drinking water facilities for workers working on the Site throughout the Contract to minimize waste plastic bottles. The drinking water facility can be in the form of a water pot with a cover at the top for water refilling and a tap at the bottom for drawing water, a distilled water drinking fountain or any other form that the Contractor considers appropriate. The drinking water facilities shall be provided indoors and each of which shall have a storage capacity of not less than 20 litres.

The Contractor shall be responsible for maintaining the drinking water facilities in clean and hygienic condition and refilling drinking water to the facilities when empty. The number of drinking water facilities provided on the Site shall be at a ratio of not less than one for every (20) workers [figure tentatively set and to be determined by the *Architect/Engineer]. The Contractor shall propose the number, location of placement and the refilling frequency for drinking water facilities provided on the Site for the approval of the *Architect/Engineer's Representative within 14 days from the date of commencement of the Works on the Site. The *Architect/Engineer's Representative shall review regularly the adequacy of drinking water facilities provided by the Contractor throughout the Contract.

3 Toilet Facilities

The Contractor shall provide toilet facilities for workers working on the Site throughout the Contract, unless otherwise approved by the *Architect/Engineer's Representative that the provision is not necessary. The toilet facilities shall be suitable for use bisexually and placed at convenient locations close to workers' workplace. The toilet facilities shall be either one of the following types:

wet type with flushing water supply and the toilet waste properly collected and discharged into a sewerage system, septic tank, soakaway system, or in-situ sewage treatment facilities proposed by the Contractor and approved by the *Architect/Engineer's Representative;

chemical type complete with containers for regularly cleaning and removal by specialist contractor.

For connection to a public sewerage system, the Contractor shall obtain approval from the Drainage Services Department prior to making the connection. If a soakaway system is adopted, the Contractor shall carry out in-situ percolation test to prove that the soil shall have sufficient absorption capacity to treat the toilet waste flow. The test results shall be submitted to the *Architect/Engineer's Representative for recording before discharging. If in-situ sewage treatment facility is adopted, the plant shall be equipped with

disinfection unit to sterilize the treated effluent before discharging.

The number of toilet facilities provided on the Site shall be at a ratio of not less than one for every (30) workers [figure tentatively set and to be determined by the *Architect/Engineer]. The Contractor shall propose the toilet type, number and their locations of placement for the approval of the *Architect/Engineer's Representative within 14 days from the date of commencement of the Works on the Site. The Contractor shall maintain the toilet facilities in clean and hygienic condition. The *Architect/Engineer's Representative shall review regularly the adequacy of toilet facilities provided by the Contractor on the Site and the cleanliness and hygienic conditions of these toilets throughout the Contract.

4 Hand-wash Facilities

The Contractor shall provide hand-wash facilities in the form of water points and sinks for workers working on the Site throughout the Contract, unless otherwise approved by the *Architect/Engineer's Representative that the provision is not necessary. The number of hand-wash facilities provided on the Site shall be at a ratio of not less than one for every (20) workers [figure tentatively set and to be determined by the *Architect/Engineer]. The discharge from hand-wash facilities shall be collected to prevent spillage on the floor, and discharged to a water reception tank or flushing water supply tank for recycling/reusing as appropriate. The Contractor shall propose the number of hand-wash facilities, their locations and the system of how to collect the discharge from the wash-water basin for reuse/recycle on the Site for the approval of the *Architect/Engineer's Representative within 14 days from the date of commencement of the Works on the Site. The *Architect/Engineer's Representative shall review regularly the adequacy of hand-wash facilities provided by the Contractor on the Site and the effectiveness of the discharge collection system throughout the Contract.

5 Showering Facilities

When the number of workers working on the Site will likely be exceeding (100) [figure tentatively set and to be determined by the *Architect/Engineer] in a day for a continuous period of twelve months or more during the Contract, the Contractor shall, in addition to the provision of hand-wash facilities pursuant to clause (4) above, provide showering facilities on the Site unless otherwise approved by the *Architect/Engineer that the provision is not appropriate. The showering facilities shall be provided indoors or inside containers with appropriate drainage connections. The number of showering points provided on the Site shall be at a ratio of not less than two for the first (100) workers [the same figure as determined above by the *Architect/Engineer], and an additional one for every additional (50)

workers [figure tentatively set and to be determined by the *Architect/Engineer].

The Contractor shall provide showering facilities at different locations/rooms for use by male or female workers separately. Each showering point shall be furnished with hot and cold water supply. The Contractor shall be responsible for the water and electricity charges for providing the facilities. Details of installation of the facilities shall be submitted for the approval of the *Architect/Engineer's Representative within 30 days after the commencement of the Works on the Site.

6 Rubbish Bins

The Contractor shall provide sufficient rubbish bins with covers at strategic locations on the Site for collection and disposal of general wastes generated by workers throughout the Contract. The rubbish bins shall be provided in pairs, one for aluminium cans and plastic bottles and the other for general refuses. The locations for the rubbish bins in pairs shall be placed at convenient locations close to the workers' workplace to facilitate use. The number of paired rubbish bins in pairs provided on the Site shall be at a ratio of not less than one pair for every (20) workers [figure tentatively set and to be determined by the *Architect/Engineer]. The size of the rubbish containers shall be of minimum 1 m high and have an opening of at least 0.28 m² at the top for collecting wastes.

The Contractor shall maintain the cleanliness of rubbish bins, and arrange collection and disposal of general waste inside the rubbish bins regularly, but in any case shall be not less than once in every three days. The Contractor shall also make arrangement for collecting papers and packaging on the Site to reduce disposal of wastes to landfills. The Contractor shall propose the number and the location of placement of rubbish bins provided on the Site together with the arrangement for on-site sorting of aluminium cans, plastic bottles and papers for the approval of the *Architect/Engineer's Representative within 14 days from the date of commencement of the Works on the Site. The *Architect/Engineer's Representative shall review regularly the adequacy of rubbish bins provided on the Site by the Contractor and the effectiveness of on-site sorting of general wastes throughout the Contract. The Contractor shall include this requirement to form part of his waste management plan if appropriate.

Record of Hazard Identification Activity (HIA) Meeting

Contract No: *[pre-printed]* Name of Contractor: *[----- pre-printed -----]*

Contract Title: *[----- pre-printed -----]*

<u>Team Reference (if appropriate):</u>	
<u>Date:</u>	<u>Time:</u>
<u>Potential Hazards/ Irregularities/ Unsafe Acts or Unsafe Conditions</u>	<u>Safety Precautionary Measures/ Rectification Actions/ Improvement Actions</u>
<u>Name of Leader:</u>	
<u>Signature:</u>	<u>Position:</u>

(Please complete one sheet for one HIA Meeting)

Appendix IV

Monthly Statement of Trade Specific Advanced Safety Training for Skilled Workers (Silver Card)

(for the month of _____)

Contract Number : _____ Department _____
Contract Title : _____
Contractor : _____

Name of Worker		Silver Card			Remarks
in English	in Chinese	Trade of Worker	Serial No.	Date of Issue	

Prepared by : _____ Checked by : _____
(Name of Safety Officer) (Name of Site Agent)

Signature : _____ Signature : _____

Date : _____ Date : _____

Colour Coding of Lifting Gear

1. General

- 1.1 This procedure applies to all slings, shackles and such-like equipment that are required by regulation to be certified.
- 1.2 This procedure will be distributed and shall apply to all contractors who are working on the Site.
- 1.3 This procedure will be distributed to Suppliers. It shall become a condition of purchase that all Suppliers use only certified lifting equipment on the Site. Such equipment will not feature on the Site Lifting Gear Register (the Register) if it is only present on a temporary basis during loading/unloading of plant, equipment or materials.

2. Arrival on the Site

- 2.1 Upon arrival on the Site, all contractors shall ensure that their lifting equipment is properly certified and identifiable (i.e. any stamping is legible). If it is not certified or the stamping is not legible then the equipment shall be quarantined and not used until such time as it is tested and certificates can be provided.
- 2.2 Sub-contractors shall report to the Main Contractor's Safety Officer (SO) who shall ensure that the certification and stamping are satisfactory, before entering the equipment in the Register and painting the equipment with the appropriate colour (see para. 3.1 below). The Register shall include the due date for re-examination of the equipment.

3. Routine Monitoring

- 3.1 A colour coding system will be in use for months as noted below -

Jan	-	Feb	-	Mar	Blue
Apr	-	May	-	Jun	Yellow
Jul	-	Aug	-	Sept	Green
Oct	-	Nov	-	Dec	Orange

To be removed from the Site Equipment under quarantine in Main Contractor's Central Yard	Red White
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- 3.2 The Main Contractor and Sub-contractors' foremen are to familiarise themselves with the colour for that month and ensure that personnel in their charge use only equipment painted in the appropriate colour.
- 3.3 On the last working day of each month (except as noted in para. 3.5) the Safety Officer of the Main Contractor (S0) will issue copies of the updated register to site foremen. The foreman will then check all equipment on their batch for compatibility with the register. The foremen shall particularly ensure that stamping is still legible and the colouring is appropriate. Any equipment in doubt shall be removed from the working area and delivered to the Main Contractor's central yard whereupon Sub-contractors will be required to have it quarantined, re-certified or scrapped accordingly. The equipment under quarantine shall be painted white by the S0. The S0 or Safety Supervisors will supervise this operation and be responsible for it.
- 3.4 During day-to-day operations, it is the responsibility of all concerned to ensure that proper lifting equipment is used. Any irregularity shall be immediately reported to the S0 who shall take action as necessary.
- 3.5 On the following days, or as soon thereafter as practical but in any event within 14 days, all lifting equipment shall be inspected by the S0 who shall also check the validity of the certificates as stipulated in the FIU (Lifting Appliances & Lifting Gear) Regulations.

The days are	31st	March
	30th	June
	30th	September
	31st	December

Upon satisfactory inspection and certification, S0 shall paint the said equipment with the new colour as noted in para. 3.1 and enter in the Register accordingly.

- 3.6 The Main Contractor's Safety Officer shall be responsible for ensuring that all equipments are painted with the appropriate colour and an updated register of such equipment kept. If routine monitoring (re. paras. 3.3 & 3.4) reveals faults with colour coding then Sub-contractors shall inform the Safety Officer who will take the appropriate action. If equipment is obviously faulty then it shall be painted red and the Sub-contractor be advised to remove it from the Site immediately.
- 3.7 The colour coding does not evade the Contractor's duty under the Factories & Industrial Undertakings (Lifting Appliances and Lifting Gears) Regulations in examining them every six months by Registered Professional Engineers.

4. Completion/Removal from the Site

- 4.1 From time to time, or upon completion of his work, a Sub-contractor may require to remove equipment from the Site. Such removal shall be notified to the S0 for updating the Register.
- 4.2 Once removed from the Site, if the equipment is then brought back, then it shall be treated as per para. 2 above.

Appendix VI(a)–Sample Method of Measurement for “Pay for Safety Scheme” for Capital Works Contracts

(Applicable to

*[Notes: 1. Where *Architect/Engineer is denoted in this MoM, it should be selected as appropriate or modified to suit the appropriate title of the contract.*

2. The following MoM, which is applicable to capital works contracts included in the Pay for Safety Scheme, should be included in a new section of the MoM, instead of Section I (Preliminaries).]

Notes: For contracts using the Hong Kong Standard Method of Measurement for Building Works (4th Edition Metric 2005 incorporating Corrigenda 1), the phrase “General Principles paragraphs 3 and 4”, wherever it may appear below, should be deleted; and the phrase “General Preambles paragraph 2”, wherever it may appear below, should be replaced with “Hong Kong Standard Method of Measurement for Building Works (4th Edition Metric 2005 incorporating Corrigenda 1) – Section II clause 11”.

Section (XX) - Site Safety

SITE SAFETY

Particular Preamble

Note

xx.01 Rates appearing in this Section of the Method of Measurement, whether pre-fixed or inserted by the Contractor, shall be deemed to allow for the value of work in connection with meeting all statutory and contractual obligations in the upkeeping of safety and health and environmental management in the execution of the Wworks and any other related obligations, liabilities, risks and profit. In the event that the rates have been insufficient or where there are any aspects where the methods provided hereunder do not measure any item or exclude the measurement of any item or part thereof, the difference in value shall be deemed to have been included in the rates inserted elsewhere in the Bills of Quantities.

SAFETY PLAN

Units

~~xx.02 — The units of measurement shall be:~~

- ~~———— (i) — complete draft Safety Plan item~~
~~———— (ii) — complete Safety Plan item~~
~~———— (iii) — updating of Safety Plan month~~

Measurement

~~xx.03 — The item for “complete draft Safety Plan” shall be measured when the draft Safety Plan has been submitted and the content is in order.~~

~~xx.04 — The items for “complete Safety Plan” shall be measured when the~~

~~Architect/Engineer* is satisfied that the Safety Plan has been completed and it meets all the requirements of the Contract at the time of its completion and copies distributed.~~

~~xx.05 The measurement of the "updating of Safety Plan" shall be the period of time commencing from the completion of the Safety Plan until the date of substantial completion of the works or an earlier or later date notified by the Architect/Engineer*.~~

~~xx.06 No measurement shall be made for the "updating of Safety Plan" for any period of time in which the Contractor fails to discharge any of its contractual obligations in respect of reviewing, revising or updating the Safety Plan.~~

Itemisation

~~xx.07 Separate items shall be provided for the Safety Plan in accordance with General Principles paragraphs 3 and 4 and the following:~~

Group	Feature
I	1. Complete draft Safety Plan
	2. Complete Safety Plan
	3. Updating of Safety Plan

Complete draft Safety Plan

~~xx.08 The item for "complete draft Safety Plan" shall, in accordance with General Preambles paragraph 2, include for:~~

Item Coverage

~~(a) prepare and complete the draft Safety Plan incorporating the details required by the Contract;~~

- ~~(b) submit the draft Safety Plan to the Architect/ Engineer*;~~
- ~~(c) attend ad hoc meetings with the Architect/ Engineer* to discuss the draft Safety Plan.~~

Complete Safety Plan xx.09 ~~The item for “complete Safety Plan” shall, in accordance with General Preambles paragraph 2, include for:~~

- Item Coverage*
- ~~5. (a) develop and complete the Safety Plan based on the draft Safety Plan and taking into account the comments given by the Architect/Engineer* or any other parties;~~
 - ~~6. (b) distribute the Safety Plan to all relevant parties.~~

Updating of Safety Plan xx.10 ~~The item for the “updating of Safety Plan” shall, in accordance with General Preambles paragraph 2, include for:~~

- Item Coverage*
- ~~1. (a) review, update and revise the Safety Plan taking into account comments made on the Safety Plan by the Architect/Engineer* and any other parties;~~
 - ~~2. (b) updating risk assessment for the work scheduled at least for the next two months;~~
 - ~~3. (c) review and establish safe working procedures and method statements;~~
 - ~~4. (d) updating emergency and rescue procedures;~~
 - ~~5. (e) distribute the revisions of the Safety Plan to all relevant parties.~~

PROVIDE SAFETY OFFICER

Units xx.~~02~~~~11~~ The unit of measurement shall be:

- (i) provide Safety Officer number-month

Measurement xx.~~03~~~~12~~ The measurement for “provide Safety Officer” shall commence from the date of appointment of the Safety Officer as approved by the *Architect/Engineer or the date on which the Safety Officer commences his duty on the Site whichever is the later. No measurement shall be made for any Safety Officer employed by the Contractor over and above the number of Safety Officers required under PS clause no. ()

xx.~~04~~~~13~~ No measurement shall be made after the date ~~for the of substantial~~ completion of the Works or an earlier or later date notified by the *Architect/Engineer*.

xx.0514 No measurement shall be made for any period of time in which the Safety Officer fails to discharge any of his duties.

Itemisation

xx.0615 Separate items shall be provided for “provide ~~S~~safety ~~O~~fficer” in accordance with General Principles paragraphs 3 and 4 and the following:

Group	Feature
I	1. Provide Safety Officer

Provide Safety Officer

xx.1607 The item for “provide Safety Officer” shall, in accordance with General Preambles paragraph 2, include for:

Item Coverage

- (a) submission ~~to the Architect/ Engineer* for approval~~ of the qualifications and experience of the proposed Safety Officer to the *Architect/Engineer for approval;
- (b) provision of sufficient number of Safety Officers in accordance with ~~Particular Specification~~PS clause ~~no.~~() and supporting staff to the Safety Officers;
- (c) ~~performance of all duties of the Safety Officer; ensuring the fulfillment of the duties by the Safety Officer(s) in accordance with PS clause () to the satisfaction of the *Architect/Engineer or his Representative; and~~
- (d) maintenance of the safety diary.

ATTEND SITE SAFETY MANAGEMENT COMMITTEE AND SITE SAFETY ~~MANAGEMENT~~ COMMITTEE

Units

- xx.0817 The units of measurement shall be:
- (i) attend Site Safety Management Committee month
 - (ii) attend Site Safety ~~Management~~ Committee month

Measurement

xx.0918 The measurement shall commence from the date of the first meeting of the relevant Committee until the date ~~of substantial for~~ completion of the Works or extended date for completion of the Works or an earlier or later date notified by the Architect/Engineer*.

xx.1019 No measurement shall be made for any month in which the Contractor fails to hold or attend any such Committee meeting in accordance with the Contract, or fails to deal with any of the matters associated with such Committees in a satisfactory manner.

Itemisation xx.~~1120~~ Separate items shall be provided for “attend Site Safety Management Committee and Site Safety Committee” in

accordance with General Principles Paragraphs 3 and 4 and the following:

Group	Feature
I	1. Attend Site Safety Management Committee 2. Attend Site Safety Management Committee

~~Attend Site Safety Committee~~
~~Attend Site Safety Management Committee~~

~~xx.21 The item for “attend Site Safety Committee” shall, in accordance with General Preambles paragraph 2, include for:~~

~~xx.12 The item for “attend Site Safety Management Committee” shall, in accordance with General Preambles paragraph 2, include for:~~

Item Coverage

~~(a) attendance of the Site Safety Management Committee meetings and complete the agenda of the meeting for the month;~~

~~(b) arranging inspection of the Site by members of the Site Safety Management Committee before the meeting for the month;~~

~~(c) providing necessary assistance for the proper functioning of the Site Safety Management Committee; and~~

~~(d) submission of monthly safety report for consideration at the meeting.~~

Attend Site Safety Committee

~~xx.13 The item for “attend Site Safety Committee” shall, in accordance with General Preambles paragraph 2, include for:~~

Item Coverage

(a) ~~establishment of~~ the Site Safety Committee;

(b) ~~arranging~~ and ~~giving~~ adequate notice to relevant parties of the Site Safety Committee meeting to be held for that month;

(c) attendance ~~at~~ of the Site Safety Committee meetings; ~~and~~

(d) completion and distribution of minutes of meetings.

*Attend Site
Safety
Management
Committee*

~~xx.22~~ The item for “attend Site Safety Management Committee” shall, in accordance with General Preambles paragraph 2, include for:

Item Coverage

- ~~(a) attendance of the Site Safety Management Committee meetings and complete the agenda of the meetings~~
- ~~(b) arranging inspection of the Site by members of the Site Safety Management Committee before the meetings;~~
- ~~(c) providing necessary assistance for the proper functioning of the Site Safety Management Committee;~~
- ~~(d) submission of a monthly safety report for consideration at the meeting.~~

ARRANGE AND ATTEND WEEKLY SAFETY WALK

Units

xx.~~23~~14 The unit of measurement shall be:

(i) arrange and attend weekly safety walk number

Measurement

xx.1524 Only those safety walks conducted during the period ~~between from~~ the date ~~offer~~ commencement of the Works ~~on site~~ until the date of ~~substantial for~~ completion of the Works or ~~extended date for completion of the Works or~~ an earlier or later date notified by the *Architect/Engineer* are qualified for measurement.

xx.1625 No payment shall be made for the weekly safety walk when any one of the following events occurs during that week:

(a) ~~The Contractor has received Improvement Notice or any Suspension Notice has been issued by the Labour Department under pursuant to the Occupational Safety and Health Ordinance in respect of any activities on the Site until the notice has been revoked or the operation of that notice is suspended; or~~

(b) the *Architect/Engineer* has suspended the progress of the Works or any part thereof due to any reason caused by any default on the part of the Contractor in failing to ensure safety and health; ~~or;~~

(c) The *Architect/Engineer* has given written notification to the Contractor requiring the Contractor to rectify any failure in the proper and full implementation of the Safety Plan, and the Contractor has failed to rectify ~~the deficiency~~ within a reasonable time; ~~or;~~

(d) ~~The Contractor has failed to rectify the defects and deficiencies identified in the weekly safety walk within the agreed time.; or~~

~~(e) Any impending prosecution comes to the knowledge of the *Architect/Engineer* under Section 27 of the Public Health and Municipal Services Ordinance.~~

Itemisation

xx.1726 Separate items shall be provided for “arrange and attend weekly safety walk” in accordance with General Principles paragraphs 3 and 4 and the following:

Group	Feature
I	1. Arrange and attend weekly safety walk

Arrange and
~~A~~attend
~~W~~weekly
~~S~~safety ~~W~~walk

xx.2718 The item for “arrange and attend weekly safety walk” shall, in accordance with General Preambles paragraph 2, include for:

Item
~~e~~coverage ~~C~~Cover
~~a~~age

- (a) ~~arr~~ange~~arr~~anging and ~~g~~ive~~g~~iving adequate notice to relevant parties of the weekly safety walk;
- (b) using a comprehensive checklist during the walk to identify ~~and record, and subsequently rectify~~ any deficiencies noted in the safety provisions, recording the deficiencies in the summary table, and rectifying such deficiencies subsequently within the agreed time;

- (c) ~~preparing~~preparation of reports on safety walks and safety inspections conducted;
- (d) ~~implement~~implementation and ~~upkeep~~upkeeping of all measures stipulated in Particular Specification on Site Safety and the Safety Plan, and ~~maintain~~maintaining the effectiveness of all such provisions for the duration of the Contract;
- (e) conduct of safety inspections including, but ~~not be limited~~without limitation to, the followings:
 - (i) ~~scaffolding;~~ and safe access.
 - (ii) ~~temporary electrical supply,~~ and
 - (iii) ~~site cleanliness.~~ and control of mosquito breeding; and
- (f) ~~implement~~implementation of the decisions and recommendations made by the Site Safety Management Committee on matters of safety and health.

PROVIDE SAFETY TRAINING

Units

xx.~~28~~19 The ~~units~~ of measurement shall be:

- (i) provide safety training ~~.....~~in the form of safety training for specified trade workers number
- (ii) provide safety training in the form of site specific induction training month
- (iii) provide safety training in the form of toolbox talks month

Measurement

xx.~~29~~20 The measurement ~~offor~~ “provide safety training in the form of ~~trade specific advanced~~ safety training ~~to skilled for specified trade~~ workers” shall be ~~paid~~ on a per worker basis subject to the production of a “Specified Trade Safety Training Certificate (Silver Card”) issued by the Construction Industry ~~Training Authority~~Council as evidence in accordance with Particular SpecificationPS clause (—). The payment). Payment shall be made for a worker attending ~~the second day of the two day trade specific advanced safety training course.~~Safety Certificate for Specified Trade Workers Course or its revalidation. No measurement will be made if ~~the second day of the course is attended~~:

- (a) the person who claims to attend the safety training for the specified trade workers for the first time had attended the same course for the same trade previously and was issued with a Specified Trade Safety Training Certificate; or
- ~~(a)~~(b) the course is attended before the skilled worker starts works on the Site; or
- ~~(b)~~(c) the course is attended after the skilled worker has left the Site.;

xx.3021 The measurement ~~of~~for “provide safety training in the form of site specific induction training” shall be ~~paid on a per person per talk basis. Measurement shall also be made on refresher talks required~~for those within the period from the date of commencement of the Works until the date for completion of the Works or extended date for completion of the Works or an earlier or later date notified by the ~~Contract~~*Architect/Engineer.

- xx. ~~31~~22 The measurement ~~offor~~ “provide safety training in the form of ~~tool~~
~~box~~ toolbox talks” shall be ~~paid on a per worker per talk basis based on a~~
~~frequency~~ made for those within the period from the date of
commencement of one talk per worker every two weeks in accordance
with Particular Specification clause (—).the Works until the date for
completion of the Works or extended date for completion of the Works
or an earlier or later date notified by the *Architect/Engineer.

- xx. ~~32~~ ~~Adjustment to or no~~23 ~~No~~ measurement for the items on “provide
safety training” in the form of site specific induction training or ~~tool~~
~~box~~ toolbox talks” will be made if the *Architect/Engineer’s ~~s~~ or his
Representative is dissatisfied with the frequency, arrangements,
numbers certified, relevance or quality of such training and the
Contractor cannot provide any justification acceptable to the
*Architect/Engineer’s Representative. No measurement shall be made
if the number of individual workers who have attended the toolbox talks
is less than 70% of the average number of workers working at the Site in
that month. For the avoidance of doubt, the average number of workers
working at the Site in a month shall be the quotient of the total number
of man-days worked for the Contract in that month divided by the
number of working days within that month.

Itemisation

xx. ~~24~~33 Separate items shall be provided for “~~P~~provide ~~S~~safety ~~T~~training”
in accordance with General Principles paragraphs 3 and 4 and the
following:

Group	Feature
I	1. Provide safety training in the form of
II	1. <u>in the form of safety training for specified Ttrade</u> <u>workers</u> specific advanced safety training 2. <u>in the form of sSite</u> specific induction training 3. <u>in the form of Ttoolb-Box tTalks</u>
III	1. Skilled workers

*Provide ~~s~~Safety
~~T~~Training in the
form of ~~trade~~
~~specified~~
~~advanced~~ safety
training ~~to~~
~~skilled for~~
~~specified trade~~
workers*

xx. ~~25~~34 The items for “provide safety training in the form of ~~trade specific~~
~~advanced~~ safety training ~~to skilled~~ for specified trade workers”
shall, in accordance with General Preambles paragraph 2, include
for:

Item Coverage

- (a) ~~arrangement of~~ skilled workers to attend ~~trade specific advanced training course~~ Safety Training Course for Construction Workers of Specified Trade organised by the Construction Industry ~~Council Training Authority or any other recognised courses notified by the Architect/Engineer*~~;
- (b) payment of the token allowance to skilled workers;
- (c) preparation of training programme and records, and submission of certified monthly statements to the *Architect/Engineer; and
- (d) administration in connection with (a), (b) and (c) above.

Provide safety training in the form of site specific induction training

xx. ~~2635~~ The items for "provide safety training in the form of site specific induction training" shall, in accordance with General Preambles paragraph 2, include for:

Item Coverage

- (a) site specific induction training talks conducted in accordance with PS clause ().
- (b) the necessary facilities, trainers and demonstration equipment for complying with (a) above;
- (c) preparation of the training programme and records, submission of certified monthly statements to the Architect/Engineer*; and
- (d) administration in connection with (a), (b) and (c) above.

Provide safety training in the form of tool-box talks

xx. ~~2736~~ The items for "provide safety training in the form of tool-box talks" shall, in accordance with General Preambles paragraph 2, include for:

Item Coverage

- (a) tool box talks conducted in accordance with ~~Particular Specification~~ clause (),
- (b) ~~providing~~ necessary training of Safety Supervisors, foremen or gangers to conduct such talks;
- (c) basing such talks on kits published by the Hong Kong Construction Association Ltd., Occupational Safety and Health Council, or kits of comparable standard approved or advised by the *Architect/Engineer's ~~Representative~~,
- (d) preparation of training programme and records, and submission of certified monthly statements to the *Architect/Engineer*; and
- (e) administration in connection with (a), (b), (c) and (d) above.
(~~* delete or amend as appropriate to suit departmental contract arrangements~~)

ARRANGE AND HOLD PRE-WORK ACTIVITIES OF SITE SAFETY CYCLE

Units xx.28 The unit of measurement shall be:

(a) arrange and hold Pre-work Activities of Site Safety Cycle month.

Measurement xx.29 Subject to clauses xx.30 to xx.31 below, the measurement for “arrange and hold Pre-work Activities of Site Safety Cycle” shall be made for those within the period from the date of commencement of the Work until the date for completion of the Works or extended date for completion of the Works or an earlier or later date notified by the *Architect/Engineer, with the set of the following Pre-work Activities performed in accordance with PS clause ()~~relevant~~ clause nos. in ETWB TCW No. 30/2002]:

- (i) Pre-work Exercise and Safety (PES) meetings;
- (ii) Hazard Identification Activity (HIA) meetings; and
- (iii) Pre-work Safety Checks.

xx.30 No measurement shall be made for the Pre-work Activities in a month if the *Architect/Engineer or his Representative is dissatisfied with the content and/or the arrangement of the Pre-work Activities.

xx.31 No measurement shall be made for the Pre-work Activities in a month if the number of individual persons who have attended the Pre-work Activities to the satisfaction of the *Architect/Engineer or his Representative within that month is less than 70% of the average number of persons working at the Site in that month. For the avoidance of doubt, the average number of persons working at the Site in a month shall be the quotient of the total number of man-days worked for the Contract in that month divided by the number of working days within that month.

Itemisation xx.32 Separate item shall be provided for “arrange and hold Pre-work Activities of Site Safety Cycle” in accordance with General Principles paragraphs 3 and 4 and the following:

<u>Group</u>	<u>Feature</u>
<u>I</u>	<u>1. Arrange and hold Pre-work Activities of Site Safety Cycle</u>

Arrange and Hold Pre-work Activities of Site Safety Cycle xx.33 The item for “arrange and hold Pre-work Activities of Site Safety Cycle” shall, in accordance with General Preambles paragraph 2, include for:

Item Coverage (a) arranging and holding PES meetings, HIA meetings and

Pre-work Safety Checks all as given in PS clause ()~~to ()~~
~~[relevant clause nos. in ETWB TCW No. 30/2002];~~

(b) providing training to leaders of the PES or HIA meetings as
given in PS clause ()~~and ()~~ ~~[relevant clause nos. in~~
~~ETWB TCW No. 30/2002]; and~~

(c) attendance by workers.

PREVENTION OF HEAT STROKE AT WORK IN A HOT ENVIRONMENT

Units xx.34 The unit of measurement shall be:
(i) prevention of heat stroke at work in a hot
environment month

Measurement xx.35 The measurement shall be made for each hot summer month (from
May to September) during the period from the date of
commencement of the Works until the date for completion of the
Works or extended date for completion of the Works or an earlier or
later date notified by the *Architect/Engineer.

xx.36 No measurement shall be made for the prevention of heat stroke at
work in a hot summer month if the *Architect/Engineer or his
Representative is dissatisfied with the measures adopted for the
prevention of heat stroke at work.

Itemisation xx.37 Separate item shall be provided for "prevention of heat stroke at
work in a hot environment" in accordance with General Principles
paragraphs 3 and 4 and the following:

<u>Group</u>	<u>Feature</u>
<u>I</u>	<u>1. Prevention of heat stroke at work in a hot environment</u>

Prevention of Heat Stroke at Work in a Hot Environment
Item Coverage xx.38 The item for "prevention of heat stroke at work in a hot
environment" shall, in accordance with General Preambles
paragraph 2, include for:

(a) providing measures for working in hot summer months in
accordance with PS clause () to the satisfaction of the
*Architect/Engineer;

Appendix VI(b) – Sample Method of Measurement for “Pay for Safety Scheme” for Term Contracts

(Applicable to term contracts included in the Pay for Safety Scheme)

*[Notes: 1. Where *Engineer/Maintenance Surveyor is denoted in this MoM, it should be selected as appropriate or modified to suit the appropriate title of the contract.*

2. The following MoM is applicable to term contracts included in the Pay for Safety Scheme.]

Section (XX) - Site Safety

Particular Preamble

Pre-fixed contract rates appearing in this Section shall be deemed to allow for the value of work in connection with meeting all statutory and contractual obligations in ~~the~~ upkeeping ~~of the~~ safety and health ~~and environmental management~~ in the execution of the Works and any other related obligations, liabilities, risks and profit. In the event that the rates have been insufficient or where there are any aspects where the methods provided hereunder do not measure any item or exclude the measurement of any item or part thereof, the difference in value shall be deemed to have been included in other contract rates.

SAFETY PLAN

xx.01	<i>Item Description</i>	Complete draft Safety Plan
xx.02	<i>Measurement</i>	The unit of measurement shall be in ‘item’. The item for “complete draft Safety Plan” shall be measured when the draft Safety Plan has been submitted and the content is in order.
xx.03	<i>Item Coverage</i>	The item for “complete draft Safety Plan” shall include for : (a) prepare and complete the draft Safety Plan incorporating the details required by the Contract; (b) submit the draft Safety Plan to the Engineer/Maintenance Surveyor*; (c) attend ad hoc meetings with the Engineer/Maintenance Surveyor* to discuss the draft Safety Plan.

xx.04	<i>Item Description</i>	Complete Safety Plan
xx.05	<i>Measurement</i>	<p>The unit of measurement shall be in 'item'.</p> <p>The item for "complete Safety Plan" shall be measured when the Engineer/Maintenance Surveyor* is satisfied that the Safety Plan has been completed and it meets all requirements of the Contract at the time of its completion and copies distributed.</p>
xx.06	<i>Item Coverage</i>	<p>The item for "complete Safety Plan" shall include for:</p> <p>(a) develop and complete the Safety Plan based on the draft Safety Plan and taking into account comments given by the Engineer/Maintenance Surveyor* or any other parties;</p> <p>(b) distribute the Safety Plan to all relevant parties.</p>
xx.07	<i>Item Description</i>	Updating of Safety Plan
xx.08	<i>Measurement</i>	<p>The units of measurement shall be in "month".</p> <p>The item for the "updating of Safety Plan" shall be measured for the period of time commencing from the completion of the Safety Plan until the date of substantial completion of the last Works Order or an earlier or later date notified by the Engineer/Maintenance Surveyor*.</p> <p>No measurement shall be made for the "updating of Safety Plan" for any period of time in which the Contractor fails to discharge any of its contractual obligations in respect of reviewing, revising or updating the Safety Plan.</p>
xx.09	<i>Item Coverage</i>	<p>The item for the "updating of Safety Plan" shall include for:</p> <p>(a) review, update and revise the Safety Plan taking also into account of comments made on the Safety Plan by the Engineer/Maintenance Surveyor* and any other parties;</p> <p>(b) update risk assessment for the work scheduled at least for the next two months;</p> <p>(c) review and establish safety and health provisions, safe working procedures and method statements;</p> <p>(d) update emergency and rescue procedures;</p> <p>(a) distribute the revisions of the Safety Plan to all relevant parties.</p>

PROVIDE SAFETY OFFICER

- | | | |
|---------------------|-----------------------------|--|
| xx. 0140 | <i>Item
Description</i> | Provide Safety Officer |
| xx. 0244 | <i>Measurement</i> | <p>(a) The unit of measurement shall be in 'number'<u>number -month</u>'<u>month</u>'.</p> <p>(b) The item for "provide Safety Officer" shall be made from the date of appointment of the Safety Officer as approved by the <u>*Engineer/Maintenance Surveyor*</u> or the date on which the Safety Officer commences his duty on the Site whichever is the later. No measurement shall be made for any Safety Officer employed by the Contractor over and above the number of Safety Officers required under Particular Specification clause no. ().</p> <p>(e) —No measurement shall be made after the date of substantial for completion of the last <u>Works Order or extended date for completion of the Works</u> or an earlier or later date notified by the <u>*Engineer/Maintenance Surveyor*</u>.</p> <p><u>(c)</u> _____</p> <p>(d) No measurement shall be made for any period of time in which the Safety Officer fails to discharge any of his duties.</p> |
| xx. 0342 | <i>Item
Coverage</i> | <p>The item for "provide Safety Officer" shall include for:</p> <p>(a) <u>submission of the qualifications and experience of the proposed Safety Officer</u> to the <u>*Engineer/Maintenance Surveyor*</u> for approval of the qualifications and experience of the proposed Safety Officer;</p> <p>(b) provision of sufficient number of Safety Officers in accordance with Particular Specification clause no. () and supporting staff to the Safety Officers;</p> <p>performance of all duties of the Safety Officer;</p> |

~~(c)~~ ensuring the fulfillment of the duties by the Safety Officer(s) in accordance with PS clause () to the satisfaction of the *Engineer/Maintenance Surveyor or his Representative; and

~~(e)~~(d) maintenance of the safety diary.

ATTEND SITE SAFETY MANAGEMENT COMMITTEE AND SITE SAFETY MANAGEMENT COMMITTEE

xx.0413 *Item* Attend Site Safety Management Committee
Description

- xx.0514 *Measurement* (a) The units of measurement shall be in ~~'month'~~"month".
- (b) The measurement shall commence from the date of the first meeting of the Site Safety Management Committee until the date for substantial-completion of the last Works-Order or-or extended date for completion of the Works or an earlier or later date notified by the *Engineer/Maintenance Surveyor.
- ~~(e)~~—No measurement shall be made for any month in which the Contractor fails to ~~hold or~~ attend ~~any such Committee the Site Safety Management Committee~~ meeting in accordance with the Contract, or fails to deal with any of the matters associated with such Committee in a satisfactory manner.

xx.0615 *Item* The items for “attend Site Safety Management Committee” shall include
Coverage for:

- ~~(a) — establish the Site Safety Committee;~~
- ~~(b) — arrange and give adequate notice to relevant parties of the Site Safety Committee meeting to be held for that month;~~
- ~~(c) — attendance at Site Safety Committee meetings;~~
- ~~(d) — completion and distribution of minutes of meetings.~~
- (a) attendance of the Site Safety Management Committee meetings and complete the agenda of the meeting for the month;
- (b) arranging inspection of the Site by members of the Site Safety Management Committee before the meeting for the month;
- (c) providing necessary assistance for the proper functioning of the Site Safety Management Committee; and
- (d) submission of a monthly safety report for consideration at the meeting.

xx.0716 *Item* Attend Site Safety ~~Management~~ Committee
Description

- xx.0817 *Measurement*
- (a) The units of measurement shall be in ~~'month'~~ "month".
 - (b) The measurement shall commence from the date of the first meeting of the Site Safety ~~Management~~ Committee until ~~the substantial-the date for~~ completion of the ~~last~~ Works ~~Order or extended date for completion of the Works~~ or an earlier or later date notified by the

Engineer/Maintenance Surveyor.

- (c) No measurement shall be made for any month in which the Contractor fails to hold or attend ~~any such~~ the Site Safety Committee meeting in accordance with the Contract, or fails to deal with any of the matters associated with ~~such the Site Safety Committee~~ in a satisfactory manner.

xx.0918 *Item Coverage*

The items for “attend Site Safety ~~Management~~ Committee” shall include for:

- (a) establishment of the Site Safety Committee;
- (b) arranging and giving adequate notice to relevant parties of the Site Safety Committee meeting to be held for the month;
- (c) attendance of the Site Safety Committee meetings; and
- (d) completion and distribution of minutes of meetings.
- ~~(a) attend Site Safety Management Committee meetings and complete the agenda of the meetings;~~
- ~~(b) arrange inspection of the Site by members of the Site Safety Management Committee before the meetings;~~
- ~~(c) provide necessary assistance for the proper functioning of the Site Safety Management Committee; and~~
- ~~(d) submission of a monthly safety report for consideration at the meeting.~~

ARRANGE AND ATTEND WEEKLY SAFETY WALK

xx.1019 *Item Description* Arrange and attend weekly safety walk

- xx.1120 *Measurement*
- (a) The units of measurement shall be in ~~number~~ “number”.
- (b) Only those safety walks conducted in accordance with ~~Particular Specification~~ clause ~~no.~~ () during the period ~~between from~~ the date ~~for of the~~ commencement of the Works until and the date ~~of substantial for~~ completion of the ~~last~~ Works ~~Order~~ or extended date for completion of the last Works Order or an earlier or later date notified by the *Engineer/Maintenance Surveyor* shall be measured.
- (c) No measurement shall be made for the weekly safety walk when any one of the following events occurs during that week:

(i) ~~The Contractor has received Improvement Notice or any Suspension Notice has been issued by the Labour Department pursuant to under the Occupational Safety and Health Ordinance in respect of any activities on the Site until the notice has been revoked or the operation of that notice is suspended; or~~

(i)

(ii) The *Engineer/Maintenance Surveyor* has suspended the progress of the Works or any part thereof due to any reason caused by any default on the part of the Contractor in failing to ensure safety and health; or

(iii) The *Engineer/Maintenance Surveyor* has given written notification to the Contractor requiring the Contractor to rectify any failure in the proper and full implementation of the Safety Plan and the Contractor has failed to rectify within a reasonable time; or

(iv) The Contractor has failed to rectify the defects and deficiencies identified in the weekly safety walk within the agreed time; or:

Any impending prosecution comes to the knowledge of the *Engineer/Maintenance Surveyor under Section 27 of the Public Health and Municipal Services Ordinance.

xx. 1221 *Item Coverage*

The item for “arrange and attend weekly safety walk” shall include for:

- (a) arranging and giving adequate notice to relevant parties of the weekly safety walk;
- ~~(b) —~~ using a comprehensive checklist during the walk to identify any deficiencies noted in the safety provisions, and recording the deficiencies in the summary table, and subsequently rectifying such deficiencies noted in the safety provisions; subsequently within the agreed time; any
- ~~(b) —~~
- (c) preparation of reports on safety walks and safety inspections conducted;
- (d) implementation and upkeeping of all measures stipulated in the Particular Specification on Site Safety and the Safety Plan, and maintaining the effectiveness of all such provisions for the duration of the Contract;
- (e) conduct of safety inspections including, but ~~not be without~~ limitation to, the followings:
 - (i) scaffolding; and safe access,
 - (ii) temporary electrical supply;
 - (iii) site cleanliness and control of mosquito breeding; and;
- (f) implementation of the decisions and recommendations made by the Site Safety Management Committee on matters of safety and health.

PROVIDE SAFETY TRAINING

xx. 1322 *Item Description*

Provide ~~trade specific advanced~~ safety training in the form of safety training for specified trade to skilled workers

xx. 142 *Measurement*

(a) The units of measurement shall be in ~~number~~ “number”.

- (b) The measurement for ~~“provide trade specific advanced safety training to skilled-in the form of safety training for specified trade workers”~~ shall be ~~paid~~ on a per worker basis subject to the production of a Specified Trade Safety Training Certificate (“Silver Card”) issued by the Construction Industry ~~Training Authority Council~~ as evidence in accordance with ~~Particular Specification~~ clause (). ~~The p~~Payment shall be made for a worker attending the second day of the two-day trade specific advanced safety training course Safety Certificate for Specified Trade Workers Course or its revalidation. No measurement will be made if ~~the second day of the course is attended~~:
- (i) the person who claims to attend the safety training for the specified trade workers for the first time had attended the same course for the same trade previously and was issued with a Specified Trade Safety Training Certificate; or

~~(i)~~(ii) the course is attended before the skilled worker starts works on the Site; or

~~(ii)~~(iii) the course is attended after the skilled worker has left the Site.

xx. ~~1524~~ *Item Coverage* The item for ~~“provide trade specific advanced safety training to skilled workers”~~ “provide safety training in the form of safety training for specified trade workers” shall include for:

- (a) ~~arrangement of~~ arrangement of skilled workers to attend ~~the “Silver Card” training course~~ Safety Training Course for Construction Workers of Specified Trade organised by the Construction Industry Council Training Authority or any other recognised courses notified by the ~~Engineer/ Maintenance Surveyor*;~~
- (b) payment of the token allowance to skilled workers;
- (c) preparation of training programme and records, and submission of certified monthly statements to the ~~*Engineer/Maintenance Surveyor*;~~ and
- (d) administration in connection with (a), (b) and (c) above.

xx. ~~1625~~ *Item Description* Provide safety training in the form of site specific ~~safety~~ induction training

- xx. ~~1726~~ *Measurement*
- (a) The units of measurement shall be in ~~‘number’~~ ‘month’.
 - (b) The measurement for ~~“provide safety training in the form of site specific induction training”~~ shall be made ~~on a per person per talk basis . Measurement shall also be made for refresher talks required by the Contract~~ for those within the period from the date of commencement of the Works until the date for completion of the Works or extended date for completion of the Works or an earlier or later date notified by the *Engineer/Maintenance Surveyor.
 - (c) ~~Adjustment to or n~~ No measurement for the item on ~~“provide safety training in the form of~~ “provide safety training in the form of site specific induction training” will be made if the *Engineer/Maintenance Surveyor~~s~~ or his Representative is dissatisfied with the frequency, arrangements, numbers certified, relevance or quality of such training and the Contractor cannot provide any justification acceptable to the *Engineer/Maintenance Surveyor~~s~~ Representative.

xx. ~~1827~~ *Item Coverage* The item for ~~“provide safety training in the form of~~ “provide safety training in the form of site specific induction training” shall include for:

- (a) site specific safety induction ~~talk~~ training conducted in accordance with ~~Particular Specification~~ clause ();
- (b) the necessary facilities, trainers and demonstration equipment for complying with (a) above;

- (c) preparation of the training programme and records, submission of certified monthly statements to the *Engineer/Maintenance Surveyor,* ; and
- (d) administration in connection with (a), (b) and (c) above.

xx. ~~1928~~ *Item Description*

Provide safety training in the form of tool-box talks

xx. ~~2029~~ *Measurement*

- (a) The unit of measurement shall be in ~~'number'~~ "month".
- (b) The measurement for "provide safety training in the form of tool-box talks" shall be made ~~on a per worker per talk basis based on a frequency of one talk per worker every two weeks in accordance with Particular Specification clause (—) for those within the period from the date for the commencement of the Works until the date for completion of the Works or extended date for completion of the Works or an earlier or later date notified by the *Engineer/Maintenance Surveyor shall be measured.~~
- ~~(c) Adjustment to or n~~ (e) ~~—~~ No measurement for "provide safety training in the form of tool-box talks" will be made if the *Engineer/Maintenance Surveyor's or his Representative is dissatisfied with the frequency, arrangements, numbers certified, relevance or quality of such talks and the Contractor cannot provide any justification acceptable to the *Engineer/Maintenance Surveyor's Representative. No measurement shall be made if the number of individual workers who have attended the relevant safety training is less than 70% of the average number of workers working at the Site in that month. For the avoidance of doubt, the average number of workers working at the Site in a month shall be the quotient of the total number of man-days worked for the Contract in that month divided by the number of working days within that month.

xx.2130 *Item*
Coverage

The item for "provide safety training in the form of tool-box talks" shall include for:

- (a) conducting tool-box talks ~~conducted~~ in accordance with ~~Particular Specification~~ clause () ;
- (b) providing the necessary training of Safety Supervisors, foremen or gangers to conduct tool-box talks ;
- (c) basing such talks on training kits published by the Hong Kong Construction Association Ltd. , Occupational Safety and Health Council, or ~~other training~~ kits of comparable standard approved or advised by the ~~*Engineer/Maintenance Surveyor's Representative~~ ;
- (d) preparation of training programme and records, and submission of certified monthly statements to the ~~*Engineer/Maintenance Surveyor*~~ ; and
- (e) administration in connection with (a), (b), (c) ~~or~~ and (d) above.

(* delete or amend as appropriate to suit departmental contract arrangements)

PREVENTION OF HEAT STROKE AT WORK IN A HOT ENVIRONMENT

xx.22 *Item*

Prevention of heat stroke at work in a hot environment

Sample Method of Measurement for Hard-Paved Area for Pre-work Activities of Site Safety Cycle and Welfare Facilities for Workers
(Incorporating Appendix E of ETWB TC(W) No. 30/2002 with necessary amendment)

Particular Preamble

Temporary
Accommodation
for the Contractor

1.11

The items for temporary accommodation for the Contractor is amended, in accordance with the following Particular Preambles :

Item
Coverage

- (a) erection, servicing and removal of everything required by the Contractor, including sheds, stores, workmen's accommodation, safety bulletin board and hard-paved area for the implementation of Pre-work Activities of Site Safety Cycle as specified in Particular Specification clause no. (), and welfare facilities for workers in accordance with Particular Specification clause nos. () to () and the like;
- (b) reinstatement of the sites occupied by temporary accommodation.

Appendix VII - Checklist for Safety Plan
(*not to be included in contract documents*)

This Checklist is designed for the checking of Safety Plans submitted by contractors under the requirements of Chapter 3 of the Construction Site Safety Manual. A good Safety Plan must document all important safe working procedures and organizational arrangements in respect of the specific project situations. It should generally contain, at least, the items in Sections 1 to 14. As for the items in Section 15, it would depend on the nature of the project. The Checklist is by no means exhaustive. You could check your contractor's Safety Plan by circling the choices (i.e. Yes, No, or Not Applicable (N/A)) for each item of the Checklist.

Section	Content Title	Yes/No	N/A
1	<u>General/Project Details</u>	Yes/No	N/A
1.1	Distribution list for full/part copy of the Safety Plan	Yes/No	N/A
1.2	Procedures and responsible person(s) for regular reviewing and updating the Plan	Yes/No	N/A
1.3	Contract No. and Title of the project`	Yes/No	N/A
1.4	Location of project	Yes/No	N/A
1.5	Nature of construction work	Yes/No	N/A
1.6	Timescale for completion of work	Yes/No	N/A
1.7	Safety Plan signed by Site Agent and Safety Officer	Yes/No	N/A
2	<u>Safety Policy</u>	Yes/No	N/A
2.1	A Policy statement for the special need of the Contract	Yes/No	N/A
2.2	Safety and health are given priority amongst other factors	Yes/No	N/A
2.3	Safety and health standards in respect of statutory and contractual requirements	Yes/No	N/A
2.4	Responsibilities and general duty of employees and subcontractors	Yes/No	N/A
2.5	Target for progressive improvement	Yes/No	N/A

2.6	Policy statement properly dated as a means for periodically updating to reflect changes	Yes/No	N/A
2.7	Name of senior executive for ensuring compliance	Yes/No	N/A
2.8	Policy statement signed by the company's top management	Yes/No	N/A
3	<u>Safety Organisation</u>	Yes/No	N/A
3.1	Organization chart with clear division of safety duties, reporting lines and telephone numbers	Yes/No	N/A
3.2	Arrangements for regular communication and reporting system on Safety issues	Yes/No	N/A
3.3	Specified responsibilities and powers vested in staff in the Safety and Health Programme (e.g. Project Manager, Construction Manager, Site Agent, Safety Manager, Safety Officers, Safety Supervisors, First-aiders and workers)	Yes/No	N/A
3.4	The following responsibilities should be clearly identified:		
3.4.1	· training and promotion of safety & health	Yes/No	N/A
3.4.2	· monitoring compliance with Safety Plan	Yes/No	N/A
3.4.3	· analysis of job hazards and recommendation for safety measures	Yes/No	N/A
3.4.4	· maintaining contact with sources of advice (e.g. Labour Department, manufacturers and trade associations)	Yes/No	N/A
3.4.5	· responding to Safety Officer, Safety Supervisors and other employees' initiatives	Yes/No	N/A
3.4.6	· first aiders, competent persons and examiners required under relevant regulations	Yes/No	N/A

4	<u>Safety and Health Training</u>	Yes/No	N/A
4.1	Training needs identified for different target groups:		
4.1.1	· senior managers	Yes/No	N/A
4.1.2	· line managers/supervisors	Yes/No	N/A
4.1.3	· new and transferred employees	Yes/No	N/A
4.1.4	· those with responsibility for safety procedures or processes such as purchasing, evacuation or first-aid	Yes/No	N/A
4.1.5	· safety and health committee members	Yes/No	N/A
4.1.6	· plant operators who need certificates	Yes/No	N/A
4.1.7	· subcontractors	Yes/No	N/A
4.2	Safety and health training courses should cover:		
4.2.1	· general safety induction training for all workers and new entrants	Yes/No	N/A
4.2.2	· site specific safety induction training for all persons on Site	Yes/No	N/A
4.2.3	· specific safety training for workers engaged in particularly hazardous trades or operations	Yes/No	N/A
4.2.4	· tool-box or task safety and health talks	Yes/No	N/A
4.2.5	· training on basic legal safety requirements	Yes/No	N/A
4.2.6	· training of emergency procedures for all employees	Yes/No	N/A
4.3	System for monitoring safety training progress of each target group	Yes/No	N/A
5	<u>Safety Rules and Regulations</u>	Yes/No	N/A
5.1	Safety rules and regulations/specific rules by clients	Yes/No	N/A
5.2	General plant safety rules	Yes/No	N/A
5.3	Work method statement	Yes/No	N/A
5.4	Permit-to-Enter/Permit-to-Work systems	Yes/No	N/A

5.5	Enforcement system for safety rules (e. g. warning signs, records on non-compliance, disciplinary action)	Yes/No	N/A
5.6	Protection of authorized visitors and exclusion of trespassers	Yes/No	N/A
6	<u>Safety Committees</u>	Yes/No	N/A
6.1	Site Safety Management Committee	Yes/No	N/A
6.2	Site Safety Committee	Yes/No	N/A
6.3	Objectives, terms of reference, membership and frequency of meeting of committees	Yes/No	N/A
6.4	Powers, functions and duties of committee members	Yes/No	N/A
7	<u>Safety and Health Inspections</u>	Yes/No	N/A
7.1	Inspections are scheduled at regular intervals	Yes/No	N/A
7.2	Inspection procedures and persons responsible	Yes/No	N/A
7.3	Comprehensive inspection checklist forms (e. g. plant/ equipment, place of work, operation procedures, emergency equipment etc.)	Yes/No	N/A
7.4	Inspection reports (e. g. frequency, coverage, content of regular reports)	Yes/No	N/A
7.5	Monitoring system on follow-up action (e. g. deadlines and responsible persons for rectification/checking)	Yes/No	N/A
7.6	Keeping of maintenance/test records for plant/temporary structures	Yes/No	N/A
8	<u>Job Hazard Analysis</u>	Yes/No	N/A
8.1	Risk assessment methodology and procedures	Yes/No	N/A
8.2	Hazardous tasks identified for the work	Yes/No	N/A
8.3	Evaluation of risk of each hazardous task	Yes/No	N/A

8.4	Control measures and work method statements for hazardous operations	Yes/No	N/A
9	<u>Personal Protective Equipment (PPE)</u>	Yes/No	N/A
9.1	Procedures for identifying PPE requirements	Yes/No	N/A
9.2	Instruction and training in the use, storage and maintenance of PPEs for employees	Yes/No	N/A
9.3	Procedures for issuing, training and enforcing the use of PPEs	Yes/No	N/A
9.4	Inventory management and maintenance systems for PPEs	Yes/No	N/A
10	<u>Accident/Incident Investigation</u>	Yes/No	N/A
10.1	Procedures for notification, recording and reporting accidents and Dangerous Occurrences	Yes/No	N/A
10.2	Procedures for investigating accidents and Dangerous Occurrences (e.g. categories of accidents/incidents requiring investigation, schedule/procedures/responsible person(s) for investigation)	Yes/No	N/A
10.3	Accident/incident investigation report form	Yes/No	N/A
10.4	Procedures for analysis of previous accident statistics	Yes/No	N/A
10.5	Procedures for recommendation and implementation of safety measures for preventing recurrence of previous accidents	Yes/No	N/A
11	<u>Emergency Preparedness</u>	Yes/No	N/A
11.1	Emergency plan (e.g. fire, typhoons, heavy rainstorms, serious accidents and Dangerous Occurrences etc.)	Yes/No	N/A
11.2	Rescue procedures & communication	Yes/No	N/A
11.3	Emergency telephone list	Yes/No	N/A
11.4	Emergency response team	Yes/No	N/A
11.5	Regular drills for emergency situations	Yes/No	N/A

11.6	First-aid (e.g. qualified first aiders, first-aid facilities, transportation for injured)	Yes/No	N/A
12	<u>Safety Promotion</u>	Yes/No	N/A
12.1	Promote safety in meetings (e.g. orientation meetings, training meetings, problem-solving meetings, information meetings, regular safety meetings)	Yes/No	N/A
12.2	Safety incentive schemes (e.g. award, competition, quizzes)	Yes/No	N/A
12.3	Safety information communication (e.g. bulletins and posters, magazines, newsletters, accident statistics displays, videos and films)	Yes/No	N/A
13	<u>Health Assurance Programme</u>	Yes/No	N/A
13.1	Pre-job and regular medical examinations as required for certain construction activities	Yes/No	N/A
14	<u>Evaluation, Selection and Control of Subcontractor</u>	Yes/No	N/A
14.1	Selection procedures for suitable subcontractors and suppliers	Yes/No	N/A
14.2	Means for communication with subcontractors (e.g. safety & health obligations, requirements, information, safety meetings)	Yes/No	N/A
14.3	Control of subcontractors and co-ordination (e.g. pre-contract commencement meeting, arrangement of regular safety meetings, regular inspections, etc.)	Yes/No	N/A
14.4	System for reviewing subcontractors' performance	Yes/No	N/A

15	<u>Process Control Programme</u>	Yes/No	N/A
15.1	Safety rules, regulations and working procedures covering all safety and health aspects, and in particular method statements and permit-to-work systems for identified high risk operations, including but not limited to the following:		
15.1.1	Housekeeping	Yes/No	N/A
15.1.2	Traffic control and transportation	Yes/No	N/A
15.1.3	Fire prevention measures and fire fighting equipment	Yes/No	N/A
15.1.4	Working in confined spaces	Yes/No	N/A
15.1.5	Excavation	Yes/No	N/A
15.1.6	Hand dug caissons	Yes/No	N/A
15.1.7	Diving	Yes/No	N/A
15.1.8	Piling	Yes/No	N/A
15.1.9	Electrical equipment and installations	Yes/No	N/A
15.1.10	Hot working, welding/cutting operations and equipment	Yes/No	N/A
15.1.11	Conveyance, handling and use of explosives (blasting)	Yes/No	N/A
15.1.12	Cranes	Yes/No	N/A
15.1.13	Hoists	Yes/No	N/A
15.1.14	Other lifting appliances	Yes/No	N/A
15.1.15	Mechanical/manual handling of materials	Yes/No	N/A
15.1.16	Scaffolding, work platforms and other temporary structures	Yes/No	N/A
15.1.17	Accesses (e.g. ladders, gangways etc.,)	Yes/No	N/A
15.1.18	Overhead and underground services	Yes/No	N/A
15.1.19	Power hand-held tools	Yes/No	N/A
15.1.20	Substances hazardous to health	Yes/No	N/A
15.1.21	Roadworks	Yes/No	N/A
15.1.22	Working at height	Yes/No	N/A
15.1.23	Working over water or adjacent to water	Yes/No	N/A
15.1.24	Structural steel erection	Yes/No	N/A

15. 1. 25	Temporary Works	Yes/No	N/A
15. 1. 26	Protection against falling objects	Yes/No	N/A
15. 1. 27	Protection against lightning	Yes/No	N/A
15. 1. 28	Demolition	Yes/No	N/A
15. 1. 29	Woodworking machines	Yes/No	N/A
15. 1. 30	Abrasive wheels	Yes/No	N/A
15. 1. 31	Asbestos	Yes/No	N/A
15. 1. 32	Grit Blasting	Yes/No	N/A
15. 1. 33	Tunnelling/pressurised atmosphere	Yes/No	N/A
15. 1. 34	Maintenance	Yes/No	N/A