Appendix 2  Notice on Work Safety Control

1. General Requirements

1.1 Exhibitors, constructors and service providers shall earnestly comply with the work safety and labor protection policies and guidelines of the People’s Republic of China and Shanghai Municipality, and strictly observe all regulations, ordinances, and provisions, including Production Safety Law of the People’s Republic of China, Safety Requirements for Large-scale Activities (GBT33170-2016) and Exhibitor’s Manual; and actively cooperate with Chinese government departments and the Organizers with respect to supervision, inspection, and management.

1.2 During the move-in, exhibition period and move-out, all matters related to booth set-up, decoration, dismantling and maintenance inside and outside the venue during the expo shall be carried out in compliance with the Organizers’ work safety rules and requirements, including Exhibitor’s Manual, Pre-expo Notification, Move-in Instructions, Safety Instructions, Venue Notices and User’s Manual for Exhibition Halls in the National Exhibition and Convention Center (Shanghai), Security Management Standards for Facilities Built in NECC etc. The exhibitors, constructors and service providers shall actively cooperate with the Chinese government departments and the Organizers with respect to the supervision, inspection and management.

1.3 Constructors shall set a work safety management organization, and arrange for a full-time on-site construction manager, safety supervisor, emergency liaison, and other safety management personnel as per relevant provisions; they shall issue official and effective documents on the establishment and appointment of the organization and personnel; and their major principal and work safety management personnel shall have certification materials (or effective certificates) on their qualified work safety knowledge and management ability issued by the competent department for work safety supervision and administration. Before move-in, constructors shall, as per booth design schemes, work out a detailed construction scheme (including set-up scheme and dismantling scheme), and conduct construction as per the said scheme. The aforesaid materials shall also be submitted at the time of application for exhibition.

1.4 In order to further strengthen the sense of safety at the expo, fulfill safety-related obligations and assume safety responsibilities, the Organizers have drawn up the Special Booth Safety Responsibility Letter, which shall be signed and stamped with the official seal by all exhibitors and their constructors, and submitted to the official constructors of the venue before the deadline along with a copy of the constructors’ business licenses. For more information, please refer to Appendix 13: Special Booth Safety Responsibility Letter.

2. Safety Control

2.1 Exhibitors and constructors thereof shall earnestly enforce a safety accountability system, reinforce their on-site safety inspection and management, and accept and follow the work safety requirements and regulations by the concerned government departments, Organizers and venue staff at the site.

2.2 Exhibitors and constructors thereof shall comply with relevant national rules and regulations of the construction industry and ensure that on-site constructors and especially workers have corresponding operation qualifications or work licenses.

2.3 Exhibitors and constructors thereof shall follow the principles of civilized construction and take proper safety precautions with respect to booth set-up, decoration, dismantling and maintenance during the expo, both inside and outside the venue. All workers shall wear safety helmets while conducting the move-in and move-out related work. Safety supervisors shall bear a safety officer mark on the site.

2.4 Booth set-up structure shall be produced in factory as much as possible, so that only splicing and installation will be needed on the site of set-up.

2.5 Exhibitors and constructors thereof shall establish a safety inspection system, and provide work safety education and trainings well. Before the entry for construction of set-up workers and drivers transporting special equipment at the venue, construction principal shall uniformly illustrate safety technologies, provide pre-job trainings about safe operation procedures and notes, and make records. No construction is permitted before pre-job safety trainings.

2.6 It is strictly prohibited to subcontract special booth set-up, maintenance and dismantling, or entrust the same to a subcontractor. To clarify accountability and liability for damages, exhibitors shall instruct their constructors or service providers to purchase relevant life insurance, property insurance, etc.
3. Booth Set-up and Plan Review

3.1 To ensure the safety and stability of the temporary structures for special booth set-up and avoid any possible risk and hidden danger, the maximum height permitted for the booths at the expo are 6 meters for a one-floor booth and 8.5 meters for a two-floor booth. Only single-storey booths are allowed to be built in the main aisle of the exhibition hall, with a limited height of 6 meters (including the lifting point); the height limit in other areas remains unchanged. Exhibitors with special booths shall submit relevant documents to the official constructor of the venue or plan review service provider for approval of their structures.

3.2 Staircases and ladders inside the booths shall comply with relevant technical specifications and safety requirements and shall be equipped with firm handrails to protect people from slipping.

3.3 To ensure the stability of booth structures, the pillars of the steel structure shall use non-welded materials at least 10 cm in diameter with welded pedestals at their bottom and have flange plates at least 60 cm in diameter on top to increase the load-bearing area. The size of the pillar base of the steel structure shall be determined in accordance with the overall load of the booth, and the pillar must be welded to the center of the base.

3.4 The main walls of all booths shall be at least 12 cm wide at the bottom to ensure sufficient contact area with the floor. Walls and steel structures spanning more than 6 meters shall be connected by crossbeams on top and supported by pillars at the bottom to ensure the rigidity and stability of the booth.

3.5 Load-bearing components shall use steel angles, U-bars, square tubes and other materials that meet corresponding Chinese national standards. Load-bearing components in special booths shall not use ornamental and flexible metals or brittle materials. Wooden load-bearing columns and supporting beams shall be lined with continuous solid wood square tubes inside to ensure their structural integrity and stability.

3.6 The single span of any wooden structure shall be no more than 6 meters wide and no more than 5 meters high. The single span of any steel or steel and wooden hybrid structure (including those lined with steel square tubes inside or equipped with iron frames) shall be no more than 8 meters wide. Molded steel grid structures can be wider depending on their cross-sections but shall be no more than 12 meters wide (except those used for professional stages).

3.7 The wooden walls of any frameless structure shall be at least 30 cm thick; and those with a frame structure shall be at least 10 cm thick. Wooden load-bearing walls shall be supported by square steel or seamless tubes inside them.

3.8 All booths decorated with glass shall use toughened glass with sufficient strength and thickness (cladding glass shall be at least 1 cm thick), installed stably in an appropriate manner. The glass shall be equipped with metal frames or professional hardware, and there shall be flexible beading between the frames or hardware and the glass to ensure the safe use of glass. Large glass materials shall be clearly marked at a 1.5-meter height to prevent people from smashing into the glass and getting injured. If a glass podium is used, the supporting pillars and walls of the structure shall be fixed to the ground under the podium, and the booth structure shall not be directly built over the smooth glass surface.

3.9 If a booth requires a podium, it is recommended to use a ramp-type podium. Angular podiums shall be no higher than 10 cm and marked with corresponding safety markings.

3.10 Relevant safety measures shall be taken for trussed booths to ensure the overall stability of the structure. The overall raise and drop of the trusses shall be commanded by special persons, scale shall be pulled on pillar in advance, and hoists at all lifting points shall operate simultaneously.

4. Booth Acceptance and Dismantling

4.1 After the completion of booth set-up, the constructor shall inspect it independently, and after the inspection is passed, apply for inspection and acceptance to the Organizers. Upon inspection and acceptance by the relevant department, the booth can be put into use. Inspection contents include structure safety, electrical safety, and fire safety.

4.2 The declaration system is implemented for the dismantling of more-than-6-meter-high special booths and trussed booths. An application for dismantling shall be submitted in advance, and dismantling can be conducted after the Organizers review the dismantling scheme again.

5. Working at Heights

5.1 Working at heights refers to working at an elevated place where there is a possibility of falling from a height of 2 m or higher.

5.2 A person can work at heights only if he or she is at least 18 years old and has passed a physical examination; people suffering from high blood pressure, cardiac disease, epilepsy, mental illness or other similar diseases are forbidden from working at heights.
5.3 Personnel working at heights shall wear protective gear (safety helmet, safety belt, etc.). Safety belts shall not be hung lower than the worker and must not be replaced by ropes. Working at heights while intoxicated is forbidden.

5.4 Personnel working at heights shall be accompanied by a supervisor to ensure on-site environment safety and the implementation of safety measures. Such personnel should follow the designated route to go up and down, and no one should stand below the workplace at height.

5.5 During work at heights, scaffolds shall not be set higher than 4 meters, and protective grating, cross bridging and brakes shall be installed in accordance with safety regulations, and the fixed footholds/load-bearing plates must be repeatedly inspected and reinforced. Tools, materials and parts used during the work shall not be carried directly in the hand or thrown away and shall only be kept in a tool bag. Scaffolds shall be fixed by brakes after installation, and be held by at least one person during work. Construction personnel are forbidden to move scaffolds on the operation platform. Tools, material fragments, spare parts and any other object that may fall from the height shall be removed and cleaned up after the operation to prevent any injury by falling objects.

5.6 It is forbidden to use a more-than-2-meter-high herringbone ladder for work at heights.

5.7 Persons engaged in work at heights must have a high-place work certificate, which shall be filed during the application for move-in.

5.8 Any lifting device used in booth set-up, decoration, dismantling and maintenance during the expo, shall be admitted into the venue only after an appropriate application is submitted and approved by the Organizers and venue management.

5.9 Matters not covered herein shall be subject to the Technical Code for Safety of Working at Height of Building Construction (JGJ80-2016).

6. Construction Tools and Labor Protection Articles

6.1 Class-II hand held tools must be used for on-site operation. The power lines of hand held electric tools shall be kept in the ex-works state, and shall not be arbitrarily lengthened.

6.2 Power boards shall not be used for building.

6.3 The hand lift used for building shall not be used in an overloaded way, and shall be equipped with safety devices including height limiter, overload alarm device, and rope-break protection instrument, and overturn-preventing safety measures shall be taken against it.

6.4 Construction workers shall use labor protection articles such as safety helmets and safety belts, which conform to the state regulations, and hold ex-works qualification certification within effective service life.

6.5 Construction workers shall wear reflective vests for construction at the venue.

7. Electricity Safety

For more information, please refer to Appendix 3: Utilities Safety Management Instructions to Exhibitor’s Manual.

8. Special Equipment Management

8.1 Forklifts, truck cranes and other special equipment shall conform to state regulations, and pass the annual inspection for special equipment, and their drivers shall work with relevant licenses.

8.2 When front view cannot be confirmed, forklifts loaded with goods shall be driven back. If they have to be driven in the condition that the view is obstructed, there shall be a commander. A safety regulation mechanism shall be established.

8.3 In the condition of dim light, front lights of forklifts shall be turned on.

8.4 No person other than the driver shall sit in a 3T forklift. Loading quantity shall not exceed the rated load capacity of forklifts. Forklift safety education shall be provided for forklift drivers and related workers.

8.5 The driver shall wear a safety helmet when driving a forklift, reduce speed at the time of making turns, and remove the key when leaving the forklift.

8.6 Do not stand on a running forklift pallet for operation. Where it is necessary to do so, the handrail fixed to fork or the pallet with a frame shall be used, and operator shall fasten the safety belt.

8.7 Do not stand under goods to be loaded or within the scope of the turning crane of truck crane. Before move-in, inspections before the operation of forklifts and truck cranes and annual and monthly inspections shall be conducted.

8.8 A forklift shall be equipped with rearview mirrors and back-up buzzer.
8.9 When the goods to be loaded are to be held upright, the fork shall be declined, parking brake shall be pulled on securely, and the driver shall get off the forklift and stop the engine.

8.10 At the place where any operator or any other vehicle may appear such as crossing, a forklift driver shall pay attention to the surrounding environment at all times, whistle in time, and reduce the speed to ensure the safe stop in any case. Operators across channels shall stop confirm the safety of surrounding environment, and after confirming the stop of forklifts, cross channels.

8.11 When the paralleling goods are taken, the tip of the fork shall not contact inside pallet. Once goods are taken, the fork shall be fully inserted. In stacking, there shall be adequate intervals between neighboring pallets, and stacking height shall not exceed 2 meters. During taking, the safety around the goods shall be confirmed. Negotiations shall be conducted at safe places rather than those near the goods.

8.12 For the operation of truck cranes, signal riggers shall be arranged, and work with licenses.

8.13 Before the operation of truck cranes, all outriggers shall be stretched out, and square timbers shall be put under supporting feet. Body level shall be adjusted, level bubble shall be in the middle in the case of no load, and locating pins of outriggers shall be inserted. With respect of cranes with an elastically suspended chassis, stabilizer shall be tightened up before stretching out outriggers.

8.14 Outriggers shall be adjusted in the condition of no load, and arm lever already stretched out shall be retracted and turned to right ahead or back; it is forbidden to turn the outrigger valve during operation.

8.15 The amplitude of variation of truck cranes shall be steady during operation, and it is forbidden to raise or drop the arm lever; raising and falling shall be operated at a constant speed.

8.16 When the arm lever of a telescopic crane is stretched out or drawn back, it shall be conducted in the prescribed order. When the arm lever is stretched out, the lifting hook shall be laid down accordingly. Where the limiter gives the alarm, the stretching of the arm lever shall stop immediately; where the arm lever draws back, a too small elevation angle will be inappropriate.

8.17 The elevation angle of truck cranes during operation shall conform to instructions. Where the length of the front section of arm lever is bigger than that of the back section after the telescopic arm lever is stretched out, an adjustment shall be made so as not eliminate the abnormal circumstance before operation.

8.18 Where any outrigger sinks or crane is inclined during the operation of a truck crane, the loaded materials shall be laid down immediately. Operation is allowed only after the adjustment and the elimination of the unsafe factor.

8.19 During loading and unloading, there shall be no person in the cab of carrier vehicle, and materials shall not be lifted over the cab of carrier vehicle.

8.20 Where two cranes are involved in hoisting operation, the performances of the two cranes shall be similar, and the load of one crane shall not be larger than 80% of rated lifting capacity.

8.21 During work, a driver shall carefully operate, and shall not chat with others or take time off arbitrarily. “Ten No Hoisting” provisions shall be followed during hoisting.

1) No hoisting in the case of unclear commanding signal.
2) No hoisting in the case of inclined traction or hanging.
3) No hoisting in the case of unclear lifting material weight or overload.
4) No hoisting in the case of bulk materials not strapped firmly or materials loaded excessively.
5) No hoisting in the case of any person on lifted materials.
6) No hoisting in the case of materials buried underground.
7) No hoisting in the case of failure or fault of mechanical safety device.
8) No hoisting in the case of unclear lifting and landing points of materials due to dark light on the site.
9) No hoisting in the case of no protection measure for the direct contact between materials with blade edges and steel wire rope.
10) No hoisting in the case of gales of Grade 6 or above, thunder or high-voltage wires.

8.22 Before driving, arm lever, lifting hook and outriggers shall be drawn back. During driving, a medium speed shall be maintained to avoid emergency braking.

8.23 During driving, no person shall stand, nor shall materials be stacked on the chassis walking board; reversing shall be conducted under the supervision of a person.

8.24 After the operation, the arm lever of telescopic crane shall be fully drawn back and put well, and the lifting hook shall be hung well. The arm lever of the trussed arm lever crane shall be turned to the front of the crane, and be lowered to the position with an angle between 40° - 60°. Brakes of all structures shall be braked firmly, and doors of operating room and machine shed shall be closed and locked.
9. Special Equipment Management

Exhibitors and constructors thereof shall establish a safety inspection system and comply with it, and shall cooperate with the Organizers, the venue and concerned government departments in safety patrols, renovation and emergency evacuation protocols in a conscientious and responsible manner. They shall follow the instructions and implement them accordingly. In case of any emergency, they shall take appropriate measures and report to the Organizers.

10. Punishments

Regarding improper operations, the Hosts shall be entitled to impose corresponding punishments; concerning behaviors with bad influence or serious consequences, they shall be transferred to the relevant department for treatment.