



**SPECIAL PROJECT DOCUMENTS**  
**Lifts & Escalators**

HO / SPD / JSA / 2020  
Rev : 000

**HEAD OFFICE -  
CHENNAI**

**JOB SAFETY ANALYSIS ( JSA )**

DATE: 15. 06. 2020

SL No	Activity	Hazard	Control Measures	Responsible Person	Remarks
1	Transporting the elevators materials by trucks/van/ auto from site entrance to the store location	<ul style="list-style-type: none"> <li>Unplanned movement of vehicles</li> <li>Collision with pedestrians/operatives</li> <li>Collision with structures</li> <li>Collision with other vehicles</li> <li>Falling of people</li> <li>Overturning</li> <li>Overloading and falling objects</li> </ul>	<ul style="list-style-type: none"> <li>Designated area should be allocated for vehicle parking and offloading of materials.</li> <li>Ensure that a space and firm pathway to truck delivery is available at site</li> <li>Banks men should be appointed to guide the vehicle driver and to ensure that no pedestrians/operatives are near by the vehicle</li> <li>Visiting drivers should be briefed about the site details through visitor induction prior to taking to site at the entrance</li> <li>Supervisor must ensure the clear route planned and maintained till off loading point</li> <li>Vehicle driver should always wear seat belt whole driving in site.</li> <li>Ensure that driver adhere to Speed limits at site</li> <li>No speed turn taken at site.</li> <li>Avoid taking reverse at site</li> <li>Load should be assessed prior to taking in to site.</li> </ul>	Site Supervisor/ ESPD /Site engineer	

Prepared by :	Reviewed by :	Approved by :	Page
Date :	Date :	Date :	1 ~ 12



**SPECIAL PROJECT DOCUMENTS**  
**Lifts & Escalators**

HO / SPD / JSA / 2020  
Rev : 000

**HEAD OFFICE -  
CHENNAI**

**JOB SAFETY ANALYSIS ( JSA )**

**DATE: 15. 06. 2020**

2	Offloading the lift materials by manually and later stage shifting the elevator materials at desired location/floor	<ul style="list-style-type: none"> <li>• The loads slip, trip sharp edges (uneven floor)</li> <li>• Improper manual handling</li> <li>• Slip, Trip &amp; Fall / falling objects from over head</li> <li>• Strains /Sprains due to heavy lifting</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor must present at all times to ensure employees/workers are adhering to manual handling safe working instructions</li> <li>• Ensure that clear access &amp; egress is available at the off loading area.</li> <li>• Must wear suitable PPE i.e Hand gloves.</li> <li>• Employees are provided with the correct lifting / handling techniques.</li> </ul> <p>Frequent breaks should be given to employees during the off loading works</p> <p>Minimize the repetitive works.</p> <ul style="list-style-type: none"> <li>• Manual off loading activity should be carried out where over head falling hazards are minimized</li> <li>• Heavy or frequent manual handling tasks should be carried out by several people.</li> <li>• The amount that is handled should be reduced or the load split into smaller ones.</li> </ul>	Site Supervisor/ ESPD /Site engineer	

Prepared by :	Reviewed by :	Approved by :	Page
Date :	Date :	Date :	1 ~ 12



**SPECIAL PROJECT DOCUMENTS**  
**Lifts & Escalators**

HO / SPD / JSA / 2020  
Rev : 000

**HEAD OFFICE -  
CHENNAI**

**JOB SAFETY ANALYSIS ( JSA )**

DATE: 15. 06. 2020

3	Offloading or shifting the elevator materials by mechanical equipment i.e.Hydra, Cranes etc..	<ul style="list-style-type: none"> <li>• Failure of mechanical lifting equipment's</li> <li>• Over loading/exceeding SWL</li> <li>• Incompetent/untrained operator</li> <li>• Failure of lifting tools&amp; tackles i.e wire ropes/web slings etc, Hydra Toppling at tandem lifting</li> </ul>	<ul style="list-style-type: none"> <li>• Need to designate the area for unloading the materials, assigned lifting equipment's (crane/hydra) should not place at un-leveled /ramp ground surfaces</li> <li>• Thoroughly inspections should be carried by operator.</li> <li>• Ensure that the machine is not exceeding the SWL by close monitoring by the supervisor.</li> <li>• Try to engage the fitted ASLI machine for the lifting activity.</li> <li>• Only a valid driving license/3rd party competency operator should be assigned for the job.</li> <li>• Work Place at Tandem lift area should be well leveled and compacted lifting loads should be assessed and special Lifting plan should be prepared by considering the both machinery and load data.</li> <li>• All the lifting tools and tackles should have valid 3rd party certificates prior to use at site.</li> </ul>	Banks Man/ Supervisor/Route engineer	

Prepared by :	Reviewed by :	Approved by :	Page
Date :	Date :	Date :	1 ~ 12



**SPECIAL PROJECT DOCUMENTS**  
**Lifts & Escalators**

HO / SPD / JSA / 2020  
Rev : 000

**HEAD OFFICE -  
CHENNAI**

**JOB SAFETY ANALYSIS ( JSA )**

**DATE: 15. 06. 2020**

04	Scaffolding Erection & Dismantling	<ul style="list-style-type: none"> <li>• Material &amp; people fall from height</li> <li>• Stuck against</li> <li>• sprains, strains, over exertion in shoulders, arms and crushed fingers for repeated works activity</li> <li>• Poor lighting,</li> <li>• collapse of scaffolding structure</li> <li>• Failure of usage of PPE i.e. full body harness.</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor must be present during the erection progress</li> <li>• Scaffolding erection area should be isolated and proper signage to be placed to ward nearby people about the activity</li> <li>• Unauthorized entry to be avoided and limited persons to be allowed at erection area</li> <li>• Unwanted materials should not be stacked on the scaffold.</li> <li>• Employees working for scaffolding erection &amp; Dismantling must wear the Full body harness and anchored to a rigid point always.</li> <li>• While shifting the standards and ledgers to erect the scaffold ensure that proper communications and coordination in between the team.</li> <li>• Employees are provided with the correct lifting / handling techniques. Frequent breaks should be given to employees during the off loading works.</li> <li>• Minimize the repetitive works.</li> <li>• Adequate lighting arrangements must be done in the lift shaft prior to start the works</li> <li>• The required supports should be provided to prevent collapse the scaffolding.</li> <li>• Scaffolding working platform should not be over loaded.</li> <li>• Approved and standard scaffolding standards and ledger</li> <li>• Only approved Full body harness should be used</li> <li>• Basic checks should be conducted by user before starting the works in each shift.</li> </ul>	Site supervisor/ESPD/Route engineer	
----	------------------------------------	---	--	-------------------------------------	--

Prepared by :	Reviewed by :	Approved by :	Page
Date :	Date :	Date :	1 ~ 12



**SPECIAL PROJECT DOCUMENTS**  
**Lifts & Escalators**

HO / SPD / JSA / 2020  
Rev : 000

**HEAD OFFICE -  
CHENNAI**

**JOB SAFETY ANALYSIS ( JSA )**

**DATE: 15. 06. 2020**

5	Template Fixing	<ul style="list-style-type: none"> <li>• Fall of person from height</li> <li>• Falling of materials/ tools</li> <li>• Fall of fixed template due to improper fixing method</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure that scaffold structure to be erected and supported rigidly.</li> <li>• Full platform to be provided at top floor and ensure no gap on working platform.</li> <li>• Permit to Work must be obtained prior to start the works(if applicable)</li> <li>• Safety harness is mandatory for all personal whoever entering inside of lift shaft.</li> <li>• Never allowed any one to work above and below floor at a time.</li> <li>• Make sure all hand tools to be secured with guide rope properly.</li> <li>• Never stack any loose material on the working platform.</li> <li>• Provide tools box to keep all loose materials on it.</li> <li>• Make sure plumb lines are fastening by the taping screws and sent down to the bottom floor.</li> <li>• Standardize anchor fastener to be used to fix the brackets.</li> <li>• Make sure all the entrance/access to the lift shaft is closed during fixing templates.</li> </ul>	Sit supervisor/Route engineer	

Prepared by :	Reviewed by :	Approved by :	Page
Date :	Date :	Date :	1 ~ 12



**SPECIAL PROJECT DOCUMENTS**  
**Lifts & Escalators**

HO / SPD / JSA / 2020  
Rev : 000

**HEAD OFFICE -  
CHENNAI**

**JOB SAFETY ANALYSIS ( JSA )**

**DATE: 15. 06. 2020**

6	Bracket fixing	<ul style="list-style-type: none"> <li>• Fall of materials and person from height</li> <li>• Brackets may come out or fall from fixed location</li> <li>• Defective power tools used for task/Electrical shock</li> </ul>	<ul style="list-style-type: none"> <li>• Make sure no one allowed to work below while bracket fixing.</li> <li>• Ensure that all workers to be used safety harness while working inside of lift shaft.</li> <li>• Don't stack any brackets on the working platform.</li> <li>• All hand tools to be secured with guide rope.</li> <li>• Make sure two numbers of anchor fastener are used to fix the wall brackets.</li> <li>• Need to fix the brackets with spring, plate washers and nut properly.</li> <li>• Ensure the horizontal brackets are placed over the wall brackets and fix with "C" clamp at both ends.</li> <li>• All electrical tools should be inspected by site safety team and to be tagged with relevant color code if any .</li> <li>• Electrical connection should be taken from ELCB fitted DB.</li> <li>• Standard Electrical cable to be used and ensure no maximum joint on cables.</li> <li>• Only authorized person/trained person to be allowed to use the power tools .</li> <li>• Electrical cable routing should be done properly by routing at height levels</li> <li>• Ensure that power tools are double insulated</li> <li>• Do not handle electric tools in wet environments / wet hands / oily hands</li> <li>•</li> </ul>	Site supervisor/ route engineer/Safety officer	

Prepared by :	Reviewed by :	Approved by :	Page
Date :	Date :	Date :	1 ~ 12



**SPECIAL PROJECT DOCUMENTS**  
**Lifts & Escalators**

HO / SPD / JSA / 2020  
Rev : 000

**HEAD OFFICE -  
CHENNAI**

**JOB SAFETY ANALYSIS ( JSA )**

**DATE: 15. 06. 2020**

7	Guide Rail Hoisting & Alignment	<ul style="list-style-type: none"> <li>Fall of rails due to rope cut /failure, Man fall from height</li> </ul>	<ul style="list-style-type: none"> <li>Proper Manual Handling techniques must be given to employees.</li> <li>Rope shall be adequate to lift the guide rails .</li> <li>Employees must anchor their full body harness to the solid point during pulling the guide rails</li> <li>Guide rail should be tied properly by rope</li> <li>Clear communication is required in between the team members Close supervision is mandatory during the works activity</li> <li>Ensure sufficient manpower to be engaged for this rail hoisting including one supervisor.</li> <li>Ensure no parallel work in below or top levels.</li> <li>Check and estimate the guide rail weight prior to hoisting.</li> </ul>	Sit supervisor / Route engineer	
8	Landing sill & Frame fixing	<ul style="list-style-type: none"> <li>Fall men or material in lift shaft</li> <li>Electric shock by power tools</li> </ul>	<ul style="list-style-type: none"> <li>Make sure adequate working platform.</li> <li>Safety harness must be wear by employees and anchor to rigid point</li> <li>Ensure frames clamps fixed properly.</li> <li>Ensure that power tools are double insulated</li> <li>Do not handle electricity in wet environments / wet hands / oily hands</li> <li>Ensure power tools pre use inspection done before using it.</li> <li>only trained employees permitted to use electrical tools</li> <li>Do not tamper any guards</li> <li>Use task specific PPE i.e Hand gloves, Eye protection</li> </ul>	Sit supervisor / Route engineer	

Prepared by :	Reviewed by :	Approved by :	Page
Date :	Date :	Date :	1 ~ 12



**SPECIAL PROJECT DOCUMENTS**  
**Lifts & Escalators**

HO / SPD / JSA / 2020  
Rev : 000

**HEAD OFFICE -  
CHENNAI**

**JOB SAFETY ANALYSIS ( JSA )**

DATE: 15. 06. 2020

9	Fixing of Chain pulley on load hook	<ul style="list-style-type: none"> <li>• Failure of load hook</li> <li>• Defective chain pulley block/chain pulley failure</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure design approved load hook installed on slab for lifting point.</li> <li>• Ensure lifting hook should be free from any damage.</li> <li>• Ensure standardize certified chain pulley using for task.</li> <li>• Ensure all chain pulley physically inspected prior to anchor by clinet</li> <li>• Ensure SWL clearly mention on chain pulley block.</li> </ul>	Sit supervisor / Route engineer	
10	Lifting of heavy materials like machine drive unit , counter weight frame, car sling by using chain pulley block.	<ul style="list-style-type: none"> <li>• Fall of material due to failure of chain pulley, Man fall from Height</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure standardize inspected chain pulley block using for task.</li> <li>• Ensure design approved lifting point provided for chain pulley hanging.</li> <li>• Ensure the lifting load should not exceed the SWL of chain pulley.</li> <li>• Ensure competent person physically inspected chain pulley block</li> <li>• Ensure underneath the lifting area should be barricaded to prevent unauthorized personal entry</li> <li>• Ensure all lifting tools&amp; Tackles should be inspected and have certificate at site.</li> <li>• Ensure material properly secured before lifting.</li> <li>• Ensure no one stand underneath or nearby lifting load area.</li> <li>• Ensure supervisor engaged for the task.</li> </ul>	Sit supervisor / Route engineer	

Prepared by :	Reviewed by :	Approved by :	Page
Date :	Date :	Date :	1 ~ 12





**SPECIAL PROJECT DOCUMENTS**  
**Lifts & Escalators**

HO / SPD / JSA / 2020  
Rev : 000

**HEAD OFFICE -  
CHENNAI**

**JOB SAFETY ANALYSIS ( JSA )**

**DATE: 15. 06. 2020**

11	Buffer Installation	<ul style="list-style-type: none"> <li>slip, trip sharp edges of the civil works</li> </ul>	<ul style="list-style-type: none"> <li>Ensure job specific PPEs shall be used.</li> <li>Work place should be clean and tidy</li> <li>Use Ladder for access to the pit.</li> </ul>	Sit supervisor / Route engineer	
12	Fixing of Traveling Cable	<ul style="list-style-type: none"> <li>Fall of person and cable from height</li> </ul>	<ul style="list-style-type: none"> <li>Ensure proper working platform with suitable access</li> <li>Ensure suitable fall arrester system with suitable anchoring point.</li> <li>Ensure no one stand underneath the cable fixing area.</li> <li>Ensure trained person with competent supervisor engaged for the task.</li> <li>Ensure all workers are using job specific PPEs(Hand glove, Harness..etc.)</li> </ul>	Sit supervisor / Route engineer	
13	Car Frame Assembly	<ul style="list-style-type: none"> <li>Material falling &amp; contact with rough edges</li> <li>Fall of car/frames on to the working crews</li> </ul>	<ul style="list-style-type: none"> <li>Access to working platform to be provided.</li> <li>All workers to use safety harness, safety goggle and hand gloves</li> <li>Ensure proper method to be adopted for manual handling</li> <li>Ensure that the personnel are not positioned in corners.</li> <li>Ensure the car platform hooked with chain pulley and tied with additional rope.</li> <li>Supervisor must be in work place</li> <li>Make sure engaged persons follow safe manual handling practices and good communication.</li> <li>Provide safe working platform and access on car top.</li> </ul>	Sit supervisor / Route engineer	

Prepared by :	Reviewed by :	Approved by :	Page
Date :	Date :	Date :	1 ~ 12



**SPECIAL PROJECT DOCUMENTS**  
**Lifts & Escalators**

HO / SPD / JSA / 2020  
Rev : 000

**HEAD OFFICE -  
CHENNAI**

**JOB SAFETY ANALYSIS ( JSA )**

**DATE: 15. 06. 2020**

14	Roping	<ul style="list-style-type: none"> <li>Fall of person and materials from height</li> </ul>	<ul style="list-style-type: none"> <li>Make sure full deck working platform be provided in below frame assembly location inside of lift shaft.</li> <li>Sufficient counter weight to be placed to bear the load/weight of car platform, scaffold platform, canopy &amp; working crews, etc.</li> <li>All workers to use safety harness, safety goggle and hand gloves</li> <li>Make sure proper communication to be maintained</li> <li>Make sure roping should be done as per manufacture instruction</li> <li>Don't stack any material near to edges of working platform</li> <li>Use proper PPEs cotton hand gloves, safety goggles and safety harness.</li> </ul>	Sit supervisor / Route engineer	
15	Landing Door Fixing	<ul style="list-style-type: none"> <li>Fall of person and fall of materials through opening</li> <li>Improper fixing of entrance door &amp; Fall of door</li> </ul>	<ul style="list-style-type: none"> <li>Adequate working platform should be provided on the scaffolding.</li> <li>All persons to use safety harness to be anchored at the scaffolding at two separate ledgers.</li> <li>Make sure door frame to be hold by two workers until to support properly.</li> <li>Door frame install and connected with block work for casting as per design.</li> <li>Permit system to be followed on the site( if applicable)</li> <li>Only one activity allowed for each lift shaft.</li> <li>Ensure properly close the shaft opening before leaving the place.</li> <li>Ensure the cleats are securely installed on wall and tied with anchor fastener, washer and nut.</li> <li>Make sure angles are securely fixed with brackets</li> <li>Make sure three trained persons to be engaged to fix the door.</li> <li>One will be in the scaffolding on the working platform and the other persons will be on the lobby area while fixing of entrance door.</li> <li>Make sure door to be fixed from bottom to top in sequence wise.</li> <li>No one allowed below or above working area while fixing of door.</li> </ul>	Sit supervisor / Route engineer	

Prepared by :	Reviewed by :	Approved by :	Page
Date :	Date :	Date :	1 ~ 12



**SPECIAL PROJECT DOCUMENTS**  
**Lifts & Escalators**

HO / SPD / JSA / 2020  
Rev : 000

**HEAD OFFICE -  
CHENNAI**

**JOB SAFETY ANALYSIS ( JSA )**

**DATE: 15. 06. 2020**

16	CAR Top Wiring and Door Operation	<ul style="list-style-type: none"> <li>Fall of Men Material from height</li> </ul>	<ul style="list-style-type: none"> <li>Ensure proper access and working platform provided on the top of CAR.</li> <li>Ensure proper handrail fixed on the CAR TOP all the tools must be secured with guide rope.</li> <li>Ensure underneath area barricaded with warning signage.</li> <li>Ensure trained person with competent supervisor engaged for the task.</li> </ul>	Sit supervisor / Route engineer	
17	Weight filling in Counter sling	<ul style="list-style-type: none"> <li>The weights slip, sharp edges of the weights.</li> <li>Improper manual handling</li> </ul>	<ul style="list-style-type: none"> <li>Supervision must present at all times to ensure employees/workers are adhering to manual handling safe working instructions</li> <li>Ensure that clear access &amp; egress is available at the weights filling area.</li> <li>Must wear suitable PPE i.e Hand gloves.</li> <li>Employees are provided with the correct lifting / handling techniques. Frequent breaks should be given to employees during the off loading works.</li> <li>Minimize the repetitive works.</li> </ul>	Sit supervisor / Route engineer	
18	Testing and commissioning	<ul style="list-style-type: none"> <li>Electric shock</li> </ul>	<ul style="list-style-type: none"> <li>Make sure all electrical connection to be checked by multi meter prior to give power supply on it.</li> <li>Make sure all standard Jonson box/ contactor and DB with proper locking system to be fixed as per manufacture instruction prior to give power supply on it.</li> <li>Make sure all lift gates to be proper installed</li> <li>Make sure electrical resistance hand gloves to be provided to concerned engineer/electrician.</li> <li>Make sure live testing power supply area to be completely barricaded with warning signage.</li> </ul>	Sit supervisor / Route engineer	

Prepared by :	Reviewed by :	Approved by :	Page
Date :	Date :	Date :	1 ~ 12



**SPECIAL PROJECT DOCUMENTS**  
**Lifts & Escalators**

HO / SPD / JSA / 2020  
Rev : 000

**HEAD OFFICE -  
CHENNAI**

**JOB SAFETY ANALYSIS ( JSA )**

**DATE: 15. 06. 2020**

19	Night Shift Activity	<ul style="list-style-type: none"><li>injury, property damage</li><li>Fire</li><li>Glare</li><li>Flickering lighting</li><li>Electrocution</li><li>Slips, Trips and Falls</li><li>Insufficient lighting levels</li><li>Fatigue</li></ul>	<ul style="list-style-type: none"><li>Proper and sufficient lightning's to be provided in all areas of work and access and egress areas at the work location.</li><li>Stroboscopic effects to be avoided while providing lightning's.</li><li>Must ensure that the emergency procedures and the contact numbers of the team known by work team.</li><li>All work area must be well lit, without shadow Reflecting, hi visibility vest must be worn.</li><li>Suitable and sufficient access way for emergency procedures must be maintained.</li><li>Regular inspections must be conducted on the power tools and lifting tools and tackles for ensuring good condition.</li><li>Only Qualified authorized persons can install / fit / remove lighting.</li><li>Electric cables to be routed safely and not lying on the ground where possible.</li><li>Damaged lighting or cables not to be used or where identified must be removed immediately and returned to the store.</li><li>When it is not possible to raise electrical cables those are laid safely and not along designated walk ways.</li><li>Lone work is not permitted in the site during night works.</li></ul>	Sit supervisor / Route engineer	
----	----------------------	--	---	------------------------------------	--

Prepared by :	Reviewed by :	Approved by :	Page
Date :	Date :	Date :	1 ~ 12