

PROJECT NAME

ACTIVITY– Installation of Lightning Protection System

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Serial No.	Sub-Activities	Hazards Identified (Generic & Task)	Risks Involved (People & Property)	Risk Rating			Control Measures	Residual Risk
				Severity	Probability	Initial Risk		
1.	Prepare work area	<ul style="list-style-type: none"> Unauthorized, untrained workers 	<ul style="list-style-type: none"> Cuts Abrasions 	2	A	L	<ul style="list-style-type: none"> TBT/DSTI to be conducted by the foreman/ safety officer prior to work commencement Task specific safety training to be provided Authorized personnel to undertake the job Daily safety inspection should be carried and eliminate the hazard 	Low (ALARP)
2.	Manual Handling	<ul style="list-style-type: none"> Incorrect lifting of loads Sharp edges. Placing the object while fingers underneath. Unsafe Posture 	<ul style="list-style-type: none"> Back Injuries Cut to finger Strain Musculoskeletal Injuries 	3	C	M	<ul style="list-style-type: none"> TBT/DSTI to be conducted by the foreman/ safety officer prior to work commencement Task specific safety training to be provided Any lifting tasks shall be carried out by persons physically capable to do so No employee should be asked to carry loads above his capacity and in any case no load shall exceed 30kg per man. Mass of the load is more then to be equally shared Deploy enough number of personnel for lifting shall be appointed to the task depending upon the type of load to be lifted. Use easy mode of transport like trolley and crane truck etc. Load not to be lifted above your shoulder height Proper personal protective equipments to be used while manual handling of materials and loads. 	Low (ALARP)
3.	Working with Hand tools	<ul style="list-style-type: none"> Slip, trip and fall Defective tools Using incorrect type Mushroom Heads 	<ul style="list-style-type: none"> Fatigue Trigger finger Cuts and abrasions 	3	C	M	<ul style="list-style-type: none"> TBT/DSTI to be conducted by the foreman/ safety officer prior to work commencement Task specific safety training to be provided Use right tools for the job 	Low (ALARP)

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							<ul style="list-style-type: none"> Defective tools should not be issued or used to perform the task, to be checked by store keeper Don't extend the spanner by using a pipe as an extension bar Never use a file as a lever Never use a screw driver as a chisel Don't work with oily or greased hands 	
4.	Stacking and Storing	<ul style="list-style-type: none"> Material fall from height Improper stacking Collapse of materials 	<ul style="list-style-type: none"> Crush Injury to Personnel Damage to property 	3	B	M	<ul style="list-style-type: none"> Task specific safety training to be provided All materials shall be stored below 2 meter height. Only known person should be there to identify the materials easily. If the material is too heavy, use hydraulic trolley to shift the material. 	Low (ALARP)
5.	Working in near floor openings	<ul style="list-style-type: none"> Material/equipment fall from height Slip/trip/fall 	<ul style="list-style-type: none"> Fatality Property Damage Fracture 	3	D	M	<ul style="list-style-type: none"> TBT/DSTI to be conducted by the foreman/ safety officer prior to work commencement Task specific safety training to be provided PTW to be applied and obtained prior to start work Rigid barrication to be provided to all external Edges and where a fall can occur Warning signboards to be provided in those areas. PPE to be used at all times (Helmet, Shoes, Vest, Overall, Harness) 	Low (ALARP)
6.	Working with ladder	<ul style="list-style-type: none"> Fall from height Over reaching Over loading Obstructing the access way Slippery or uneven surface 	<ul style="list-style-type: none"> Sprain and strain Fracture Injury to the person 	3	C	M	<ul style="list-style-type: none"> TBT/ DSTI and Visual inspection to be done before using the ladder Jobs specify training to be provided. The ladder should extend minimum one meter from the top for safe movement 	Low (ALARP)

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							<ul style="list-style-type: none"> • Heavy materials should not be carried • Do not erect in slippery, uneven surface • Should be set up with a 4 vertical to 1 horizontal slope (4:1) • Colour coded, inspection and maintenance to be registered and recorded by the store keeper • Step ladder must fully open and lock and the devices to be as per manufacturer • Defective ladder should not be used and report it immediately • Do not work from the top of two rungs • Remember the 3 point contact • Do not work in front of the door. If work is carried then locked the door or blocked off • Ladder to be used for short duration works only limited to 15 min. 	
7.	Working on mobile scaffold	<ul style="list-style-type: none"> • Uneven surface • Overhead structure and cable • Materials and worker fall from height • Untrained, unauthorized Workers 	<ul style="list-style-type: none"> • Sprain and strain • Fracture • Spinal cord damage • Musculoskeletal Injury • Fatality 	3	C	M	<ul style="list-style-type: none"> • TBT/ DSTI to be provide prior to start work • Jobs specify training to be provide • Do not stack materials on to the scaffold • Visual inspection should carry before use • Out rigger fitted and breaks are locked on • Only trained scaffolders shall be involved in erection & dismantling activities. • No person to be on the scaffold while it is being moved • Scaffold only use in on level and surface area • Use safety harness to protect from falling above 2 meter height • Tagging system to be implemented (i.e., all safe scaffolds shall be provided with green tags and unsafe scaffolds with red tag) • Keep walkways free of obstacles, tools and Equipment • Never stand and sit on the hand rails 	Low (ALARP)

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8.	Working with power tools	<ul style="list-style-type: none"> • Defective equipment • Electricity • Improper use of equipment • Poor maintenance • Untrained workers • Flying object • Noise and vibration 	<ul style="list-style-type: none"> • Hearing losses • Eye injury • Crushing • Back injury • Burns • Electrocutation 	3	C	M	<ul style="list-style-type: none"> • TBT/DSTI to be conducted by the foreman/ safety officer prior to work commencement • Job related training to be provided • PTW to be applied and obtained prior to start, If spark producing activity is performed • Defective tools should not be issued or used to perform a task. • Cable hangers shall be used to avoid the direct contact of power tools cable with the scaffolding members. • Monthly inspection should be carried out by the electrician and record to be kept at the store • All portable power tools should be fitted with adequate fuse protection either in the tool body or in its electrical plug. • The weight, size and type of tool should be selected to suit the job being carried out. • Don't lay the cables around the access way, it should be proper routing • Industrial distribution board and socket only to be used at site • Correct rate of breaker should be used (Ex:- 30ma only acceptable) • Only those persons who have been adequately trained and experienced in the use of the tool should be allowed to use the same. • Tools should be stored and maintained in good working condition. • Appropriate PPE Should use (Goggles, Gloves, Shoe, Helmet, Overall, Vest) 	M (ALARP)

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9.	Working on roofs	<ul style="list-style-type: none"> Unauthorized/ Untrained workers Slip, trip and fall Material Fall from Height Abnormal weather 	<ul style="list-style-type: none"> Fatality Fracture Sprain and strain 	4	B	M	<ul style="list-style-type: none"> TBT/DSTI to be conducted by the foreman/ safety officer prior to work commencement Authorized person only to assign the job Safety net to be provided from falling materials Openings in the roof must be securely covered or guarded. Keep walkways free of obstacles, tools and Equipment Covering or guarding may be removed to allow the passage of men or material, it must be replaced immediately after that operation. Barricade the ground level area of work and post warning signs. Wet, windy or hot weather can seriously affect your safety during roofing works, ask if in doubt and do not work in that abnormal weather condition High visibility vest to be worn at all times while work on roof. 	Low (ALARP)
10	Fixing the copper tape	<ul style="list-style-type: none"> Untrained/ unauthorized worker Material Fall 	<ul style="list-style-type: none"> Cut and abrasion Trigger finger Fatigue 	3	C	M	<ul style="list-style-type: none"> TBT/DSTI to be conducted by the foreman/ safety officer prior to work commencement Authorized person only to assign the job PPE to be worn (safety shoe, helmet, gloves, vest, overall,) 	Low (ALARP)
11.	While working at night shift	<ul style="list-style-type: none"> Poor illumination Slip/trip/fall 	<ul style="list-style-type: none"> Fatality Cuts 	3	B	M	<ul style="list-style-type: none"> Proper illumination to be provided light post to be secured from fall Proper cable management system to be Followed All materials to be staged in proper manner without obstacles 	Low (ALARP)

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12.	Working in hot weather	<ul style="list-style-type: none"> Heat 	<ul style="list-style-type: none"> Dehydration Sunburn Skin Cancer 	2	B	M	<ul style="list-style-type: none"> Drink plenty of water Proper awareness of heat stress symptoms Avoid highly physical tasks during the hottest part of the day Isotonic drinks to be provided 	Low (ALARP)
13.	Work Completion	<ul style="list-style-type: none"> Poor housekeeping Slip/trip/fall 	<ul style="list-style-type: none"> Fire 	2	A	L	<ul style="list-style-type: none"> General housekeeping, Remove all surface, unwanted waste materials from the building All necessary precautions will be adopted to prevent fire 	Low (ALARP)

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RISK MATRIX

					Probability				
					A	B	C	D	E
Severity	People	Assets	Environment	Reputation	Improbable 1 in 100,000 Years	Remote 1 in 10,000 Years	Occasional 1 in 1000 years	Probable 1 in 100 years	Frequent 1 in 10 years
5-Catstrophic	Multiple fatalities or permanent total disabilities	Extensive damage	Massive effect	International impact	Medium Risk (ALARP)	High Risk			
4-Severe	Single fatalities or permanent total disabilities	Major damage	Major effect	National impact					
3-critical	Major injury or health effects	Local damage	Localised effect	Considerable impact					
2-Marginal	Minor injury or health effects	Minor damage	Minor effect	Minor impact					
1-Negligible	Slight injury or health effects	Slight Damage	Slight effect	Slight impact					
					Low Risk				

HIGH	3-E 4-C,D,E 5-B,C,D,E
MEDIUM	1-D,E 2-B,C,D,E 3-A,B,C,D 4-A,B 5-A
LOW	1-A,B,C 2A