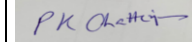

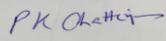


<div>McLAREN</div>	AMC CONCOURSE BRIDGE PROJECT		Document Reference		
			MCL-ME-A-MST-MSS-003		
			Rev. No.		Rev. Date
			01		19/02/02019
	Risk Assessment Record		Assessed by	Title	Signature
	Activity: STRUCTURED CABLING		Prabir	Safety Officer	


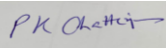
No	ACTIVITY	IDENTIFIED HAZARDS/RISKS	People Involved	Base Risk Ranking (Without Controls)				CONTROL MEASURES	Residual Risk Ranking (With Controls)				Person Responsible
				L	S	Risk Score	Risk Rating		L	S	Risk Score	Risk Rating	

1	Delivering, unloading and storing of CAT-6 & fiber cable with accessory materials using pickup van and unloading by manual handling and shifting by using pallet trolley	Plant and Traffic movement <ul style="list-style-type: none"> Run over by vehicles/plants Hit by reversing equipment Overhead obstructions Vehicle break down Property damage Collision with other vehicles Falling materials from pallet trolley Personal injury 	Operatives Staff/visitors	3	4	12	Medium	1) Delivery/ collection drivers shall be subject to McLaren induction/Training with regards to traffic management. 2) Ensure exclusion zone is set up around the preparation work area and all plant movement and checked by supervisor 3) Always use the pedestrian access provided 4) Traffic light batons shall be provided for banks man at night 5) All plant to have a fully trained banks man present all times. 6) No plant to reverse without banks man. 7) Ensure access route are sufficient and safe to use. 8) Do not take rest in or under vehicles 9) Proper barricade and safety signboard provided on open excavation 10) All vehicles must be fitted with reverse alarm / Flashing light. 11) The work place and all access to be well illuminated. 12) Ensure close supervision, Effective Communication & Coordination with McLaren 13) Enforce Speed limit 14) Ensure all vehicles entering the site is properly maintained and reported if found any defect 15) Ensure materials are secured/tied in pallet	1	3	3	Low	Site Engr Supervisor Foreman
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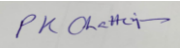
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				L	S	Risk Score	Risk Rating		L	S	Risk Score	Risk Rating	

								trolley to avoid fall from trolley. 16) Do not ride or horse play with pallet trolley.					
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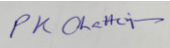
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2	Manual Handling	musculoskeletal disorders, Hand injuries, cut , bruises Sharp edges	Operatives involved in work	4	3	12	Medium	1) Eliminate the need for manual handling by using mechanical aid. 2) Reduce the weight of a load to limit force exertion 3) If unsure of the load weight, check with supervisor. 5) Ensure proper manual handling procedure 6) Identify and eliminate sharp edges before any manual lift 7) Ensure adherence with sufficient and appropriate PPE. 8) Limit load carrying to 20kg per person 9) Supervisor must make sure while manual handling load individual task and environment to be considered to reduce the risk of manual handling.	1	3	3	Low	Supervisor, Foreman, Site Eng.
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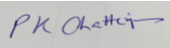
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3	Material storing	Slips, Trips and fall Poor house keeping	Operatives Staff/storekeeper	3	4	12	Medium	1) Ensure accesses are kept clear at all times. 2) Housekeeping to be carried out regularly throughout the day when required 3) Supervisor to ensure operatives are stacking material neatly and stacks are stable and in a safe condition 4) Provide adequate lighting especially during night hours 5) Appropriate space is allowed around storage areas for employees to move around safely without the risk being trapped between stacked materials. 6) Maintain good housekeeping.	1	4	4	Low	Supervisor, Foreman, Site Eng.
4	Installation of fiber optical cable and CAT-6 Cable using mobile tower for access. Cable pulling By manual	Working at height Fall of Person Fall of Materials/tools Slips, Trips and Falls, Poor illumination	All operatives involved	3	4	12	Medium	1. Supervisor must conduct the Toolbox talks and discuss STARRT prior to start the work. 2. Ensure all kind of electrical power supply and utility services turned off before starting activity. 3. Use proper access and egress while using Mobile scaffolding with green tag 4. Work area must have enough illumination arrangement. 5. Mobile scaffolding must be fixed by competent person and inspected by 3 rd party certified inspector. 6. Full body harness must wear while working on height and anchored in secured place. 7) Unauthorized person not allowed modifying the scaffolding. 8) Do not push or pull the scaffolding if person working	2	4	8	Low	Supervisor, Foreman, Safety officer

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				L	S	Risk Score	Risk Rating		L	S	Risk Score	Risk Rating	

								on platform. 9) All the hand tools must secured by using lanyard. 10) Maintain good house keeping					
5	Cable glanding and termination in to patch panel (Not energized) using drill machine and hole show cutter.	Physical Injuries like laceration, foreign parts in eyes, finger injury Entanglement with sharp edge tools Noise and dust Spark and Fire	All operatives involved	4	4	16	High	1. PAT test to be conduct and maintain register. 2) All the power tools must be 110 volt and safe to use 3.All power supplies should be installed & connected by a competent electrician. 4). RAMS to be briefed to the operatives before start the activity and maintain the record. 5.Hot work permit to be obtained and work area must free from combustibile item 6. Fire extinguisher in place with fire blanket. 7. Noise protection to be use 8) Eye protection must be used. 9) Operatives should alert while using sharp edge tools to avoid entanglement with clothing. 10) Close supervision and necessary PPE.	2	4	8	Low	Supervisor, Foreman, Safety officer
6	End to end testing using OTDR(optical time domain Reflectometer)	Irritation of eyes	Operators	4	3	12	Medium	1. Permit to be obtained for testing and commissioning 2) Reflectometer must be calibrated from Authorized testing lab. 3. Ensure all kind of electrical power supply and utility services turned off before starting activity. 4. Both end operators must have communication by using radio system.	2	3	6	Low	Supervisor, Foreman, Safety officer

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								5. Proper supervision should be provided 5. Cones, warning tape/signboards to be placed. 6. Maintain proper housekeeping at all times. 7. Only authorized persons are allowed to enter the area.					
7	Working in poor visibility/dust condition	Physical injuries, Slips, trips & falls, Health effects – eye damage/respiratory diseases.	All personnel in the work area	3	4	12	Medium	1. Prepare the working area for a good working condition. 2.All workers should wear high visibility vest and PPE 3. Ensure that the working area is well-ventilated. 4.Wear goggles & face mask when working in a dusty place 5. TBT conducted by supervisor. 6.First aider and first aid kit available on the site 7) Ensure that work area must have proper illumination 8) Maintain good house keeping	1	4	4	Low	Site engg Supervisors, Foreman

Approved By : Name PRABIR KUMAR Position HSE Signature 

RISK ASSESSMENT & CONTROL GUIDELINES

1. Executing Steps:

1.1. Planning

- a) Construction and HSE team must ensure that hazard identification is complete.
- b) Construction and HSE team must prioritize the hazard issues, which are of significant in nature. (It means that risks have well established legal requirements, potentially high risks).
- c) Construction and HSE team to prepare the risk assessment plan for the priorities identified hazards for these potential high risks.

1.2. Risk Assessment

Risk is the probability of an event occurring in a given set of circumstances. The 'event' is an exposure to hazard. The hazard is the potential to cause harm. The risk assessment is the technique of evaluating not just the likelihood of an event occurring, but also the outcome will be in terms of injury, loss, damage or harm.

1.3. Risk Assessment Process

The process of carrying out a risk assessment should be as follows.

1. Identify the hazards.
2. Identify who might be harmed and how.
3. Evaluate the risk and implement the control measures.
4. Record the significant findings.
5. Review the assessment and update if necessary.

1.4. Examination of the Hazards and Risk Associated

- Competent staff must be used in examining the risk associated with the identified hazard.
- Competent staff should examine following aspect to determine the risk involved:
 - Examine the existing control measures in place.
 - Identify employees at risk.
 - Likelihood of risk.
 - Severity
 - Risk level and their tolerability.

1.5. Evaluating the risk:

Once the necessary information has been obtained on the hazards encountered by work activities, next stage is to access the risks.

1.5.1. Risk Rating Score

Risk rating score is a combination of two factors.

- The severity of the risk that could injure persons or cause damage to plant.
- The likelihood of the risk that it could happen (Probability).

RISK RATING = LIKELIHOOD X SEVERITY

NOTE: Each activity has to be assessed for the risk value for determining the level of Severity and likelihood are mentioned in the table below.

		SEVERITY				
		No Injury (1)	Minor Injury (2)	Moderate Injury (3)	Major Injury (4)	Catastrophic (5)
LIKELIHOOD	Rarely (1)	1	2	3	4	5
	Unlikely (2)	2	4	6	8	10
	Possible (3)	3	6	9	12	15
	Likely (4)	4	8	12	16	20
	Almost Certain (5)	5	10	15	20	25
RISK LEVEL:		Low		Medium		High