







STANDARD OPERATING PROCEDURE

FALL PROTECTION IMPROVISED ANCHORAGE POINTS

Kiewit Bridge and Marine				
Position	Name	Ownership Date		
Superintendent	Rigo Vargas	22-Mar-2024		
Superintendent	Vincent Hermes	22-Mar-2024		
Superintendent	Daisy Contreras	22-Mar-2024		
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Superintendent	Dino Huy	22-Mar-2024		

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А	6-Jun-2024	Issued for Review	
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IMPROVISED ANCHORAGE POINTS

OCTOBER 2024

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IMPROVISED ANCHORAGE POINTS

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1.0 PURPOSE

This Standard Operating Procedure (SOP) establishes guidelines for assessing and establishing improvised anchorage points capable of supporting 5,000 lbs. or greater when exposed to fall hazards over 6' (or 4' in Washington). The objective of this document is to outline the requirements for a competent person that is qualified to assess improvised anchorage points for use in fall protection.

2.0 WORK SCOPE

This procedure covers the assessment, selection, anchoring, verification, and usage of improvised anchor points, as well as documentation along with Fall Protection Permit. Improvised anchorage points are to be used in conjunction with company approved fall protection equipment.

3.0 DEFINITIONS / ACRONYMS

TERMS / ACRYNOMS	DEFINITION	REFERENCE
Corporate Standard Definitions	Glossary	



4.0 ROLES AND RESPONSIBILITIES

POSITION	ROLE AND RESPONSIBILITY
DESIGNATED SIGNER	 Must review and approve <u>every</u> fall protection permit on their project. Designated by district leadership and assigned on the TSCD matrix.
DESIGNATED INSPECTOR	Responsible for initial inspection of fall protection systems to ensure correct installation.
PROJECT MANAGER	 Oversee implementation of fall protection program. Ensure employees are trained and understand the fall protection requirements.
GENERAL SUPERINTENDENT	 Review, approve fall protection permits. Ensure the fall protection hierarchy of controls is followed. Ensure the fall protection permit is complete with all supporting documents attached.
SUPERINTENDENT	 Develop the fall protection permit with the goal of eliminating fall risk by following the hierarchy of controls (eliminate, prevent, restrain, arrest, administrative). Verify the craft have appropriate training, understand the plan/permit. Verify the permit is being adhered to in the field. Ensure all approvals are obtained. Ensure the team is trained on the inspection process and it is being tracked. Confirm rescue equipment is available.
FIELD ENGINEER	 Participate in development of the fall protection permit. Confirm fall distance vs fall clearance required. Verify that the crew has the correct fall protection equipment. Track and document all fall protection equipment and device inspections. Verify the permit is being adhered to in the field. Confirm rescue equipment is available.
FOREMAN	 Participate in the development of the fall protection permit. Verify the permit is being adhered to in the field. Ensure all craft employees working on the permit are properly trained to utilize their fall protection equipment and devices. Review fall protection permit with crew prior to task and confirm signed off. Confirm rescue equipment is available.
CRAFT	 Follow the fall protection permit being utilized in the field. Only use fall protection equipment you have been trained to use. Inspect all fall protection equipment and devices prior to every use.

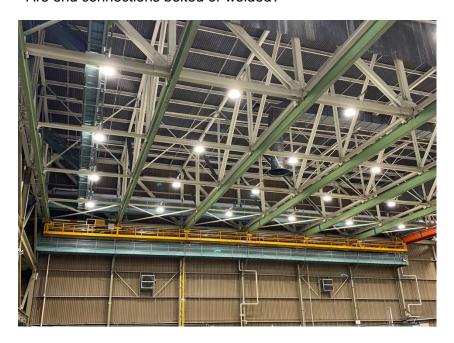


5.0 PROCEDURE

- 5.1 Selecting your Improvised Anchorage Point:
 - 5.1.1 Ensure that the anchorage point is capable of supporting 5,000 lbs. or more for fall arrest.
 - 5.1.2 Choose anchor points that are overhead so that the worker will be tied off above their D-ring.
 - 5.1.3 Identify the shortest fall clearance present at the intended work location.
 - 5.1.4 Will there be a swing fall? Can it be eliminated, and did we account for it in our fall Protection Permit?
 - 5.1.5 Inspect all fall protection equipment before use.
 - 5.1.6 Involve both the competent person, and the designated signer to review and approve the selected improvised anchorage point with the desired anchorage connector.

6.0 IMPROVISED ANCHORAGE EXAMPLES

- 6.1 Structural Members
 - 6.1.1 Identify suitable structural members when looking to use as improvised anchorage points. Assess the strength, stability, and suitability of the members. Choose members such as steel beams, columns or concrete elements that are designed to support more than 5,000 lbs.
 - 6.1.2 Are end connections bolted or welded?



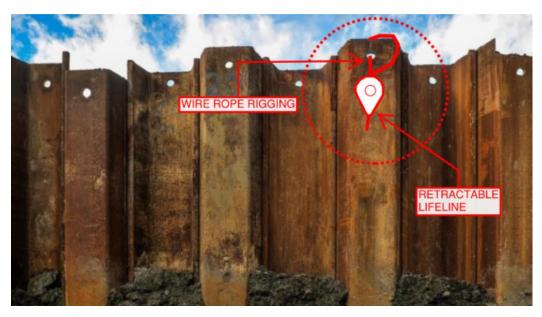


Beam Strap with SRL



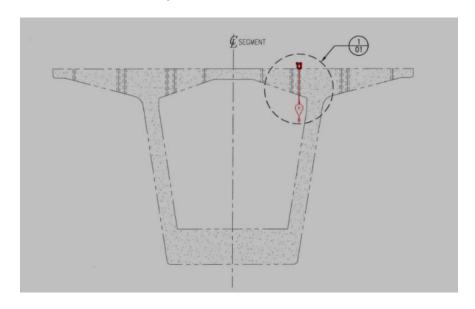
6.2 Sheet Pile

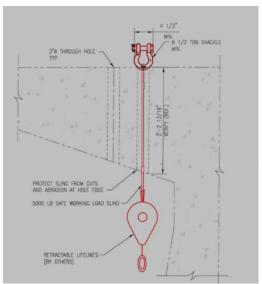
- 6.2.1 Sheet piles can be utilized as improvised anchorage points, as shown in the example below. Assess the suitability of the wall thickness based on factors such as the materials of the sheet piles, soil conditions and the loads the sheet pile wall is expected to bear.
- 6.2.2 Is the sheet pile driven per design prior to attaching connecting device?





6.3 End Segment





Note: Rigging must be new and not used for rigging and lifting when used for fall protection.

7.0 ANCHORAGE CONNECTORS

- 7.1 Anchorage connectors are essential components of fall protection systems, providing a secure attachment point for improvised anchorage.
 - 7.1.1 Anchorage Connectors Designed for Steel





7.1.2 General Anchorage Connectors



Note: DO NOT use scaffold choker to extend the D-Ring.

7.1.3 Anchorage Connectors for Concrete





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8.0 REFERENCES

8.1 For most up to date <u>fall protection polices</u>, forms (permits), SOP's, trainings etc.