Agenda

- History
- Cost of a workplace injury
- PDA document overview
- COAA Website
- Best Practice Guideline
- Q&A Panel
- Video

COAA PDA Project

Committee Members:

- **Dave Hagen**, Chemco – COAA Safety Committee Rep.
- **Joe McFayden**, CLRA – Committee Chair
- **Scott Boyer** – Project Manager
- **Hal Middlemiss**, Middlemiss Safety Management - Project Manager
- **Brad Bent**, CLAC, COAA Safety Committee
- **Larry Jones –** Ledcor, COAA Safety Committee
- **Reg Sopka –** PCL, COAA Safety Committee
- **Ryan Henry -** WCB/Millard Health
- **Winston Fynn** – Shell/Project Sponsor
- **Doug Dory** - UA Local Union 488
- Robert Gould - Fluor

PDA Project Objective

- Develop a Physical Demands Analysis (PDAs) for industrial construction occupations.
- Reduce cost for employers by providing a native file template PDA.
- To create a best practice for the industrial construction industry regarding worker placement decisions both before and after

  injury and reduce the risk of further injury in the cases of return to work or accommodation scenarios.

Benefits of a Physical Demands Analysis

- Medical studies show that transitional work speeds the healing process.
- The loss of social interaction being confined at home is avoided. Such isolation can make it hard to come back to work.
- Rapport is maintained between the injured person and fellow employees.
- The injured person can complete work that might otherwise not get done.

Benefits of a Physical Demands Analysis

- It is customized to specific job positions and reflects the needs of your business
- It sets a benchmark to understand the level of physical capability needed to complete the job effectively
- It is used for effectively orienting new employees to a position
- It provides an opportunity to analyze a position, identify risk factors and determine if job tasks, or workplace environment modifications, are necessary
- If an employee is injured, it can minimize the time away from work by providing medical/WCB/rehabilitation experts, ***more precise*** information on job demands, ***more value added*** modified duties, and quicker return to work for injured workers

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Impact of an Injury

- Injury due to overexertion: #1
- Incidence of repeat injury: 35%
- Average work days lost per claim: 23 days
- Average lost-time claim cost: $87,500 (2014)

Volume of construction work required to pay for injuries

Volume of construction work, at a 5% profit margin needed to pay for:

- One Lost Time Accident: **$1.750M**
- Industry Code 40400 in 2017 (226 LTA's)x$87,500/5% = **$395.5M**
- Provincially (25,542 LTA'sx$87,500)/5% = **$44.7B**

What cannot be counted…..

Lloyd Smith, age 52, died on the job October 2017. Picture from CBC News British Columbia.

Robert Hogue, father, died from work-related injuries December 2017. Picture from Edmonton Journal.

Jared Moffat, age 34, died on the job June 2017. Picture from CBC News Newfoundland & Labrador.

Malcolm Trudell, age 26, died on the job January 2018. Picture from The London Free Press.

Jeff Howes, age 26, died on the job December 2017. Picture from CBC News Ottawa.

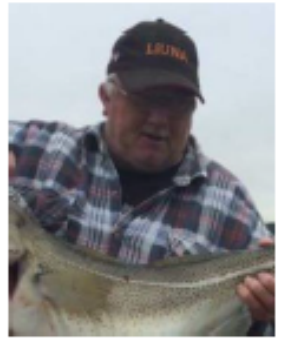
Ian Gallagher, age 33, died on the job November 2017. Picture from Global News.

Eric Labelle, age 47, father of four, died on the job July 2017. Picture from kawarthaNOW.com.

Joe Burke, age 80, died from a work-related disease July 2017. Picture from CBC News Nova Scotia

Tyler Wallace, age 33, died on the job July 2017. Picture from Cape Breton Post.

Steven Lutes, age 42, died on the job January 2017. Picture from CBC News New Brunswick.



Tom Gardiner, age 54, died on the job January 2018. Picture from CBC News Newfoundland & Labrador.

Jesse Hoehn, age 25, died on the job February 2017. Picture from The Davidson Leader.

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PDA Project substantially complete.

- PDA Project Update✓
- Assembled a tripartite committee✓
- Identify trades in industrial construction✓
- Contracted the development of PDAs✓
- Research leading practices✓
- Identify participating sites/contractors✓
- Develop PDAs✓
- Create repository for documents✓
- Develop “how-to instructions” and best practices✓
- for repository users✓
- “How to”Video for website✓

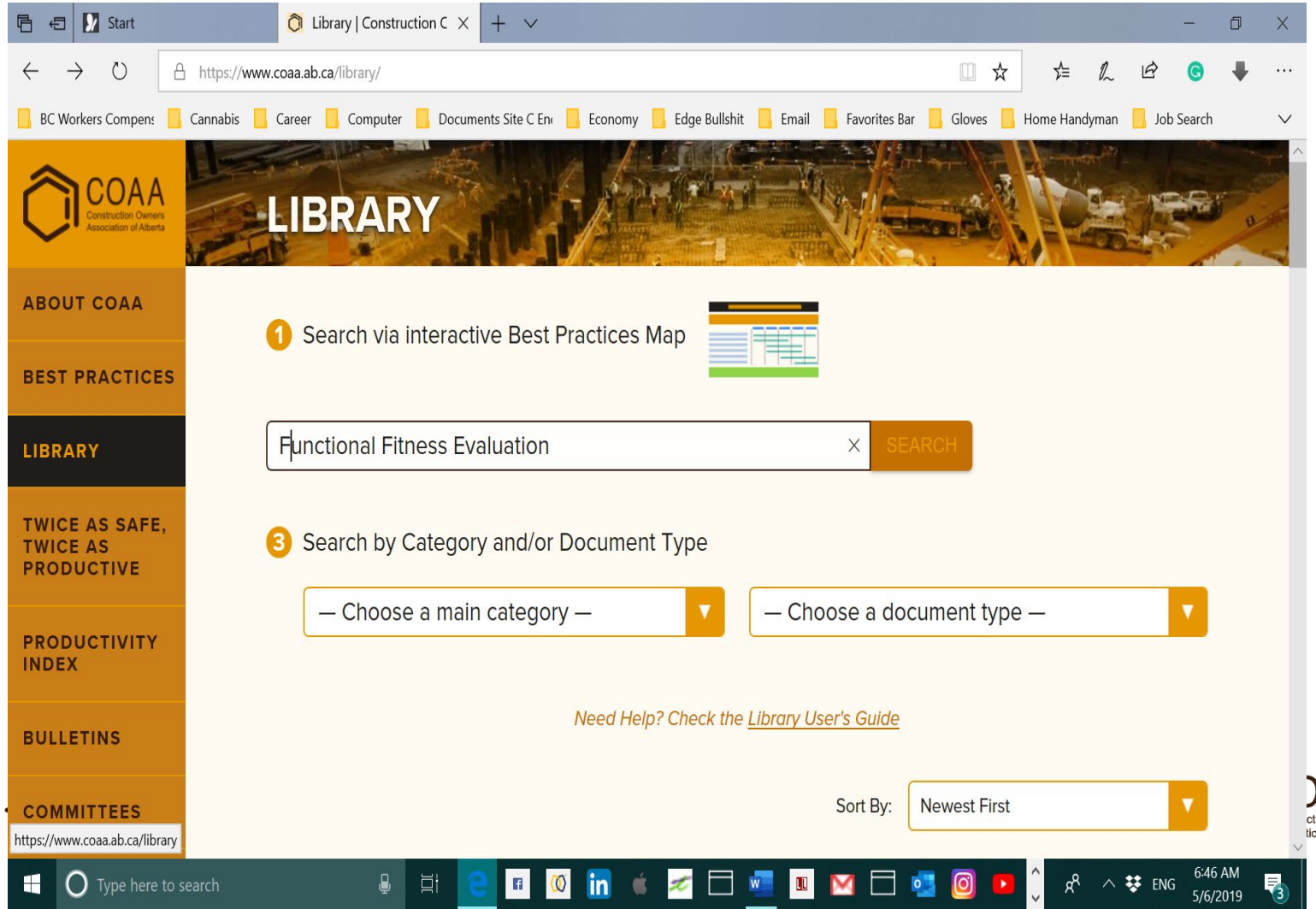
PDA Resources

- The PDA best practices document
- The Physical Demands Analysis document
- Where to find them?
- What's in them?
- How to use them? Physical Demands Analysis Video

COAA Web Page Search - PDA Best Practices Guide.

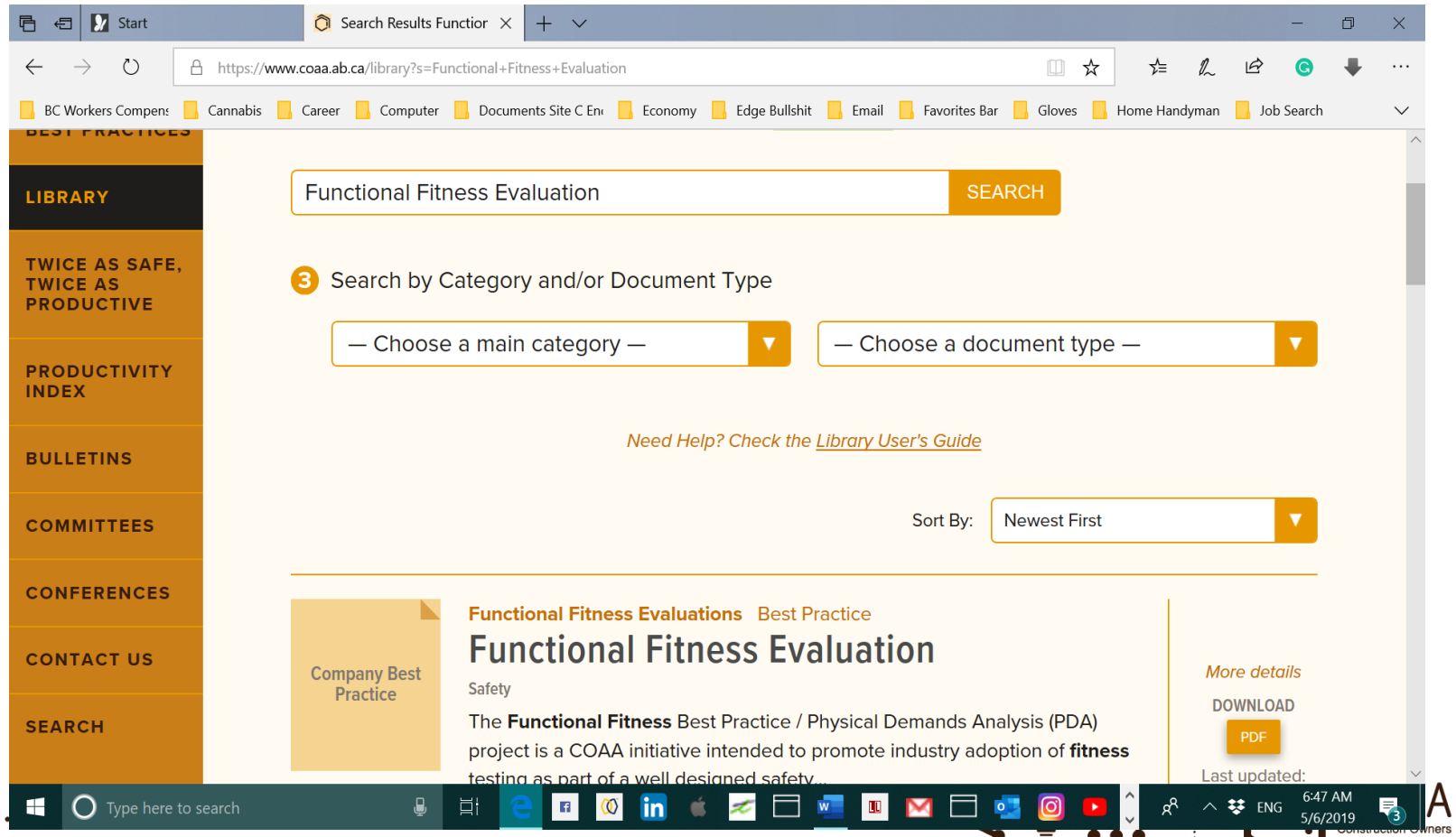
Where to find it?

1. [COAA Best Practices Web Page]
2. In Search Library Type in “Functional Fitness Evaluation.”

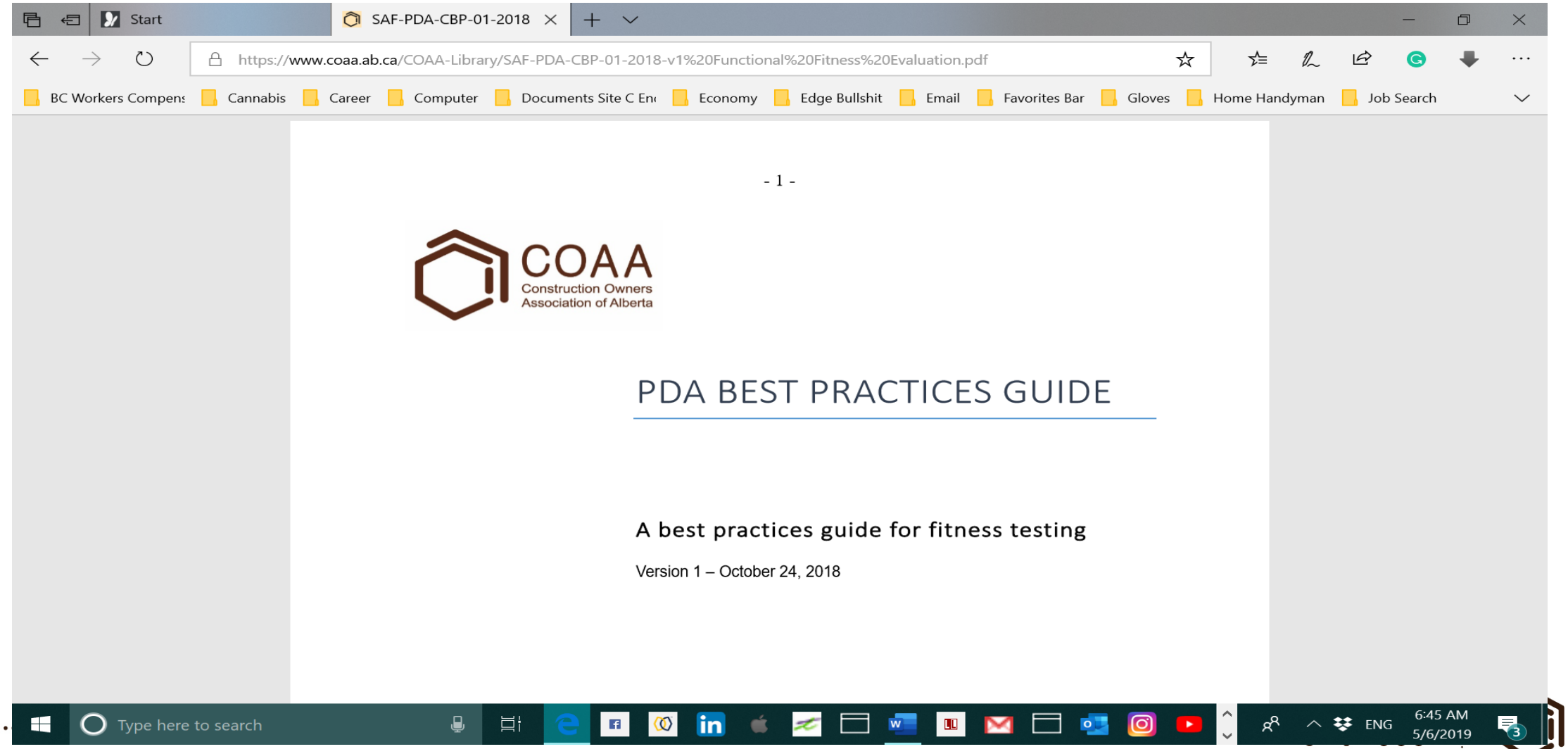


PDA BEST PRACTICES GUIDE

- Click on Download



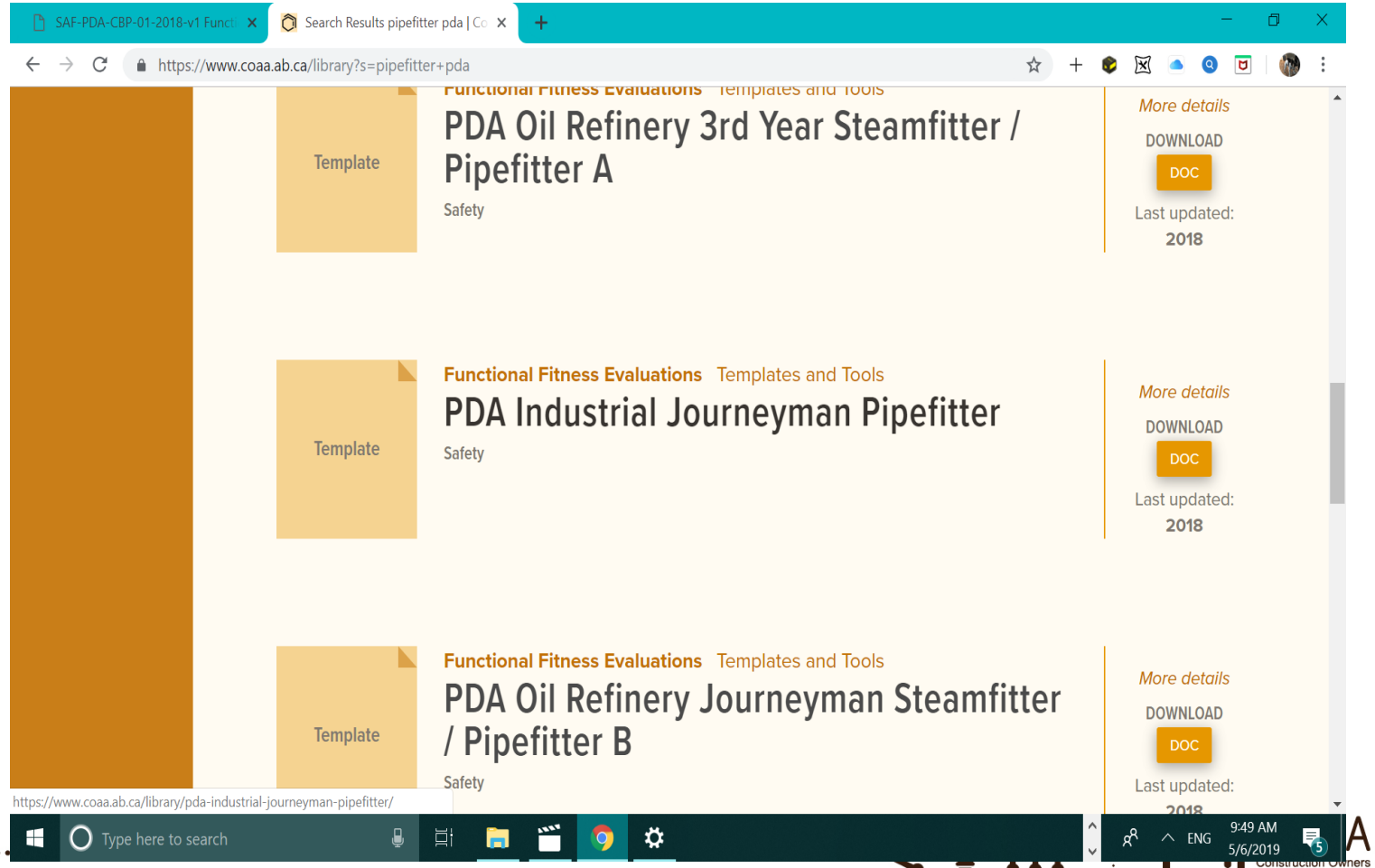
PDA BEST PRACTICES GUIDE



COAA Web Page Search – PDA's

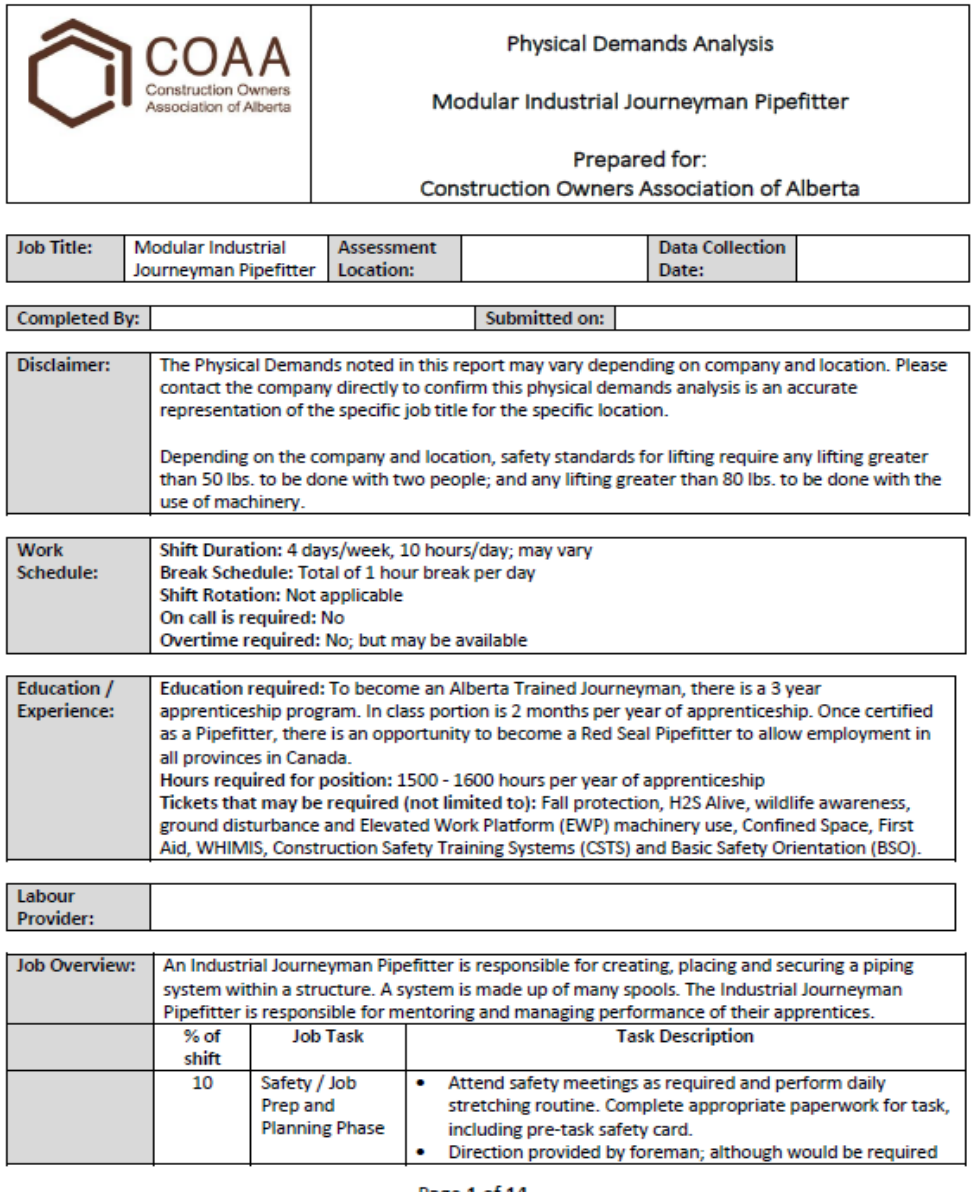
Where to find them?

1. [COAA Best Practices Web Page]
2. What trade name, eg: Journeyman Pipefitter
3. In Search Library Type in "Pipefitter."



PDA Sections

- Job Title, Location, Data Date
- Completed by, Submitted on.
- Disclaimer
- Work Schedule
- Education/Experience
- Labour Provider
- Job Overview



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Physical Demands Analysis

Modular Industrial Journeyman Pipefitter

Prepared for:
Construction Owners Association of Alberta

Job Title:	Modular Industrial Journeyman Pipefitter	Assessment Location:		Data Collection Date:	

Completed By:		Submitted on:	

Disclaimer:	The Physical Demands noted in this report may vary depending on company and location. Please contact the company directly to confirm this physical demands analysis is an accurate representation of the specific job title for the specific location. Depending on the company and location, safety standards for lifting require any lifting greater than 50 lbs. to be done with two people; and any lifting greater than 80 lbs. to be done with the use of machinery.

Work Schedule:	**Shift Duration:** 4 days/week, 10 hours/day; may vary **Break Schedule:** Total of 1 hour break per day **Shift Rotation:** Not applicable **On call is required:** No **Overtime required:** No; but may be available

Education / Experience:	**Education required:** To become an Alberta Trained Journeyman, there is a 3 year apprenticeship program. In class portion is 2 months per year of apprenticeship. Once certified as a Pipefitter, there is an opportunity to become a Red Seal Pipefitter to allow employment in all provinces in Canada. **Hours required for position:** 1500 - 1600 hours per year of apprenticeship **Tickets that may be required (not limited to):** Fall protection, H2S Alive, wildlife awareness, ground disturbance and Elevated Work Platform (EWP) machinery use, Confined Space, First Aid, WHIMIS, Construction Safety Training Systems (CSTS) and Basic Safety Orientation (BSO).

Labour Provider:	

Job Overview:	An Industrial Journeyman Pipefitter is responsible for creating, placing and securing a piping system within a structure. A system is made up of many spools. The Industrial Journeyman Pipefitter is responsible for mentoring and managing performance of their apprentices.		
	% of shift	Job Task	Task Description
	10	Safety / Job Prep and Planning Phase	• Attend safety meetings as required and perform daily stretching routine. Complete appropriate paperwork for task, including pre-task safety card. • Direction provided by foreman; although would be required

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PDA Sections

- Equipment/Tools/Materials
- Exposures/Environment

Equipment/ Tools/ Materials:	Equipment, tools and materials used may include, but are not limited to: • Hammer • Measuring tape • Combination wrench • Torque wrench • Clamps (beam) • EWP (Elevated Work Platform) • Zoom boom & Cranes (driven by Heavy Equipment Operators) • Squares • Levels • Nylon slings • Shackles • Wire rope • Chain falls • Come along • Crosby clips • Ratchet / socket • Wire rope sling • Pipe stand (large and small) • Canvas bag to hold tools • Hydraulic tools • Grinder

Exposures / Environment:	Exposures and environment may include, but are not limited to: • Inclement weather (rain, wind, varying temperatures, snow, ice, etc.) • Uneven, slippery, rough walking surface • Loud noises • Sparks (if around welder) • Moving vehicles / heavy equipment around site • Heights greater than 6 feet • Toxins (fire proofing materials, paint, gases, fumes) • Vibration • Tools falling • Trip hazards • Head and/or knee bangers

PDA Sections

- Personal Protective Equipment Required at all times
- Personal Protective Equipment used as required.
- Strength Level Key
- Frequency Key

Personal Protective Equipment Required at all times:	• Hard hat • Steel toed boots • Gloves • Foam safety eyewear (fectoggle) • Safety vest or high visibility stripes • Long sleeves and pants
Personal Protective Equipment used as Required:	PPE's used may include, but are not limited to: • Harness / fall arrest • Hearing protection • Face shield

NOC STRENGTH LEVEL KEY	
Strength Level	Definition
Limited (Lim)	Up to 5 kg (11 pounds)
Light (L)	5 kg to 10 kg (11 – 22 pounds)
Medium (M)	10 kg to 20 kg (22 – 44 pounds)
Heavy (H)	Greater than 20 kg (44 pounds plus)

FREQUENCY KEY		
Frequency	% of Workday	Hours – Based on 8 hour Workday
Not Required (N/R)	0%	0
Rarely (R)	1 – 5%	<25 min/day
Occasionally (O)	6 – 33%	25 min to 2 hours 40 min/day
Frequently (F)	34 – 66%	2 hours 41 min to 5 hours 17 min/day
Constantly (C)	67 – 100%	5 hours 18 min to 8 hours/day

**Frequency Key based on WCB Alberta Recommendations*

**Strength Level Key based on the National Occupational Classification*

PDA Sections

- Job Demands

Job Demand	Frequency / NOC Strength Level					Details/ Measurements
	N/R	R	O	F	C	
Material Handling:						
Floor to Waist Level Lifting		H	M			Gate valve – 78 lbs. Pipe stand – 62 lbs. (can be separated top – 17 lbs. and bottom – 45 lbs.) Mini pipe stand – 22 lbs. Hand tools (hammer – 1 lb.) Supports – 25 lbs. 20ft. chain, 1 ½ ton capacity chain fall – 45 lbs. (length of chain and capacity can vary, making it weigh less or more) ¾ ton capacity come along – 20 lbs. 3 ton beam clamp – 22 lbs. Shackle – can vary between 17 lbs. (used more often) to 47 lbs (a 35 ton shackle, used rarely) Hydraulic tools – (hydro container – 17 lbs. and Ram – 37 lbs.)
Knee to Waist Level Lifting		H	M			As above
Waist to Waist Level Lifting		H	M	L		As above
Waist to Chest Level Lifting		M		L		Mini pipe stand – 22 lbs. Hand tools (hammer – 1 lb.) Supports – 25 lbs. 20ft. chain, 1 ½ ton capacity chain fall – 45 lbs. (length of chain and capacity can vary, making it weigh less or more) ¾ ton capacity come along – 20 lbs. 3 ton beam clamp – 22 lbs. Shackle – 17 lbs.
Waist to Shoulder Level Lifting		M		L		Hand tools (hammer – 1 lb.) ¾ ton capacity come along – 20 lbs. 3 ton beam clamp – 22 lbs. Shackle – 17 lbs. Supports – 25 lbs.
Waist to Overhead Level Lifting			L			Hand tools (hammer – 1 lb.) ¾ ton capacity come along – 20 lbs. 3 ton beam clamp – 22 lbs. Shackle – 17 lbs

PDA Sections

- Photos of Tasks and Work Environment

PHOTOS OF TASKS AND WORK ENVIRONMENT

Figure 1: A large pipe system that has been assembled, placed, secured and temporary secured in some places for transportation in a module.

Figure 2: A smaller pipe system that is being assembled while sitting on two pipe stands (one on each end). Note the various valves being used in this system.

Figure 3: A valve with casket that will be secured once the next spool in the system is connected.

Figure 4: Two pipes that have been temporarily secured with wire ropes and clamps (lashing).

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Panel Q&A

- **Julia P. Reid, B. Mgmt. (D Hons), CHRP**– Director, Life Mark Health Occupational Health & Wellness Services (Canada)
- **Dave Hagen** – Chemco. Vice President, Health, Safety and Environment.
- **Larry Jones** –Ledcor Vice President Corporate Health, Safety and Environmental Protection
- **Joe McFadyen** – Construction Labor Relations