

PHYSICAL DEMANDS ANALYSIS (EXAMPLE)

UNDERGROUND PIPE LAYER

JOB DESCRIPTION

TASK #	TASK DESCRIPTION	% OF SHIFT
1	Removing equipment and tools from nearby site storage, ensuring proper site measurements are reviewed with crew and review tasks for the day. Prepare site for day's work.	5%
2	With help from the excavator, move trench walls and ladder, measure appropriate placement of pipe, lay pipe down in correct position/placement, checking pipe joints and secure pipe using pea gravel.	95%

*The physical demands may vary depending on company and location.
Confirm this physical demands analysis is an accurate representation of the specific job.*

ITEMS HANDLED

- Pick (8 lb.)
- Surveying Equipment (15 lb.)
- Sledgehammer (3 lb.)
- Ladder (46 lb.)
- Leveller (2 lb.)
- Shovel (4 lb.)
- Crowbar/Prybar (18 lb.)
- Grease Bucket (10 lb.)
- Cable Slings
- Trench Walls/Box
- Bucket of Pins - approximately 5 pins (16 lb.)
- Cut-off saw

PERSONAL PROTECTIVE EQUIPMENT

- Work Boots
- Hard hat
- Gloves
- Coveralls (High Visibility stripes)
- Safety goggles

ENVIRONMENTAL EXPOSURE

Works inside and outside with exposure to all weather conditions including uneven, wet, or icy ground.

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JOB TITLE	UNDERGROUND PIPE LAYER	LENGTH OF SHIFT (HRS)	8
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JOB DESCRIPTION

The worker is required to help the excavator lay pipe underground within trench walls, guiding the pipe down to the correct location and securing the pipe.

PHYSICAL JOB DEMANDS - Grade using a scale of 0 - 4

0 = NOT REQUIRED	1 = SELDOM REQUIRED: < 5%	2 = MINOR REQUIREMENT: 5-33%
-	Less than 30 minutes per day or not daily	30 minutes up to 3.5 hours per day or 1 repetition every 30 minutes
3 = OCCASIONAL REQUIREMENT: 34-66%	4 = FREQUENT REQUIREMENT: 67-100%	
3.5 hours up to 6.5 hours per day or 1 repetition every 2 minutes	6.5 hours per day up to shift length or 1 repetition every 30 seconds	

INSTRUCTIONS: Place an X under number 0,1,2,3 or 4 to identify the frequency of each body demand or exposure.

PHYSICAL JOB DEMANDS	0	1	2	3	4	DESCRIBE THE TASK(S) PERFORMED
WHOLE BODY DEMANDS						
SITTING	X					-
SITTING WITH VIBRATION/JARRING	X					-
DRIVING	X					-
STANDING			X			Waiting for excavator to transport pipe and pea gravel into trench box, communicating with crew, while in trench box, on pea gravel.
RUNNING	X					-
WALKING						
LEVEL	X					-
UNEVEN GROUND				X		On site in trench box, gravel and dirt throughout site, pea gravel, in trench box, etc.
SLOPES / RAMPS	X					-
CLIMBING						
REGULAR STAIRS	X					-
STEEP STAIRS	X					-
LADDERS			X			In and out of trench box.
OTHER	X					-
LOW LEVEL WORK						
KNEELING		X				Checking pipe joints.
SQUATTING	X					-
CRAWLING	X					-

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PHYSICAL JOB DEMANDS	0	1	2	3	4	DESCRIBE THE TASK(S) PERFORMED
SPECIFIC BODY DEMANDS						
NECK MOVEMENTS						
BENDING						
SUSTAINED				X		Laying pipe, checking pipe joints, installing trench box, using various equipment in trenches to lay pipe, shovelling pea gravel, communicating to excavator or co workers above.
REPETITIVE	X					-
TWISTING						
SUSTAINED	X					-
REPETITIVE	X					-
TRUNK MOVEMENTS						
BENDING						
SUSTAINED	X					-
REPETITIVE				X		Checking pipe placement, level of pipe, shovelling pea gravel, placing pins into trench walls, installing pipe.
TWISTING						
SUSTAINED	X					-
REPETITIVE				X		Shovelling pea gravel.
SHOULDER MOVEMENTS						
OVERHEAD			X			Handing off equipment and tools to co workers above, using ladder.
FORWARD REACHING				X		Moving and adjusting trench boxes with excavator, laying, and adjusting pipe position with excavator, hammering pins into trench box, retrieving, and using surveying equipment to lay pipe, using various equipment, site preparation and site clean up, shovelling pea gravel around pipe.
GRIPPING DEMANDS						
DOMINANT HAND						
REPETITIVE					X	Moving and adjusting trench boxes with excavator, cut-off saw while cutting pipe, laying and adjusting pipe positioning with excavator, hammering pins into trench box, using surveying equipment to lay pipe, using various equipment, site preparation and site clean up, shovelling pea gravel around pipe.
CONTINUOUS	X					-
NON-DOMINANT HAND						
REPETITIVE					X	Moving and adjusting trench boxes with excavator, cut-off saw while cutting pipe, laying and adjusting pipe positioning with excavator, hammering pins into trench box, using surveying equipment to lay pipe, using various equipment, site preparation and site clean up, shovelling pea gravel around pipe.
CONTINUOUS	X					-
FINGER DEXTERITY	X					-

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PHYSICAL JOB DEMANDS	0	1	2	3	4	DESCRIBE THE TASK(S) PERFORMED
MANUAL HANDLING DEMANDS						
LIFTING						
LIGHT (MAX 20 LB / 9 KG)			X			Lifting shovel, leveller, prybar/crowbar, pick, cut-off saw, cable slings, grease, etc. around site and into trench box, lifting ladder and surveying equipment from trench box to coworkers above, shovelling pea gravel.
MEDIUM (MAX 50 LB / 22.5 KG)		X				Ladders up to 46 lb.
HEAVY (MAX 100 LB / 45 KG)	X					-
VERY HEAVY (OVER 100 LB / 45 KG)	X					-
CARRYING						
LIGHT (MAX 20 LB / 9 KG)			X			Carrying bucket of pins, bucket of grease, surveying equipment, sledgehammer, leveller, shovel, cable slings, etc. into trench box (dependent on workers preferred method of carrying), during site preparation and clean up.
MEDIUM (MAX 50 LB / 22.5 KG)		X				Ladders up to 46 lb. – can be two people.
HEAVY (MAX 100 LB / 45 KG)	X					-
VERY HEAVY (OVER 100 LB / 45 KG)	X					-
MOBILE PUSHING						
LIGHT (MAX 20 LB / 9 KG)	X					-
MEDIUM (MAX 50 LB / 22.5 KG)	X					-
HEAVY (MAX 100 LB / 45 KG)	X					-
VERY HEAVY (OVER 100 LB / 45 KG)	X					-
MOBILE PULLING						
LIGHT (MAX 20 LB / 9 KG)	X					-
MEDIUM (MAX 50 LB / 22.5 KG)	X					-
HEAVY (MAX 100 LB / 45 KG)	X					-
VERY HEAVY (OVER 100 LB / 45 KG)	X					-
STATIC PUSHING/PULLING						
LIGHT (MAX 20 LB / 9 KG)	X					-
MEDIUM (MAX 50 LB / 22.5 KG)	X					-
HEAVY (MAX 100 LB / 45 KG)				X		Positioning pipe in trench box, hammering pins into trench box, spreading pea gravel with shovel.
VERY HEAVY (OVER 100 LB / 45 KG)	X					-