



## MEMORANDUM

**To:** Municipal officials  
**From:** VLCT PACIF Loss Control  
**Date:** October 4, 2016  
**Re:** Sample “Essential Function Job Analysis” of highway department employees in a small Vermont municipality

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Accurate and up-to-date job descriptions are important for employers as well as employees. A functional job analysis details the physical requirements of a certain job and should be used in creating that job’s official description. The following report of a functional job analysis was commissioned by VLCT PACIF to help its smaller members as they improve their Highway Department job descriptions. **An equivalent report for large municipalities is also available: please use the sample that best fits your municipality.** The appropriate elements of both reports have already been incorporated into two of the Job Description Templates developed by VLCT’s Human Resources Assistance Program – one for Highway Supervisors and the other for Highway Maintenance Workers. We are providing the attached report as a reference document so VLCT members can examine their current job descriptions (directly for highway workers and indirectly for other positions) and make improvements with respect to *essential tasks and the physical requirements associated with them*. Such a review is likely to both **improve the employer’s level of ADA compliance** and become a **valuable part of an effective Transitional Return To Work program** for injured employees.

The attached report was prepared by the Vermont company Injury & Health Management Solutions (IHMS) after analyzing the essential job functions of highway maintenance employees at one of Vermont’s small municipalities. When using this sample document to help update your own municipality’s job descriptions, please remember the following:

- It is no longer enough for a job description to say that the job has “strenuous physical demands.” Rather, it must classify and quantify the types of physical activity that the job requires and indicate how often each type is likely to occur. The IHMS report is very detailed: under the FUNCTIONAL column heading, activities are classified and measured, and the columns next to it indicate frequency: O = Occasional (up to 1/3 of work time), F = Frequent (1/3 to 2/3 of work time), and C = Constant (2/3 to all of work time). The job description can be less detailed but should still be informative: for example, it could explain a lifting requirement as “frequent lifting of 50 lbs and occasional lifting of 90 lbs.” This higher level of detail is one requirement of the ADA.
- The attached report is specific to the one small municipality that IHMS analyzed. While we hope the tasks and duties in the sample report are closely aligned with your municipality’s jobs, it is your responsibility to **review your municipality’s job requirements, tasks, and duties and tailor your job descriptions to accurately describe what your employees actually do.** Take care to fill any gaps and correct any differences between the sample and your municipality. In some cases, VLCT Loss Control staff may be able to assist with this.

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VLCT Employment  
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Fund, Inc.

As always, feel free to contact VLCT with questions as you work through this process.

# IHMS ESSENTIAL FUNCTION JOB ANALYSIS

**COMPANY:** VLCT

**EVALUATOR:** Charles Alexander OTR/L, CEES

<b>Job Title</b>	Highway Maintenance Worker or Equipment Operator	<b>Dept.</b>	Small Town Municipality <i>(Based on evaluation at Underhill Public Works)</i>	<b>DOT #</b>	899.684-046
				<b>O'NET#</b>	47-4051.00
<b>Work Hours</b>	Work hours vary. Employees typically work four 10 hour days (6:30am-5pm) in the summer and four 8 hour days the rest of the year (6:30-3pm) the rest of the year. 30 min. (2) 15 min breaks AM/PM. Overtime can be up to 15-20 hours or more during the winter or with emergency road repair during storms <i>(based on last 6 years of work history)</i> .				
<b>Job Purpose</b>	Responsible for the maintenance and repair of town highways and equipment.				
<b>Essential Functions (EF)</b>	<ol style="list-style-type: none"> <li>1. Driving/Plowing Town Roads/Grading Roads</li> <li>2. General Truck Maintenance-tire change, fluids, lubrication.</li> <li>3. Road Repair-Trash Removal, Culverts Repair/Clean, Patching, Sweeping, Flagging, Bridge Wash, Power Washing, Laying Gravel, Tree and Brush Removal, Stumping and Ditching, Road Side Mowing.</li> <li>4. Cut brush/trees, weed trimming, Zero Turn Mower</li> <li>5. Power Tool Use- jack hammer, chain saws, trimers and all basic hand tools</li> <li>6. Heavy Equipment Operation-, Grader, Street Sweep, loader/excavator and chipper.</li> <li>7. Paperwork and work orders.</li> </ol>				
<b>Comments</b>	<p>Due to the small size of this team employees will often work in teams of 2 or independently to be able to carry out essential job tasks. Employees have a high exposure to lifting requirements at times due to the limited staffing to perform jobs with a reasonable expectation of being able to lift nearly 100 pounds to waist level and 50 pounds to shoulder/overhead to independently complete equipment maintenance and field work. Crews maintain 45 miles of dirt roads including grading at 2mph on a 5 pass system to complete 1 road. Ability to perform driving of large equipment for 8-14 hours per day is essential for this position. Workers must possess a Class A or Class B CDL.</p> <p><b>Equipment:</b> Tools (wrenches/impact gun/shovels/racks/jack hammer/chain saw/etc.), Heavy Machinery (loaders/grader/roller/sweeper/dump truck/excavator, etc.), repair equipment, hoses, etc .</p> <p><b>Work Area:</b> Garage, Truck, Outside on town roads.</p> <p><b>Item Weights Measured:</b> 7' grader blade: (138#), 11' plow blade: (136#), stinger bit for grader: (99#), road side water pump: (52#), Chain Saw (18-21#), culverts/pipes (&lt;100#), chains (40-70#), signs/barriers (30-45#), calcium chloride (50#), posts (95#), pail of bolts (95#), bag of cement (80#), oil (50#), plow shoes (35-75#), shovels with dirt/asphalt (30#), wood/limbs (15-50#), equipment (5-30#), hay bales (60#), Patch (55#), bags chloride (50#), Portable Post Pounder (125#), Paint (75#). Tires (&gt;100#), etc.</p> <p><b>Work Capacity:</b> HEAVY work capacity with the ability to sit for 4 hours sustained and up to 16+ hours a day during snowstorms. Must be able to go from a Sedentary driving position for several hours to manual labor. Must be able to have the mind set to switch to another job at a moment's notice. Work in all-weather condition. Ability to work at all levels, perform constant reaching, sit or stand on a Constant basis and perform physical requirements listed below are essential to be able to perform all job tasks.</p>				

FUNCTIONAL ACTIVITY	O	F	C	COMMENTS	EF
<b>STRENGTH</b>				<b>HEAVY</b>	
Lifting (in pounds) *Floor to Waist	99*	50	25	See weights above- 99# chosen for replacing stinger bits and other items that weigh near 100# that may be handled independently. Some weights are higher others are lower. Weights and items above 99 pounds are typically handled by 2 or more employees. Some heavier items such as grader and plow blades may be lifted and carried horizontally by 1 person but installed by 2 employees.	2,3,4,5
*Waist to Overhead	50	25	--	Back of the truck is 42" (shovel and lift), tools and signs stored overhead.	2,3,4,5
Carrying (in lbs.)Up to 50	80*	50		(80# bag of cement) - Carts not available in field—Can be up to 500'	2,3,4,5,
Pushing (0"-overhead)	80	35	5	Ability to maneuver equipment in the garage and position culverts, move limbs etc. in field (80#). Steering (L) controls (R) and levers on truck/machinery—equipment on the truck, up to 43" to truck, overhead to pull on limbs. Constant controls when driving.	1,2,3,4,5,6
Pulling (0"-overhead)	80	35	5	Hand rails to get on/off trucks, carts, equipment. Spreading forks on excavator, positioning plows and equipment that is not wheeled in garage.	1,2,3,4,5,6
<b>POSITION</b>					
Sitting			X	Trucks/Machinery-up to 4 hours sustained—long winter hours up to 16 hours	1,6,7
Standing			X	More in spring/summer and certain tasks—flagging the most-4+ hours sustained. Employees may be on their feet 8-10 hours a day. Ability to stand and work over uneven or slippery terrain is essential.	2,3,4,5
Walking		X		More spring/summer-uneven terrain, ditches, hill sides, brooks/streams and slippery ground—2-3 miles. Walking often performed with tools and equipment in hand.	2,3,4,5
<b>MOBILITY</b>					
Spinal Rotation/Neck		X		To check side mirrors/plows when driving machinery at least 60 degrees.	1,2,3,4,5,6
Climbing		X		Steps 16", 34" and 50" into truck and machinery/equipment, uneven terrain and hills.	1,2,3,6
Balancing/Coordination		X		Slippery surfaces, on equipment, uneven terrain	1,2,3,4,5,6
Stooping/Crouch/Kneel-Low Level Work		X		To perform low level repair work- can be occasional when using machinery or driving. More in Spring and Summer. Bending/crouching for low level chain saw, ditch, planting.	2,3,4
Reaching • forward/outward			X	Left reaching (<20") on Right 21-30" to run plow controls. Must be able to drive plow truck with 1 hand (Left) while working plow controls (right).	1-6
• overhead		X		Grab bars one equipment up to 65", signs-overhead, equipment-overhead to 72"	2,3,4,5

<b>DEXTERITY (varies)</b>			
Handling		X	
Fingering/Pinching/Fine Dexterity	X		
<b>COMMUNICATION</b>			
Talking-clarity	X		
Hearing		X	
Seeing			
• Near (<20")			X
• Far (>20')			X
<b>SKILLS</b>			
Problem Solving/Critical		X	
Judgment/Decision Making			
Spatial Orientation/Depth Perception		X	
Peripheral Vision		X	
Reaction Time			X

Requires a HEAVY capacity of at least 51# frequently-for most tasks. Current work force dominant hand (115#-150#). Need at least 80# to meet job demands.	1,2,3,4,5,6
Computer work, small controls and repair and sign work to turn bolts and small parts Strength: 20# to tighten sign bolts. Move levers and push buttons on controls.	1,6,7
On radio and in person to ensure completion of task accurately and for safety Radio and fellow employees, car horns	1,2,3,4,5,6
To observe controls	1,2,3,4,5,6
For safe driving	1,2,3,4,5,6
Troubleshooting problems, thinking on ones feet, safety	1,2,3,4,5,6
To ensure safety of self and others	1,2,3,4,5,6
Vital for plowing and machine operation for safety	1,2,3,4,5,6
For safe driving and equipment operation and accident avoidance	
To prevent accidents especially when driving and flagging	1,2,3,4,5,6

O = Occasional (1-33% of shift) F = Frequent (34-66% of shift) C = Constant (67-100% of shift)

Final 06-09-16 CJA