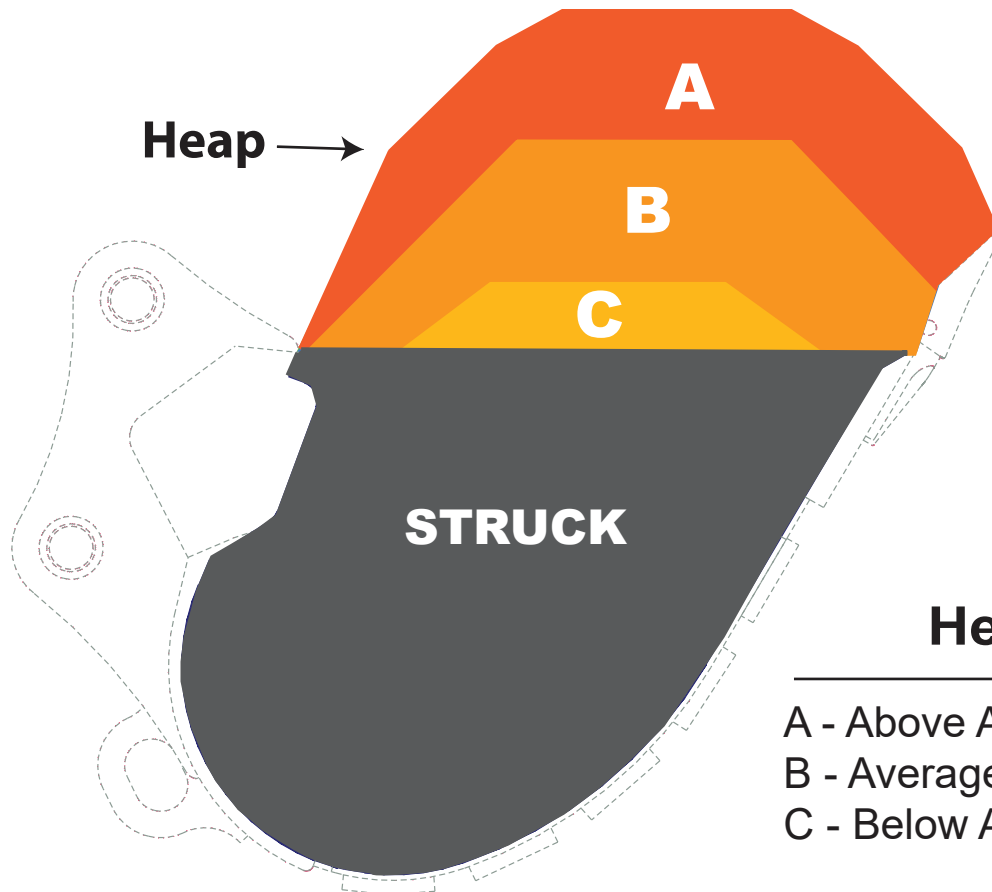


# BUCKET HEAP CHART



## Heap Key

- A - Above Average 100-120%
- B - Average 80-100%
- C - Below Average 65-80%

**For Payload Calculation:  
Average Bucket Payload =  
(Heaped Bucket Capacity) x (Bucket Fill Factor)**

Material	Fill Factor Range (Percent of heaped bucket capacity)
Moist Loam or Sandy Clay	A - 100-120%
Sand and Gravel	B - 80-100%
Hard, Tough Clay	C - 65-80%
Rock - Well Blasted	50-65%
Rock - Poorly Blasted	40-50%

# MATERIAL WEIGHTS



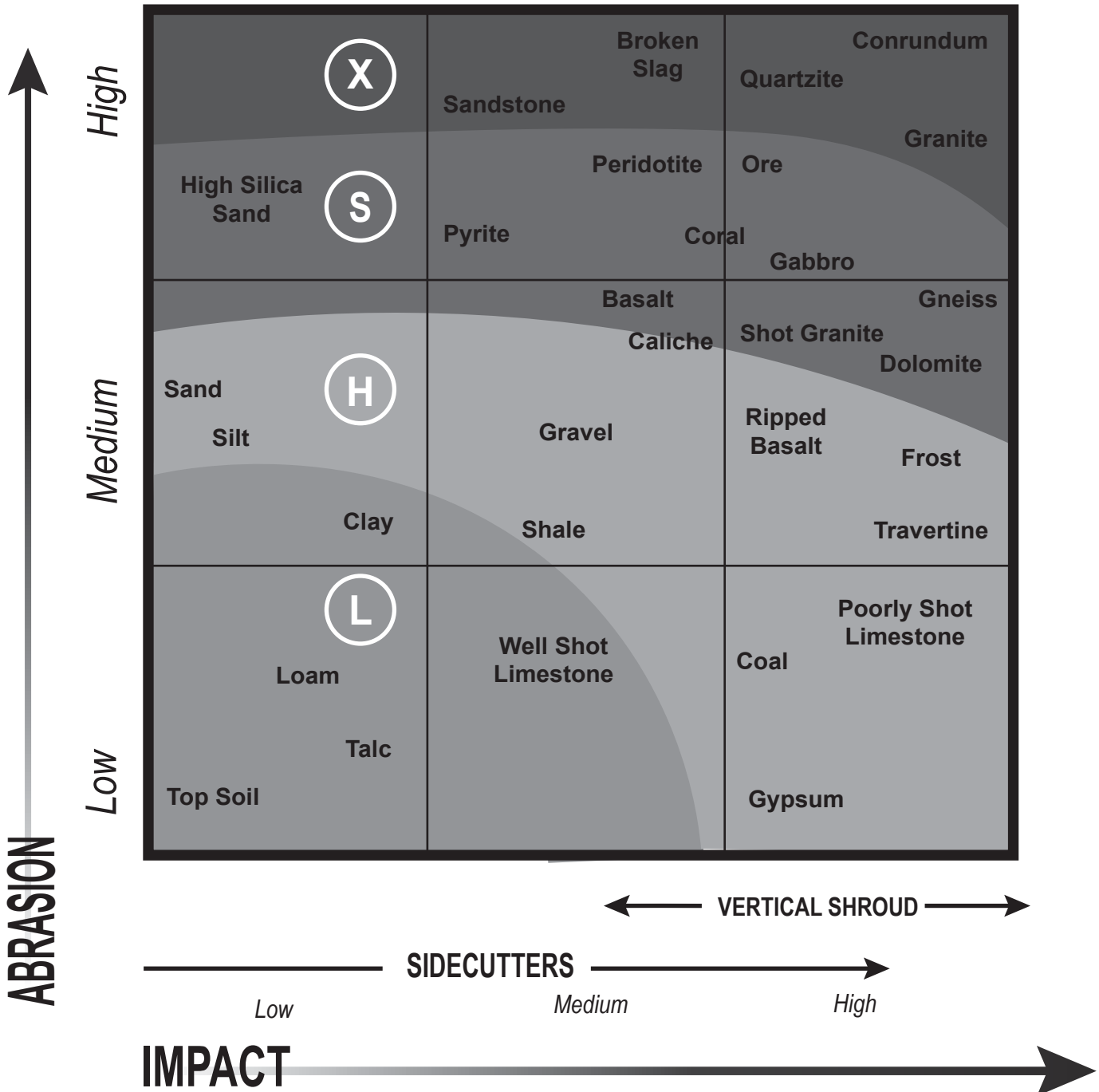
## Material Weight in Lbs

Basalt, Granite, Piled	2,592	Humus	945	Sand, Silica, Dry	2,700
Cement, Portland, Loose	2,565	Ice, Solid	1,549	Sand, Gravel, Dry, Packed	3,105
Charcoal, Wood Pulp	715	Ice, Broken or Crushed	1,080	Sand or Gravel, Excavated in Water	1,620
Cinders (Coal, Ashes)	1,134	Incinerator Refuse, Average	500	Sand or Gravel, with Clay, in Water	1,755
Cinders, Blast Furnace	1,539	Iron, Cast	4,590	Sawdust, Dry	540
Clay and Gravel, Dry	2,700	Iron Ore, Hematite, in Ground	4,590	Sawdust, Ground	540
Clay, Excavated in Water	2,160	Iron Ore, Hematite, Loose	4,050	Sandstone, Quarried	2,214
Clay, Compact, Solid	2,943	Iron Ore, Magnetite	8,505	Scale, Mill, Wet	4,050
Clay, Dry in Clump	1,701	Iron Slag	4,644	Shale, Broken Crushed	2,295
Clay, Ground	2,295	Lead Oxides	2,700	Slag, Steel Mill	2,214
Clay, Fire, Powdered	1,620	Lime, Burned, Pebble	1,431	Slate, Crushed	2,295
Clay, Gray, Granular	2,160	Lime, Mason	459	Snow, Fresh	270
Coal, Anthracite	1,458	Limestone, Crushed	2,295	Snow (Moistened), Compacted by Rain	1,080
Coal, Anthracite, Broken	2,025	Limestone, Various Sizes	2,835	Sodium Aluminate, Ground	1,944
Coal, Chestnut	1,242	Limestone, Coarse, Sized	2,646	Stone, Riprap, in Water	1,755
Coal, Bituminous Size, Wet or Dry	1,215	Limestone and Marble, Loose	2,700	Stone or Gravel, 1 1/2" to 3" Size	2,430
Coal, Sludge, Dry	1,674	Mill Scale	7,398	Stone or Gravel 3/4" Size	2,646
Coal, Sludge, Wet	2,079	Mud, Wet	2,916	Sugar, Brown	1,215
Coke, Loose	756	Nickel Ore	4,941	Sugar, Granulated	1,350
Coke, Petroleum	945	Oyster Shells	2,160	Sugar, Raw	1,620
Coke, Refiners	1,026	Peat, Dry	837	Sulpher, Coarse	2,052
Copper, Sulphate, Ground	2,025	Peat, Wet	1,728	Sulpher, Lump	2,241
Dolomite, Pulverized	1,242	Pebble, 1" or Larger	2,565	Tankage, Ground	1,323
Earth, Common Loam, Dry	2,052	Phosphate, Ground	1,377	Tin, Oxide, Ground	2,700
Earth, Fullers, Raw	1,134	Phosphate, Fla. No 20	2,511	Wood, Chips, Dry	783
Earth, Mud, Wet	2,916	Pyrites	6,210	Wood, Cypress	864
Earth, Mud, Packed	3,105	Riprap, Limestone	2,241	Wood, Eastern Fir	675
Garbage, Average	675	Riprap, Sandstone	2,430	Wood, Hemlock Dry	783
Granite, Broken	2,592	Riprap, Shale	2,835	Wood, Oak, Live, Dry	1,593
Granite, Solid	4,725	rock, Florida Phosphate No. 20	2,511	Wood, Pine, White, Dry	729
Gravel	2,970	Salt, Rock, Crushed	2,025	Wood, Pine, Yellow, Dry Short Leaf	1,026
Grit, Dry Sewage	999	Salt, Coarse	1,269	Wood, Pine Yellow, Dry Long Leaf	1,188
Gypsum	3,834	Sand, Sized	2,565	Wood, Sawdust, Dry	500
Gypsum, Ground	1,512	Sand, Fine	2,430	Zinc, Ore, Crushed	4,320
Hardpan, Loosened	2,943	Sand, Full of Water	3,240	Sugar Cane, Cut	472
Hog Fuel, Wood Chips, Damp	500	Sand, Dry	2,835		

# EXCAVATOR & LOADER BUCKET SELECTOR



(L) LIGHT DUTY
(H) HEAVY DUTY
(S) SEVERE DUTY
(X) EXTREME DUTY



# EXCAVATOR & LOADER BUCKET SELECTOR



EXCAVATORS						
<b>L</b> Light Duty	Tilting Bucket	Ditching & Grading Bucket	Heavy Duty Bucket	PowerGrip Bucket		
<b>H</b> Heavy Duty	Heavy Duty Bucket	PowerGrip Bucket	Severe Duty Bucket	Skeleton Rock Bucket	Long Reach Bucket	Hydraclamp Bucket
<b>S</b> Severe Duty	Severe Duty Bucket	Skeleton Rock Bucket	Long Reach Bucket	Extreme Duty Bucket	Hydraclamp Bucket	
<b>X</b> Extreme Duty	Extreme Duty Bucket					

LOADERS										
<b>L</b> Light Duty	High Perf. Bucket	High Tip Bucket	Aggregate Bucket	Two Pass Bucket	Light Material Bucket	Grapple Bucket	Quad Bucket	Grading Rake	Grapple Rake	Skeleton Rock Bucket
<b>H</b> Heavy Duty	High Perf. Bucket	High Tip Bucket	Aggregate Bucket	Two Pass Bucket	Light Material Bucket	Grapple Bucket	Quad Bucket	Grading Rake	Grapple Rake	Skeleton Rock Bucket
<b>S</b> Severe Duty	Skeleton Rock Bucket	Severe Duty Bucket								