

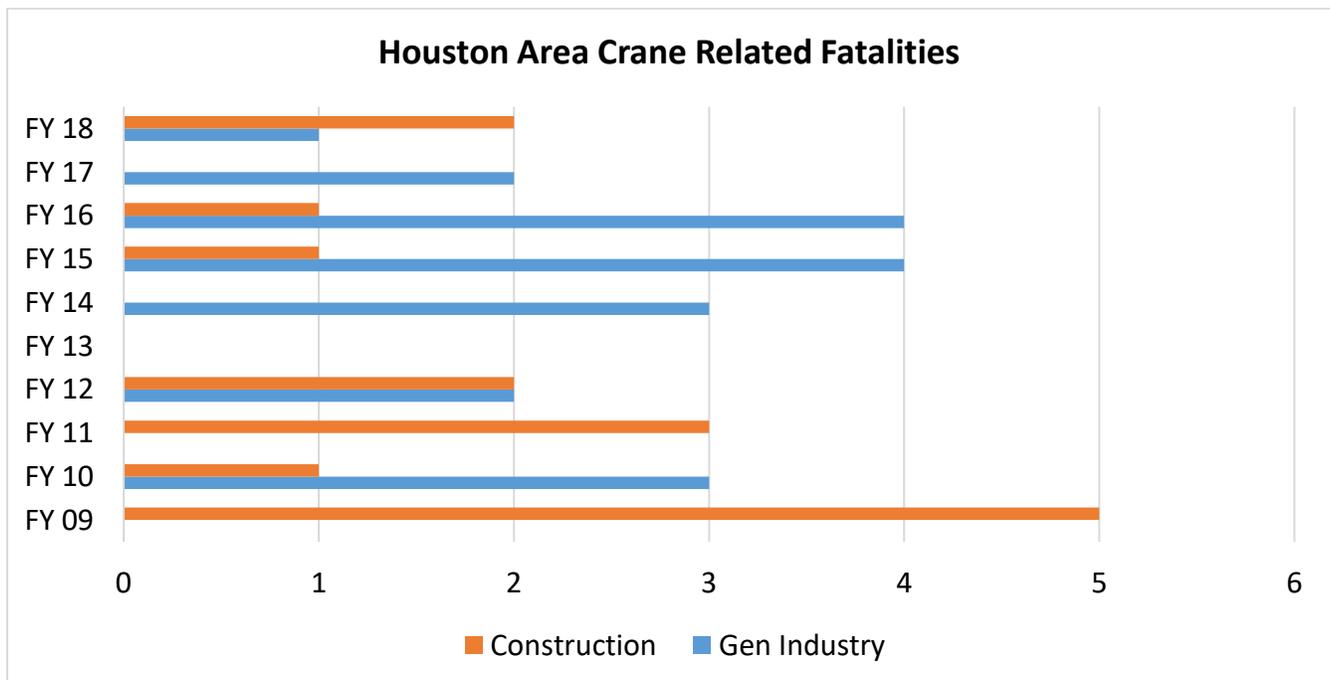
Houston Area Incidents Related to Cranes Operation* (Nov 2018)

Crane operations include any operation where the crane appeared to be an integral part of the work being performed at the time of the incident. 'Houston Area' is the portion of SE Texas covered by the Houston OSHA Area Offices.

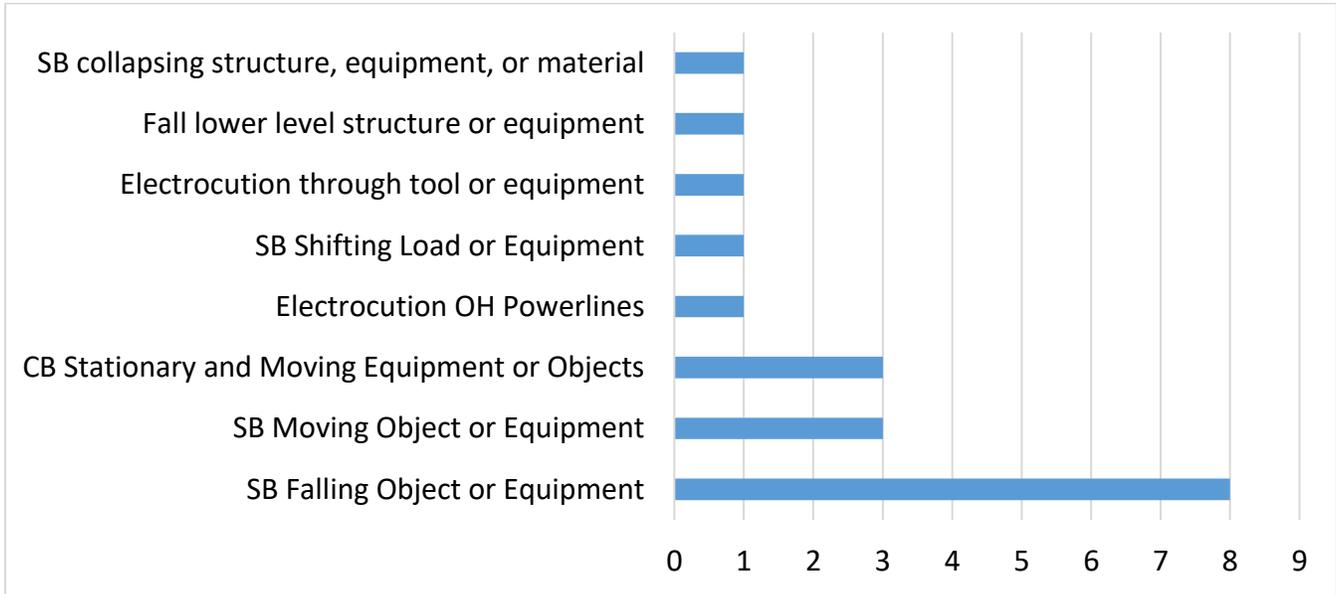
FY 09 – FY 18 Houston Area Crane Related Fatalities

	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	TOTAL
Cnst Total	5	1	3	2	0	0	1	1	0	2	15
Struck By	2	1	1	1						1	6
Caught Btwn	1		1	1			1	1			5
Electrocution										1	1
Falls	2		1								3
Gen Ind Total	0	3	0	2	0	3	4	4	2	1	19
Struck By		3		2		1	3	2	1	1	13
Caught Btwn						1	1		1		3
Electrocution						1		1			2
Falls								1			1
ALL TOTAL	5	4	3	4	0	3	5	5	2	3	34

FY 09 – FY 18 Houston Area Crane Related Fatalities Gen Industry vs Construction



FY 09 – FY 18 Houston Area Crane Related General Industry Fatalities by Event



FY 09 – FY 18 Houston Area Crane Related General Industry Fatalities by NAICS

NAICS	INDUSTRY	INCIDENTS
488320	Marine Cargo Handling	3
423510	Metal Service Centers and Other Metal Merchant Wholesalers	2
488390	Other Support Activities for Water Transportation	2
213111	Drilling Oil and Gas Wells	1
213112	Support Activities for Oil and Gas Operations	1
323114	Commercial Screen Printing	1
332618	Other Fabricated Wire Product Manufacturing	1
333120	Construction Machinery Manufacturing	1
333132	Oil and Gas Field Machinery and Equipment Manufacturing	1
488310	Port and Harbor Operations	1
541990	All Other Professional, Scientific, and Technical Services	1
424690	Other Chemical and Allied Products Merchant Wholesalers	1
336611	Ship Building and Repairing	1
484110	General Freight Trucking, Local	1
332420	Metal Tank (Heavy Gauge) Manufacturing	1

FY 18 Houston Area General Industry Crane Related Fatality Narratives

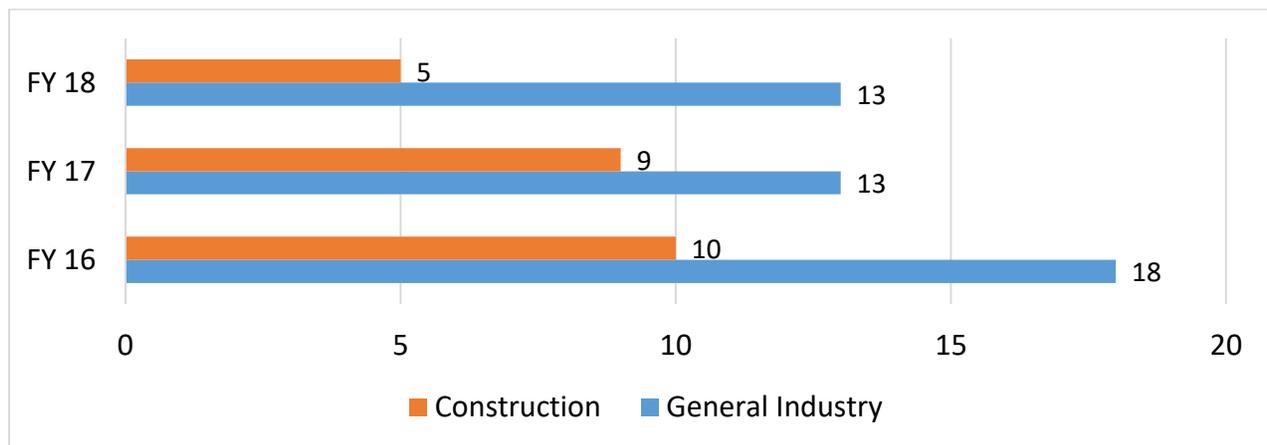
Struck by collapsing structure, equipment, or material

- While erecting a 500,000 gallon water tower, a worker un-hooked the crane from the steel structure/sidewall when it collapsed inside the water tank with employee connected to it killing him and also striking another employee working below breaking his back and fracturing his leg.

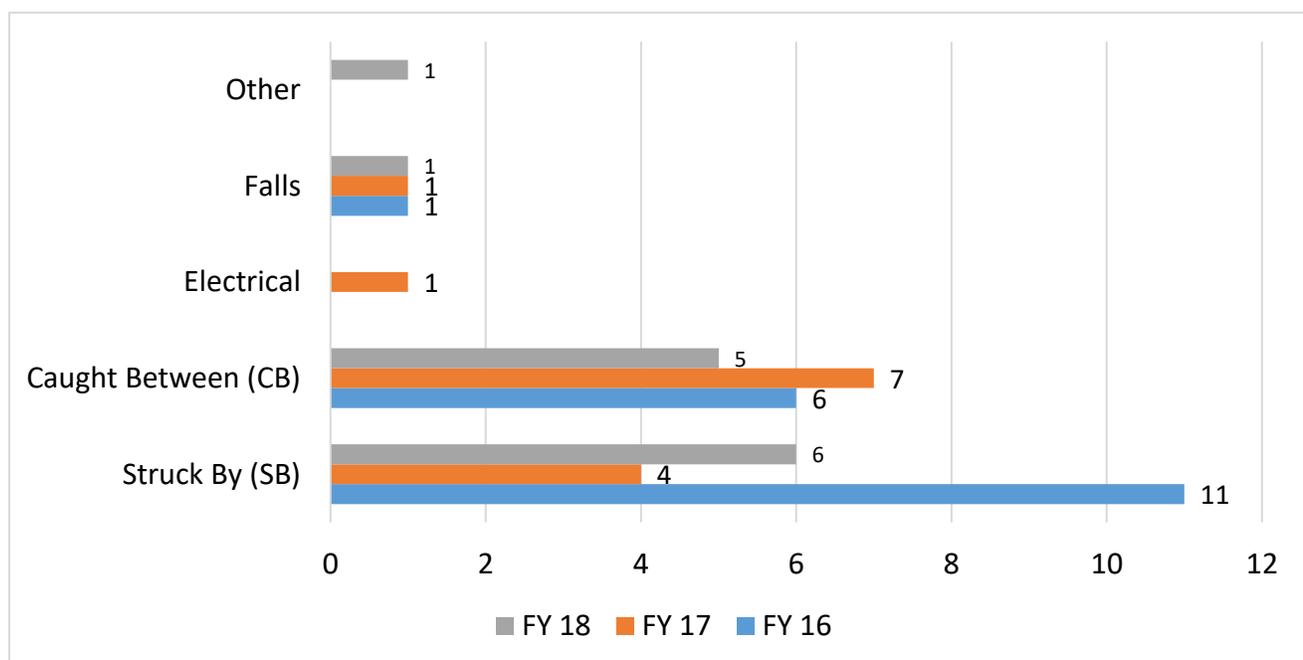
Serious Incident Reports (SIR)

Report (SIR) incidents include incidents of reported hospitalizations, amputations, or loss of an eye and there are three fiscal years of data. During those three years, in general industry and construction, there were about 68 crane related serious incidents reported to the Houston OSHA Offices. Looking at the types of serious incidents that occurred may help prevent future serious injuries and fatalities.

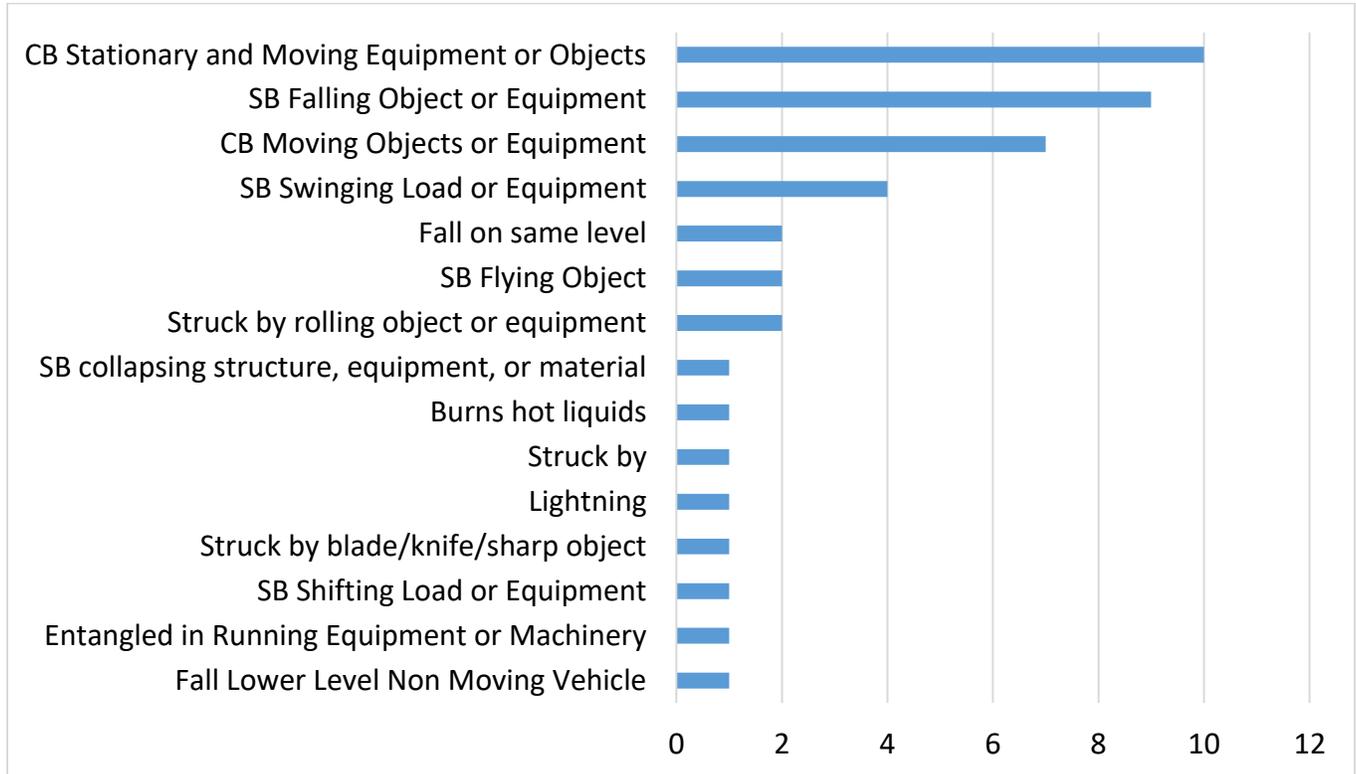
FY 16 – FY 18 Houston Area Crane Related SIR Reports



Houston Area Crane Related General Industry SIRs by Focus Four FY 16 – FY 18



General Industry Crane Operations SIRs by Event FY 16 – FY 18



General Industry Crane Related SIRs by 3-Digit NAICS FY 16 – FY 18

NAICS	INDUSTRY	SIRs
332	Fabricated Metal Product Manufacturing	11
488	Support Activities for Transportation	8
331	Primary Metal Manufacturing	5
333	Machinery Manufacturing	4
423	Merchant Wholesalers, Durable Goods	3
336	Transportation Equipment Manufacturing	2
339	Miscellaneous Manufacturing	2
811	Repair and Maintenance	2
22	Utilities	1
327	Nonmetallic Mineral Product Manufacturing	1
484	Truck Transportation	1
334	Computer and Electronic Product Manufacturing	1
493	Warehousing and Storage	1
213	Support Activities for Mining	1
561	Administrative and Support Services	1

General Industry Crane Related SIR Narratives FY 18

Burns hot liquids

- Contractor employees were cutting open a drum of coke at the same time as the injured employee was climbing stairs of the unit to reach the cab of his crane. The crane operator sustained first and second degree burns on face and wrist when he came in contact with pocket of steam and hot gasses that were released from the coker unit.

Caught between moving objects or equipment

- Employee was working at the terminal unloading a crane from a man basket. As he was taking the pin off the shackle to unhook his thumb got caught between in the shackle of the crane causing a partial amputation of tip to left thumb.

Caught between Stationary and moving equipment or objects

- An employee was using an overhead crane to move a bundle of product. He put his hand on the hook and started to lift the load and had the tip of his left ring finger pinched off between the load rigging and the hook.
- Employee was setting a work piece into a manual lathe using an overhead crane. While maneuvering the work piece his finger was pinched between the machine chuck jaws and the work piece severing the fingertip.
- Employee smashed fingertips of middle and ring fingers while trying to lift a steel plate using an overhead crane. Employee's middle and ring fingers of the right hand was caught between steel plate and steel block.
- Employee was hooking a forklift that was to be load in a vessel. The foreman signaled the crane operator to start the lift and the worker left ring finger was caught in the chain and was crushed and later amputated.

Fall on same level

- Employee was walking backwards while operating an overhead crane when he tripped over a pallet and fell fracturing his right elbow.

Struck by collapsing structure, equipment, or material

- Employee was operating a crane with a load of anchor chain and suffered a back injury when the crane tipped over.

Struck by falling object or equipment

- Employee was lifting a pipe approximately 36" long. The pipe slipped from the rigging, hit the floor, and bounced into his right lower shin fracturing his leg.
- Employee sustained an amputation of tip of pinky finger on the left hand when a piece of steel he was moving fell off a crane hook and landed on his left hand.

Struck by flying object

- Operator was using a crane and sling to support a part while changing the inserts. He was using a single leg of a double leg sling with a choker to support the part. The unused leg hung over the machine. As raised the crane it caused the unconnected sling leg to release and it struck him on the chin fracturing his jaw.

Struck by swinging load or equipment

- An employee was installing a motor using a bridge crane. When the stabilizing bolt was removed the motor swung and hit the employee face and chest and then swung back and hit him in the back.

Struck by

- An employee was making repairs to a cylinder on a crane. When the hydraulic line was removed, the pressure in the hose blew and cut the employee's left hand requiring surgery.

FY 18 Most Frequently Cited 1910.179 Overhead Cranes**

Standard	Cited	Narrative
1910.179(j)(3)	62	Periodic inspection. Complete inspections of the crane shall be performed at intervals as generally defined in paragraph (j)(1)(ii)(b) of this section, depending upon its activity, severity of service, and environment, or as specifically indicated below...
1910.179(j)(2)	37	Frequent inspection. The following items shall be inspected for defects at intervals as defined in paragraph (j)(1)(ii) of this section or as specifically indicated, including observation during operation for any defects which might appear between regular inspections...
1910.179(g)(1)(v)	30	Pendant control boxes shall be constructed to prevent electrical shock and shall be clearly marked for identification of functions.
1910.179(j)(2)(iii)	28	Hooks with deformation or cracks. Visual inspection daily; monthly inspection with a certification record which includes the date of inspection, the signature of the person who performed the inspection and the serial number, or other identifier, of the hook inspected. For hooks with cracks or having more than 15 percent in excess of normal throat opening or more than 10° twist from the plane of the unbent hook refer to paragraph (l)(3)(iii)(a) of this section.
1910.179(j)(2)(iv)	18	Hoist chains, including end connections, for excessive wear, twist, distorted links interfering with proper function, or stretch beyond manufacturer's recommendations. Visual inspection daily; monthly inspection with a certification record which includes the date of inspection, the signature of the person who performed the inspection and an identifier of the chain which was inspected.
1910.179(b)(5)	16	The rated load of the crane shall be plainly marked on each side of the crane, and if the crane has more than one hoisting unit, each hoist shall have its rated load marked on it or its load block and this marking shall be clearly legible from the ground or floor.

1910.179(m)(1)	14	Running ropes. A thorough inspection of all ropes shall be made at least once a month and a certification record which includes the date of inspection, the signature of the person who performed the inspection and an identifier for the ropes which were inspected shall be kept on file where readily available to appointed personnel...
1910.179(n)(3)(i)	14	The load shall be well secured and properly balanced in the sling or lifting device before it is lifted more than a few inches.
1910.179(l)(3)(i)	12	Any unsafe conditions disclosed by the inspection requirements of paragraph (j) of this section shall be corrected before operation of the crane is resumed. Adjustments and repairs shall be done only by designated personnel.
1910.179(j)(1)(ii)	7	Inspection procedure for cranes in regular service is divided into two general classifications based upon the intervals at which inspection should be performed. The intervals in turn are dependent upon the nature of the critical components of the crane and the degree of their exposure to wear, deterioration, or malfunction. The two general classifications are herein designated as "frequent" and "periodic" with respective intervals between inspections as defined below...
1910.179(l)(1)	7	Preventive maintenance. A preventive maintenance program based on the crane manufacturer's recommendations shall be established.
1910.179(n)(3)(vi)	7	The employer shall require that the operator avoid carrying loads over people.

*Fatalities and SIRs are logged or recorded in various mediums and reports are generated using various criteria. Late reporting, change in status, and other factors may affect the overall numbers over time. Houston specific data is edited to determine a count of fatalities/SIRs under OSHA jurisdiction and may change over time as records are updated. Narratives are rewritten for brevity and edited and may not reflect the final results of an investigation. Data in many cases is used 'as is'. The numbers and information are for accident prevention purposes and trending and is not intended to be a statistical study or evaluation. For questions email Jim Shelton at the HNAO at: shelton.james@dol.gov

** As search was made for all citations for 1910.179. Generally a Most Frequently Cited (MFC) is search just by Federal OSHA jurisdiction. In this case the search encompassed all jurisdictions. Whether some or all State-Planned states are included is not known. The larger number of citations issued 384 vs the 239 by Federal OSHA may give a better overall picture. The information is for general awareness of the types of violations being found.