

# **SELECTED FATALITY STUDY**

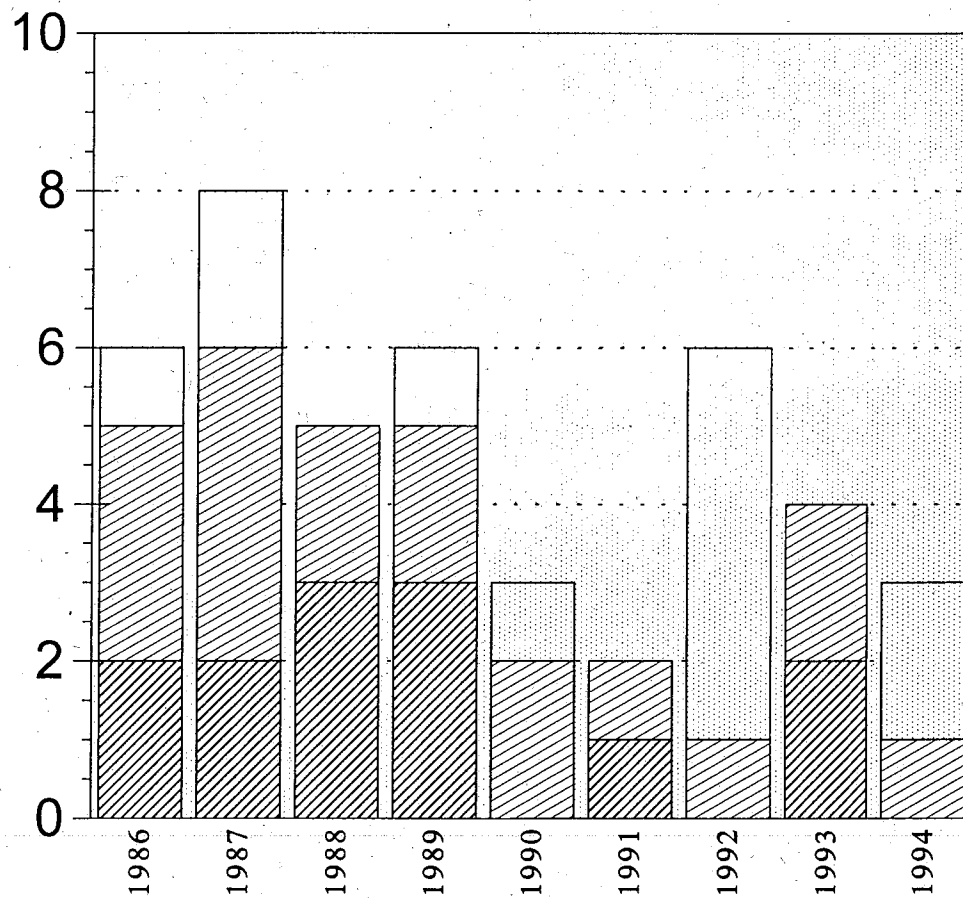
**Task Force For On-Track Safety**

**January, 1986 - September, 1994**

# OTS TASK FORCE STUDY

## Selected Fatality Incidents by Year - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



Working With 5 or More	1	2	0	1	1	0	5	0	2
Working With 2-4	3	4	2	2	2	1	1	2	1
Employee Working Alone	2	2	3	3	0	1	0	2	0

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

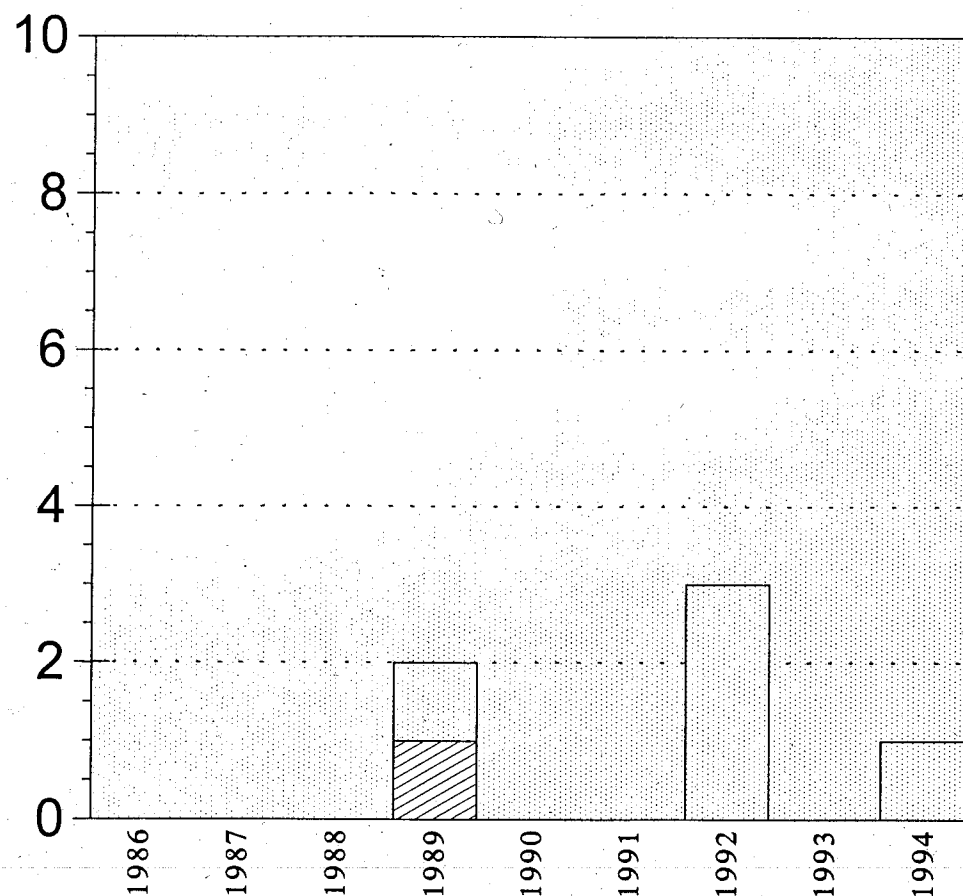
Source: FRA and NTSB Railroad Accident Files

Chart 11/14

# OTS TASK FORCE STUDY

Selected Fatality Incidents by Year (Within Limits) - January, 1986 to September, 1994

43 Total Incidents Involving 46 Fatalities - 4 Total Incidents Within Limits



Working With 5 or More				1			3		1
Working With 2-4				1					
Employee Working Alone	0	0	0	0	0	0	0	0	0

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

Source: FRA and NTSB Railroad Accident Files

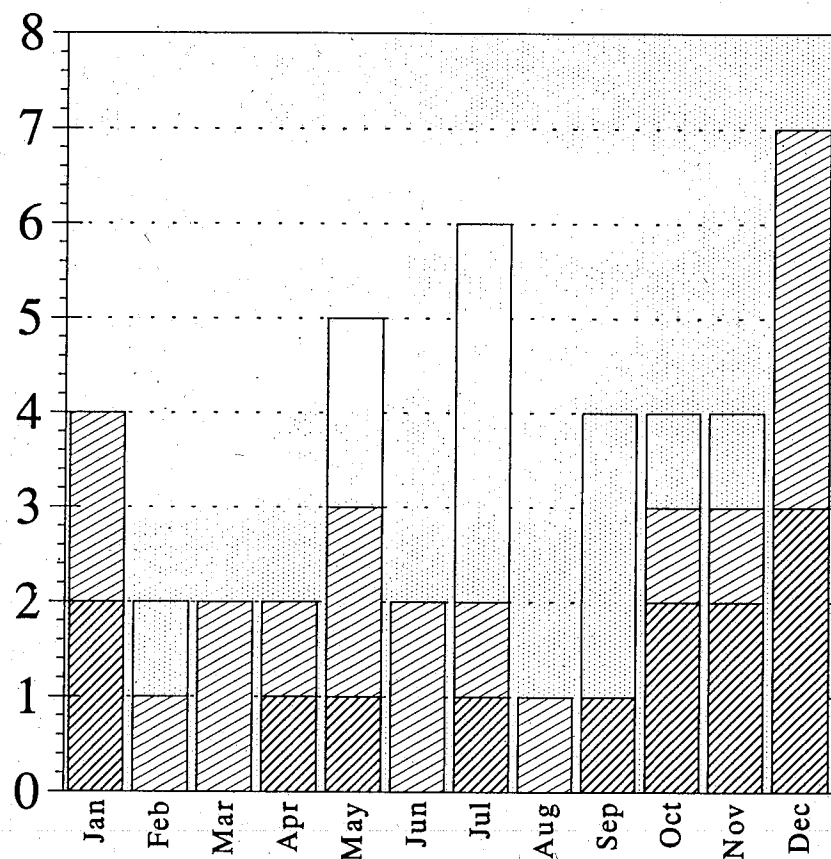
WITHIN LIMITS: Accident/Incident involved trains/OTE working under (within) same protection

Chart Date 11/14

# OTS TASK FORCE STUDY

## Selected Fatality Incidents by Month - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



Working With 5 or More		1		2		4		3	1	1	
Working With 2-4	2	1	2	1	2	1	1	1	1	1	4
Employee Working Alone	2			1	1			1	2	2	3

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

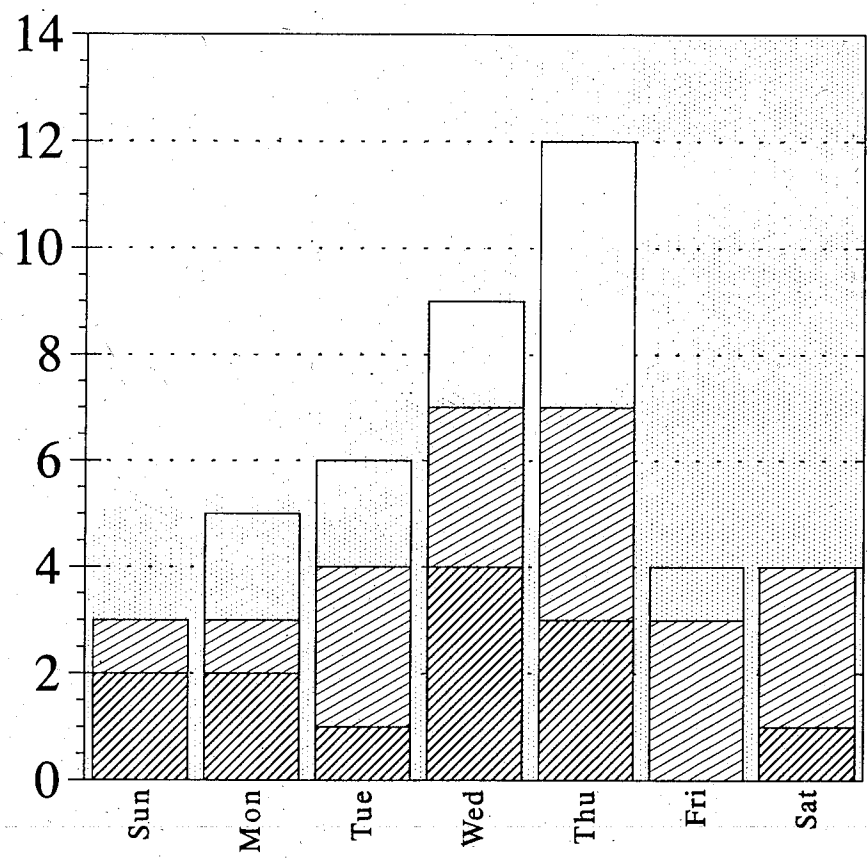
Source: FRA and NTSB Railroad Accident Files

Chart Date 11/14

# OTS TASK FORCE STUDY

## Selected Fatality Incidents by Day - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



Working With 5 or More	0	2	2	2	5	1	0
Working With 2-4	1	1	3	3	4	3	3
Employee Working Alone	2	2	1	4	3	0	1

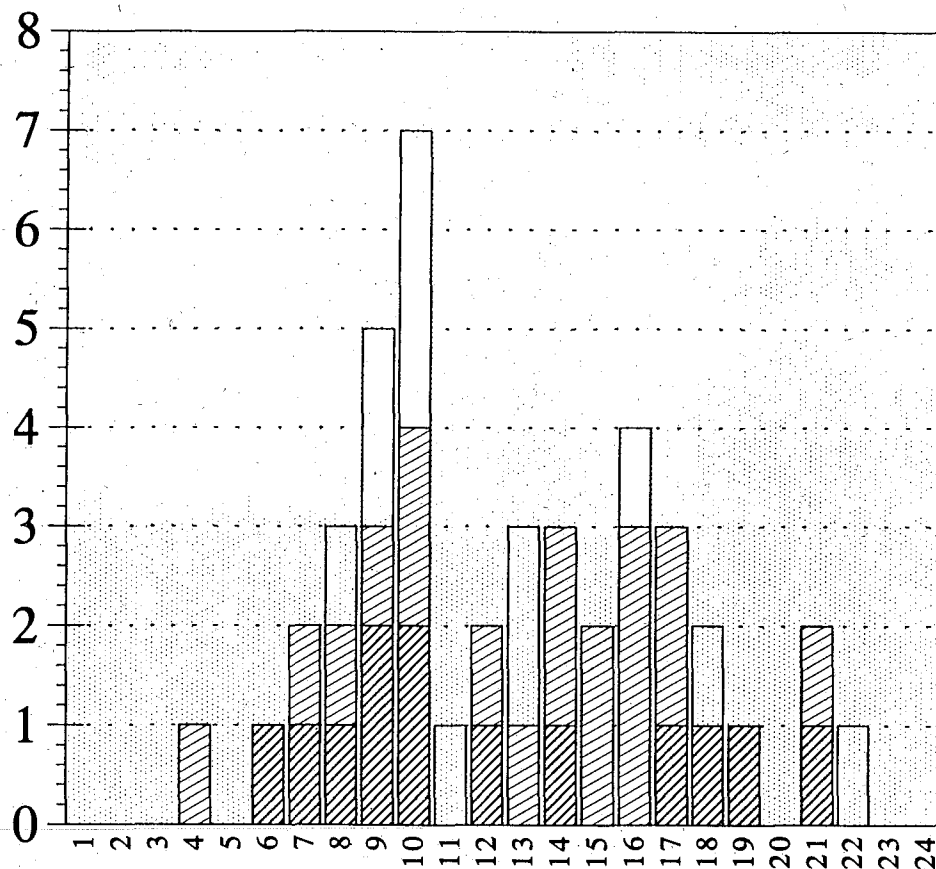
# Employees at Work at Time of Accident

- Working With 5 or More
- Working With 2-4
- Employee Working Alone

# OTS TASK FORCE STUDY

## Selected Fatality Incidents By Time - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



Working With 5 or More	0	0	0	0	0	0	0	1	2	3	1	0	2	0	0	1	0	1	0	0	0	1	0	0
Working With 2-4	0	0	0	1	0	0	1	1	1	2	0	1	1	2	2	3	2	0	0	0	0	1	0	0
Employee Working Alone	0	0	0	0	0	1	1	1	2	2	0	1	0	1	0	0	1	1	1	0	1	0	0	0

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

Source: FRA and NTSB Railroad Accident Files

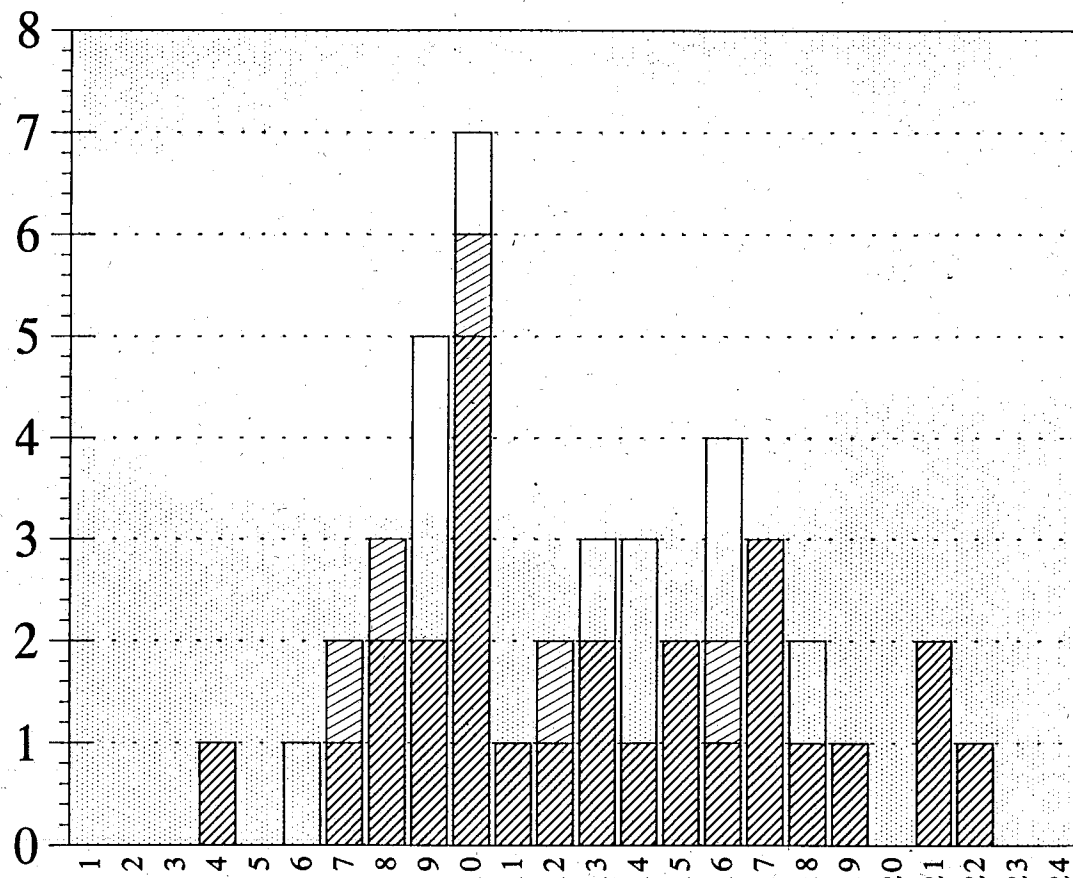
TRACKWORK: operate/repair machine, clean switch, set on hy-rail, operate train

TRAVEL: track inspection ON R-O-W: driving along, walking, flagging Chart Date 11/30

# OTS TASK FORCE STUDY

Selected Fatality Incidents: Time/Employee Activity - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



On Right of Way	0	0	0	0	0	1	0	0	3	1	0	0	1	2	0	2	0	1	0	0	0	0	0	0	0
Travel on Track	0	0	0	0	0	0	1	1	0	1	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
Trackwork	0	0	0	1	0	0	1	2	2	5	1	1	2	1	2	1	3	1	1	0	2	1	0	0	0

Employee Activity at Time of Accident

On Right of Way

Travel on Track

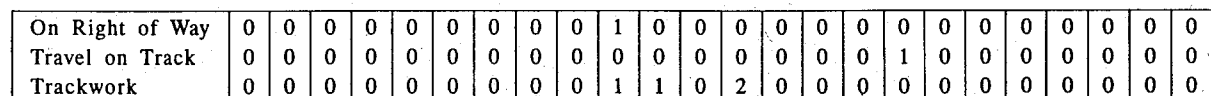
Trackwork

Source: FRA and NTSB Railroad Accident Files

TRACKWORK: operate/repair machine, clean switch, set on hy-rail, operate train

TRAV track inspection ON R-O-W: driving along, walking, flag Chart Date 11/30

## 43 Total Incidents Involving 46 Fatalities



 Trackwork

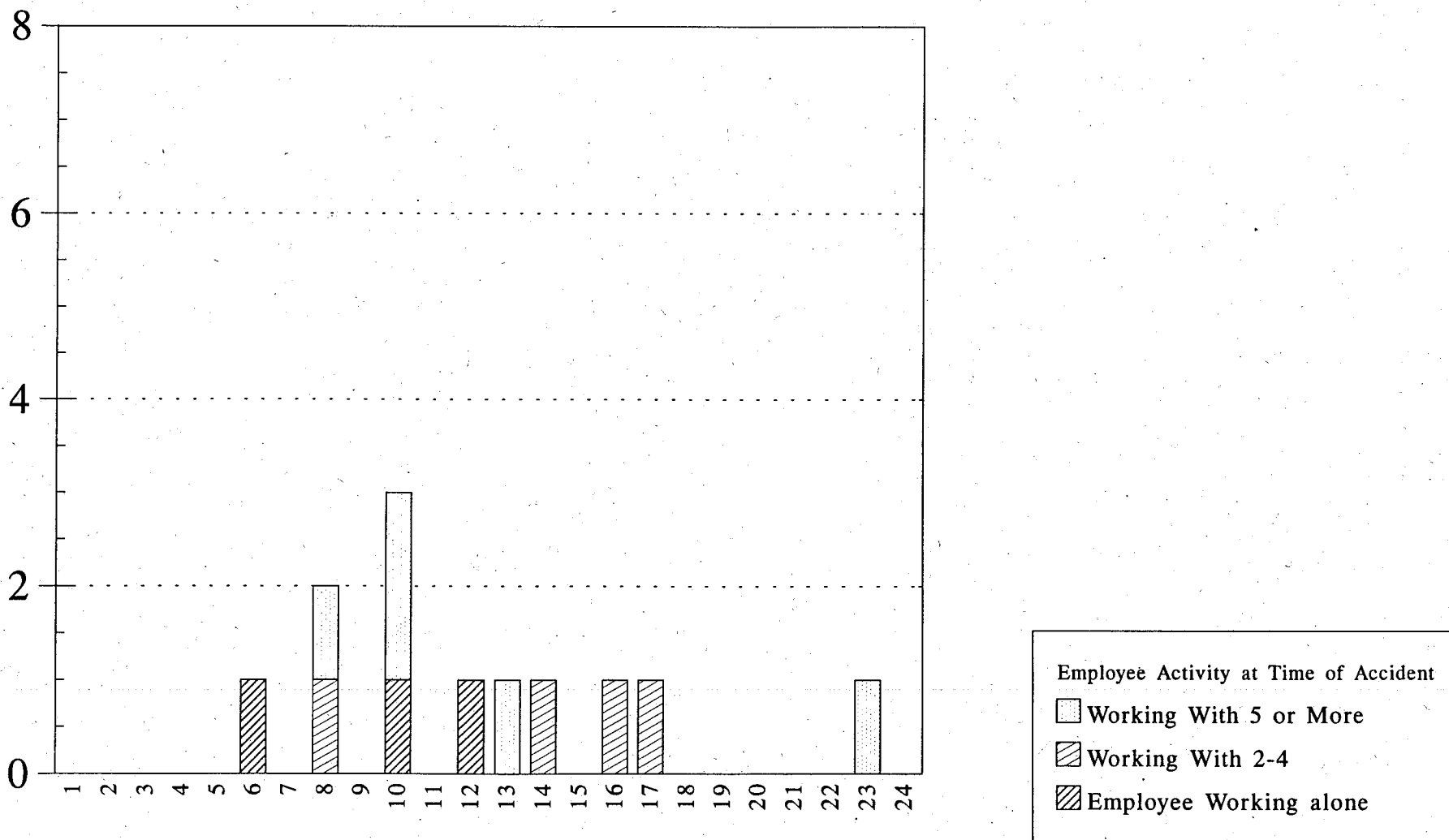
TRAY = track inspection Work = operate/repair equ, set on hy-rai<sup>1</sup> operate train On ROW = drive/walk



# OTS TASK FORCE STUDY

Selected Fatality Incidents By Time on Thursdays - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities

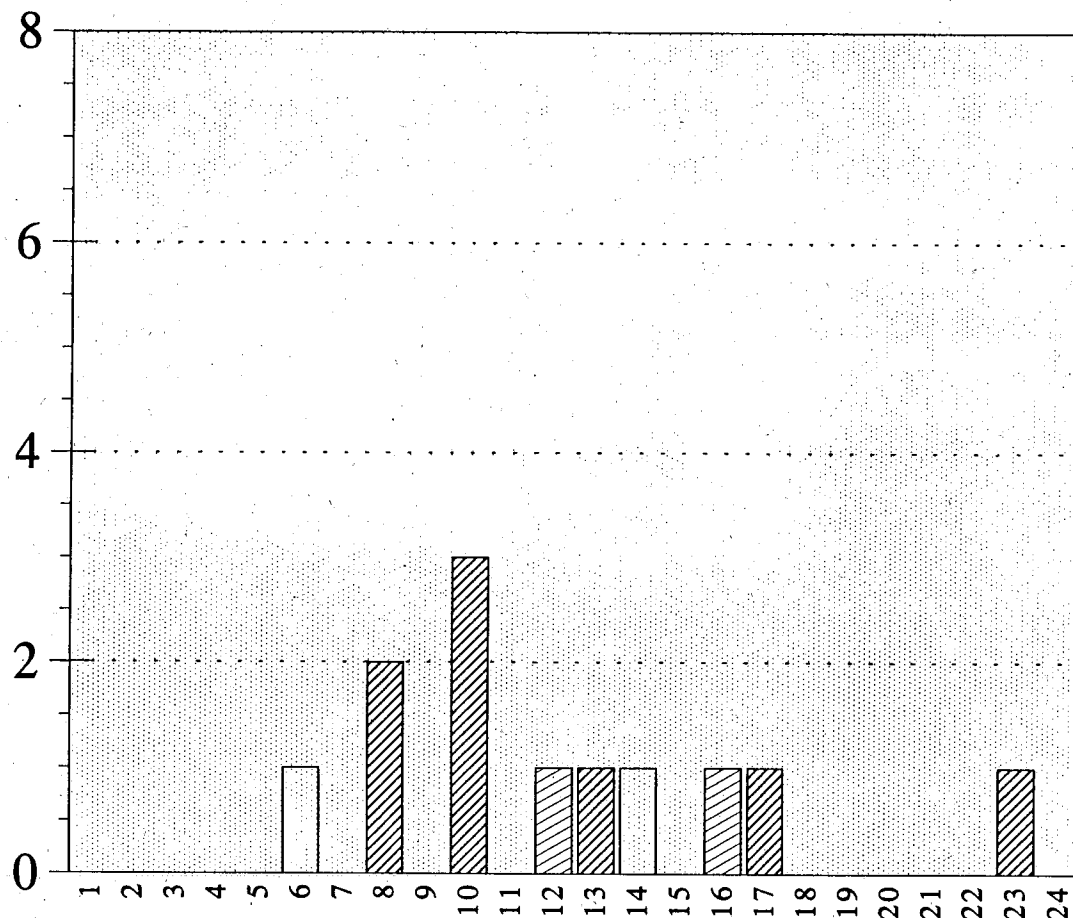


Source: FRA and NTSB Accident Files

# OTS TASK FORCE STUDY

Selected Fatality Incidents: Thursdays/Time/Employee Activity - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



On Right of Way	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Travel on Track	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
Trackwork	0	0	0	0	0	0	0	2	0	3	0	0	1	0	0	0	1	1	0	0	0	0	0	1	0	0

Employee Activity at Time of Accident

On Right of Way

Travel on Track

Trackwork

Source: FRA and NTSB Railroad Accident Files

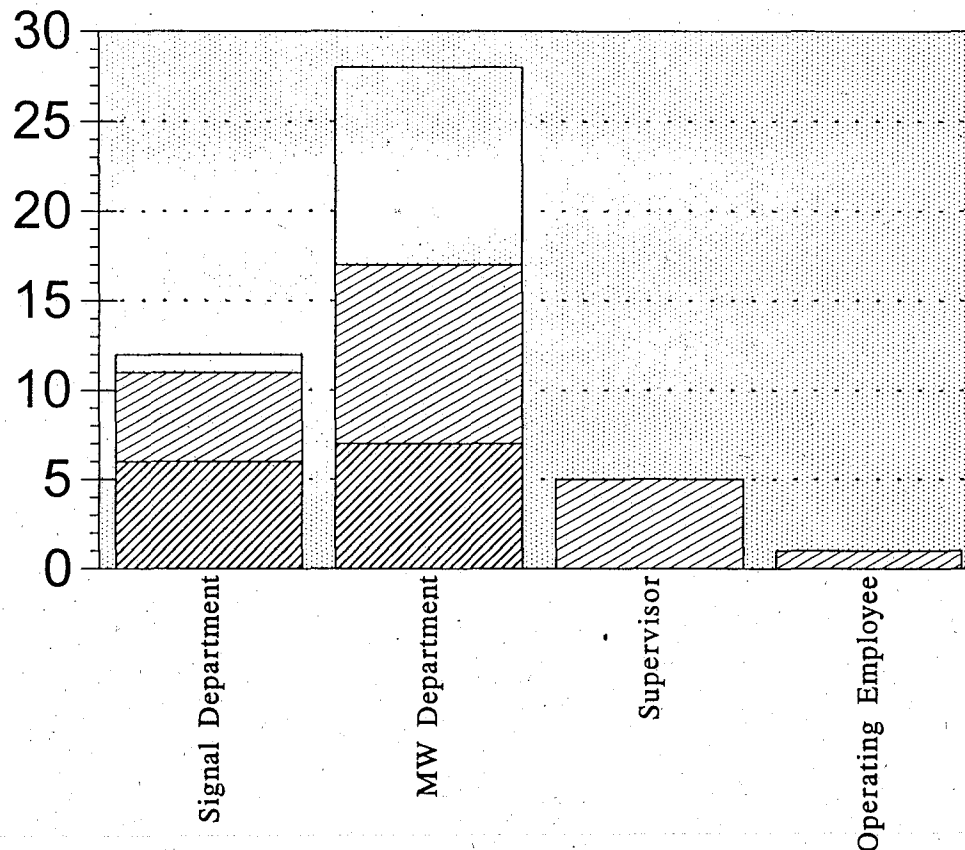
TRACKWORK: operate/repair machine, clean switch, set on hy-rail, operate train

TRAV rack inspection ON R-O-W: driving along, walking, flag Chart Date 11/30

# OTS TASK FORCE STUDY

Selected Fatalities by Occupation - January, 1986 to September, 1994

43 Total Incidents Involving 46 Fatalities



Working With 5 or More	1	11	0	0
Working With 2-4	5	10	5	1
Employee Working Alone	6	7	0	0

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

Source: FRA and NTSB Railroad Accident Files

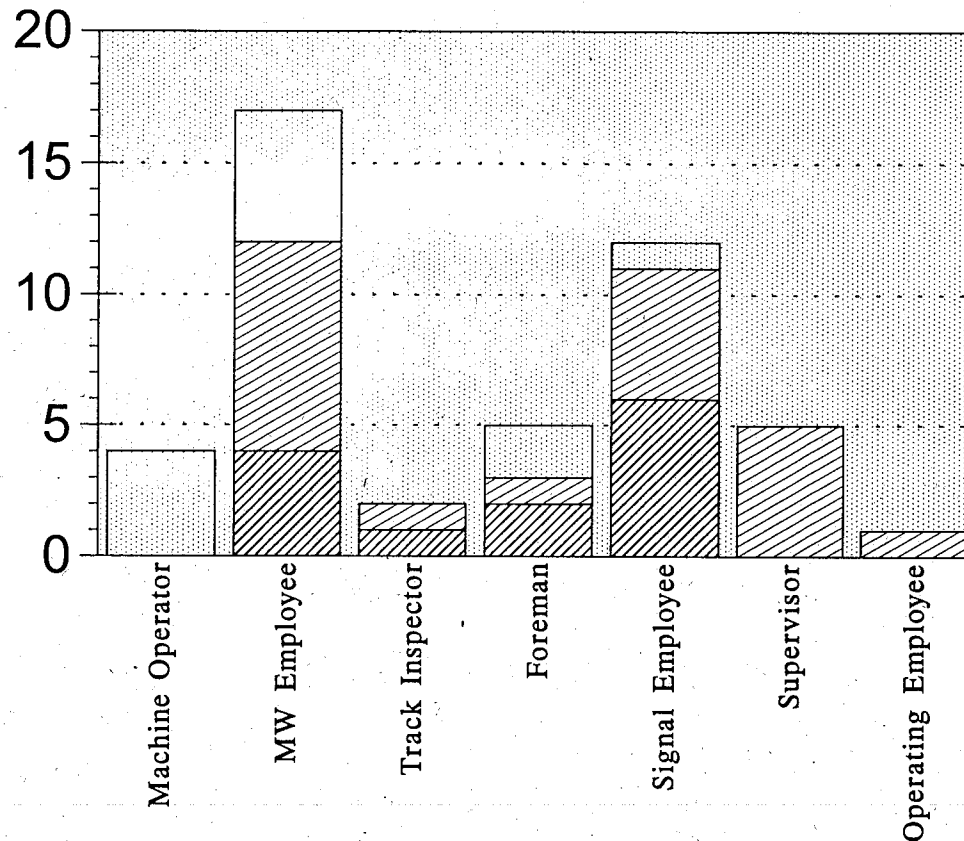
SUPERVISOR: Roadmaster, Signal Inspector/Supervisor, Trainmaster

MW: Foreman, Machine Operator, etc. Chart Date 1/23

# OTS TASK FORCE STUDY

Selected Fatalities by Occupation - January, 1986 to September, 1994

43 Total Incidents Involving 46 Fatalities



Working With 5 or More	4	5		2	1		
Working With 2-4		8	1	1	5	5	1
Employee Working Alone		4	1	2	6		

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

Source: FRA and NTSB Railroad Accident Files

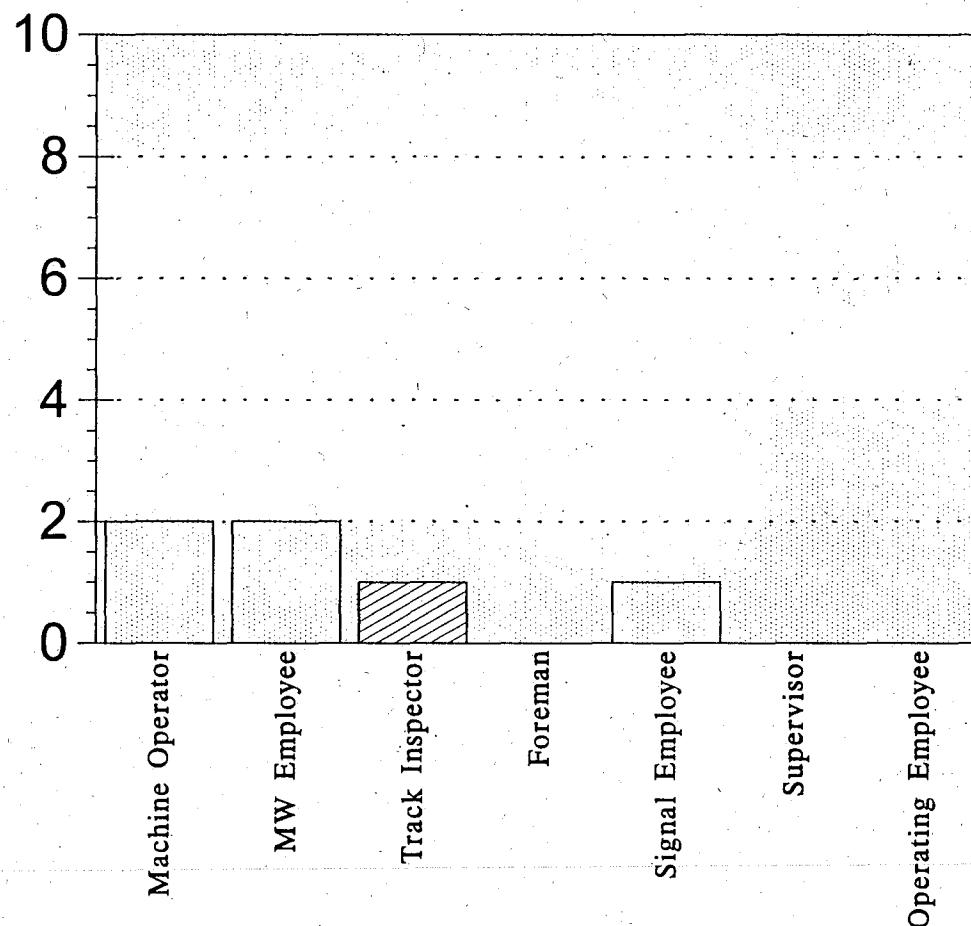
SUPERVISOR: Roadmaster, Signal Inspector/Supervisor, Trainmaster

Chart Date 1/23

# OTS TASK FORCE STUDY

Selected Fatality Incidents by Occupation - (Within Limits) - January, 1986 to September, 1994

43 Total Incidents Involving 46 Fatalities



Working With 5 or More	2	2	0	0	1	0	0
Working With 2-4	0	0	1	0	0	0	0

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Source: FRA and NTSB Railroad Accident Files

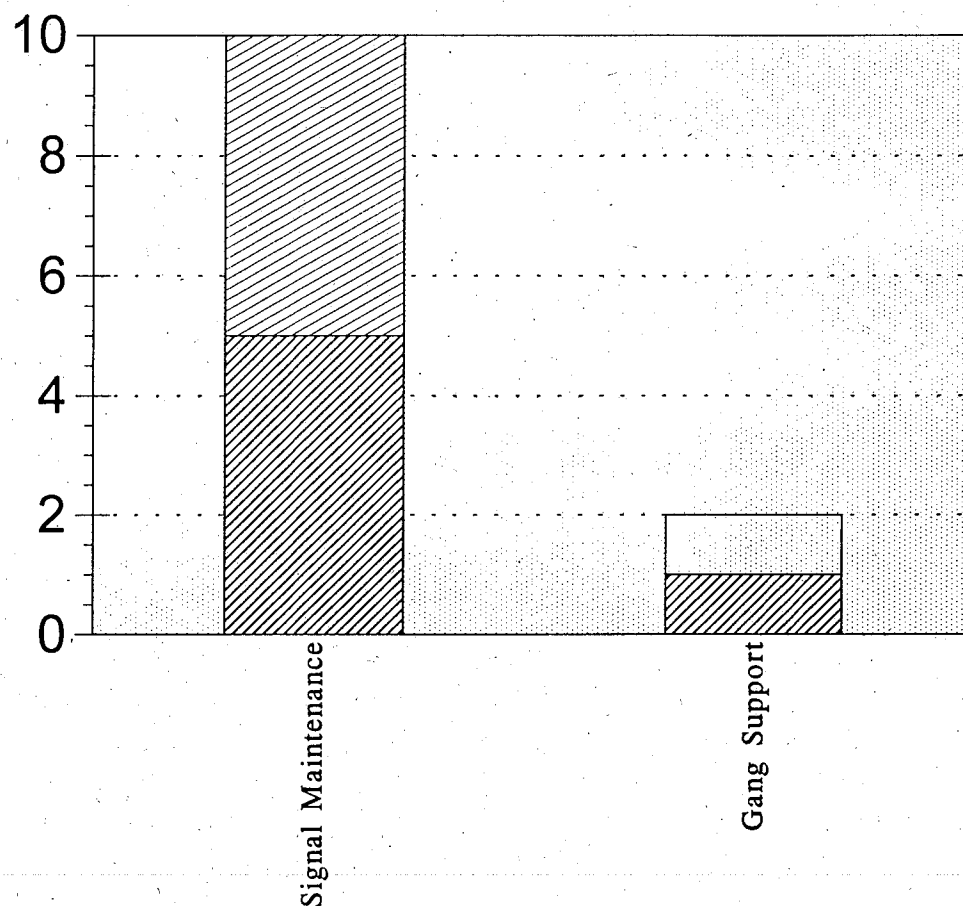
SUPERVISOR: Roadmaster, Signal Inspector/Supervisor, Trainmaster

Within Limits: Accident/incident involved trains/OTE working under (within) same protection 11/30

# OTS TASK FORCE STUDY

Selected Fatality Incidents by Signal Department Activity - January, 1986 to September, 1994

43 Total Incidents Involving 46 Fatalities



Working With 5 or More	0	1
Working With 2-4	5	0
Employee Working Alone	5	1

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

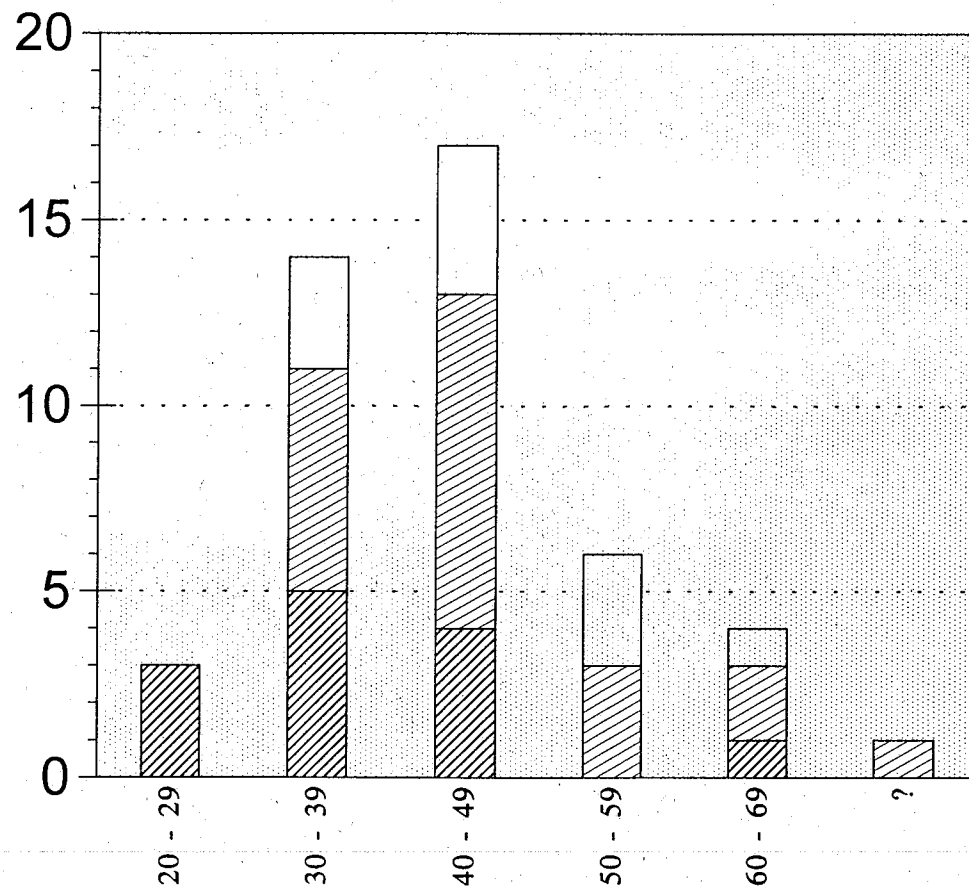
Source: FRA and NTSB Railroad Accident Files

Chart Date 11/14

# OTS TASK FORCE STUDY

Selected Fatality Incidents by Employee Age - January, 1986 to September, 1994

43 Total Incidents Involving 46 Fatalities



Working With 5 or More	0	3	4	3	1	0
Working With 2-4	0	6	9	3	2	1
Employee Working Alone	3	5	4	0	1	0

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

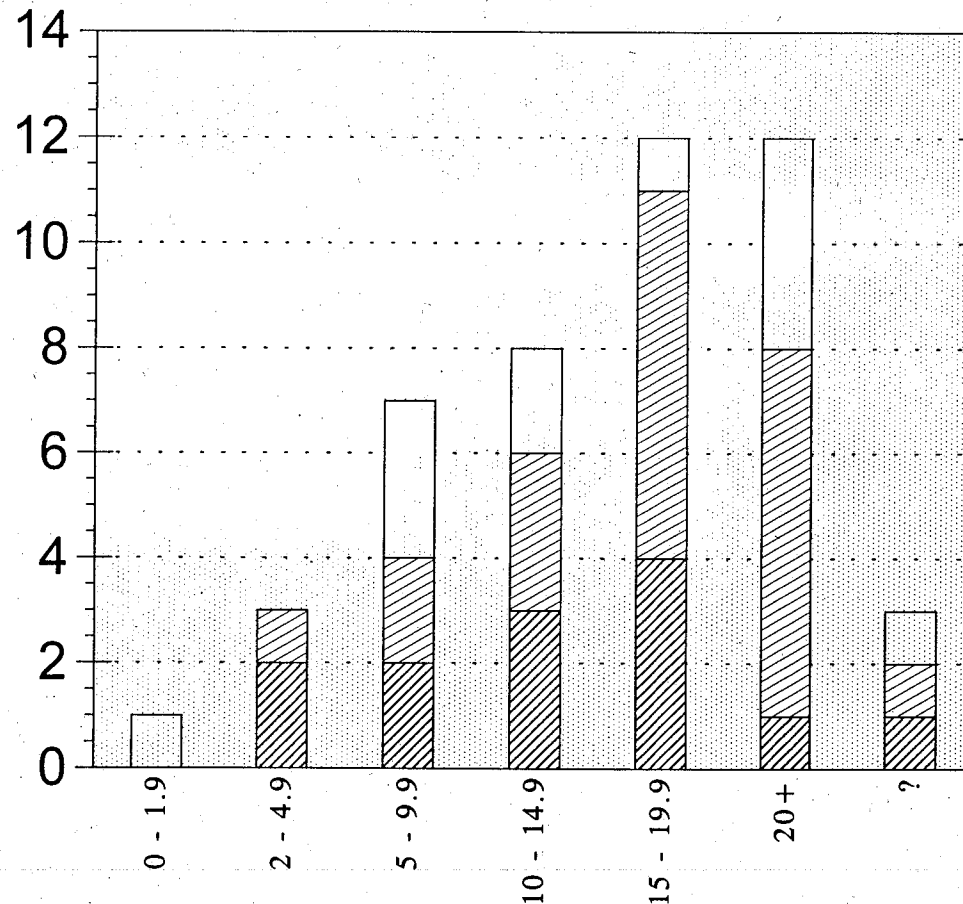
Source: FRA and NTSB Railroad Accident Files

Chart Date 11/14

# OTS TASK FORCE STUDY

Selected Fatality Incidents by Employee Years of Service - January, 1986 to September, 1994

43 Total Incidents Involving 46 Fatalities



Working With 5 or More	1	0	3	2	1	4	1
Working With 2-4	0	1	2	3	7	7	1
Employee Working Alone	0	2	2	3	4	1	1

# Employees at Work at Time of Accident

- ☐ Working With 5 or More
- ☒ Working With 2-4
- ☒ Employee Working Alone

Source: FRA and NTSB Railroad Accident Files

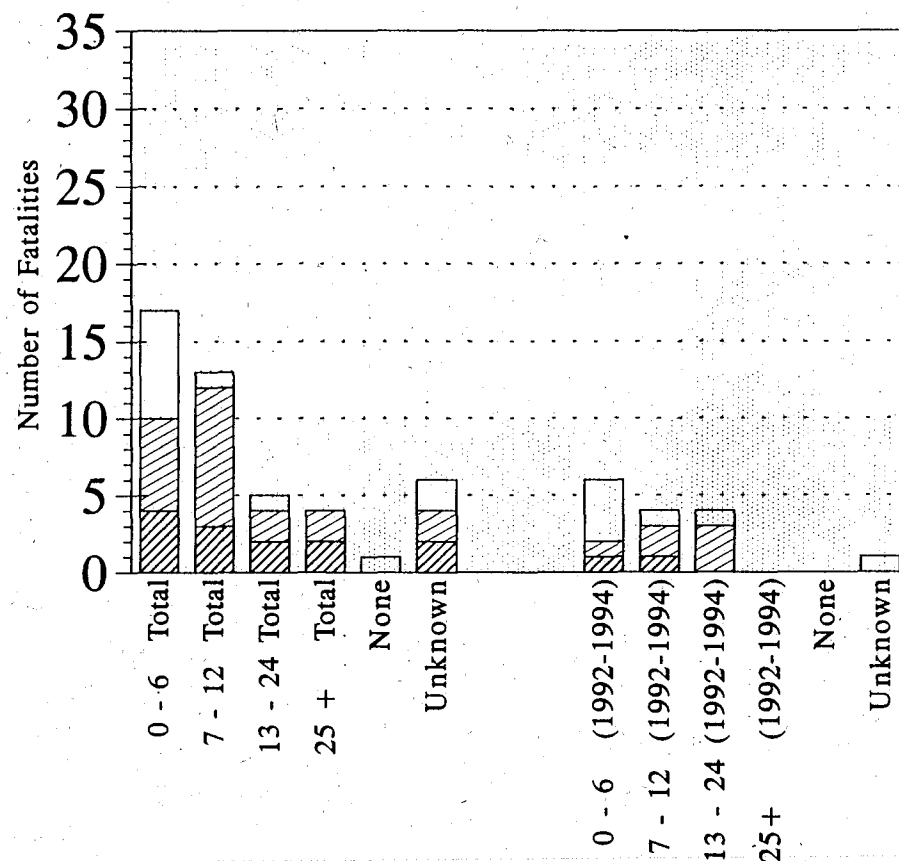
Chart Date 11/14



# OTS TASK FORCE STUDY

Selected Fatalities by Months Since Rules Training - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



# Employees at Work at Time of Accident

□ Working With 5 or More

▨ Working With 2-4

▩ Employee Working Alone

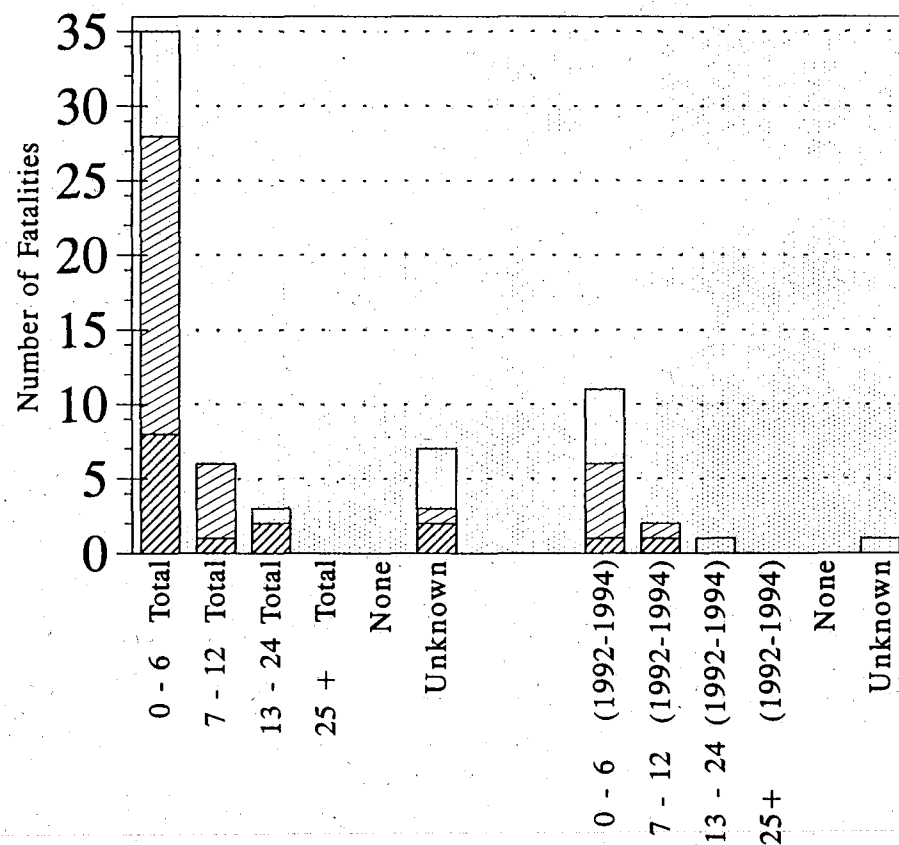
Working With 5 or More	7	1	1	0	1	2			4	1	1	0	0	1
Working With 2-4	6	9	2	2	0	2			1	2	3	0	0	0
Employee Working Alone	4	3	2	2	0	2			1	1	0	0	0	0

Source: FRA and NTSB Railroad Accident Files

# OTS TASK FORCE STUDY

Selected Fatalities by Months Since Safety Training - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



Working With 5 or More	7	0	1	0	0	4		5	0	1	0	0	1
Working With 2-4	20	5	0	0	0	1		5	1	0	0	0	0
Employee Working Alone	8	1	2	0	0	2		1	1	0	0	0	0

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

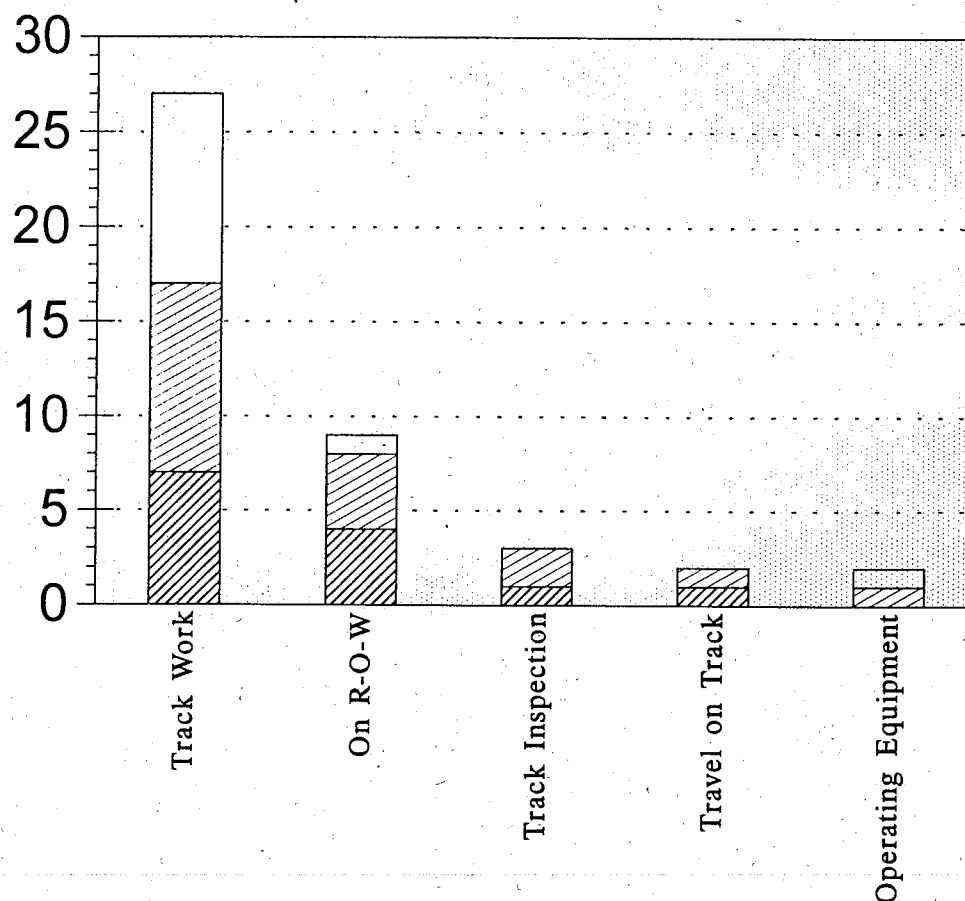
Employee Working Alone

Source: FRA and NTSB Railroad Accident Files

# OTS TASK FORCE STUDY

Selected Fatality Incidents by Employee Activity at Time - January, 1986 to September, 1994

43 Total Incidents Involving 46 Fatalities



Working With 5 or More	10	1	0	0	1
Working With 2-4	10	4	2	1	1
Employee Working Alone	7	4	1	1	0

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

Source: FRA and NTSB Railroad Accident Files

Work: operate/repair machine, clean switch, set on hy-rail, operate train

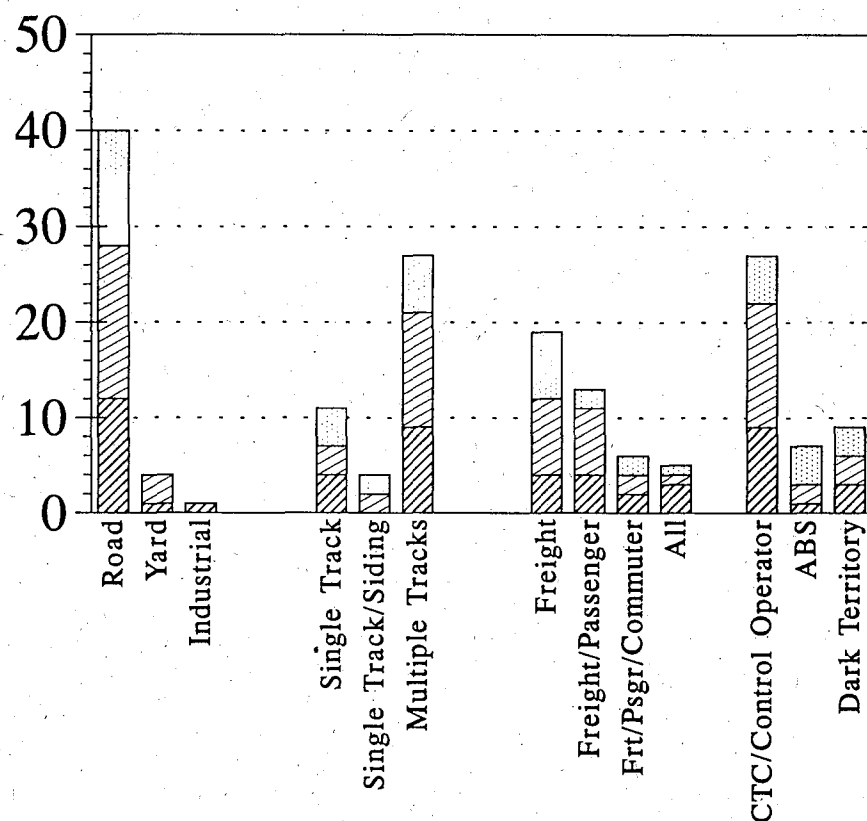
On R-O-W: drive/walk along, flagging

Chart Date 11/14

# OTS TASK FORCE STUDY

Selected Fatality Incidents By Location - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



Working With 5 or More	12	0	0			4	2	6			7	2	2	1		5	4	3
Working With 2-4	16	3	0			3	2	12			8	7	2	1		13	2	3
Employee Working Alone	12	1	1			4	0	9			4	4	2	3		9	1	3

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

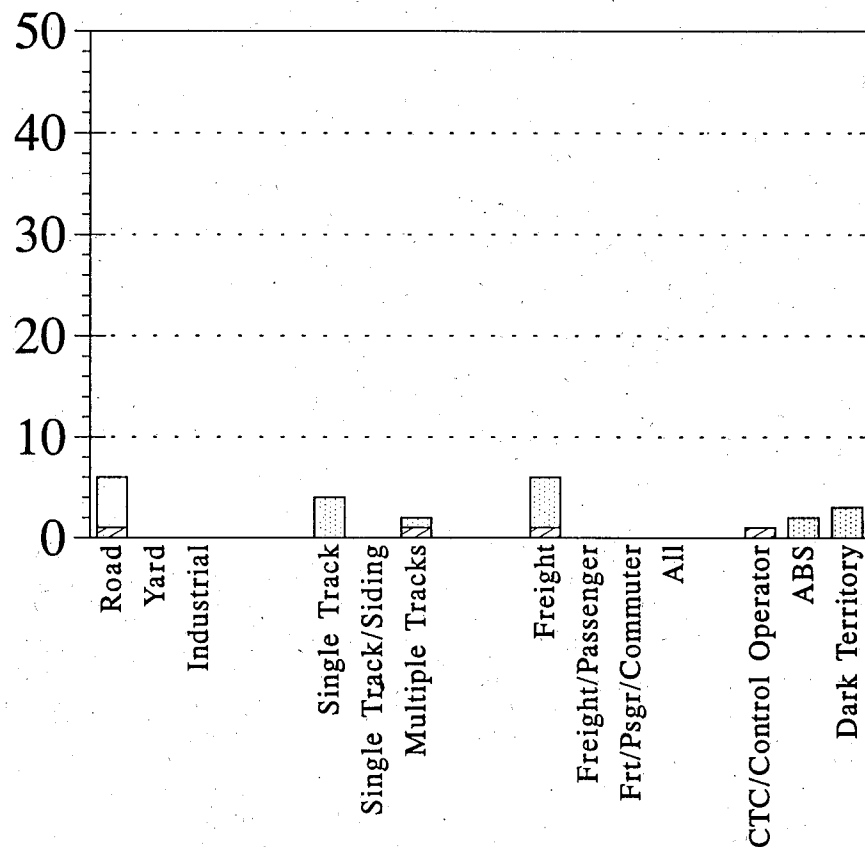
Source: FRA and NTSB Accident Files

Chart Date 1/23

# OTS TASK FORCE STUDY

Selected Fatality Incidents By Location (Within Limits) - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities      6 Total Incidents Within Limits



Working With 5 or More	5	0	0			4	0	1			5	0	0	0		0	2	3
Working With 2-4	1	0	0			0	0	1			1	0	0	0		1	0	0
Employee Working Alone	0	0	0			0	0	0			0	0	0	0		0	0	0

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

Source: FRA and NTSB Accident Files

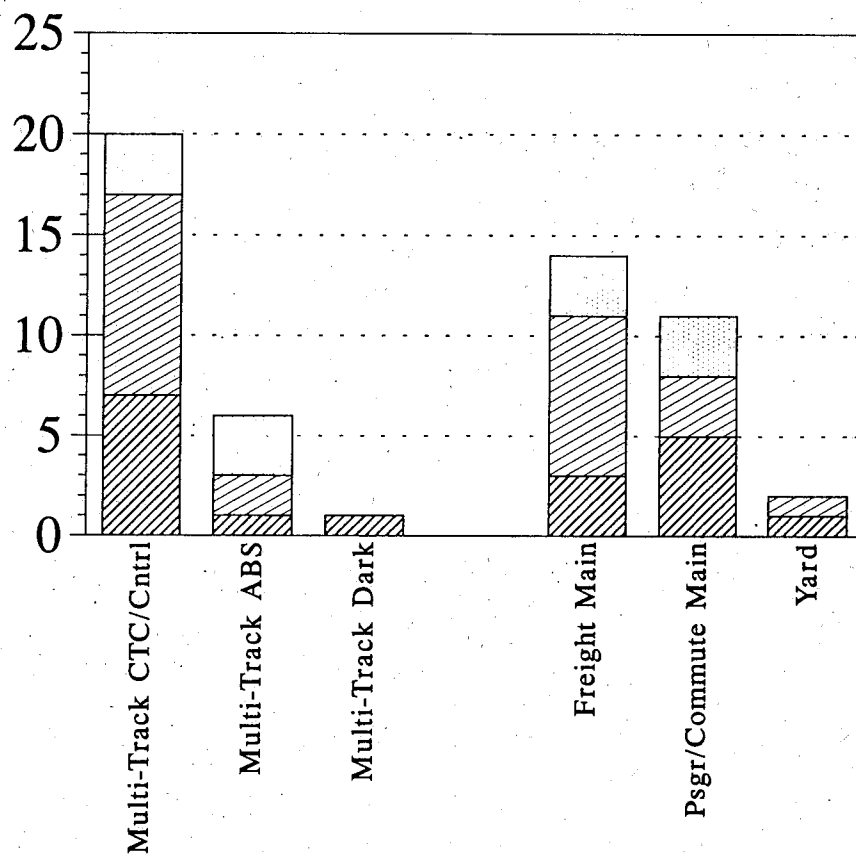
WITHIN LIMITS: Accident/Incident involved trains/OTE working under (within) same protection

Chart Date 1/23

# OTS TASK FORCE STUDY

Selected Fatality Incidents By Multiple Track Location - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities 27 Fatalities on Multiple Track



Working With 5 or More	3	3	0		3	3	0
Working With 2-4	10	2	0		8	3	1
Employee Working Alone	7	1	1		3	5	1

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

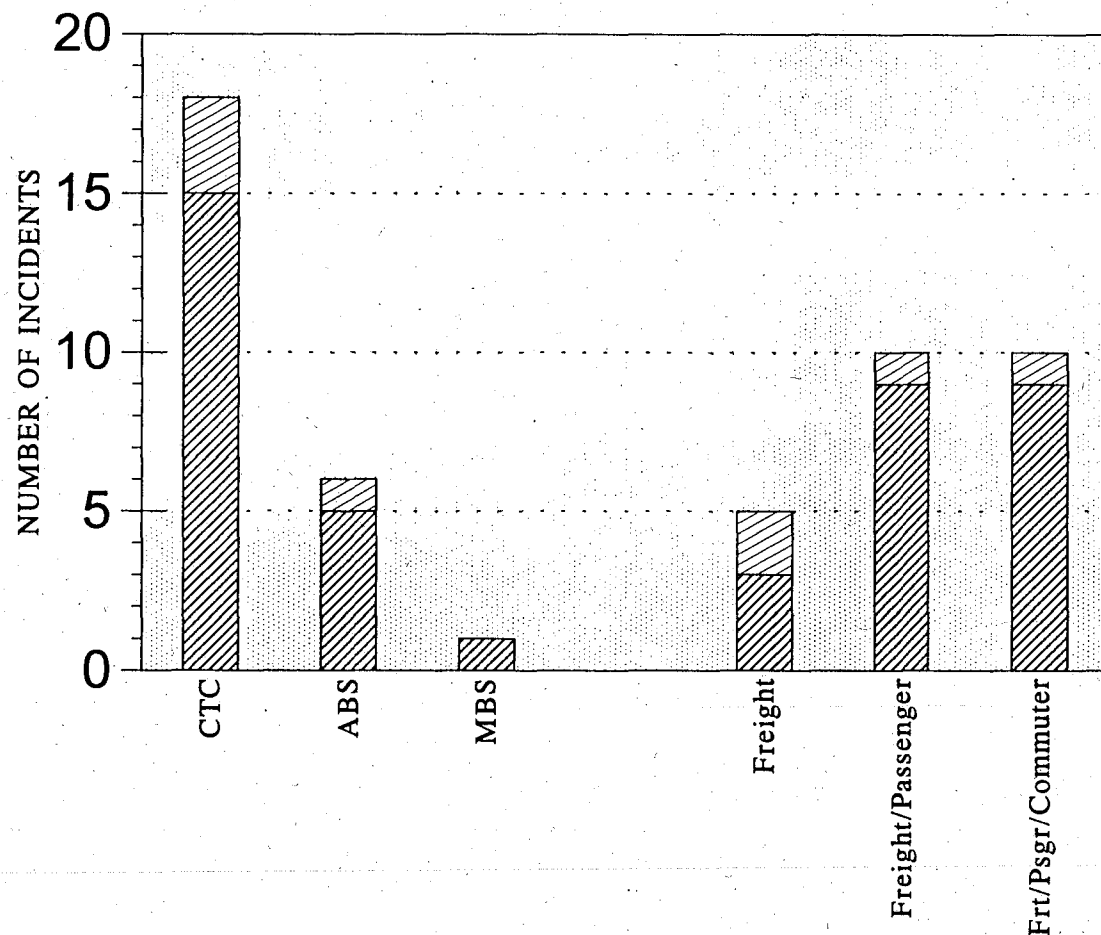
Source: FRA and NTSB Accident Files

Chart Date 11/2

# OTS TASK FORCE STUDY

Selected Fatality Incidents by Multiple Track Locations/Striking Equipment - 1/86 to 9/94

43 Total Incidents Involving 46 Fatalities



Struck by MW Equipment	3	1	0		2	1	1
Struck by Train	15	5	1		3	9	9

Striking Equipment

Struck by MW Equipment

Struck by Train

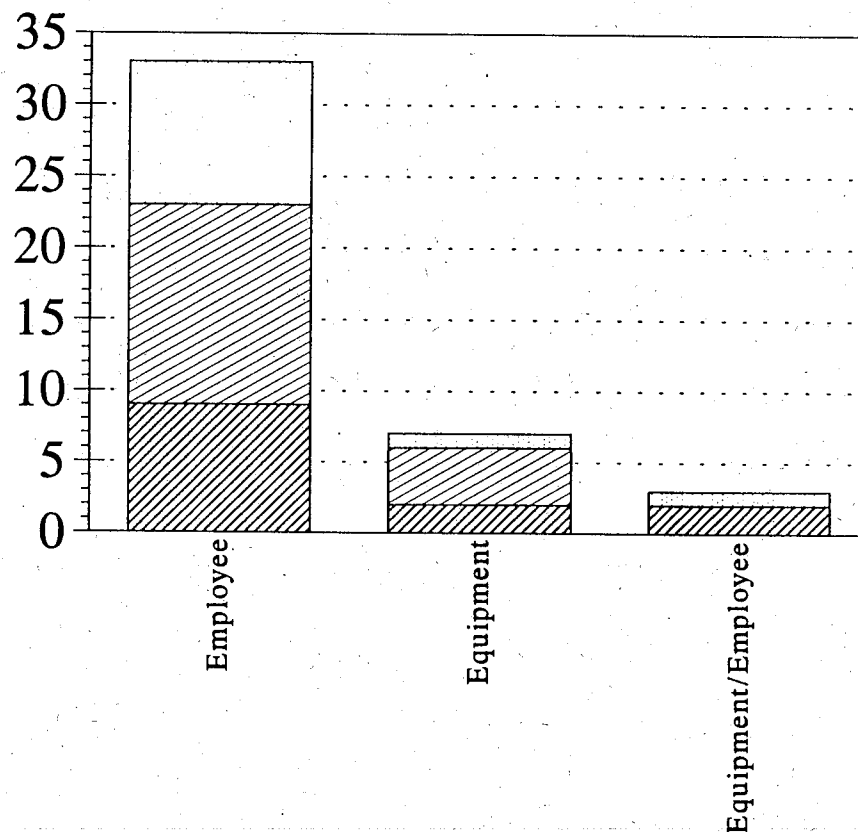
Source: FRA and NTSB Railroad Accident Files

Chart Date 11/30

# OTS TASK FORCE STUDY

Selected Fatality Incidents By What Struck - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



Working With 5 or More	10	1	1
Working With 2-4	14	4	0
Employee Working Alone	9	2	2

# Employees at Work at Time of Accident

□ Working With 5 or More

▨ Working With 2-4

▩ Employee Working Alone

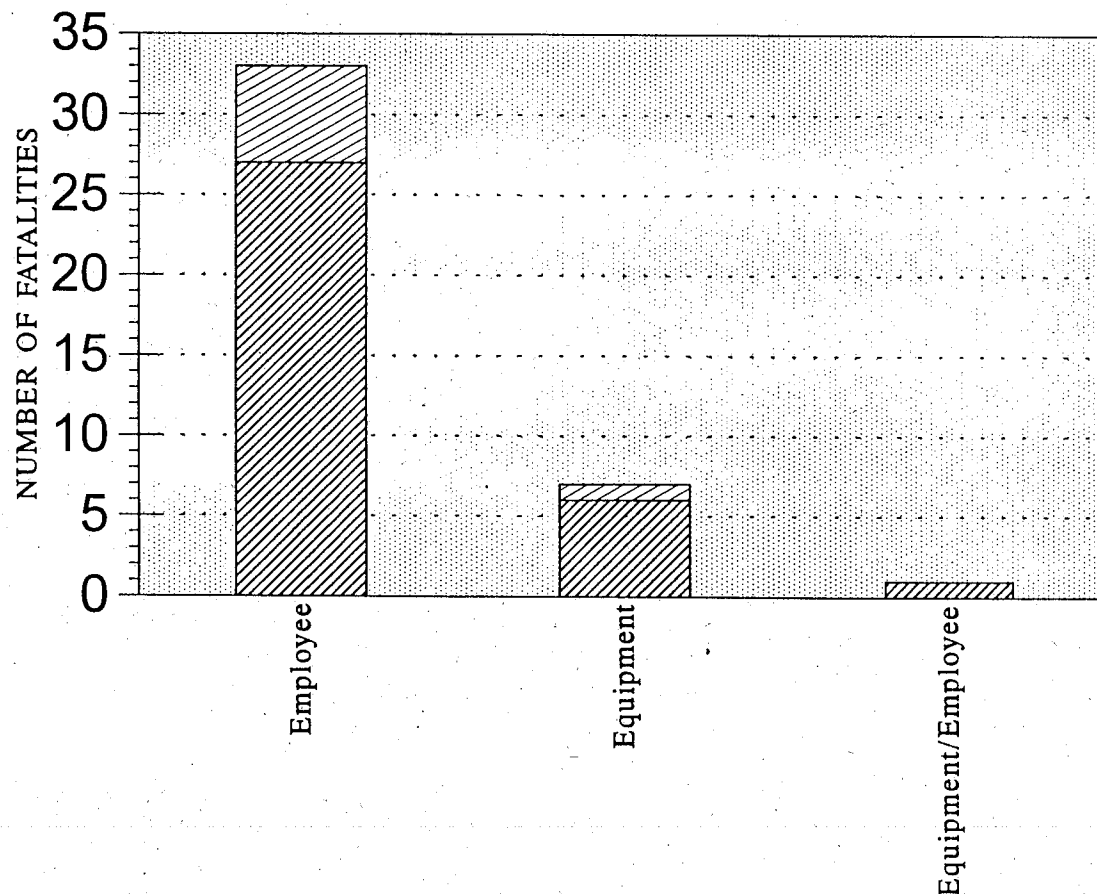
Source: FRA and NTSB Accident Files



# OTS TASK FORCE STUDY

Selected Fatalities by What Was Struck/Striking Equipment - 1/86 to 9/94

43 Total Incidents Involving 46 Fatalities



Struck by MW Equipment	6	1	0
Struck by Train	27	6	1

Striking Equipment	
	Struck by MW Equipment
	Struck by Train

Source: FRA and NTSB Railroad Accident Files

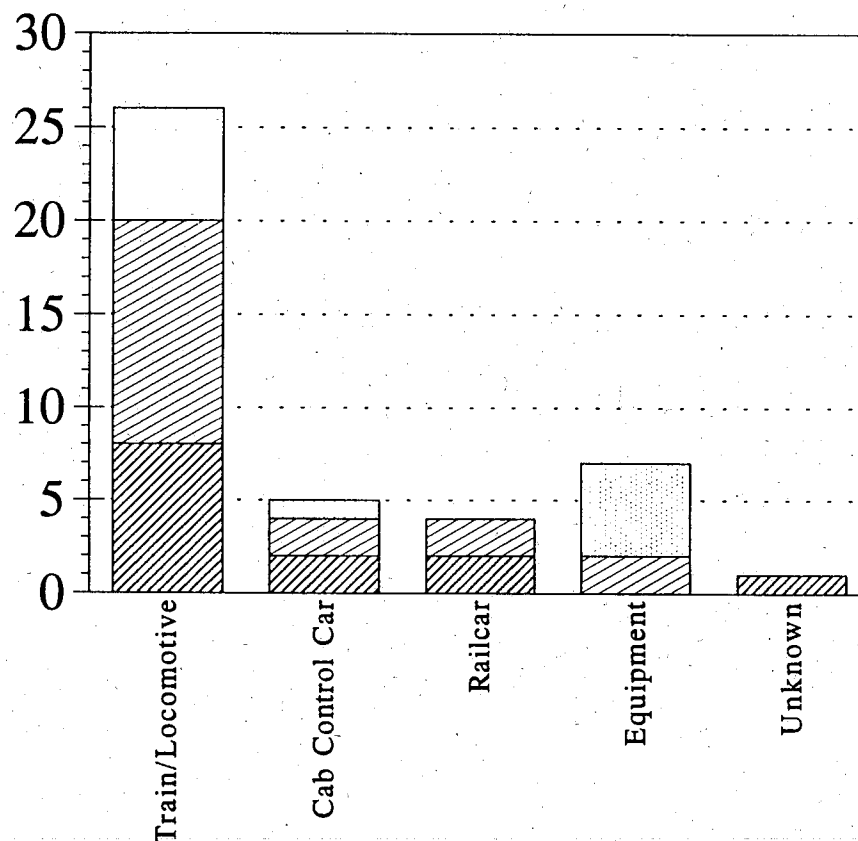
4 Fatalities Associated With Railcars, 1 Was Unknown

Chart 1/23

# OTS TASK FORCE STUDY

Selected Fatality Incidents By Striking Equipment - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



Working With 5 or More	6	1	0	5	0
Working With 2-4	12	2	2	2	0
Employee Working Alone	8	2	2	0	1

# Employees at Work at Time of Accident

□ Working With 5 or More

▨ Working With 2-4

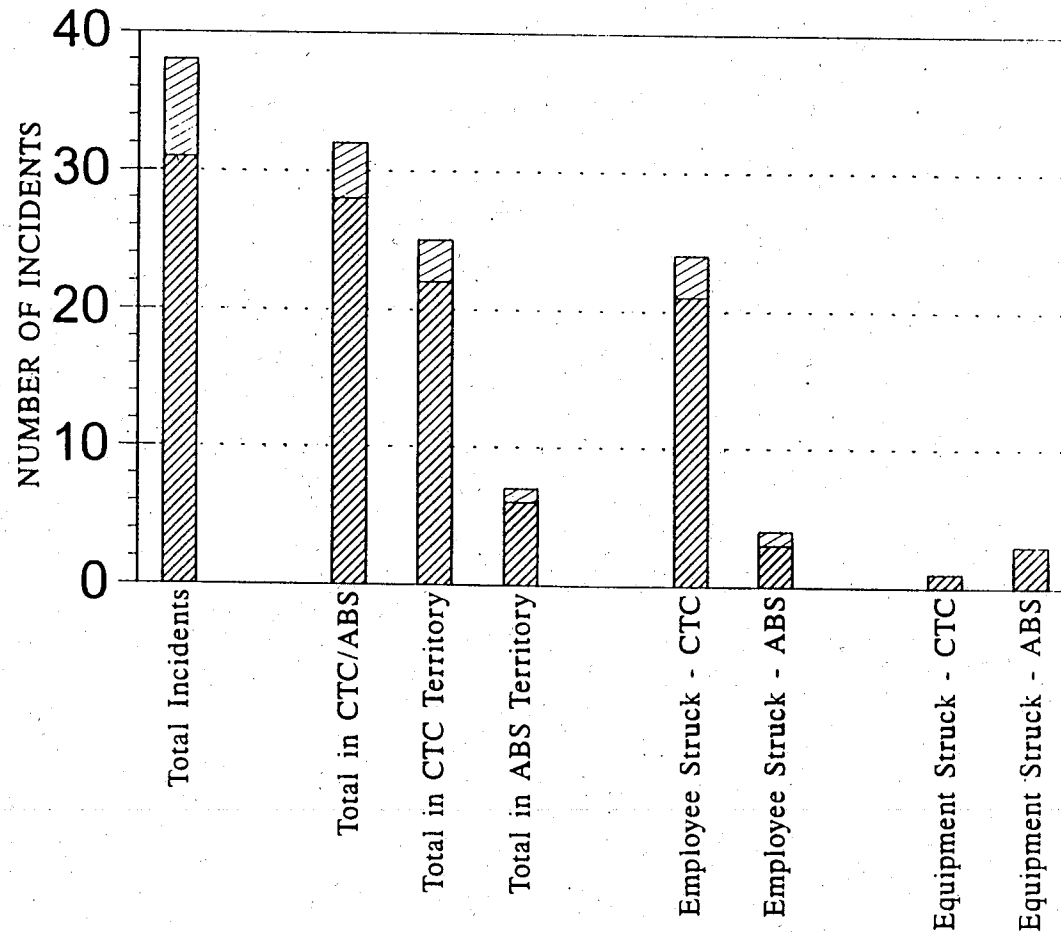
▩ Employee Working Alone

Source: FRA and NTSB Accident Files

# OTS TASK FORCE STUDY

Selected Fatality Incidents In CTC/ABS Territory by Striking Equipment - 1/86 to 9/94

43 Total Incidents Involving 46 Fatalities



Struck by Equipment	7		4	3	1		3	1		0	0
Struck by Train	31		28	22	6		21	3		1	3

# Employees at Work at Time of Accident

Struck by Equipment

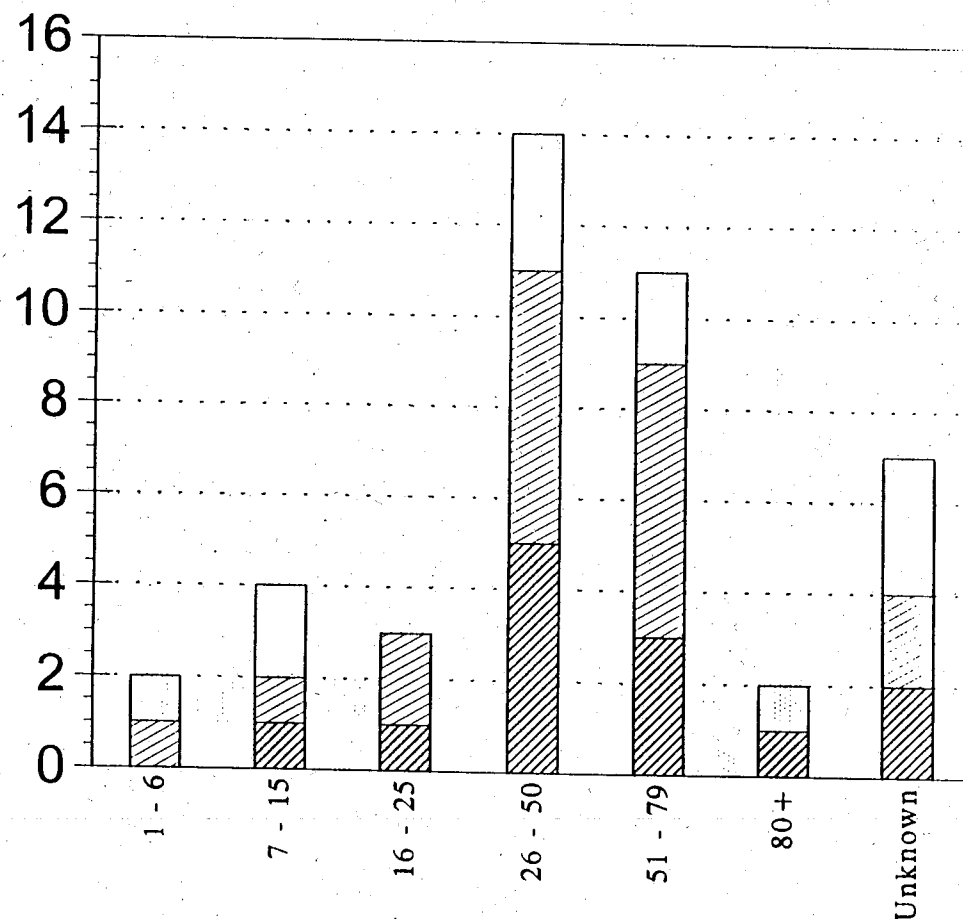
Struck by Train

Source: FRA and NTSB Railroad Accident Files

Chart 11/15

# OTS TASK FORCE STUDY

Selected Fatality Incidents by Speed of Striking Equipment - January, 1986 to September, 1994  
43 Total Incidents Involving 46 Fatalities



Working With 5 or More	1	2	0	3	2	1	3
Working With 2-4	1	1	2	6	6	0	2
Employee Working Alone	0	1	1	5	3	1	2

# Employees at Work at Time of Accident

□ Working With 5 or More

▨ Working With 2-4

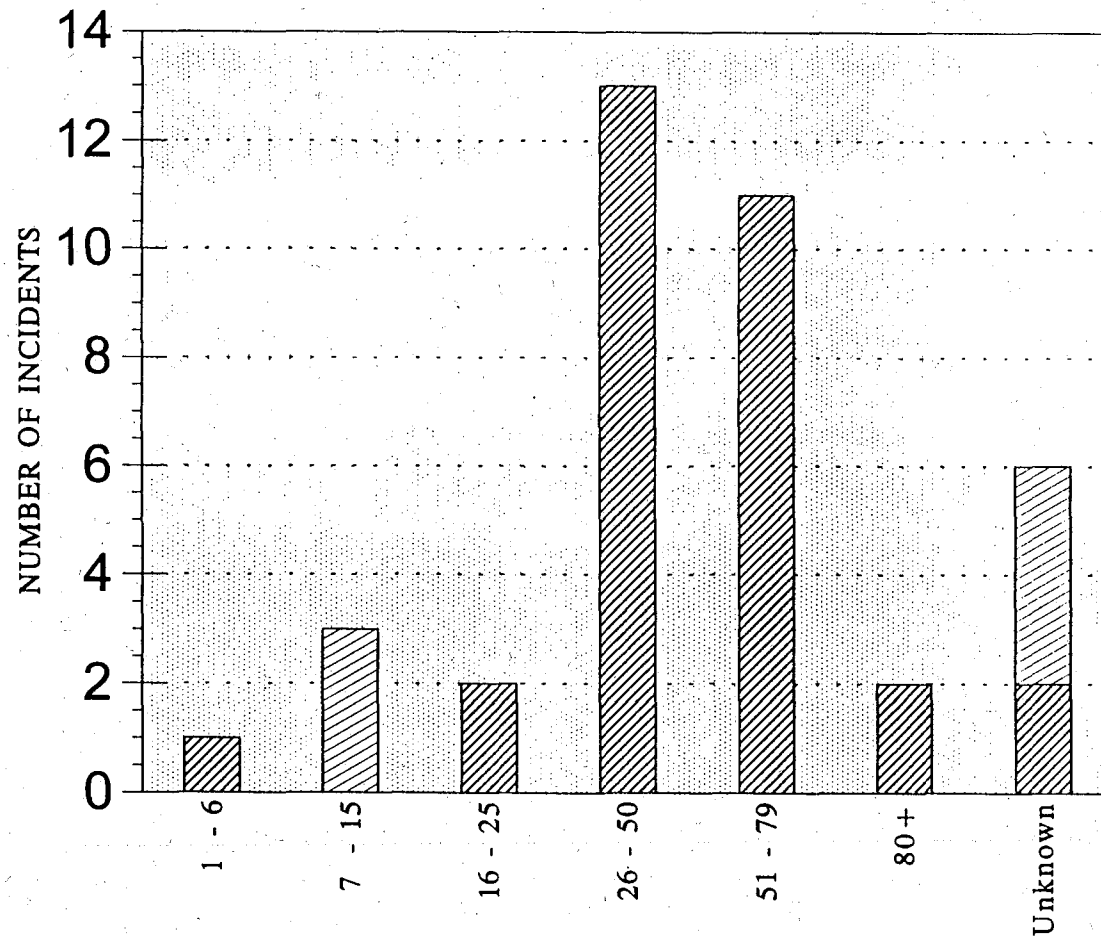
▩ Employee Working Alone

Source: FRA and NTSB Railroad Accident Files

Chart 11/14

# OTS TASK FORCE STUDY

Selected Fatality Incidents -Speed of Striking Equipment/Striking Equipment - 1/86 to 9/94  
43 Total Incidents Involving 46 Fatalities



Struck by MW Equipment	0	3	0	0	0	0	4
Struck by Train	1	0	2	13	11	2	2

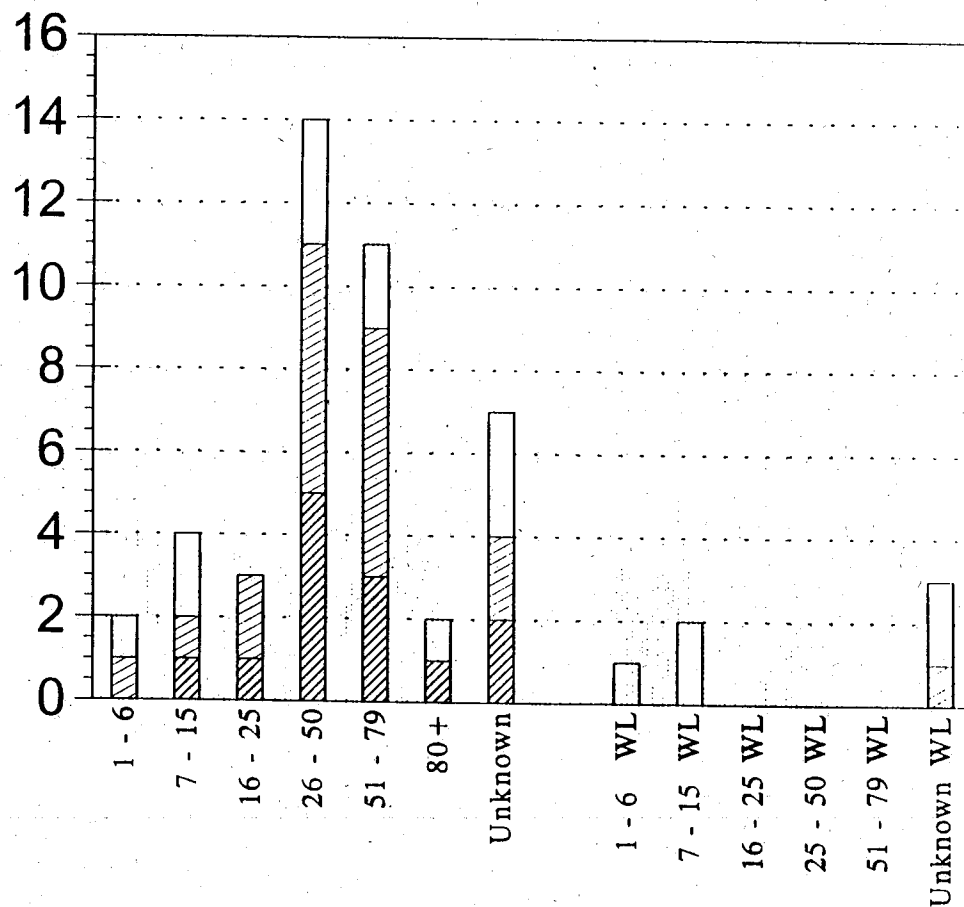
Striking Equipment	
	Struck by MW Equipment
	Struck by Train

Source: FRA and NTSB Railroad Accident Files

# OTS TASK FORCE STUDY

Selected Fatality Incidents by Speed of Striking Equipment - January, 1986 to September, 1994

43 Total Incidents Involving 46 Fatalities      6 Total Incidents Within Limits



Working With 5 or More	1	2	0	3	2	1	3		1	2	0	0	0	0	2
Working With 2-4	1	1	2	6	6	0	2		0	0	0	0	0	0	1
Employee Working Alone	0	1	1	5	3	1	2		0	0	0	0	0	0	0

# Employees at Work at Time of Accident

□ Working With 5 or More

▨ Working With 2-4

▩ Employee Working Alone

Source: FRA and NTSB Railroad Accident Files

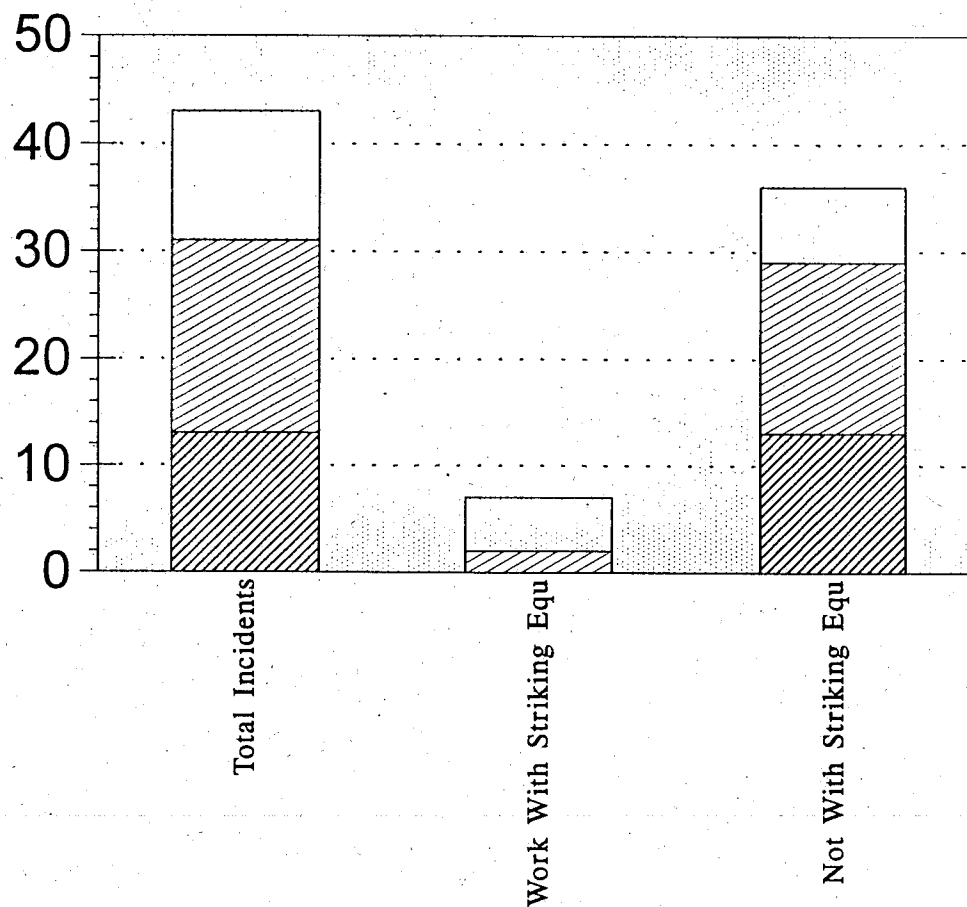
WITH LIMITS: accident/incident involved trains/OTE working within same protection

Chart 11/14

# OTS TASK FORCE STUDY

## Selected Fatality Incidents by Environment - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



Working With 5 or More	12	5	7
Working With 2-4	18	2	16
Employee Working Alone	13	0	13

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

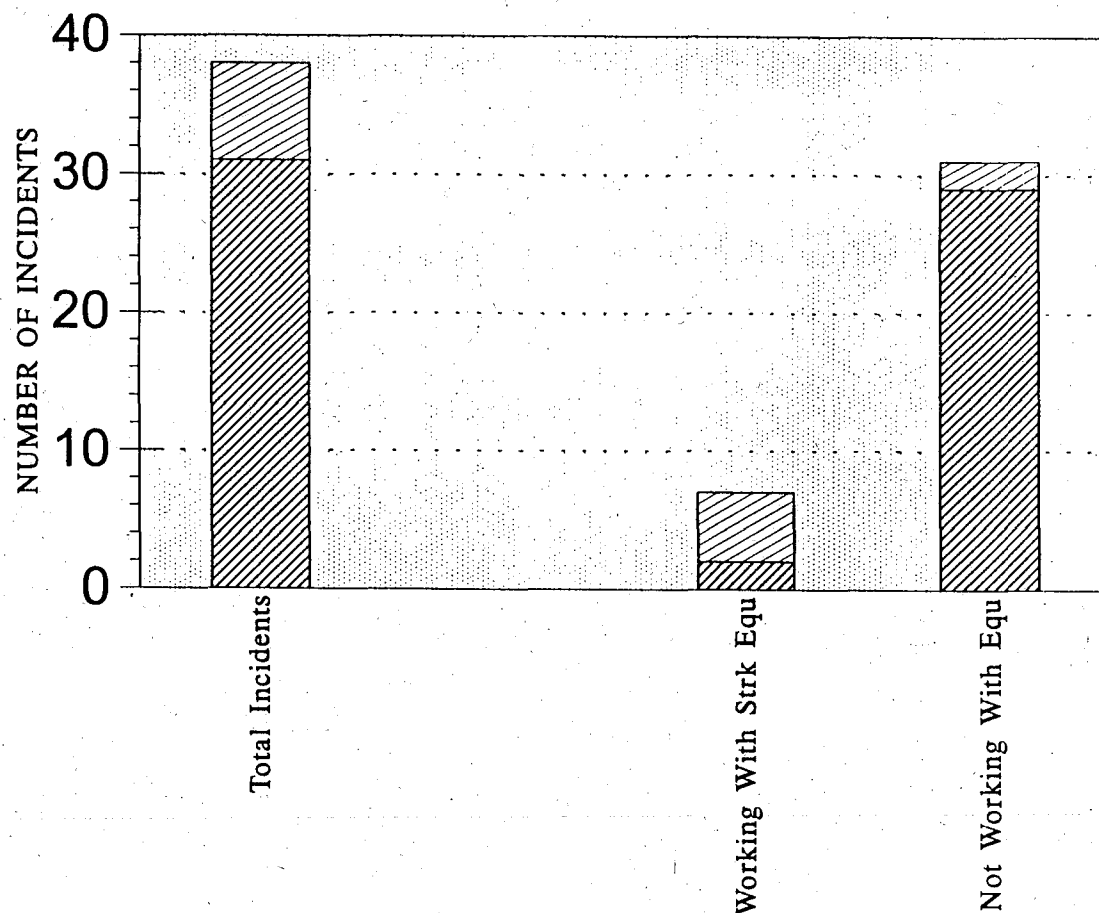
Source: FRA and NTSB Railroad Accident Files

Chart 11/14

# OTS TASK FORCE STUDY

## Selected Fatality Incidents - Environment/Striking Equipment - 1/86 to 9/94

43 Total Incidents Involving 46 Fatalities



Struck by MW Equipment	7		5	2
Struck by Train	31		2	29

Striking Equipment

Struck by MW Equipment

Struck by Train

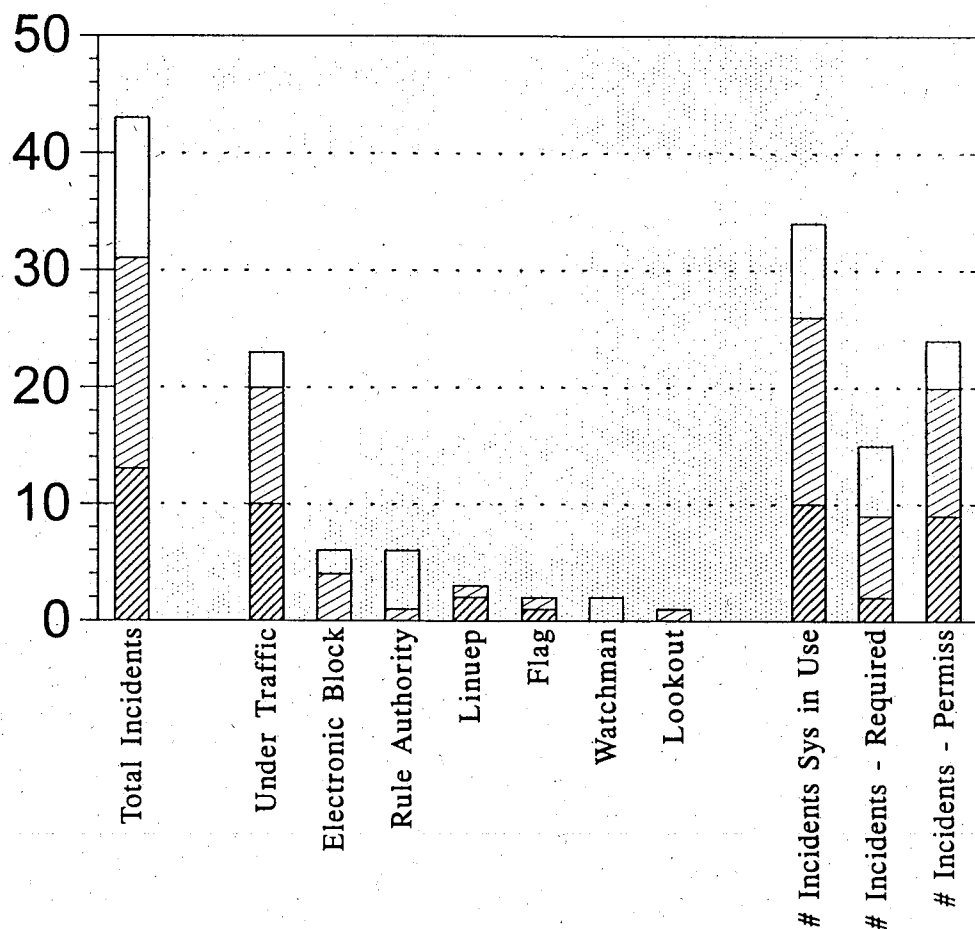
Source: FRA and NTSB Railroad Accident Files



# OTS TASK FORCE STUDY

Selected Fatality Incidents by Protection System in Effect - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



Working With 5 or More	12	3	2	5	0	0	2	0		8	6	4
Working With 2-4	18	10	4	1	1	1	0	1		16	7	11
Employee Working Alone	13	10	0	0	2	1	0	0		10	2	9

# Employees at Work at Time of Accident

□ Working With 5 or More

▨ Working With 2-4

▩ Employee Working Alone

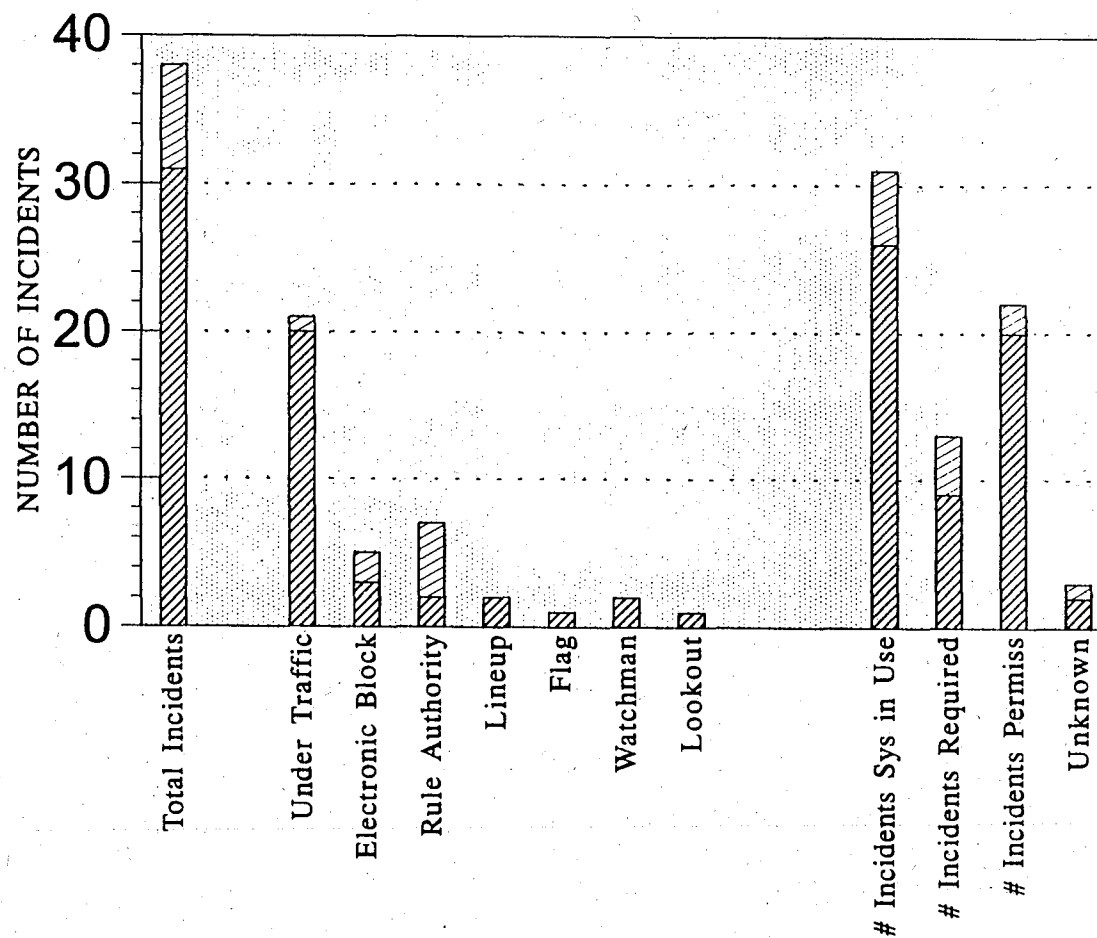
Source: FRA and NTSB Railroad Accident Files

Chart: 11/14

# OTS TASK FORCE STUDY

Selected Fatality Incidents - Protection System in Effect/Striking Equipment - 1/86 to 9/94

43 Total Incidents Involving 46 Fatalities



Struck by MW Equipment	7		1	2	5	0	0	0	0		5	4	2	1
Struck by Train	31		20	3	2	2	1	2	1		26	9	20	2

Striking Equipment

▨ Struck by MW Equipment

▩ Struck by Train

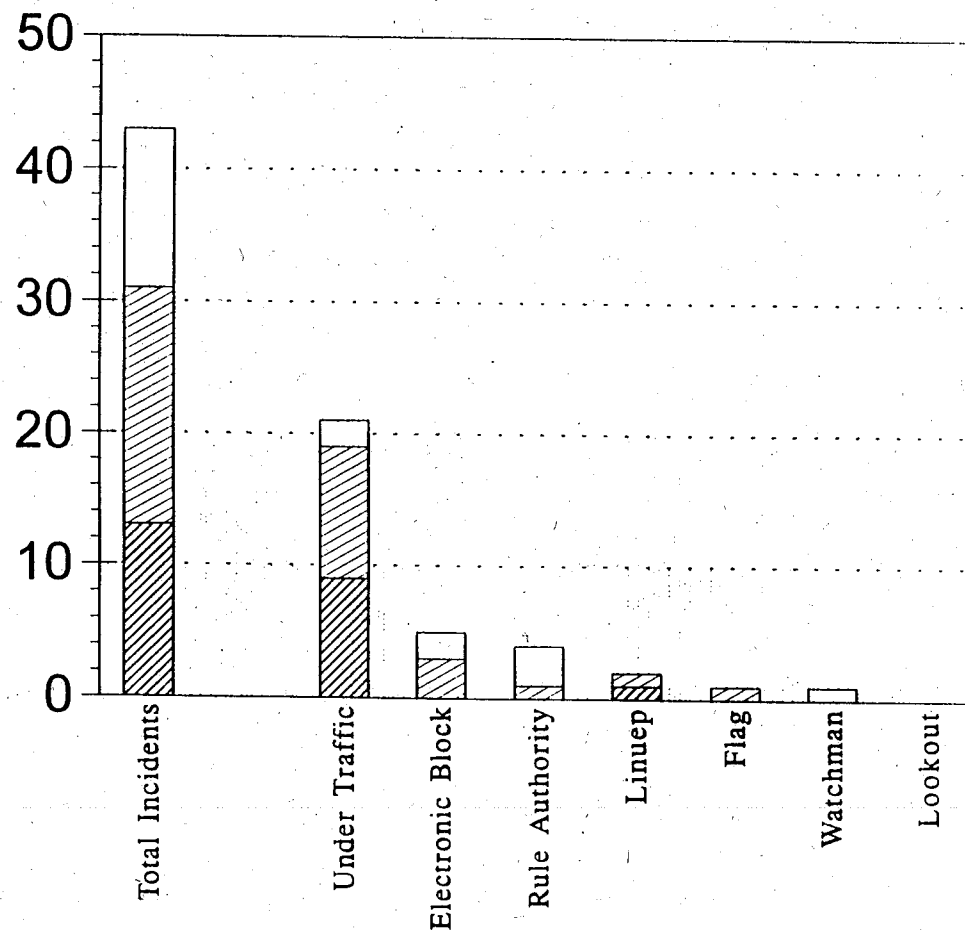
Source: FRA and NTSB Railroad Accident Files

Chart 11/30

# OTS TASK FORCE STUDY

Selected Fatality Incidents by Protection System in Use - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



Working With 5 or More	12		2	2	3	0	0	1	0
Working With 2-4	18		10	3	1	1	1	0	0
Employee Working Alone	13		9	0	0	1	0	0	0

# Employees at Work at Time of Accident

□ Working With 5 or More

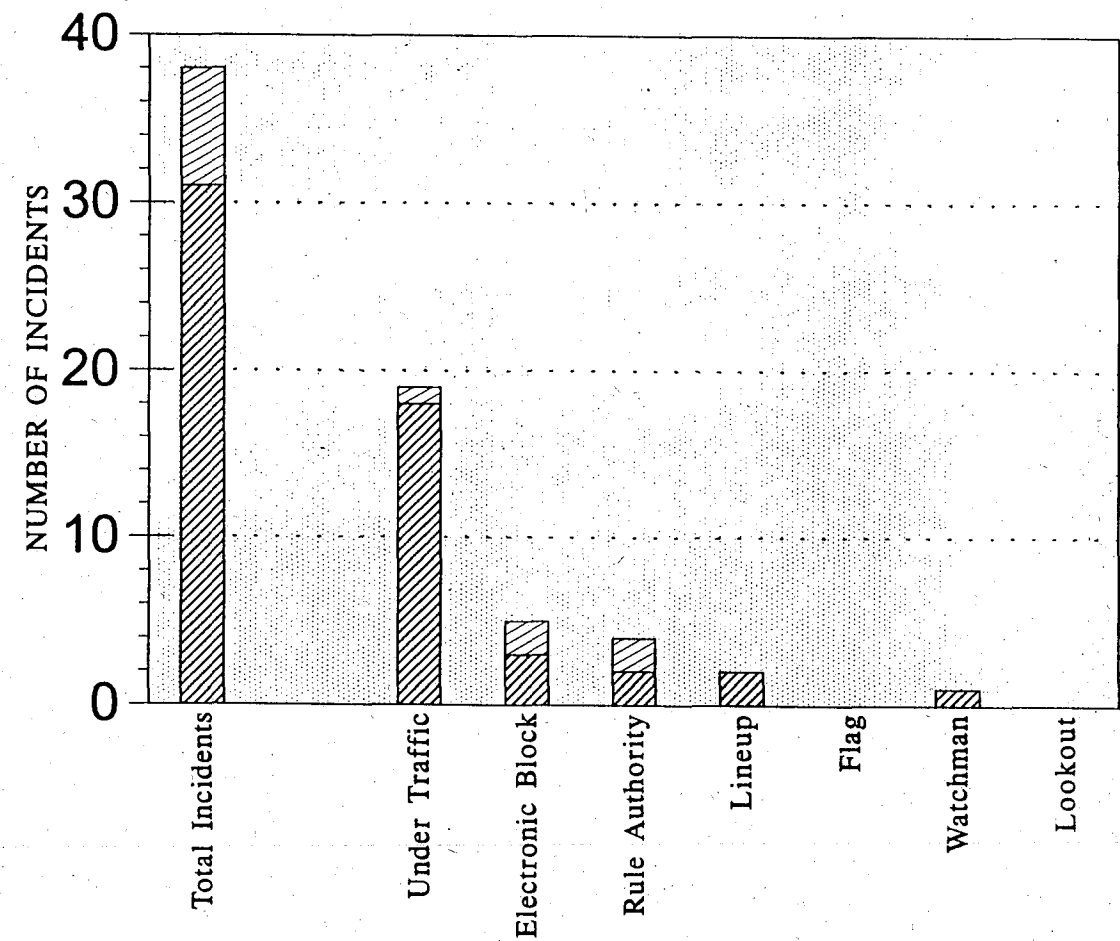
▨ Working With 2-4

▩ Employee Working Alone

# OTS TASK FORCE STUDY

Selected Fatality Incidents - Protection System in Use/Striking Equipment - 1/86 to 9/94

43 Total Incidents Involving 46 Fatalities



Struck by MW Equipment	7		1	2	2	0	0	0	0
Struck by Train	31		18	3	2	2	0	1	0

Striking Equipment

Struck by MW Equipment

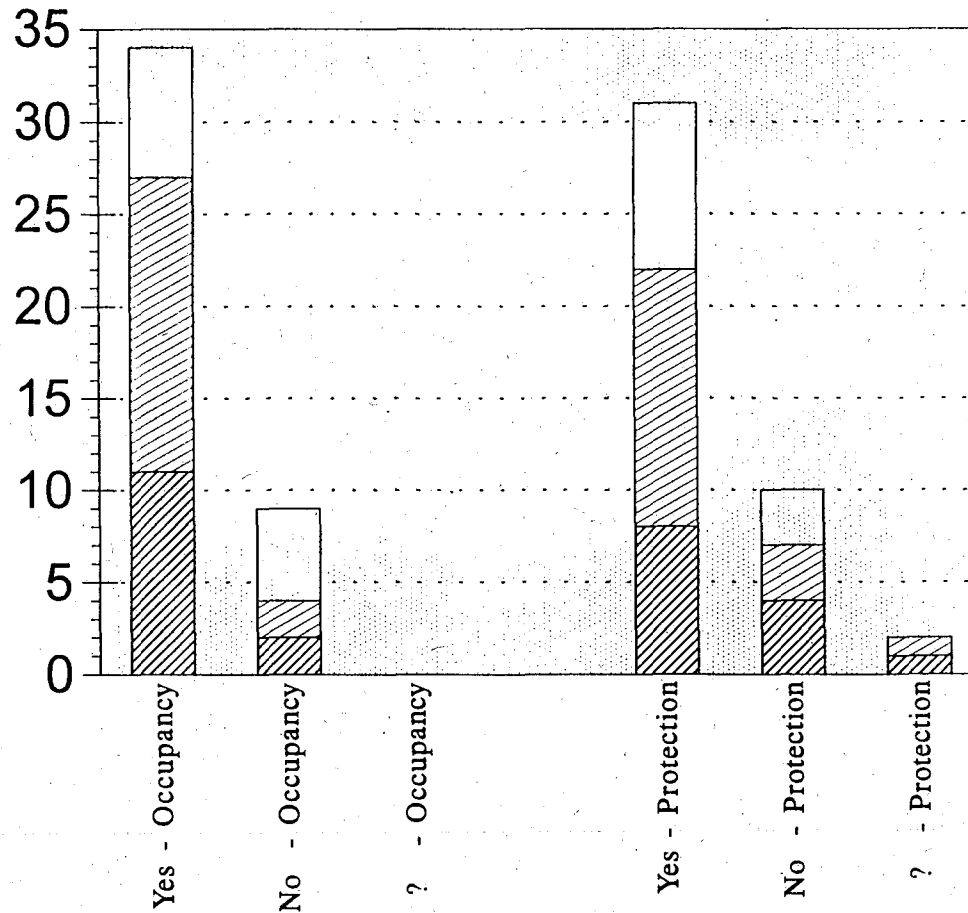
Struck by Train

Source: FRA and NTSB Railroad Accident Files

# OTS TASK FORCE STUDY

Selected Fatality Incidents Involving Multiple Rules - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



Working With 5 or More	7	5	0		9	3	0
Working With 2-4	16	2	0		14	3	1
Employee Working Alone	11	2	0		8	4	1

# Employees at Work at Time of Accident

□ Working With 5 or More

▨ Working With 2-4

▩ Employee Working Alone

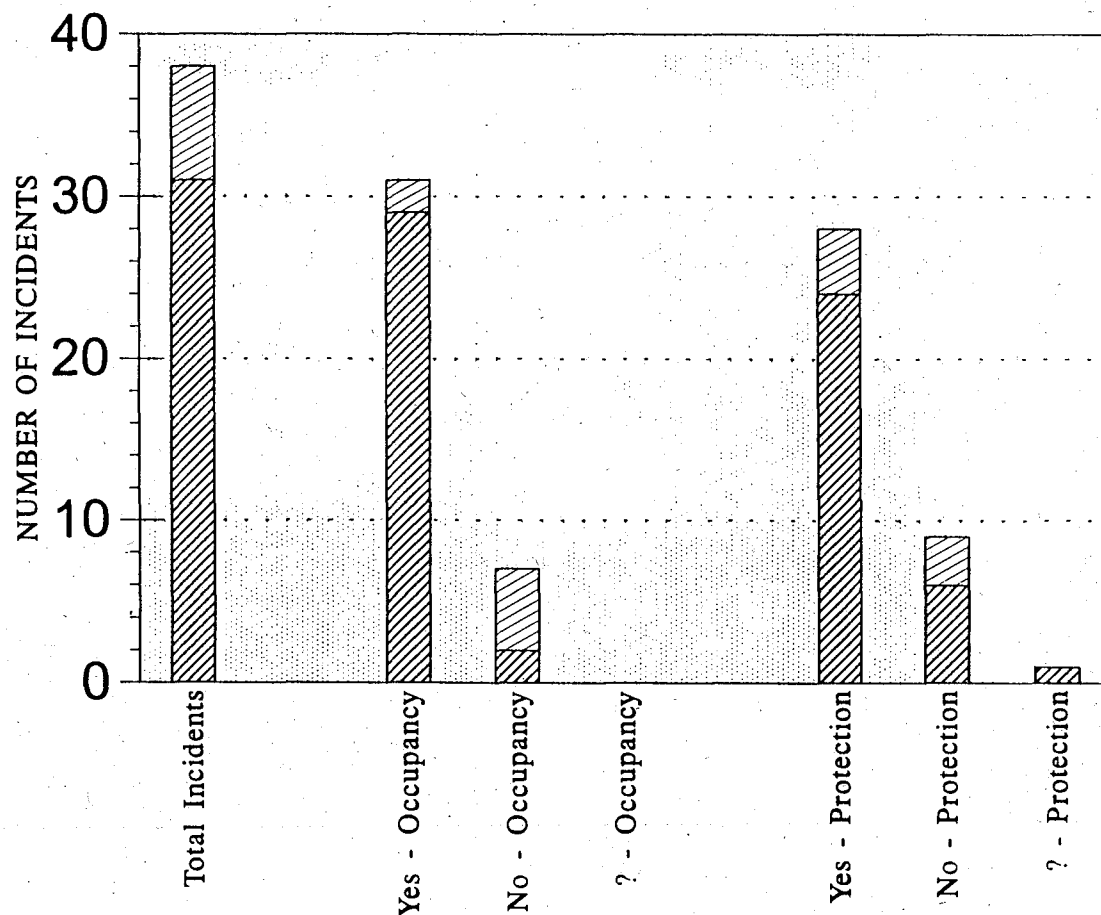
Source: FRA and NTSB Railroad Accident Files

Chart 11/14

# OTS TASK FORCE STUDY

Selected Fatality Incidents - Multiple Rules/Striking Equipment - 1/86 to 9/94

43 Total Incidents Involving 46 Fatalities



Struck by MW Equipment	7		2	5	0		4	3	0
Struck by Train	31		29	2	0		24	6	1

Striking Equipment

Struck by MW Equipment

Struck by Train

Source: FRA and NTSB Railroad Accident Files

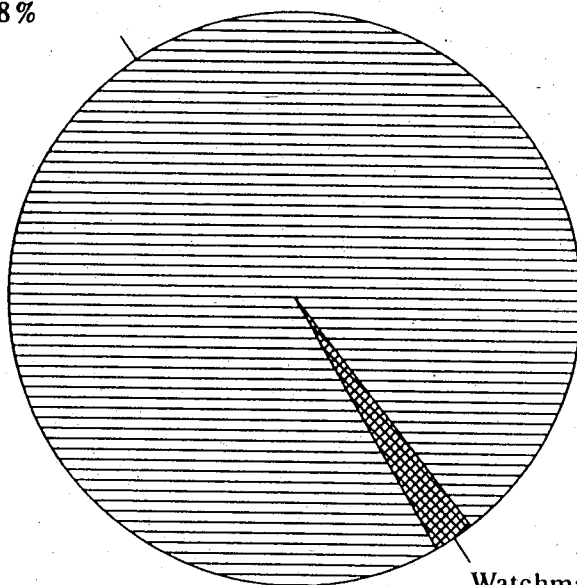
Chart 11/30

# OTS TASK FORCE STUDY

Selected Fatality Incidents by Use of Watchman - January, 1986 to September, 1994

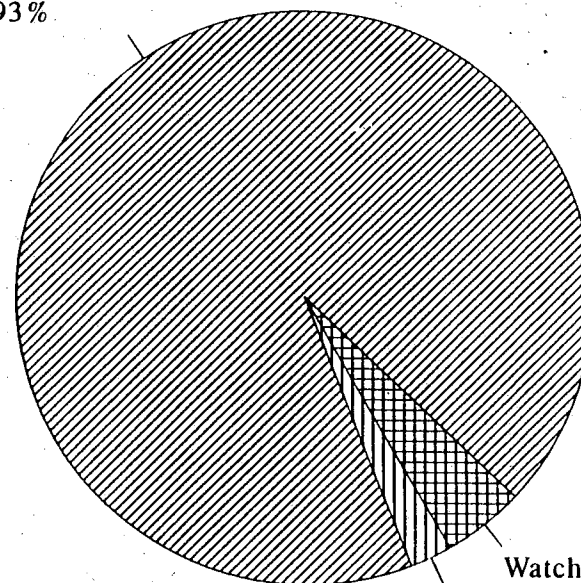
43 Total Incidents Involving Moving Equipment

Watchman Present - No  
42 98%



Watchman Present - Yes  
1 2%

Watchman Req - No  
40 93%



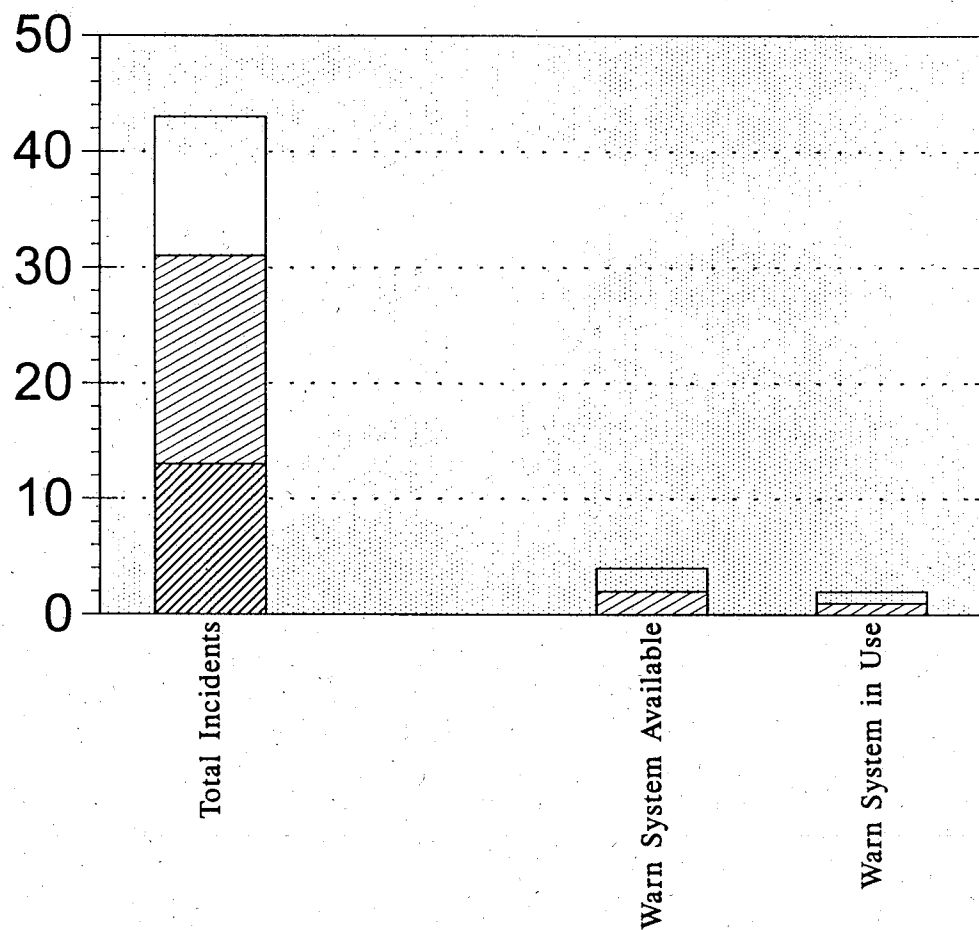
Watchman Req - Yes  
Unknown 2 5%  
1 2%

Source: FRA and NTSB Data

# OTS TASK FORCE STUDY

Selected Fatality Incidents by Presence of Warning System - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities



Working With 5 or More	12		2	1
Working With 2-4	18		2	1
Employee Working Alone	13		0	0

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

Source: FRA and NTSB Railroad Accident Files

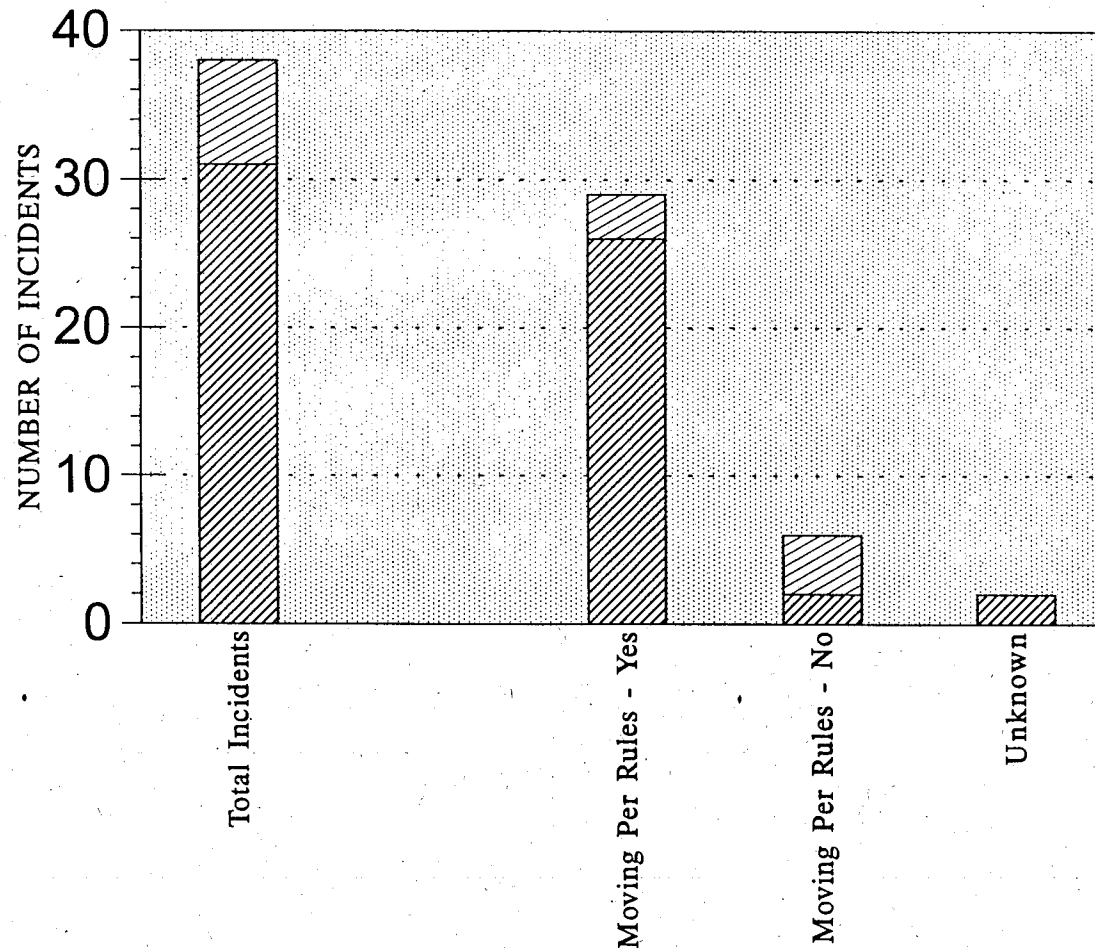
Char 11/14



# OTS TASK FORCE STUDY

Selected Fatality Incidents -Striking Equipment Moving Per Rules/Striking Equipment - 1/86 to 9/94

43 Total Incidents Involving 46 Fatalities



Struck by MW Equipment	7		3	4	0
Struck by Train	31		26	2	2

Striking Equipment	
	Struck by MW Equipment
	Struck by Train

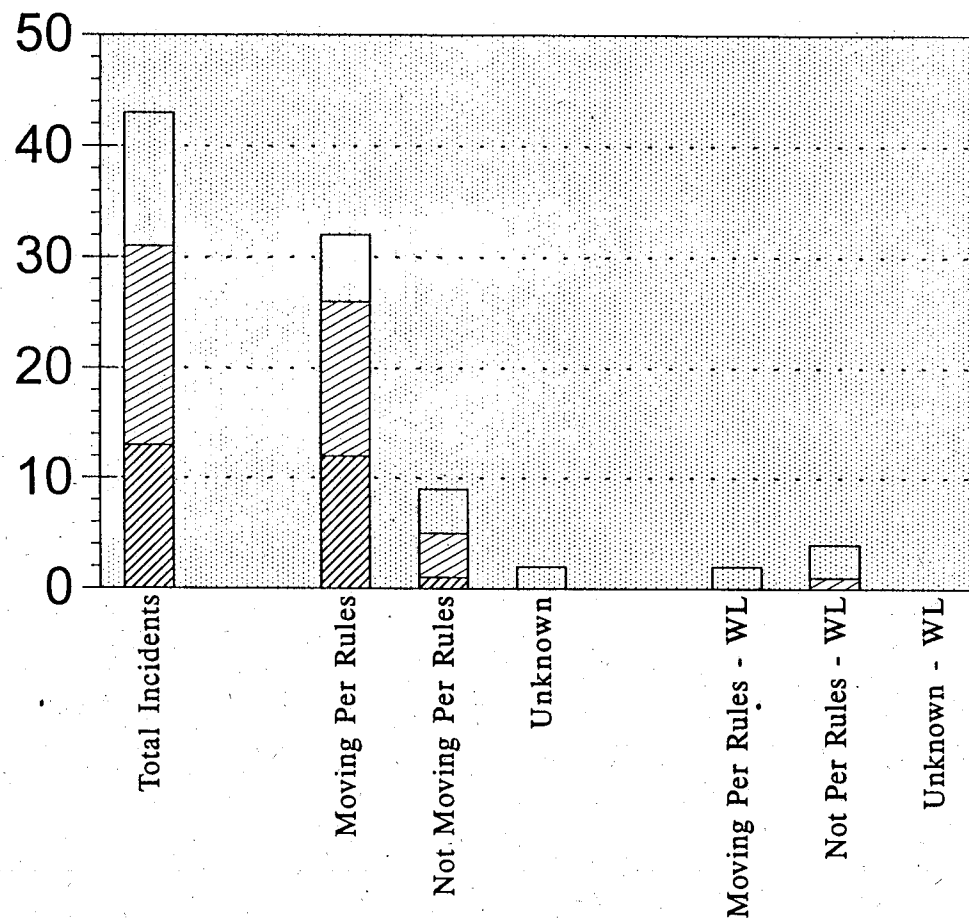
Source: FRA and NTSB Railroad Accident Files

# OTS TASK FORCE STUDY

Selected Fatality Incidents - Striking Equipment Moving Per Rules - January, 1986 to September, 1994

43 Total Incidents Involving 46 Total Fatalities

6 Total Incidents Within Limits



Working With 5 or More	12		6	4	2		2	3	0
Working With 2-4	18		14	4	0		0	1	0
Employee Working Alone	13		12	1	0		0	0	0

# Employees at Work at Time of Accident

Working With 5 or More

Working With 2-4

Employee Working Alone

Source: FRA and NTSB Railroad Accident Files

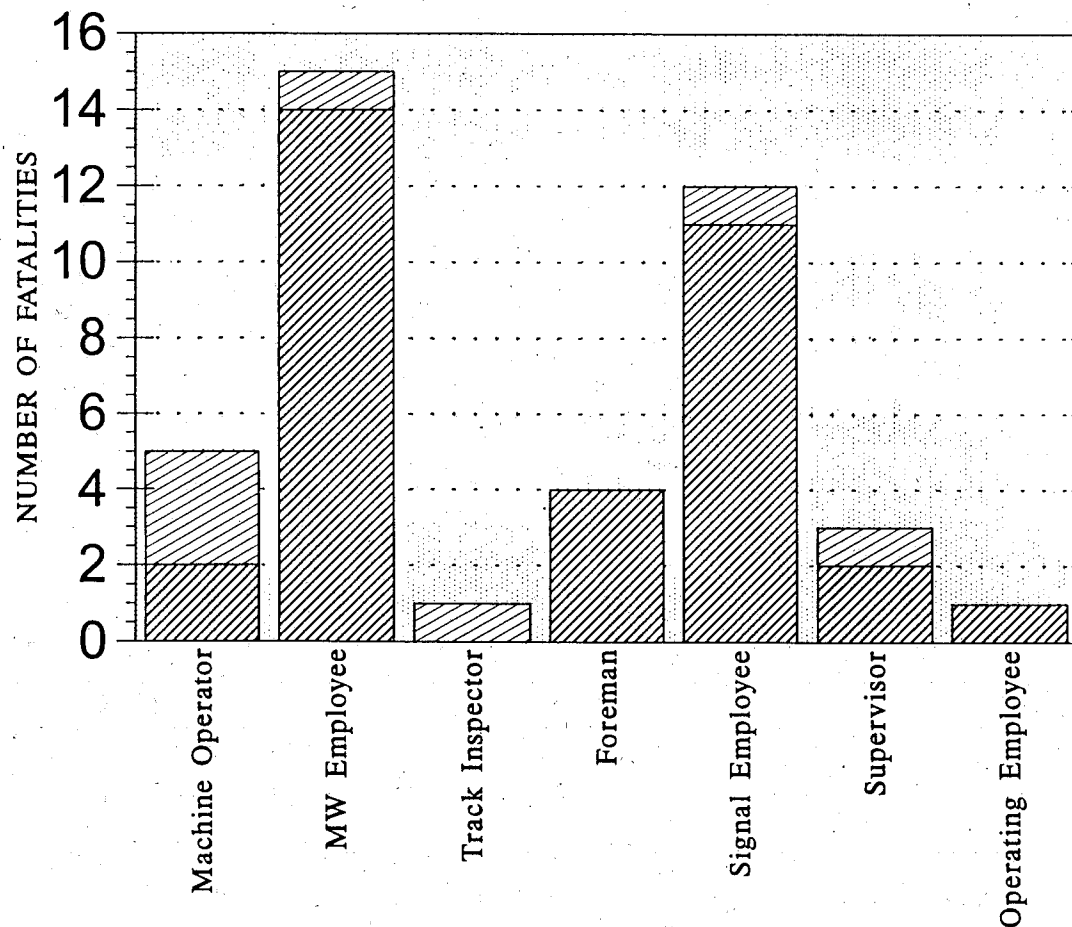
WITHIN LIMITS: Accident/incident involved trains/OTE working under (within) same protection

Char 1/23

# OTS TASK FORCE STUDY

Selected Fatalities by Occupation/Striking Equipment - January, 1986 to September, 1994

43 Total Incidents Involving 46 Fatalities



Struck by Equipment	3	1	1	0	1	1	0
Struck by Train	2	14	0	4	11	2	1

# Employees at Work at Time of Accident

Struck by Equipment

Struck by Train

Source: FRA and NTSB Railroad Accident Files

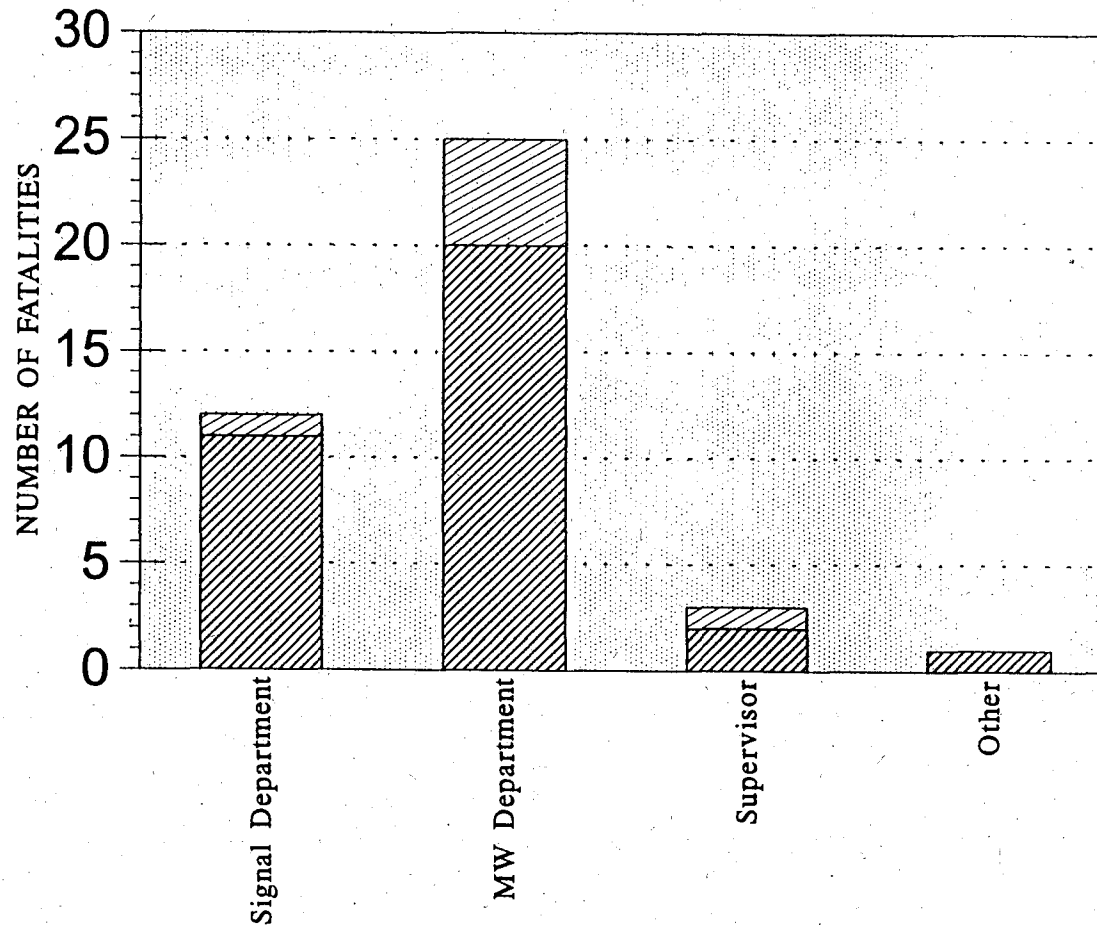
SUPERVISOR: Roadmaster, Signal Inspector/Supervisor, Trainmaster

Char 11/15

# OTS TASK FORCE STUDY

Selected Fatalities by Occupation/Striking Equipment - January, 1986 to September, 1994

43 Total Incidents Involving 46 Fatalities



Struck by MW Equipment	1	5	1	0
Struck by Train	11	20	2	1

Striking Equipment

Struck by MW Equipment

Struck by Train

Source: FRA and NTSB Railroad Accident Files

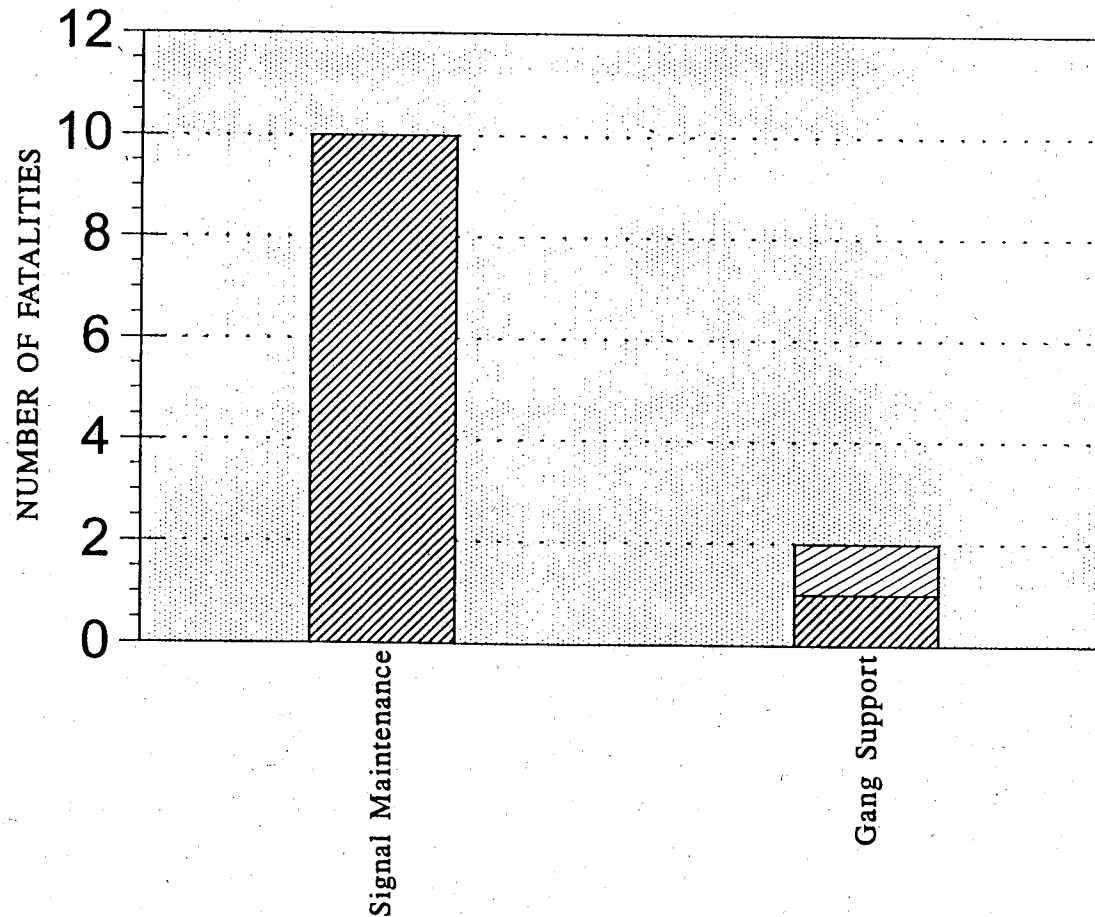
SUPERVISOR: Roadmaster, Signal Inspector/Supervisor, Trainmaster

Chart I 1/30

# OTS TASK FORCE STUDY

Selected Fatalities by Signal Department Activity - January, 1986 to September, 1994

43 Total Incidents Involving 46 Fatalities



Struck by MW Equipment	0	1
Struck by Train	10	1

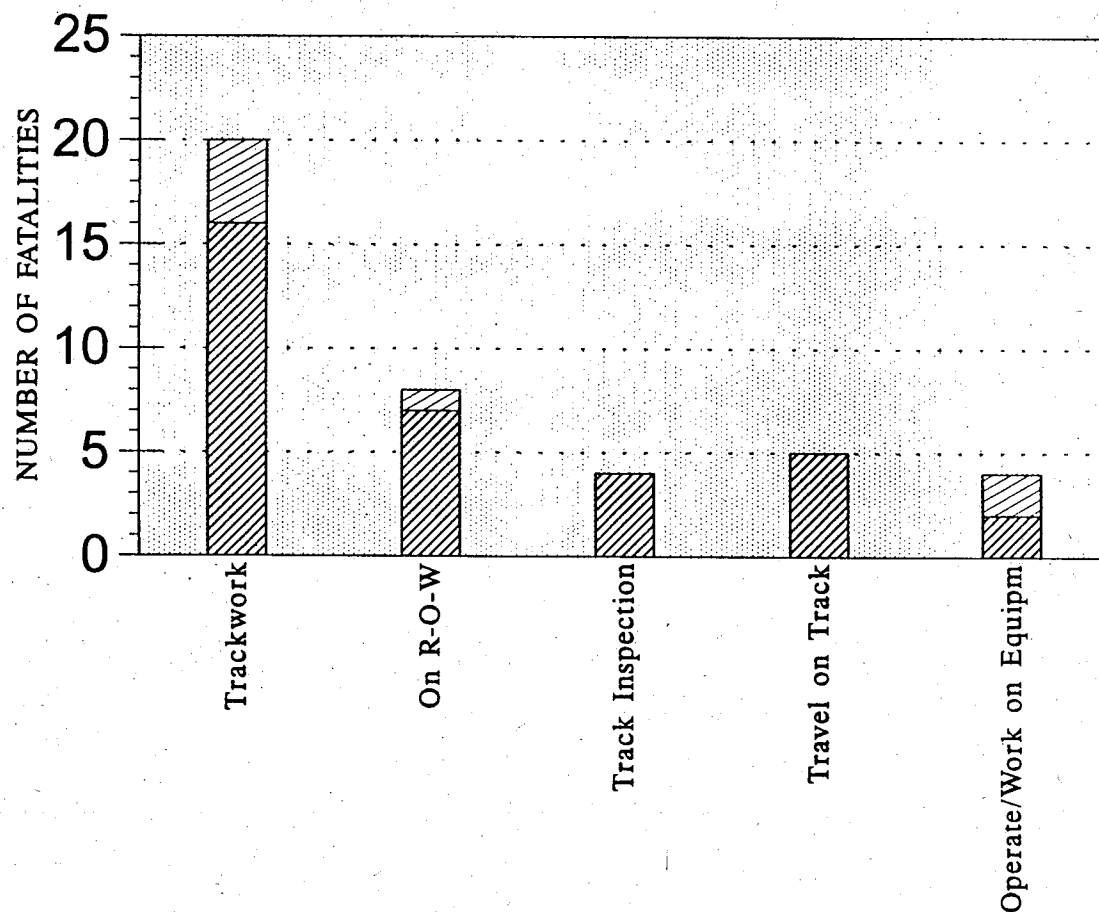
Striking Equipment	
	Struck by MW Equipment
	Struck by Train

Source: FRA and NTSB Railroad Accident Files

# OTS TASK FORCE STUDY

Selected Fatalities by Employee Activity - January, 1986 to September, 1994

43 Total Incidents Involving 46 Fatalities



Struck by MW Equipment	4	1	0	0	2
Struck by Train	16	7	4	5	2

Striking Equipment

Struck by MW Equipment

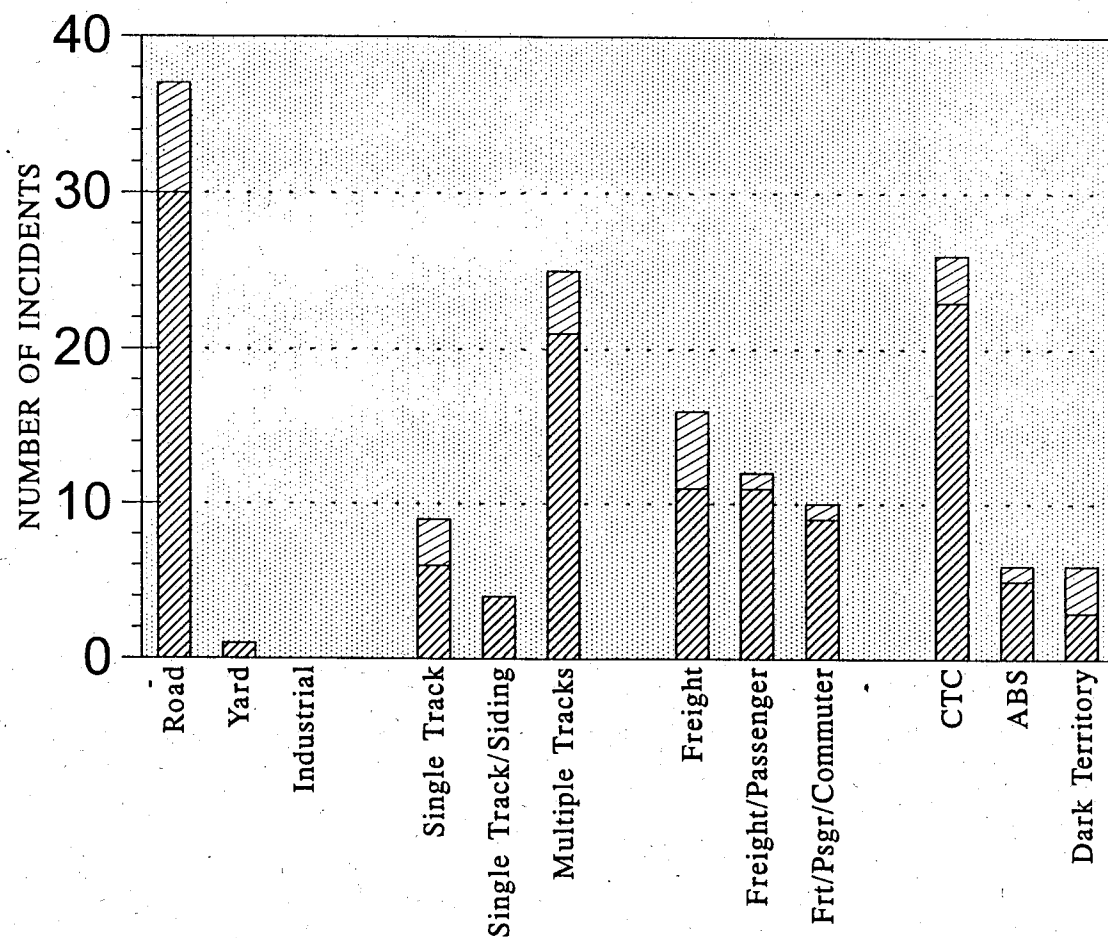
Struck by Train

Source: FRA and NTSB Railroad Accident Files

# OTS TASK FORCE STUDY

Selected Fatality Incidents By Location/Striking Equipment - January, 1986 to September, 1994

43 Total Incidents Involving 46 Fatalities



Struck by MW Equipment	7	0	0		3	0	4		5	1	1		3	1	3
Struck by Train	30	1	0		6	4	21		11	11	9		23	5	3

Striking Equipment

Struck by MW Equipment

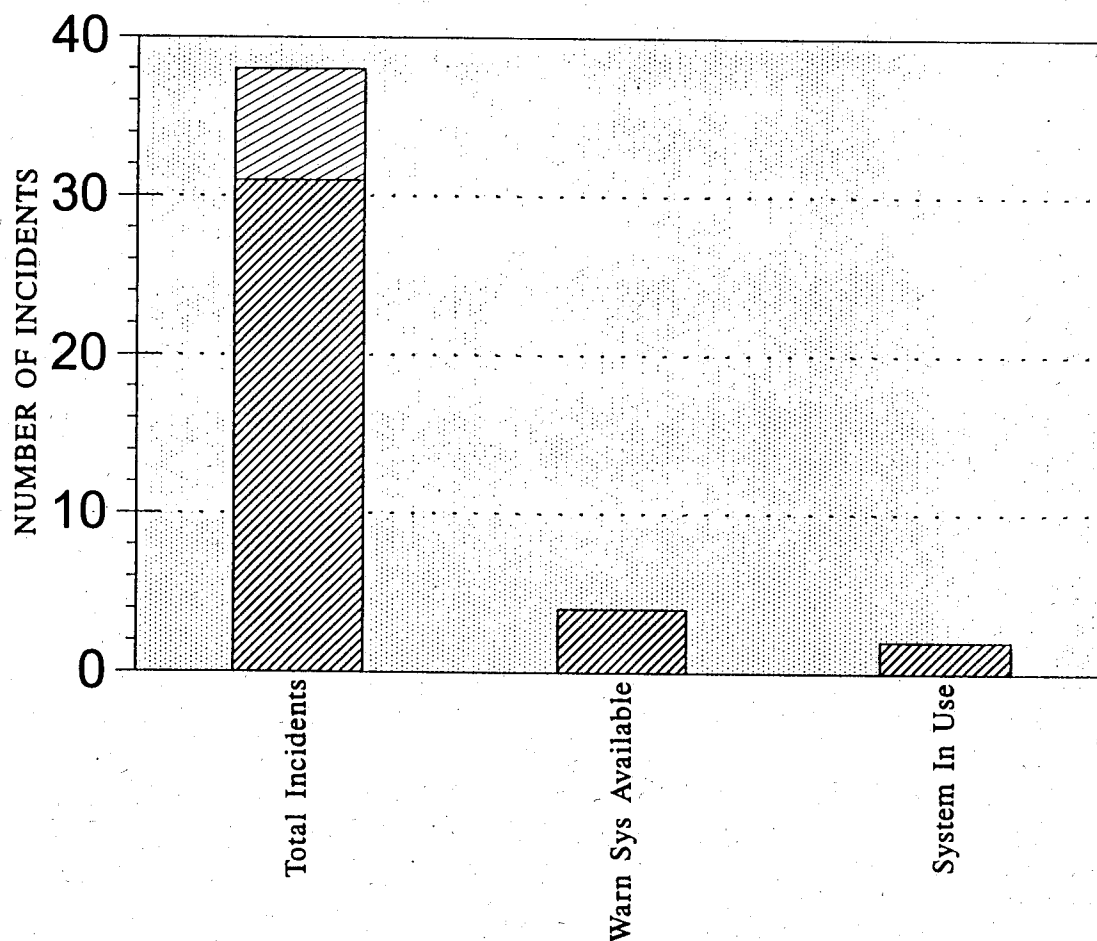
Struck by Train

Source: FRA and NTSB Railroad Accident Files

# OTS TASK FORCE STUDY

Selected Fatality Incidents by Presence of Warning System/Striking Equipment - 1/86 to 9/94

43 Total Incidents Involving 46 Fatalities



Struck by MW Equipment	7	0	0
Struck by Train	31	4	2

Striking Equipment	
	Struck by MW Equipment
	Struck by Train

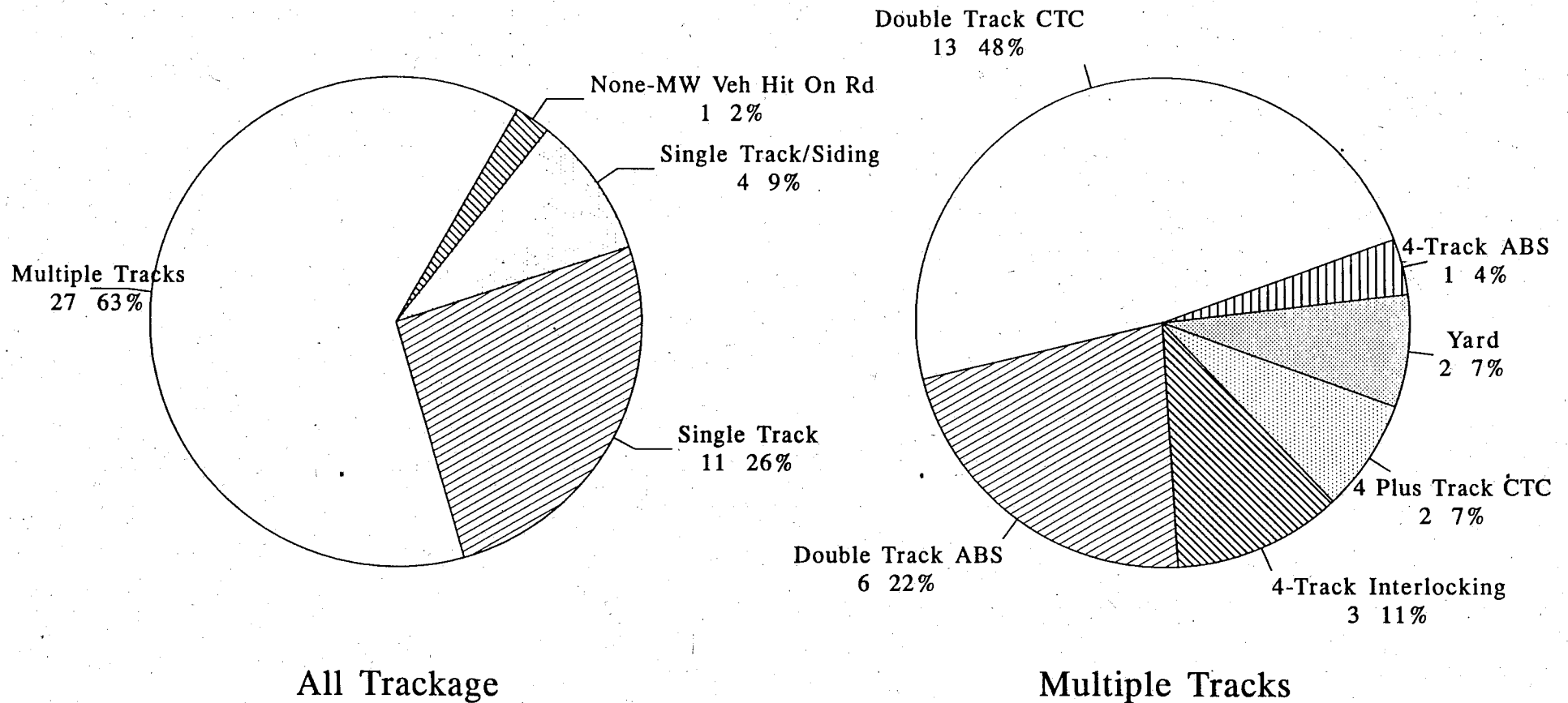
Source: FRA and NTSB Railroad Accident Files



# OTS TASK FORCE STUDY

Selected Fatality Incidents by Track Locations - January, 1986 - September, 1994

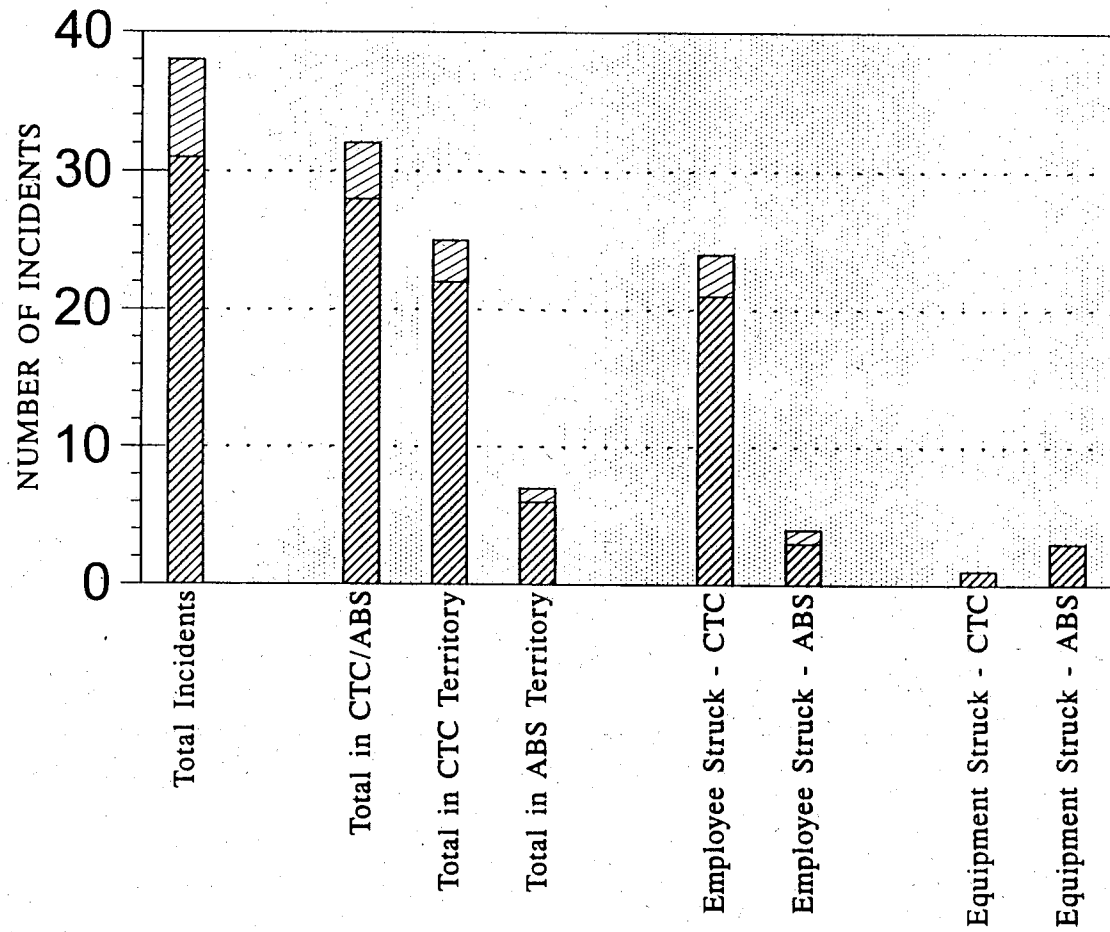
43 Total Incidents - 27 Incidents Involving Multiple Tracks



# OTS TASK FORCE STUDY

Selected Fatality Incidents In CTC/ABS Territory by Striking Equipment - 1/86 to 9/94

43 Total Incidents Involving 46 Fatalities



Struck by MW Equipment	7		4	3	1		3	1		0	0
Struck by Train	31		28	22	6		21	3		1	3

Striking Equipment

Struck by MW Equipment

Struck by Train

Source: FRA and NTSB Railroad Accident Files

Chart Date 11/30

