

Asphalt chunk elevated 50ft

Evidence
Data log

Solutions
Additional end of shift inspection from top side for all elevated road-decking demo jobs
Criteria Pass Status Selected
Cost is per day. This solution is intended for example purposes only.

Asphalt was part of elevated roadway

Evidence
Data log

Large object fell

Evidence
Data log

Solutions
Erect a protective tunnel for sidewalk and road on all bridge demo jobs
Criteria Fail Status Identified
This solution is intended for example purposes only.
Install safety net at end of shift, under demo bridge to catch falling debris
Criteria Pass Status Identified
This solution is intended for example purposes only.

Asphalt chunk moved over the edge of bridge

Evidence
Demo sub statement

1800 lb asphalt chunk fell off of bridge

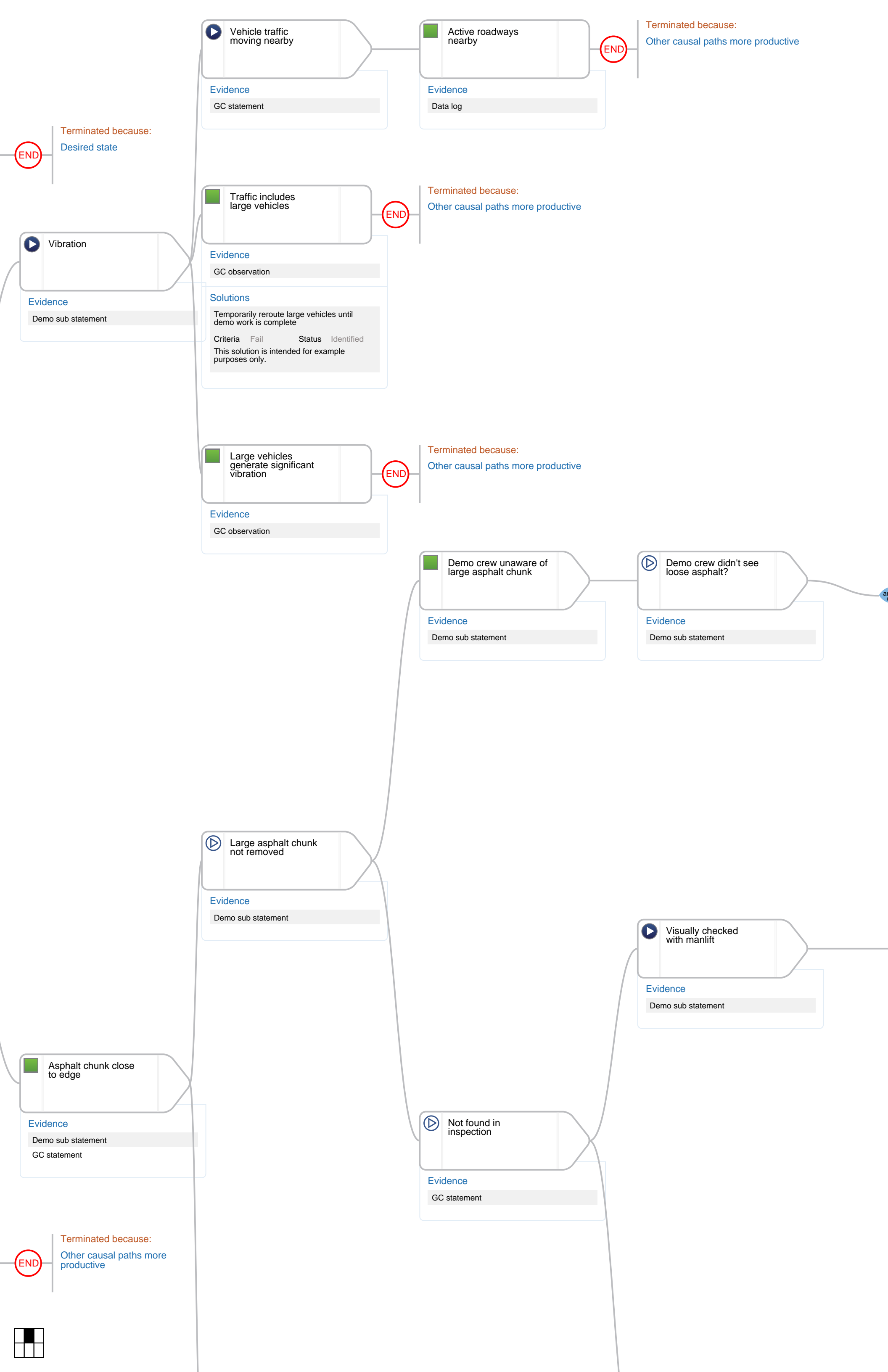
Evidence
Demo sub statement

Solutions
Install protective safety restraints over top of elevated roads to prevent asphalt movement after demo work
Criteria Pass Status Selected
This solution is intended for example purposes only.

Gravity

Evidence
Statement from multiple crew members





END

Terminated because:
Desired state

▶ Vehicle traffic moving nearby

Evidence
GC statement

■ Active roadways nearby

Evidence
Data log

END

Terminated because:
Other causal paths more productive

■ Traffic includes large vehicles

Evidence
GC observation

Solutions
Temporarily reroute large vehicles until demo work is complete

| Criteria | Fail | Status | Identified |
|--|------|--------|------------|
| This solution is intended for example purposes only. | | | |

END

Terminated because:
Other causal paths more productive

▶ Vibration

Evidence
Demo sub statement

■ Large vehicles generate significant vibration

Evidence
GC observation

END

Terminated because:
Other causal paths more productive

■ Demo crew unaware of large asphalt chunk

Evidence
Demo sub statement

▶ Demo crew didn't see loose asphalt?

Evidence
Demo sub statement

▶ Large asphalt chunk not removed

Evidence
Demo sub statement

■ Asphalt chunk close to edge

Evidence
Demo sub statement
GC statement

▶ Not found in inspection

Evidence
GC statement

▶ Visually checked with manlift

Evidence
Demo sub statement

END

Terminated because:
Other causal paths more productive



Used demo tool @ end of excavator arm to clear debris

Terminated because:
Other causal paths more productive

END

Loose Asphalt far away from operator

Evidence
Demo sub statement

Evidence
Demo sub statement

Demo tool is very long

Evidence
Demo sub statement

Terminated because:
Other causal paths more productive

END

Limited visibility?

Actions
Provide evidence for this cause

Terminated because:
Other causal paths more productive

END

Never looked for loose asphalt

Evidence
Statement from multiple crew members

Terminated because:
Other causal paths more productive

END

Procedure

Evidence
Data log
Demo sub statement

Terminated because:
Other causal paths more productive

END

Incomplete inspection?

Actions
Provide evidence for this cause

Terminated because:
Other causal paths more productive

END



★ Near miss incident

~~▶ Work crew accidentally pushed asphalt chunk over edge~~

Evidence

Demo sub statement

■ 1800 lb asphalt chunk existed

Evidence

Statement from multiple crew members

■ Located on public roadway

Evidence

Data log

■ General public has access to area

Evidence

Data log

■ Area access not restricted

Evidence

GC statement

Solutions

Reroute vehicle and pedestrian traffic

| Criteria | Fail | Status | Identified |
|--|------|--------|------------|
| This solution is intended for example purposes only. | | | |

■ Potential for people to be under falling object

Evidence

GC statement

and/or

▶ Construction crews working in area

Evidence

Data log

▶ Rebuilding bridge & roadway

Evidence

Data log



Asphalt being removed was near open edge of bridge

Terminated because:
Other causal paths more productive

Evidence

- GC observation
- Statement from multiple crew members

Manlift inspection did not reveal the debris

Evidence

- Demo sub statement

Terminated because:
Other causal paths more productive

Asphalt is on bridge

Terminated because:
Other causal paths more productive

Evidence

- Data log

Terminated because:
Other causal paths more productive

Loosened by bridge demolition

Evidence

- Data log

Bridge deemed unsafe

Terminated because:
Other causal paths more productive

Evidence

- Data log

Terminated because:
Other causal paths more productive

Bridge section being demolished

Evidence

- Data log

Terminated because:
Other causal paths more productive

Make way for new bridge

Terminated because:
Other causal paths more productive

Evidence

- Data log

Terminated because:
Other causal paths more productive

Not enough space to reroute

Actions

- Provide evidence for this cause
- Terminate the cause
- Set the cause type

Not economical to reroute?


Actions


- Provide evidence for this cause
- Terminate the cause
- Set the cause type

Terminated because:
Desired state



nd or

 Inadequate lighting?



Solutions

Equip crews with high powered lighting for inspections


| Criteria | Pass | Status |
|----------|------|----------|
| | | Selected |


This solution is intended for example purposes only.

Actions

Provide evidence for this cause

Terminated because:
Other causal paths more productive

 Manlift not close enough to be effective?



Actions

Provide evidence for this cause

Terminated because:
Other causal paths more productive

