



NTSB



NTSB National Transportation Safety Board

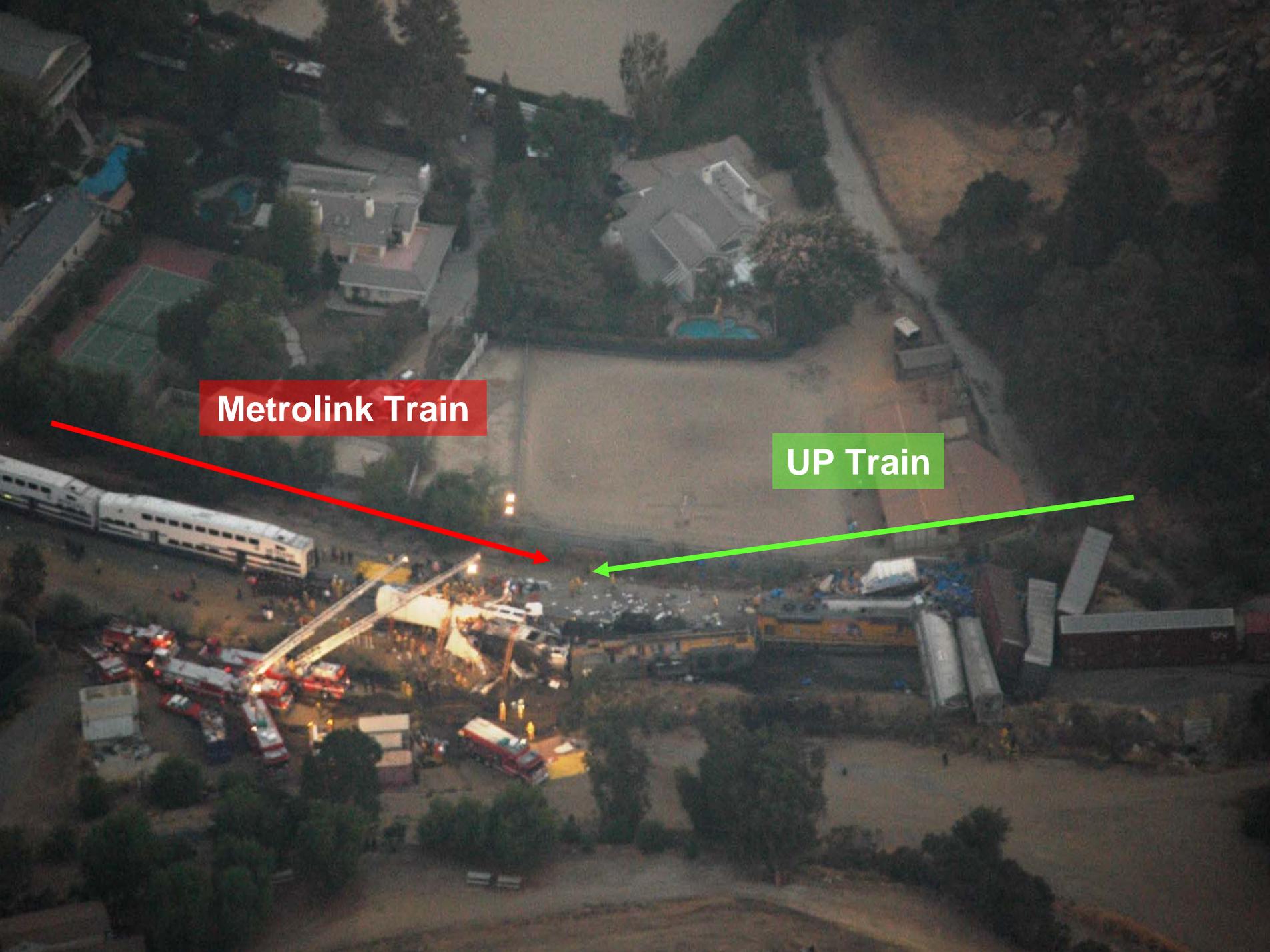
*Office of Railroad, Pipeline &
Hazardous Materials Investigations*

**Collision of Metrolink
Passenger Train 111 and
Union Pacific Freight Train
LOF65-12**

**Chatsworth, California
September 12, 2008**

Metrolink Train

UP Train



Parties

- Federal Railroad Administration
- California Public Utilities Commission
- Los Angeles Fire and Rescue
- Los Angeles Police Department
- Metrolink
- Connex
- Mass Electric Construction Company
- Union Pacific Railroad (UP)
- United Transportation Union
- Brotherhood of Locomotive Engineers & Trainmen
- Bombardier Inc. (Passenger Car manufacturer)

Presentation Overview

- Mechanical and track evidence
- Train movements and signal indications
- Dispatch plan for the trains
- Track switch damage
- Engineer radio callouts and postaccident radio testing
- Animation of the accident sequence
- Postaccident signal testing
- Cell phone use by operating crews
- Unauthorized persons being allowed in locomotive cab
- Drug and alcohol test results

Mechanical and Track Evidence

- No mechanical anomalies found
- Train brakes were inspected and tested
- No track problems identified

Train Movements and Signal Evidence

- Recorded data
 - Metrolink Dispatch Center
 - Wayside signal equipment
 - Locomotive event recorders onboard both trains
 - Locomotive forward video on UP train
- Track switch damage at Topanga caused by Metrolink train
- All recorded data and physical evidence consistent with the Metrolink train failing to stop at the red signal at Topanga
- Metrolink train continued along main track that was reserved for the UP train



CP Davis

4426

Chatsworth
Station

CP Topanga

Chatsworth St.

Devonshire St.

4451

CP Bernson



Accident Site

CP Davis

4426
Chatsworth
Station

CP Topanga

Chatsworth St.

Devonshire St.

4451

CP Bernson



09/16/2008 11:16



CP Davis

4426

Chatsworth
Station

CP Topanga

Chatsworth St.

Devonshire St.

4451

CP Bernson



CP Davis

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Chatsworth
Station

CP Topanga

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CP Davis

4426

Chatsworth
Station

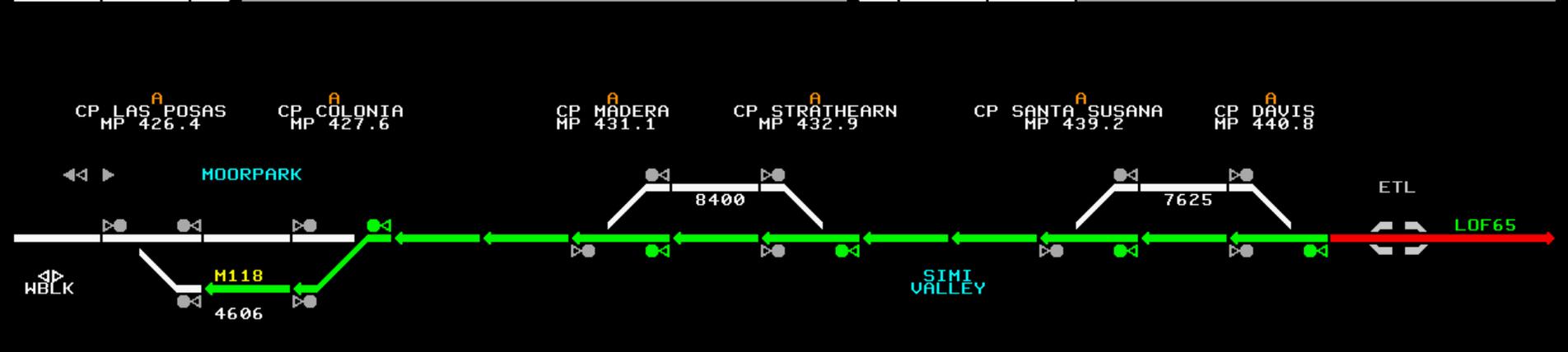
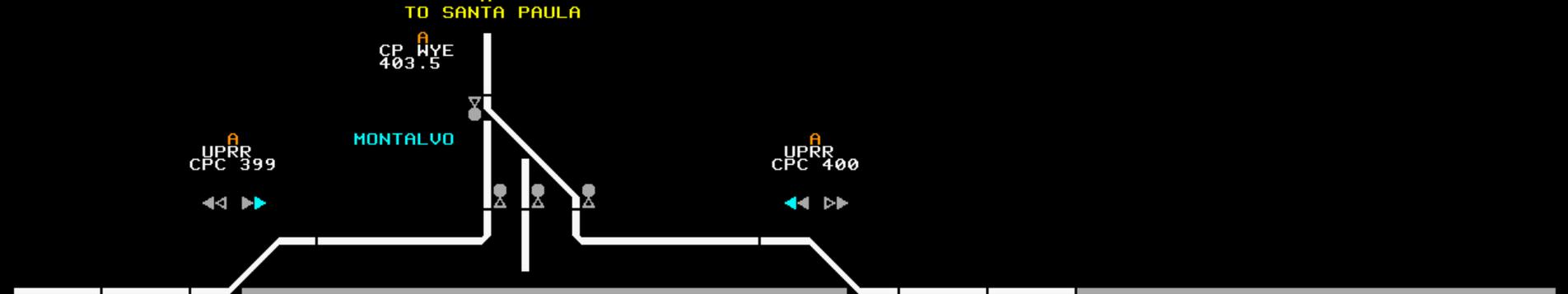
CP Topanga

Chatsworth St.

Devonshire St.

4451

CP Bernson



FAST ►► PAUSED MRZ DISP VENTURA DAVIS 25 TK OCCUPY INDICATION 9/12/08 4:20:22P



Siding

Main Track

Signal Testing

- Extensive testing and examination of all recorded data show track and signal systems functioning properly
- Recorded data from the Metrolink Dispatch Center and wayside signal equipment show signals were set 6 minutes before the Metrolink train approached the area



Metrolink Train



09/13/2008 13:27



Recorded Radio Data

- Rules require all signals to be called
- Metrolink engineer called flashing yellow signal at Bernson
- No recording of engineer calling out signals at Chatsworth or Topanga
- Defect detector radio broadcast was recorded

Radio Tests

Postaccident radio testing did not identify any “dead zones” where locomotive radio broadcasts could not be received and recorded by the dispatch center

UP Locomotive Video Recorder

- Showed a green clear indication at Control Point Davis allowing the train to proceed
- Showed a double yellow approach diverging indication at intermediate signal 4426 indicating that train would divert off the main track at the next signal

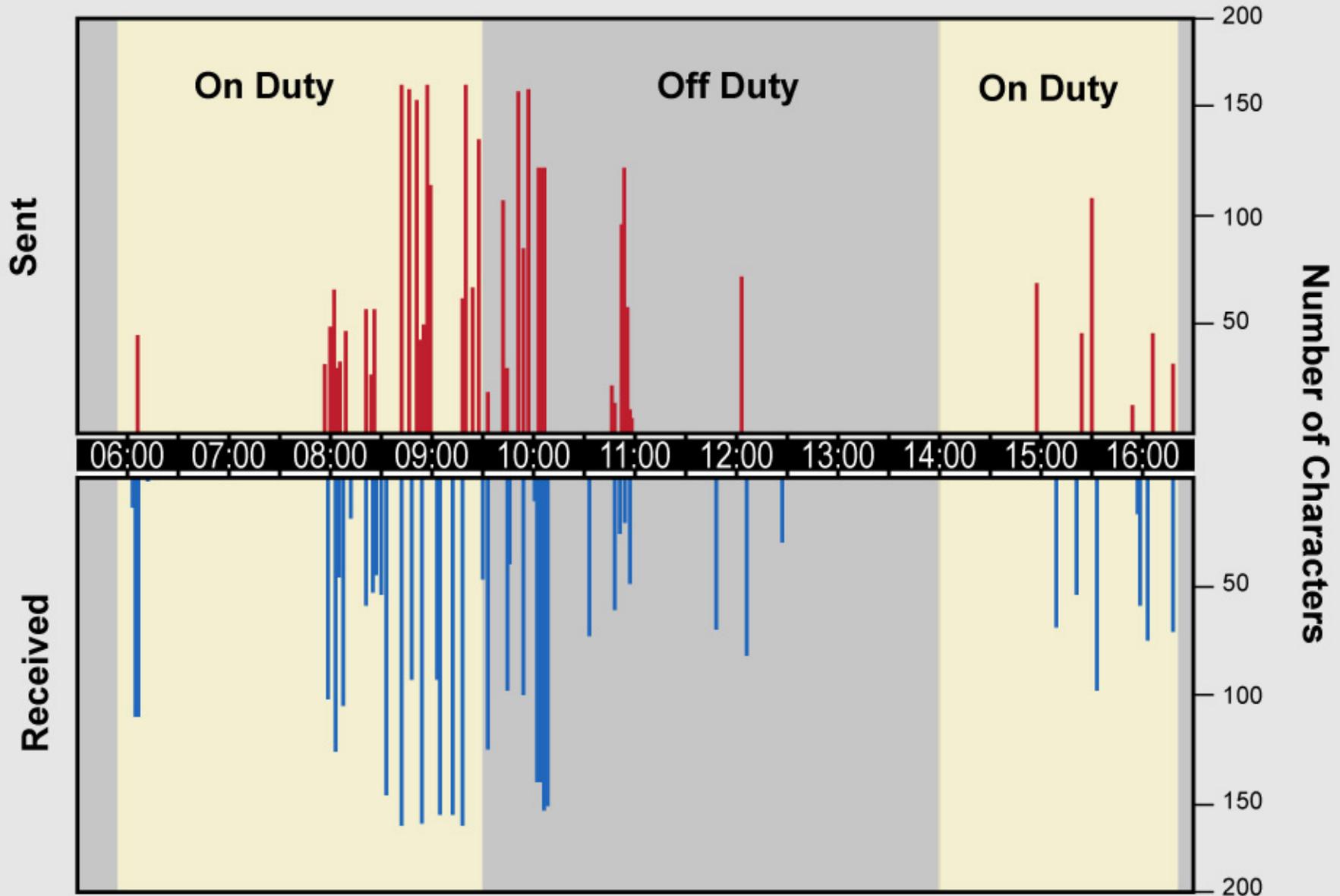
Cell Phone Use

- A significant issue in this accident is cell phone usage by train crews
- Metrolink rule at the time of the accident stated that employees must not use cell phones when operating the controls of moving equipment, except in emergencies

Cell Phone Use

- Metrolink engineer's cell phone calls and text messages collected from the service provider
- Records show the Metrolink engineer sent and received numerous text messages while on duty
- Metrolink engineer's last text message was sent shortly before the accident while the train was in motion

Metrolink Engineer's Text Messages



Engineer's Cell Phone Activity (On Duty)

| Weekday | Total Messages Sent | Total Messages Received |
|----------------|------------------------------------|--|
| Tuesday | 19 | 13 |
| Wednesday | 67 | 59 |
| Thursday | 50 | 42 |
| Total | 136 | 114 |

Text Message Records

- Indicate engineer had previously allowed unauthorized persons into the locomotive cab and one person sat at the controls while the train was operating
- Indicated an offer for another unauthorized person to ride in cab and operate the train the day of accident
- Rules prohibit these activities

Text Message Records

- UP conductor cell phone records collected
- Records indicate several text messages sent while on duty
- UP conductor sent last text message about 4:20 p.m.

Drugs and Alcohol

- The UP conductor's blood and urine tests were positive for marijuana
- Test results were negative for remaining crewmembers from both trains

Video Animation

- Train motion and accident sequence derived from event recorders and signal indications
- Cell phone record times correlated to Metrolink engineer's train operation
- Cell phone messages included in animation, at <http://ntsb.gov/events/2009/Chatsworth-CA/animation.htm>



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