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Speed Determination

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Sources for Vessel Speeds

- Electronic data
- Coxswain and crew
- Sea Ray operator
- Witnesses
- Photographs
- Video and audio

Electronic Data

- Sea Ray
  - No engine or navigation data
- CG 33118
  - No engine download data
  - AIS installed
    - JHOC recorded no AIS data
  - Scalable Integrated Navigation System
    - No data capture available

Operator Statements

- Crew of the *CG 33118*
  - Coxswain reported 3000 rpm
    - Equating to about 19 knots
  - Rear crewmember stated 20 -25 knots
- Operator of the Sea Ray
  - Traveling at idle (2 to 4 knots)

Witness Statements

- Consistently stated *CG 33118* was planing
  - Some stated that eastbound leg was similar in speed to westbound leg
- Sea Ray traveling slowly
- Both vessels at steady speeds
  - Similar course and headings

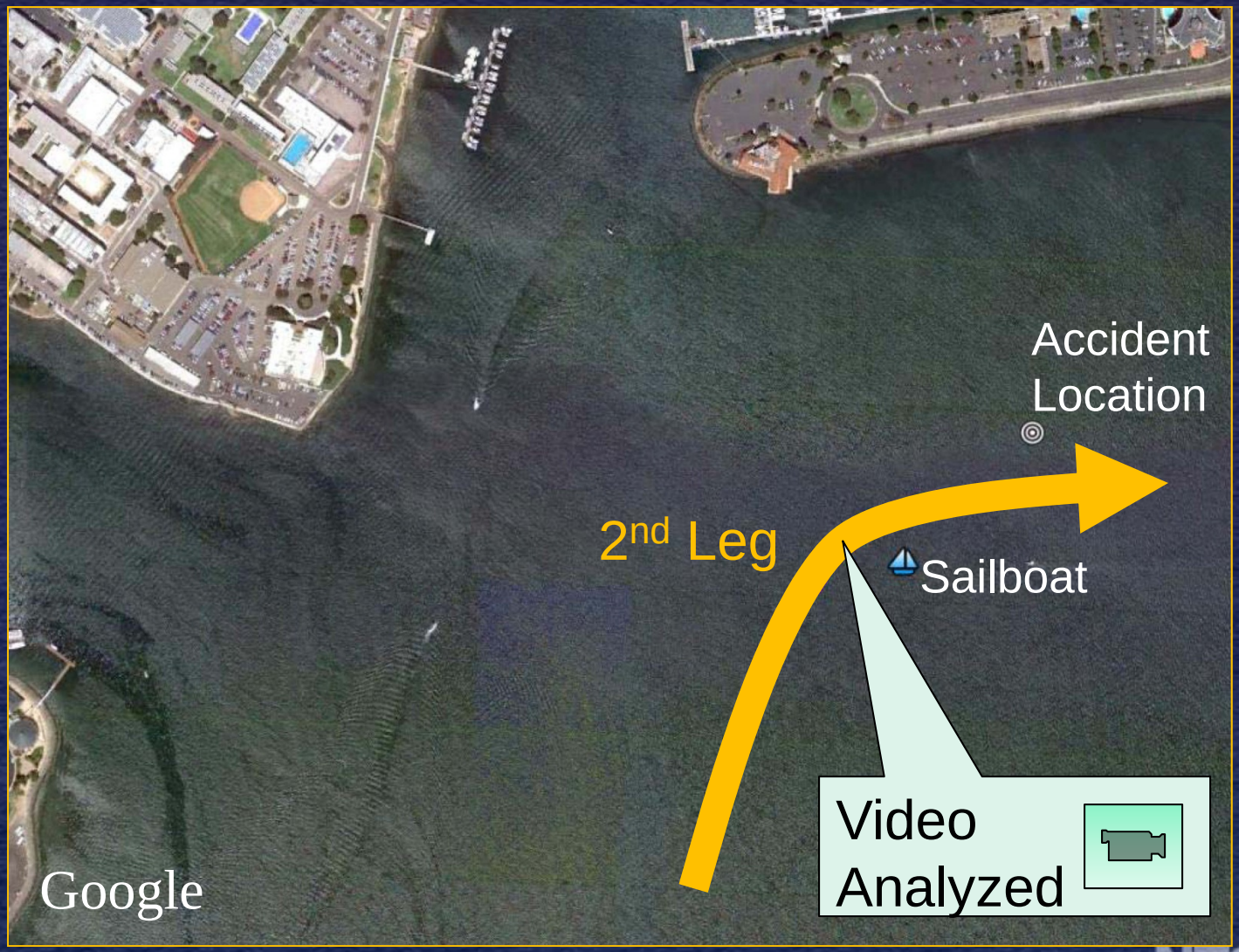
Photographs, Video and Audio

- Attempt to determine speed and track
- Unable to determine

  -Sea Ray

  -*CG 33118* on accident leg
- *CG 33118* on leg (2nd) prior to collision
  - Calculated speed and portion of track

Video and Audio Study



CG 33118 Speed

- Approximately 42 knots (about 5200 rpm)
  - During a portion of the eastbound or 2nd leg
  - A few minutes prior to the collision
  - Within 100 yards of the accident location
- At least planing speed (19 knots or more)
  - During the westbound accident leg

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SPC-LE Visibility

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Forward Visibility

- Indications visibility could be challenging
- Contract called for ABYC standards
  - H-1 visibility standard included
- SPC-LE did not meet H-1 standard
  - Vertical range of visibility
  - 3000 rpm highest trim angle
    - Corresponds with worst visibility

Vertical Visibility Comparison Study

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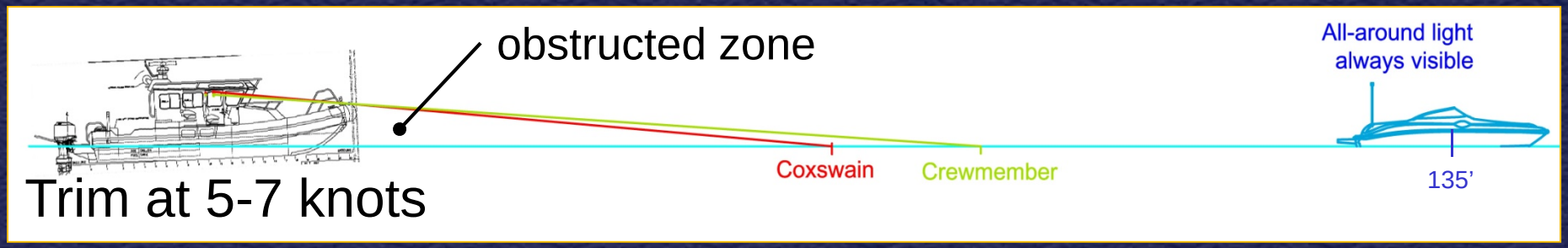
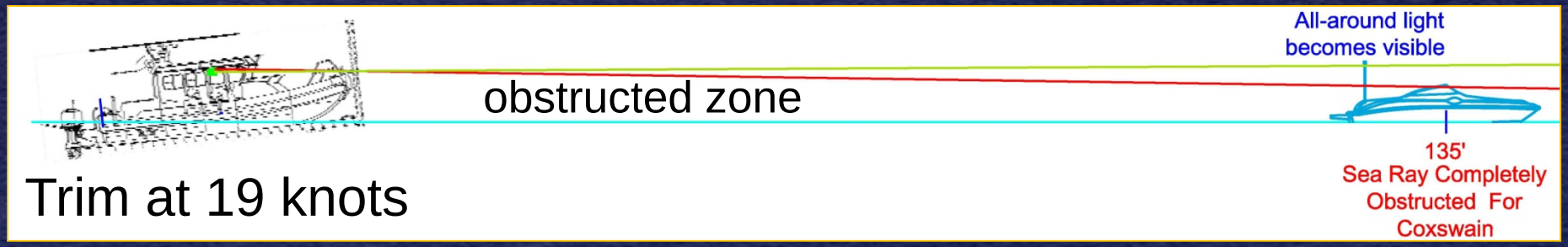
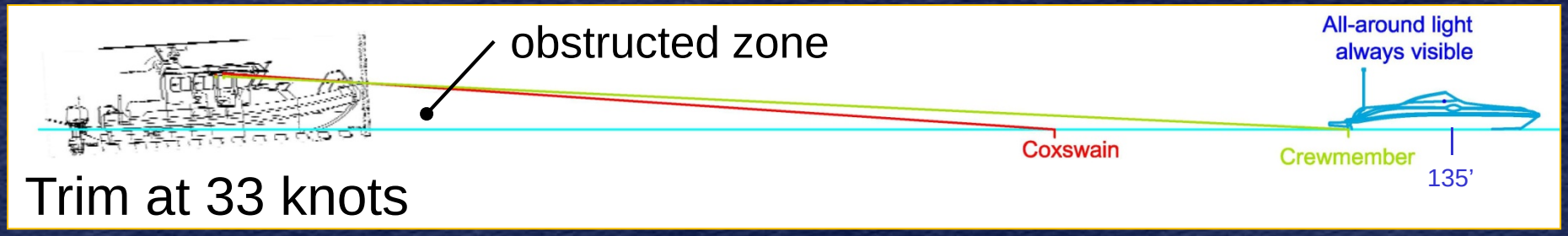
Comparison Study Results



Trim at 5-7 knots



Trim at 19 knots



Trim at 33 knots

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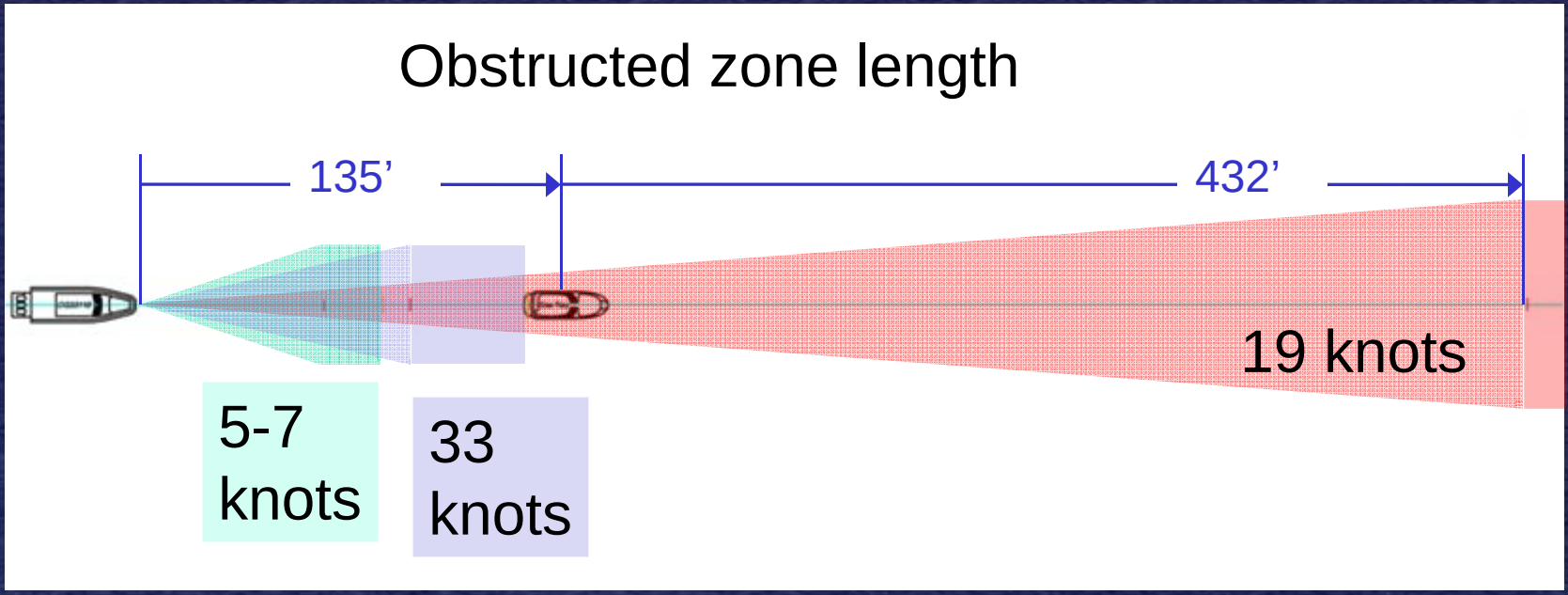
Comparison Study Results



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Visibility Conclusions

- Can’t precisely determine obstruction for crew before collision
- Shorter operators may have an obstructed view of the horizon
  - Specifically at lower planing speeds

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