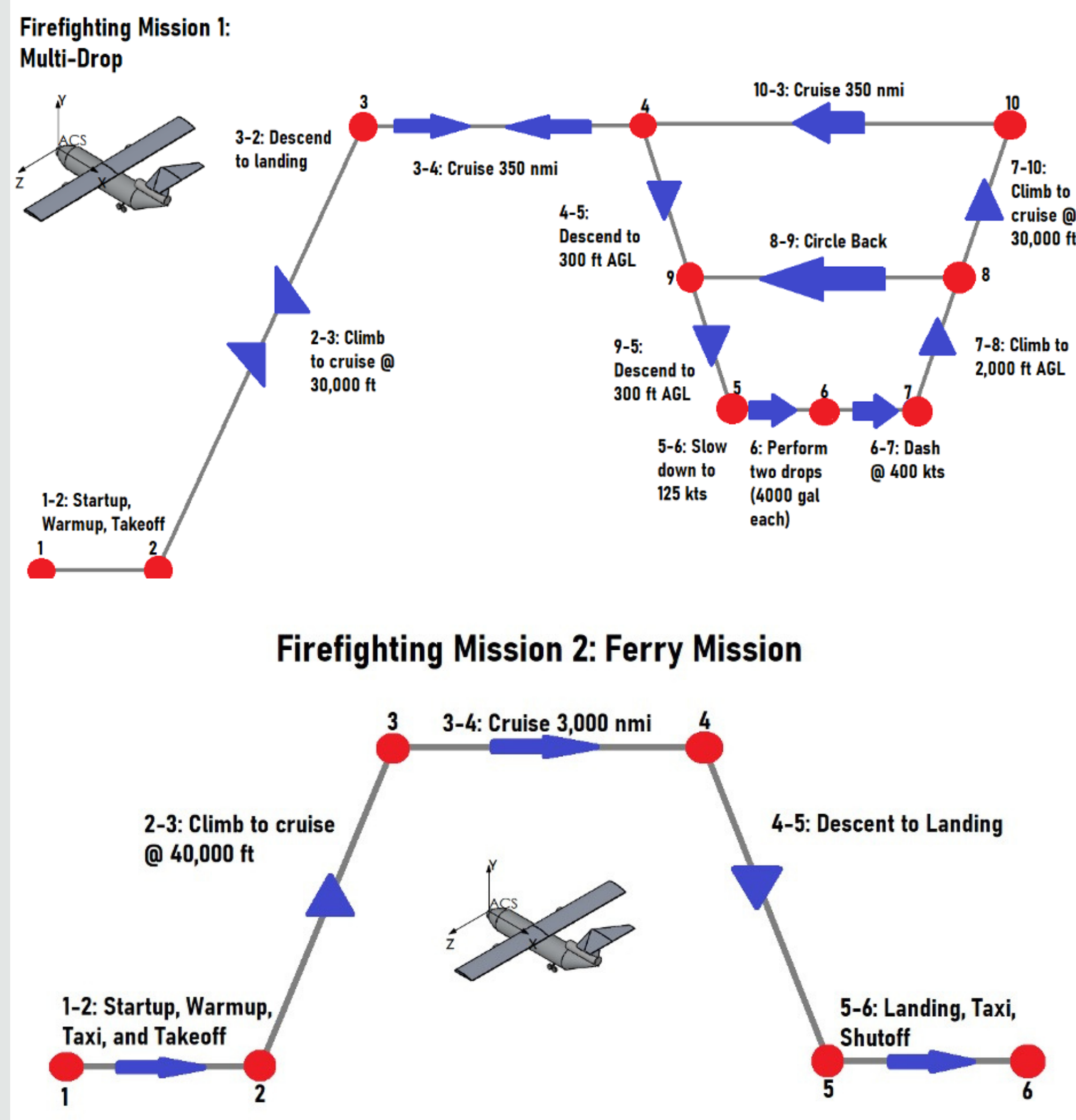


Tri-Engine Firefighting Tanker Aircraft "The Pelican"

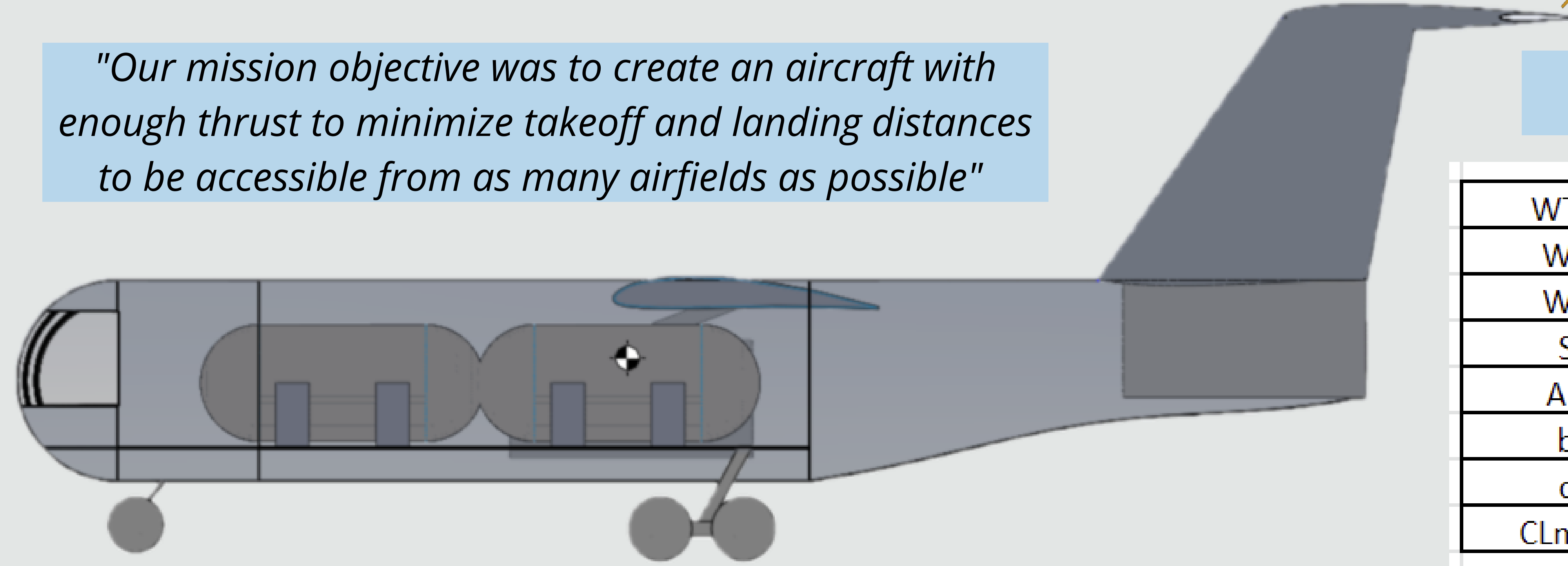


Andrew Birch, Andre Galarza, Viviana Perez, Errin Quiazon, Efrain Ramos, Brian Torgerson

Mission Profiles



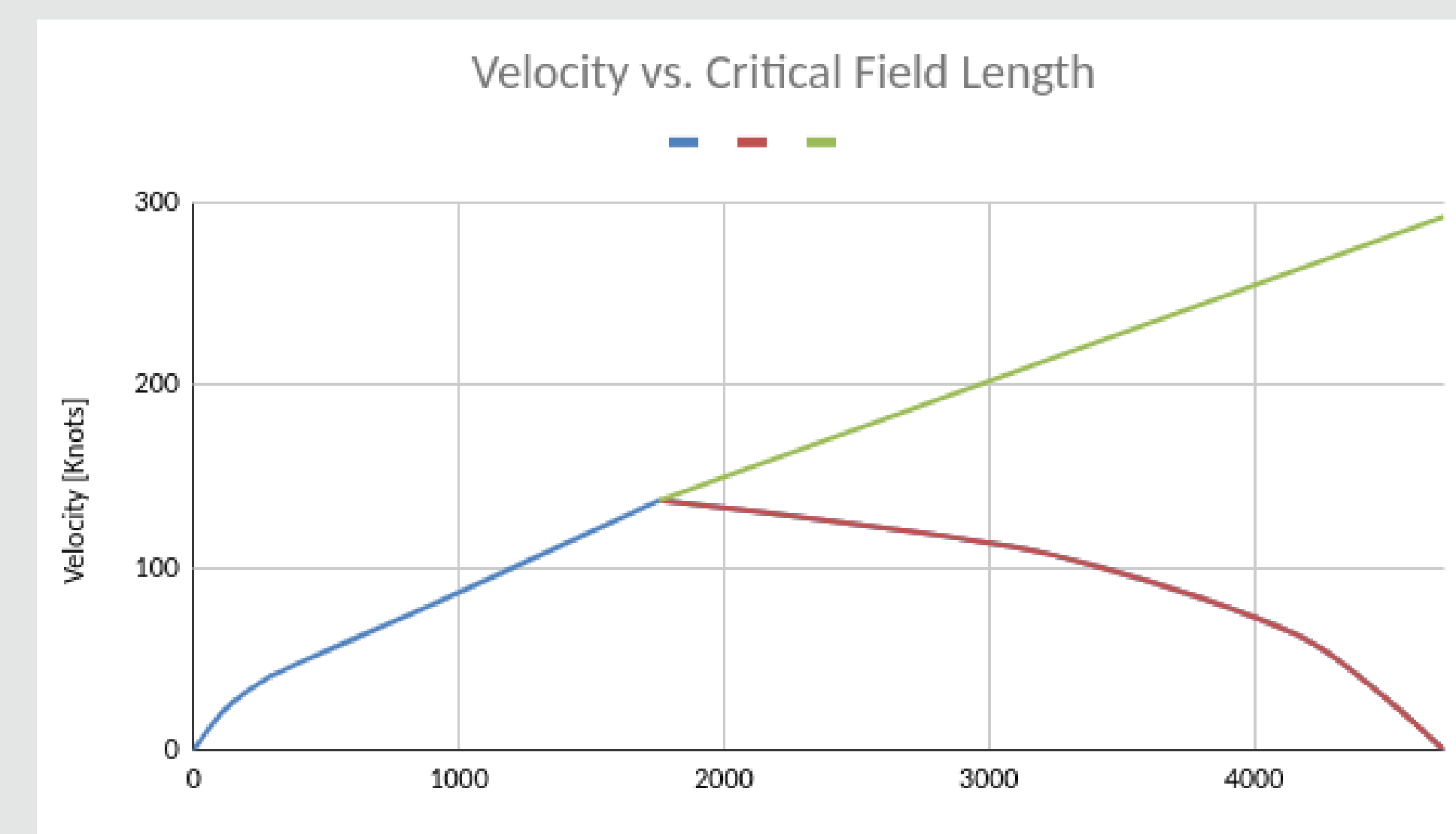
"Our mission objective was to create an aircraft with enough thrust to minimize takeoff and landing distances to be accessible from as many airfields as possible"



Design Specifics

WTO	242278 lbs	Max Takeoff Gross Weight
WE	125424 lbs	Empty Weight
WF	43573 lbs	Mission Fuel Weight
S	2202.53 ft ²	Wing Planform Area
AR	8.9	Wing Aspect Ratio
b	140 ft	Wingspan
c	15.75 ft	Wing Chord
CLmax	2.4	Maximum Lift Coefficient

Requirement	Optimum Goal	Required Goal	"The Pelican"	OBJECTIVE MET?
Takeoff Distance	5000ft	8000ft	3221ft	YES
Landing Distance	5000ft	8000ft	2003ft	YES
Retardant Capacity	8000gal	4000gal	8000gal	YES
Minimum Drop Speed	125Kts	150Kts	154kts	YES
Maximum Cruise w/payload	400nmi	200nmi	655.17nmi	YES
Maximum Cruise no payload	3000nmi	2000nmi	2140nmi	Required Only
Drop volume	N/A	2000gal	2000 gal	YES
Reload Volume	N/A	500 gal/min	500gal/min	YES
Max Dash Speed	400kts	300kts	618 kts	YES



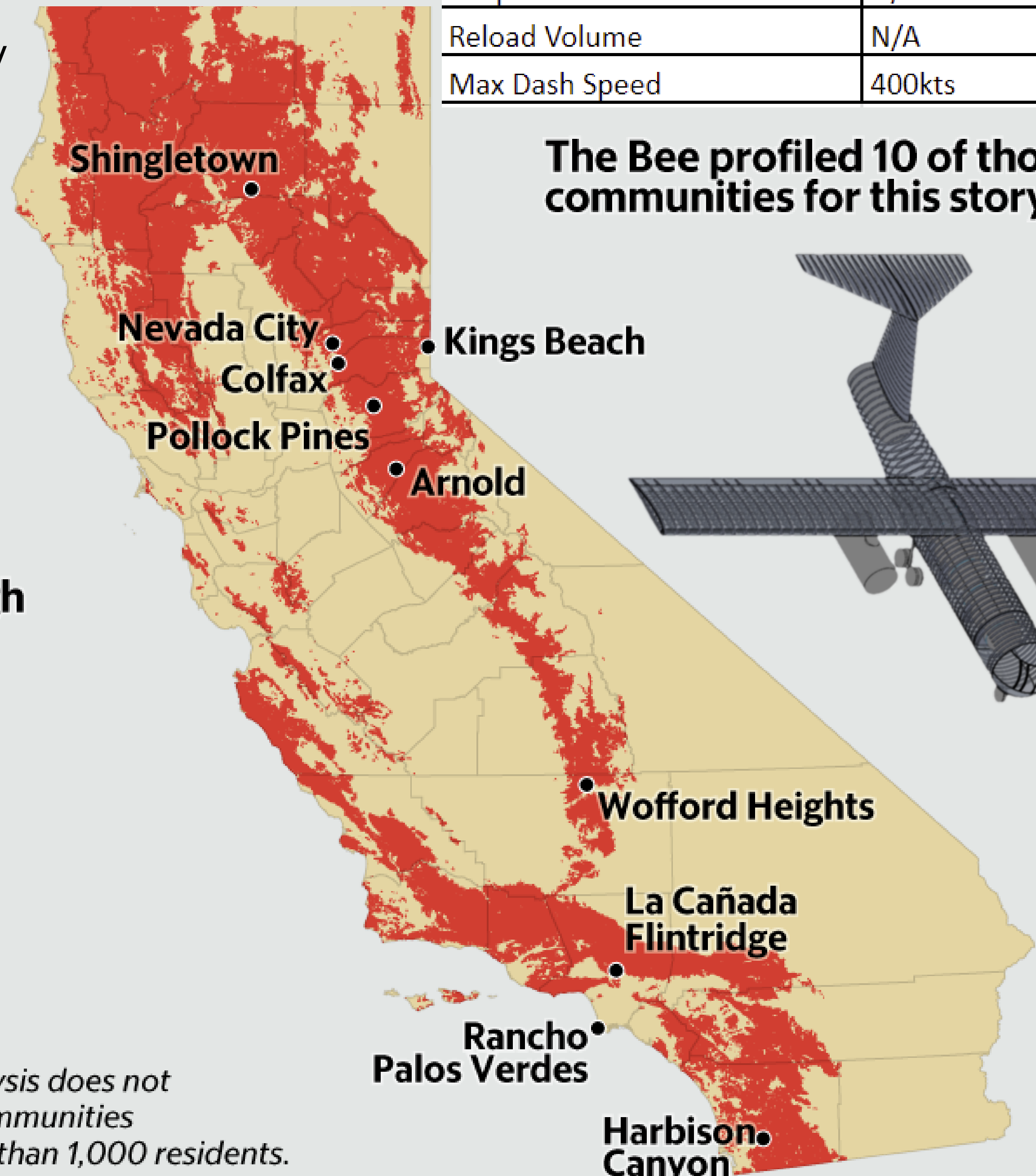
California Fire Hot Zones

Average Runway Length across Hot Zones:
4,566 ft

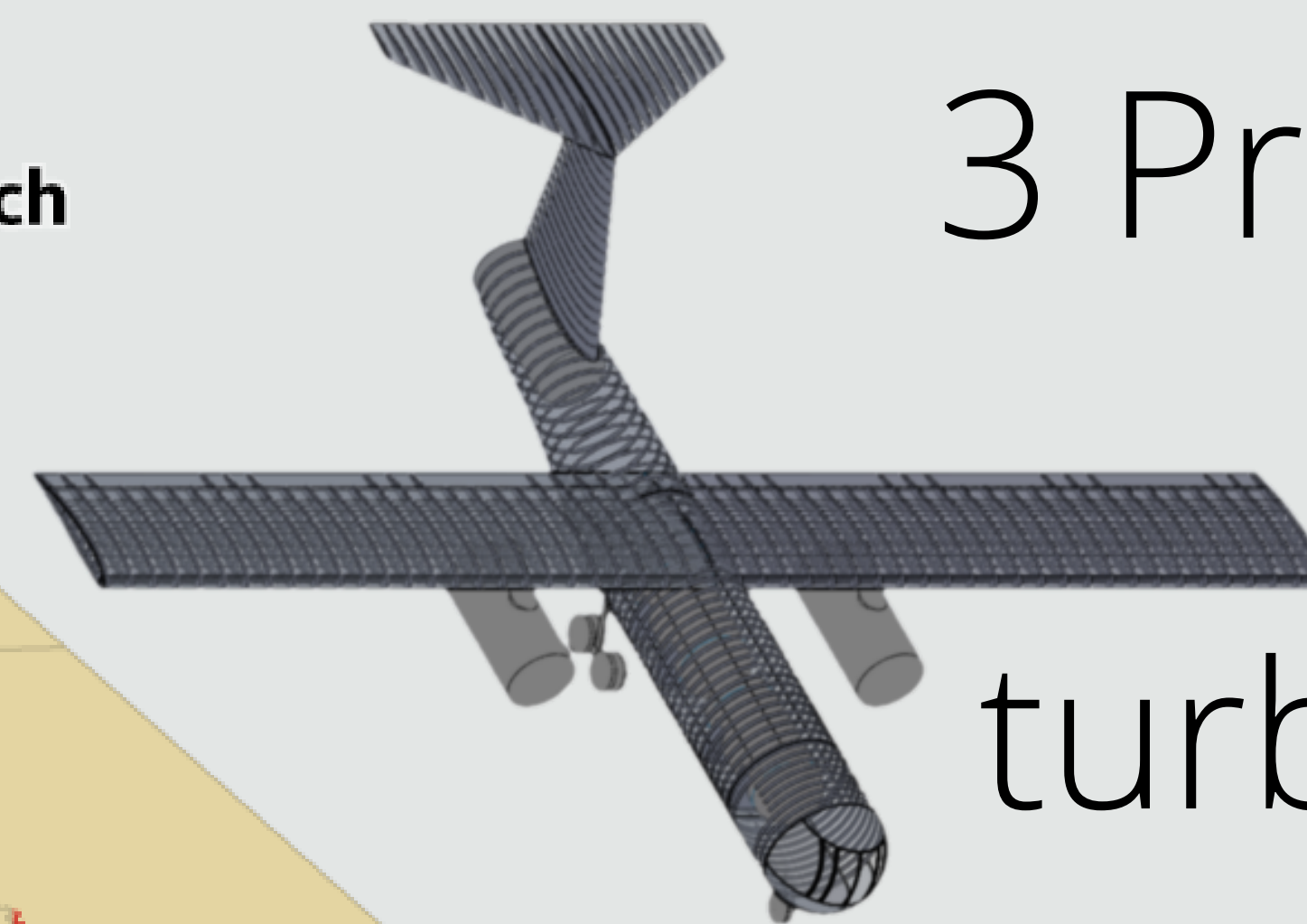
Using high thrust engines and large aspect ratio wings allows our aircraft to reach any California wildfire fast and efficiently.

Very high fire hazard severity zone

Note: Analysis does not include communities with fewer than 1,000 residents.



The Bee profiled 10 of those communities for this story.



3 Pratt & Whitney F117-PW-100 turbofan engines

- 539,124 Newtons of thrust
- In-flight reverse thrust capability
- World's leading midrange-thrust engine

Modular
Airborn
Fire
Fighting
System



Capacity:
8,000 gallons
Reload Pump Speed:
300 GPM
Retardant Drop Rate:
600 GPS