

The FAA and your Drone program!

UAS Groups

- Micro UAS – under .55 lbs
- sUAS - .55 to 55 lbs
- Over 55 lbs requires aircraft certification

Pilot/Operator Classifications

- Hobbyist – Uses guidance from AC 91.57A, no certificate required!



Pilot/Operator Classifications

- Commercial Operator – requires testing to receive Part 107 Remote Pilot-in-Command Certificate

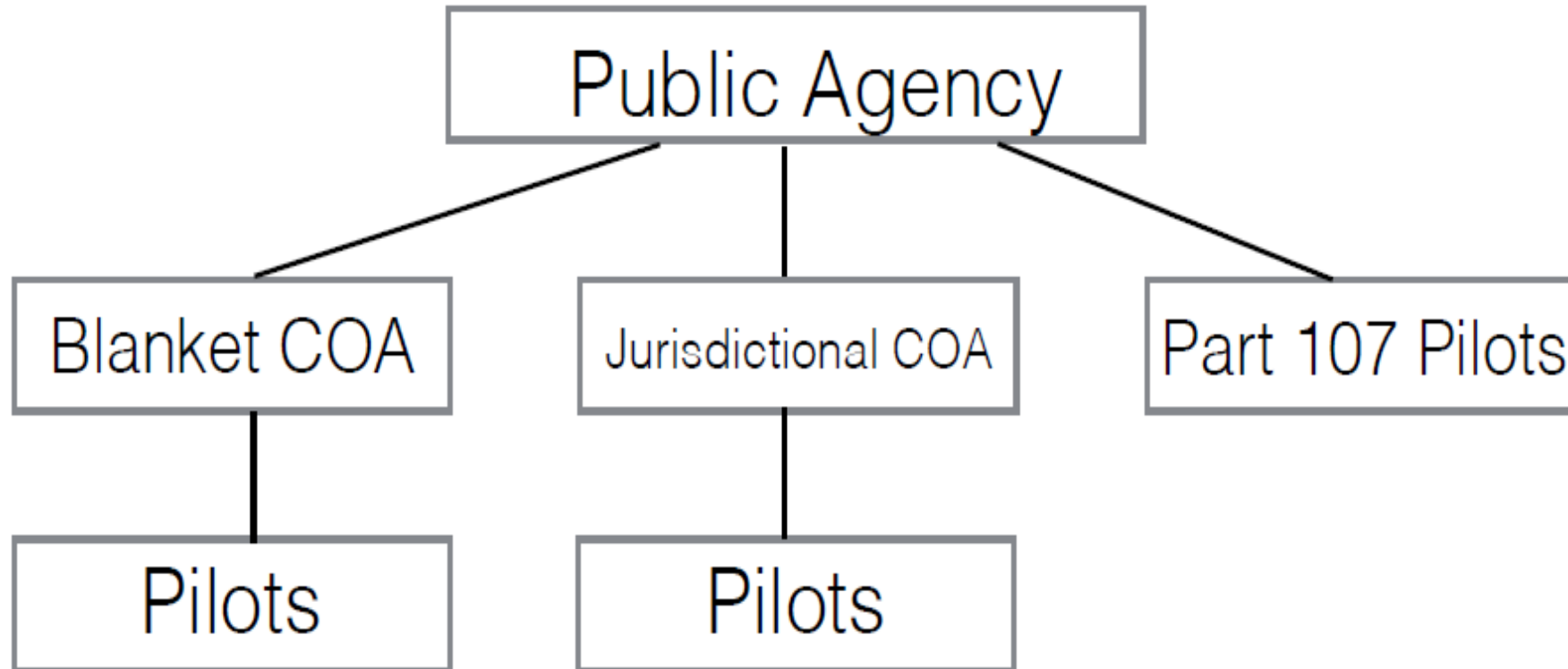


Pilot/Operator Classifications

- Public Aircraft Operator – Government agency (any level)
Requires Certificate of Authorization



How can public agencies fly legally?



Certificate of Authorization (Public Safety)

- Granted only to government agencies
- Allows for self certification of aircraft and pilots
- Outlines limitations on operations
- Includes reporting requirements
- Requires agency to verify aircraft airworthiness
- Requires registration of aircraft
- Valid for 24 months, simple renewal process
- Can be amended

Blanket COA

- Operations limited from surface to 400 above ground
- Operations only permitted within Class G airspace
- Day and night operations permitted
- Valid anywhere in Class G airspace
- Takes 2-6 weeks for approval

FAA FORM 7711-1 UAS COA Attachment
Blanket Area Public Safety Agency COA
2017-CSA-###-COA

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

CERTIFICATE OF WAIVER OR AUTHORIZATION

ISSUED TO
Emergency Management Agency
123 Main St
Los Angeles, CA 90210

This certificate is issued for the operations specifically described hereinafter. No person shall conduct any operation pursuant to the authority of this certificate except in accordance with the standard and special provisions contained in this certificate, and such other requirements of the Federal Aviation Regulations not specifically waived by this certificate.

OPERATIONAL AUTHORITY
Operation of small Unmanned Aircraft System(s) weighing less than 55 Lbs. only in Class G airspace at or below 400 feet Above Ground Level (AGL) under the provisions of this authorization. See Special Provisions.

LEFT OF WAIVER REGULATIONS BY SECTION AND TITLE
N/A

STANDARD PROVISIONS

1. A copy of the application made for this certificate shall be attached and become a part hereof.
2. This certificate shall be presented for inspection upon the request of any authorized representative of the Federal Aviation Administration, or of any State or municipal official charged with the duty of enforcing local laws or regulations.
3. The holder of this certificate shall be responsible for the strict observance of the terms and provisions contained herein.
4. This certificate is nontransferable.

Note-This certificate constitutes a waiver of those Federal rules or regulations specifically referred to above. It does not constitute a waiver of any State law or local ordinance.

Jurisdictional COA

- Operations can be approved above 400 feet above ground
- Operations can be approved in any controlled airspace
- Day and night operations permitted
- Can make safety case for otherwise restricted operations
- Takes 60-90 days for approval
- Once approved, allows for broadest operating parameters of any certification level

Part 107

- Operations limited from surface to 400 above ground
- Day time operations only
- Operations in Class G airspace only
- Must pass 60 question FAA test at testing facility
- Allows for waivers for night, controlled airspace, and other limited operations
- Waivers can take up to 60 days
- Pilot elects to operate under Part 107

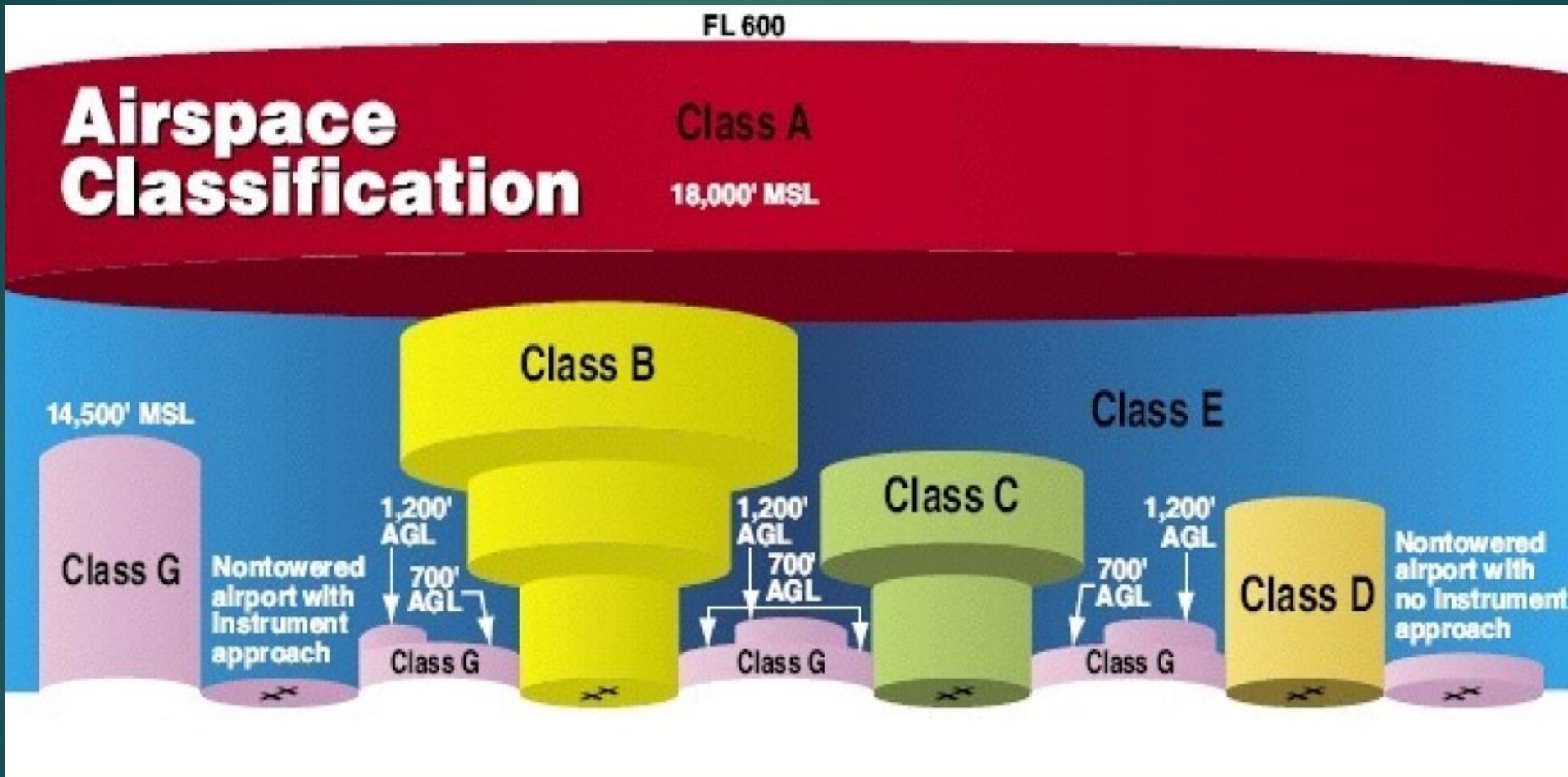
Visual Observer

- Use of a Visual Observer (VO) is required under public safety Certificate of Authorization
- Use of a Visual Observer is voluntary under FAA Part 107
- It is the responsibility of the Pilot in Command (PIC) to ensure the VO is appropriately qualified for the mission

Weather Hazards for UAVs

Condition	Results	Risk to UAVs
Heat	Less Lift	Motors work harder, battery life shortened
Rain	Liquid Water in Atmosphere	Unsafe to operate electronics
Lightning	Electricity in Atmosphere	Unsafe to operate electronics
Cold	More Lift	Battery too cold to operate
Fog/Mist/Smoke	Poor Visibility	May not be VFR, unable to keep UAV in sight
Wind	Windy	Wind may be too high for UAV to remain stable

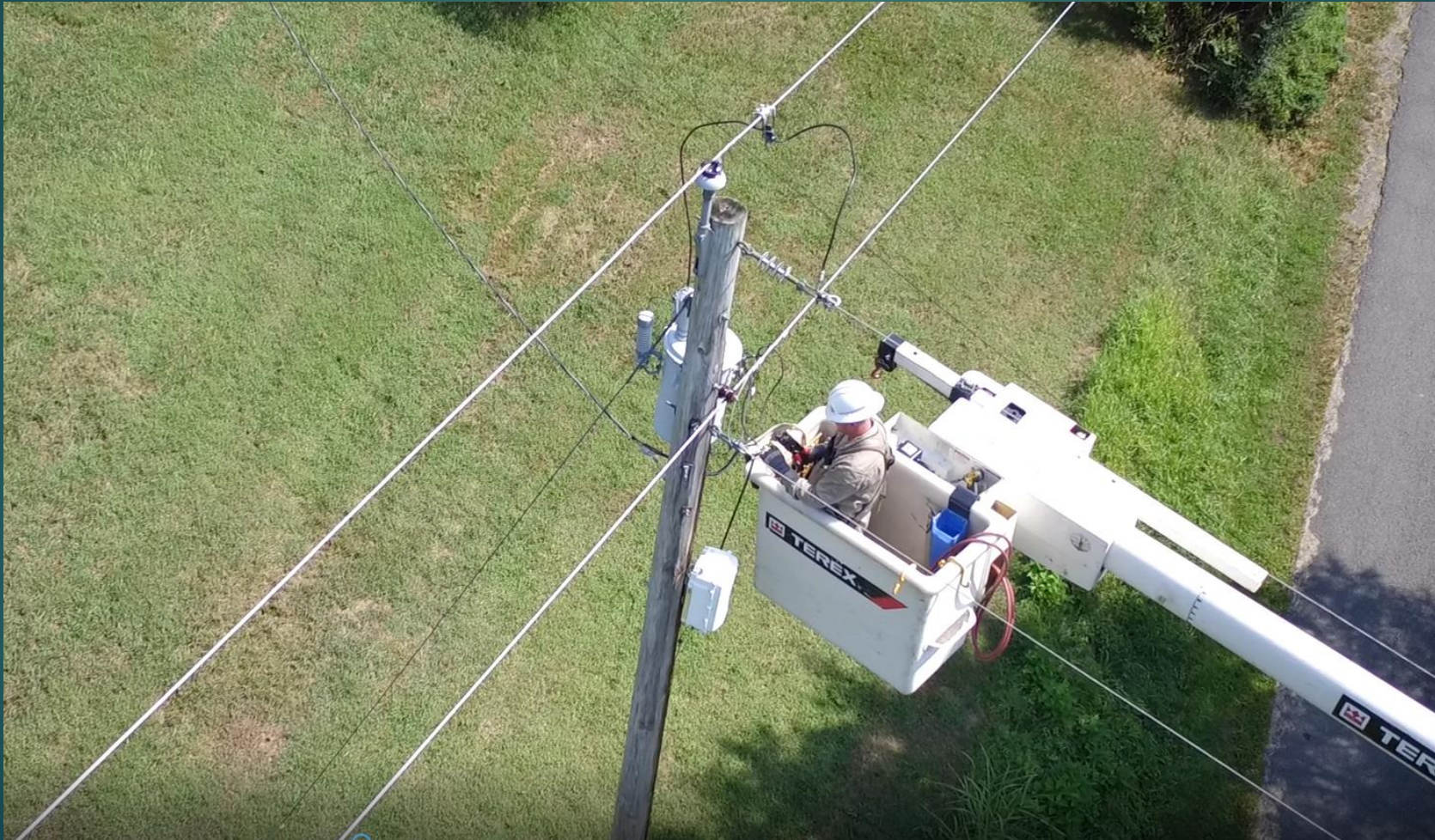
Airspace



Skyvector.com



Some of Newport Utilities missions for the drone.



Halls Top fire



FLIR Tools PRIMARY SUB

DJI_0013.jpg 9/12/2016 8:28:40 AM

101.9°F

Note
PRIMARY SUB

Measurements °F

Spot	Temperature (°F)
Sp1	102.7
Sp2	102.9
Sp3	104.2
Sp4	107.1
Sp5	101.9
Sp6	95.0

Parameters

Emissivity	1.00
Refi. temp.	71.6°F
Distance	65.7ft
Atmospheric temp.	71.6°F
Ext. optics temp.	71.6°F
Ext. optics trans.	1.00
Relative humidity	50.0%

Text annotations
Add row +

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Image Information

Camera model	
Camera serial	
IR resolution	640 x 512
File size	787.4 KB
Date created	9/12/2016 8:28:40 AM
Last modified	9/13/2016 10:01:05 AM

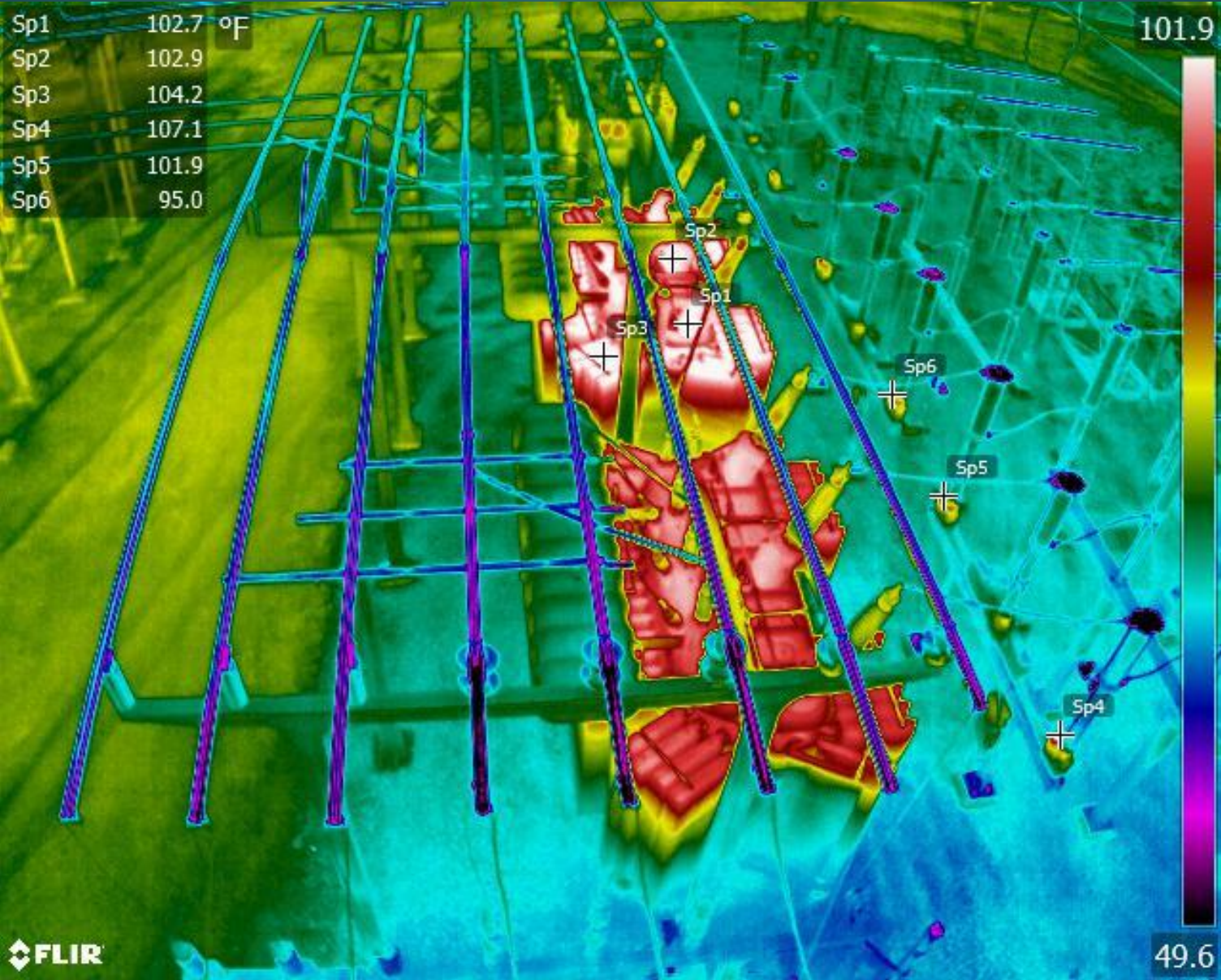
49.6°F

Auto

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Save Save and close Cancel

Primary Sub heat signatures





Questions ???