

NAVIGATION & LANDING EQUIPMENT – HOMEWORK SOLUTION SET

	<u>Navigation and Landing Equipment</u>	<u>Function to Navigation (What it does to aid pilot?)</u>	<u>Form of Aid to Pilot (How it does it?)</u>
A	MALSRL (Medium Intensity Approach Lighting System with RAIL) Note: RAIL = Runway Alignment Indicator Lights	Helps pilot find runway center-line	Series of medium intensity lights from 2400' to runway, provides visual indication
B	ALSF-2 Elevated Lights with Flasher	Helps pilot find runway center-line Note: Pilot has only 20 seconds from Decision Height to get oriented to runway center-line for CAT II/III approach	Series of high intensity lights from 2400'/3000' to runway threshold in-line with runway center-line, provides visual indication
C	RVR (Runway Visual Range)	Provides data to allow pilots to decide what type of approach to use: - runway visibility (in nautical miles)	Projector/Detector pair located at 3 location on runway, determines visibility. Data provided by Air Traffic Controller.
D	ILS Glideslope	Provides pilot with reference to 3 degree glideslope Note: Electronic PAPI	Signal upto 10/25 nm from runway upto +/-3 degrees each side of glideslope center-line. Electronic signal displayed in cockpit.
E	PAPI (Precision Approach Path Indicator)	Provide pilot with 3 degree glideslope (or glidepath) down to runway threshold. Note: Visual form of glideslope	Each light in PAPI emits different color lights at higher angles - above glidepath – 4 white - on glidepath 2 white/2 red - below glidepath 4 red Visual indication to pilot.
F	ILS Localizer	Provides pilot with reference to runway center-line. Note: electronic "RAIL"	Signal upto 10/25 nm from runway upto 35 degrees each side of runway-centerline, upto 7 degrees glidepath. Electronic signal displayed in cockpit
G	VOR/DME	VOR provides pilot with radials to airport. VOR provides pilot with distance to airport.	VOR - electronic signals of course to navaid. DME- electronic signals of slant range to from navaid to aircraft. Electronic signals displayed in cockpit.
H	MALSRL Elevated Flasher	Helps pilot find runway center-line.	Series of medium intensity lights from 2400' to runway, provides visual indication.
I	NDB	Provides pilots with bearing to airport.	Located at Outer Marker or Middle Marker on approach path. Electronic signal displayed in cockpit.
J	REIL (Runway End Identifier Lights)	Provide pilots with indication of end of runway On both ends of runway)	2 sec synchronized flashing light. Provides visual indication.