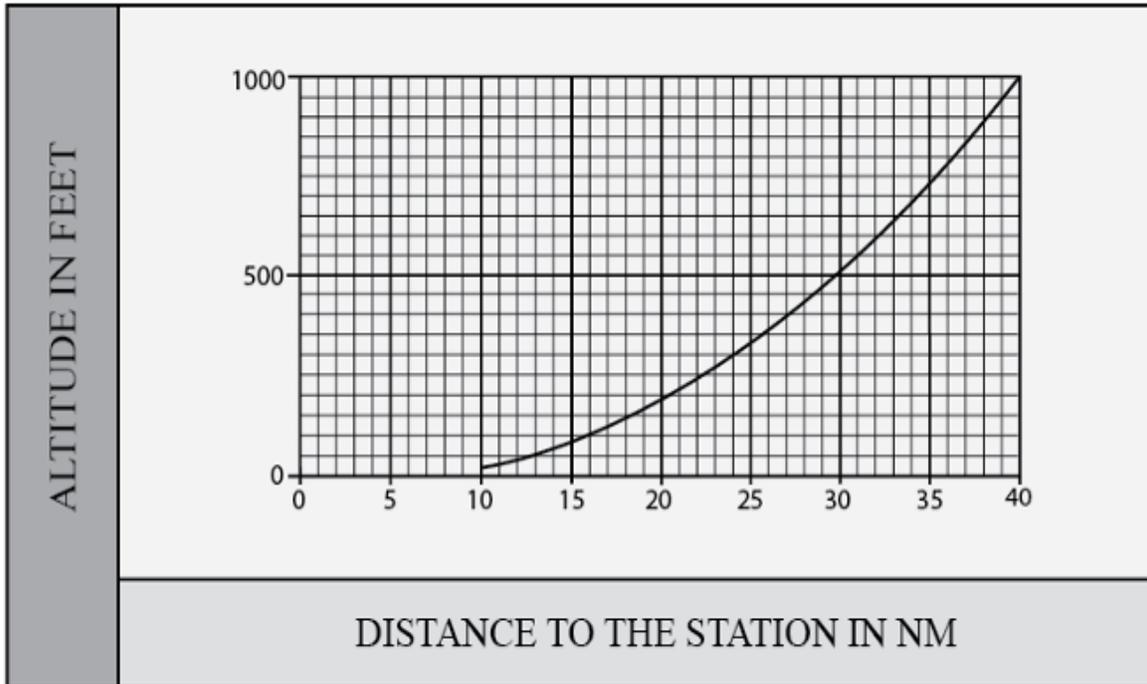


**FIG 1-1-3  
Lower Edge of Low and High Service Volumes (in altitude ATH)**



2. With the progression of navigation capabilities to Performance Based Navigation (PBN), additional capabilities for off-route navigation are necessary. For example, the VOR MON (See paragraph 1-1-3 f.) requires the use of VORs at 5,000 feet AGL, which is beyond the original SSV ranges. Additionally, PBN procedures using DME require extended ranges. As a result, the FAA created four additional SSVs. Two of the new SSVs are associated with VORs: VOR Low (VL) and VOR High (VH), as shown in FIG 1-1-4. The other two new SSVs are associated with DME: DME Low (DL) and DME High (DH), as shown in FIG 1-1-5. The SSV at altitudes below 1,000 feet for the VL and VH are the same as FIG 1-1-3. The SSVs at altitudes below 12,900 feet for the DL and DH SSVs correspond to a conservative estimate of the DME radio line of sight (RLOS) coverage at each altitude (not including possible terrain blockage).