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FILE

TO: MTA BOARD OF DIRECTORS  
FROM: STANLEY G. PHERNAMBUCO   
SUBJECT: METRO RED LINE RADIO STATION ANTENNA  
AESTHETICS AND SECURITY

### ISSUE

At the September MTA board meeting, alternate board member Patsaouras expressed concern regarding the vulnerability of the subway radio antenna system to sabotage and with the aesthetics of the antenna system in the stations. He requested a response on these issues.

### BACKGROUND

With regard to the aesthetics of the antennas, we noted that our architects were somewhat dismayed with the finished appearance of the Segment 1 stations because the Segment 1 contractor took no pains to hide the extensive radiating cable antenna system. For the Segment 2 installations we required the contractor to provide a cover for any exposed cables. We also encouraged the contractor to use ceiling mounted single element antennas, which are very inconspicuous. The Segment 2 contractor has designed a station antenna system which uses no exposed cables in "finished" areas. All cables feeding the single element antennas are hidden behind ceiling panels or in conduit.

With regard to the security of the station antenna system, in Segment 2, we have endeavored to install all antennas in spaces high above the floor which are inaccessible without ladders. The only public areas where this has not been possible are the emergency exits. Furthermore, in the event a station antenna is destroyed or its feedline cut, the radio coverage lost would be restricted to at most the corresponding specific station level, i.e. the mezzanine (but not the platform), etc. Additionally the platform levels of stations are fed from multiple antennas and the destruction of one would diminish but not totally disable radio coverage.

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**Finally, the computer system which monitors the radio system has sensors designed to detect antenna system problems. These installations are with the full knowledge and approval of the MTA's Fire/Life Safety oversight organization.**