

# Building ground communication base stations costs

What is a communication base station?

In the vast telecommunications network, communication base stations play a frontline role. Positioned closest to end users, they serve as gateways for processing customer requests and managing data flow. In the words of "Interesting Communication Engineering Drawings," these stations act like "business trackers," always vigilant to:

What is a candidate site for a new ground-based station?

To simplify the presentation, we designate candidate sites for new ground-based stations as numbers 1-316, existing ground-based stations as 317-318, existing rooftop stations as 319-320, and new rooftop stations as 321-551. In a complex 3D outdoor environment, approximately 2-8 stations are required to achieve coverage.

What is the height of a ground-based base station tower?

Where,  $h$  is the height of the ground-based base station tower.  $a$ ,  $b$ , and  $c$  are the linear relationship coefficients of this function. Based on practical considerations, the height of ground-based base station towers ranges from a minimum of 15 meters to a maximum of 40 meters.

What is the minimum height of a base station?

The base station height must be higher than the surrounding low- to mid-rise buildings to ensure optimal signal coverage, excluding high-rise buildings. Therefore, the minimum height of the base station is set to the average height of the surrounding low- to mid-rise buildings.  $(13) h_{min} \leq h \leq 40$

We select suitable candidate locations for building base stations on the ground and rooftop, and set restrictions on the height of base station towers. The use of existing base station ...

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The article discusses the costs associated with building and maintaining a communication base station, categorizing them into initial setup costs such as site acquisition, design and engineering, equipment ...

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Base station construction requires the coordination of multiple resources and is hindered by difficult site selection and stringent compliance requirements, resulting in long construction cycles ...

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