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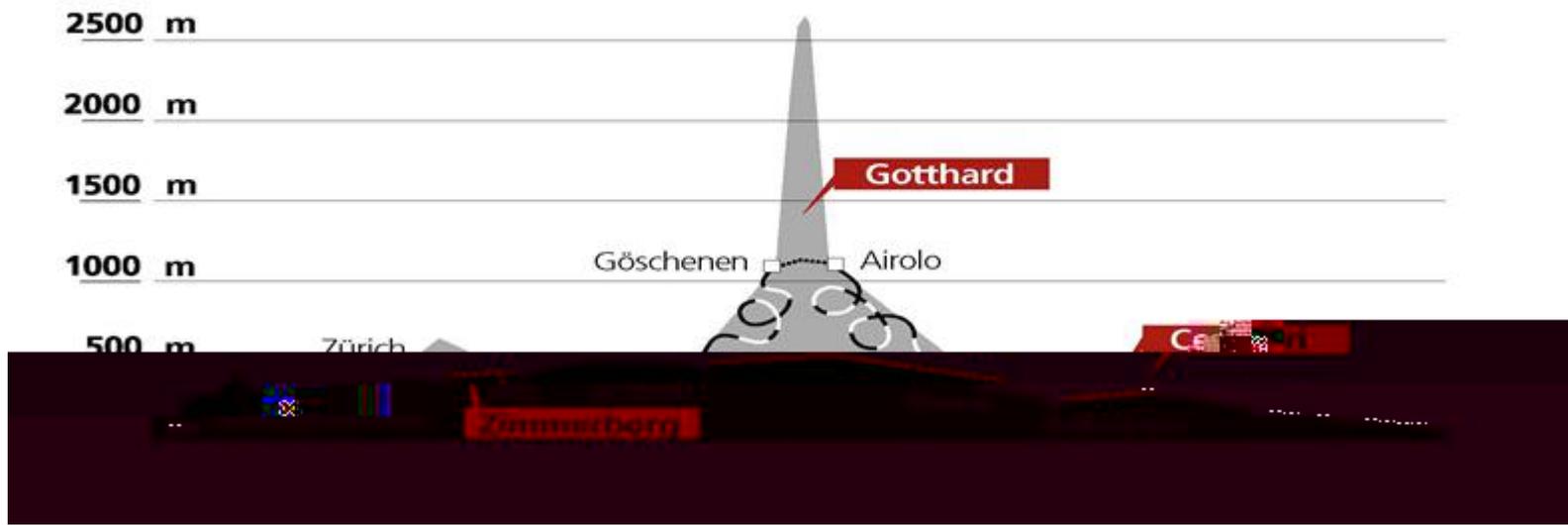


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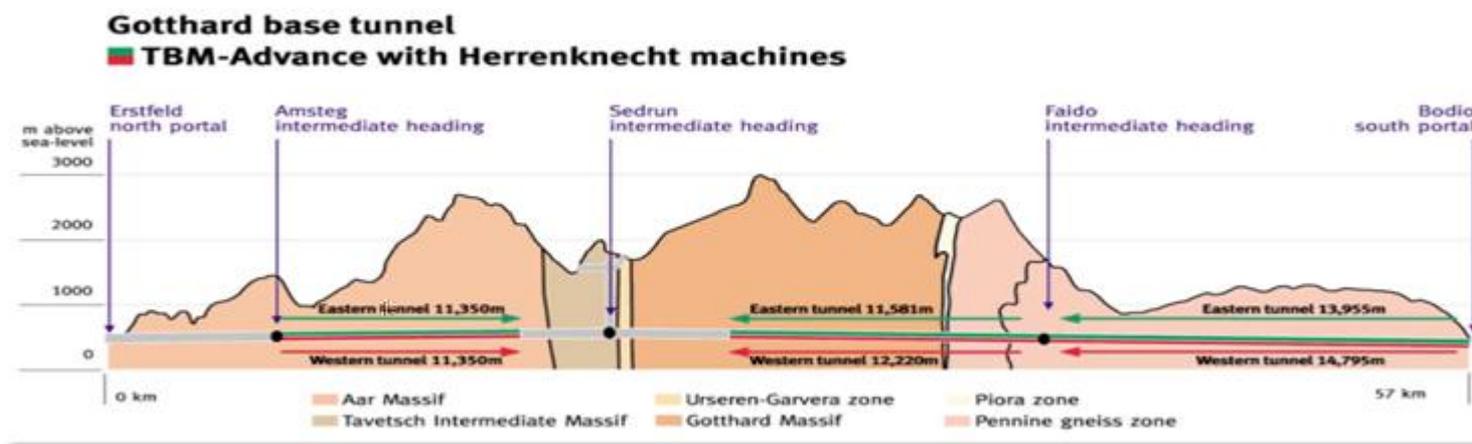


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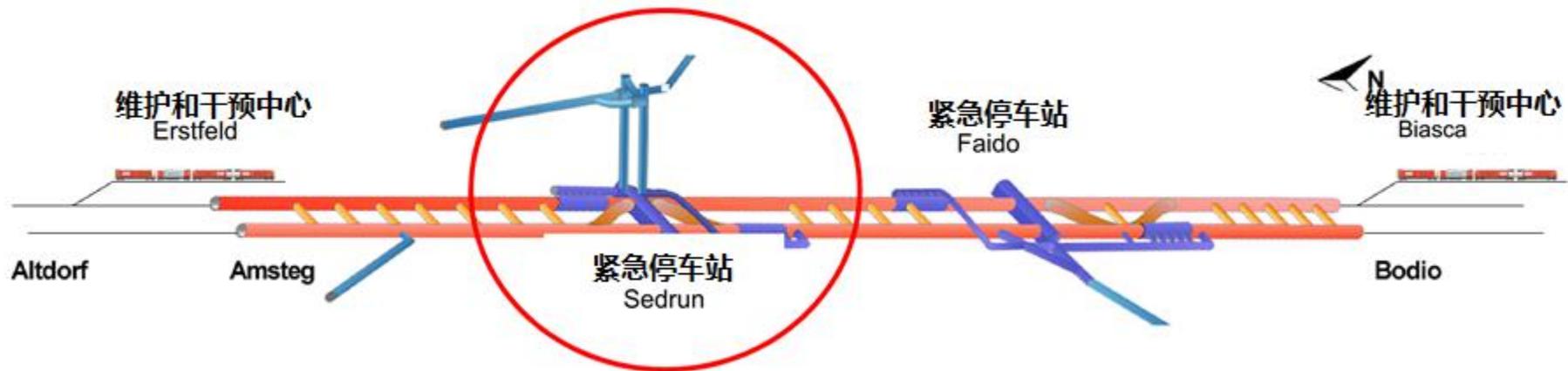
Gotthard base tunnel

TBM-Advance with Herrenknecht machines



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NORDPORTAL INNSBRUCK
PORTALE NORD INNSBRUCK

INNSBRUCK

TUNNEL UND INFRASTRUKTUR
CURTICE DI BOZCO

UMFAHRUNG INNSBRUCK
CIRCONVALLAZIONE INNSBRUCK

长度 55.4 km

隧道

奥地利

设计时速 350 km/h

电力牵引 25 kV 50 Hz

多功能区 $(i < 20)$

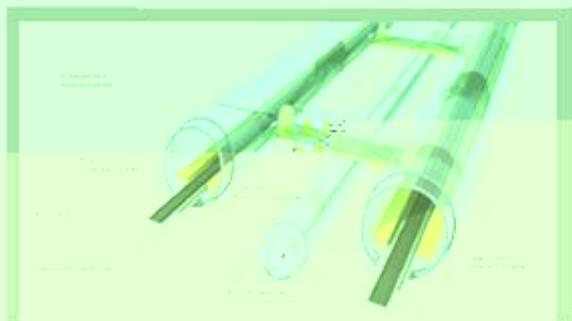
(m)

INNSBRUCK
CIRCONVALLAZIONE

UMFAHRUNG

INNSBRUCK

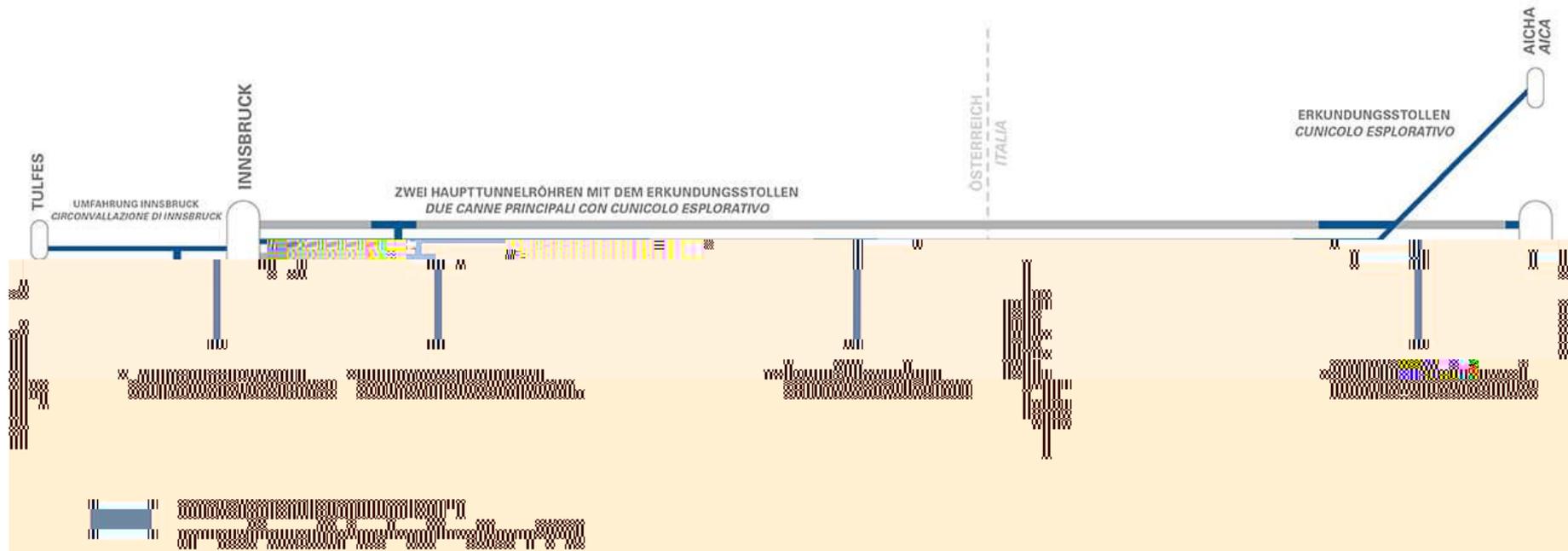
INNSBRUCK

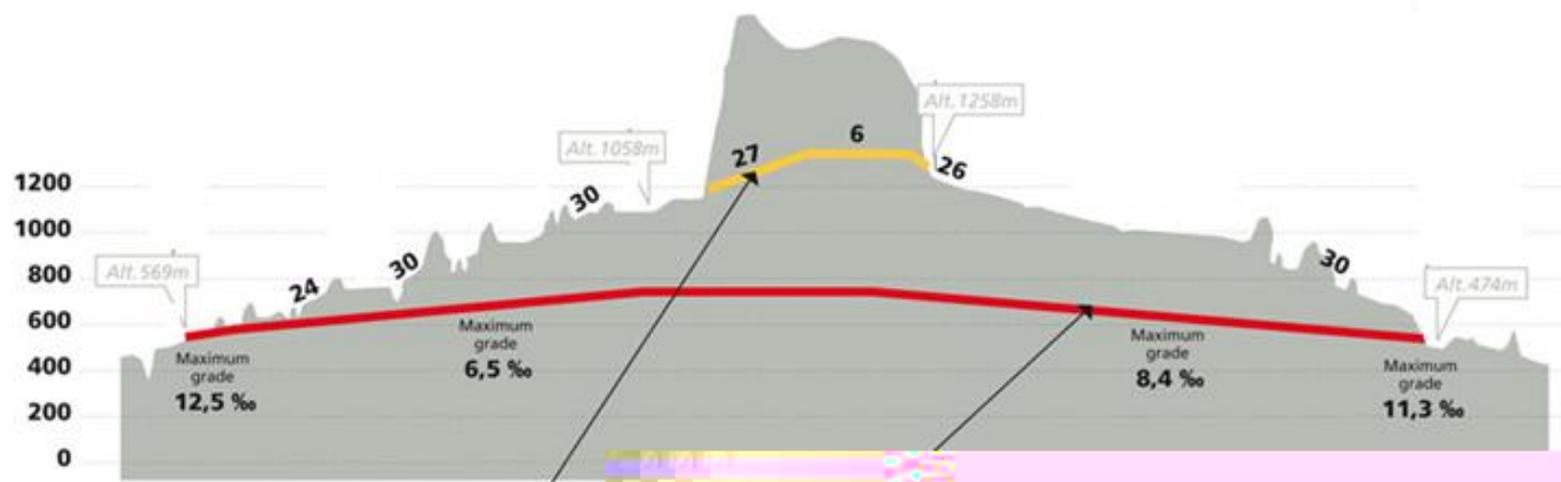


SUDPORTAL FRANZENSFESTE
PORTALE SUD FORTEZZA

意大利

3)





既有隧道

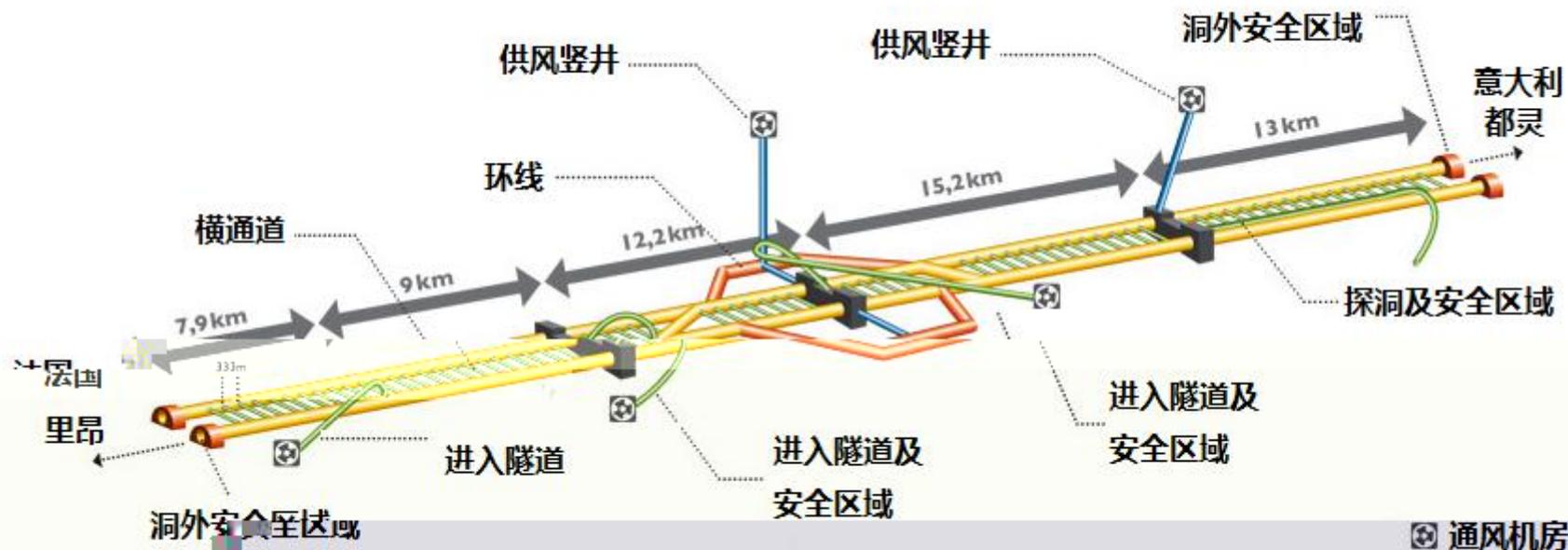
最大坡度

新建隧道

最大坡度

既有隧道 (14 km)

山底隧道 (57 km)



2.1

2.2



2.3

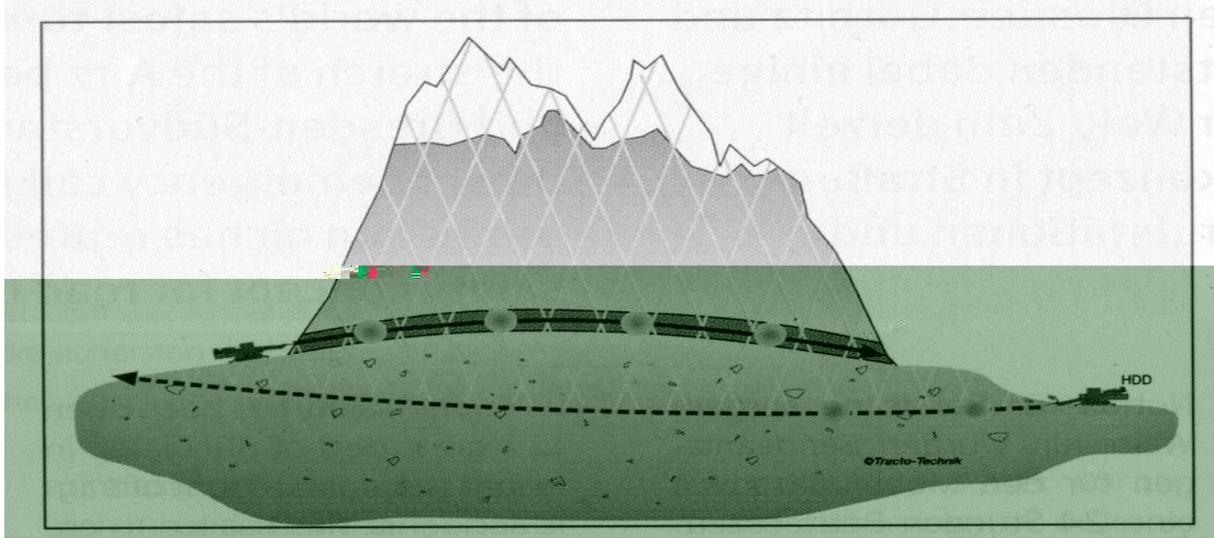
.....

2.4

(

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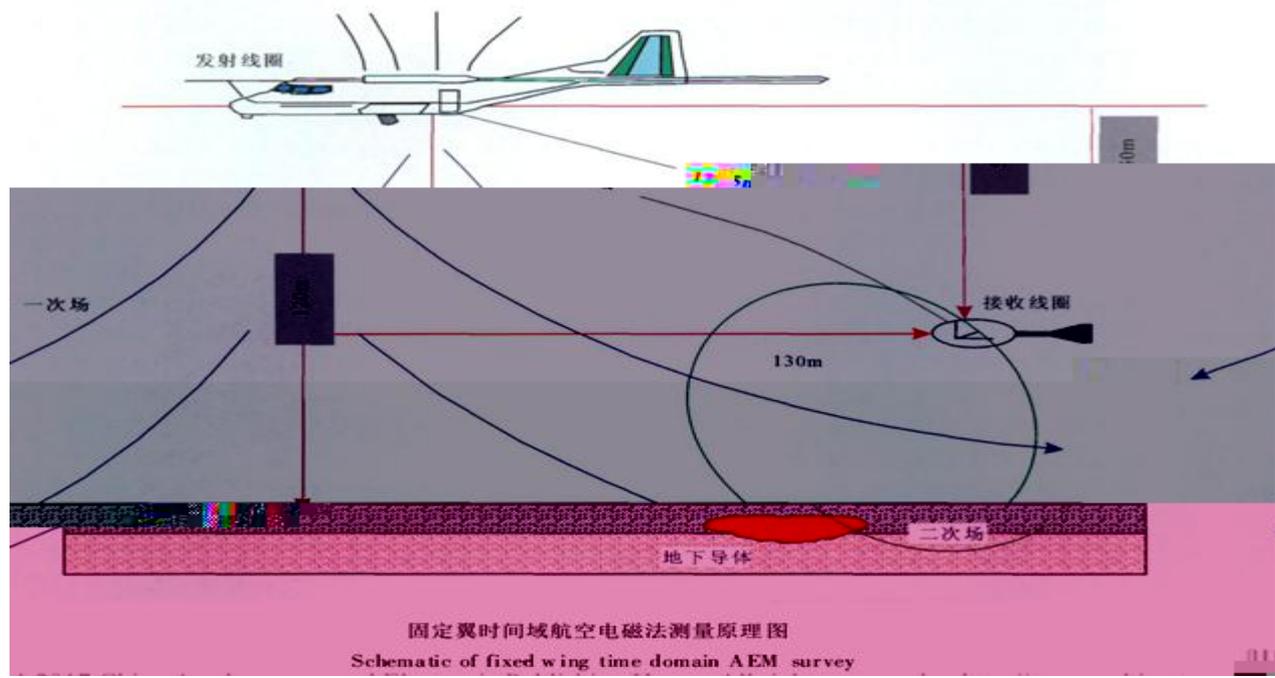






3



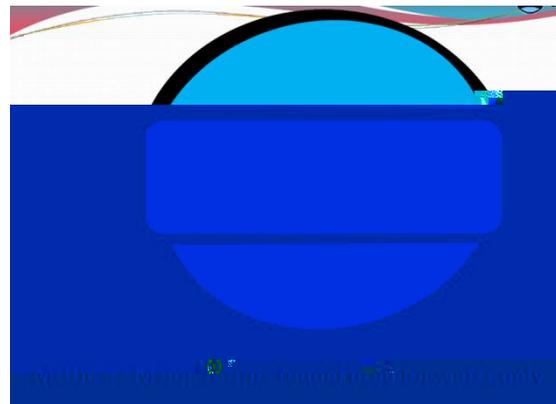
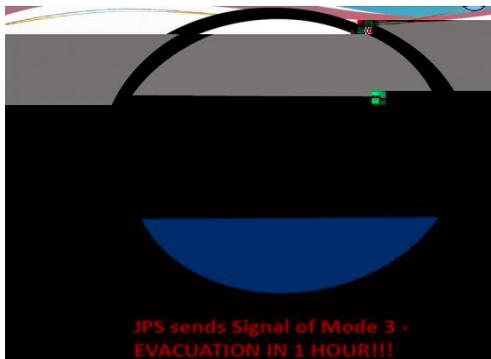
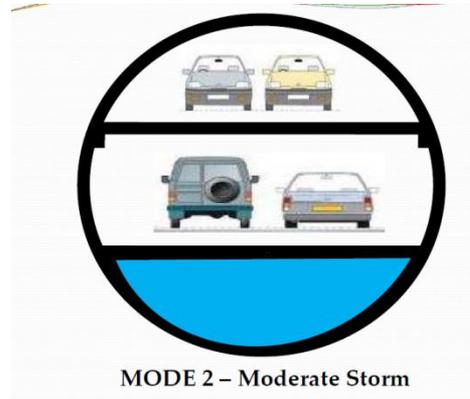


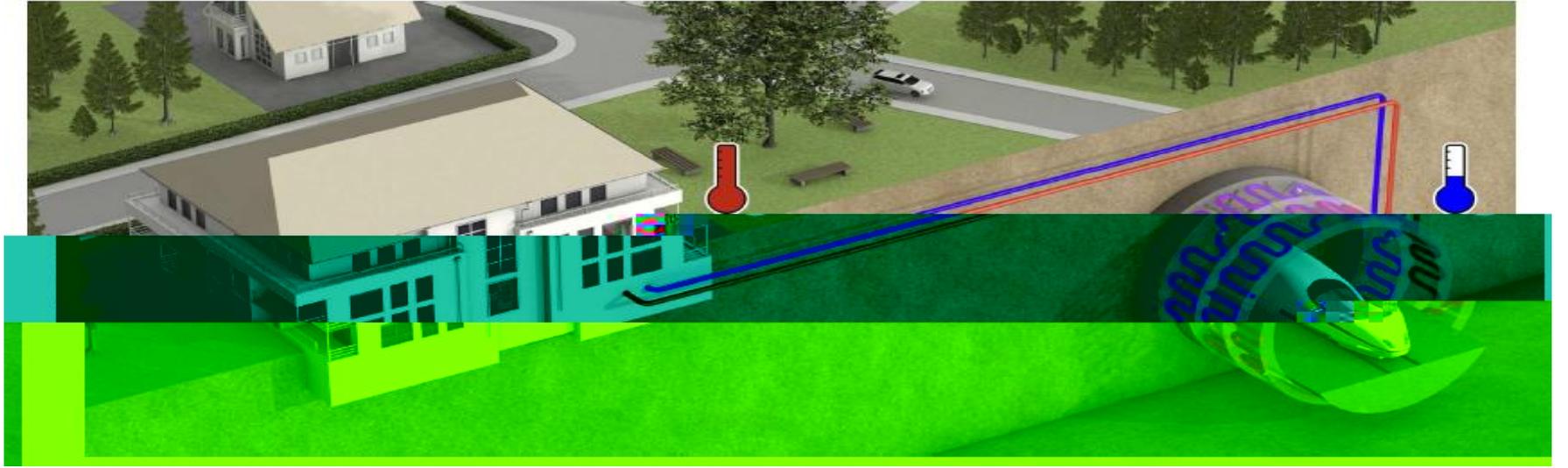








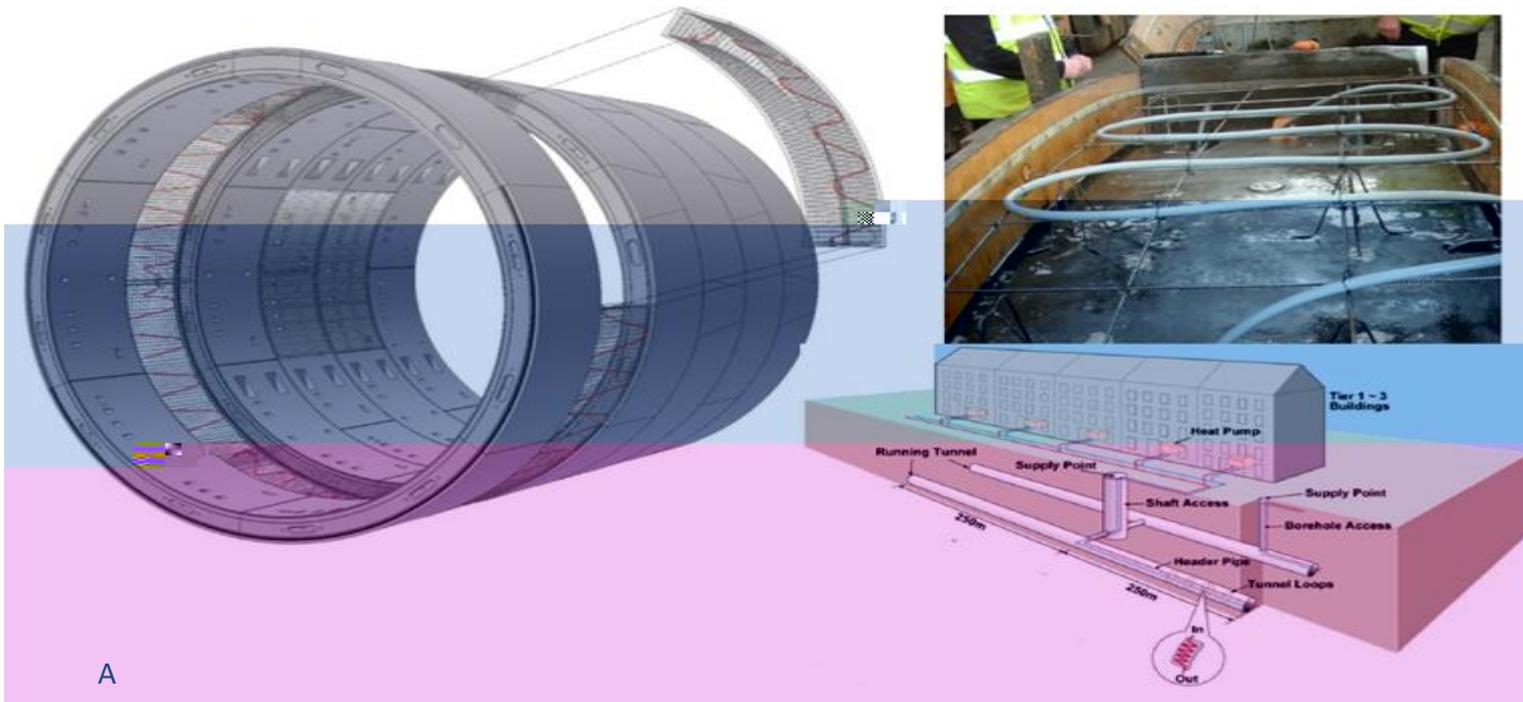




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“ 能 量 管 片 ”

衬砌中吸热管的布置





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	(100 %)
A	(33 %)
B	(66.3 %)
C	(0.7 %)
	70 km















