ISTIQ Acoustic Barrier

Metal Noise Barrier

Application Notes

Studies have shown that motor vehicle noise is significant and the construction of traffic noise barriers (sound walls) has been the most effective mechanism to mitigate vehicle noise for residents living next to high density roadways.
If there is no obstacle in between the sound source and receiver, sound is transmitted via a direct path. However, if there is a impediments between the source and the receiver, the noise is diffracted above the obstacle and therefore sound is attenuated.
Most of the barrier can attenuate the noise level by 10 dB. Although 15 dB reduction is difficult to achieve but it is possible by using a higher structure and better selection of the materials.

Introduction

Attenuation due to barrier is related to how much further the sound is forced to travel in going around the screen compared with the direct path. The important quantity is the extra distance, as given in the
formula $\delta = A + B - d$

Panel Details			
Length (mm)	Height (mm)	Thickness (mm)	Weight (mm)
2125	500	95	26

Construction

ISTIQ ACOUSTIC BARRIER are made from panels. And these panels are made of from galvanised metal sheet, both front and back of the panels. In between, acoustic infill (rockwool or fibre glass) is used to absorb noise. In front of the panels slit punch is applied as to maximize the absorption and at the same time prevent any water to penetrate in the panels. The thickness of these panels is approximately 95 mm thick. Different acoustic infill and different thickness of metal sheet can be used depending on the application to ensure excellent performance and cost effectiveness without sacrificing quality.

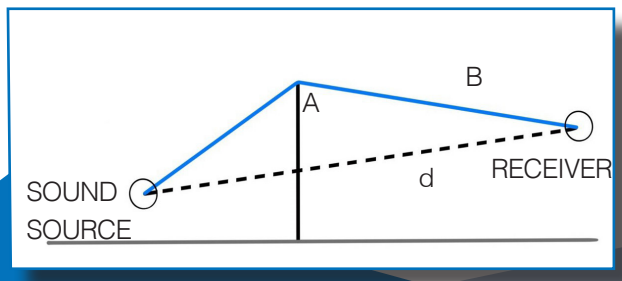
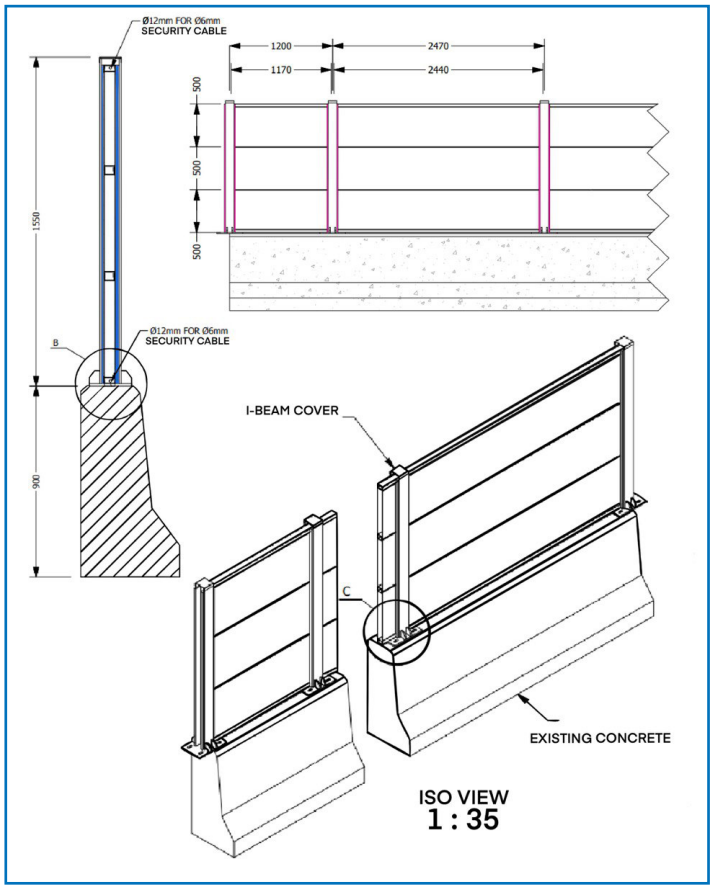


Table 1 - Additional Attenuation Due to Barriers							
Freq (Hz) δ (mm)	63	125	250	500	1k	2k	4k
0.3	8	9	10	13	16	18	20
1	11	12	14	18	20	23	25
2	14	15	18	20	24	27	29
3	15	17	20	22	25	28	30
4	16	18	20	24	26	30	31
5	16	18	21	25	27	30	32

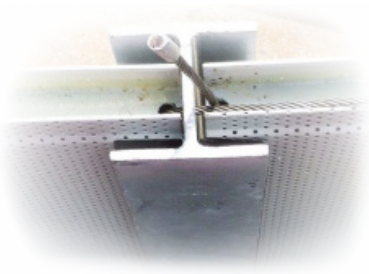
Sarawak Energy (Kuching)

Malakoff (Pinang)

Acoustic Metal Noise Barrier



Pulau Sekati - Terengganu

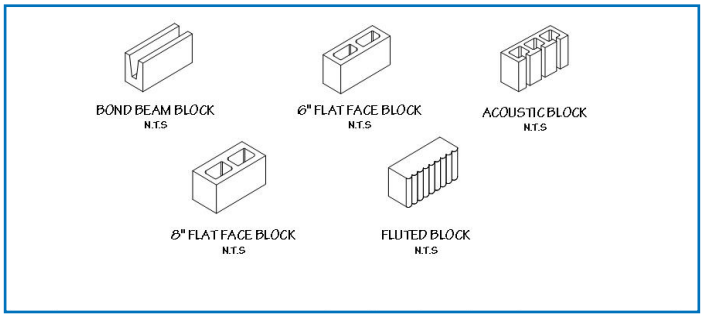


Kerjaya Prospek (Pinang)

Istiq Masonry Noise Barrier

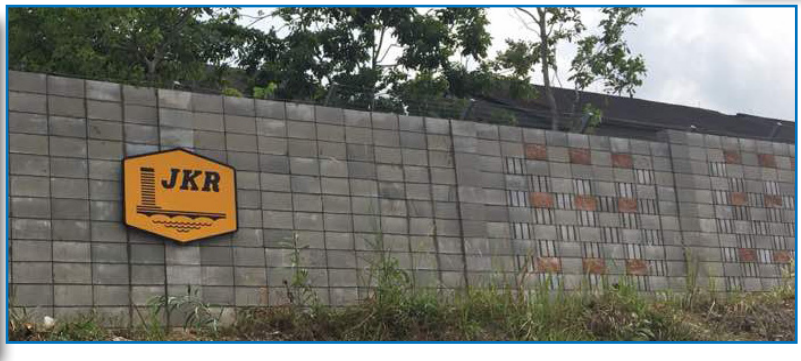
Description

ISTIQ Masonry barrier consist of combination of few type of various masonry block which is Flat Face, Bond Beam Block, Column Flat Face, Flutter Block and Acoustic Block. The standard size of ISTIQ Acoustic Hallow Block Barrier is typical 140 mm x 190 mm x 390 mm except for Column Flat Block which is 190 mm x 190mm x 390 mm. Column block and Bond Beam block is reinforce with steel bar to give the additional strength of the wall against wind force.



Construction

Excavation of a trench started after confirmation of the starting, end points and alignment of the noise barrier wall. The strip footing were constructed and reinforcement laid before the concreting. Laying of the Acoustic Hollow Blocks commenced immediately upon proper curing process of the reinforced concrete strip footing.



Istiq Noise Blanket Barrier

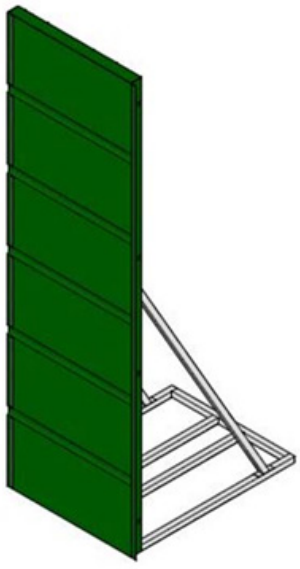
Description

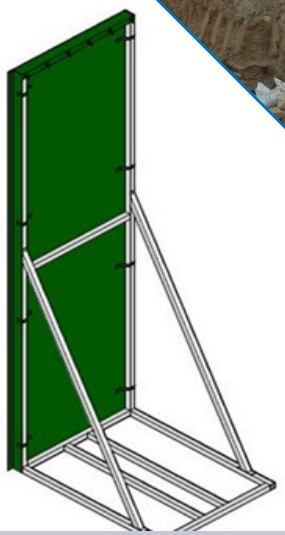
Istiq Noise Blanket Barrier consist of 50 mm thick absorption infill that compress to 30 mm thickness wrapped with high grade nylon and come with size of 2 m H x 1.2 m W , 3 m H x 1.2 m W and 4 m H x 1.2 m W.

Its mobility and easy to install is the suitable choice to use at place where the noise barrier is needed and only use for short of time before moving it to another point. It can be used for hacking activity, piling and even to cover the generator set. This also the best method to use at the construction site where rough environment and mobility is important as it can follow the machine activities.

The Istiq Noise Blanket is a “hang” type onto the structural frame such as normal scaffolding making it cost saving and reliable and can move together with the scaffolding. It also can hung at special design steel frame (counter weight needed).

Cergas Murni Sdn Bhd - Propose SUKE Highway





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