Japan BGN level information of residential area

TFRWS #17
13th Jan 2021
JASIC
Japan BGN level of low ambient noise level area

➢ Previous information about BGN level in Japan. (TFRWS-08-05)
  ✔ Low ambient noise level: 38~39dB

➢ Additional information about BGN level of residential area
  ✔ We Conducted a measure of our living area. (10 min LAeq)
    • Residential area: 34.0~42.9dB(LAeq), 28.9~39.0dB(L50)
    • Parking area of Convenience store: 45.6dB(LAeq), 38.5dB(L50)

➢ Summary
  ✔ Japan has residential area’s that BGN level is really quiet.
  ✔ In this area especially night time, RWS need the low sound level.
  ✔ Japan proposal of Low level:
    “at least 10dB lower than the normal level but lower limit
    shall be more than 40dB(A)”
Information of Japan BGN level at TFRWS #8

BGN level of "Low level" usage situation (TFRWS-08-05)

1. In TFRA-04-11, there are sentences about the usage situations of 3 different sound level modes. The situations are defined as follows.
   - Low level: Quiet times (e.g. during 10 pm to 5 am) Quiet area
   - Normal level: Normal traffic hours (e.g. during 5 am to 10 pm)
   - High level: Very loud time and/or very loud place

   These sentences were deleted from present draft of new regulation. But TF still have common understanding.

2. Based on the above background, the followings are appropriate BGN levels when 3 different sound level modes are used.
   (All values are $L_{Aeq}$.)

<table>
<thead>
<tr>
<th>Level</th>
<th>Number of measurement</th>
<th>Averaged $L_{Aeq}$ (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>Day 108</td>
<td>44</td>
</tr>
<tr>
<td></td>
<td>Night 25</td>
<td>38</td>
</tr>
<tr>
<td>Suburban</td>
<td>Day 41</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>Night 25</td>
<td>38</td>
</tr>
<tr>
<td>Local city</td>
<td>Day 24</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>Night 9</td>
<td>39</td>
</tr>
<tr>
<td>Rural</td>
<td>Day 11</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>Night 5</td>
<td>38</td>
</tr>
</tbody>
</table>

   Measurement results of road transportation area (Outside)

   The expected use of the "Low level" is about 40dB.
Residential area (Tochigi/Utsunomiya city)

Time: 2PM  
BGN level: $L_{Aeq}=37.8\text{dB}, L_{50}=32.4\text{dB}$

Time: 8PM  
BGN level: $L_{Aeq}=34.0\text{dB}, L_{50}=28.9\text{dB}$

(Measuring time: 10min)
Residential area (Tochigi/Tochigi city)

Time: 9PM

BGN level: $L_{Aeq}=40.9\text{dB}$ (Measuring time: 10min)
Residential area (Tokyo/Ome city)

Time: 12AM / 8PM
BGN level: $L_{Aeq} = 36.6\text{dB} / 38.8\text{dB}$, (Measuring time: 10min)
Residential area (Tokyo/Chofu city)

Time: 11AM
BGN level: $L_{Aeq}=42.9\text{dB}, L_{50}=39.0\text{dB}$ (Measuring time: 10min)
Convenience store (Tochigi/Haga)

Time: 10PM
BGN level: $L_{Aeq}=45.6\text{dB}, L_{50}=38.5\text{dB}$ (Measuring time: 10min)
Situation of the Convenience store (Near Tokyo area)

Almost the Convenience store has signboard, “Please be quiet”.