Newport Beach Municipal Code section 10.26.045 limits the noise from sound-producing equipment to 50 dB measured to the nearest outdoor living area (OLA) or nearest window (NW), which ever is the least distance to the affected property. This number can be raised to 55 dB if a timer is installed on the equipment to shut off between 10 PM and 7 AM. Those limits can be further raised to 65 dB with a timer and written permission from the affected neighbor on our city standard form: newportbeach.ca.gov/home/showdocument?id=17340

Before issuance of a mechanical permit to install an AC condenser, the applicant must show compliance with the noise ordinance by providing the following information on two copies of plans. See sheets 2 & 3.

The basic procedure for estimation of the sound level at a given point of evaluation consists of combining the sound pressure levels resulting from the operation of outdoor equipment in any installation.

The direct distance, D, from the equipment location to the point of evaluation is a very significant application factor in determining the estimated A-weighted sound pressure levels resulting from the operation of outdoor equipment in any installation.

For the Barrier Shield, L_d must occur at not less than 5 ft. from finish surface for Point of Evaluation.

Equipment Location Factor
This factor takes into consideration the effect of walls and other reflective surfaces adjacent to the equipment.

Barrier Shielding Factor
(See example sketches, below.) Sound reduction benefits can be gained when a solid structure obstructs the sound path. These structures could be:

- Corner of building.
- Corner of flat roof and wall.
- Parapet around flat roof.
- Heavy continuous wall (ARI 275 4.1.2)
- Parapet around flat roof.
- Corner of flat roof and wall.

Note: Typical wood fence not adequate. FHWA Noise Barrier Design Handbook 3.4.2

Multiple Condenser Unit Installation
When there are two AC units, figure the dB level of each at the OLA or NW. Then use Table 4 to determine the overall combined sound level of the two units.

When there are three or more AC units, figure the dB levels of each at the OLA or NW, which ever is the least distance. Then, using Table 4, determine the overall combined sound levels of two units that are the loudest ( loudest at the point of evaluation, i.e. the neighbor.) Compare those combined sound levels with the third loudest unit and come up with another combined level, etc., until all units have been considered. Those final combined sound levels are the resultant of the multiple units.

Values from Table 4 shall be added to the unit with the highest dB level among the units being evaluated.

Multiple Condenser Unit Calculation (ARI Std 275)
Assumptions:
We are working with a unit that has 2 condensers. The difference in sound rating between the two condensers is approximately 6.0 dB, with 72 db being the maximum value.

Example Calculation:

Sound Rating of Equipment (Decibel Level) 72 dB
+ Multiple Condenser Unit Factor + 6 (see Table 4)
+ Equipment Location Factor  4 (see Table 1)
- Barrier Shielding Factor  - 7 (see Table 2)
- Distance Factor  - 17.5 (see Table 3)
= Estimated Sound Level of Equipment at the Point of Evaluation (Neigh.) = 53.5 dB + 55 dB O.K. w/ Timer

Multiple Condenser Unit Installation
When there are two AC units, figure the dB level of each at the OLA or NW. Then use Table 4 to determine the overall combined sound level of the two units.

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SIDE YARD SETBACK AS DETERMINED BY A PLANNER: FT

CONTACT INFO:

OWNER’S NAME:  
PLAN PREPARER:  
TEL NO.:  
CONTACT INFO:  
SIGNATURE:  
LICENSE NO.:

FILENAME: AC Noise Analysis v2019.DWG

Sheet 1 of 3
**MANUFACTURER’S NAME & PRODUCT DATA SHEET**

**SITE PLAN**

**BARRIER SHIELD ANALYSIS**

**NOTE: THE SCALE IS NOT SET, BUT MUST REMAIN CONSISTENT THROUGHOUT**

**UNIT #1**

Calculation:

- Sound Rating of Equipment (Decibel Level) = dB
- Equipment Location Factor + dB (see Table 1)
- Barrier Shielding Factor - dB (see Table 2)
- Distance Factor - dB (see Table 3)
- Estimated Sound Level of Equipment at the Point of Evaluation (Neighbor) = dB

When two or more units:

- Multi-Unit Value + dB (see Table 4)
- Grand Total with Multi-Unit Value = dB

**UNIT #2 (IF APPLICABLE)**

Calculation:

- Sound Rating of Equipment (Decibel Level) = dB
- Equipment Location Factor + dB (see Table 1)
- Barrier Shielding Factor - dB (see Table 2)
- Distance Factor - dB (see Table 3)
- Estimated Sound Level of Equipment at the Point of Evaluation (Neighbor) = dB

When two or more units:

- Multi-Unit Value + dB (see Table 4)
- Grand Total with Multi-Unit Value = dB

**UNIT #3 (IF APPLICABLE)**

Calculation:

- Sound Rating of Equipment (Decibel Level) = dB
- Equipment Location Factor + dB (see Table 1)
- Barrier Shielding Factor - dB (see Table 2)
- Distance Factor - dB (see Table 3)
- Estimated Sound Level of Equipment at the Point of Evaluation (Neighbor) = dB

When two or more units:

- Multi-Unit Value + dB (see Table 4)
- Grand Total with Multi-Unit Value = dB

**UNIT #4 (IF APPLICABLE)**

Calculation:

- Sound Rating of Equipment (Decibel Level) = dB
- Equipment Location Factor + dB (see Table 1)
- Barrier Shielding Factor - dB (see Table 2)
- Distance Factor - dB (see Table 3)
- Estimated Sound Level of Equipment at the Point of Evaluation (Neighbor) = dB

When two or more units:

- Multi-Unit Value + dB (see Table 4)
- Grand Total with Multi-Unit Value = dB

**A.C. CONDENSER NOISE ANALYSIS**

**SIDE YARD SETBACK AS DETERMINED BY A PLANNER:**

**PLANNER’S INITIALS:**
### MANUFACTURER'S NAME & PRODUCT DATA SHEET

(Listing dB Level)

### SITE PLAN

(Note: The scale is not set, but must remain consistent throughout)

### BARRIER SHIELD ANALYSIS

(Note: Barrier drawing must be to scale)

<table>
<thead>
<tr>
<th>UNIT #1</th>
<th>UNIT #2 (IF APPLICABLE)</th>
<th>UNIT #3 (IF APPLICABLE)</th>
<th>UNIT #4 (IF APPLICABLE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculation:</td>
<td>Exterior dB</td>
<td>Exterior dB</td>
<td>Exterior dB</td>
</tr>
<tr>
<td>Sound Rating of Equipment (Decibel Level)</td>
<td>+ ________ (see Table 1)</td>
<td>+ ________ (see Table 1)</td>
<td>+ ________ (see Table 1)</td>
</tr>
<tr>
<td>- Equipment Location Factor</td>
<td>- ________ (see Table 2)</td>
<td>- ________ (see Table 2)</td>
<td>- ________ (see Table 2)</td>
</tr>
<tr>
<td>- Barrier Shielding Factor</td>
<td>- ________ (see Table 3)</td>
<td>- ________ (see Table 3)</td>
<td>- ________ (see Table 3)</td>
</tr>
<tr>
<td>- Distance Factor</td>
<td>= ________ dB</td>
<td>= ________ dB</td>
<td>= ________ dB</td>
</tr>
<tr>
<td>Estimated Sound Level of Equipment at the Point of Evaluation (Neighbor)</td>
<td>= ________ dB</td>
<td>= ________ dB</td>
<td>= ________ dB</td>
</tr>
</tbody>
</table>

When two or more units:

- Multi-Unit Value: + ________ (see Table 4) + ________ (see Table 4) + ________ (see Table 4) + ________ (see Table 4) + ________ (see Table 4) + ________ (see Table 4) + ________ (see Table 4) + ________ (see Table 4) + ________ (see Table 4) + ________ (see Table 4)
- Grand Total with Multi-Unit Value: = ________ dB = ________ dB = ________ dB = ________ dB = ________ dB = ________ dB = ________ dB = ________ dB = ________ dB = ________ dB

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**A.C. Condenser Noise Analysis**

Side Yard Setback as Determined by a Planner: __________ FT.

**Scope of Work:**

**Project Address:**

**Owner's Name:**

**Plan Preparer:**

**Tel. No.:**

**Contact Info.:**

**Signature:**

**License No.:**

Sheet 3 of 3