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## Chapter 16 : HEARING PROTECTION

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### INTRODUCTION/OVERVIEW

Continual exposure to excessive noise levels has a cumulative effect and may cause permanent hearing loss. Exposure to sudden, intense noises may even cause rupture of the eardrum and damage to the inner ear.

The OSHA Act (1926.52) requires that an employer provide hearing protection in accordance with the following table.

#### Permissible Noise Exposures

Duration per day, hours:	Sound Level dBA slow response
8.....	90
6.....	92
4.....	95
3.....	97
2.....	100
1-1/2.....	102
1.....	105
1/2.....	110
1/4 or less .....	115

Certain areas of construction might exceed the 90 dB level when contractors are working in an industrial environment. Under such conditions, our employees will adhere to **CUNNINGHAM PAVING** policies and hearing notification postings mandating the use of hearing protectors. **CUNNINGHAM PAVING** will furnish all jobsites with the proper ear protection.

Some jobs may require that special and unusual monitoring be performed. If so, this will be done by a competent and qualified person. If personal dosimeter measurements are necessary, arrangements will be made with the proper consultant.

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## ***TYPES OF HEARING PROTECTORS***

There are several varieties of hearing protectors including muffs, molded rubber ear plugs and foam-type ear plugs. These protectors have a minimum noise reduction rating of 29 dBA. OSHA calculates the actual protection as follows:

**Noise Reduction Rating - 7 dBA = Actual Protection Factor**

Hearing protectors we provide to our employees have an actual protection factor of 22 dBA. It would require a noise source of 107 dBA for a person wearing protection to be above the action level of 85 dBA or a noise source of 112 dBA to be above the mandatory protection level of 90 dBA.

## **HEARING CONSERVATION**

### **REGULATORY AUTHORITY FOR IMPLEMENTATION OF HEARING CONSERVATION PROGRAM**

The Occupational Safety and Health Act under 29 CFR 1910.95 establishes requirements relating to Hearing Conservation. In response to the regulatory mandate, Cunningham Paving has developed and will maintain the Hearing Conservation Program to provide proper and safe procedures for all applicable employees.

### **PURPOSE**

This document is primarily intended to outline methods of protecting and/or informing all Cunningham Paving employees where noise levels may exceed 85 dBA within their workplace. In addition, it is intended that Cunningham Paving will be in full compliance with the OSHA Hearing Conservation Standards 29 CFR 1910.95.

### **RESPONSIBILITY**

Cunningham Paving shall instruct all appropriate employees in the safety significance of the Hearing Conservation Program. In addition, Cunningham Paving considers these requirements to be of critical importance in helping to ensure that the applicable provisions of the Hearing Conservation Program are known, understood, and strictly adhered to by all employees. It shall be the responsibility of the Safety Director to

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continually monitor the Hearing Conservation Program to ensure that all requirements of these procedures are being followed and that any deviations or inadequacies are corrected.

## GENERAL

Employee hearing conservation is an important objective in our overall employee protection program. Our major goal is to reduce continuous noise levels below 90 dBA and also reduce impact noises where feasible through engineering and administrative controls.

## DEFINITIONS

<b>Hearing Protection Device</b>	Personal hearing protective equipment that is worn over the ear ( earmuffs) or in the ear (earplugs) to attenuate noise.
<b>dba</b>	Sound level in decibels read on the scale of a sound meter. A unit of measurement of a sound level corrected to the a-weighted scale, as defined in ANSI S1.4-1971 (R1976), using a reference level of 20 micropascals (0.0003 Newton/m <sup>2</sup> ).
<b>Standard Threshold Limit</b>	A change in the hearing threshold relative to the baseline audiogram.

## PROGRAM ELEMENTS

### Noise Level Monitoring

- A. A survey will be conducted whenever a change in process, procedures, equipment location, or condition could result in an increased noise level.

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- B. All purchase agreements for high level noise generating equipment will contain a provision requiring the manufacturer to reduce the noise level below 84 dBA where technically and/or economically feasible.

## **Noise Abatement**

All available and practical engineering and administrative controls will be employed to eliminate or control excessive noise at its source. This will include, but not be limited to, replacement of equipment, alternative processes or procedures, machine redesign and isolation, or providing appropriate hearing protection.

## **Audiometric Monitoring**

1. An audiometric baseline test will be administered to all employees who routinely work in an area with TWA of 85 dBA, initially, and annually thereafter.
2. New employees will be tested prior to job placement and receive appropriate training.
3. All tests will be administered by a certified audiologist otolaryngologist, qualified physician, or a technician who is certified by the Council of Accreditation in Occupational Hearing Conservation.
4. All tests will be compared to the baseline (initial) test. If a standard threshold shift (STS) has occurred, these steps will be taken:

