

BASE MATERIAL REQUIRED IN REFERENCE TO THE EXPANSION INDEX :

**EXPANSION INDEX LESS THAN 21**

1. VERY LOW EXPANSION POTENTIAL SOILS,  
NON-EXPANSIVE BASE MATERIAL IS NOT REQUIRED.

**EXPANSION INDEX 21 TO 50**

2. LOW EXPANSION POTENTIAL SOILS,  
PLACE A MIN. OF 4" OF NON-EXPANSIVE BASE MATERIAL  
BENEATH CONCRETE STRUCTURES. SATURATE THE BASE MATERIAL AND  
SUBGRADE WITH WATER 24 HOURS PRIOR TO POURING CONCRETE.

**EXPANSION INDEX 51 TO 90**

3. MEDIUM EXPANSION POTENTIAL SOILS,  
PLACE A MINIMUM OF 8" OF NON-EXPANSIVE BASE MATERIAL  
BENEATH CONCRETE STRUCTURES. SATURATE THE BASE MATERIAL  
AND SUBGRADE BY PONDING WATER ON IT FOR 24 HOURS PRIOR  
TO POURING CONCRETE.

**EXPANSION INDEX GREATER THAN 90**

4. VERY HIGH EXPANSION POTENTIAL SOILS,  
PLACE A MINIMUM OF 16" OF NON-EXPANSIVE BASE MATERIAL BENEATH  
CONCRETE STRUCTURES. SATURATE THE BASE MATERIAL AND SUBGRADE  
WITH WATER 24 HOURS PRIOR TO POURING CONCRETE. PLACE TWO NUMBER  
FOUR REINFORCING BARS IN THE CURB, CONTINUOUSLY. A PRELIMINARY SOILS  
REPORT CONTAINING RECOMMENDATIONS FOR MITIGATION CONCERNING SIDEWALK,  
CURB AND GUTTER CONSTRUCTION IS REQUIRED, IN ORDER TO GAIN APPROVAL  
OF AN ALTERNATIVE TO THE USE OF 16" OF NON-EXPANSIVE MATERIAL.

NOTE: IN ANY SUBDIVISION WHERE ANY INDIVIDUAL SOIL SAMPLE HAS AN EXPANSION INDEX GREATER THAN 50, THE CITY ENGINEER MAY REQUIRE ADDITIONAL SOIL SAMPLES AND TESTS, UP TO ONE SET PER THREE ACRES, FOR THE PURPOSE OF DETERMINING THE EXPANSIVE INDEX(ES) FOR THE PROPOSED DEVELOPMENT.

**SHRINK/SWELL POTENTIALS :**

BASE MATERIAL REQUIRED IN REFERENCE TO THE SOIL CONSERVATION SERVICE CRITERIA

1. AREAS WITH LOW SHRINK/SWELL POTENTIAL. NON-EXPANSIVE MATERIAL IS NOT REQUIRED. NO SOILS REPORT IS REQUIRED FOR BUILDING PERMITS.
2. AREAS CONTAINING SOIL THAT HAS A LOW TO MODERATE SHRINK/SWELL POTENTIAL, REQUIRES A MINIMUM OF 4 INCHES OF NON-EXPANSIVE MATERIAL BENEATH CONCRETE STRUCTURES. SATURATE THE BASE MATERIAL AND SUBGRADE WITH WATER 24 HOURS PRIOR TO POURING CONCRETE. A SOILS REPORT IS REQUIRED FOR ALL BUILDING PERMITS EXCEPT SINGLE FAMILY RESIDENTIAL.
3. AREAS CONTAINING SOIL THAT HAS A MODERATE SHRINK/SWELL POTENTIAL, REQUIRES A MINIMUM OF 8 INCHES OF NON-EXPANSIVE MATERIAL BENEATH CONCRETE STRUCTURES. SATURATE THE BASE MATERIAL AND SUBGRADE WITH WATER 24 HOURS PRIOR TO POURING CONCRETE. A SOILS REPORT IS REQUIRED FOR ALL BUILDING PERMITS.
4. AREAS CONTAINING SOIL THAT HAS A HIGH SHRINK/SWELL POTENTIAL, REQUIRES 16 INCHES OF NON-EXPANSIVE MATERIAL BENEATH CONCRETE STRUCTURES. SATURATE THE BASE MATERIAL AND SUBGRADE WITH WATER 24 HOURS PRIOR TO POURING CONCRETE. PLACE TWO NUMBER FOUR REINFORCING BARS IN CURB, CONTINUOUSLY. A SOILS REPORT IS REQUIRED FOR ALL BUILDING PERMITS.

NOTE: SEE APPENDIX A FOR SOIL CONSERVATION SERVICE SOILS LEGEND WITH SHRINK/SWELL POTENTIALS AND APPENDIX B FOR SOIL CONSERVATION SERVICE SOILS MAP FOR PORTERVILLE AREA (SEE POCKET AT THE BACK OF THESE STANDARDS).

BASE MATERIAL WILL BE AS SHOWN ABOVE OR AS DETERMINED BY THE CITY ENGINEER.