

**BELL SYSTEM PRACTICES**  
**Outside Plant Construction**  
**and Maintenance**

**SECTION G45.120.1**  
**Issue 1, May, 1945**  
**AT&T Co Standard**

**CONCRETE AND MORTAR**  
**AGGREGATES**

<b>Part</b>	<b>Page</b>
1. General .....	1
2. Fine Aggregate .....	1
3. Coarse Aggregate .....	2
4. Storage of Aggregates .....	2

**1. GENERAL**

1.01 The characteristics of the aggregates used in the preparation of concrete and mortar have an important bearing on the quality of the resultant cement products. This section describes the physical properties sought in fine and coarse aggregates of the quality desired.

**2. FINE AGGREGATE**

2.01 Fine aggregate shall consist of natural sand, or sand prepared from stone, blast-furnace slag or gravel.

2.02 The amounts of clay, silt and organic impurities in the fine aggregates shall not exceed the limits established in G45.210.1 under the sedimentation and color tests covered in that section.

2.03 Fine aggregate for concrete shall be well graded from coarse to fine and, when tested by means of sieves, shall conform to the requirements of the following table. In the table, the numbered sieves have meshes per linear inch corresponding in number to the designation of the sieve.

	<u>Per cent. by weight</u>
Passing a 3/8 in. sieve	100
Passing a No. 4 sieve	95 to 100
Passing a No. 16 sieve	45 to 80
Passing a No. 50 sieve	5 to 30
Passing a No. 100 sieve	0 to 8

2.04 Fine aggregate for brick masonry mortar shall be well graded but shall contain no particles which will not pass a No. 4 sieve.

2.05 Fine aggregate for mortar bandage joint mortar shall be well graded plaster sand containing no particles which will not pass a No. 8 sieve.

### 3. COARSE AGGREGATE

3.01 Coarse aggregate shall consist of crushed stone, gravel, blast-furnace slag, or other approved inert materials of similar characteristics, or combinations thereof, having hard, strong, durable pieces, free from adherent coatings and conforming to the requirements of the specifications of the American Society for Testing Materials.

3.02 In coarse aggregate, the amount of foreign substances such as soft fragments, coal, clay, shale and other materials detrimental to the quality of concrete shall not exceed 5 per cent. of the total weight of the coarse aggregate.

3.03 The coarse aggregate shall be well graded between the limits specified below:

<u>Intended Use</u>	<u>Class of Concrete</u>	<u>Minimum Size*</u>	<u>Maximum Size</u>
Manholes, Conduit Protection	1A, 1B, 1C, 1D, 2A	No. 4	3/4 in.
Conduit Encasement	2B	No. 4	1/2 in.
Pavement Replacement	2C, 2D	No. 4	1-1/2 in.

\* Refers to correspondingly numbered sieve size.

3.04 In no case shall cinders be used to form a part of the aggregate for concrete to be used in underground conduit or manhole construction work.

### 4. STORAGE OF AGGREGATES

4.01 Aggregates shall be stored in such a manner as to prevent mixture with other aggregates until they are used and also to prevent the inclusion of foreign materials.