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Section II.D.1 - Fast Dry Tennis Courts for Use with Above Surface Irrigation

1.0 Definition

Fast dry is a porous tennis court surface material consisting of natural crushed stone, brick, or tile, that is ground, screened, well graded, and may or may not be mixed with a chemical binder to form a stable homogeneous mixture having an affinity for water.

2.0 Slope and Elevation Requirements

All excavating, filling, and grading requirements and compacting work of the subbase should be performed so that the finished subgrade should be above the surrounding ground, i.e. 4"-6", and should slope not less than 0.28% (1:360) and not more than 0.42% (1:240). Each court must slope on a true plane, preferably from side to side (but from end to end or from corner to corner also are acceptable), or in the shortest direction for good drainage/water run-off. The court should never be sloped from the net line to the baseline, from the baseline to the netline, from the sides to the centerline or from the centerline to the sides.

3.0 Perimeter Edging

An edging of brick or block set in cement mortar, treated wood timber or concrete should be installed around the entire perimeter of the court area. The finished curb elevation should be 1/2" below the finished court surface, after compaction, and the court surface should be tapered from approximately 2' out to meet the top of the edging.

4.0 Standard Base Construction

A base course of crushed stone or gravel should be installed over the subbase. The crushed stone or gravel should conform to gradations as approved by the surface material manufacturer, for example:

<u>U.S Standard</u>	
<u>Sieve Size</u>	<u>% Passing</u>
1"	100%
3/4"	95-100%
3/8"	60- 80%
No. 4	16- 60%
No. 40	10- 35%
No. 200	Less than 10%

The thickness of the base course may vary to meet local soil and climatic conditions, but in no case should it be less than 3" after compaction. The surface of the base course after compaction should be smooth, even, and should not vary more than 3/8" in 10' when measured in any direction.

5.0 Standard Base Leveling Course

A leveling course of crushed stone or gravel screenings should be installed over the standard base course. Screenings should conform to the following gradation:

U.S Standard

<u>Sieve Size</u>	<u>% Passing</u>
3/8"	100%
No. 4	80-100%
No. 100	10- 30%
No. 200	Less than 10%

Screenings should be spread and thoroughly compacted to a thickness of not less than 1". The finished surface of the leveling course should not vary more than 1/4" in 10', when measured in any direction.

6.0 Modified Base Construction

Depending on local conditions, other materials such as slag, washed limerock screenings, washed shell, cinders, or other suitable material may be substituted for the Standard Base and Leveling Material (Sec. 4.0 and 5.0) under extenuating circumstances.

A modified base course is sometimes used, particularly in areas not subject to freeze/thaw action. The modified base may consist of one course of suitable material as described above and may be installed to a uniform thickness of 2 1/2" to 4". The modified base should be compacted to provide a smooth, true plane surface, and should not vary more than 1/4" in ten feet 10', when measured in any direction.

When selecting a base material, the following Guidelines should be considered:

- a. The material should be porous enough to allow water to penetrate after compaction but not so porous that water drains entirely through the base material. Water should drain through the court surface and should be retained in the base as moisture until the court surface begins to dry and "pulls" (capillary action) this moisture from the base back to the court surface.
- b. The base should be stable so as not to shift under the weight of a roller.
- c. Based on (a) and (b) above, precaution should be exercised to avoid some limestone type materials which may solidify and become non-porous when in contact with water for prolonged periods of time. Some sandy materials may shift and become unstable.
- d. It should also be noted that while making an excellent base, cinders, slag, and other lightweight materials may heave through the surface in frost areas and should be avoided.
- e. When in doubt, the base material should be approved by the manufacturer of the fast dry surface material.

7.0 Court Surfacing/Tennis Court Material (TCM)

A surface course of fast dry tennis court surface material as defined above, should be installed over the leveling course (or modified base course) to a uniform thickness of approximately 1 1/4". The surface course material should then be watered to its full depth and compacted with a roller to a minimum thickness of 1".

The fast dry material gradation may vary with materials of varying physical characteristics and with manufacturers' formulae. In general the material should pass a 1/8" screen and be uniformly graded down through a 200 mesh screen.

The finished surface course should not vary more than 1/8" in 10' when measured in any direction.

8.0 Compaction

Compaction of base and surface courses should be obtained with a roller weighing approximately 600 lbs. per roller drum.

Refer to Guide Specifications:

[I.A. General Conditions for Construction](#)

[I.B. Site Investigation](#)

[I.C. Site Preparation, Earthwork, Drainage and Subbase Construction](#)

[I.D. Vegetation Control or Vegetation Regrowth Prevention](#)

[I.E. Subsurface and Surface Drainage for Recreational Areas](#)

[II.A. Tennis Court Orientation](#)

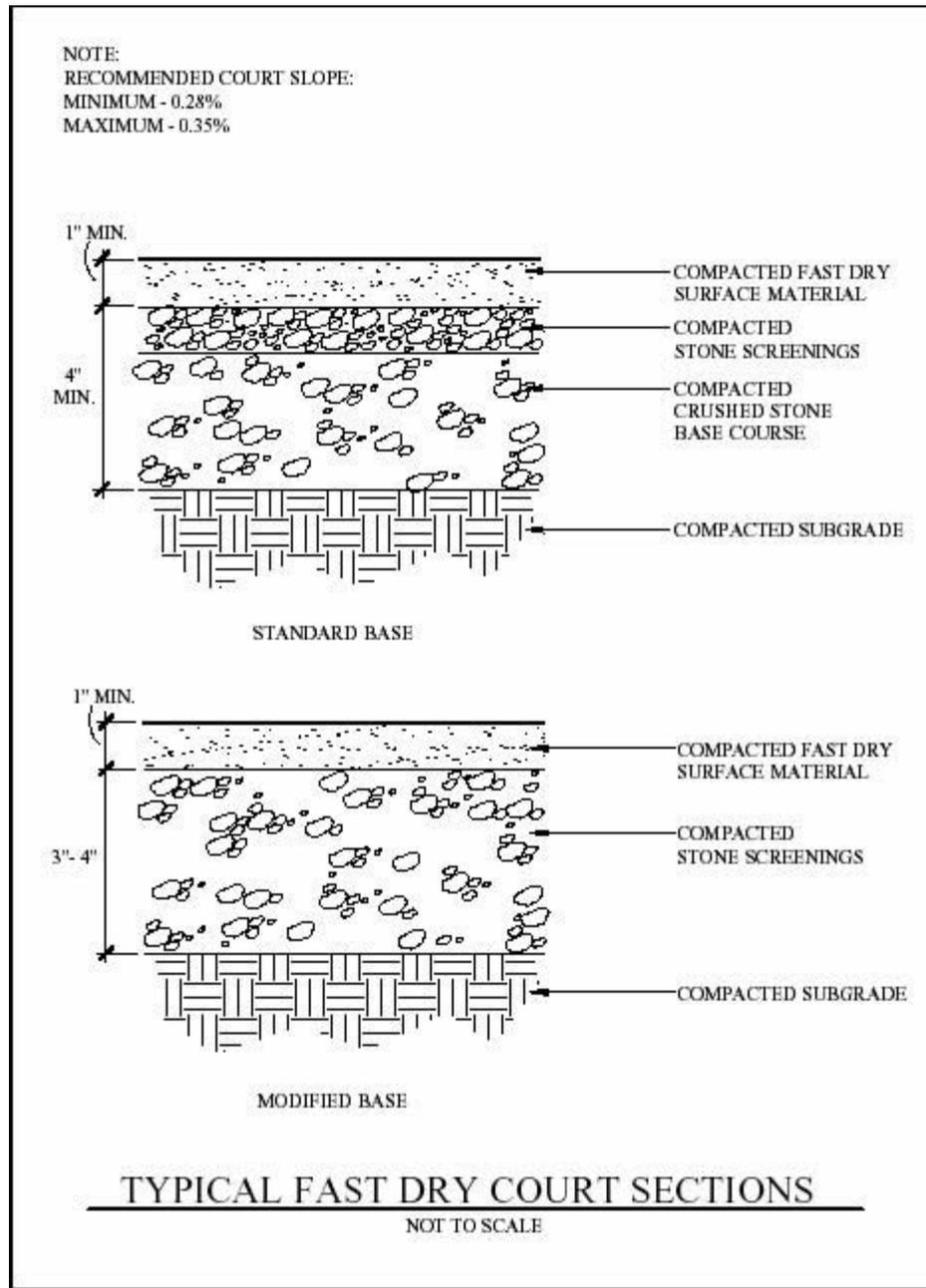
[II.B. Tennis Court Dimensions and Related Measurements](#)

[II.F.1. Above Surface Watering Systems for Clay and Fast Dry Tennis Courts](#)

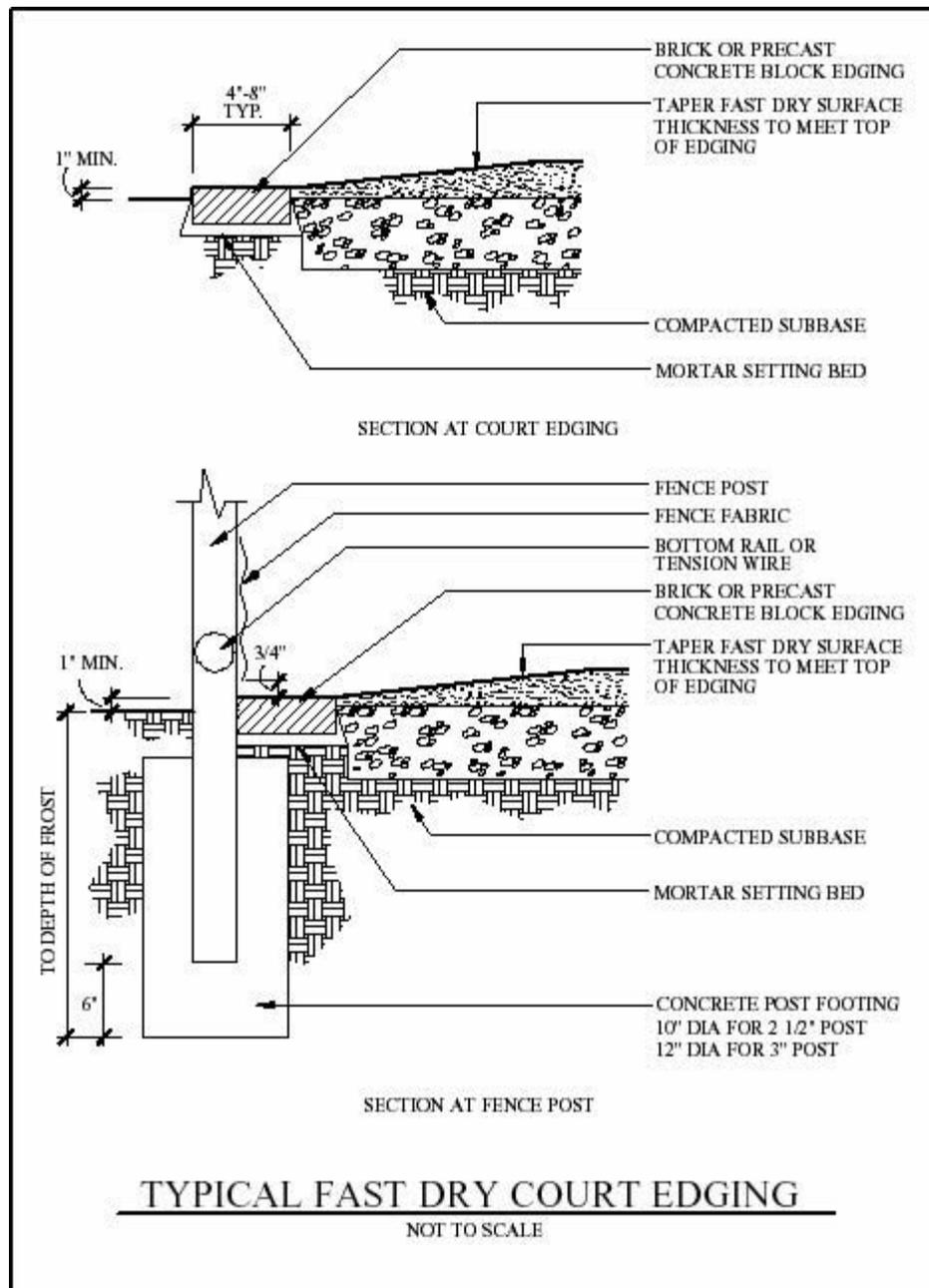
[II.L. Net and Net Post Equipment](#)

Section II.D.1 - Drawings

Section II.D.1 - Typical Fast Dry Court Section



Section II.D.1 - Typical Fast Dry Court Edging



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Notice

These Construction Guidelines are intended for use by architects, engineers, contractors, tennis court and running track owners. Parties not experienced in tennis court or running track construction are advised to consult a qualified contractor, consultant and/or design professional. Experienced contractors, consultants and/or design professionals can be identified through the American Sports Builders Association. Due to changing construction technology and techniques, only the most recent version of these Guidelines should be used. Variances in climate, soil conditions, topography and other factors may make these Guidelines unsuitable for certain projects.