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## APPENDIX A

### SPECIFICATIONS FOR PAVING OF OFF - STREET PARKING AND LOADING AND/OR UNLOADING AREAS

All new off - street parking facilities shall be paved with asphalt or portland cement concrete and shall be designed and constructed in accordance with the standards and procedures herein established.

#### A. ASPHALT CONCRETE PAVEMENT

##### 1. General Design Requirements

- a. Asphalt concrete pavements shall consist of specified thickness of asphalt concrete surface course and a base course, or courses, all constructed on prepared subgrade. Required pavement thickness shall be determined from Table A-1 of the appropriate subgrade soil and traffic use.
- b. Paved areas shall be so designed and constructed that water will quickly drain from the surface and be conducted away from the area through approved systems. Transverse and/or longitudinal slopes of not less than 5/8 inch in 10 feet shall be provided. For large paved areas, approved catch basins and storm drainage systems shall be provided.
- c. When the pavement includes a granular base, and the pavement is not constructed over granular subgrade, perimeter subsurface drainage shall be provided to prevent lateral flow of water into the base course and to provide for removal of seepage water that may enter the base.
- d. Successive layers of the pavement shall be offset from the edge of the underlying layer a distance equal to the course thickness of the lower layer, except when abutting existing construction. When the asphalt layers of the pavement abut a building foundation, barrier curb, or similar vertical surface, the abutting surface shall be heavily painted with asphalt prior to construction of the asphalt course. The surface course shall be finished 1/4 inch above adjacent flush construction to permit proper compaction.

2. Construction Materials and Procedures

- a. Base courses shall consist of the following materials. Construction procedures shall conform to the requirements applicable to the base course selected.
  - (1) Asphalt Concrete Base Course - Materials and construction shall conform to the current requirements of the Kentucky Department of Transportation, Bureau of Highways', Specifications for Asphalt Concrete Base Course, Sections 401, 403, except as noted herein.
- b. Crushed Stone Base Course - Crushed stone base course shall conform to all the current requirements of the Kentucky Department of Transportation, Bureau of Highways, for Dense Graded Aggregate Base Course, Section 303.
- c. Asphalt Concrete Surface Course – Materials and construction shall conform to the current requirements of the Kentucky Department of Transportation, Bureau of Highways, for Asphalt Concrete Surface, Type B, State Highway Designation Section 401, 402.
- d. Asphalt Prime and Tack Coat
  - (1) Asphalt Prime shall conform to the Kentucky Department of Transportation, Bureau of Highways' requirements for Cutback Asphalt Emulsion Primer, Type L, as per Section 407. Prime shall be applied to the surface of granular base course at a rate of 0.25 to 0.50 gallons per square yard, as directed by the legislative body's engineer or inspector.
  - (2) Tack Coat (SS-1h) shall meet the requirements of the Kentucky Department of Transportation, Bureau of Highways, as per Section 407. It shall be diluted with equal parts of water, when directed by the inspector. Tack coat shall be applied, upon direction of the legislative body's engineer, to the surface of asphalt courses that have become dusty or dry, at a rate of 0.10 gallons per square yard of the diluted SS-1h before the subsequent course is constructed.

B. CONCRETE PAVING

1. General Requirements - Thickness of concrete shall be:
  - a. A minimum of four (4) inches for driveways and parking areas serving single and two-family residential dwellings.
  - b. A minimum of five (5) inches for passenger cars and panel or pickup trucks serving industrial, commercial, and multi - family residential developments.
  - c. A minimum of six (6) inches for light trucks serving industrial, commercial, and multi-family residential developments.
  - d. A minimum of seven (7) inches for heavier commercial or industrial needs.

2. General Requirements

- a. Minimum Cement Content - 564 lb./cu.yd. of concrete (6 U.S. bags).
- b. Maximum Size of Aggregate - 1-1/4 inches.
- c. Maximum Water Content - 0.49 lb./1 lb. of cement (5.5 gal./ bag).
- d. Maximum Slump - five (5) inches when using hand-finishing techniques, three (3) inches when using a mechanical finishing machine.
- e. Strength of Concrete - The concrete shall attain a minimum expected strength of concrete at 28 days of 3,500 pounds per square inch compressive strength and/or 550 pounds per square inch flexural strength "modulus of rupture".
- f. Air Entrainment

Maximum Size Aggregate (inches)	Entrained Air (Percent)
1-1/4	5 + 1
3/4, 1	6 + 1
3/8, 1/2	7-1/2 + 1

3. Construction Procedures

- a. All soft and yielding material and other portions of the subgrade which will not compact readily when rolled or tamped, shall be removed and replaced with suitable material, placed and compacted. The subgrade shall be thoroughly compacted with suitable equipment so as to have uniform density at moisture contents of not less than standard optimum (AASHTO-T98).
- b. Longitudinal joint spacing shall not exceed 15 feet and be designed in accordance with the joint details in Figure A-2.
- c. Transverse joint spacings shall be at regular intervals of twenty (20) feet.
- d. All transverse construction joints shall be designed in accordance with the joint details in Figure A-2.
- e. Form offsets at radius points shall be at least two (2) feet.
- f. Pavement joints must be continuous through the curbs.
- g. Where curbs are required, they shall be cast integrally.
- h. The pavement shall be struck - off, consolidated, and finished, to the grades shown on the plans. All catch basins and manhole castings shall be boxed out and separated from the pavement with expansion joint material. All except premolded or sawed joints shall be edged with a tool having a maximum radius of 1/8 inch. Sawed and formed joints shall be cleaned and sealed before opening to traffic. Final surface texture shall be that obtained with a burlap drag. Curing shall be that obtained with a uniform coverage of white membrane curing compound or by seven-day coverage of white polyethylene or waterproof paper. The completed pavement shall be closed to traffic for at least fourteen (14) days or by the time it has attained a compressive strength of 3,500 pounds per square inch and/or 550 pounds per square inch flexural strength. This traffic restriction shall apply to the contractor's construction equipment and vehicles, as well as general traffic.