

SECTION 32 12 00 - FLEXIBLE PAVING

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Extent of paving and surfacing is shown on the drawings and includes but is not limited to:
 - 1. Asphalt paving.
 - 2. Heavy duty paving at all truck traffic areas.
 - 3. Pavement markings.
 - 4. Wheel stops.
 - 5. Signs and posts for handicapped parking required by ADA.

1.02 QUALITY ASSURANCE

- A. Comply with and perform all paving work in accordance with the Standard Specifications for Road Construction (latest edition) of the Department of Transportation (Highway) of the state in which the store is located and the Asphalt Institute "Specifications for Paving and Industrial Applications (SS-2), information series documents IS 91 and IS 87.
- B. Design Requirements: (Based on 20-year pavement life)
Daily Traffic: 1200 passenger vehicles, 10 single unit trucks,
2 multi-unit trucks
- C. Provide pavement designs sealed by a licensed Professional Engineer based upon design requirements and daily traffic indicated in article 1.02.B above and anticipated subgrade support characteristics derived from the geotechnical engineering analysis performed for the project.
- D. Provide compaction tests of soil subgrade at not less than 1 test per each 2,500 sq.-ft. around the building.
- E. Asphalt cement materials shall conform to ASTM D-3515.
- F. Obtain materials from same source throughout project.
- G. At Walgreens discretion "suspect" installation will be tested, at Walgreens expense, for conformance to State D.O.T. Specifications by:
 - 1. Using proper rolling equipment for: Breakdown, compaction and finishing.
 - 2. Coring, extraction and gradation for compliance with approved job mix formula.
 - 3. Density testing to verify conformance to State Department of Transportation Standards.Non complying installations will be replaced at the landlords/contractors expense.
- H. Pavement designs which differ from these indicated in this section must be accompanied with a letter from the design engineer certifying to Walgreens that the proposed design complies with the standards and specifications, of the applicable state Dept. of Transportation.

I. Install pavement in the presence of the Quality Control Testing Consultant.

1.03. JOB CONDITIONS

- A. Establish grades, lines and elevations to drain water away from buildings, prohibit ponding and accommodate adjoining work and property.
- B. Subgrade Conditions: Provide subgrade improvements as required to correct adverse conditions caused by permeability, frost potential and unstable soils.

1.04 GUARANTEE

- A. Contractor shall guarantee in writing, the materials and workmanship in accordance with Section 01 11 00, for a period of two (2) years, beginning on the date of substantial completion or Walgreens possession, whichever ever comes later. This provision also applies to concrete pavements.

1.05 SUBMITTALS

- A. Submit the following to the Architect of Record, Quality Control Testing Consultant and Walgreens Project Architect
 1. Pavement designs sealed by a licensed Professional Engineer based upon design requirements and daily traffic indicated in article 1.02.B above and anticipated subgrade support characteristics derived from the geotechnical engineering analysis performed for the project.
 2. Laboratory reports of compaction tests and proof rolling of soil sub-grade.
 3. Pavement Surface Smoothness tests.
 4. Approved pavement design mix.

PART II - PRODUCTS

2.01 MATERIALS

- A. Asphalt Aggregate Mix: Plant-mixed, medium volume, hot laid asphalt-aggregate mixture AC 10 or AC 20 complying with ASTM D 3515 and as recommended by local paving authorities to suit project conditions and as follows:

<u>ASPHALT GRADE</u>	<u>TEMPERATURE CONDITION</u>
Use AC 10 for:	Cold, mean annual air temperature ≤ 7 degree C (45 degree F)
Use AC 10 or AC 20 for:	Warm, mean annual air temperature between 7 degree C (45 degree F) and 24 degree C (75 degree F)
Use AC 20 for:	Hot, mean annual air temperature ≥ 24 degree C (75 degree F)

- B. Plant Mixed Asphalt Base/Binder Course: Provide one course laid to a compacted thickness of 2 inches.

- C. Plant Mixed Asphalt Surface Course: Provide one course laid to a compacted thickness of 1-1/2 inches.
- D. Prime Coat: Cut back asphalt type; AASHTO M82, MC-30, MC-70 or MC-250. Apply material over compacted Base to penetrate and seal. Slow cure (SC) or rapid cure (RC) liquid asphalt may be used depending on weather/climate conditions. Cure as necessary.
- E. Tack Coat: Emulsified asphalts AASHTO M 140 or M 208: SS-1, SS-1h, CSS-1, CSS-1h, diluted with one part water to one part emulsified asphalt. Apply to contact surfaces of previously constructed asphalt.
- F. Base Material: Provide naturally or artificially graded mixture of natural or crushed gravel, crushed stone, crushed slag, natural or crushed fine aggregate conforming to ASTM D-2940, latest edition (Table 1, Bases) with at least 95% passing a 1-1/2 inch sieve and not more than 8% passing a No. 200 sieve.

2.02 MISCELLANEOUS PRODUCTS

- A. Pavement Marking Paint: FS-TT-P-1952D (waterborne), Type II (adverse conditions), color; highway yellow or as required by local codes.
- B. Wheel Stops: Precast of 3,500 psi air-entrained concrete, approximately 6" high 9" wide, and 7'-0" long, with chamfered corners and drainage slots on underside.
- C. Delineation Post: FlexStake model SM-703-Y-W-W, 36" high, yellow, by FlexStake (800) 348-9839, 2150 Andrea Lane, Ft. Myers, FL 33912.
- D. Security Bollard Cover: Polyethylene thermoplastic bumper post sleeve by Ideal Shield® (313-842-7290) or equal, color; as shown on the drawings.
- E. Storm water Management Grates/Catch Basin Covers: Provide cast iron units with bicycle safe grates that will not allow bicycle tires to drop down into opening.
- F. Bicycle Racks (when required): Provide undulating tubular steel by the following manufacturers or equal as approved by Walgreens Project Architect:
 - “Ribbon Rack” # RB 07 by AAA Ribbon® Rack Co.
 - “CycLoop” #2170-7 by Columbia Cascade
 - “Thunderbolt” #TB-7 by Creative Pipe, Inc.
 - “Heavy Duty Winder” #HW 238-7 by Madrax

Finish: Hot-dipped galvanized,
Mounting: Permanent in ground mount.
Capacity: 7 bicycles

PART III - EXECUTION

3.01 SURFACE PREPARATION

- A. Compact upper 12 inches minimum of the soil subgrade to 95% of maximum density as determined by ASTM D 1557 latest edition for cohesionless soils and 90% maximum density for cohesive soils. Cohesionless soils shall be moisture conditioned to plus or minus 2% of optimum moisture. Cohesive soils shall be moisture conditioned to a minimum of 2% above optimum moisture. Proof roll and repair all unstable areas of the prepared subgrade.

- B. Compact Base to 95% of maximum density as determined by ASTM D 1557 latest edition. Base materials shall be moisture conditioned to plus or minus 2% of optimum moisture. Proof roll and repair all unstable areas of the prepared Base.
- C. Install pavement markings with mechanical equipment after pavement has been properly cured. Apply to 10.3 mil wet film thickness, 6.0 mil dry film thickness.
- D. Secure wheel stops to pavement with galvanized steel dowels.

3.02 FIELD QUALITY CONTROL:

- A. General: Repair or remove and replace unacceptable or non-compliant paving, as determined by an independent testing laboratory and as directed by Walgreens.
- B. Surface Smoothness: Surfaces will not be acceptable if exceeding the following tolerances for smoothness when tested with a 10' straight edge.
 - 1. Wearing Course Surface: 3/16".
 - 2. Pavement variation from true design elevation: 1/4".
 - 3. Areas which pond water for longer than 24 hours will be cut out and replaced with hot mixed asphalt.

END OF SECTION