



# construction checklist

for asphalt parking lots



## Checklist for Parking Lots

To achieve the longest life, lowest maintenance costs, and best performance from an asphalt parking lot, the entire construction process should be monitored for the quality of both its materials and workmanship. It is important in case of claims that the parking lot be photographed before, during, and after construction. A new parking lot project begins with a subgrade of compacted soil and the base layers and continues through the paving process. The following checklist is designed to help the onsite inspector or owner's representative identify key aspects of the process and understand best practices known to produce a quality pavement project. The checklist is based upon national recommendations, local recommendations may vary depending upon climate, materials, and practices.

## Project Review

Every paving project should start with a detailed review of the project's contract, plans, and specifications. Any questions arising from this review should be directed to the design firm's engineers.



## Subgrade/Subsoil and Base Layers

A parking lot is only as good as the preparation of the subgrade and the subbase materials. Extra effort spent making sure the pavement subbase is correct will ensure a longer life for the parking lot. A properly compacted and graded base layer will minimize the chance of water puddling on the surface and instead will direct water to the proper drainage or containment areas. Remember, before you dig there are laws that must be followed regarding underground utilities. In most areas, you must call “811 Dial Before You Dig” to have a service locate on-site utilities. You must confirm the local requirements and ensure they are being followed before allowing excavation work to begin.

### Ask Yourself —

- Is the correct depth and type of crushed aggregate material being installed on the project?
- Does the parking lot appear to be graded properly?
- Is the subbase layer smooth to 1/2-inch change over a 10-foot length?

- Does it appear that the design will allow water to flow to catch basins and curbs?
- Are all utility structures set at the proper grade to accept the total number of inches of asphalt?
- Are all structures (catch basins, inlets, etc.) cleaned and protected?
- Is the site clear of debris and vegetation?
- Are all ramps and walkways designed to meet Americans with Disabilities Act standards, if required?
  - If so, is the contractor aware of the requirements and will the finished work meet them?
- Has the subbase been checked for adequate compaction with no visible water or movement?
- Is the base layer/subsoil firm and unyielding under the pressure of repeated construction trucks?
- Is the soil dry enough to support heavy construction? Can the soil hold its shape under loaded trucks?
  - If the site is wet, postpone until the site is sufficiently dry and can be proof rolled and uniform stability obtained.

## Asphalt Delivery

Before the asphalt mixture is delivered to the project, the inspector must review several items to ensure the site is ready for construction and asphalt paving. The most important element is safety. All construction is dangerous and steps should be taken to keep workers and the public safe at all times.

### Ask Yourself —

- Has a pre-paving meeting been held with the paving foreman to inspect the subbase?
- Have you checked the site for possible safety issues?
- Are the entrance/crossing points protected against damage?
- Has vehicle movement in and around the site been planned?
- Are overhead wires or obstructions clearly identified or marked?
- Have all utilities been located and marked?
- Are any and all obstructions on the site marked and accounted for?
- Have all underground objects been identified and marked?
- Can pedestrians navigate the site safely?
- Can all construction vehicles enter and exit the site safely?
- Are construction warning signs in place and are they easily visible on the site?
- Are cones or similar work zone devices being used to clearly mark the work zone?
- If paving on compacted aggregate, is the subbase clean and ready to be paved?
- If a milled surface, is the milling pattern uniform?
  - Is the depth of the milling correct for the depth of asphalt to be installed?
  - Has the milled surface been swept or vacuumed?
- Are all structures/utilities adjusted to the proper grade?
- Are there any areas that need to be patched or repaired prior to paving?

## Asphalt Mixture

Prior to starting this project, the design engineers determined the depth of each pavement layer and the type of asphalt mixture to be used. Your responsibility is to verify that the correct, specified asphalt mixtures are coming to the site. You can check and collect the truck delivery tickets to verify and document asphalt type and tonnage arriving on the project.

### Ask Yourself —

- Is this the correct mix type for the project and the layer you are constructing?
  - Is the mix type specified being installed at the minimum lift thickness?
  - Does the truck delivery ticket match the approved mix design?
  - How many tons are estimated to pave the project?
  - Does the paving foreman know how many tons he expects to use?
- How many dump trucks are scheduled to deliver the mix from the plant and how many tons are in each round?
    - The goal is to balance the mix delivery schedule to avoid having to start and stop the paving operation.
  - Are there enough trucks on the run to haul the mix needed to complete the job?
    - If you have 5 trucks on the round each carrying 25 tons = 125 tons per round.
    - If each round takes 1 hour to make, then the production rate is 125 tons per hour.
    - If the job requires 1,000 tons at 125 tons per hour = 8 hours to get the mix to the job.
  - Are the truck bodies cleaned of debris and are they tarped when they arrive on site?
  - Is an approved release agent being used?  
**DIESEL FUEL is not allowed!**
  - Is the temperature of the mix arriving at the site within the project guidelines?

## Asphalt Paving

Weather is a key factor in determining the end quality of a job. Paving is not advised if the air and surface temperatures are too cold. An air temperature of 40°F is a minimum before paving should be allowed to begin. If paving must go ahead despite the temperature, discuss with your contractor the possible benefits of warm-mix asphalt or other materials/technologies that may improve pavement quality when paving in colder weather.

Prior to the start of paving, the foreman and crew should “paint out” the boundaries of the project and mark the paving lanes to identify the proper paving sequence. Once paving starts, the inspector must monitor many items, including mix temperature, layer thickness, smoothness, possible mix segregation and joint construction. These are done through observation and utilization of a straight edge and a thermometer.

## Ask Yourself — Site Preparation

- If overlaying a subbase aggregate material, was a “prime coat” (a bonding and sealing agent) required and was it installed per the project specifications?
- If overlaying an existing or milled surface, has the surface been cleaned/ swept and given a full “tack coat” (a bonding agent between the two surfaces)?
  - What is the specified coverage rate for the prime/tack coat?
  - Is the application uniform?
  - Has the material been given enough time to “break” (evaporate the water)?

## Ask Yourself — Paving Operation

- Is the equipment properly maintained and in proper working order?
- Does the foreman have a paving plan?
  - Are the paving lanes and passes painted out?
  - Has a roller pattern been established?
- What is the specified compacted thickness in inches? How thick is the crew laying the mixture prior to compaction? A rule of thumb is that a loose mat compacts a quarter inch per 1 inch of thickness.
- Is the mix temperature within the guidelines as recorded in the paver hopper?
- Is the finished mat smooth with no deviations greater than ¼ inch over 10 feet?
- Is the contractor taking steps to minimize segregation of the aggregate in the mat?
- Are there any signs of pattern segregation in the mix, particularly at the joints?
- Is the paving crew maintaining a continuous slope/grade between paver passes?
- Are both transverse and longitudinal joints being constructed properly?
- Are efforts being made not to broadcast mix on to the mat and to remove excessive coarse aggregate, especially in handwork areas?

## Compaction/Density

Compaction is the most critical part of pavement installation. Properly compacted asphalt mats provide many years of reliable service. Proper compaction of the mat will keep moisture out of the pavement and prevent future problems. The plans and specifications should specify how density is tested. The inspector needs to monitor the specified compaction density with a gauge to ensure that final target densities are achieved. Regular visual inspection of the mat during compaction is also required: look for segregation, indentations, properly sealed joints, and under-compacted areas.

### Ask Yourself — During Compaction

- Is the proper type and number of compaction equipment being used to achieve specified density?
- Has adequate time been allowed to ensure proper compaction given the current weather?

- Check pavement temperature before compaction begins. Don't rely solely on an infrared temperature gauge. Have a probe thermometer on hand to check the internal temperature of the mat.
- The ability to achieve proper compaction requires a mat temperature of 175°F or greater.
- Do not let roller operators park equipment on the fresh mat while compaction is ongoing.
- Has the contractor performed extra compaction effort in handwork areas inaccessible to rollers?
- Is a compaction testing gauge being used?
- Density targets are called out in the specification — are they being achieved?
  - Typical density targets are in the 90–95% range.
  - Nuclear gauge readings, particularly on thin pavements, may have limitations.



## Ask Yourself — After Compaction

- Upon visual inspection, does everything look correct?
- Are there any signs of depressions/water puddles on the mat?
- Is the final lift thickness correct as specified after compaction?
- Are all joints properly compacted?
- Is the project neat and clean when the work is complete?
- Has the mat cooled sufficiently to support traffic?
  - Keep all traffic off the finished mat for as long as possible.
  - To avoid scuffing, be sure the surface has cooled to a minimum of 160°F.
  - On hot summer days or in warmer climates, additional cooling time may be needed. It may be advisable to keep traffic off the finished mat for as long as three days in some climate conditions.

## After Project Completion

Ensure that the finished product is ready to accept traffic before it opens. Retain all records from the project and take a final photograph of the site for your records.

- Do you have copies of all truck delivery tickets?
- Do you have a record of all the temperature and compaction readings you took during the project?
- Is an outside agency testing the final product for acceptance and payment?
- Do you have all the necessary temperature recordings?
- Allow the pavement 2–3 weeks to cure before final parking lot striping is added.
- Schedule a walkthrough with the owner on the completed project to ensure satisfaction with the workmanship and finished product.

# Additional Resources

## **Alabama Asphalt Pavement Association**

Phone: (334) 834-5314  
Website: [www.alasphalt.com](http://www.alasphalt.com)

## **Arkansas Asphalt Pavement Association**

Phone: (501) 219-1100  
Website: [www.arasphalt.com](http://www.arasphalt.com)

## **California Asphalt Pavement Association**

Phone: (916) 791-5044  
Website: [www.calapa.net](http://www.calapa.net)

## **Colorado Asphalt Pavement Association**

Phone: (303) 741-6150  
Website: [www.co-asphalt.com](http://www.co-asphalt.com)

## **Connecticut Asphalt & Aggregate Producers Assn.**

Phone: (860) 529-6855  
Website: [www.ctconstruction.org](http://www.ctconstruction.org)

## **Dakota Asphalt Pavement Association Inc.**

Phone: (605) 224-8500  
Website: [www.dakota-asphalt.org](http://www.dakota-asphalt.org)

## **Delaware Asphalt Pavement Association**

Phone: (302) 423-5822

## **Asphalt Contractors Association of Florida**

Phone: (850) 222-7300  
Website: [www.FloridaRidesOnUs.org](http://www.FloridaRidesOnUs.org)

## **Georgia Asphalt Pavement Association**

Phone: (770) 622-7798  
Website: [www.gahotmix.com](http://www.gahotmix.com)

## **Hawaii Asphalt Paving Industry**

Phone: (808) 847-4274  
Website: [www.hawaiiasphalt.org](http://www.hawaiiasphalt.org)

## **Illinois Asphalt Pavement Association**

Phone: (217) 523-2208  
Website: [www.il-asphalt.org](http://www.il-asphalt.org)

## **Asphalt Pavement Association of Indiana**

Phone: (317) 910-5493  
Website: [www.asphaltindiana.org](http://www.asphaltindiana.org)

## **Asphalt Paving Association of Iowa**

Phone: (515) 233-0015  
Website: [www.apai.net](http://www.apai.net)

## **Kansas Asphalt Pavement Association**

Phone: (785) 249-3536  
Website: [www.ksasphalt.com](http://www.ksasphalt.com)

## **The Plantmix Asphalt Industry of Kentucky**

Phone: (800) 544-8522  
Website: [www.palky.org](http://www.palky.org)

## **Louisiana Asphalt Pavement Association**

Phone: (225) 927-9737  
Website: [www.lahotmix.org](http://www.lahotmix.org)

## **Maine Asphalt Pavement Association**

Phone: (207) 838-1379  
Website: [www.maine-apa.org](http://www.maine-apa.org)

## **The Maryland Asphalt Association**

Phone: (410) 761-2160  
Website: [www.mdasphalt.org](http://www.mdasphalt.org)

## **Massachusetts Aggregate & Asphalt Pavement Association**

Phone: (781) 762-2367  
Website: [www.massasphalt.com](http://www.massasphalt.com)

## **Asphalt Pavement Association of Michigan**

Phone: (517) 323-7800  
Website: [www.apa-mi.org](http://www.apa-mi.org)

## **Minnesota Asphalt Pavement Association**

Phone: (651) 636-4666  
Website: [www.AsphaltisBest.com](http://www.AsphaltisBest.com)

## **Mississippi Asphalt Pavement Association**

Phone: (601) 948-5495  
Website: [www.msasphalt.com](http://www.msasphalt.com)

## **Missouri Asphalt Pavement Association**

Phone: (573) 635-6071  
Website: [www.moasphalt.org](http://www.moasphalt.org)

## **New Jersey Asphalt Pavement Association**

Phone: (609) 838-1867  
Website: [www.njapa.com](http://www.njapa.com)

## **Asphalt Pavement Association of New Mexico**

Phone: (505) 831-8811  
Website: [www.apanm.org](http://www.apanm.org)

## **New York Construction Materials Association**

Phone: (518) 783-0909  
Website: [www.nymaterials.com](http://www.nymaterials.com)

## **(North) Carolina Asphalt Pavement Association**

Phone: (919) 838-8004  
Website: [www.carolinaasphalt.org](http://www.carolinaasphalt.org)

## **Flexible Pavements of Ohio**

Phone: (614) 791-3600  
Website: [www.flexiblepavements.org](http://www.flexiblepavements.org)

## **Oklahoma Asphalt Pavement Association**

Phone: (405) 524-7675  
Website: [www.okhotmix.com](http://www.okhotmix.com)

## **Asphalt Pavement Association of Oregon**

Phone: (503) 363-3858  
Website: [www.apao.org](http://www.apao.org)

## **Pennsylvania Asphalt Pavement Association**

Phone: (717) 657-1881  
Website: [www.pa-asphalt.org](http://www.pa-asphalt.org)

## **South Carolina Asphalt Pavement Association**

Phone: (803) 252-2522  
Website: [www.scasphalt.org](http://www.scasphalt.org)

## **Tennessee Road Builders Association**

Phone: (615) 255-5751  
Website: [www.trba.org](http://www.trba.org)

## **Texas Asphalt Pavement Association**

Phone: (512) 312-2099  
Website: [www.texasasphalt.org](http://www.texasasphalt.org)

## **Utah Asphalt Pavement Association**

Phone: (801) 566-3802  
Website: [www.utahasphalt.org](http://www.utahasphalt.org)

## **Virginia Asphalt Association**

Phone: (804) 929-2331  
Website: [www.vaasphalt.org](http://www.vaasphalt.org)

## **Washington Asphalt Pavement Association**

Phone: (425) 207-8814  
Website: [www.asphaltwa.com](http://www.asphaltwa.com)

## **Asphalt Pavement Association of West Virginia**

Phone: (304) 342-1166  
Website: [www.asphaltwv.com](http://www.asphaltwv.com)

## **Wisconsin Asphalt Pavement Association**

Phone: (608) 255-3114  
Website: [www.wispave.org](http://www.wispave.org)



[www.DriveAsphalt.org](http://www.DriveAsphalt.org)