Best Practices
Paving Small (Any)
Parking Lot

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Presenter session:
Audience texts
ASPHALT1 to 22333 to join the session, you will receive notice
"You’ve Joined"
Poll Everywhere

Which of the following is the most correct for the origination of the State Name, Missouri?

From Indian phrase meaning, Don’t tell me, Show Me!
Indian word Mi Soru, meaning, Land between rivers.
From Indian wording meaning “town of the large canoes,“?
Indian translation from term, Mi Sor, meaning Great Sports Teams!
What is your favorite steak cut?

- New York Strip
- Sirloin
- Filet
- T-Bone
- Rib Eye
- Flank

Have you ever built, maintained, resurfaced, designed, inspected a parking lot?

- YES
- NO

What best describes your companies business?

- Consultant
- Maintenance Contractor
- Building Owner / Developer
- Government or Public Agency
- Asphalt Producer / Contractor
- Asphalt Laydown Contractor
- Other
• As of 2015, the Bureau of Transportation Statistics estimates that there are over 250 million registered light vehicles (car, light trucks and motorcycles) in the United States. While estimates of parking totals have varied, most studies conclude that we have between 4 and 8 parking spaces per vehicles in the country. Perhaps that number isn’t terribly surprising. After all, we park our cars at home, at work, at church, at the shopping mall, etc. But combined, that means we have between 1 billion and 2 billion parking spaces in America alone.

• Billions of parking spaces is a lot, but it can be tough to wrap your head around that number. So, if we were to build 1 billion parking spaces side by side, it would cover an area equivalent to the size of Connecticut.

https://av-future.com/impact/parking/
7 Keys

Handout
- Pick your Mix
- Dig Deep
- Drain the Rain
- Build a Base
- The Green Scene
- Pave and Save
- Pay attention to details

Pick your Mix
- Parking vs. Highway
  - Static
  - Rolling

The Glue that Binds!
- Asphalt Cement Binder - Important
  - What is PG
  - What grade and Where?
- Viscoelastic = Materials that are time and temperature susceptible.
Pick your Mix

- Understand Asphalt Cement – Binder
  - Proper % Binder
  - Performance Grade (PG)
  - Ask for guidance!
    - Physical Location of Use
    - Base or Surface
    - Polymer additives
- **Warning:** Improper Selection can result in:

Just Right!

Mix Targets

- Start with trials to learn best fit.
- Learn from variations
- Monitor and QC Checks

Add AC to achieve 3.5% Air, increase durability.
- Possible use in lower lifts.
- **Surface = Performance testing? Balance Mix Design**

Rap Percent Use

- Manage Percentage
- Liquid Binder
- Mix Design = Performance
Dig Deep

- Subbase Platform
  - Understanding Support = Critical Part of Design

Drain the Rain

- Moisture Bad
- Drainage System
- “Pay me now or Pay me later”
- Success starts from the ground up!

Build A Base

- Structural Platform
- Paving Platform
- Type and Technique
Trucking Along

- Nothing Temporary-Plan and design for the long term...
- 1 Loaded Semi = 3000 Cars
- ESAL Calculation Pavement Interactive
- Cars Minimal Impact – Design Minimum (See SAPA)

Thickness Design Guides

- Asphalt Pavement #1 Recycled Material
- RAP = Recycle Asphalt Pavement
  - Resources Saved / 100% Reusable
  - Aggregate
  - Binder
- LEED v4
- EPD’s = Environmental Product Declarations

The Green Scene
Pave and Save
• Select Qualified Contractor
  – SAPA List
• Inspect – Inspect – Inspect
  – Oversight = Sleep like a baby!
• Ask Questions

Recap
• Pick your Mix
• Dig Deep
• Drain the Rain
• Build a Base
• Trucking Along
• The Green Scene
• Pave and Save
Pay attention to details

Which “Key” would you consider most important?

<table>
<thead>
<tr>
<th>Key</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mix Design and Thickness Design</td>
<td>26%</td>
</tr>
<tr>
<td>Solid Subgrade and Aggregate</td>
<td>15%</td>
</tr>
<tr>
<td>Drainage (Sub and Surface)</td>
<td>15%</td>
</tr>
<tr>
<td>Contractor Selection</td>
<td>59%</td>
</tr>
<tr>
<td>All the above</td>
<td>59%</td>
</tr>
</tbody>
</table>
Handy Checklist

Best Practices of Commercial Paving

Scott McLean
The McLean Company

Ohio Asphalt Expo 2019
Take the time to mark your paving lanes.

Do we need screed extensions?
Do we need auger extensions?

Specifications
- Sensors
- Levelers
Proper asphalt emulsions are essential to bonding old asphalt to new asphalt.
Starting Pad

Proper Contact Between Truck and Paver is Essential
Incorrect Extension Adjustment

This is how a 3-wheel roller compacts—looks good but doesn't get density.

Correct Extension Adjustment

Material will move to the area of least resistance and not compact.

Over lap of 3”-6” is desired

Material will move to the area of least resistance and not compact.
Unconfined edge or 1st Pass (Low side to high side or CL) Stay 6" away...

Joint Construction

1st Pass

2nd Pass

Joint Construction

Rolled or "Cold" Joint - Allow 1/4" per inch for compaction
Overlap cold joint by 2"
Quality Jobs Are No Accident

What Lies Ahead & Future Pavement Considerations

Porous Pavement
What Lies Ahead

- Vehicle Changes
  - Electric Vehicles
  - Autonomous Vehicles
  - Trucks
MY POINT – What Lies Ahead!

Build for Today with your EYE on Tomorrow!

• Build Flexible
• Watch for Change
• Understand Performance
• Seek Knowledge
• Look for Information
• Ask Questions

Which of the following companies do you believe to be the most cost conscious?

What percentage of Walmarts have Concrete Parking Lots?

0%
<5%
5-10%
>10%
AMERICA RIDES ON US

Used Google Earth
Sample Info = Largest Metro in Each State

Most appear to be built in last 15-20 Years. Many Super Walmarts!
Less than 5% total Parking Info were PCC.
Average SY @ 45K SY
Site Average HMA tons 15.5 Tona Total #?

Walmart sees value in ASPHALT!

Total | Total | Average
ACC   | PCC   | Total | Size SY
260.07| 129.03| 379.73| 43,795

Percent PCC 4.7%

Which Approach?

Which One?
Asphalt Benefits

- Versatile
- Adaptable to change
- Fast
- Smooth
- Aesthetic pleasing
- Durable
- Rehabilitation Option!

Thank You

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