HISTORY OF CONCRETE PAVEMENT IN SC

JAY THOMPSON, PE
STATE PAVEMENT DESIGN ENGINEER SCDOT
FOOTE 5A TRACTION PAVING MIXER CA. 1905
FIRST MECHANIZED MIXERS ON THE SCENE

(Photo courtesy Historical Construction Equipment Association)
SC COLLECTED REVENUES FOR 38,000 MOTOR VEHICLES IN 1917
MACHINE ADVANCEMENTS OF THE 20'S AND 30'S

• 1918 saw the paving rig (mixers) get propulsion with tracks

• 1929 - Jacob Blaw and Luther Knox had combined bought a concrete finishing machine company. Growing into a full line of Blaw-Knox form-riding concrete spreaders.
1932 KOEHRING 27-E DUAL BATCH PAVING MIXER

(Photo courtesy Historical Construction Equipment Association)
THE AGE OF SLIP FORMING IS HERE 1949

• Iowa Highway Commission engineer and assistant lab chief, Jimmy Johnson, watched a demonstration of paving with concrete. He went away convinced that a more cement-rich concrete could be poured and vibrated into place under a moving paving machine and keep its shape with moveable forms. He and two other commission members began experiments to test his theorem.

• Slip form paving was finally successful in 1955 and grew from there.

• One Iowa contractor during this time between 1936 and 1965 started and eventually grew into GOMACO.

https://www.constructionequipmentguide.com/a-100-year-history-of-paving-compaction-milling-iron/27983
1960'S INTERSTATES AND LIMITED LOCAL ROADS
US-52 CHARLESTON
BUILT 1962
8 INCHES PCC
I-26 DORCHESTER
BUILT 1963
9 INCHES JPCP
4.5 INCHES GABC
I-20 RICHLAND
BUILT 1965
9 INCHES JPCP
4 INCHES CSAB
I-95 Dillion and Florence
Built 1965
9 inches JPCP
4 inches CEM MOD SUBGRADE
I-95 FLORENCE
BUILT 1966
9 INCHES JPCP
4 INCHES CEM MOD SUBGRADE
I-20 AIKEN
BUILT 1966
9 INCHES JPC P
4 INCHES GABC
8 INCHES EARTH BASE
I-95 SUMTER
BUILT 1967
9 INCHES JPCP
4 INCHES CEM MOD SUBGRADE
I-20 LEXINGTON
BUILT 1967
9.5 INCHES JPCP
6 INCHES GABC
1970’s through 1980’s

- Concluded the construction of the majority of our interstates in this period
  - 223 CL miles of concrete now today
  - An additional 400 miles of concrete has been overlaid on the interstate and is still functioning as a base
I-95 CRC
BUILT MID 1970'S
9 INCHES CRC
5 INCHES CEM MOD SUBGRADE
I-77 RICHLAND CRC
BUILT 1979
9 INCHES CRC
6 INCHES CSAB
I-77 FAIRFIELD JCPC
BUILT 1982
10 INCHES JPCP
6 INCHES LEAN CONCRETE
6 INCHES CEM MOD SUBGRADE
1990’S THROUGH 2000’S
LONGS POINT ROAD S-97 CHARLESTON
BUILT 1991
11 INCHES JPCP
6 INCHES CSAB
6 INCHES CEM MOD SUBGRADE
I-526 CHARLESTON
BUILT 1992
10 INCHES JPCP
6 INCHES LEAN CONC
BLOSSOM AND ASSEMBLY STREETS
COLUMBIA SC
BUILT APPROXIMATELY 2000
WHITE TOPPING
I-85 ANDERSON
BUILT 2004
12 INCHES JPCP
200 PSY PERMEABLE HMA
OVERLAY HMA
OR 175 HMA AND 8 INCHES GABC
S-80 SPARTANBURG
BUILT 2005
10 INCHES JPCP
8 INCHES GABC
I-95 FLORENCE NEW
BUILT 2006
12 INCHES JPCP
OVERLAY OR
175 PSY HMA AND 8 INCHES GABC
I-520 AIKEN
BUILT 2008
11 INCHES JPCP
150 PSY HMA
8 INCHES GABC
I-26 CHARLESTON WITH NEW LANE
NEW LANE BUILT 2010
10 INCHES JPCP
475 PSY HMA BASE
AVIATION AVE S, 1342 CHARLESTON
BUILT 2010
10 INCHES JPCP
475 HMA BASE
I-385 LAURENS
BUILT 2010
10 INCHES JPCP
OVERLAY
I-385 GREENVILLE GOLDEN STRIP
BUILT 2013
13 INCHES JPCP
OVERLAY OR
6 INCHES CSAB
6 INCHES CEM MOD SUBGRADE
I-20 RICHLAND
BUILT 2014
12 INCHES JPCP
175 PSY HMA SURFACE
6 INCHES CMRB/GABC
US-301 AND US-15 ORANGEBURG
BUILT 2014
10 INCHES JPCP
NON WOVEN GEOTEXTILE
6 INCHES GABC
US-17 GEORGETOWN
BUILT 2017
12 INCHES JPCP
10 INCHES LEAN CONCRETE
ON GOING CONCRETE PROJECTS

- I-85 Spartanburg
- I-85 Cherokee
- I-85/385 Greenville
- I-20 Lexington
- Port access road – Charleston
- I-26 85-101 Richland and Lexington