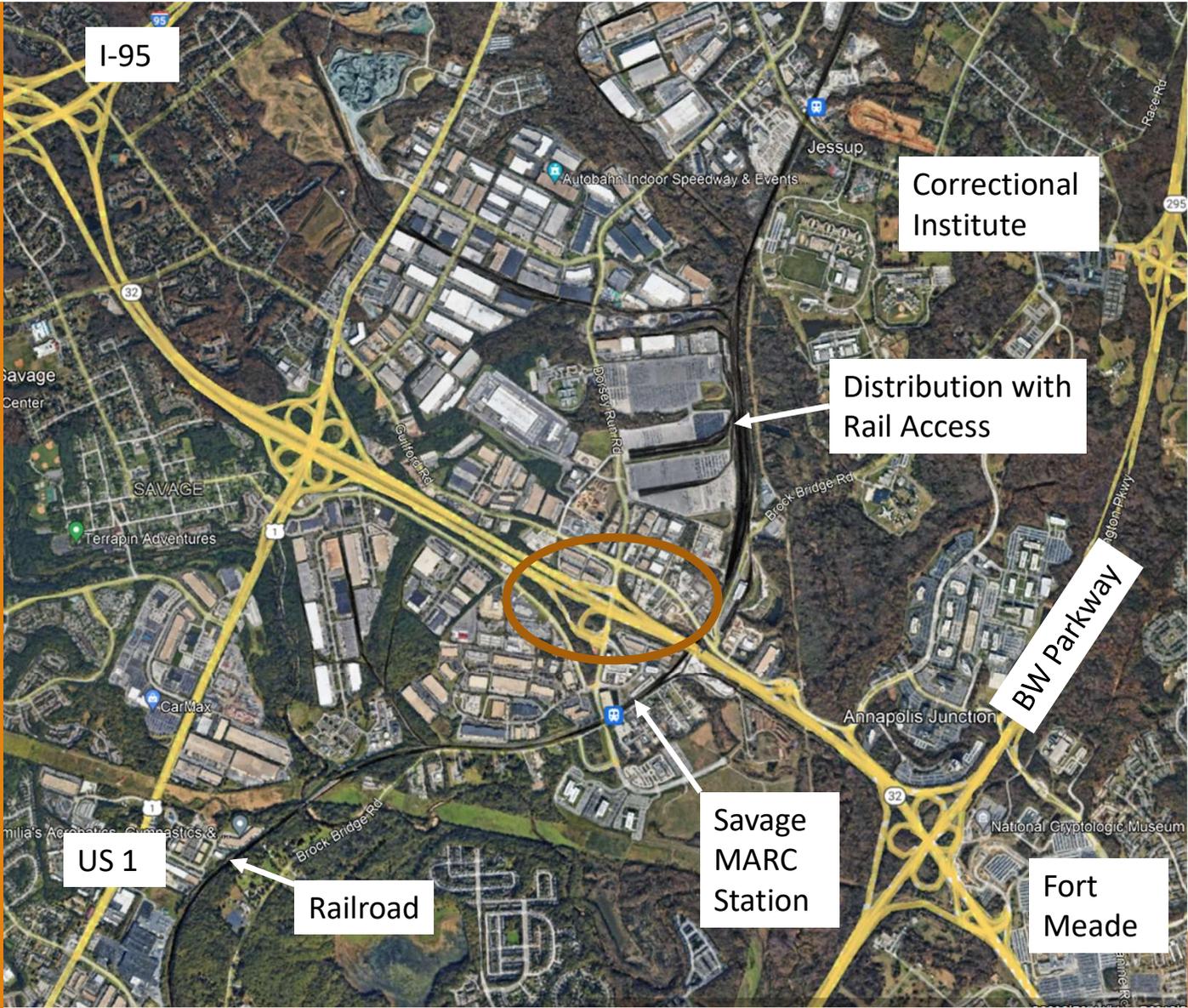


MD 32 at Dorsey Run Road

CONCRETE CASE STUDY

MD 32 at Dorsey Run Road



MD 32 at Dorsey Run Road

- Originally Constructed in early 1990's
- MD 32 from US 1 to Anne Arundel County Line scheduled for system preservation resurfacing
- Condition of ramps, particularly the ramps to/from MD 32 Eastbound warranted a stand-alone project due to extent of reconstruction and closures required. Particularly for the EB ramps.
- Combination of full-depth patching, pavement reconstruction, concrete pavement, subgrade drainage blankets, and longitudinal underdrain.
 - Ramp A: MD 32 Eastbound to Dorsey Run Road
 - 6,375 ADT (2018)
 - 12% Trucks



Existing Conditions

MDOT SHA OMT Final Report

Predominant Soils included Sand, Silt, and Sandy Clay

Moisture Content 8-19% (Optimum 6-8%)

Ramp A

- Existing Pavement Structure: 4"-10" Asphalt over 2"-20" Stone
- Medium Alligator Cracking and High Patching

MD 32 SB RAMP-A

<i>Average Condition Values MD 32 SB Ramp A to EB Dorsey Run Road</i>	<i>IRI</i>	<i>Structural Cracking Density</i>	<i>Functional Cracking Density</i>	<i>Rutting</i>	<i>Skid Number</i>	<i>Overall</i>
Existing Value	258	11	12	0.16	32	
Existing Remaining Service Life	0 (F)	16 (D)	17 (D)	32 (B)	0 (F)	0 (F)

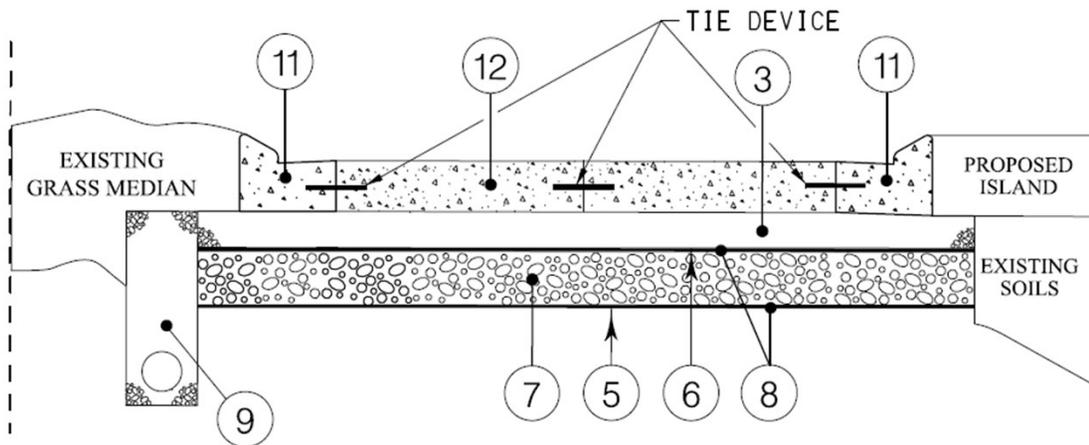
Ramp A Proposed Concrete Pavement

Multiple Details in Project Documents as the Typical Section varied from closed to open section

11" PCC Mix No 7

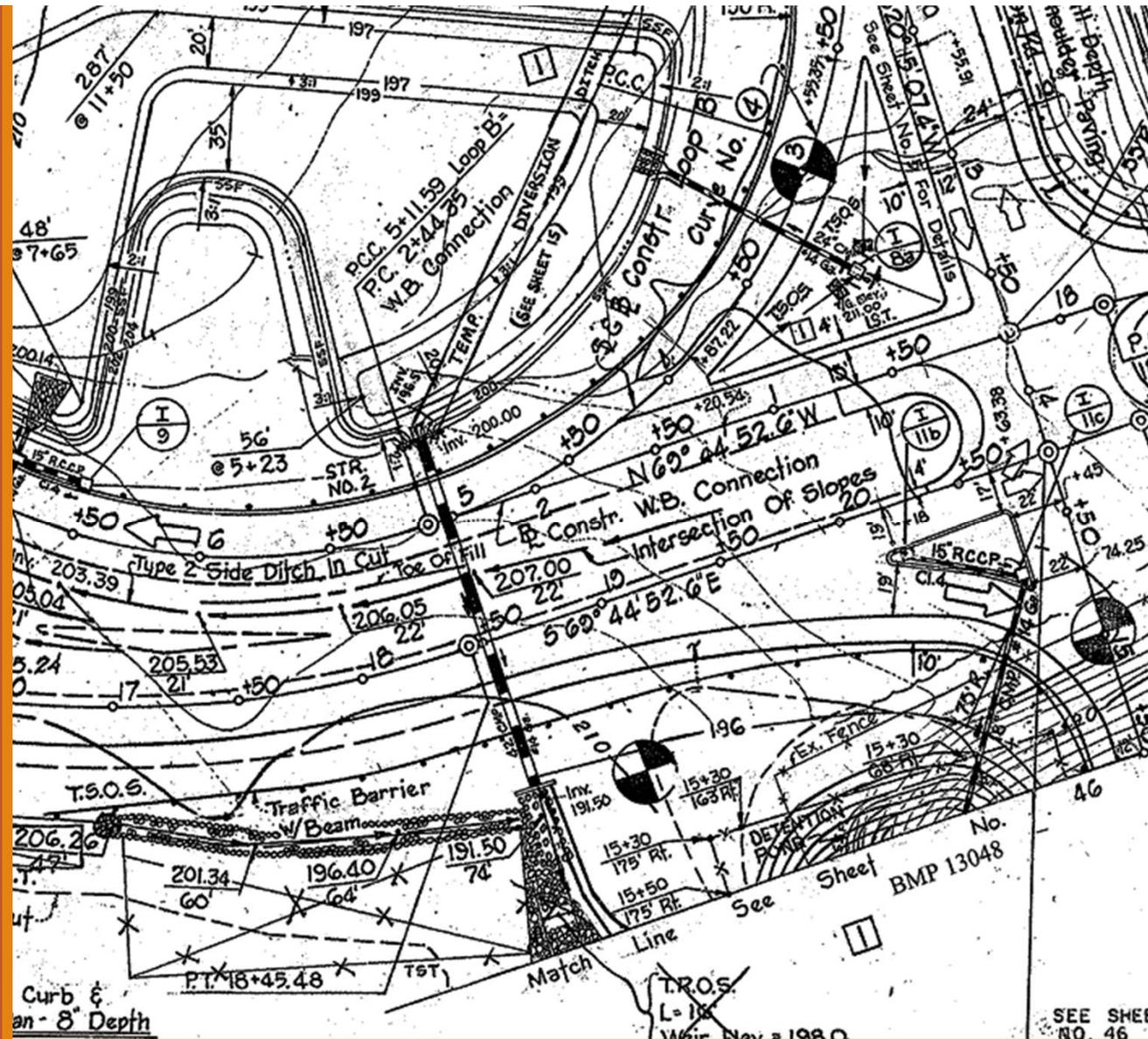
6" Graded Aggregate Base

Subgrade Drainage Blanket: 12" No. 57 Stone



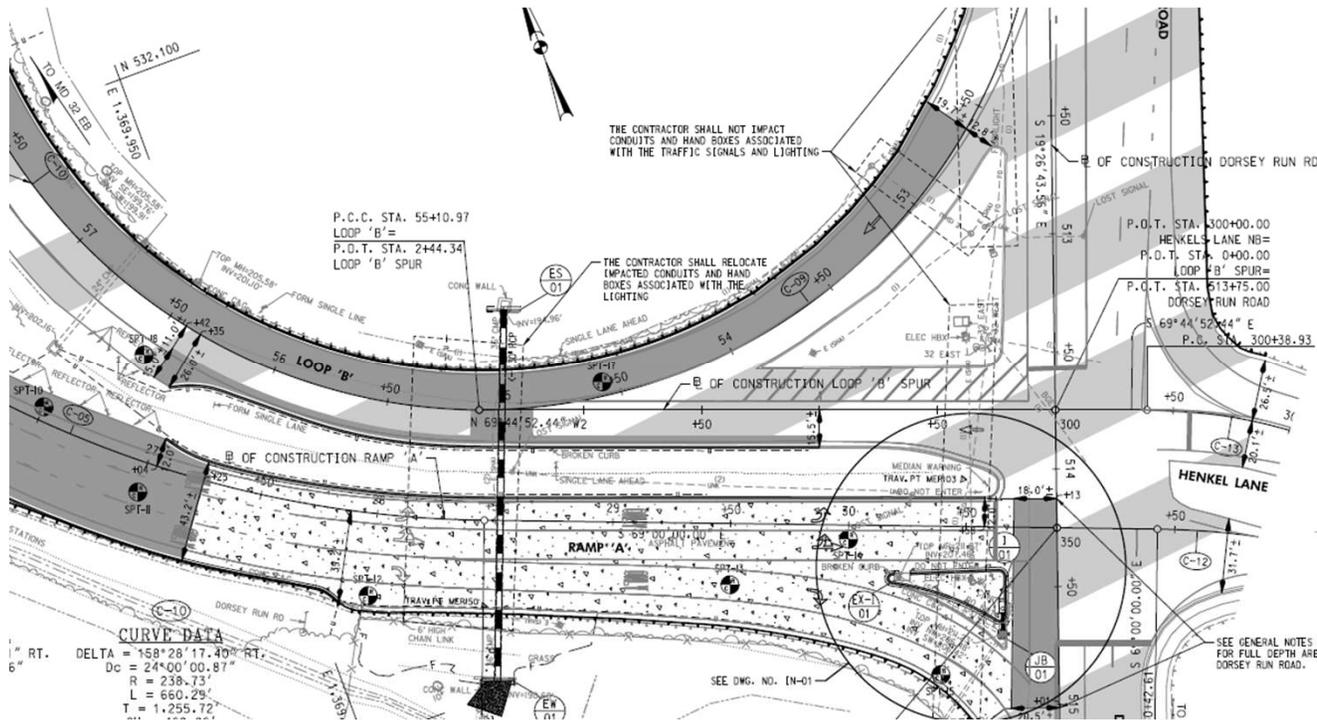
Design Completion....?

READY TO ADVERTISE AND THEN....



Failed Principal Spillway





Ramp A Plan View

Construction

Contractor: CJ Miller

Cost: \$2,300,000

NTP: 3/29/21

Ramp A Closure: 5/2/2021 to 7/26/2021

Project Completion: 11/30/2021

Construction

The traffic factor – The ability to use PPC at this location



Construction



Construction

Typical PPC construction

Subsurface Preparation –poor soils encountered

Curb and Island tie-ins

Use of an air screed was approved

Issues - minimal

Construction



Construction



Questions?

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