*May be able to determine from span length and roadway width, number and type of piles. See attached list of retired design standards, copies of which can be obtained from the FDOT Central Office.*
Calculate Superstructure Dead Load Reaction on Bent

Calculate Substructure Dead Loads

Determine Design Truck

Calculate Number of Lanes on Bridge

Calculate Total Live Load Reaction at Bent

Divide Total Loads by number of piles to determine pile load

Flat Slab
How are piles located?

Beams centered over piles:
1. Calculate Beam Dead Load Reaction
2. Determine Design Truck
3. Calculate Beam Live Load Reaction using AASHTO distribution factor
   - \( R_1 = \text{Sum Dead Load and Live Load Beam Reactions} \)
4. Calculate total weight of substructure
5. \( R_2 = \text{Divide total weight of substructure by number of piles} \)
6. Determine Design Pile Load as \( R_1 + R_2 \)

Beams not centered over piles:
1. Calculate Beam Dead Load Reaction
2. Determine Design Truck
3. Calculate Beam Live LoadReaction using Lever Rule and controlling lane configuration
4. Calculate distributed load of substructure
5. Determine Pile Load by performing a frame analysis of the bent, using calculated dead and live load reactions, and distributed load of cap

Pile Load
Pile Load

Create Pile Capacity Curve

Use pile load and capacity curve to determine predicted pile embedment

Gain consensus from Geotechnical Engineer regarding predicted pile embedment
Was bridge designed after 2002?

Yes: Use HL-93 Truck as defined in the AASHTO LRFD Code

No: Use HS20 Truck as defined by AASHTO

Was bridge designed after 1985?

Yes: Is Bridge Record Available from District?

No: Is Truck Stamped on Railing?

Yes: Use Truck Shown on Bridge Record on Railing

No: Determined Design Truck

Is Design Live Load Known?

Yes: Use known truck

No: Use Truck Shown on Bridge Record

Conservatively use H15 Truck