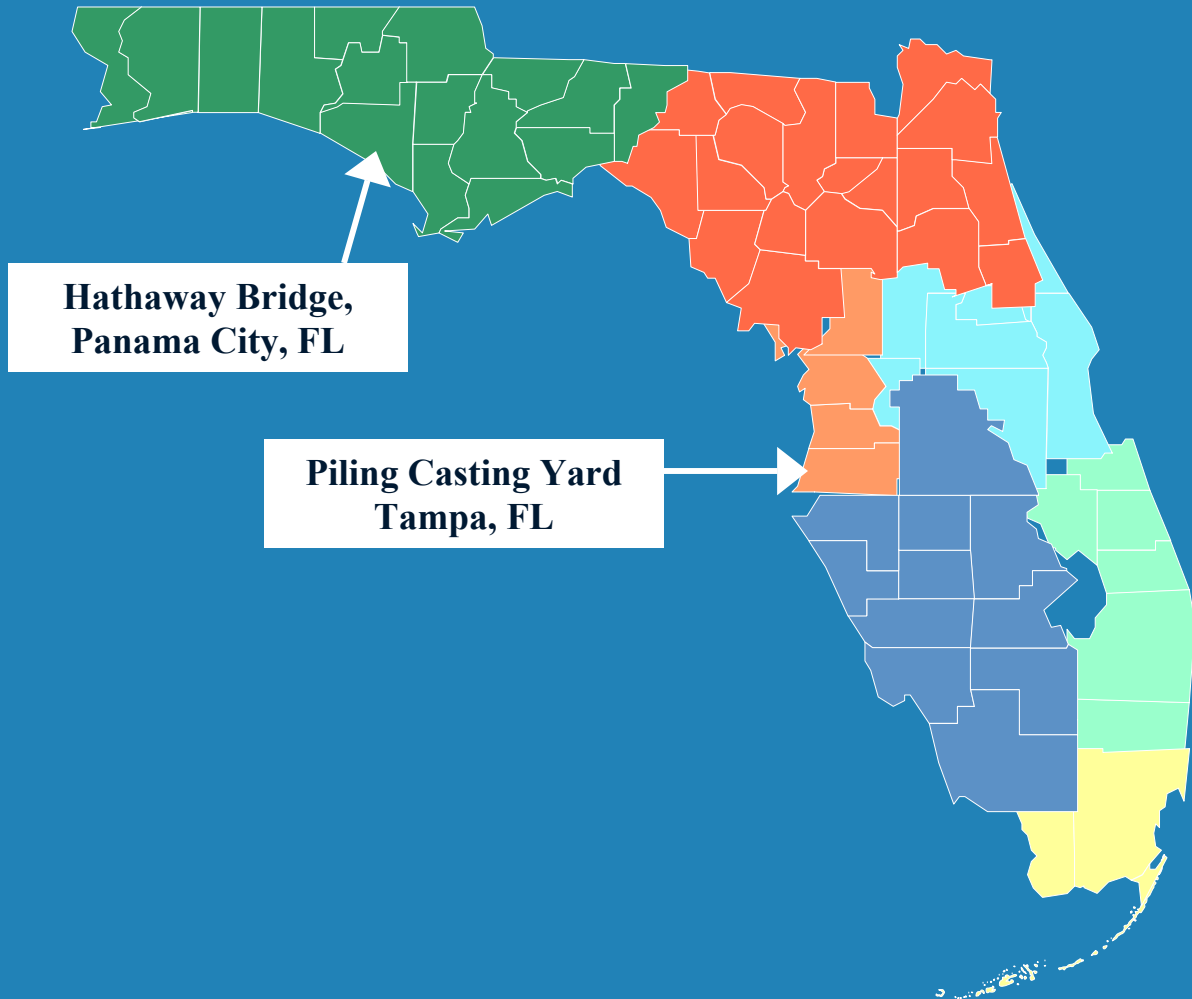


# HATHAWAY BRIDGE PROJECT



# HATHAWAY BRIDGE LOCATION



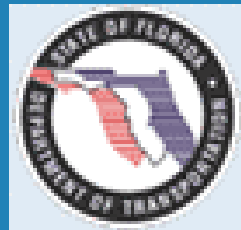
**Hathaway Bridge,  
Panama City, FL**

**Piling Casting Yard  
Tampa, FL**



# HATHAWAY BRIDGE PROJECT

*Piling Team Members:*



# HATHAWAY BRIDGE DESIGN-BUILD PROJECT

## PROJECT INFORMATION AS OF FEBRUARY, 2003

**STANDARD CONCRETE PRODUCTS**  
PO BOX 19449  
TAMPA, fl 33686-9449  
813-831-9520  
813-831-3165, fax

**QORE PROPERTY SCIENCES**  
1712 AIRPORT ROAD  
PANAMA CITY, FL 32405  
850-215-7673  
850-215-7675. Fax

**APPLIED FOUNDATION TESTING, INC.**  
1060 ROLAND AVE.  
GREEN COVE SPRINGS, FL 32043  
904-284-1337, 904-284-1339 Fax

### **PRIME CONTRACTOR:**

**GRANITE CONSTRUCTION CO.**  
6089B W. HIGHWAY 98  
PANAMA CITY, FL 32401  
850-873-7773, 850-873-6443 Fax

**DESIGNER OF RECORD**  
HNTB  
5850 T.G. LEE BLVD., SUITE 600  
ORLANDO, FL 32822  
407-859-8380, 407-855-9641 FAX

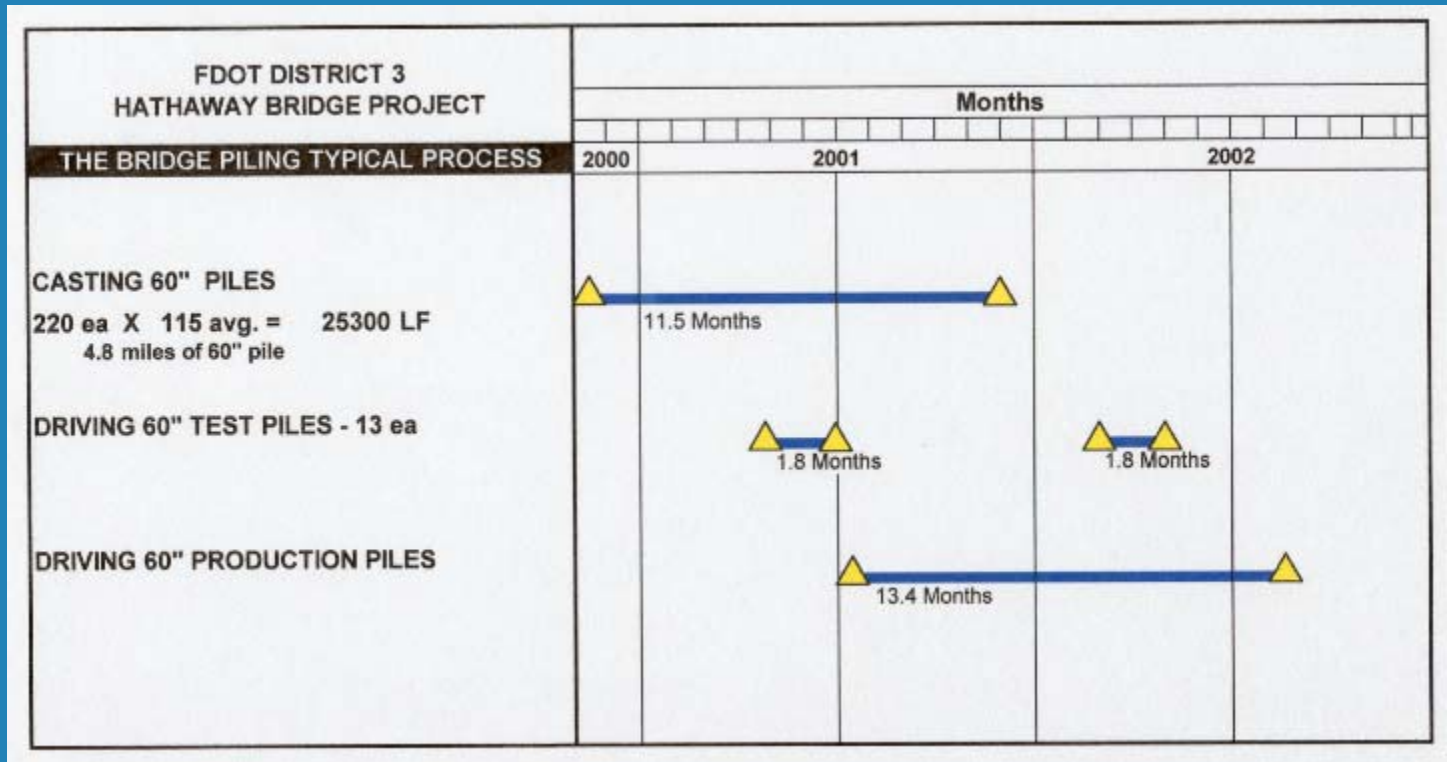
**CONSTRUCTION ENG. AND INSPECTION:**  
REYNOLDS, SMITH AND HILLS CS, INC.  
6089 W. HIGHWAY 98  
PANAMA CITY, FL 32401  
850-872-3591, FAX 872-3594

**FLORIDA DEPARTMENT OF TRANSPORTATION:**  
3633 HIGHWAY 390  
PANAMA CITY, FL 32405  
850-872-4136, FAX 850-872-7713

**WEBSITE:** [www.hathawaybridge.com](http://www.hathawaybridge.com)

# HATHAWAY BRIDGE DESIGN-BUILD PROJECT

## PILING TIMELINE



# HATHAWAY BRIDGE DESIGN-BUILD PROJECT

## FACTS AND FIGURES FOR NEW BRIDGES

### OVERALL BRIDGE DIMENSION FACTS

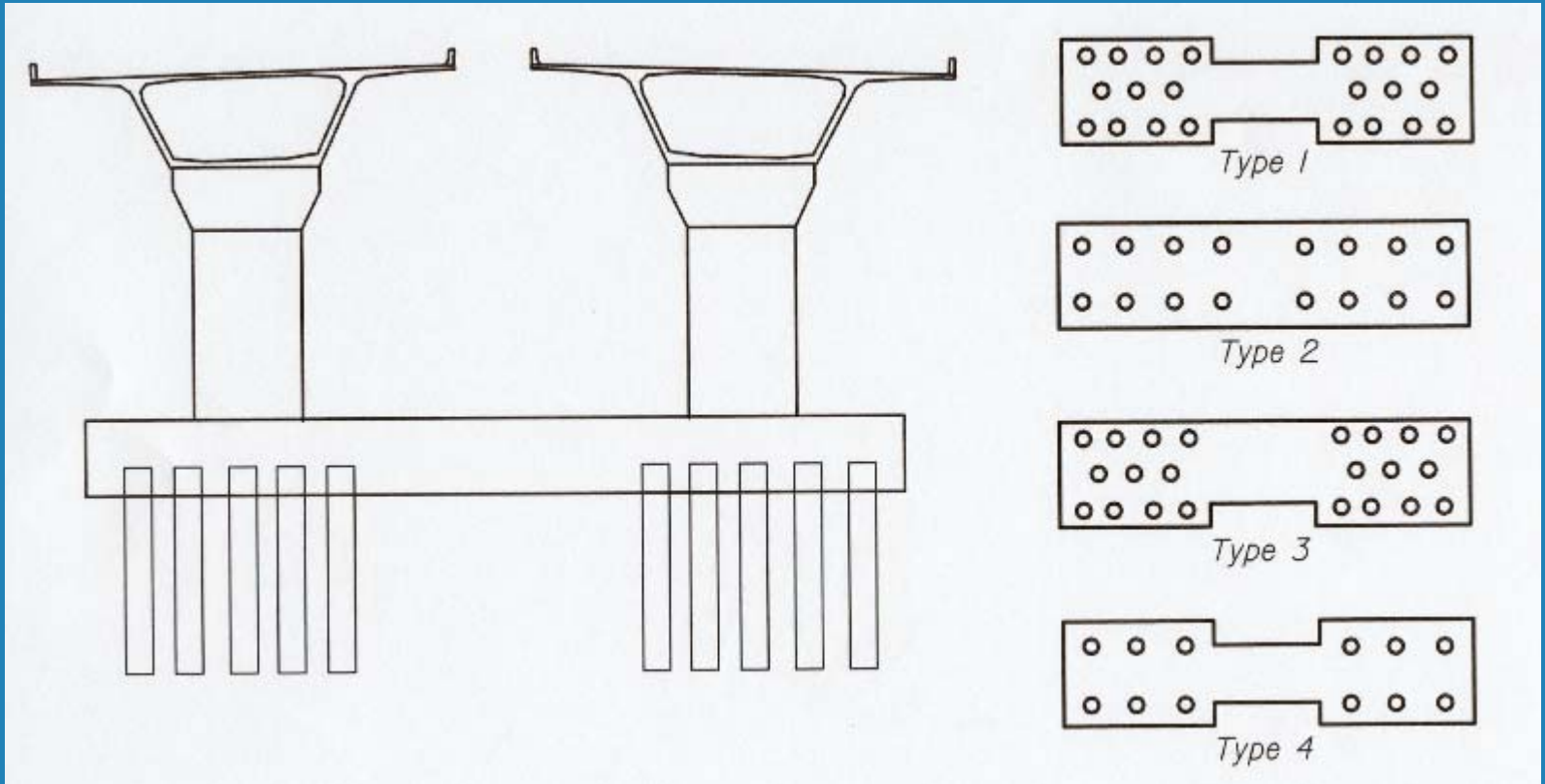
- |                      |            |                        |            |
|----------------------|------------|------------------------|------------|
| • Westbound Length – | 3814 feet. | Eastbound Length –     | 3383 feet. |
| • Maximum height –   | 85 feet.   | Horizontal clearance - | 287 feet   |
| • Maximum span -     | 330 feet.  | Vertical clearance -   | 65 feet    |

### Concrete piles – 60-inch diameter, hollow piles

- |                             |            |
|-----------------------------|------------|
| • Average weight per foot – | 1300 lbs.. |
| • Average length per each – | 115 feet.  |
| • Quantity required –       | 220 each.  |
| • Max. Capacity -           | 1550 tons. |

Foundation footing Piles	Transverse Footing Capacity (K)	Max. Ultimate Bearing Capacity / Pile
• Type 1 - 22 piles	3000 (K)	2900 (K)
• Type 2 - 16 piles	2500 (K)	2600 (K)
• Type 3 - 22 piles	3500 (K)	3100 (K)
• Type 4 - 12 piles	2000 (K)	2800 (K)

# HATHAWAY BRIDGE - *Footing Details*



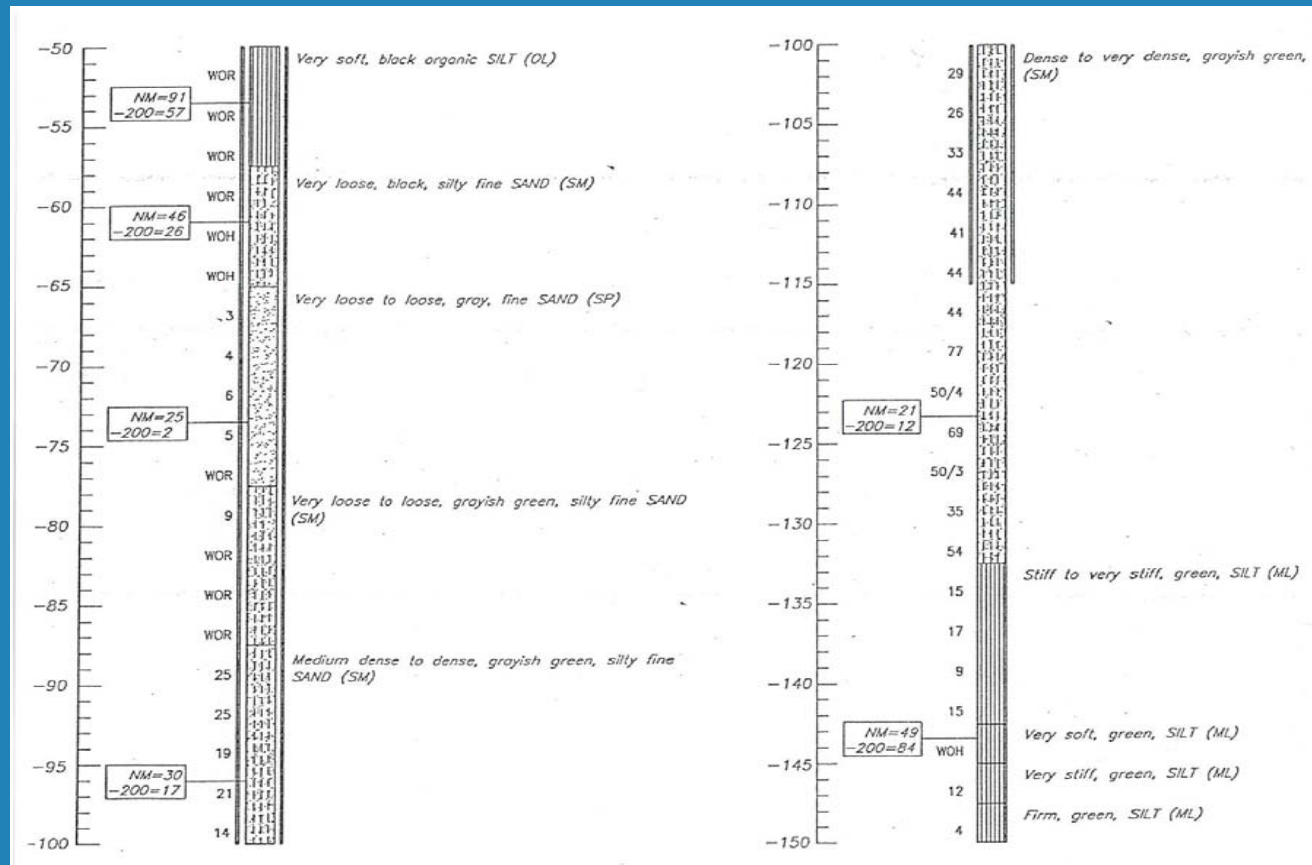
# PRESTRESS YARD - *60" Pile Form*



# PRESTRESS YARD - Production Piles



# Report of Soil Boring



# STATNAMIC PILE TESTING

## AFT

- 30 Meganewton Statnamic Axial load test
- Accelerometers and full bridge strain gauges embedded in pile
- Calculated max. Static load of 5376 KIP (SUP)
- Maximum mobilized unit strength of 4.9 ksf for outer surface only



# FOUNDATION - *Pile Driving*

## Hammer Model

Bruce SGH 3013  
Hydraulic Hammer

Ram: 66,000 lbs.  
Stroke: 0 - 4 ft.

Rated Energy:  
282,100 ft-pounds

Weight : 80 tons  
Height 32 feet  
Width 7 feet

Box Leads 140',  
14"x83"

Pile Cushion  
9 in. to 15 in.  
Plywood and  
Alum./Micarta



# FOUNDATION-*Jetting battered piles*

## GCCo Equipment

Manitowoc 4100W  
with a 240 ft. boom

Ringer mounted on a  
72 x 250 ft., 5400 tn.  
Barge - (The Island)

Rated at 400 tons.

Crane was equipped  
with an additional  
140 ft. mast.



# SUBSTRUCTURE - *Forming footer*

## Mass Concrete

Largest footing  
1400 CY

Bottom of  
Footing / Top of  
suspended  
concrete seal  
slab 1.0 ft.  
below mean low  
water sea level.



# SUBSTRUCTURE- *Pile plugs & footer*



# Hathaway Bridge Cantilever 7



# Standard Prestressed 60" Cylinder Pile

