NOTES:

1. All reinforcing bars shall be ASTM A416 Grade 60 (EPONAY-cated).
2. Anchor bolts shall be ASTM F1554 Grade 55 steel (Galvanized).
3. Verify elevation of tie rods w/ Army Core of Engineers.

SECTION THRU MAT FOUNDATION
Richard Hunt Sculpture -
Silver Beach,
Berrien County, MI

Plan View of Mat Foundation
Not to Scale

Existing 8" Reinforced Concrete Retaining Wall

20' Diameter Reinforced Concrete Mat Foundation
5' x 5000 ft² (150 psi)
Concrete w/ Air Entraining/Plasticizer

10' Diameter Reinforced Concrete Upper Portion of Mat

Steel Base Plate "Ring"
W/ Anchor Bolts for Attachment of Sculpture

SSK-01 6/6/01
REQUIRED NUMBER OF PILES:

- Total weight of base + fill + sculpture = 350 k
- Overturning moment from wind on sculpture = 350 k-ft
- Moment arm for overturning: 1) Piles on 14' circle
  2) Assume 2 piles resist all compression

\[ F = \frac{350 \text{k-ft}}{12.5'} = 28 \text{k} \Rightarrow \text{14 k/PILE} \]

\[ \Rightarrow d = 12.5' \]

* Assuming 8 piles \[ \frac{350 \text{k}}{8} + 14 \text{k} = 58 \text{k/PILE} = 2.9 \text{ tons/pile} \]

* USE 8 - HPBx36 PILES

- Stress in HPBx36:
  \[ A_g = 10.0 \text{ in}^2 \]

For possible corrosion assume 1/16" loss from all surfaces

\[ A_e = 10.0 \text{ in}^2 - \left(\frac{1}{16}\right) \left[ (4)(8.15') + (2)(5.75') \right] \Rightarrow A_e = 7.8 \text{ in}^2 \]

\[ f_a = \frac{60k}{7.8 \text{ in}^2} = 7.8 \text{ ksi} \Rightarrow f_a = 0.23 f_y \Rightarrow \text{OK} \]

* SEE NEXT PAGE FOR PILE CAPACITY CALCULATIONS