INSTRUCTION TO DESIGNER:
The bottom of the "X" dimension shall be 1-'0" below the mud line.
The top elevation of Concrete Sheet Piles shall be determined by the Geotechnical Engineer.

SECTION THRU BULKHEAD (Showing Plastic Filter Fabric)

DETAIL "A" (Cap and Anchoring System Not Shown) (Section Taken Above Dimension "X")

NOTE: Detail "A" shows a Plan/Profile View of an assumed bulkhead.
See Bulkhead plans for actual Plan View.

DETAIL "A" (Section Taken Below Dimension "X")

PILE STORAGE AND TRANSPORTATION SUPPORT DETAILS

SHEET PILE DESIGN CRITERIA AND NOTES

DESCRIPTION:
Design Standards Index Series No. 20400 include details for three types of piles with two thicknesses. Types "B" and "C" piles (corner piles) are of reinforced concrete construction, and Type "A" is of prestressed concrete construction. The piles shall be manufactured, cured, and installed in accordance with the requirements of the contract documents.

MATERIALS: (for materials not listed refer to the Specifications)
CONCRETE:
Class: V (Special) for slightly and moderately aggressive environments
V (Special/ Silica Fume) for extremely aggressive environments
Unit weight: 150pcf
Modulus of Elasticity: Based on the use of Florida limestone concrete

REINFORCING STEEL:
Grade: 60,000 psi ASTM A615

PRESTRESSING STEEL:
Grade: 270,000 psi (low-relaxation Strand)

DESIGN PARAMETERS:
Type "A":
Concrete Compressive Strength at release of prestressing: 4000 psi minimum
Uniform compression after prestressing losses: 1000 psi minimum
Pick-up, Storage and Transportation: 0.0 to 0.5 times pile self weight
Types "B" & "C":
Pick-up, Storage and Transportation: Minimum compressive strength fcz 4000 psi required.

ENVIRONMENT:
The pile designs are applicable to all Environments.

PLASTIC FILTER FABRIC:
The plastic filter fabric shall extend to the bottom of the "X" dimension.

PILE PICK-UP AND HANDLING:
Type "A":
Pick-up of pile may be either a single point pick-up or a two point pick-up as shown below.
Types "B" & "C":
Two point pick-up for lifting out of forms & two point support for storage & transportation.
Single point pick-up for installation only.

PILE FIT-UP:
The 2'-6" Sheet Pile dimension is nominal. This dimension may be varied by the Manufacturer up to 0.5" to allow for Sheet Pile trim in its final position. Minimum Sheet Pile width is 2'-6". No changes shall be made to the tongues or grooves.

NOTES AND DETAILS FOR PRECAST CONCRETE SHEET PILES

2-Point Pick-up, Tie Down, and Support Points
Single Point Pick-up