NOTES

A. DESIGN SPECIFICATIONS:


B. DESIGN CRITERIA:

The Precast Sound Barriers are pre-designed and based on the criteria in the Plans Preparation Manual, Volume I, and the following soil conditions: Silt with soil SP3 N values between 10 and 40.

C. CONCRETE AND GROUT:

1. Concrete Class and Compressive Strength:
   a. Cast-in-Place Columns: Class IV (f’c = 5500 psi)
   b. Precast Panels, Columns and Post Caps: Class IV (f’c = 5500 psi)
   c. Piles: Class IV (f’c = 5500 psi)
2. Grout for Auger Cast Piling:
   a. Maximum Working Compressive Stress = 2200 psi
   b. Minimum 28 Day Strength = 5500 psi
3. Minimum Compressive Stress for Form Removal and Winding of Poles and Fiber Reinforcing:
   a. 2,500 psi for horizontally cast poles and panels.
   b. 2,000 psi for vertically cast panels or when hit-up form tables are used for horizontally cast panels.

D. REINFORCING STEEL:

1. Reinforcing steel shall conform to ASTM A 615, Grade 60.
2. Welded wire mesh shall conform to ASTM A 480, Grade 190 deformed wire.
3. Concrete Cover at 2” shall be provided, unless otherwise specified.
4. All reinforcing bars shall conform to the requirements of Specifications Section 932.21.2.1, and pile and pile strakes at the following locations as a minimum:
   a. Pile Strakes = 1 in. at each corner bar and at every third interior bar intersection.
   b. Pile Strakes = Tie to the main vertical reinforcing at alternate intersections for circular configurations and for rectangular configurations at the four corners and at every third interior bar intersection.

E. SURFACE FINISHES:

Provide a Class 5 finish in accordance with Specification Section 400, unless otherwise shown in the Wall Control Drawings. See Index No. 5200 for texture finish options.

F. WELDING:

Construct Auger Cast Piling in accordance with the Plans and Specification Section 455.

G. UTILITIES:

Field verify the locations of underwater and underground utilities shown in the Wall Control Drawings.

H. PRECAST AND REINFORCED PANELS:

1. Precast Poles for Panel Bearing: Between the Stacked Panels:
   - The Neoprene pads for the panel bearing pads shall be Plan Poles, Grade 50 diameter hardness in accordance with Specification Sections 932.21.21. Plan Poles may be substituted for Fiber Reinforced Poles when sufficient bearing area is available on the concrete column, as follows:
     a. 10” post spacing: “A” x “A” x 1” x 1” Plan Poles, Grade 50 hardness.
     b. 20” post spacing and 16” wide height: “A” x “A” x 1” x 1” Plan Poles, Grade 50 hardness.
     c. 20” post spacing and 24” wide height: “A” x “A” x 1” x 1” Plan Poles, Grade 50 hardness.

J. CASTING TOLERANCES:

1. Thickness: +/- %
2. Plane of side mold: +/- %
3. Drawings: +/- %
4. Out of square: +/- % per ft, but not more than % total along any side
5. Warpage: % per foot distance along nearest corner
6. Boeing: 1/2” x 2” x 4” panel dimension
7. Surface Smoothness for Type “A” (Smooth) Surface Texture Option: +/- % along a 10 ft straightheight.

K. SOUND BARRIER WALL:

1. Distance between piles shall have a maximum of 20 ft from centerline to centerline. These Sound Barrier Wall standard dimensions allow for 5 Pile/Post connection options based on either 20 or 20 ft spacing. The panel connection is specified in Index No. 5200 through 5240 based on a 20 ft post spacing. All connections shall be made with approved metallic connectors that can be used in any graphic relief (if applicable). The lower panels shall have a minimum of 8 ft upper panel that is necessary to access the upper panel.
2. Walls greater than 12” in height shall consist of 2 or 3 stacked panels (upper and lower), each less than 12” in height. The height of the upper panel shall have a minimum of 8 ft upper panel that is necessary to access the upper panel.
3. Minimum 28 Day Strength = 5500 psi
4. Minimum Compressive Stress for Form Removal and Winding of Poles and Fiber Reinforcing:
   a. 2,500 psi for horizontally cast poles and panels.
   b. 2,000 psi for vertically cast panels or when hit-up form tables are used for horizontally cast panels.

L. REINFORCING STEEL:

1. Reinforcing steel shall conform to ASTM A 615, Grade 60.
2. Welded wire mesh shall conform to ASTM A 480, Grade 190 deformed wire.
3. Concrete Cover at 2” shall be provided, unless otherwise specified.
4. All reinforcing bars shall conform to the requirements of Specifications Section 932.21.2.1, and pile and pile strakes at the following locations as a minimum:
   a. Pile Strakes = 1 in. at each corner bar and at every third interior bar intersection.
   b. Pile Strakes = Tie to the main vertical reinforcing at alternate intersections for circular configurations and for rectangular configurations at the four corners and at every third interior bar intersection.

M. SURFACE FINISHES:

Provide a Class 5 finish in accordance with Specification Section 400, unless otherwise shown in the Wall Control Drawings. See Index No. 5200 for texture finish options.

N. WELDING:

Construct Auger Cast Piling in accordance with the Plans and Specification Section 455.

O. UTILITIES:

Field verify the locations of underwater and underground utilities shown in the Wall Control Drawings.

P. PRECAST AND REINFORCED PANELS:

1. Precast Poles for Panel Bearing: Between the Stacked Panels:
   - The Neoprene pads for the panel bearing pads shall be Plan Poles, Grade 50 diameter hardness in accordance with Specification Sections 932.21.21. Plan Poles may be substituted for Fiber Reinforced Poles when sufficient bearing area is available on the concrete column, as follows:
     a. 10” post spacing: “A” x “A” x 1” x 1” Plan Poles, Grade 50 hardness.
     b. 20” post spacing and 16” wide height: “A” x “A” x 1” x 1” Plan Poles, Grade 50 hardness.
     c. 20” post spacing and 24” wide height: “A” x “A” x 1” x 1” Plan Poles, Grade 50 hardness.

Q. CASTING TOLERANCES:

1. Thickness: +/- %
2. Plane of side mold: +/- %
3. Drawings: +/- %
4. Out of square: +/- % per ft, but not more than % total along any side
5. Warpage: % per foot distance along nearest corner
6. Boeing: 1/2” x 2” x 4” panel dimension
7. Surface Smoothness for Type “A” (Smooth) Surface Texture Option: +/- % along a 10 ft straightheight.

R. SOUND BARRIER WALL:

1. Distance between piles shall have a maximum of 20 ft from centerline to centerline. These Sound Barrier Wall standard dimensions allow for 5 Pile/Post connection options based on either 20 or 20 ft post spacing. The panel connection is specified in Index No. 5200 through 5240 based on a 20 ft post spacing. All connections shall be made with approved metallic connectors that can be used in any graphic relief (if applicable). The lower panels shall have a minimum of 8 ft upper panel that is necessary to access the upper panel.
2. Walls greater than 12” in height shall consist of 2 or 3 stacked panels (upper and lower), each less than 12” in height. The height of the upper panel shall have a minimum of 8 ft upper panel that is necessary to access the upper panel.
3. Minimum 28 Day Strength = 5500 psi
4. Minimum Compressive Stress for Form Removal and Winding of Poles and Fiber Reinforcing:
   a. 2,500 psi for horizontally cast poles and panels.
   b. 2,000 psi for vertically cast panels or when hit-up form tables are used for horizontally cast panels.