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 subconditions: Sites with soil SPT N values between 10 and 40.

C. CONCRETE AND GROUT:
1. Concrete Class and Compressive Strength:
   a. Cast-in-Place Collars: Class IV (f'c = 5500 psi)
   b. Precast Panels, Colors and Post Caps: Class IV (f'c = 5500 psi)
   c. Pile Caps: Class IV (f'c = 5500 psi)

2. Grout for Auger Cast Piling:
   a. Maximum Working Compressive Strength = 2200 psi
   b. Minimum 28 Day Strength = 1550 psi
   c. Minimum Compressive Strength for Form Removal and Handling of Posts and Panels:
      a. 2,500 psi for horizontally cast post and panels.
      b. 2,000 psi for vertically cast panels or when fill-up form panels are used for horizontally cast panels.

D. PLACING/SPACING:
1. Reinforcing steel shall conform to ASTM A 615, Grade 60.
2. Welded wire fabric shall conform to ASTM A 576 (smooth wire) or ASTM A497 (deformed wire).

3. Concrete Cover of 2" shall be provided, unless otherwise noted.

4. In addition to the requirements of Specification Section 415, tie post and pile stirrups at the following locations:
   a. Post Stirrups = Tie at four corner bars and at every third interior bar intersection.
   b. Pile Stirrups = 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 460, unless otherwise shown on the Wall Control Drawings. See Index No. 5201 for texture finish options.

F. FILING:
When auger cast piling is according to the plans and Specification Section 455.

G. UTILITIES:
Field verify the locations of all overhead and underground utilities shown on the Wall Control Drawings.

H. NEOPRENE PADS AND RESILIENT PADS:
1. Neoprene Pads for Panel Bearing Points Between the Stacked Panels:
   The neoprene pads for the panel bearing points on auger cast Pile/Post are Grade 50 durometer hardness in accordance with Specifications Sections 932-2.1.

2. Neoprene Pads for Bolt Bearing Points:
   Neoprene Fiber Reinforced Pads, Grade 50, 50 or 70 durometer hardness in accordance with Specification Section 932-2.1. Plain Pads may be substituted for Fiber Reinforced Pads when sufficient bearing area is available on the concrete bearing member. The minimum required bearing area is:
   a. 10" post spacing: 4" x 4" x 5" Plain Pads, Grade 50 hardness.
   b. 20" post spacing and 18" wall height: 4" x 4" x 5" Plain Pads, Grade 50 durometer hardness.
   c. 20", 25" or 28" wall height: 4" x 5" x 5" Plain Pads, Grade 50 durometer hardness.

I. CASTING TOLERANCES:
1. Overall Height & Width: +/- 1/2"
2. Thickness: +/- 1/8"
3. Plane of side mold: +/- 1/8"
4. Openings: +/- 1/8"
5. Out of Square: +/- 1/2" per 6" length, but not more than 1/3" total on any side
6. Warming: +/- 1/8" per foot distance nearest to center of post

J. PANEL AND BACKGROUND:
1. 600" panel dimension
2. Surface Smoothness for Type "A" (Moist) Surface Texture Option: +/- 1/4" along a 10 ft. straightedge.

K. SOUND BARRIER WALL NOTES:
1. Distance between piles shall be a minimum of 20 ft. from centerline to centerline. These Sound Barrier Wall Standard Indexes apply for 5 pile/post connection options based on either 10 or 20 ft. post spacing. The panel system depicted in Index No. 5200 through 5204 is based on a 20 ft. post spacing.
2. Walls greater than 12 ft. in height shall consist of 2 or 3 stacked panels (upper and lower), each less than 12 ft. in height. The height of the upper panel shall be a minimum of 8 ft. or greater as necessary to any graphic relief (if applicable). The lower panel shall not be less than 8 ft. in height. Walls equal to or less than 8 ft. in height shall consist of either a single panel or 2 stacked panels with an 8 ft. upper panel (provided that any graphic relief is applicable) will fit within the upper panel.
3. Horizontal panel joints shall be located outside of the graphic relief (if applicable). Horizontal panel joints shall be held at a constant elevation for a given wall, where possible.
4. Posts shall be "H" type cross-section with panels installed from above.
5. See Index No. 5205 for the five pile/post connection options. The Contractor may choose any of these options, unless specifically excluded in the Wall Control Drawings. The options associated with pile/post connection option E, Index 5205 (sheet) are with an expiration date of August 10, 2010. The post shall be placed on or before August 10, 2010 subject to the right of the patent holder U.S. Patent Nos. 5,234,288 & 5,424,450 and all patent royalties or license fees shall be the sole responsibility of the user. To construct pile/post/connections, use the specification section 920 or on or before the patent expiration date, contact:
   State Contracting and Engineering Corps.
   3900 North 29th Street
   Hollywood, Florida 33020
   Phone: (954) 923-4747

6. All posts shall be held in auger cast piles with an installation template. The template shall be adjustable for horizontal/vertical, vertical placement and plumness of posts. The template shall be such that the installation (if applicable) will fit within the upper panel.
7. The Contractor shall be responsible for meeting OSHA requirements. Any utility adjustments, charges for power, telephone, gas, water, etc., on the contract documents, or any added costs shall be the responsibility of the user.
8. Structural Steel shall be in accordance with ASTM A 36.
9. Structural Steel Plus Pile/Post Connection Option D: Pre-assembled steel shall be fabricated in accordance with Specification Section 460. Welding details and welding operations shall be in accordance with the current edition of AWS/ASME Code. Field welding is not permitted.
10. Structural Steel plus Concrete Casting Option C: Steel cast-in-place in a location protected from environmental conditions. Prior to pouring the concrete around the structural post, post shall be free of loose rust, scale, dirt, paint, oil and foreign material.
11. Shimming of wall panels above the pile collar, beneath the bearing pads is permitted to a maximum of 1½" height. Shims must be either stainless steel (Type 304 or 316) or engineered polymer (epoxy or polyurethane) plastic. Plastic shims must have a minimum compressive strength of 8,000 psi without any fractures. Stacking shims is permitted as follows:
   a. For shimming height of 1" or less, provide up to 4 ½" shims
   b. For shimming heights greater than 1", use a minimum ½N thick single shim and up to 3 ½" shims

L. VSF OR CONTRACTOR REDESIGN:
1. In no case will VSFs or Contractor Redesigns be allowed to modify foundation designs, or post spacing.
2. Substitution of proprietary panels or systems not listed in the Wall Control Drawings will be allowed.

M. QUALIFIED PRODUCTS LIST:
Manufacturers seeking approval of proprietary sound barrier panels, posts and foundations or systems for inclusion on the Qualifications List must submit a QPL Application along with design documentation, vendor drawings and other information as required in the Sound Barrier QR. Acceptance Criteria showing the proprietary product is designed to meet all specified requirements. Project specific Shop Drawings are required for sound barrier projects in accordance with Specification Section 534.

N. ALTERNATES:
The Contractor shall construct the standard precast 20'-0" panel option depicted in the plans or shall construct one of the proprietary sound barrier panel/proprietor system options (panel and foundation) listed in the Wall Control Drawings.

O. FILLING:
1. All post areas not shown to receive an anti-graffiti coating shall be coated in accordance with Specification Section 560 with a Class 5 Applied Finish Coating. The color of the system shall be the same as the anti-graffiti system or as directed by the Engineer.
2. Structural Steel Post Assembly Coating System – Pile/Post Connection Option D: The post assembly shall receive a shop applied three-coat system comprised of one coat of inorganic zinc primer and two coats of Type M coating applied in accordance with Specifications Section 560. The limits of the coating system shall the exposed area of the posts from the top of post to 2½" below Top of Collar (Elev. A). After the post assembly is installed, it shall be coated with an approved compatible Class 5 Applied Finish Coating in accordance with Specification Section 400 or an anti-graffiti coating. The color of the Class 5 Coating shall match the color of the panel unless otherwise noted in the Wall Control Drawings on the Department's Qualified Products List.
3. The material supplier shall certify compatibility of paint system.

P. TEST WALL:
The Contractor shall construct a test wall at the beginning of the project consistent with Specification Section 534. The Contractor shall demonstrate that allocating and erection tolerances can be met in order to assure that the prefabricated elements fit together as intended.