ITEM SPECIAL - NOISE GENERALS

1. DESCRIPTION
   - Work consists of preparing any necessary shop drawings, and providing and installing noise
     barriers, if specified. If not specified, noise barriers shall be designed by the
     Contractor, submitted for review and approved by the Engineer, fabricated, and
     installed. Noise barriers shall be designed to meet the sound and visual
     requirements specified herein.

2. DESIGN SPECIFICATIONS
   - Noise barriers shall be designed and fabricated to meet the sound and visual
     requirements specified herein.

3. CONSTRUCTION SPECIFICATIONS AND WORKSHOP
   - Provide shop drawings in accordance with the current version of the noise
     barriers. For additional information, refer to the "Guide for Design and
     Construction of Noise Barriers" (ASCE-167), including the 1999 and 2003
     revisions.

4. DESIGN LOADS
   - Wind load: 75 mph for all panels.

5. DESIGN LOADS
   - Snow load: 4 inches of snow at 57.3 psi (24 psf).

6. DESIGN LOADS
   - Ice load: 2 inches of ice at 11.6 psi (5 psf).

7. NOISE BARRIER HEIGHTS
   - The noise barrier heights shall equal or exceed the acoustic profile.

8. SOUND ABSORBING MATERIAL
   - The sound-absorbing material shall be integral with the precast concrete panels.
   - Select a precast sound-absorbing material from the list of materials provided by
     the Engineer, based on the environmental, safety, and cost considerations.

9. ENVIRONMENTAL
   - The noise barrier shall meet all applicable environmental regulations.
   - Noise barriers shall comply with the Architectural and Environmental Design
     Guidelines.

10. CONSTRUCTION
    - All work shall be performed in accordance with the Architectural and
        Environmental Design Guidelines.

11. SITE CONDITIONS
    - The Contractor shall provide all necessary field data, including sound levels,
        site topography, and soil conditions.

12. ACCESS
    - Access to the site shall be coordinated with the Architectural and
        Environmental Design Guidelines.

13. SAFETY
    - All work shall be performed in accordance with the Architectural and
        Environmental Design Guidelines.

14. REINFORCEMENT
    - Reinforcement shall be designed and fabricated to meet the requirements of
        the Architectural and Environmental Design Guidelines.

15. QUALITY CONTROL
    - All materials shall be inspected and tested in accordance with the
        Architectural and Environmental Design Guidelines.

16. ACKNOWLEDGEMENT
    - All electronic documents shall be in Portable Document Format (PDF).
    - All submittals shall be in accordance with the Architectural and
        Environmental Design Guidelines.

17. CONSTRUCTION
    - All work shall be performed in accordance with the Architectural and
        Environmental Design Guidelines.

18. ACCEPTANCE
    - The noise barrier shall be accepted by the Engineer upon completion.

19. REVISIONS
    - All revisions to the noise barrier design shall be submitted to the Engineer
        for review and approval.

20. OWNER'S RESPONSIBILITY
    - The owner shall be responsible for the installation of the noise barrier.

21. CONTRACTOR'S RESPONSIBILITY
    - The Contractor shall be responsible for the design and fabrication of the noise
        barrier.

22. WORK SAFETY
    - All work shall be performed in accordance with the Architectural and
        Environmental Design Guidelines.

23. WORK SECURITY
    - All work shall be performed in accordance with the Architectural and
        Environmental Design Guidelines.

24. WORK ACCESS
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25. WORK INSURANCE
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CONSTRUCTION METHODS

1. Layout and Stake Each Noise Barrier in the Field and Verify the Proposed Wall Geometry and Dimensions of the Posts and the Panels Prior to Installing Necessary Shot Drills and Ongoing Alignment at the Barrier Components.

2. Clear Brush and Neatly Trim Any and/or Remove Trees in Contact with the Proposed Noise Barriers. Note that Trees Should be Removed or Trimmed to Ensure Access by Equipment. If Trees Are Necessary to Perform the Work, Obtain Approval from the Project Engineer Prior to Performing the Work. For Clarity, Trees Shall Not Be Removed or Trimmed.

3. Do Not Ship Concrete Panels, Posts, or Cap Units. The Concrete Gets Its Strength on-Site and Cannot Be Removed or Stored at Locations Other Than Those Shown in the Standard Drawings. Transport and Store Panels in an Upright Position. Provide Unloading Supports Capable of Maintaining the Panels in an Upright Position.

4. Install Noise Barriers in Accordance with the Project Plans. Ensure Joints and Connections Are in Such a Manner As to Be Structurally Adequate. Site Survey Shall Be Conducted and Noise Panels, Spacers, and Brackets, Etc., Be Installed in Accordance with the Noise Barriers by the Engineer Prior to Final Acceptance As Directed Work in Accordance with LVN 503.10.

5. Protection of Existing Sewers and Culverts: Before Excavating for the Drilled Shafts, Verify the Location of All Existing Sewers and Culverts Shown in the Project Plans.

6. Dispose of All Excavation in a Manner Satisfactory to the Engineer.

7. For Noise Barriers that are Built on Top of Earth Surveys, Construct the Design Slope Using a Design Material Consistent with the Slope of the Project.

8. Prior to Noise Barrier Installation, Restore All Areas Disturbed by the Noise Barrier Construction to Their Original Condition. Restoration shall Include Replanting Trees, Installing Grass, and Repairing Any Damage to Vegetation Resulting From the Noise Barrier Installation.

9. Site Survey Shown in the Project Plans is the Final Elevation of the Noise Barrierizzly.

10. The Contractor Shall Deliver to the Job Site and Erect Each Full Height Panel and Cap Consistent with the Design Specifications. All Noise Barriers Shall Be Installed in Accordance with the Project Plans and Specifications. The Contractor Shall Deliver to the Job Site and Erect Each Full Height Panel and Cap Consistent with the Design Specifications. All Noise Barriers Shall Be Installed in Accordance with the Project Plans and Specifications.

11. The Sample Posts and Panels Shall Become Control Posts and Panels Against Which the Engineer Shall Measure Deviations From the Project Plans and Specifications. The Sample Posts and Panels Shall Be Installed in Accordance with the Project Plans and Specifications.

12. The Contractor Shall Deliver Each Full Height Panel and Cap Consistent with the Design Specifications. All Noise Barriers Shall Be Installed in Accordance with the Project Plans and Specifications.

13. Noise Barriers Shall Be Manufactured Using the Same Method of Construction As to Produce Uniform Design Strength. All Noise Barriers Shall Be Installed in Accordance with the Project Plans and Specifications.

14. All Noise Barriers Shall Be Installed in Accordance with the Project Plans and Specifications.
NOISE BARRIER SEALER

DESCRIPTION: This sealer is a liquid sealer applied to the entire surface of concrete or asphalt surfaces. It is a water-based material with an outstanding adhesion to concrete, asphalt, and other porous surfaces. It is designed to reduce noise levels in areas where noise is a concern.

APPLICATION: This sealer is typically applied to the surfaces of concrete or asphalt to reduce noise. It is applied using a spray gun or a roller. The sealer is allowed to dry naturally for 24 hours before it is ready for use.

MATERIALS: The sealer is made up of a water-based polymer that is highly adhesive to concrete and asphalt. It is mixed with water at the time of application and applied in a thin layer to the surface.

APPLICATION PROCEDURE:
1. **Prepare the surface:** Ensure the surface is clean and free of any debris or contaminants. The surface should be dry, clean, and free of any oil or grease.
2. **Mix the sealer:** Mix the sealer with water according to the manufacturer's instructions. Mix the sealer to ensure uniform consistency.
3. **Apply the sealer:** Apply the sealer using a sprayer or roller. Apply the sealer in a thin layer, ensuring that it covers the entire surface.
4. **Allow to dry:** Allow the sealer to dry for 24 hours before it is ready for use.

CAUTION: This sealer is not suitable for use on surfaces that are prone to freezing. It is also not suitable for use on surfaces that are exposed to direct sunlight for extended periods.

APPLICATION NOTES:
- **Color:** The sealer is available in a range of colors, allowing for a customized look.
- **Coverage:** One gallon of sealer covers approximately 1,000 square feet.
- **Cost:** The cost of the sealer varies depending on the size of the project and the chosen color.

CONCLUSION: This sealer is an effective solution for reducing noise levels in areas where it is a concern. It is easy to apply and provides a customizable look.
TYPICAL FILL SECTION

TYPICAL CUT SECTION

TYPICAL SLOPED SECTION

TYPICAL ELEVATION OF SLOPED SECTION - DRAINAGE

SLOPED SECTION DRAINAGE NOTES:
1. Construct a trench with a minimum longitudinal slope of 1.0% under the noise barrier panels as shown in the typical elevation.
2. Provide underdrain slope of 1% minimum as specified in project plans, installed in accordance with item 605.
3. Outlet conduit to be spaced at 500' max; install in accordance with item 605.