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<tr>
<th>Drawing</th>
<th>Modification Summary</th>
<th>Effective: 04-01-2020</th>
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<tr>
<td>G12</td>
<td>STRUCTURE MOUNTED NOISE ABATEMENT WALL DETAILS</td>
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<td>Sheets 1-2</td>
<td>New Standard</td>
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<tr>
<td>G13</td>
<td>CENTRAL TRI-STATE STRUCTURE MOUNTED NOISE ABATEMENT WALL DETAILS</td>
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<td>Sheets 1-2</td>
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<td>CENTRAL TRI-STATE BUMP-OUT MOUNTED NOISE ABATEMENT WALL DETAILS</td>
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<td>New Standard</td>
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<td>G15</td>
<td>NON-CRASHWORTHY GROUND MOUNTED NOISE ABATEMENT WALL DETAILS</td>
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<td>CRASHWORTHY GROUND MOUNTED NOISE ABATEMENT WALL DETAILS</td>
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<td>Sheets 1-3</td>
<td>New Standard</td>
</tr>
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</table>
1. All exposed concrete edges shall have a V, X 45° steel bent plate, see panel chamfer, except where shown otherwise. Chamfer on 1'-7" vertical edges shall be continued a minimum of one foot below finished ground level.

2. Reinforcement bars, including epoxy-coated reinforcement bars, shall conform to the requirements of AASHTO M-31, ASTM A706, Grade 60, deformed bars.

3. Reinforcement bars designated "" shall be epoxy coated 1 1/2"" diameter. Steel post - type 1, 0.5"" clip corner of angle type 1, 0.5"" flange accordance to section 1028 of standard specifications.

4. Anchor bolts, nuts, and washers shall be supplied by the fabricator of an anchor bolt assembly. Anchor bolts shall be installed with Illinois Tollway constant slope barrier.

5. Minimum distance to centerline of light pole is 4'-7' desirable and 3'-7' minimum.

Notes:
- Steel post maximum spacing is 11'-8".
- Slippforming of the barrier is not permitted.
- See special provisions for furnishing noise abatement wall structural steel.
- Steel post maximum spacing is 11'-8".

Design Specifications
- Steel post maximum spacing is 11'-8".
- Slippforming of the barrier is not permitted.
- See special provisions for furnishing noise abatement wall structural steel.

Design Stresses
- Concrete 150 PCF
- Steel 490 PCF
- Design stresses 4,000 PSI (class B)
- Design stresses 60,000 PSI (reinforcement)
- Design stresses 50,000 PSI, ASTM A709, AASHTO M270, Grade 36, fy = 36,000 PSI, ASTM A709, AASHTO M270, all other steel unless noted otherwise.

Design Loading
- Concrete 5,000 lb per sq ft
- Vehicle impact - 4kips applied at the highest point up to 1/6" deep.
- Wind loads 50PSF IST III}

Miscellaneous Steel Connection Quantity

<table>
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<tr>
<th>Description</th>
<th>Weight</th>
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<tr>
<td>Foundation plate, bearing angle</td>
<td>11 lbs</td>
</tr>
<tr>
<td>Bending plate, angle, 2 angles</td>
<td>32 lbs</td>
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<tr>
<td>Bend anchor bolt assembly</td>
<td>26 lbs</td>
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<tr>
<td>Anchor bolt assembly</td>
<td>26 lbs</td>
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<td>Total</td>
<td>288 lbs</td>
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Total weight of noise blocking assembly: 288 lbs.

Notes:
- Concrete 150 PCF
- Steel 490 PCF
- Design stresses 4,000 PSI (class B)
- Design stresses 60,000 PSI (reinforcement)
- Design stresses 50,000 PSI, ASTM A709, AASHTO M270, Grade 36, fy = 36,000 PSI, ASTM A709, AASHTO M270, all other steel unless noted otherwise.
If POST
BACKER ROD WITH 1/4" MIN.

B ¾" x 3½" BENT II 1/4" THICK

STRUCTURAL PRECAST CONCRETE PANEL

4 GALVANIZED BAR WITH BEARING ANGLE EACH END OF PANEL WIDTH / 4 LIFTING INSERT LIFTING INSERT

W8x48 ±1"

TOP PANEL AT BEARING ANGLE BENT PLATE DETAILS

NOTE: MINIMUM ANGLE AT KINK IN WALL
MIN ANGLE BETWEEN PANELS AT TYP POST

1. DIMENSIONAL DEVIATIONS SHOWN ON THE PANEL DETAILS ARE REPORTED TO THE MANUFACTURER AND CUSTOMER.
2. BACKER ROD: MILE HIGH FOAM PRODUCT SIZED PER BACKER ROD MANUFACTURING, INC. OR EQUIVALENT.
3. NON-STRUCTURAL CAULK SEALANT: SIKAFLEX 15 LM PER MANUFACTURER'S SPECIFICATION AND RECOMMENDATIONS.
5. LIFTING INSERTS SHALL HAVE A FACTOR OF SAFETY OF 4:1

SUGGESTED TYPICAL NOISE ABATEMENT WALL INSTALLATION SEQUENCE AND PROCEDURE

1. PERMANENTLY SET PANELS UPRIGHT ON SITE ON SOLID SUBSTRATES.
2. REMOVE PANELS FROM TRUCK WITH RIGGING.
3. TOP OR CENTER PANEL BENDING DETAIL
4. STEEL BENT PLATE AT 4'-0" OC MAX.
5. MAXIMUM DIMENSION OF BEARING ANGLE below barrier is 6" and 3" above the top of the barrier.
6. THE NAW INSTALLATION PROCEDURES SHOWN ON THIS SHEET PROVIDE GENERAL INSTALLATION SEQUENCE AND PROCEDURES FOR THE CONTRACTOR. THE CONTRACTOR SHALL RETAIN SOLE RESPONSIBILITY FOR THE MEANS, METHODS, AND TECHNIQUES OF CONSTRUCTION OF THE NAW FOR COMPLIANCE WITH LAWS, REGULATIONS, AND CODES, AND FOR THE SAFETY OF CONSTRUCTION APPLICABLE TO THIS WORK.

NOTE B WALL & POST EL.

FULL HEIGHT PANEL & Bottom Panel
SECTION A-B SECTION B-B

TOP PANEL OR CENTER OR FULL HEIGHT PANEL BOTTOM PANEL

TOP PANEL COPING DETAIL

HORIZONTAL JOINT DETAIL

TYPICAL PLAN VIEW THRU NOISE ABATEMENT WALL

TYPICAL NOISE WALL PANEL DETAIL

WALL PANEL RELIEF LINER TYP.

NOTE 2: BACKER ROD: MILE HIGH FOAM PRODUCT SIZED PER BACKER ROD MANUFACTURING, INC. OR EQUIVALENT.
NOTE 3: BENT REBAR AS REQUIRED BY ANCHOR.
1. All exposed concrete edges shall have a 1/4" x 45° chamfer, except where shown otherwise. Chamfer on vertical edges shall be continued a minimum of one foot below finished ground level.

2. Reinforcement bars, including epoxy-coated reinforcement bars (designated "E1") shall conform to the requirements of AASHTO M-31 with shim at each end. Deformed bars. ASTM A706, Grade 60.

3. Reinforcement bars designated "E1" shall be epoxy-coated. Diameter 3/4" DIA. F1554 Grade 105-1554.

4. Construction contractor shall not scale dimensions from the contract plans for construction purposes. Scales shown are for information only.

5. Reinforcement bar bending dimensions are out to out.

6. Construction contractor shall not scale dimensions from the contract plans for construction purposes. Scales shown are for information only.

7. Wall & Post EL.


9. Minimum distance to centerline of light pole 15 ft-7" desirable and 3 ft-7".

10. Anchor bolts, nuts, and washers shall be supplied by the fabricator of an anchor bolt assembly. The fabricator shall be responsible for the structural integrity of the anchor bolt assembly. Each anchor bolt shall have a minimum load capacity of 25,000 lbs.

11. An elastomeric flange plate shall be used at the top of the wall. The flange plate shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

12. The precast concrete panels shall be 100 lbs. per panel. Each panel shall be 3 ft-6" in length and 2 ft-6" in height. The panels shall be prestressed with a post-tensioning system.

13. The bearing plate shall be a minimum of 3 ft-6" in length and 2 ft-6" in height. The bearing plate shall be hot-dip galvanized and shall have a minimum load capacity of 20,000 lbs.

14. The bent anchor bolt shall be 4 ft-0" in length and 2 ft-6" in height. The bent anchor bolt shall be hot-dip galvanized and shall have a minimum load capacity of 20,000 lbs.

15. The noise blocking assembly shall consist of a 1/4" x 2" galvanized plate, a 1/4" x 2" stainless steel plate, and a 1/4" x 2" galvanized plate. The noise blocking assembly shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

16. The precast panel mount shall be 3 ft-6" in length and 2 ft-6" in height. The precast panel mount shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

17. The sign panel mount shall be 3 ft-6" in length and 2 ft-6" in height. The sign panel mount shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

18. The noise blocking assembly shall consist of a 1/4" x 2" galvanized plate, a 1/4" x 2" stainless steel plate, and a 1/4" x 2" galvanized plate. The noise blocking assembly shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

19. The precast panel mount shall be 3 ft-6" in length and 2 ft-6" in height. The precast panel mount shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

20. The sign panel mount shall be 3 ft-6" in length and 2 ft-6" in height. The sign panel mount shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

21. The noise blocking assembly shall consist of a 1/4" x 2" galvanized plate, a 1/4" x 2" stainless steel plate, and a 1/4" x 2" galvanized plate. The noise blocking assembly shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

22. The precast panel mount shall be 3 ft-6" in length and 2 ft-6" in height. The precast panel mount shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

23. The sign panel mount shall be 3 ft-6" in length and 2 ft-6" in height. The sign panel mount shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

24. The noise blocking assembly shall consist of a 1/4" x 2" galvanized plate, a 1/4" x 2" stainless steel plate, and a 1/4" x 2" galvanized plate. The noise blocking assembly shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

25. The precast panel mount shall be 3 ft-6" in length and 2 ft-6" in height. The precast panel mount shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

26. The sign panel mount shall be 3 ft-6" in length and 2 ft-6" in height. The sign panel mount shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

27. The noise blocking assembly shall consist of a 1/4" x 2" galvanized plate, a 1/4" x 2" stainless steel plate, and a 1/4" x 2" galvanized plate. The noise blocking assembly shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

28. The precast panel mount shall be 3 ft-6" in length and 2 ft-6" in height. The precast panel mount shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.

29. The sign panel mount shall be 3 ft-6" in length and 2 ft-6" in height. The sign panel mount shall be hot-dip galvanized and shall have a minimum load capacity of 10,000 lbs.
**GENERAL NOTES**

1. All exposed concrete edges shall have a ¾" x 45° chamfer except where shown otherwise. Chamfer or vertical edges shall be contoured a minimum of one foot below finished grade level.

2. Reinforcement bars, including epoxy-coated reinforcement bars, shall comply to the requirements of ASTM A615 (M240), Grade 40, deformed bars.

3. Reinforcement bars designated C3E shall be epoxy coated.


5. Reinforcement bar bending dimensions are out to out.

6. Construction Contractor shall not scale dimensions from the contract plans for construction purposes. Scales shown are for information only.

7. Structural steel shall be painted using a Tollway Approved Coat Paint System manufactured by Tollway Approved Contractors. The first coat shall be epoxy polyamide meeting the requirements of Article 1001, 1005, or the Standard Specifications. The second coat shall be a high-build paint meeting the requirements of Article 1001.2 or the Standard Specifications. The paint system shall be applied according to the applicable portions of Section 506 and the galvanizing and paint manufacturer’s recommendations.

8. The color of the Structural Steel final coat paint shall match the color of the precast concrete panel stain of Sherwin-Williams 7533, Taupitone 246-14, (required per color code).

9. Structural caulk - Durashield 51 ms flexible epoxy control joint sealant or equivalent, shall be applied per manufacturer’s specification and recommendations.

10. Backer Rod - High density foam product sized per backer rod manufacturer’s standard or equivalent.

11. Non-structural caulking materials shall be adapted 15 PCF manufacture’s standard or equivalent.

12. Steel Post: ASTM A572 (M250), Grade 50, 50 KSI. All Steel posts to be hot-dipped galvanized.

13. Reinforcement Steel: ASTM A615 (M215), Grade 50, 60 KSI, deformed bars, hardened washers, grade 50, hardened washers. All steel to be hot-dipped galvanized.


16. Grout shall conform to the requirements of Section 1024.02 of the Standard Specifications. Grout under posts prior to installation of the panels.

17. The Contractor shall submit to the Engineer for approval any proposed holes in the built-up post for galvanizing anchors.

**DESIGN LOADS**

- Live Load: 10 PSF (H1/8, B1)

**DESIGN SPECIFICATIONS**

- Revised Date: September 2017
- Effective Date: September 2017

**BASE PLATE AND POST DETAIL 1**

- Step 1: ¾” increments up to 2’ necessary

**BASE PLATE AND POST DETAIL 2**

- Step 2: ½” increments up to 2’ necessary

**BASE PLATE AND POST DETAIL 3**

- Step 3: ¼” increments up to 2’ necessary

**BASE PLATE AND POST DETAIL 4**

- Step 4: ½” increments up to 2’ necessary
1. ALL EXPOSED CONCRETE EDGES SHALL HAVE A 4" X 45° BEVEL. EXCEPT WHERE SHOWN OTHERWISE, CHAMFER ON VERTICAL EDGES SHALL BE CONTAINED IN A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.

2. REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM A706), GRADE 60, DEFORMED BARS.

3. REINFORCEMENT BARS DESIGNATED "SE" SHALL BE EPOXY COATED.

4. REINFORCEMENT BAR BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES 4TH EDITION.

5. REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.

6. CONSTRUCTION CONTRACTOR SHALL NOT SCALE DIMENSIONS FROM THE CONTRACT PLANS FOR CONSTRUCTION PURPOSES. SCALE SHOWN ARE FOR INFORMATION ONLY.

7. END POSTS SHALL HAVE NO BENT PLATES ON EXPOSED SIDE.

8. THE FOUNDATION DETAILS SHOWN ARE BASED ON THE PRESENCE OF MOSTLY COMMON CONCRETE SOIL CONDITIONS (CLAY WITH AN AVERAGE UNCONFINED COMPRESSION STRENGTH (q) = 1.5 ksi), WHICH SHALL BE DETERMINED BY PRIMARY SOIL INVESTIGATIONS AT THE PROJECT. WHEN OTHER CONDITIONS ARE DETERMINED, THE FOUNDATION DETAILS SHOWN SHALL BE THE RESULT OF SITE SPECIFIC DESIGN.

9. ALL STEEL POSTS SHALL BE HOT-DIP GALVANIZED.

10. ALL STEEL SHALL BE HOT-DIP GALVANIZED.

11. ALL STEEL POSTS SHALL BE EMBEDDED.

12. DRILLED SHAFTS SHALL BE BENT PLATE DETAILS EMBEDDED.

13. ** TYPICAL SECTION SHOWS ROADWAY ON THE HIGH SIDE. DETAILS OF POST FOR ROADWAY ON THE LOW SIDE ARE MIRRORED.

14. PRECAST CONCRETE (GROUND MOUNTED NIGHT):

   - 4"x6" PLASTIC SHIM TO BE PLACED ON TOP AND BOTTOM OF CONCRETE SHIM DIRECTLY BELOW PRECAST CONCRETE PANEL.

   - PRECAST PANEL SHIM (¼" MIN THICKNESS MWB).

   - ** USE SHIMS FOR NON-CRASHWORTHY GROUND MOUNTED I AND IIA MEMBERS FOR NON-CRASHWORTHY GROUND MOUNTED E AND IIIB MEMBERS.

   - WHEN 30" PANELS MOUNT OR POST EXTENSIONS ARE USED TO ACCOMMODATE A SIGN PANEL, POST IS PREDICTED.

   - ** USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

   - W21X83 5¾" 10"X3½"X¾" 9½" 3'-6" POST Embedment.

   - USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

15. NON-CRASHWORTHY GROUND MOUNTED

   - TYPE 1 15'-0" 10'-0"

   - TYPE II 25'-0" 12'-6"

16. ** TYPICAL SECTION SHOWS ROADWAY ON THE HIGH SIDE.

17. TAPER TOP OF SHAFT AWAY FROM POST FOR DRAINAGE.

18. MINIMUM ANGLE BETWEEN PANELS AT TYP POST.

19. CONCRETE SHIM DETAIL

   - SHIMS TO BE SECURED TO THE POST; SEE DETAIL 2.

   - ½" THICK MINIMUM THICKNESS U.N.O.

   - CONCRETE SHIMS TO BE SECURED TO THE POST; SEE DETAIL 2.

   - SECURE SHIMS WITH ** GALVANIZED STEEL SCREW OR ** GALVANIZED STEEL PLAIN HOOKS OR BENDING AROUND POST.

   - MAX POST MIN POST NAW TYPE HEIGHT EMBED DEPTH

   - NON-CRASHWORTHY GROUND MOUNTED I 25° 25° 22° 22° 12° 12° A766 3/8" 3/8" 5½" 5½" 3½" 3½"

   - NON-CRASHWORTHY GROUND MOUNTED II 25° 25° 22° 22° 12° 12° A766 3/8" 3/8" 5½" 5½" 3½" 3½"

   - NON-CRASHWORTHY GROUND MOUNTED III 25° 25° 22° 22° 12° 12° A766 3/8" 3/8" 5½" 5½" 3½" 3½"

   - NON-CRASHWORTHY GROUND MOUNTED IV 25° 25° 22° 22° 12° 12° A766 3/8" 3/8" 5½" 5½" 3½" 3½"

   - NON-CRASHWORTHY GROUND MOUNTED V 25° 25° 22° 22° 12° 12° A766 3/8" 3/8" 5½" 5½" 3½" 3½"

20. MAX DRILLED SHAFT DEPTH

   - NON-CRASHWORTHY GROUND MOUNTED I 6¾" 6¾" 6¾" 6¾" 6¾" 6¾" 12° A766 3/8" 3/8" 5½" 5½" 3½" 3½"

   - NON-CRASHWORTHY GROUND MOUNTED II 6¾" 6¾" 6¾" 6¾" 6¾" 6¾" 12° A766 3/8" 3/8" 5½" 5½" 3½" 3½"

   - NON-CRASHWORTHY GROUND MOUNTED III 6¾" 6¾" 6¾" 6¾" 6¾" 6¾" 12° A766 3/8" 3/8" 5½" 5½" 3½" 3½"

   - NON-CRASHWORTHY GROUND MOUNTED IV 6¾" 6¾" 6¾" 6¾" 6¾" 6¾" 12° A766 3/8" 3/8" 5½" 5½" 3½" 3½"

   - NON-CRASHWORTHY GROUND MOUNTED V 6¾" 6¾" 6¾" 6¾" 6¾" 6¾" 12° A766 3/8" 3/8" 5½" 5½" 3½" 3½"

21. ** TYPICAL SECTION SHOWS ROADWAY ON THE HIGH SIDE.

   - DETAILS OF POST FOR ROADWAY ON THE LOW SIDE ARE MIRRORED.

   - STEEL POST EMBEDDED.

   - PRECAST PANEL SHIM (¼" MIN THICKNESS MWB).

   - ** USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

   - USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

22. ** TYPICAL SECTION SHOWS ROADWAY ON THE HIGH SIDE.

   - DETAILS OF POST FOR ROADWAY ON THE LOW SIDE ARE MIRRORED.

   - STEEL POST EMBEDDED.

   - PRECAST PANEL SHIM (¼" MIN THICKNESS MWB).

   - ** USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

   - USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

23. ** TYPICAL SECTION SHOWS ROADWAY ON THE HIGH SIDE.

   - DETAILS OF POST FOR ROADWAY ON THE LOW SIDE ARE MIRRORED.

   - STEEL POST EMBEDDED.

   - PRECAST PANEL SHIM (¼" MIN THICKNESS MWB).

   - ** USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

   - USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

24. ** TYPICAL SECTION SHOWS ROADWAY ON THE HIGH SIDE.

   - DETAILS OF POST FOR ROADWAY ON THE LOW SIDE ARE MIRRORED.

   - STEEL POST EMBEDDED.

   - PRECAST PANEL SHIM (¼" MIN THICKNESS MWB).

   - ** USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

   - USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

25. ** TYPICAL SECTION SHOWS ROADWAY ON THE HIGH SIDE.

   - DETAILS OF POST FOR ROADWAY ON THE LOW SIDE ARE MIRRORED.

   - STEEL POST EMBEDDED.

   - PRECAST PANEL SHIM (¼" MIN THICKNESS MWB).

   - ** USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

   - USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

26. ** TYPICAL SECTION SHOWS ROADWAY ON THE HIGH SIDE.

   - DETAILS OF POST FOR ROADWAY ON THE LOW SIDE ARE MIRRORED.

   - STEEL POST EMBEDDED.

   - PRECAST PANEL SHIM (¼" MIN THICKNESS MWB).

   - ** USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

   - USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

27. ** TYPICAL SECTION SHOWS ROADWAY ON THE HIGH SIDE.

   - DETAILS OF POST FOR ROADWAY ON THE LOW SIDE ARE MIRRORED.

   - STEEL POST EMBEDDED.

   - PRECAST PANEL SHIM (¼" MIN THICKNESS MWB).

   - ** USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.

   - USE W18x65 FOR NON-CRASHWORTHY GROUND MOUNTED I.
SUGGESTED TYPICAL NOISE ABATEMENT WALL INSTALLATION SEQUENCE AND PROCEDURE

1. REMOVE PANELS FROM TRUCK WITH RIGGING.
2. TEMPORARILY SHORE PANELS STANDING UPRIGHT ON SITE ON SOLID SUBSTRATES.
3. SCREW CONCRETE AND SET EMBEDDED POSTS.
4. PLACE PANEL.

1 2 3 4 5 6

TYPICAL LIFTING INSERT DETAIL

LIFTING INSERTS SHALL HAVE A FACTOR OF SAFETY OF 4:1

2. THE MAN INSTALLATION PROCEDURES SHOWN ON THIS SHEET PROVIDE GENERAL INSTALLATION SEQUENCE AND PROCEDURES FOR THE CONTRACTOR. THE CONTRACTOR SHALL RETAIN RECORDS OF THE MAN INSTALLATION PROCEDURES OF THE MAN FOR COMPLIANCE WITH LAWS, REGULATIONS, AND CODES, AND FOR THE SAFETY OF CONSTRUCTION APPLYABLE TO THIS WORK.

TYPICAL NOISE WALL PANEL DETAIL

FILL POCKET WITH 5000 PSI NON-SHRINK, NON-METALLIC GROUT AFTER PANEL POST HAS BEEN ERECTED.

- ¾" FORM LINER FINISH TOP OF PANEL
- ¾" TOP PANEL COPING DETAIL
- 9½" TURN BENT PLATE TABLE
- 90° TURN DETAIL
- BEARING DETAIL (TYPICAL EACH SIDE): FOR BOTTOM PANELS ONLY
- PANEL MOUNT SEE ILLINOIS TOLLWAY STANDARD F19

SECTION A-A

TYPICAL LIFTING DETAIL

BEARING DETAIL (TYPICAL EACH SIDE): FOR BOTTOM PANELS ONLY

SECTION B-B

SIGN PANEL MOUNT TO PANEL DETAIL

PRECAST PANELS HAVE BEEN DESIGNED TO ACCOMMODATE SIGN PANEL MOUNTED WITH MAX 32 SF SIGN AREA IN ACCORDANCE WITH ILLINOIS TOLLWAY STANDARDS. PANEL HEIGHT SUPPORTING SIGN SHALL BE 5'-2".

SECTION B-B

HORIZONTAL JOINT DETAIL

ALLOWS KNOCK OUT PANELS FOR ADDITIONAL FULL HEIGHT PANELS HAVE BEEN DESIGNED TO ACCOMMODATE A MAXIMUM OF 32 SF SIGN AREA IN ACCORDANCE WITH ILLINOIS TOLLWAY STANDARDS UP TO A MAXIMUM PLY POST HEIGHT OF 12'-0".

PANEL MOUNT SEE ILLINOIS TOLLWAY STANDARD F19

CHEIEF ENGINEERING OFFICER

DATE

REVISIONS

STANDARD G15-00

NON-CRASHWORTHY GROUND MOUNTED NOISE ABATEMENT WALL DETAILS

[Diagram showing various details and specifications for noise abatement wall installation and construction, including lifting inserts, bearing details, and panel connections.]
**POST & DRILLED SHAFT DESIGN**

### Typical Cross Section

- **Bent Plate Details**
  - STEEL POST
  - HORIZONTAL JOINT WITH PLASTIC SHIM AT EACH END BETWEEN PANELS
  - TOP OF SHAFT AWAY FROM POST FOR DRAINAGE, TYP.
  - PLASTIC OR CONCRETE SHIM AS REQ'D

- **Post & Shaft**
  - PRECAST PANEL
  - HORIZONTAL JOINT WITH PLASTIC SHIM AT EACH END BETWEEN PANELS

### Table: Post & Drilled Shaft Design

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<th>Panel Type</th>
<th>Post</th>
<th>Shaft</th>
<th>Panel A</th>
<th>Panel B</th>
<th>Panel C</th>
<th>Panel D</th>
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<tr>
<td>DRILLED SHAFT PRECAST</td>
<td>48&quot;</td>
<td>14&quot;</td>
<td>7&quot;</td>
<td>5½&quot;</td>
<td>6½&quot;</td>
<td>5½&quot;</td>
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<tr>
<td>SHAFT &amp; POST</td>
<td>28'</td>
<td>16'</td>
<td>20'</td>
<td>28'</td>
<td>28'</td>
<td>28'</td>
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### Notes
- MIN ANGLE BETWEEN PANELS AT TYP POST
- TAPER TOP OF SHAFT AWAY FROM POST FOR DRAINAGE, TYP.
- POST & SHAFT 8" LONG BENT PLATE AT 45° (RESIDENTIAL SIDE)
- TOP OF POST & WALL PANEL 8" LONG BENT PLATE AT 45° (INCIDENTAL SIDE)
- STRUCTURAL CAULK & BACKER ROD SEEN PANEL TO POST CONNECTION DETAILS
- BENT PLATE DETAILS
- MIN ANGLE BETWEEN PANELS AT TYP POST
- MIN ANGLE BETWEEN PANELS AT TYP POST

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**CONCRETE SHIM DETAIL**

- SHEETS TO BE SECURED TO THE POST SEE DETAIL 2
- 3½" x 5½" UNBALANCED SOIL LOAD WHERE NAW IS PLACED INSIDE CLEAR ZONE TO MAINTAIN "F" TEST LEVEL

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**DESIGN SPECIFICATIONS**

- CRASHWORTHY GROUND MOUNTED NOISE BEATMENT WALL DETAILS
- LATEST EDITION
- ILLINOIS TOLLWAY STRUCTURE DESIGN MANUAL, LATEST EDITION
- ILLINOIS TOLLWAY GEO-TECHNICAL MANUAL, LATEST EDITION