

**PUERTO RICO HIGHWAY AND TRANSPORTATION AUTHORITY  
STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

| DATE   | DRAWING NUMBER | TITLE   |
|--|----------------|---|
| <b>VOLUME I</b>                                      |                |   |
| <b>Erosion Control</b>                               |                |   |
| Oct-1998   | ER 01          | Devices<br>Silt Fence   |
| Oct-1998   | ER 02          | Devices<br>Straw Bales  |
| Oct-1998   | ER 03          | Devices<br>Silt Fence with Straw Bale Dike                              |
| May-1998   | ER 04          | pH Calculation<br>Lime Requirements for Acid Soils                      |
| May-1998   | ER 05          | pH Calculation<br>Lime Requirements for Acid Soils                      |
| May-1998   | ER 06          | pH Calculation<br>Lime Requirements for Acid Soils                      |
| May-1998   | ER 07          | pH Calculation<br>Lime Requirements for Acid Soils                      |
| Oct-1998   | ER 17          | Slope Protection<br>Plastic Liner Installation                          |
| <b>Portland Cement Concrete Pavement</b>             |                |   |
| Apr-1996   | PCCP 01        | Typical Sections  |
| Apr-1996   | PCCP 02        | Shoulders Typical Sections Types A, B and C                             |
| Apr-1996   | PCCP 03        | Typical Median Sections   |
| Dec-1998   | PCCP 04        | Joint Details   |
| Apr-1996   | PCCP 05        | Pavement Drain Details  |
| May-1998   | PCCP 06        | AC and DC Lanes   |
| Jul-2000   | PCCP 06A       | Approved List   |
| <b>Portland Cement Concrete Pavement Restoration</b> |                |   |
| May-1999   | PCCPR 01       | PCC Pavement Restoration<br>Installation of Steel Dowel and Tie Bars    |
| May-1999   | PCCPR 02       | PCC Pavement Restoration<br>Joint Details                               |
| May-1998   | PCCPR 03       | PCC Pavement Restoration<br>Partial Depth Patching                      |
| May-1999   | PCCPR 04       | PCC Pavement Restoration<br>Slabjacking and undersealing                |
| Jul-2000   | PCCPR 04A      | Approved List   |
| <b>Miscellaneous Pavement Details</b>                |                |   |
| Feb-2000   | MPD 1/5        | Typical Pavement Sections Widening                                      |
| <b>Miscellaneous Bituminous Pavement Details</b>     |                |   |
| May-2010   | MBPD 01        | Notes for Transition to Bituminous Pavements and Structures             |
| May-2010   | MBPD 02        | Details for Transition to Bituminous Pavements and Structures<br>Type 1 |
| May-2010   | MBPD 03        | Details for Transition to Bituminous Pavements and Structures<br>Type 2 |

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STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

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| May-2010                                       | MBPD 04        | Details for Transition to Bituminous Pavements and Structures<br>Type 3 |
| May-2010                                       | MBPD 05        | Details for Transition to Bituminous Pavements and Structures<br>Type 4 |
| May-2010                                       | MBPD 06        | Placing Sequence of Bituminous Course Type 4                            |
| May-2010                                       | MBPD 07        | Details for Transition to Bituminous Pavements and Structures<br>Type 5 |
| May-2010                                       | MBPD 08        | Placing Sequence of Bituminous Course Type 5                            |
| May-2010                                       | MBPD 09        | Details for Transition to Bituminous Pavements and Structures<br>Type 6 |
| May-2010                                       | MBPD 10        | Placing Sequence of Bituminous Course Type 6                            |
| May-2010                                       | MBPD 11        | Details for Transition to Bituminous Pavements and Structures<br>Type 7 |
| May-2010                                       | MBPD 12        | Placing Sequence of Bituminous Course Type 7                            |
| May-2010                                       | MBPD 13        | Details for Transition to Bituminous Pavements and Structures<br>Type 8 |
| May-2010                                       | MBPD 14        | Placing Sequence of Bituminous Course Type 8                            |
| <b>Miscellaneous Concrete Pavement Details</b> |                |   |
| May-2010                                       | MCPD 01        | Notes for Transition to Concrete Pavements and Structures               |
| May-2010                                       | MCPD 02        | Details for Transition to Concrete Pavements and Structures<br>Type 1   |
| May-2010                                       | MCPD 03        | Details for Transition to Concrete Pavements and Structures<br>Type 2   |
| May-2010                                       | MCPD 04        | Details for Transition to Concrete Pavements and Structures<br>Type 3   |
| May-2010                                       | MCPD 05        | Details for Transition to Concrete Pavements and Structures<br>Type 4   |
| May-2010                                       | MCPD 06        | Placing Sequence of Bituminous Course Type 4                            |
| May-2010                                       | MCPD 07        | Details for Transition to Concrete Pavements and Structures<br>Type 5   |
| May-2010                                       | MCPD 08        | Placing Sequence of Bituminous Course Type 5                            |
| May-2010                                       | MCPD 09        | Details for Transition to Concrete Pavements and Structures<br>Type 6   |
| May-2010                                       | MCPD 10        | Placing Sequence of Bituminous Course Type 6                            |
| May-2010                                       | MCPD 11        | Details for Transition to Concrete Pavements and Structures<br>Type 7   |
| May-2010                                       | MCPD 12        | Details for Transition to Concrete Pavements and Structures<br>Type 8   |
| May-2010                                       | MCPD 13        | Details for Transition to Concrete Pavements and Structures<br>Type 9   |
| May-2010                                       | MCPD 14        | Details for Transition to Concrete Pavements and Structures<br>Type 10  |
| May-2010                                       | MCPD 15        | Details for Transition to Concrete Pavements and Structures<br>Type 11  |
| May-2010                                       | MCPD 16        | Details for Transition to Concrete Pavements and Structures<br>Type 12  |
| May-2010                                       | MCPD 17        | Placing Sequence of Bituminous Course Type 12                           |

**PUERTO RICO HIGHWAY AND TRANSPORTATION AUTHORITY  
STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

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|--|----------------|---|
| May-2010   | MCPD 18        | Details for Transition to Concrete Pavements and Structures Type 13 |
| May-2010   | MCPD 19        | Placing Sequence of Bituminous Course Type 13                       |
| May-2010   | MCPD 20        | Details for Transition to Concrete Pavements and Structures Type 14 |
| May-2010   | MCPD 21        | Placing Sequence of Bituminous Course Type 14                       |
| <b>Shelters</b>                                      |                |   |
| Oct-1997   | BSS 01         | Bus Stop Shelter Construction details                               |
| Oct-1997   | BSS 02         | Bus Stop Shelter Construction details                               |
| <b>Reinforced Concrete Pipe Installation Methods</b> |                |   |
| Apr-1996   | RCP 01         | Reinforce Concrete Pipe Installation Methods                        |
| Apr-1996   | RCP 02         | Embankment Beddings   |
| Apr-1996   | RCP 03         | Trench Beddings   |
| Aug-1999   | RCP 04         | Allowable Height of Fill Above Top of Circular Concrete Pipe        |
| <b>PVC Pipe Installation Methods</b>                 |                |   |
| May-1998   | PVCP 01        | Negative Projection and Trench Method                               |
| <b>Corrugated PE Pipe Installation Method</b>        |                |   |
| Jul-2000   | PEP 01         | Installation Method Negative projection and trench method           |
| Sep-1996   | PEP 02         | Polyethylene End Section  |
| <b>Drainage</b>                                      |                |   |
| Dec-2000   | DR 01          | Approved List of Cast Iron Manufacturers and Products               |
| Dec-1998   | DR 02          | Slotted Pipe and Installation Details                               |
| Dec-1998   | DR 03          | Manhole for Slotted Pipe from 18" Ø to 36" Ø                        |
| Dec-1998   | DR 04          | Slotted Pipe and Installation Details for Existing Conditions       |
| Dec-1998   | DR 05          | Manhole for Slotted Pipe on Existing Conditions from 18" Ø to 36" Ø |
| Dec-1998   | DR 06          | Inlet Type 1 from 18" Ø to 30" Ø<br>Bicycle grate                   |
| Dec-1998   | DR 07          | Inlet Type 1 from 18" Ø to 30" Ø<br>Alternate grate                 |
| Dec-1998   | DR 08          | Inlet Type 1A from 36" Ø to 48" Ø<br>Alternate grate                |
| Dec-1998   | DR 09          | Inlet Type 1A from 36" Ø to 48" Ø<br>Bicycle grate                  |
| Dec-1998   | DR 10          | Inlet Type 2 from 18" Ø to 30" Ø                                    |

**PUERTO RICO HIGHWAY AND TRANSPORTATION AUTHORITY  
STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

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|----------------------|----------------|--|
| Dec-1998             | DR 11          | Inlet Type 2A from 36" Ø to 48" Ø                          |
| Dec-1998             | DR 12          | Inlet Type 3 from 18" Ø to 30" Ø                           |
| Dec-1998             | DR 13          | Inlet Type 3A from 36" Ø to 48" Ø                          |
| Dec-1998             | DR 14          | Inlet Type 4 from 18" Ø to 30" Ø                           |
| Dec-1998             | DR 15          | Inlet Type 4A from 36" Ø to 48" Ø                          |
| Dec-1998             | DR 16          | Inlet Type 5 (Depressed Grass Median)                      |
| Dec-1998             | DR 17          | Precast Curb Drains  |
| Dec-1998             | DR 18          | Bridge End Inlets  |
| Dec-1998             | DR 19          | Precast Concrete End Section                               |
| Dec-1998             | DR 20          | Metal End Sections   |
| Dec-1998             | DR 21          | Reinforced Concrete Headwalls Type "A" and "B"             |
| Dec-1998             | DR 22          | Transversible Headwall Type C with Load-Carrying Grate     |
| Dec-1998             | DR 23          | Headwall Type D  |
| Dec-1998             | DR 24          | Manhole Adjustments  |
| Dec-1998             | DR 25          | Manhole Adjustments  |
| Oct-2000             | DR 25A         | Manhole Adjustments Manufactured by Andrews Metal Products |
| Oct-2000             | DR 25B         | Manhole Adjustments Manufactured by Andrews Metal Products |
| Oct-2000             | DR 25C         | Manhole Adjustments Manufactured by Andrews Metal Products |
| Oct-2000             | DR 25D         | Manhole Adjustments Manufactured by Andrews Metal Products |
| Dec-1998             | DR 26          | Typical Curbs  |
| <b>Metal Barrier</b> |                |  |
| Sep-2009             | MB 01          | W-Beam Strong Post Hardware                                |
| Sep-2009             | MB 02          | W-Beam Strong Post Hardware                                |
| Sep-2009             | MB 03          | W-Beam Strong Post Hardware                                |
| Sep-2009             | MB 04          | W-Beam Strong Post Hardware                                |
| May-1998             | MB 05          | W-Beam Strong Post Hardware                                |
| Feb-1997             | MB 05A         | W-Beam Strong Post Hardware                                |

**PUERTO RICO HIGHWAY AND TRANSPORTATION AUTHORITY  
STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

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|----------|----------------|---|
| Feb-1997 | MB 06          | W-Beam Strong Post<br>Single Face<br>Assembly & Elevation Details   |
| Dec-2000 | MB 06A         | W-beam strong-post<br>Timber blockout details   |
| Dec-2000 | MB 06B         | W-Beam Strong Post<br>Plastic blockout details  |
| Dec-2000 | MB 06C         | W-Beam Strong Post - Plastic Blockout Details   |
| Dec-2000 | MB 06D         | W-Beam Strong-Post<br>Plastic blockout details  |
| Feb-1997 | MB 07          | W-Beam Strong Post<br>Highway Lighting  |
| Feb-1997 | MB 08          | W-Beam Strong Post<br>Single Face<br>Terminal Type MA   |
| Sep-2009 | MB 09          | W-Beam Strong Post<br>Single Face<br>Terminal Type MB   |
| Oct-1997 | MB 10          | W-Beam Strong Post<br>Single Face<br>Terminal Type MC   |
| Sep-2009 | MB 11          | W-Beam Strong Post<br>Transition section to concrete parapet<br>Transition module details                                     |
| Sep-2009 | MB 12          | W-Beam Strong Post<br>Transition section on concrete parapet<br>Transition module details                                     |
| Sep-2009 | MB 13          | W-Beam Strong Post<br>Transition section to concrete parapet<br>Transition module details                                     |
| Sep-2009 | MB 14          | W-Beam Strong Post<br>Transition section to concrete parapet<br>Existing bridge transition upgrade                            |
| Sep-2009 | MB 14A         | W-Beam Strong Post<br>Transition section to concrete parapet<br>Existing bridge transition upgrade in approach slab condition |
| Sep-2009 | MB 14B         | W-Beam Strong Post<br>Transition section to concrete parapet<br>Existing bridge transition upgrade in wingwall condition      |
| May-1998 | MB 16          | Reduced Post Spacing  |
| Dec-1998 | MB 18          | W-Beam Strong Post<br>Double Face<br>Connection Concrete Barrier Type C   |
| Feb-1997 | MB 19          | W-Beam Strong Post<br>Double Face<br>Median Treatment   |

**PUERTO RICO HIGHWAY AND TRANSPORTATION AUTHORITY  
STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

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|----------|----------------|---|
| Oct-1996 | MB 19A         | W-Beam Strong Post<br>Double Face<br>Median Treatment                   |
| Feb-1997 | MB 20          | W-Beam Strong Post<br>Double Face<br>Terminal Type MA-MED               |
| Oct-1997 | MB 21          | W-Beam Strong Post<br>Double Face<br>Terminal Type MB-MED               |
| Oct-1997 | MB 23          | W-Beam Strong Post<br>Double Face<br>Connection Concrete Barrier Type A |
| Oct-1997 | MB 24          | Transition W-Beam Strong Post to Weak Post<br>Single face               |
| Feb-1997 | MB 25          | Transition W-Beam Strong Post to Weak Post<br>Single Post               |
| Feb-1997 | MB 26          | Transition W-Beam Strong Post to Box Beam<br>Single Face                |
| Feb-1997 | MB 27          | Transition W-Beam Strong Post to Box Beam<br>Double Face                |
| Feb-1997 | MB 28          | Box Beam<br><b>Concrete Barrier</b>                                     |
| May-1998 | CB 01          | F Shape   |
| Jul-1997 | CB 02          | Types B & C in Combination with Slotted Pipe                            |
| Apr-1996 | CB 04          | Open for Pedestrian Crossing  |
| Apr-1996 | CB 05          | Joint with End Section and Construction Joint                           |
| Apr-1996 | CB 06          | End Section   |
| Apr-1996 | CB 06A         | End Sections  |
| Apr-1996 | CB 07          | At Structure Column and Manhole Shaft                                   |
| Apr-1996 | CB 08          | Highway Luminaire Mounting Detail<br><b>Highway Lighting</b>            |
| Jun-1996 | LS 01          | Standard Legend, Notes & Design Criteria                                |
| Nov-1996 | LS 02          | Aluminum Lighting Standard  |
| Nov-1996 | LS 03          | Special Lighting Standard   |
| Jun-1996 | LS 04          | Lighting Pole Installation Detail                                       |
| Nov-1996 | LS 05          | Pole Base and Anchor Detail   |
| Jun-1996 | LS 06          | Pull Box For Lighting Circuits Detail                                   |
| Nov-1996 | LS 07          | Arm Support & Hand Hole Detail  |
| Jun-1996 | LS 08          | Underpass and Pedestrian Bridge Standard                                |
| Jun-1996 | LS 09          | Pole Mounted Substation Standard-I                                      |
| Jun-1996 | LS 10          | Pad Mounted Substation Standard II                                      |
| Jun-1996 | LS 11          | Pad Mounted Substation Standard III                                     |
| Jun-1996 | LS 12          | Median Barrier Mounting Detail  |
| Jun-1996 | LS 13          | Trench Detail Standard  |
| Nov-1996 | LS 14          | High Mast Lighting Standard   |

**PUERTO RICO HIGHWAY AND TRANSPORTATION AUTHORITY  
STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

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|--|----------------|--|
| Jun-1996                                     | LS 15          | High Mast Detail   |
| Jun-1996                                     | LS 16          | Temporary Lighting Standard  |
| Dec-1998                                     | LS 17          | Alternate Bases<br>for aluminium lighting poles                                |
| May-1998                                     | LS 17A         | Alternate Bases<br>Precast base for round high mast<br>80'-0" and 100'-0" high |
| <b>Impact Attenuators</b>                    |                |  |
| Jan-2010                                     | IA 01          | Modules  |
| Jan-2010                                     | IA 02          | Modules  |
| Jan-2010                                     | IA 03          | Typical Module Arrays  |
| Jan-2010                                     | IA 04          | Alternate Module Arrays  |
| <b>Markers and Delineators</b>               |                |  |
| Oct-1997                                     | DLN 01         | Delineators<br>Standard mounting<br>Type 1, 2, 3, & 4                          |
| Oct-1997                                     | DLN 02         | Delineators<br>Typical application<br>Types 1, 2, 3, & 4                       |
| <b>Planting</b>                              |                |  |
| May-1998                                     | PL 01          | Pruning<br>Broadleaf evergreens and deciduous plants                           |
| May-1998                                     | PL 02          | Pruning<br>Cutting procedures  |
| May-1998                                     | PL 03          | Pruning<br>Location of the pruning cut   |
| Jan-2000                                     | PL 04          | Method of planting tree seedling   |
| Jan-2000                                     | PL 05          | Planting pits details  |
| Jan-2000                                     | PL 05A         | Planting pits details  |
| Jan-2000                                     | PL 06          | Planting details<br>Staking, guying and wrapping                               |
| Jan-2000                                     | PL 07          | Slope planting details<br>Staking, guying and wrapping                         |
| <b>Turf Establishment</b>                    |                |  |
| Oct-1998                                     | TUST 01        | Jute Mesh Placement  |
| <b>Maintenance and Protection of Traffic</b> |                |  |
| Oct-2000                                     | MPT 01         | Channelizing Devices   |
| Feb-2000                                     | MPT 02         | Channelizing Devices   |
| Apr-1996                                     | MPT 03A        | F Shape Temporary Concrete Barrier with Vertical I-Beam                        |
| Apr-1996                                     | MPT 04         | F Shape Temporary Concrete Barrier with Pin & Rebar                            |
| Apr-1996                                     | MPT 05         | F Shape Temporary Concrete Barrier with Side Plate                             |
| Apr-1996                                     | MPT 06         | F Shape Temporary Concrete Barrier with Wire Rope and Pin<br>Connection        |
| Apr-1996                                     | MPT 07         | Temporary Concrete Barrier, Positive Connecting Barrier J-J<br>Hook Design     |

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STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

| DATE     | DRAWING NUMBER | TITLE                                       |
|----------|----------------|---|
| Sep-2009 | MPT 08         | Concrete Barrier, Temporary End Section     |
| Oct-1996 | MPT 08A        | Temporary Impact Attenuator                 |
| Apr-1996 | MPT 09         | Polyethylene Barrier System                 |
| Apr-1996 | MPT 09A        | Polyethylene Barrier System                 |
| Apr-1996 | MPT 10         | Work Zone Design Criteria                   |
| Apr-1996 | MPT 11         | Typical Application Diagrams                |
| Apr-1996 | MPT 12         | Typical Application Diagrams                |
| Apr-1996 | MPT 13         | Typical Application Diagrams                |
| Apr-1996 | MPT 14         | Typical Application Diagrams                |
| Apr-1996 | MPT 15         | Typical Application Diagrams                |
| Apr-1996 | MPT 16         | Typical Application Diagrams                |
| Feb-1997 | MPT 17         | Typical Application Diagram                 |
| Apr-1996 | MPT 18         | Typical Application Diagrams                |
| Apr-1996 | MPT 19         | Typical Application Diagrams                |
| Oct-1997 | MPT 20         | Typical Application Diagrams                |
| Apr-1996 | MPT 21         | Warning Signs                               |
| Apr-1996 | MPT 21A        | Warning Signs                               |
| Nov-1996 | MPT 22         | Warning Signs                               |
| Sep-2009 | MPT 23         | Temporary Traffic Signs<br>Mounting Details |

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STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

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|-------------------------------------|----------------|---|
| <b>VOLUME II</b>                    |                |   |
| <b>Gravity Retaining Wall</b>       |                |   |
| Oct-1997                            | REWA 01        | Gravity Retaining Wall Dimensions   |
| <b>Fences and Gates</b>             |                |   |
| Oct-1997                            | FEGA 01        | Barbed Wire Fence   |
| Oct-1997                            | FEGA 02        | Chainlink Gate and Fence  |
| Oct-1997                            | FEGA 03        | Wire Mesh Fence   |
| Oct-1997                            | FEGA 04        | Wire Mesh Fence<br>(For access control)   |
| <b>Miscellaneous Bridge Details</b> |                |   |
| Sep-2009                            | MBD 01         | General Notes   |
| Sep-2009                            | MBD 02         | Expanded Metal Fence for Bridge   |
| Sep-2009                            | MBD 03         | Expanded Metal Fence for Bridge   |
| Sep-2009                            | MBD 04         | Bridge Name Plate Details   |
| Sep-2009                            | MBD 05         | Location of Bridge Name Plate   |
| <b>Ada Ramps Details</b>            |                |   |
| Sep-2009                            | ADA 01         | Ada Ramp Details  |
| <b>Field and Laboratory Office</b>  |                |   |
| Oct-1997                            | FILA 01        | Field and Laboratory Office Model 1   |
| Oct-1997                            | FILA 02        | Field and Laboratory Office Model 2   |
| Oct-1997                            | FILA 03        | Field and Laboratory Office Model 3   |
| Oct-1997                            | FILA 04        | Field and Laboratory Office Model 4   |
| Oct-1997                            | FILA 05        | Field and Laboratory Office Model 5   |
| <b>Small Traffic Sign</b>           |                |   |
| Jul-2000                            | STS 01         | Steel flanged channel and square steel<br>Post details                            |
| Oct-2000                            | STS 02         | Steel flanged channel post<br>Foundation details                                  |
| Dec-1999                            | STS 03         | Steel flanged channel<br>Base post to top post connection details                 |
| Jul-2000                            | STS 04         | Square steel post<br>Foundation and connection details                            |
| Jul-2000                            | STS 04A        | Steel flanged channel or square steel post  |
| Dec-1999                            | STS 04B        | Precast base  |
| Jan-2000                            | STS 05         | Fasteners<br>for attaching sign plates to top post                                |
| Dec-2000                            | STS 05A        | Fasteners<br>for attaching sign plates to top post                                |
| Jul-2000                            | STS 06         | Steel flanged channel and square steel post<br>"L", "T", "+" and "45" flat plates |
| Oct-2000                            | STS 07         | General notes   |
| May-1998                            | STS 08         | Blank plate standards   |
| Dec-1999                            | STS 08A        | Blank plate standards   |
| May-1998                            | STS 09         | Metric equivalents  |

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STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

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|-----------------------|----------------|---|
| Dec-1999              | STS 10         | Sign panel splices  |
| Jul-2000              | STS 11         | Steel flanged channel and square steel post<br>Mounting on sidewalk areas with planting strip   |
| Jul-2000              | STS 12         | Steel flanged channel and square steel post<br>Mounting on sidewalk areas with planting strip   |
| Dec-1999              | STS 12A        | Steel flanged channel and square steel post<br>Typical post location for mounting on sidewalk areas<br>with or without planting strip |
| Oct-2000              | STS 13         | Steel flanged channel and square steel post<br>Rural mounting or mounting on grass area   |
| Dec-1999              | STS 13A        | Steel flanged channel and square steel post<br>Typical post location for rural mounting   |
| Dec-1999              | STS 14         | Offset drawings<br>Autopista and other highways with 9 meter clear zone   |
| Dec-1999              | STS 15         | Offset drawings<br>Highways with intermediate clear zone  |
| Dec-1999              | STS 16         | Offset drawings<br>Highways with minimum right of way and cross section   |
| Jul-2000              | STS 17         | Bridge mounting detail  |
| Jan-2000              | STS 18         | Chevron mounting detail for two way roadways  |
| Dec-1998              | STS 19         | Route Markers   |
| Dec-1998              | STS 19A        | Route Markers   |
| Dec-1998              | STS 19B        | Route Markers<br>Tollways route marker  |
| Jul-2000              | STS 20         | Route Markers<br>Auxiliary plates   |
| Jul-2000              | STS 20A        | Route Markers<br>Auxiliary plates   |
| Jul-2000              | STS 21         | Route Markers<br>Auxiliary plates   |
| Feb-2000              | STS 21A        | Route Markers<br>Auxiliary plates   |
| Jul-2000              | STS 22         | Route Markers<br>Sign assembly details  |
| Jul-2000              | STS 22A        | Route Markers<br>Sign assembly details  |
| Jul-2000              | STS 22B        | Route Markers<br>Sign assembly details  |
| Jul-2000              | STS 22C        | Route Markers<br>Sign assembly details  |
| <b>Ground Mounted</b> |                |   |
| Oct-2000              | GMTS 01        | Break-Away Signs<br>Specifications and Post Selection   |
| Oct-2000              | GMTS 02        | Break-Away Signs<br>Sign Panel Assembly   |
| Oct-2000              | GMTS 02A       | Break-Away Signs<br>Sign panel splice details   |

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STANDARD DRAWINGS  
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| Jul-2000 | GMTS 03        | Break-Away Signs<br>Offset Drawings<br>Autopista & other highways with 9 meter clear zone |
| Jul-2000 | GMTS 04        | Break-Away Signs<br>Offset Drawings<br>Highway with Intermediate Clear Zone               |
| Jul-2000 | GMTS 05        | Break-Away Signs<br>Offset Drawings<br>Highway with minimal right of way                  |
| Jul-2000 | GMTS 06        | Break-Away Signs<br>Fuse and Hinge Plates   |
| Oct-2000 | GMTS 07        | Break-Away Signs<br>Base Connection   |
| Jul-2000 | GMTS 08        | Break-Away Signs<br>Foundations Drilled Shafts  |
| Jul-2000 | GMTS 09        | Break-Away Signs<br>Foundations Spread Footing  |
| Dec-1999 | GMTS 10        | Break-Away Signs<br>Structural Shapes Data  |
| Feb-1999 | GMTS 11        | Break-Away Signs<br>Route Markers<br>General Notes  |
| Feb-1999 | GMTS 11A       | Break-Away Signs<br>Sign Assembly Details For 36" x 36"                                   |
| Jul-2000 | GMTS 11B       | Break-Away Signs<br>Route Markers<br>Sign Assembly Details for 36" x 36"                  |
| Jul-2000 | GMTS 11C       | Break-Away Signs<br>Route Markers<br>Sign Assembly Details for 36" x 36"                  |
| Jul-2000 | GMTS 11D       | Break-Away Signs<br>Route Markers<br>Sign Assembly Details for 48" x 48"                  |
| Jul-2000 | GMTS 11E       | Break-Away Signs<br>Route Markers<br>Sign Assembly Details for 48" x 48"                  |
| Jul-2000 | GMTS 11F       | Break-Away Signs<br>Route Markers<br>Sign Assembly Details for 48" x 48"                  |
| Jul-2000 | GMTS 12        | Break-Away Signs<br>Exit Number Panel   |
| Dec-2000 | GMTS 12A       | Break-Away Signs<br>Exit Number Panel<br>Attachment and Location Detail                   |
| Aug-1999 | GMTS 12B       | Break-Away Signs<br>Exit Number Panel<br>Fuse and Hinge Plates                            |

**PUERTO RICO HIGHWAY AND TRANSPORTATION AUTHORITY  
STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

| DATE     | DRAWING NUMBER | TITLE   |
|----------|----------------|---|
| Oct-2000 | GMTS 12C       | Break-Away Signs<br>Exit Number Panel<br>Base Connection                |
| Jul-2000 | GMTS 12D       | Break-Away Signs<br>Exit Number Panel<br>Foundations Drilled Shafts     |
| Jan-2000 | GMTS 12E       | Break-Away Signs<br>Exit Number Panel<br>Structural Shapes Data         |
| Aug-1999 | GMTS 13        | Break-Away Signs<br>Intersection Plate                                  |
|          |                | <b>Overhead Sign</b>  |
| Oct-2000 | OHTS 01        | Specifications and Notes  |
| Oct-2000 | OHTS 01A       | Specifications and Notes  |
| Dec-2000 | OHTS 02        | Approved List of Manufacturers for Overhead Structures Types            |
| Dec-2000 | OHTS 02A       | Index<br>Approved structures shop drawings                              |
| Oct-2000 | OHTS 03        | Sign Panel Assembly   |
| Oct-2000 | OHTS 03A       | Sign Panel Splice Details   |
| Aug-1999 | OHTS 04        | Cantilever Types  |
| Dec-1998 | OHTS 05        | Balanced Cantilever Types   |
| Dec-1998 | OHTS 06        | Bridge Types  |
| Dec-1998 | OHTS 07        | Bridge Types  |
| Aug-1999 | OHTS 08        | Bridge with Cantilever Types  |
| Aug-1999 | OHTS 09        | Bridge with Cantilever Types  |
| Jul-2000 | OHTS 10        | Foundation for Cantilever Type  |
| Jul-2000 | OHTS 11        | Foundation for Balanced Cantilever Type                                 |
| Jul-2000 | OHTS 12        | Foundation for Bridge Type  |
| Jul-2000 | OHTS 13        | Foundation for Bridge Type (Two columns)                                |
| Jul-2000 | OHTS 14        | Foundation for Bridge with Cantilever Type<br>Foundation BC             |
| Jul-2000 | OHTS 15        | Foundation for Bridge with Cantilever Type<br>Foundation BC (Two posts) |
| Jul-2000 | OHTS 16        | Foundation for Bridge with Cantilever Type<br>Foundation B              |
| Jul-2000 | OHTS 17        | Foundation for Bridge with Cantilever Type<br>Foundation B (Two posts)  |
| Dec-1999 | OHTS 18        | Structural Shapes Data  |
|          |                | <b>Sign Bridge Connection</b>   |
| Aug-1999 | SBC 01         | Skew Angle from 0° to 10°   |
| Aug-1999 | SBC 02         | Skew Angle from 10° to 25°  |
|          |                | <b>Guide Signs</b>  |
| Oct-2000 | GS 01          | General Information Signs<br>General notes                              |
| Aug-1999 | GS 02          | Route Markers for Guide Signs Use                                       |

**PUERTO RICO HIGHWAY AND TRANSPORTATION AUTHORITY  
STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

| DATE   | DRAWING NUMBER | TITLE  |
|--|----------------|--|
| Aug-1999   | GS 03          | Route Markers for Guide Signs Use                              |
| Aug-1999   | GS 04          | Cardinal Direction Word for Guide Signs Use                    |
| Dec-1999   | GS 04A         | Miscellaneous Details Accents                                  |
| Aug-1999   | GS 07          | Port Sign  |
| <b>Sign Identification</b>                           |                |  |
| Jan-2000   | SI 01          | Identification label for sign panels                           |
| Jan-2000   | SI 02          | Identification plate for standard overhead sign structures     |
| Jan-2000   | SI 03          | Identification plate for non-standard overhead sign structures |
| <b>Destination Signs Panels</b>                      |                |  |
| Jul-2000   | DSP 01         | Arrows for Guide Signs   |
| <b>Recreational and Cultural Interest Area Signs</b> |                |  |
| Jul-2000   | RCIA 01        | General Notes  |
| Jul-2000   | RCIA 02        | Auxiliary Plate  |
| Jul-2000   | RCIA 03        | Auxiliary Plate  |
| Jul-2000   | RCIA 04        | Parador Marker   |
| Jul-2000   | RCIA 05        | Meson Marker   |
| Jul-2000   | RCIA 06        | Parador and Meson Name Plate                                   |
| Jul-2000   | RCIA 07        | Parador and Meson Name Plate Text                              |
| Jul-2000   | RCIA 08        | UPR Sign Plate   |
| Oct-2000   | RCIA 09        | Area Signs<br>General Notes                                    |
| Oct-2000   | RCIA 09A       | Area Signs<br>Tourist Plate Detail                             |
| Oct-2000   | RCIA 10        | Area Signs<br>Paso Fino Route Sign                             |
| Oct-2000   | RCIA 10A       | Area Signs<br>Paso Fino Route Map                              |
| Oct-2000   | RCIA 11        | Area Signs<br>Flamboyán Route Sign                             |
| Oct-2000   | RCIA 11A       | Area Signs<br>Flamboyán Route Map                              |
| Oct-2000   | RCIA 12        | Area Signs<br>Coquí Route Sign                                 |
| Oct-2000   | RCIA 12A       | Area Signs<br>Coquí Route Map                                  |
| Oct-2000   | RCIA 13        | Area Signs<br>Cotorra Route Sign                               |
| Oct-2000   | RCIA 13A       | Area Signs<br>Cotorra Route Map                                |
| Oct-2000   | RCIA 14        | Area Signs<br>Panoramic Route Sign                             |
| Oct-2000   | RCIA 14A       | Area Signs<br>Panoramic Route Map                              |
| <b>Warning Signs</b>                                 |                |  |
| Dec-2000   | WS 01          | Falling Rock   |

**PUERTO RICO HIGHWAY AND TRANSPORTATION AUTHORITY  
STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

| DATE                             | DRAWING NUMBER | TITLE   |
|----------------------------------|----------------|---|
| <b>General Information Signs</b> |                |   |
| Jul-2000                         | GIS 01         | General Notes                                       |
| Jul-2000                         | GIS 02         | Auxiliary Plate                                     |
| Jul-2000                         | GIS 02A        | Auxiliary Plate                                     |
| Jul-2000                         | GIS 03         | Principal Airport Sign                              |
| Jul-2000                         | GIS 04         | Library Sign  |
| Jul-2000                         | GIS 06         | Bus Stop Sign                                       |
| Dec-2000                         | GIS 07         | Race Track  |
| Dec-2000                         | GIS 08         | Moscoso Bridge Sign                                 |
| <b>Gabions</b>                   |                |   |
| Jul-2000                         | GABI 01        | Welded Wire Gabions<br>Dimensions                   |
| Jul-2000                         | GABI 02        | Welded Wire Gabions<br>Binders and lacing patterns  |
| Jul-2000                         | GABI 03        | Welded Wire Gabions<br>Installation procedures      |
| Jul-2000                         | GABI 04        | Welded Wire Gabions<br>Geotextiles                  |
| Jul-2000                         | GABI 05        | Twisted Wire Gabions<br>Dimensions                  |
| Jul-2000                         | GABI 06        | Twisted Wire Gabions<br>Binders and lacing patterns |
| Jul-2000                         | GABI 07        | Twisted Wire Gabions<br>Installation procedures     |
| Jul-2000                         | GABI 08        | Twisted Wire Gabions<br>Geotextiles                 |
| Oct-2000                         | GABI 08A       | Approved List of Manufacturers                      |
| Oct-2000                         | GABI 09        | Gravity Wall<br>Stepped front face                  |
| Oct-2000                         | GABI 10        | Gravity Wall<br>Vertical front face                 |
| <b>Pavement Marking</b>          |                |   |
| Dec-2000                         | PM 01          | General Notes                                       |
| Oct-1997                         | TRSN 16        | Pavement marking                                    |
| Oct-1997                         | TRSN 17        | Pavement marking details                            |
| Oct-1997                         | TRSN 18        | Pavement marking and summary                        |
| <b>Reference Location Sign</b>   |                |   |
| Jan-2010                         | RLS 01         | General Notes                                       |
| Jan-2010                         | RLS 02         | Kilometer Panel                                     |
| Jan-2010                         | RLS 03         | Kilometer and Hectometer Panel                      |
| Jan-2010                         | RLS 04         | Assembly Details                                    |
| Jan-2010                         | RLS 05         | Foundation Details                                  |
| Jan-2010                         | RLS 06         | Rural Mounting or Mounting on Grass Area            |
| Jan-2010                         | RLS 07         | Mounting on Sidewalk Areas                          |

**PUERTO RICO HIGHWAY AND TRANSPORTATION AUTHORITY  
STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

| DATE                   | DRAWING NUMBER | TITLE  |
|------------------------|----------------|--|
| Jan-2010               | RLS 08         | Offset Drawings<br>Toll Roads and other Highways with 9 meter clear zone                                     |
| Jan-2010               | RLS 09         | Offset Drawings<br>Highways with intermediate clear zone   |
| Jan-2010               | RLS 10         | Offset Drawings<br>Highways with minimum right of way and cross section                                      |
| Jan-2010               | RLS 11         | Typical Installations  |
| Jan-2010               | RLS 12         | Typical Installations  |
| Jan-2010               | RLS 13         | Typical Post Marker Placement  |
| <b>Traffic Signals</b> |                |  |
| Aug-1999               | TRSI 01        | Signal Faces   |
| Oct-1997               | TRSI 01        | Legend   |
| Oct-1997               | TRSI 02        | Notes  |
| Nov-1996               | TRSI 02        | Backplates Details & Lane-In-Use Control Signal Detail   |
| Oct-1997               | TRSI 03        | Mast Arm Mounting  |
| Nov-1996               | TRSI 03        | Signs  |
| Nov-1996               | TRSI 04        | Pedestrian Signal Faces  |
| Apr-1997               | TRSI 05        | Precast Slab Loop Detector   |
| Oct-1997               | TRSI 06        | Post mounted signal with foundation and others details   |
| Apr-1997               | TRSI 06        | Precast Slab Loop Detector<br>Installation Details for Existing and New Bituminous and<br>Composite Pavement |
| Apr-1997               | TRSI 07        | Loop Slab Configuration in Bituminous and Composite<br>Pavements   |
| Oct-1997               | TRSI 08        | Traffic Control Cabinet  |
| Apr-1997               | TRSI 08        | Trench Details I   |
| Oct-1997               | TRSI 09        | Foundation Details   |
| Apr-1997               | TRSI 09        | Point Detector<br>Saw-cut in Place for P.C.C. Pavement and Bridge Decks                                      |
| Oct-1997               | TRSI 10        | Controller Foundation, Service Installation and Trench Repair  |
| Apr-1997               | TRSI 10        | Directional Detector<br>Saw-cut in Place for P.C.C. Pavement and Bridge Decks                                |
| Oct-1997               | TRSI 11        | Handhole and Pull Box  |
| Apr-1997               | TRSI 11        | Presence Detector<br>Saw-Cut in Place for P.C.C. Pavement and Bridge Desks                                   |
| Oct-1997               | TRSI 12        | Terminal Handhole for Master Control   |
| Apr-1997               | TRSI 12        | Installation Details for Loop Detectors in New or Existing P.C.C.<br>Pavements                               |
| Oct-1997               | TRSI 13        | Summary of Quantities  |
| Apr-1997               | TRSI 13        | Connection Detail for Precast Slab<br>Loop Detector  |
| Oct-1997               | TRSI 14        | Summary of Quantities  |
| Apr-1997               | TRSI 14        | Connection Detail for Saw-Cut in Place<br>Loop Detector  |
| Apr-1997               | TRSI 15        | Loop Conductor<br>Splice Details   |

**PUERTO RICO HIGHWAY AND TRANSPORTATION AUTHORITY  
STANDARD DRAWINGS  
REVISED LIST OF MAY 6, 2010**

| DATE     | DRAWING NUMBER | TITLE  |
|----------|----------------|--|
| May-1997 | TRSI 21        | Foundation Details for Aluminum and Galvanized Steel Poles                       |
| May-1997 | TRSI 22        | Mast Arm Foundation<br>Typical Locations   |
| May-1997 | TRSI 23        | Mono Tube and Post Top Foundation<br>Typical Locations                           |
| Dec-2000 | TRSI 24        | Span Wire<br>Specifications and notes  |
| Dec-2000 | TRSI 24A       | Span Wire<br>Approved manufacturers for span wire traffic signal supports        |
| Dec-2000 | TRSI 24B       | Span Wire<br>Configurations  |
| Dec-2000 | TRSI 24C       | Span Wire  |
| Dec-2000 | TRSI 24D       | Span Wire<br>Wiring details  |
| Dec-2000 | TRSI 24E       | Span Wire<br>Prestressed concrete pole<br>Manufactured by Ornamental Poles, S.E. |
| Dec-2000 | TRSI 24F       | Span Wire<br>Foundations<br>Manufactured by Ornamental Poles, S.E.               |
| Oct-1997 | TRSI 25        | Traffic Signals<br>Truss & tubular type mast arm mounting                        |
| Oct-1997 | TRSI 26        | Traffic Signals<br>Bridge Type Mounting  |
| Oct-1997 | TRSI 27        | Traffic Signals<br>Mast arm & bridge mounting<br>Assembly details                |
| Oct-1997 | TRSI 28        | Traffic Signals<br>Post top & side mounting                                      |
| Oct-1997 | TRSI 29        | Traffic Signals<br>Pedestrian faces mounting                                     |
| Oct-1997 | TRSI 30        | Traffic Signals<br>Post top, side mounting & pedestrian<br>Assembly details      |
| Oct-1997 | TRSI 31        | Traffic Signals<br>Span-wire mounting  |
| Oct-1997 | TRSI 32        | Traffic Signals<br>Span wire mounting<br>Assembly details                        |