MILL HILL PARK
INTERPRETIVE SIGNAGE PLAN

CITY OF TRENTON
MERCER COUNTY, NEW JERSEY

Prepared for:

HMR Architects
and
The City of Trenton

Prepared by:

Patrick Harshbarger, Principal Historian
Richard W. Hunter, Principal

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1. INTRODUCTION AND PURPOSE OF PLAN

In March 2014, Hunter Research, Inc., as a cultural resources sub-consultant to HMR Architects, was contracted with the City of Trenton to develop an interpretive signage plan for Mill Hill Park. This work is to take place in conjunction with preparation of plans to rehabilitate the historic Douglass House, a feature in the park.

Mill Hill Park is located in downtown Trenton on the Assunpink Creek at a site that has figured prominently in the city’s and the region’s history. The park incorporates the archaeological site of Mahlon Stacy’s Mill, a gristmill erected in 1679, which formed the economic nucleus around which “Trent Town,” later Trenton, developed. Until the late 19th century, much of the park lay within the millpond that formed upstream of the mill’s dam immediately east of where South Broad Street crosses the Assunpink Creek. During the American Revolution, the mill and an adjacent stone-arch bridge (a precursor of the current bridge now located along the west edge of the park) were a scene of action during the First and Second Battles of Trenton of December 25, 1776 and January 2, 1777. During the Second Battle, General George Washington drew up his forces on high ground along the south bank of the Assunpink to guard against a British attack across the bridge. After the American Revolution in 1789, George Washington was greeted by the citizens of Trenton beneath a triumphal arch erected over the bridge on his way to New York City for his Presidential inauguration.

During the first half of the 19th century, the millpond continued to provide waterpower to important Trenton industries, including the Eagle Cotton Mill, one of the city’s earliest textile mills, associated with the prominent Waln family of Philadelphia, and a later paper mill. Trentonians made use of the pond for recreational activities including boating, skating and bathing. In the last decades of the 19th century, the millpond was filled for the construction of commercial and residential properties, most of which faced away from the Assunpink Creek onto the adjacent streets that now bound the park. In 1888, Jackson Street was extended across the Assunpink Creek with construction of an iron-truss bridge, which remains in the park although it is no longer open to vehicular traffic. The bridge, fabricated by South Trenton’s New Jersey Steel and Iron Company, is considered one of the most important examples of iron-truss construction in the state.

The middle decades of the 20th century were unkind to downtown Trenton and properties in the vicinity of Mill Hill were neglected and allowed to deteriorate. In the early 1970s, the City of Trenton acquired property along Assunpink Creek, cleared it, and landscaped it to create Mill Hill Park. The Douglass House, which served as Washington’s headquarters prior to the Second Battle of Trenton, was relocated to the park. As recently as 2012, the park landscape has been renewed with new pathways and plantings. Portions of a brick wall that bounded the north side of the park have been removed to provide better public access from South Broad and East Front Streets.

As a follow-up to the renewed park landscaping and completion of rehabilitation of the Douglass House, which will include public restrooms, the City of Trenton proposes to install interpretive signage to
Educate visitors about the history associated with Mill Hill Park and other nearby locations of related historical interest in the City of Trenton.

The purpose of the interpretive signage plan is to identify and recommend specific locations in the park for the signs, to identify themes for each sign, and itemize the most important messages and graphics to be conveyed to visitors by the signs. Recommendations are also made for the design and fabrication of the signs.

2. RECOMMENDED SIGN LOCATIONS AND INTERPRETIVE THEMES

This plan recommends the installation of a tri-side upright interpretive wayfinder and “kiosk” at the main park entrance at the corner of South Broad and East Front Streets, and of three low-profile single-panel interpretive signs in various locations throughout the park (Figures 1 and 2). Consideration in the placement of signs has taken into account such factors as proximity to features of historic interest; location near existing pathways and preferably near entrances to the park for maximum visibility; placement on level ground (or ground that can be leveled) to create small ADA-compliant “platforms” for visitors to pull off the path, out of the way of pedestrian and bike traffic, to read and enjoy the signs; and ability to assign themes to each sign that tell coherent, interesting historical stories that logically relate to the surrounding park landscape. Small maps on each sign will direct visitors to take a self-guided tour of the park by following the signs.

Sign #1 – Tri-Side Upright Interpretive Wayfinder and Kiosk (Photograph #1)

This sign will be located at the northwest corner of the park near the entrance at the corner of South Broad and East Front Streets. It is recommended that the kiosk be placed on the south side of the oval plaza on its own platform located between the trees that have been recently planted there. This will place the kiosk out of the way of pedestrians and spaces used for special events but in a prominent enough location that it will be visible to park visitors as they approach the park from one of its principal entrances. Placing the kiosk between trees should eventually provide an inviting shady location once the trees mature, while also aiding in preventing the 7-foot tall kiosk from appearing out of proportion with the mostly open park landscape.

The tri-side kiosk will accommodate three graphic panels. The first panel (Panel 1A) will interpret the American Revolution in Trenton; the second panel (Panel 1B) will interpret the history of Mill Hill Park as an evolving urban landscape; and the third panel (Panel 1C) will be an interpretive wayfinder to other points of historic and cultural interest in downtown Trenton.

Sign #1, Panel 1A – The American Revolution in Trenton. This sign will be located at the northwest corner of the park, on the south side of the circular plaza at the corner of South Broad and East Front Streets. Visitors reading the sign will be facing south southwest, with a view toward the South Broad Street Bridge and the higher ground beyond. This landscape perspective will help visitors to visualize the Second Battle of Trenton where Washington’s troops took up defensive positions on the high ground beyond the bridge. Thematicallly the sign will be about Trenton’s role in the American Revolution and the battle
Figure 1. Mill Hill Park, Proposed Signage Locations.
Figure 2. Mill Hill Park, Proposed Signage Locations on Park Landscaping Plan (2010).
Photograph 1. Mill Hill Park, Location for Interpretive Tri-Side Kiosk Sign #1. This kiosk would be located at the northwest corner of the park, on the south side of the circular plaza at the corner of South Broad and East Front Streets. The three-sided sign would be on the themes of the American Revolution in Trenton, the history of Mill Hill Park, and a wayfinding guide to sites of historic and cultural interest in downtown Trenton and beyond (Photographer: Patrick Harshbarger, April 2014) [HRI Neg. #14001/D3:01].
action that took place within the bounds of the modern-day city. The sign’s principal focus will be the Second Battle of Trenton, but the First Battle of Trenton, and Washington’s strategy for the Winter 1776-77 campaign will also be summarized. Key graphics will include a selection of historic maps and illustrations depicting military action, an image of George Washington, and the famous drawing of Washington’s greeting upon returning to the site of the battle and crossing the bridge in 1789.

**Sign #1, Panel 1B – Mill Hill Park, an Evolving Urban Landscape.** This sign will be located at the northwest corner of the park, on the northeast side of the circular plaza at the corner of South Broad and East Front Streets. Visitors reading the sign will be facing east overlooking the park lawn with a view of the Douglass House and the Jackson Street Bridge in the distance. This landscape perspective will help visitors to think about the local urban landscape and how it has changed over time. Thematically, the sign will be about the one hundred years or so from the time Mill Hill Park ceased being a millpond in the 1870s to becoming a park in the 1970s. The history of some important buildings formerly in the park will be addressed, including the Assunpink Block (commercial buildings built over the stream), the Temperance Hall and the Trenton Athenaeum. Also addressed, briefly, will be the history of Mill Hill Historic District, with an invitation to walk through the park, over the Jackson Street Bridge and into this historic area of the city. Key graphics will include a selection of historic maps and photographs.

**Sign #1, Panel 1C – Wayfinding to Sites of Cultural and Historical Interest in Downtown Trenton and Beyond.** The third panel on the sign will be a wayfinding guide to other sites of cultural and historical interest in downtown Trenton and beyond. Components of this panel will include a map, photographs and short blurbs about each site with invitations to explore and visit. A preliminary list of sites includes the Trent House, Douglass House, Old Masonic Lodge (Visitors Center), Old Barracks, War Memorial, Petty’s Run, New Jersey State House and State House Complex, New Jersey State Museum and Trenton Battle Monument. Other sites of historic interest such as the First Presbyterian Church and Cemetery, St. Michael’s Church, the Trenton Friends Meeting House, or City Hall may also be mentioned. This panel will feature information about the Crossroads of the American Revolution and related sites within the region such as Washington’s Crossing and the Princeton Battlefield. Website URL or QR code will be provided to link visitors to information about these sites and the Crossroads of the American Revolution National Heritage Area.

**Sign #2 – Mahlon Stacy’s Mill & Waterpower on the Assunpink**

This sign will be located at the southwest corner of the park near the entrance on South Broad Street. Visitors reading the sign will be on the north side of the pathway facing the Assunpink Creek, so as to be able to relate the sign to the stream as a source of waterpower for the mill (Photograph 2). The focus of the sign will be the history of the gristmill on this site and the importance of waterpower in Trenton’s economic development. Information will be organized around three periods of development: Stacy’s Gristmill (1679-1714), the Trenton Mills (1714-1814), and the Eagle Carding Mill/McCall Paper Mill (1814-1872). Key graphics will include a selection of historic maps.
Photograph 2. Mill Hill Park, Location for Low-Profile Interpretive Sign #2. This sign will be located at the southwest corner of the park near the entrance on South Broad Street. The sign will be on the theme of Mahlon Stacy’s Mill, the Trenton Mills and Waterpower on the Assunpink (Photographer: Patrick Harshbarger, April 2014) [HRI Neg. #14001/D1:53].
Photograph 3. Mill Hill Park, Location for Sign #3. This sign will be located at the south end of the bridge on the west side of the main pathway crossing the bridge. The sign will be on the theme of the historic Jackson Street Bridge (Photographer: Patrick Harshbarger, July 2014) [HRI Neg. #14001/D3:05].
Photograph 4. Mill Hill Park, Location for Sign #4. This sign will be located to the northwest corner of the Douglass House, west of the front entry walkway and oriented to the brick sidewalk that provides an entrance into the park. The sign will be on the theme of the historic Douglass House. It will replace the small sign currently in front of the house (Photographer: Patrick Harshbarger, July 2014) [HRI Neg. #14001/D3:04].
and photographs depicting the mill and its setting. An explanation of milling and waterpower technology will also be provided, identifying key features in the landscape (now buried or gone).

**Sign #3 – The Jackson Street Bridge (Photograph 3)**

This sign will be located at the south end of the bridge on the west side of the main pathway crossing the bridge. The sign will be just south of the intersection of this pathway with the one along the Assunpink Creek. This sign will interpret the history of the Jackson Street Bridge. Topics to be included will be the history of the establishment of this crossing in 1888, the late 19th-century technology of pin-connected iron-truss bridges and the importance of this bridge as a surviving example, and the history of the New Jersey Steel & Iron Company. Recent work to rehabilitate the bridge will also be highlighted. Graphics will include a selection of historic maps and photographs, a diagram showing an “exploded view” of the bridge to show how it is assembled, and illustrations of the works of the iron company.

**Sign #4 – The Historic Douglass House (Photograph 4)**

This sign will be located in front of the Douglass House, slightly west of the front entry walkway and oriented to the East Front Street sidewalk. Visitors reading the sign will be facing the house. This sign will replace the current small identifying sign in the house’s front lawn. It would be desirable, although not necessary, for the City to consider the possibility of relocating some of the clutter of traffic signs and control devices immediately in front of the Douglass House to improve the view and make the interpretive sign more visible. This interpretive sign will tell the story of the Douglass House from the time of its construction in 1766, through its multiple relocations (1876, 1923 and 1972), and the importance that the people of Trenton placed on the house due to its association with George Washington and the planning of the Second Battle of Trenton. This fascinating story of historic preservation against all odds (and the high probability that the part of the house where Washington actually met was lost in the first move) will have relevance to the city’s present-day efforts to recognize and promote its heritage. Graphics will include a selection of historic photos of the Douglass House and of the city celebrating important historical events (e.g., Centennial, Bicentennial, Patriot’s Week, etc.). A map will show the house’s three previous locations. Recent work to rehabilitate the house will also be highlighted.

3. PROPOSED SIGN DESIGN AND FABRICATION

The tri-side interpretive kiosk will be a custom design for Mill Hill Park, although it should be based on the National Park Service Base Signage System – Tri-Sided (Appendix B). It is proposed that the top of the kiosk be ornamented and include the name of the park, similar to several examples that have been identified through web searches (Photograph 5). The steel frame should be similar in color and fabrication to the three low-profile signs so that they are recognizable as a group, but the kiosk can feature some custom details. It is suggested that the final design be developed in consultation with the graphic designer and fabricator.

It is proposed to model the low-profile cantilevered signs after the interpretive signs recently installed at the Petty’s Run Archaeological Site, also in downtown Trenton and designed by Hunter Research (Photograph 6, Appendix A). The idea is to use the same panel size and sign supports for continuity, but provide Mill Hill Park with a different graphic identity achieved by a separate color and graphic design pack-
Photograph 5. Sample Interpretive Kiosks and Wayfinding Signs.
Photograph 6. Sample Petty’s Run Interpretive Sign. It is recommended to pattern the Mill Hill Park interpretive signs after those at Petty’s Run (Photographer: Patrick Harshbarger, March 2013).
age applied to the actual sign panels. The six signs for Mill Hill Park will form an interpretive unit, just as the six signs at Petty’s Run do.

The Mill Hill Park signs will be 36-by-48-inch panels supported by two-leg steel sign standards and frames. This type of sign is often referred to as a National Park Service cantilevered sign. The sign panel is mounted approximately 32 inches above ground level and is slanted away from the reader at a 45-degree angle. This provides maximum readability for visitors, but has less visual impact than a vertical sign on a park landscape. A small amount of site preparation is required to install the signs including leveling and paving, if necessary, the area where visitors stand to read the signs and the placement of concrete footers for bolting the leg bases. Plans and specifications from the Petty’s Run project are included as Appendix A of this report. It is recommended that these be modified for use with the Mill Hill Park signage.

4. NEXT STEPS

The next step is for the project team and the City of Trenton to review this signage plan. The plan may be shared with other interested parties, such as the Crossroads of the American Revolution and the Old Mill Hill Society, for comment. After comments have been considered, Hunter Research requests formal approval of the plan so that we can proceed to graphic design of the sign panels. The deliverable for the next phase of the project will be the original artwork for the sign panels. This artwork will be suitable for providing to a contractor to fabricate the signs. Plans and specifications for the installation and fabrication of the signs will be included in the construction document package.
Appendix A

SAMPLE SIGNAGE PLAN AND SPECIFICATIONS (PETTY’S RUN)
SECTION 10 1400 – EXTERIOR INTERPRETIVE SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:
   1. Interpretive Panel Signage

B. Related Sections include the following:
   1. Division 03 Section "Cast-in-Place Concrete" for Concrete footing and wall for support of guardrail and gate.
   2. Section 05500 - Metal Fabrications; metal secondary supports for frame, post and base.

1.3 REFERENCES

A. American National Standards Institute (ANSI).

1.3 SUBMITTALS

A. Submit under provisions of Section 01300
B. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for signage. Submit manufacturer’s and processor’s technical data and installation instructions
C. Shop Drawings: Containing plans, elevations, sections and details for all work in this section, and indicating location of signs, finishes and method of attachment.
D. Graphics for Signage: Submit desired graphics to be applied to each component specified.
E. Samples: For each finish specified, two complete sets of color chips representing manufacturer's full range of available colors, patterns and finishes.
F. Verification Samples: For each finish product specified, one full-size sign representing actual product, color, patterns, and finishes. Include method of raised symbols and copy

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: Manufacturer shall have five years experience manufacturing and fabricating products of similar type and scope as those specified in this section.
B. Installer Qualifications: Installation performed by installer specialized and experienced in work similar to that required for this project.

C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
   1. Finish areas designated by Architect.
   2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
   3. Refinish mock-up area as required to produce acceptable work

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Materials shall be delivered to the location in unopened, labeled factory containers. Upon delivery, materials shall be inspected for damage. Deficient materials shall not be used.

1.6 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

B. The Contractor shall furnish all labor, materials, services and incidentals to produce and install the required number of outdoor interpretive signs.

C. The Owner's Representative will deliver to the Contractor all digital files and color paper printouts for reference, as required, for exhibit panel fabrication. Digital files will be in Adobe Illustrator format and will include all associated files (pantones, fonts, symbols, scans and TIF files).

PART 2 - PRODUCTS

2.1 MATERIALS

A. High Pressure Laminate (HPL) Panels: Provide six (6), 30" x 48" high-pressure laminate sign panels. HPL graphic sign material is composed of several layers of phenolic resin impregnated kraft filler paper, surfaced by a layer of melamine graphic image substrate, imaged with UV resistant, pigment based process color inks, and translucent UV overlay, and a UV resistant melamine clear overlay, plus an optical coating that will resist no less than 99% of all sunlight and UV rays, as well as provide a graffiti resistant coating. The table below shows the panel number, name, layout and size requirements.

B. Exterior Interpretive signage panel: Provide six (6) signage of type and size indicated on Drawings.
   1. Interpretive Signage #1: PETTY’S RUN ARCHAEOLOGICAL SITE
   2. Interpretive Signage #2: CHANGING LANDSCAPES
   3. Interpretive Signage #3: WEST FRONT STREET
   4. Interpretive Signage #4: PETTY’S RUN
   5. Interpretive Signage #5: FRONT STREET PAPER MILL
   6. Interpretive Signage #6: TRENTON STEEL WORKS

C. Sign Frame and Base: Provide six (6) metal sign frame and base units as detailed on the Drawings and Specifications.
2.2 SIGN FRAME AND BASE

A. The fabrication of these units shall be as detailed on the Drawings and described herein. Use only specified fastening devices.

B. Frames shall be designed and built to hold 30” x 48” HPL exhibit panels. The frames shall be 2-legged base for free standing signs as shown on Drawings

C. Provide concealed fasteners. Fixtures to hold the frame in place must be tamperproof and durable to outside elements.

D. Paint color shall be black with powder coating. The second coat shall be applied to provide a textured non-glare pattern. The finish shall be free of runs, sags and other imperfections. The color shall be consistent from surface to surface. The paint shall be applied under dry, dust-free conditions at temperatures above 50 degrees F. Painting shall be done in a workman-like manner so as to produce an even film of uniform thickness. Edges, crevices, corners and joints shall receive special attention to ensure they are thoroughly cleaned and receive an adequate film thickness of paint.

E. The panels shall be installed in the frames so as to allow removal in the future. The completed assemblies shall be crated in materials and containers to ensure they will not be damaged under normal shipping conditions.

F. Crating and shipping costs will be paid by the Contractor

G. Prior to installation, HPL sign units shall be protected by storing in a secure area not exposed to dust, extreme changes in temperature or humidity.

2.3 FABRICATION

A. All panels shall be professionally screen printed producing clean, consistent prints of materials and ink compatible with the proposed process for the specified use.

B. The Contractor shall provide one set of color paper proofs at half size and one lab proof sample to the Owner’s Representative for approval prior to the production of final panels. Proofs shall accurately represent the image to be fabricated in color, clarity and consistency. Rejected proofs shall be corrected as required and resubmitted as specified above.

C. All edges of printed art are to be sharp and passage of ink when dry to be continuously even and opaque, with no bleeding whatsoever. Contractor is responsible to accurately apply the colored inks in perfect registration and with absolute duplication in accordance to industry standards. Contractor is responsible to touch up and clean up any and all minor imperfections at no additional cost to the Owner.

D. Colors and backgrounds will be printed, not sprayed or applied otherwise. All panels are to be consistent in color, opacity and quality.

E. Ink colors shall match the specified colors, be opaque, clean, able to withstand the laminate process and able to provide ten (10) years of color integrity in continuous outdoor exposure to ultraviolet radiation.

F. The laminate process requires that the printed paper shall be laminated and processed using exterior grade laminates and exterior solid phenolic core panels approved equivalent.

G. The panels shall be no less than 1/16” thick, opaque and with matte, non-glare finish. Panels shall be cured and trimmed, smooth on all edges, and cut within a tolerance of 1/32” to size required for final installation. Margins and bleed to be established with the sign manufacturer so that all text and graphics are clearly visible on the completed and framed sign.

H. The panels must be resistant to scratching, ink, paint, steam, acids and aromatics. All ink or paint markings shall be readily removable with soap and water or solvents without harm.
PART 3 - EXECUTION

3.1 EXAMINATION

A. Inspect conditions of substrate and other conditions, which may affect installation of signage.

B. Do not begin installation until substrates are within manufacturer's specified tolerances and have been prepared in accordance with manufacturer's instructions.

C. If substrate preparation is the responsibility of another installer, do not proceed with installation. Notify Architect of unsatisfactory preparation immediately.

D. Commencement of work is deemed as acceptance of installation conditions.

3.2 PREPARATION

A. Verify mounting heights and locations for signage will comply with specified requirements, including accessibility requirements.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions. Clean mounting locations of dirt, dust, grease or similar conditions that would prevent proper installation.

3.3 INSTALLATION, GENERAL

A. Signs will be installed in the locations as shown in drawings and as keyed to the sign numbering system. Install completed sign units square, plumb and accurately level in a workmanlike manner and in accordance with the Drawings and Specifications.

B. Provide footing for sign bases per Drawings and Specifications.

C. Clean completed sign unit surface with a soft cloth and soap and water, based on supplier recommendations. Abrasive cleaners shall not be used.

D. Finished signs will be inspected for blemishes, chips, scratches or other damage. Any sign not meeting requirements of this specification shall be rejected and promptly replaced at the Contractor's expense.

3.6 CLEANING, PROTECTION AND ADJUSTMENT

A. Cleaning and Protection: Protect all work from misuse or damage after installation has been completed. Work that is scratched, etched, or damaged may not be accepted by the Landscape Architect and Owner’s Representative, and shall be replaced with acceptable work, or, as approved, repaired, at no additional cost to the Owner.

B. Touch-up: In field, after installation and as approved by Landscape Architect, touch-up damaged products before Substantial Completion. If touch-up is not satisfactory as determined by Owner’s Representative, the item shall be removed and replaced at no expense to the Owner.

3.6 WARRANTY

A. Provide a written warranty issued in the name of the Owner and signed by the supplier stating that the sign panels have a guaranteed life of ten (10) years against fading, delaminating, discoloration, staining or cracking from the date of substantial performance.
Stabilization of Petty's Run Excavation

Part of 120 W. State Street
Trenton, NJ 08608

The New Jersey Department of the Treasury
DPMC
20 W. State Street
Trenton, NJ 08608

Wallace Roberts & Todd, LLC
100 Market Street
Philadelphia, PA 19106
(215) 406-5000

Sheet No.

DATE

STAMP

CHECKED

APPROVED

SECTION

L-502

1 INTERPRETIVE SIGN #1 - PLAN
SCALE: 1" = 1'-0"

2 INTERPRETIVE SIGN #2 - PLAN
SCALE: 1" = 1'-0"

3 INTERPRETIVE SIGN #3 - PLAN
SCALE: 1" = 1'-0"

4 INTERPRETIVE SIGN #4-6 AT METAL GUARDRAIL
- PLAN
SCALE: 1" = 1'-0"

5 INTERPRETIVE SIGN AT C/F, CONCRETE PAVING - ELEVATION / SECTION
SCALE: 1" = 1'-0"

6 INTERPRETIVE SIGN AT METAL GUARDRAIL - ELEVATION / SECTION
SCALE: 1" = 1'-0"
**STABILIZATION OF PETTY'S RUN EXCAVATION**

1. **SITE**

   - **Scale:** 6" = 1'-0"

2. **LIGHT POLE FOUNDATION - SECTION**

   - **Dimensions:**
     - 2'-8" long, 6" diameter, 3/4" embedment
     - 3/4" long, 6" diameter, 3-1/2" embedment

3. **FENCE POST FOOTING IN EARTH, TYP**

   - **Dimensions:**
     - 2'-0" long, 4" diameter, 2" embedment
     - 1" minimum edge distance

4. **POST ANGLE - SIDE ELEV, TYP**

   - **Dimensions:**
     - Top of footing 3"
     - 5/16" minimum edge distance

5. **BASE PLATE DETAIL**

   - **Dimensions:**
     - 1/4" diameter, 3/8" long
     - 3/8" long, 1/4" diameter

6. **CONDUIT**

   - **Dimensions:**
     - 2" diameter, 2" pitch, 1-3/4" x 3/4" x 1/8"

7. **GROUT**

   - **Dimensions:**
     - 3" long, 6" diameter, 6" embedment

8. **ANCHOR BOLTS**

   - **Dimensions:**
     - 3" long, 1/2" diameter, 1" minimum edge distance

9. **BASE PLATE DETAIL**

   - **Dimensions:**
     - 1/2" diameter, 1" long

10. **LIGHT POLE FOUNDATION - SECTION**

    - **Dimensions:**
      - 2'-0" long, 4" diameter, 2" embedment
      - 1" minimum edge distance

11. **FLAT HEAD, TORQUE SCREW W/ 14" - 20 HOLE**

    - **Dimensions:**
      - 18-8 STAINLESS STEEL COUNTERSUNK
      - 1/2" diameter, 3/8" long

12. **1/8" STEEL CORE PANEL**

    - **Dimensions:**
      - 2" long, 1" wide

13. **1/8" UNDERCUT HPL PANEL**

    - **Dimensions:**
      - 2" long, 1" wide

14. **EXPANSION ON ALL SIDES**

    - **Dimensions:**
      - 1/16" gap for panel expansion

15. **1/8" STEEL PLATE**

    - **Dimensions:**
      - 1" minimum edge distance

16. **COMPACTION FILL**

    - **Dimensions:**
      - 3" long, 6" diameter, 3-1/2" embedment

17. **TOP OF POST**

    - **Dimensions:**
      - 2" long, 1" wide

18. **3/4" DRILLED WEEP HOLES**

    - **Dimensions:**
      - 1/4" diameter, 3/8" long

19. **(3) 1/4" Ø 18-8 STAINLESS STEEL BOLTS**

    - **Dimensions:**
      - 3" long, 1/4" diameter

20. **BASE PLATE FOR PLATE METAL**

    - **Dimensions:**
      - 3" long, 1/4" diameter

21. **TUBULAR STEEL POST**

    - **Dimensions:**
      - 1-3/4" long, 3/4" diameter, 1/8" thick

22. **BENT PLATE**

    - **Dimensions:**
      - 1" long, 1" wide

23. **HSS 3X2X1/8 STEEL HIGH STRENGTH**

    - **Dimensions:**
      - 2" long, 1" wide

24. **SIGN FRAME - SIDE SECTION**

    - **Dimensions:**
      - 1/8" thick HPL on all sides

25. **SIGN FRAME - TOP SECTION**

    - **Dimensions:**
      - 1/8" thick HPL on all sides

26. **BASE PLATE DETAIL**

    - **Dimensions:**
      - 1/4" diameter, 3/8" long
      - 3/8" long, 1/4" diameter

27. **CONCRETE**

    - **Dimensions:**
      - 2" long, 1" wide

28. **STEEL SECTION**

    - **Dimensions:**
      - 2" long, 1" wide

29. **ANCHOR BOLTS**

    - **Dimensions:**
      - 3" long, 1/2" diameter

30. **BASE PLATE DETAIL**

    - **Dimensions:**
      - 1/4" diameter, 3/8" long
      - 3/8" long, 1/4" diameter

31. **COMPACTED FILL**

    - **Dimensions:**
      - 3" long, 6" diameter, 3-1/2" embedment

32. **TOP OF FOOTING**

    - **Dimensions:**
      - 2" long, 1" wide

33. **1/8" THICK HPL ON ALL SIDES**

    - **Dimensions:**
      - 2" long, 1" wide

34. **SPECIAL TUBULAR STEEL POST**

    - **Dimensions:**
      - 1-3/4" long, 3/4" diameter, 1/8" thick

35. **TOP OF FRAME IS CONNECTED**

    - **Dimensions:**
      - (3" from posts and at center)

36. **BENT PLATE**

    - **Dimensions:**
      - 1" long, 1" wide

37. **HSS 3X2X1/8 STEEL HIGH STRENGTH**

    - **Dimensions:**
      - 2" long, 1" wide

38. **STEEL: ALL STEEL SHALL BE GALVANIZED**

    - **Dimensions:**
      - VARIES

39. **FINISH: ALL STEEL SHALL BE BLACK POWDER COAT FINISHED**

    - **Dimensions:**
      - ALL STEEL SHALL BE BLACK POWDER COAT FINISHED

40. **45° LINE OF 1/8" UNDERCUT HPL PANEL**

    - **Dimensions:**
      - 1/8" long, 1/8" wide

41. **BASE PLATE DETAIL**

    - **Dimensions:**
      - 1/4" diameter, 3/8" long
      - 3/8" long, 1/4" diameter
Appendix B

NATIONAL PARK SERVICE BASE SIGNAGE SYSTEM – TRI-SIDED
VIS Hardware Assembly Series

The chart to the right provides an overview of the base hardware available in the VIS system.

All VIS bases are available in a variety of material options including weathering steel, galvanized steel, and painted aluminum. Painted aluminum bases are available in three paint color finishes.

The material and finish appropriate for a specific base depends primarily on the sign's purpose and its location. Weathering steel is an excellent choice for low maintenance in many forested and desert sites; galvanized steel is very durable in coastal and other salt–water and corrosive environments; and painted aluminum may be a good choice for an urban environment.

The Low Profile base is the preferred style for NPS interpretive outdoor exhibits. Available in a variety of material finishes and sizes the base's simple, unadorned form makes it appropriate for any park landscape.

Wall Mount frames are designed to display information on vertical surfaces. Frames are available in a variety of materials and sizes.

TS Series - Trailsides
Low to the ground, Trailsides are an excellent choice for plant ID markers, site markers, trail guides, and anywhere a small discreet sign is required.

LP Series - Low Profile

UP Series - Uprights
Designed to stand vertically so they attract attention, Upright bases typically provide practical information to visitors rather than site–specific interpretation. Like the Low Profile base, Upright bases are available in a variety of material finishes and sizes. Bases can be fabricated as a single unit, double or triple inline unit, and tri-sided and four-sided units. The single unit and inline bases can be configured for one or two-sided display. All of the uprights, (in certain preset sizes) are available with or without a roof structure. Each base is designed to hold panels or other accessories including bulletin cases.

TM Series - Trailsides

UP Series - Uprights

WM Series - Wall Mount

Upright Base
Upright Tri (Tri-Side)
Upright Quad (Four-Side)
Upright Tri-Side Series Overview (UPTR)

Upright structures can be configured in a tri-sided arrangement. The Tri-Sided Series can support exhibit panels, bulletin cases and other accessories. The Upright Tri Series, like all NPS hardware, is typically embedded directly into the ground, although other mounting methods are available to accommodate site conditions. The Tri-Sided Series is available in weathering or galvanized steel, or in painted aluminum.
24" Series
Scale: 1/2" = 1'

36" Series
Scale: 1/2" = 1'

UPTR-24x36
Custom Posts

UPTR-36x48
Custom Posts