Riverline Transit-to-Trail Signage
Bicycle Wayfinding Sign System

Annotated DD
March 11, 2022
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Basic Standards</td>
<td>1.00</td>
</tr>
<tr>
<td>Logo, art, color, material and typography specifications</td>
<td></td>
</tr>
<tr>
<td>2. Design Intent Documentation</td>
<td>2.00</td>
</tr>
<tr>
<td>Sign elevations, graphic layouts and construction details</td>
<td></td>
</tr>
<tr>
<td>3. Performance Specifications</td>
<td>3.00</td>
</tr>
<tr>
<td>Sign performance, quality assurance and execution requirements</td>
<td></td>
</tr>
<tr>
<td>4. Appendix</td>
<td>4.00</td>
</tr>
<tr>
<td>Associated details and documents for reference</td>
<td></td>
</tr>
</tbody>
</table>
Section 1 Basic Standards
### Basic Standards

#### Client/Project
- Project No.: 21TSTC314001
- Date: 03.11.22

#### Revisions Scale

© 2022 Cloud Gehshan

---

#### Graphic Standards

### Color Schedule

#### Paints
- All paint & printed vinyl finishes require final clear coat finish. If the Matthews Super Satin Clear is not available, substitute with an exterior-grade automotive polyurethane clearcoat, or a clear laminate.

All materials, clear coats and/or laminates should be warranted to 10 years in exterior environments.

- **PPG Architectural Finishes, Inc.**
  - Phone: 888.774.7732
  - Website: [www.ppghpc.com](http://www.ppghpc.com)

- **Matthews Paint Company**
  - Phone: 800.323.6593
  - Website: [www.matthewspaint.com](http://www.matthewspaint.com)

- **3M Commercial Graphics Division**
  - Phone: 800.328.3908
  - Website: [www.3M.com/us/graphicarts](http://www.3M.com/us/graphicarts)

See section 4 appendix for material & paint information.

---

#### Materials to Be Purchased

<table>
<thead>
<tr>
<th>Number</th>
<th>Color</th>
<th>Specification – color to match</th>
<th>Fabrication Process</th>
</tr>
</thead>
</table>

Note: For signs not in the right-of-way, client may elect to substitute with exterior-grade non-reflective printable vinyl for cost effectiveness.

---

#### Paint Matches

<table>
<thead>
<tr>
<th>Number</th>
<th>Color</th>
<th>Specification – color to match</th>
<th>Fabrication Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>Purple</td>
<td>PMS 7680C</td>
<td>Satin Finish Matthews Acrylic Polyurethane Paint, topcoat with 290228Sp Super Satin Clear</td>
</tr>
</tbody>
</table>

---

This drawing represents design intent only. All measurements and installation guidelines are approximate.

Sign fabricator will be responsible for:

- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.
This drawing represents design intent only. All measurements and installation guidelines are approximate.

Sign fabricator will be responsible for:
- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.
Basic Standards

Client/Project Project No.
Date Revisions Scale
© 2022 Cloud Gehshan

Riverline Transit-to-Trails Signage
Bicycle Wayfinding Sign System
03.11.22
21TSTC314001

As Noted

This drawing represents design intent only. All measurements and installation guidelines are approximate.

Sign fabricator will be responsible for:
- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.

Graphic Standards

Arrows & Symbols

Notes
The graphic element(s) shown on this page have been carefully created, sized and spaced.
Artwork for these element(s) will be provided to the fabricator as electronic, digital files.
FABRICATOR MUST USE ARTWORK SUPPLIED; NO SUBSTITUTE ARTWORK OR TYPESETTING WILL BE ACCEPTED.

Symbols

Arrows

S1 Directional Arrow

Symbols

S2 Light Rail
S3 Bike Repair
S4 Bike

This drawing represents design intent only. All measurements and installation guidelines are approximate.

Sign fabricator will be responsible for:
- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.

Client/Project
Riverline Transit-to-Trails Signage
Bicycle Wayfinding Sign System

Date
03.11.22

Revision

Scale
As Noted

Page Number

© 2022 Cloud Gehshan
This drawing represents design intent only. All measurements and installation guidelines are approximate.

Sign fabricator will be responsible for:
- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.

**Graphic Standards**

**Notes**
No substitute typefaces will be accepted.
Refer to sign layout drawings for line spacing requirements.

F1 – ClearviewHwy
2-B

```
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,.
```

F2 – Gotham Rounded Book

```
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,.
```

F3 – Gotham Rounded Medium

```
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,.
```

F4 – Gotham Rounded Bold

```
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890 &!?,.
```
This drawing represents design intent only. All measurements and installation guidelines are approximate.

Sign fabricator will be responsible for:

- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.

This page contains information on graphic standards.

No substitute typefaces will be accepted.
Refer to sign layout drawings for line spacing requirements.
Section 2 Design Intent Documentation
Sign System Overview

This drawing represents design intent only. All measurements and installation guidelines are approximate. Sign fabricator will be responsible for:

- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.

**Sign System Overview**

- **ST2**
  - (on-trail)
  - Trail ID: 12" x 17"
  - ST2a: bandit strap mount
  - ST2b: U-channel post mount

- **ST3**
  - (on-trail)
  - Trail Connections: 14" x 36"
  - ST3a: bandit strap mount
  - ST3b: U-channel post mount

- **ST5**
  - (on-road)
  - Trailblaze Sign: 14" x 19"
  - Single destination
  - ST5a: bandit strap mount
  - ST5b: U-channel post mount
  - ST5d: fence mount

- **ST6**
  - (on-road)
  - Two-destination Directional Sign: 14" x 24"
  - Up to two destinations, no mileage
  - ST6a: bandit strap mount
  - ST6b: U-channel post mount
  - ST6d: fence mount

- **ST7**
  - (at stations)
  - Station connections sign: 12" x 24"
  - Up to four destinations, with mileage
  - ST7a: bandit strap mount
  - ST7b: U-channel post mount
  - ST7d: wall/fence mount
**ST2 – Trail ID**

Sign layout and mounting height

**Typical Mounting Height**

- **Scale:** 3/4" = 1'-0"

---

**Notes:**

- Mounting types:
  - (a): bandit strap, see page 2.8
  - (b): unistrut post mount, see page 2.9
  - (d): fence mount, see page 2.10

- Painted to match Ps on back and returns

- Sign templates provided by designer. Sign fabricator is responsible for customizing messages for each sign location.

---

**Design Intent Documentation**

Date Revisions Scale
03.11.22 As Noted

This drawing represents design intent only. All measurements and installation guidelines are approximate. Sign fabricator will be responsible for:

- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.
Sign layout and mounting height

ST3 – Trail Connections

Delaware River Heritage Trail
Circuit Connections

Notes:
- Mounting types:
  (a): bandit strap, see page 2.8
  (b): unistrut post mount, see page 2.9
  (d): fence mount, see page 2.10

Sign templates provided by designer. Sign fabricator is responsible for customizing messages for each sign location.

Circuit Connections
Columbia Bridge Trailhead 500 ft
Girard Avenue Trailhead 1.25 mi
Philadelphia Museum of Art 1.5 mi
Philadelphia Zoo 2.25 mi
East Park Canoe House Trailhead 4.2 mi

Discover 100s of miles of happy at circuittrails.org

Design Intent Documentation

This drawing represents design intent only. All measurements and installation guidelines are approximate. Sign fabricator will be responsible for:
- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.

Enlarged Elevation

Single logo layout

Double logo layout

Notes:
- Mounting types:
  (a): bandit strap, see page 2.8
  (b): unistrut post mount, see page 2.9
  (d): fence mount, see page 2.10

Sign templates provided by designer. Sign fabricator is responsible for customizing messages for each sign location.

Circuit Connections
Columbia Bridge Trailhead 500 ft
Girard Avenue Trailhead 1.25 mi
Philadelphia Museum of Art 1.5 mi
Philadelphia Zoo 2.25 mi
East Park Canoe House Trailhead 4.2 mi

Discover 100s of miles of happy at circuittrails.org

Design Intent Documentation

This drawing represents design intent only. All measurements and installation guidelines are approximate. Sign fabricator will be responsible for:
- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.
This drawing represents design intent only. All measurements and installation guidelines are approximate. Sign fabricator will be responsible for:

- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.

Notes:
Mounting types:
(a): bandit strap, see page 2.8
(b): unistrut post mount, see page 2.9
(d): fence mount, see page 2.10

Sign templates provided by designer. Sign fabricator is responsible for customizing messages for each sign location.
This drawing represents design intent only. All measurements and installation guidelines are approximate. Sign fabricator will be responsible for:

- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.

Notes:
Mounting types:
(a): bandit strap, see page 2.8
(b): unistrut post mount, see page 2.9
(d): fence mount, see page 2.10

Sign templates provided by designer. Sign fabricator is responsible for customizing messages for each sign location.

ST6 – Two-destination Directional Sign

Sign layout and mounting height

1. Typical Mounting Height
   scale: 3/4"=1'-0"

2. Elevation - typical layout
   scale: 3"=1'-0"
   1/8" thick aluminum message plate, digital printed graphics on high intensity prismatic reflective sheeting

3. Elevation - six-line layout
   scale: 3"=1'-0"
Notes:
Mounting types:
(a): bandit strap, see page 2.8
(b): unistrut post mount, see page 2.9
(d): fence mount, see page 2.10

Sign templates provided by designer. Sign fabricator is responsible for customizing messages for each sign location.
Typical Bandit Strap Mounting Details (a)

1. Typical Section
   - Stainless strap through bracket
   - Existing post
   - Aluminum U-channel welded to back of sign face

2. Typical Bandit Strap Mounting Bracket Details
   - Stainless strap through bracket
   - Existing post
   - 1/8” thick aluminum message plate

3. Typical Perspective
   - Route slots for stainless steel strapping
   - 3/8” thick alum U-channel with miter cut edges
   - Aluminum U-channel welded to back of sign face

4. Bracket detail
   - Stainless strap through bracket
   - 3/8” thick alum U-channel

NOTE: THIS BRACKET DESIGN IS FOR A TYPICAL TAPERED ALUM OR WOOD LIGHT POST. FABRICATOR MUST VERIFY CONDITIONS OF EXISTING PROJECT RELATED LIGHT POSTS BEFORE BUILDING BRACKETS. BRACKET SIZE FOR TIGHT FIT AROUND EXISTING POSTS.

This drawing represents design intent only. All measurements and installation guidelines are approximate. Sign Fabricator will be responsible for:
- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.
Typical U-Channel Post Mount Details (b)

Large U-channel post; paint to match to Ps
Ribbed aluminum plate; paint to match to post color

Threaded studs welded to back of sign face
Tamper-proof nuts and washers fasten to studs

U-channel post painted match to Ps
1/8" thick aluminum message plate

Photograph 1 Typical U-Channel Post mount
scale: 1 1/2"=1'-0"

Photograph 2 Elevation
scale: 1 1/2"=1'-0"

Photograph 3 Typical Plan
scale: 1 1/2"=1'-0"

Photograph 4 Rear View
scale: 1 1/2"=1'-0"

Photograph 5 Typical footer installation detail
scale: 1 1/2"=1'-0"

NOTE: USE LAP SPLICE BREAKAWAY OR SIMILAR DEVICE AT BOTTOM OF POST (FOOTER DEPTH TBD BY FABRICATOR)

U-channel post painted match to Ps
1/8" thick aluminum message plate

Painted U-channel post w/ super satin clear coat. Apply Teflon coating or equivalent where in contact with the concrete to prevent corrosion just below soil line.

Backfill to match grade conditions
varies from 4"-6"
minimum 3"

Painted U-channel post painted match to P1

1/8" thick aluminum message plate

Tamper-proof nuts and washers fasten to studs

Threaded studs welded to back of sign face

Ribbed aluminum plate; paint to match to post color

THANK YOU FOR YOUR UNDERSTANDING.
This drawing represents design intent only. All measurements and installation guidelines are approximate. Sign Fabricator will be responsible for:

- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.

1 **Existing Condition – BDT-ST5d-105**

2 **Typical Fence Mount Section**

3 **Typical Plan**

3 Rear View

- 1/4” thick aluminum message plate
- Brackets attached to back of message plate and fastened to stair fence rail with tamper-proof fasteners; fabricator to field verify bracket placement
- Fabricator to field verify bracket placement

**Notes**

- Existing fence
- Brackets attached to back of message plate and fastened to stair fence rail with tamper-proof fasteners; fabricator to field verify bracket placement
- Existing fence
- Varies

**Scale:** 1 1/2” = 1'-0”

© 2022 Cloud Gehshan

Client/Project Project No.
Riverline Transit-to-Trails Signage
Bicycle Wayfinding Sign System

21TSTC314001

**Notes**

**Scale:** 1 1/2” = 1'-0”

© 2022 Cloud Gehshan
Section 3 Performance Specifications
PART 1 – PERFORMANCE REQUIREMENTS

1.01 Work Included
A Labor, materials, equipment and services necessary for the fabrication, delivery and installation of signage as described in the detail drawings.
B Refer to the message schedule for a complete list of sign types and quantities. Signs listed on message schedule should match those indicated on sign location plans. Contractor to notify owner of any discrepancies in sign quantities by doing take-offs before manufacturing signs.
C For all signs, all fasteners, support structures required for installation.

1.02 Related Work
A General carpentry and painting requirements: all work to be done in a professional manner and to the highest trade standards.
B Use OSHA safety requirements if necessary for pedestrian or vehicular safety.

1.03 Requirements
A Observe applicable codes, MUTCD guidelines, sign ordinances and zoning requirements.
B Shop Drawings
NOTE: All final shop drawings must have an engineering stamp from a state licensed engineer before being approved for fabrication.
1 Submit one (1) set of shop drawings as outlined below.
2 Include plans, elevations, sections and large scale details of sign wording and lettering layout. Show anchorages and accessory items. Provide mounting templates.
3 Show fabrication and installation details, including all sign components such as extrusions, brackets, bracing, hardware, internal framing, foundations, etc.
4 Provide engineering data to confirm viability of signs and supports, including structural stability of all signs, fasteners and foundation design.
5 Structural details must be reviewed and stamped by a state certified structural engineer, ensuring structural integrity and safety.
C Maintenance Data
1 Submit each manufacturer’s recommendations for maintenance of all items.
2 The instructions shall cover cleaning, repair, repainting and maintenance of signs, including data on cleaning solutions or methods of application which should be avoided.

1.04 Warranty
All warranties on fabricator’s standard contract forms must be modified to match warranty criteria mentioned hereafter. Any changes in warranty length or criteria must be negotiated prior to contract signing. Any discrepancies from fabricator’s contract are superseded by this performance specification.
ALL PAINT FINISH WARRANTIES MUST BE ACCOMPANIED BY SIGNED WARRANTY AGREEMENTS WITH THE PAINT MANUFACTURER AND FINISHER.
A Warrant all products (including, but not limited to, materials, hardware and finishes) against any and all defects for a minimum period of 2 years from date of installation.
B Correct any and all defects in material and/or workmanship which may appear during the warranty period by restoring defective work to the standard of the contract documents at no cost to the owner and to the owner’s satisfaction.
C Vinyl shall be warranted for five years against delamination from substrate.
D Correct any and all paint finish defects which may appear during the warranty period by restoring defective work to the standard of the contract documents at no cost to the owner and to the owner’s satisfaction.

1.05 Alternate Fabrication
A The drawings show design intent only. The fabricator is responsible for fabrication and overall level of quality. Any changes in design, materials, fabrication techniques or details necessary to the successful completion of this project should be communicated to owner in a timely fashion. Further development and engineering of designer’s details (for fabrication and installation) is expected and should be shown in the shop drawings.
B The designer recognizes that manufacturers may have shop fabrication techniques that differ from details shown. Suggested changes in fabrication that do not alter the design intent nor reduce the quality will be considered by the designer provided they are submitted in sketch form as soon as possible prior to shop drawing preparation.
C Any value engineering changes during fabrication shall be discussed with owner and the associated groups.

Corrosion developing beneath paint surfaces of the support systems (except when it is the result of obvious vandalism or other external damage to the paint surfaces).
2 Corrosion of the fastenings.
3 Fading of the colors when matched against a sample of the original color and material.
4 Discoloration of metal finishes.

Additional corrections shall include, but not be limited to, the following:
1 Bubbling, crazing, chalking, rusting or other disintegration of the sign face or of the messages or of the edge finish of the sign inserts or panel.
2 Fading of the colors when matched against a sample of the original color and material.
### PART 1 - PERFORMANCE REQUIREMENTS (continued)

#### 2.01 Quality Assurance

<table>
<thead>
<tr>
<th>Part</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Materials used for this project shall be new and not reconditioned or re-purposed.</td>
</tr>
<tr>
<td>B</td>
<td>Use only personnel thoroughly skilled and experienced with the products and method for fabrication and installation of signage specified.</td>
</tr>
<tr>
<td>C</td>
<td>The owner shall reserve the right to reject any shop drawings, samples or other submittals, as well as any finished product or installation, that cannot meet the standard of quality established. Any such decision will be considered final and not subject to recourse.</td>
</tr>
<tr>
<td>D</td>
<td>The intent of the contract documents is to provide everything necessary for a complete contract. In the event of conflict or omission, the fabricator shall consult the owner for resolution.</td>
</tr>
<tr>
<td>E</td>
<td>Materials and hardware not specified, but necessary to the complete functioning of the sign, shall conform to the quality level established.</td>
</tr>
<tr>
<td>F</td>
<td>Use design templates, following exact font, letter-spacing, size, symbol and artwork specifications. Contact the designer and/or client for layout clarification.</td>
</tr>
</tbody>
</table>

#### 2.02 Preferred material suppliers

Vendors and products listed in section 1 are specified for this project. These products have either been tested on prior projects and have delivered proven results, or have properties unique to this project. Any suggested substitutions must have documentation demonstrating the same level of quality and warranty prior to bidding. Bids are subject to disqualification if unauthorized substitutions are used.

#### 2.03 FABRICATION

<table>
<thead>
<tr>
<th>Part</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Report any discrepancies between drawings, specifications and owner requirements and request direction from owner before proceeding.</td>
</tr>
<tr>
<td>B</td>
<td>Verify measurements in field as required for work fabricated to fit job conditions. Before starting work, examine adjoining work on which work of this section is in any way dependent for perfect workmanship and fit.</td>
</tr>
<tr>
<td>C</td>
<td>Make work in ample time not to delay job progress and deliver to job at such time as required for proper coordination. Fabricate work true to line and detail with clean, sharply defined profiles. Finish surfaces smooth unless otherwise specified.</td>
</tr>
<tr>
<td>D</td>
<td>Do cutting, punching, drilling and tapping required for attachment or other work coming in contact with signage work where indicated.</td>
</tr>
<tr>
<td>E</td>
<td>Changeability: fabricate signs in such a manner that each of the major mounting components may be removed and replaced with similar components by maintenance personnel, but not by unauthorized personnel.</td>
</tr>
<tr>
<td>F</td>
<td>Construction: fabricate all joints, corners, miters, etc., with work accurately machined, filed and fitted, rigidly framed together at joints and contact points. Carefully match all work to provide a perfect continuity of lines and design, with metal in contact having hairline joints. Make joints of such character and assembly to be strong and as rigid as adjoining sections. Make exposed joints where joint is least conspicuous. Corners shall be square as indicated. All edges shall be finished and free of saw marks.</td>
</tr>
<tr>
<td>G</td>
<td>Engineering: the system shall be engineered to eliminate buckling of any members, failure at any points, distortions or other damage.</td>
</tr>
<tr>
<td>H</td>
<td>The system shall be engineered to be rigid with minimum deflection and rotation under stress and shall be able to withstand movement, shear and torsional loads.</td>
</tr>
<tr>
<td>I</td>
<td>Exposed areas of signs shall not oil can. Signs shall be designed as structurally self-supporting units. The suspension systems and substructure shall be designed by the sign manufacturer to perform in accordance with the contract documents.</td>
</tr>
</tbody>
</table>

#### 3.01 Anchors and fastenings

<table>
<thead>
<tr>
<th>Part</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Sign panels - general</td>
</tr>
<tr>
<td>1</td>
<td>Surface finish: provide surface finishes that are free from lines, motting, ridges, variations in color, orange peel, bubbles, pinholes, motting, crazing, grit and coarse particles. This applies to all methods of fabrication and finishing. Use clear coatings for durability, surface protection, appearance and maintenance.</td>
</tr>
<tr>
<td>2</td>
<td>Note: all colors, are to match references exactly. Washed out or weak colors will not be accepted.</td>
</tr>
<tr>
<td>J</td>
<td>Anchors and fastenings</td>
</tr>
<tr>
<td>1</td>
<td>Mechanical</td>
</tr>
<tr>
<td>a</td>
<td>Provide anchors and fasteners required to secure work in place.</td>
</tr>
<tr>
<td>b</td>
<td>Surface finish: do not expose fastenings on surface of sign panels unless specifically noted otherwise. Do not deform, distort or discolor sign face surfaces by attachment of concealed fastenings.</td>
</tr>
<tr>
<td>c</td>
<td>Corrosion resistance: all fastenings shall be non-corrosive and resistant to oxidation or other corrosive action, of the same composition completely through their cross sections, particularly when used below grade. Use highest quality stainless steel hardware and fasteners.</td>
</tr>
<tr>
<td>d</td>
<td>Anchors, inserts or fasteners shall be compatible with sign materials, shall not result in galvanic action or chemical interaction of adhesives and shall have demonstrable and sufficient strength for intended use.</td>
</tr>
<tr>
<td>e</td>
<td>Steel anchors and fastenings for exterior use shall be galvanized in accordance with ASTM A53.</td>
</tr>
<tr>
<td>f</td>
<td>Stability: fabricate and install signs with fastenings to withstand all actions imposed by use; 30 psf wind perpendicular to surfaces, water, ice, snow loads and similar forces.</td>
</tr>
<tr>
<td>g</td>
<td>Anchor bolts in concrete shall be cast in place. Manufacturer shall furnish instructions for the setting of anchors and bearing plates. Manufacturer shall ascertain that the items are properly set during the process of the work.</td>
</tr>
<tr>
<td>h</td>
<td>Color: secure work with fastenings of same color and finish as the components they secure where they are exposed to view, unless noted otherwise.</td>
</tr>
<tr>
<td>i</td>
<td>Security: All exposed fasteners must be vandal resistant and have vandal-proof “spanner” type slots to be removed only with a special driver head.</td>
</tr>
</tbody>
</table>
PART 2 – QUALITY ASSURANCE

K Messages
The fabricator is responsible for the message layout of all directional message panels. Fabricator must produce scale drawings of message layouts for review prior to fabrication. Layout spacing and letter heights to be based on typical layout guideline drawing pages.

1 Layout: layouts are shown on the drawings. All messages including braille shall be flush left, unless noted otherwise. Correct line breaks are indicated in the “Message” column of the schedule and should be followed exactly. Braille line breaks shall match those of the raised copy. Any problems in message layout shall be brought to the attention of the owner for solution.

2 Fabrication: execute all signs such that letter forms are true and clean. Letter forms with rounded corners, or chipped, nicked, cut or ragged edges, will not be accepted. This applies to all methods of fabrication and copy application.

3 Copy: message copy on detail drawings is for layout purposes only. Actual copy is listed in the “Message” column of the schedule. Certain copy may be provided later by the owner.

4 Capitalization: directions for upper and lower case are found in the “Message” column of the schedule. Certain copy may be provided later by the owner.

5 Single or double faces: all signs that are double sided will be noted as such in the drawings and message schedule. For double sided signs, the message will be indicated as “Side A” and “Side B” or “Side C” and “Side D”. This will be noted as such in the drawings and “Message” column of the schedule and should be followed exactly.

B Locations: refer to drawings for approximate locations. The owner must be present for field placement of signs. Manufacturer and owner to confirm that sign locations and sight lines are free from all visual obstruction (i.e. signs, lights, doors overhangs, sprinklers, etc.) Locations must comply with relevant Life and Safety codes mandated by the state, federal, and local regulatory commissions. Any discrepancies or apparent deviations from drawing locations because of different site conditions shall be brought to the attention of the owner and designer for solution.

C For ground-mounted signs, provide whatever replacement concrete, pavers, bricks, etc. are necessary to match adjacent surfaces exactly. Seams should be parallel or perpendicular to sign face and be symmetrical around post(s).

3.01 Installation
A Install sign units and components with concealed fasteners, unless otherwise shown. Refer to detail drawings for general method. Verify each surface in file to determine specific, appropriate hardware.

Drawings in this package may not indicate any below-ground or in-wall structural tie-ins or connections that may be necessary to assure stable and secure installation of signs. Sign fabricator is responsible for determining where such connections are necessary and for coordinating with related trades to make them.

B Locations: refer to drawings for approximate locations. The owner must be present for field placement of signs. Manufacturer and owner to confirm that sign locations and sight lines are free from all visual obstruction (i.e. signs, lights, doors overhangs, sprinklers, etc.) Locations must comply with relevant Life and Safety codes mandated by the state, federal, and local regulatory commissions. Any discrepancies or apparent deviations from drawing locations because of different site conditions shall be brought to the attention of the owner and designer for solution.

E Note that signage experiences heavy public use. Strong environmental conditions such as weather and vandalism may be routine problems. Signs must be securely mounted. Contractor is responsible for suggesting alternative fabrication or installation methods if required to prevent theft or vandalism.

F Install signs to be level, plumb and at the proper height. Cooperate with other trades for installation of sign units.

G Clean and polish, remove excess adhesive.

3.02 Cleanup
A Upon completion of the installation, remove all waste, dirt, wrappings and excess materials, tools and equipment, and carefully and thoroughly clean all surfaces to the satisfaction of the owner.

3.03 Property Damage
A Protect all adjacent surfaces from damage and pay the cost of repairing any damage to the property caused by delivery or installation of materials. In all cases, match existing surfaces.

D For aluminum/steel components direct buried into concrete or soil, provide appropriate Teflon coating; or 5 mils of bitumen paint; or 2 mils of lacquer. This process will reduce the risk of corrosion from chemical reactions with the concrete mixture or soil.
Section 4 Appendix
Super Satin Clear Kit

This Super Satin Clear Kit is a two-component, 1.24 ready-to-spray VOC compliant, acrylic polyurethane clear, which was developed to provide extended performance under the toughest conditions.

Super Satin Clear is formulated with an excellent UV screening package that ensures protection of the color and substrate underneath or as a stand-alone clear coat.

Super Satin Clear is designed for topcoat applications to protect color coated substrate components, vinyl graphics or to highlight architectural metals, while providing extreme durability and protection.

---

MPC194

290 228SP

Super Satin Clear Kit

This Super Satin Clear Kit is a two-component, 1.24 ready-to-spray VOC compliant, acrylic polyurethane clear, which was developed to provide extended performance under the toughest conditions.

Super Satin Clear is formulated with an excellent UV screening package that ensures protection of the color and substrate underneath or as a stand-alone clear coat.

Super Satin Clear is designed for topcoat applications to protect color coated substrate components, vinyl graphics or to highlight architectural metals, while providing extreme durability and protection.

---

290 228SP

Directions for Use

Surface Preparation:
Substrate should be prepared according to product instructions prior to clearcoat application.

Mix Ratio:
Clear Catalog Appropriate 2.8 or 5.5 VOC Reducer
3.5 parts 1 part 5 parts
4 parts

Pot life is 4 hours at 77°F (25°C)

Reducers:

| Exempt MAP Reducers (2.8 VOC) | Exempt Cool Temperature, 60 - 75°F (16 - 24°C) |
| Exempt Warm Temperature, 70 - 85°F (21 - 29°C) |
| Exempt Hot Temperature, 80°F (27°C) & above |
| Low VOC MAP Reducers (3.5 VOC) |
| Cool Temperature, 60 - 75°F (16 - 24°C) |
| Warm Temperature, 70 - 85°F (21 - 29°C) |
| Hot Temperature 80°F (27°C) & above |

Spray Set Up:

Air Pressure: Conventional: 40 - 50 psi at the gun
HVLP: 10 psi at the cap

Pot Pressure: 15 - 18 psi

Gun Set Up: Siphon Feed: 1.4 mm 0.055 fluid tip
HVLP: 1.4 mm 0.055 fluid tip

Application:
Apply: 1 full wet coat
Flash: 5 - 10 minutes between coats
Follow with a second full wet coat

Recommended Wet Film Thickness: 5.1 - 7.5 mils
Recommended Dry Film Thickness: 1.5 - 2.2 mils

Caution: All 2-component crosslinking tops or does significantly at temperature below 60°F or 16°C. Note drop in visible dried painted coatings due to these conditions at low of gloss, poor water and chemical resistance, decreased durability and improper curing will occur.

Drying Times:

Dry to Touch: 1 - 2 hours
Dry to Handle: 10 - 12 hour
Dry to Raise: 4 hour

---

Appendix

Notes:
No substitutions will be permitted.
Appendix

Notes:

No substitutions will be permitted.

---

Directions for Use

Equipment Cleaning:

- Clean up equipment promptly with 45 360SP Cleanz-It or an all-purpose cleaning solvent.
- Do not leave mixed material in equipment.

Technical Data:

Exempt Reducers VOC Information

<table>
<thead>
<tr>
<th>Product Code</th>
<th>VOC Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>290 228SP Super Satin Clear</td>
<td>1.29</td>
</tr>
<tr>
<td>283 520SP Catalyst</td>
<td>0.95</td>
</tr>
<tr>
<td>6370SP, 6371SP, 6372SP Exempt Reducers</td>
<td>0.00</td>
</tr>
<tr>
<td>Ready to Spray</td>
<td>1.24</td>
</tr>
</tbody>
</table>

Low VOC Reducers VOC Information

<table>
<thead>
<tr>
<th>Product Code</th>
<th>VOC Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>290 228SP Super Satin Clear</td>
<td>2.11</td>
</tr>
<tr>
<td>283 520SP Catalyst</td>
<td>0.95</td>
</tr>
<tr>
<td>6380SP, 6381SP or 6382SP Reducer</td>
<td>2.32</td>
</tr>
<tr>
<td>Ready to Spray</td>
<td>5.17</td>
</tr>
</tbody>
</table>

With Conventional Reducers

<table>
<thead>
<tr>
<th>Product Code</th>
<th>VOC Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>45280</td>
<td>2.95 VOC</td>
</tr>
<tr>
<td>45290</td>
<td>2.95 VOC</td>
</tr>
<tr>
<td>6379</td>
<td>2.89 VOC</td>
</tr>
<tr>
<td>6396</td>
<td>2.93 VOC</td>
</tr>
</tbody>
</table>

Performance Characteristics

- Volume solids (RTS) 29.50%
- Weight solids (RTS) 10.70 lbs.
- Theoretical Coverage (1 in 10 @ 100% transfer efficiency) 512.5 sq.ft./RTS gal.

Application Conditions

- 60°F (16°C) minimum
- 100°F (38°C) maximum
- 85% maximum
- 5° above dew point

Gloss

- 30 units with 60° meter

Flash Point

- Below 100°F (27°C)

---

290 228SP

Super Satin Clear Kit

Important:

The contents of this package may have to be blended with other components before the product can be used. Before opening the package, be sure you understand the warning messages on the labels of all components, since the mixture will have the hazards of all parts. Improper spray technique may result in a hazardous condition. Follow spray equipment manufacturer’s instructions to prevent personal injury or fires. Follow directions for incompatible use. Wear and use protective clothing, observe all applicable precautions.

See Material Safety Data Sheet and Labels for additional safety information and handling instructions.

---

The World’s Finest Coating For Architectural Signage

760 Pittsburgh Drive
Delaware, OH 43015
Toll Free: 800-323-6593
Toll Free FAX: 800-947-0377
www.MatthewsPaint.com
Part No. MPC194   03/12
© 2012 Matthews Paint

EMERGENCY MEDICAL OR SPILL CONTROL INFORMATION - US (412) 434-8115; CANADA (514) 645-1320; MEXICO 1-800-68-21-400

See Material Safety Data Sheet and Labels for additional safety information and handling instructions.
Dear Matt:

Thanks for your inquiry about project warranties for Matthews brand paint products. Hopefully this letter will provide sufficient guidelines for you to work effectively with clients and fabricators to develop and manage warranty expectations on major projects.

First and foremost, it is our policy to issue project-specific, written warranties only to fabricator(s) who apply our coatings. Application is inherently part of the quality and durability of any coating; we warrant our coatings when they are properly mixed and applied. Shop factors such as application temperature, humidity, catalyst freshness, mixing accuracy, film thickness, and recoat times can all impact proper cross-linking and durability of the cured coating. We try to minimize application related risks by assessing whether fabricator(s) are qualified and knowledgeable.

There are a number factors which affect the duration and terms of a project warranty.

First is the inherent durability of the chosen coating system. The following table illustrates several basic product factors to consider. Choosing factors furthest to the right, and in combination maximizes system durability and warrantability.

<table>
<thead>
<tr>
<th>Pigments/Color</th>
<th>Good</th>
<th>Better</th>
<th>Best</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic pigments</td>
<td>N/SOA Clear</td>
<td>VOC/MAP-LV Clear</td>
<td>Super Satin Clear</td>
</tr>
<tr>
<td>Inorganic pigments</td>
<td>Flat Satin Semigloss Gloss</td>
<td>MAP-LV Gloss</td>
<td></td>
</tr>
</tbody>
</table>

Second is the environment in which signs will be installed. Sunnier and hotter climates will degrade coatings more quickly. Southern exposures receive the most sun, followed by eastern, western, and northern. Simply put, longer and more intense UV exposure leads to more rapid degradation; a normal process. Caustic or moisture-laden environments also accelerate degradation, such as coastal, high humidity, and areas near salted roadways. In more rigorous cases, primer and/or clearcoat selection are key project considerations.

Other factors include sign design for rounded (not sharp) edges, water run-off, thermal expansion/contraction, difficult-to-coat areas, and substrate choice.

Finally, we cannot and do not warrant systems using non-Matthews coatings in combination with our coatings (e.g. a different primer), for obvious reasons.

Given all these considerations, you can understand why we take warranties seriously. Ultimately, our warranties are intended to cover users against defective paint product. Beyond that, we try to match the coating to the need and environment, and establish realistic expectations for service life. As a general rule, warranty range for non-clearcoated systems would be 3-6 years, depending on product, color, and exposure. We have seen systems last much longer, but we do not warrant longer. Clearcoats extend life 15-20% for like resin (i.e. clearcoat product same line as the color), and more for a superior clearcoat resin. For clearcoated systems, warranty range would be 4-7 years, depending on color and exposure. Warranty range for Super Satin Clear would be 8-10 years.

The stated warranty windows are offered for general understanding, but we reserve sole authority to determine the duration and terms of any project warranty; even to not warrant. Regardless of warranty offer, we will always stand by and replace product found to be defective, as packaged from our factory.

If you have a specific project warranty request, please contact Randall Crabtree or me, or have your fabricator contact their local MPC sales rep. We will work with involved parties to gather appropriate information such as product line, substrate, primer, color, installation environment(s), etc., and determine an appropriate warranty package to offer given the specifics.

I hope this explanation helps you work with clients more effectively. If you have questions, please do not hesitate to contact me at 847-370-0651.

Best Regards,

John P. Brandmeier
Director, Business and Operations
brandmeier@ppg.com
3M™ High Intensity Prismatic Digital Sheeting 3930DS (White)

February 2016

Color Test – Ordinary Colored Sheeting

Conformance to standard chromaticity (x, y) and luminance factor (Y%) requirements shall be determined by instrumental method in accordance with ASTM E1964 on sheathing applied to smooth aluminum test panels cut from Alloy 6061-T6 or 6062-H26. The values shall be determined on a HunterLab ColorFlex 45/0 spectrophotometer. Computations shall be done for CIE Illuminant D65 and the 2º standard observer.3

Table A - Daytime Color Specification Limits 1

<table>
<thead>
<tr>
<th>Color</th>
<th>x</th>
<th>y</th>
<th>(x')</th>
<th>(y')</th>
<th>(L')</th>
<th>(M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>0.303</td>
<td>0.350</td>
<td>0.368</td>
<td>0.366</td>
<td>0.340</td>
<td>0.393</td>
</tr>
<tr>
<td>Daytime Lynce Limit (7%)</td>
<td>Min.</td>
<td>Max.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daytime Lynce Limit (7%)</td>
<td>0.276</td>
<td>0.329</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daytime Lynce Limit (7%)</td>
<td>27</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Coeficients of Retroreflection \(R_{c}\)

When laminated with 3M™ ElectroCut™ Film 170C Clear and applied to properly prepared sign substrates High Intensity Prismatic Digital Sheeting provides long-term retroreflective durability and durability. Digital sheeting is not suitable for a signage application without 170C Clear overlaminate film.

Photometrics

Daytime Color \((x, y, Y)\)

The chromaticity coordinates and total luminance factor of the retroreflective Digital sheeting, when laminated with 3M™ ElectroCut Film 170C Clear, conform to Table A.

Test for Coefficients of Retroreflection

Conformance to coefficient of retroreflection requirements shall be determined by instrumental method in accordance with ASTM E810 “Test Method for Coefficient of Retroreflection of Retroreflective Digital Sheeting”, and per E-810 the values of 0º and 90º rotation are averaged to determine the \(R_c\) in Table B.

Table B - Minimum Coefficient of Retroreflection \(R_c\) for new sheeting (cd/lux/m²)

<table>
<thead>
<tr>
<th>Observation Angle</th>
<th>(0^\circ)</th>
<th>(90^\circ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(-4^\circ) Entrance Angle</td>
<td>380</td>
<td>190</td>
</tr>
<tr>
<td>90º Entrance Angle</td>
<td>175</td>
<td>72</td>
</tr>
</tbody>
</table>

Entrance Angularity Performance in Regard to Orientation

High Intensity Prismatic Digital Sheeting is designed to be an effective wide angle reflective sheeting regardless of its orientation on the substrate or ultimate orientation of the sign after installation. However, because the efficiency of light return from cube corner reflectors is not equal at all application orientations, especially with increasing entrance angles, it is possible to get the widest entrance angle light return when the sheeting is oriented in a particular manner. When high entrance angle (>50º) performance is required for given signs (e.g., Keep Right Symbols), it can be obtained easily by specifying the application orientation of the completed signs. In these situations the completed sign should have the sheeting positioned at the 0º orientation (downweb direction perpendicular to the road). When the flat side of the diamond (direction of diamond chain links) is vertical in the completed sign, sheathing is said to be at a 0º orientation. When the “primary groove line” or, flat side of the diamond shape) is horizontal in the completed sign, the sheathing is said to be at a 90º orientation. (Figure 6)

Figure 1 - Primary Groove Line

Unless the sign location and/or position calls for extra-wide entrance angularity performance or a specific installation direction is required by customer specification, signs and applied copy (letters, arrows, borders and shields) can be fabricated and installed using the application orientation that most efficiently utilizes the reflective sheeting.

Notes:

1. The four pairs of chromaticity coordinates determine the acceptable color in terms of the CIE 1931 Colorimetric System.

2. High Intensity Prismatic Digital Sheeting 3930DS (White) February 2016

3M™ High Intensity Prismatic Digital Sheeting 3930DS (White) with digital printing
Adhesive
High Intensity sheeting has a pressure sensitive adhesive that is recommended for application at temperatures of 65°F (18°C) or higher.

Digital Printing Process
Prior to printing regulated traffic sign images on High Intensity Prismatic Digital Sheet 3930DS, the printing file must use only spot color swatches defined with the 3M™ naming convention. The following files may then be printed using only 3M™ Pico Inkjet Series 8900UV Ink with an EFI H1625-DS printer.

Overlamination Process
High Intensity Prismatic Digital Sheet 3930DS must be laminated with 3M™ ElectroCut Film 1170C Clear with a pneumatically adjusted, heated top roll laminator. The laminator roll must be a minimum of 48 inches in width. High Intensity Prismatic Digital Sheeting 3930DS must be laminated with 3M™ ElectroCut Film 1170C Clear with 65ºF (18ºC) or higher.

Sign Fabrication Methods
Application
High Intensity Prismatic Digital Sheet 3930DS incorporates a pressure sensitive adhesive and should be applied to the sign substrate at temperature of 65°F (18°C) or higher by any of the following methods:

- Mechanical squeeze roll applicator – refer to 3M Information Folder (IF) 4. Application to extrusions that are edge wrapped requires sufficient softening of the sheeting. This can be accomplished by directing additional heat to the “next to last” edge roller. This practice will increase productivity and minimize cracking.
- Hand squeeze roll applicator – refer to 3M IF 1.6.

Application of High Intensity Prismatic Digital Sheet 3930DS (White) for complete signs or backgrounds must be done with a roll laminator, either mechanical or hand driven.

Hand Application
Hand application is recommended for legend and copy only. Refer to 3M Information Folder 1.5 for more details.

Hand applications will show some visual irregularities, which are objectionable to aesthetically critical customers. These are more noticeable on darker colors. To obtain a close-up uniform appearance, a roll laminator must be used. All direct applied copy and border MUST be cut at all metal joints and squaged at the joints.

Splices
High Intensity Prismatic Digital Sheet 3930DS must be butt spliced when more than one piece of sheeting is used on one piece of substrate. The sheeting pieces should not touch each other. This is to prevent buckling as the sheeting expands in extreme temperature and humidity exposure.

Double Faced Signs
The sheeting on the bottom side of a double faced sign can be damaged if rolled through a squeeze roll applicator with an unprotected steel bottom roller. The use of a semi-soft flat sheet between the steel roller and the applied sign face will provide protection from damage. A material such as a rubber mat, tag board or cardboard is recommended.

Substrates
For traffic sign use, substrates found to be most reliable and durable are properly prepared aluminum sheets and extrusions. Users are urged to carefully evaluate all other substrates for adhesion and sign durability. Other substrates that may be satisfactory for proper application of sheeting will have the following characteristics:

- Clean
- Smooth
- Flat
- Rigid
- Dimensionally stable
- Weather resistant
- Non-porous
- High surface energy (passes water break test)

Refer to Information Folder 1.7 for surface preparation recommendations. Substrates with low surface energy may require additional preparation such as flame treatment, mechanical abrasion or use of adhesion promoters prior to sheeting application. Guide sign extrusions may be edge wrapped. Flat panels or unwrapped extrusions are to be carefully trimmed so that sheeting from adjacent panels does not touch on assembled signs. High Intensity Prismatic Digital Sheet 3930DS is designed primarily for applications to flat substrates. Any use that requires a radius of curvature of less than five inches should also be supported by rivets or bolts. Plastic substrates are not recommended where cold shock performance is required. Sign failures caused by the substrate or improper surface preparation are not the responsibility of 3M.
Applying Cut-Out Copy

3M™ High Intensity Prismatic Digital Sheeting 3930DS (White) may be processed into traffic signs by applying cut-out copy as described below. 3M assumes no responsibility for failure of sign face legends or backgrounds that have been processed with materials other than the matched component imaging materials listed in Table D.

Table D – Matched Component Materials compatible with High Intensity Prismatic Digital Sheeting 3930DS

<table>
<thead>
<tr>
<th>Material Component</th>
<th>Nominal™ Film</th>
<th>Digital Imaging</th>
<th>Skysheet</th>
<th>Premasking Tape</th>
<th>Premasking Tape</th>
<th>Transfer Tape</th>
</tr>
</thead>
<tbody>
<tr>
<td>1170C Clear</td>
<td></td>
<td>BM900V</td>
<td>SCW-G50</td>
<td>SCPM-2</td>
<td>SCPM-3</td>
<td>TFM-S</td>
</tr>
</tbody>
</table>

High Intensity cut letters may be applied to High Intensity Prismatic Digital Sheeting 3930DS to create a sign legend. Direct applied copy must be cut at all panel seams and carefully trimmed back so that sheeting from adjacent panels do not touch each other on assembled signs. Refer to Information Folder 1.10 for more information.

Storage and Packaging

High Intensity Prismatic Digital Sheeting 3930DS (White) should be stored in a cool, dry area, preferably at 65-75°F (18-24°C) and 30-50% relative humidity and should be applied within one year of purchase. Rolls should be stored horizontally in the shipping carton. Partially used rolls should be returned to the shipping carton or suspended horizontally from a rod or pipe through the core. Unprocessed sheets should be stored flat. Finished signs and applied blanks should be stored on edge.

Avoid banding, crating, or stacking signs. Package for shipment in accordance with commercially accepted standards to prevent movement and chafing. Store sign packages indoors on edges. Panels or finished signs must remain dry during shipment and storage. If packaged signs become wet, unpack immediately and allow signs to dry. Refer to Information Folder 1.11 for instructions on packing for storage and shipment.

Installation

Nylon washers are required when twist style fasteners are used to mount the sign.

Cleaning

Signs that require cleaning should be flushed with water, and then washed with a detergent solution and soft bristle brush or sponge. Avoid pressure that may damage the sign face. Flush with water following washing. Do not use solvents to clean signs. Refer to 3M Information Folder 1.10 for more information.

Health and Safety Information

Read all health hazard, precautionary, and first aid statements found in the Safety Data Sheets (SDS) for important health, safety and environmental information. To obtain SDS sheets for 3M products, go to 3M.com/SDS, or by mail, or in case of an emergency, call 1-800-364-3577.

Warranty Information

Warranty Coverage Overview

The durability of 3M™ High Intensity Prismatic Digital Sheeting 3930DS (White) and finished signs will depend upon substrate selection and preparation, compliance with recommended application procedures, geographic area, exposure conditions, and maintenance. Maximum durability of 3930DS (White) sheathing can be expected in applications subject to vertical exposure on stationary objects when processed and applied to properly prepared aluminum according to 3M recommendations provided in Information Folder 1.7 on Sign Substrate Surface Preparation. The user must determine the suitability of any nonmetallic sign backing for its intended use.

Sign failures caused by the substrate or improper surface preparation are not the responsibility of 3M. Applications to unprimed, excessively rough or non-weather resistant surfaces, or exposure to severe or unusual conditions can shorten the performance of such applications. Signs in mountainous areas that are covered by snow for prolonged periods may also have reduced durability. Atmospheric conditions in certain geographic areas may result in reduced durability.

Periodic sign inspection and regular sign replacement are strongly recommended in order for agencies to establish their own effective service life expectation.

3M Basic Product Warranty

3M High Intensity Prismatic Digital Sheeting 3930DS (“Product”) is warranted (“Basic Warranty”) to be free of defects in materials and manufacture at the time of shipment and to meet the specifications stated in this product bulletin. If the Product is proven not to have met the Basic Product Warranty on its shipment date, then a buyer’s exclusive remedy, and 3M’s sole obligation, at 3M’s option, will be refund or replacement of the Product.

3M MCS™ Warranty, MCS Warranty for Traffic, and Limited Remedy

For the MCS Warranty, MCS Warranty for Traffic, and limited remedies applicable to the Product, refer to the 3M™ Digitally-Imaged Sign Warranty Bulletin.

Limitations of Liability

2M WILL NOT UNDER ANY CIRCUMSTANCES BE LIABLE TO A BUYER FOR DIRECT (OTHER THAN THE APPLICABLE LIMITED REMEDY PREVIOUSLY STATED), SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOSS OF PROFITS) IN ANY WAY RELATED TO A PRODUCT OR THIS PRODUCT BULLETIN, REGARDLESS OF THE LEGAL OR EQUITABLE THEORY ON WHICH SUCH DAMAGES ARE SOUGHT.

Additional Limitations

See the 3M™ Digitally-Imaged Sign Warranty Bulletin for terms, additional limitations of your warranty, if any, and limitations of liability.

Other Product Information

Always confirm that you have the most current version of the applicable Product Bulletin, Information Folder or other product information from the 3M Website at http://www.mmm.com/tsp.

IF 1.4 Instructions for Interstate Squeeze Roll Applicator
IF 1.5 Hand Application Instructions
IF 1.6 Hand Squeeze Roll Applicator
IF 1.7 Sign Base Surface Preparation
IF 1.80 Cutting, Premasking, and Prespacing
IF 1.90 Sign Maintenance Management
PB 1170 ElectroCut™ Film Series

2022 Cloud Gehshan

Notes:

- 3M™ High Intensity Prismatic Digital Sheeting 3930DS (White) with digital printing
This drawing represents design intent only. All measurements and installation guidelines are approximate. Sign Fabricator will be responsible for:

- Verifying all dimensions, structures, and existing conditions in the field prior to execution of shop drawings.
- Notifying and coordinating the appropriate groups of any potential issues or obstructions that will affect the design intent prior to installation.
- Obtaining any necessary engineering seals or permits.
- Verifying compliance with ADA and local sign codes with the appropriate groups for final approval prior to fabrication.

Notes:
3M™ High Intensity Prismatic Digital Sheet-ling 3930DS (White) with digital printing