

**Wayfinding and Signage System Program  
Downtown Miami, Florida**

**DESIGN INTENT  
DOCUMENTATION DRAWING PACKAGE**

*(11 December 2010)*

**REVISION:**

**(#1) April 20, 2012**

**(#2) November 30, 2012**

**(#3) August 16, 2013**

**(#4) March 12, 2014**

**(#5) May 2, 2014**

**(#6) July 9, 2015**

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Florida License # PE72196  
Florida COA # 8644



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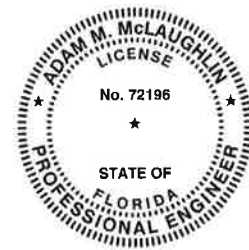
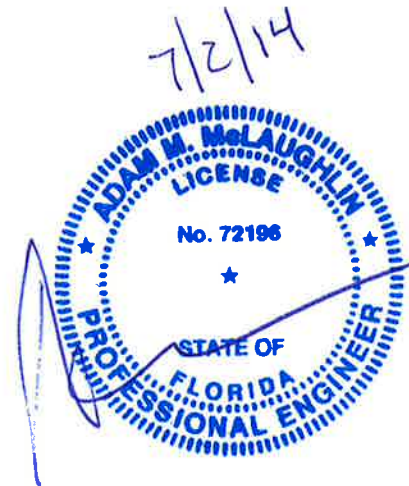


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**STRUCTURAL DESIGN ONLY**



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GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**DOWNTOWN MIAMI  
WAYFINDING AND SIGNAGE PROGRAM  
BID DOCUMENTATION PACKAGE**

**DESIGN CRITERIA:**

**Location:**

Downtown Miami, Florida

**Design Codes:**

2010 Florida Building Code  
2008 FDOT Design Standards

**Wind Design Data:**

Ultimate Design Wind Speed, Vult = 175 mph  
Nominal Design Wind Speed, Vasd = 136 mph

Risk Category = II

Wind Exposure "C"

**GENERAL NOTES:**

1. All work to be done within existing government owned rights of way.
2. Concrete design as  $f'c=4000$  PSI., MIN. Special inspection not required.
3. Bolt Steel - Stainless steel type 316 - All hardware to be tamper proof.
4. All Steel Poles to be made from ASTM A53 Grade B Steel ( $F_y= 35$  KSI)
5. All Aluminum members grade 6061-T6.
6. Sign Cabinets shall be fabricated in the shop of an approved fabricator.
7. Allowable soil pressures based on 2010 FBC Table 1806.2 Class 4 material or better. Special inspection not required. (If soft or sandy soil, collapsing or unstable soil, organic materials or groundwater are encountered, immediately contact the engineer of record for additional foundation requirements.)
8. Calculations of sign area based on worst case load to 1 of 2 poles.
9. Anchor bolts ASTM F1554 Grade 36, U.N.O.
10. Reinforcing steel ASTM A615, Grade 60.
11. Provide 3" min. clear concrete cover on all steel embedded in concrete footing unless noted otherwise.
12. Aluminum welding to conform to AWS D1.2 / D1.2H: 2008 Structural welding code: Aluminum.
13. Sign Installer shall field verify that the site conditions are consistent with these drawings prior to sign installation. Notify engineer of record immediately if site conditions vary from these drawings.
14. Provide protective coating for all steel to be in contact with earth.
15. Provide isolation of dissimilar materials including a protective coating for all aluminum to be in contact with concrete and for all aluminum to be in contact with steel.
16. Provide slope away from base of pole and anchorage.
17. TRANSPO Break-Safe and Pole-Safe support systems shall be installed per manufacturers specifications.
18. Capacities for TRANSPO Break-Safe and Pole-Safe support systems per manufacturer supplied technical data.
19. The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these design intent drawings, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these design intent drawings as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

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**STRUCTURAL DESIGN ONLY**

**SECTION 1** | Signage Drawings

STRUCTURAL DESIGN ONLY

**A. Graphic Standards**

**STRUCTURAL DESIGN ONLY**

PRIMARY TYPEFACE

ClearviewHwy 2-W

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

1234567890 ' '!@#\$%^

Amongst the several mechanical Arts that have engaged my attention, there is no one which I have pursued with so much steadiness and pleasure, as that of Letter Founding.

Library

acceptable

Library

NOT acceptable

Library

NOT acceptable

123A

acceptable

123A

NOT acceptable

123A

NOT acceptable

STRUCTURAL DESIGN ONLY

SPECIFICATIONS


All type shall be set exactly as specified. Substitutions will only be accepted, at the Client's or Designer's discretion, where they match the specified typeface in every detail. The Contractor shall be aware that different versions of typesetting equipment may not satisfactorily match specified type faces and in such instances will not be acceptable.

Sometimes the Foot mark is mistaken for an apostrophe and an inch mark is mistaken for quotations. Below are examples of correct and incorrect apostrophe's for each typeface.

CLEARVIEW HWY 2-W

 This apostrophe is CORRECT.

PARK'S

 This apostrophe is INCORRECT.

PARK'S

NOTES

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CLIENT / PROJECT

Downtown Miami  
City of Miami, Florida

PROJECT NO.

SUBCONSULTANT

SHEET TITLE

DATE 10 December 2010

DRAWN BY: PR

Clearview Hwy 2-W  
Typography  
Specifications

Drawings of fabrications, materials, and details shall be checked by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

REVISIONS  
04/20/2012 PR  
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03/12/2014 PR  
05/02/2014 PR

SHEET NO.

A.1

SECONDARY TYPEFACE

# Helvetica Neue 95 Black

**ABCDEFGHIJKLMNOPQRSTUVWXYZ**

**abcdefghijklmnopqrstuvwxyz**

**1234567890 ‘”!@#\$%^**

**Amongst the several mechanical Arts that have engaged my attention, there is no one which I have pursued with so much steadiness and pleasure, as that of Letter Founding.**

**Library**  
acceptable

**Library**  
NOT acceptable

**Library**  
NOT acceptable

**123A**  
acceptable

**123A**  
NOT acceptable

**123A**  
NOT acceptable

**STRUCTURAL DESIGN ONLY**

**SPECIFICATIONS**

All type shall be set exactly as specified. Substitutions will only be accepted, at the Client's or Designer's discretion, where they match the specified typeface in every detail. The Contractor shall be aware that different versions of typesetting equipment may not satisfactorily match specified type faces and in such instances will not be acceptable.

Sometimes the Foot mark is mistaken for an apostrophe and an inch mark is mistaken for quotations. Below are examples of correct and incorrect apostrophe's for each typeface.

**HELVETICA NEUE 95 BLACK**

This apostrophe is CORRECT.  
**PARK'S**

This apostrophe is INCORRECT.  
**PARK'S**

**NOTES**

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**CLIENT / PROJECT**

**Downtown Miami  
City of Miami, Florida**

**PROJECT NO.**

**SHEET TITLE**

**Helvetica Neue 95 Black  
Typography  
Specifications**

**SHEET NO.**

**A.2**

**SUBCONSULTANT**

**DATE** 10 December 2010

**DRAWN BY:** PR

The project fabricator is responsible and in proximity to the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

**REVISIONS**  
04/20/2012 PR

11/30/2012 GS

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05/02/2014 PR

SECONDARY TYPEFACE

# Helvetica Neue 75 Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ

abcdefghijklmnopqrstuvwxyz

1234567890 “!@#\$%^

Amongst the several mechanical Arts that have engaged my attention, there is no one which I have pursued with so much steadiness and pleasure, as that of Letter Founding.

**Library**  
acceptable

**Library**  
NOT acceptable

**Library**  
NOT acceptable

**123A**  
acceptable

**123A**  
NOT acceptable

**123A**  
NOT acceptable

STRUCTURAL DESIGN ONLY

**SPECIFICATIONS**

All type shall be set exactly as specified. Substitutions will only be accepted, at the Client's or Designer's discretion, where they match the specified typeface in every detail. The Contractor shall be aware that different versions of typesetting equipment may not satisfactorily match specified type faces and in such instances will not be acceptable.

Sometimes the Foot mark is mistaken for an apostrophe and an inch mark is mistaken for quotations. Below are examples of correct and incorrect apostrophe's for each typeface.

**HELVETICA NEUE 75 BOLD**

 This apostrophe is CORRECT.  
**PARK'S**

 This apostrophe is INCORRECT.  
**PARK'S**

**NOTES**

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CLIENT / PROJECT

**Downtown Miami  
City of Miami, Florida**

PROJECT NO.

SUBCONSULTANT

SHEET TITLE

DATE 10 December 2010

DRAWN BY: PR

**Helvetica Neue 75 Bold  
Typography  
Specifications**

The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

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SHEET NO.

**A.3**



**LETTER SPACING**

Inconsistencies in Letter Spacing

TYPEFACE 1

Community

**IMPORTANT: Individual spacing of each letter needs to be evaluated.** See Examples Above.  
Kern all Copy so that **each character is optically centered** between the center of each of the surrounding characters.

Corrected Letter Spacing

TYPEFACE 1

Community

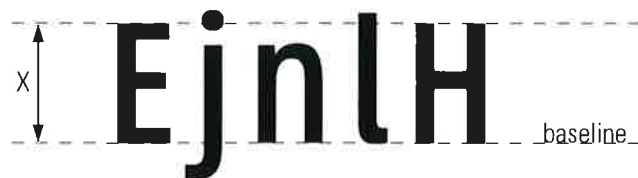
**ARROWS AND TEXT RELATIONSHIPS**

Always measure from baseline to baseline.  
Please Reference to the arrow detail below.



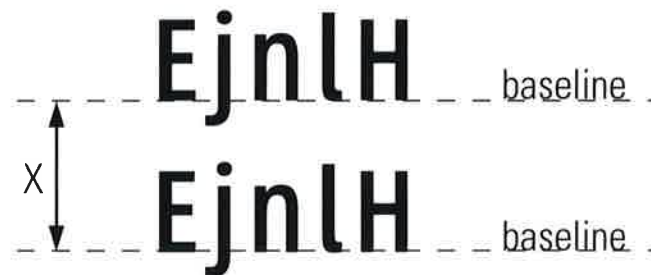
**COPY HEIGHT**

When measuring copy height, measure only the height of the Capital letters to determine your overall copy height shown in illustration below as "X." Some of the other letters have an extended height beyond the average height of the letters.



**LINE SPACING**

When measuring line spacing, always measure from the baseline of the top most text line to the baseline of the text line below shown as "X."



**STRUCTURAL DESIGN ONLY**

**SPECIFICATIONS**

**ALL TYPE SHALL BE SET EXACTLY AS SPECIFIED.**

Individual spacing of each letter shall be evaluated and approved by the **DESIGNER and CLIENT** prior to sign fabrication. All copy shall be kerned so that each character is optically centered between the center of each of the surrounding characters.

**NOTES**

ENVIRONMENTS & EXPERIENCES

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CLIENT / PROJECT

**Downtown Miami  
City of Miami, Florida**

PROJECT NO.

SUBCONSULTANT

SHEET TITLE

DATE 10 December 2010

DRAWN BY: PR

If a project fabricator is a consultant and is not the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

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05/02/2014 PR

SHEET NO.

**Typography  
Specifications**

**A.4**

3'-8" Vehicular Panel Width

DISTRICTS

Arts & Ent District 

Brickell District 

Central Business District 

TRANSPORTATION

PortMiami 

TOURIST INFORMATION 2004 MUTCD

Welcome Center 

MUSEUMS

Art Museum  
 Childrens Museum  
 Museum of Science

HIGHER EDUCATION

Florida Intl University  
 Miami Dade College  
 Miami Intl University  
 YoungArts

GOVERNMENT

Childrens Courthouse  
 City Admin Building  
 County Courthouse  
 County Govt Center  
 Courthouses  
 Federal Courthouse

ATTRACTIONS

AA Arena  
 Arsht Center  
 Convention/ Knight Cntr  
 Cultural Center  
 Freedom Tower  
 Olympia Theater  
 Jungle Island  
 Miami Circle

PARKS

Bayfront Park  
 Museum Park  
 Margaret Pace Park  
 Simpson Park

DESTINATION STREETS

Flagler St Shopping

OTHER

Bayside  
 Brickell Village

SUB DISTRICT

Jewelry District  
 Wynwood

ADJACENT (INSIDE BOUNDARY)

Baseball Stadium

ADJACENT (OUTSIDE BOUNDARY)

Downtown

PARKING

  
 Convention/ Knight Cntr Garage  
 Courthouse Center Garage  
 College Station Garage  
 Flagler Bldg Garage  
 Hickman Garage  
 Miami Dade Cultural Cntr Garage  
 Overtown Garage  
 Public Parking

**STRUCTURAL DESIGN ONLY**

SPECIFICATIONS

Terminology shown represents graphic breaks for Vehicular Directional Signs with 5 inch high copy.

ALL TYPE SHALL BE SET EXACTLY AS SPECIFIED.

NOTES

The Owner, and destination shown, shall verify all terminology and abbreviations are accurate.

ENVIRONMENTS & EXPERIENCES

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CLIENT / PROJECT

Downtown Miami  
 City of Miami, Florida

PROJECT NO.

SUBCONSULTANT

DATE 10 December 2010

DRAWN BY: PR

The Designer, fabricator is responsible for any errors in the drawings proposed means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS. The fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

REVISIONS  
 04/20/2012 PR  
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 03/12/2014 PR  
 05/02/2014 PR






SHEET TITLE






Word Breaks  
 5" High Vehicular/Parking Directionals

SHEET NO.

**A.5**

8'-6" Vehicular Panel Width

← Arts & Ent District	
← Brickell District	
← Central Business District	
← PortMiami	
← Welcome Center	

Arts & Ent District		→
Brickell District		→
Central Business District		→
PortMiami		→
Welcome Center		→

← AA Arena
← Arsht Center
← Art Museum
← Baseball Stadium
← Bayfront Park
← Bayside
← Childrens Courthouse
← Childrens Museum
← City Admin Building
← County Courthouse
← County Government Center
← Convention / Knight Center

← Cultural Center
← Flagler St Shopping
← Freedom Tower
← Jungle Island
← Margaret Pace Park
← Miami Dade College
← Miami Circle
← Museum of Science
← Museum Park
← Olympia Theater
← Wynwood
← YoungArts

STRUCTURAL DESIGN ONLY

**SPECIFICATIONS**

Terminology shown represents graphic breaks for Vehicular Directional Signs with 6 inch high copy.

ALL TYPE SHALL BE SET EXACTLY AS SPECIFIED.

---

**NOTES**  
The Owner, and destination shown, shall verify all terminology and abbreviations are accurate.

<p>ENVIRONMENTS &amp; EXPERIENCES</p> <p>The project fabricator is responsible for providing shop</p> <p><b>merJe</b></p> <p>120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a></p>	<p>CLIENT / PROJECT</p> <p style="text-align: center;"><b>Downtown Miami City of Miami, Florida</b></p> <p>PROJECT NO.</p> <p>SHEET TITLE</p> <p style="text-align: center;"><b>Word Breaks 6" High Copy Vehicular</b></p> <p>SHEET NO.</p> <p style="text-align: right;"><b>A.6</b></p>										
<p>SUBCONSULTANT</p> <p>DATE 10 December 2010</p> <p>DRAWN BY: PR</p> <p>REVISIONS</p> <table border="1" style="width: 100%;"> <tr><td>04/20/2012</td><td>PR</td></tr> <tr><td>11/30/2012</td><td>GS</td></tr> <tr><td>08/16/2013</td><td>GS</td></tr> <tr><td>03/12/2014</td><td>PR</td></tr> <tr><td>05/02/2014</td><td>PR</td></tr> </table> <p><small>drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.</small></p>	04/20/2012	PR	11/30/2012	GS	08/16/2013	GS	03/12/2014	PR	05/02/2014	PR	
04/20/2012	PR										
11/30/2012	GS										
08/16/2013	GS										
03/12/2014	PR										
05/02/2014	PR										

Approx. 22" Pedestrian Panel Width

DISTRICTS

- Arts & Ent District →
- Brickell District →
- Central Business District →

SUB-DISTRICTS

- Jewelry District →
- Brickell Village →
- Bayside →
- Wynwood →
- Flagler Street Shopping →

HIGHER EDUCATION

- Florida Intl University →
- Miami Intl University →
- Miami Dade College →
- YoungArts →

GOVERNMENT

- County Courthouse →
- Federal Courthouse →
- Police Headquarters →
- City Admin Building →
- County Government Center →
- Courthouses →
- Main Library →
- Childrens Courthouse →

DISTRICT HEADERS

- ARTS & ENTERTAINMENT →
- BRICKELL →
- CENTRAL BUSINESS →

MUSEUMS

- Art Museum →
- HistoryMiami →
- Museum of Art and Design →
- Museum of Science →

LARGE ATTRACTIONS

- AA Arena →
- Amphitheater →
- Arsht Center →
- Brickell Key →
- Riverwalk →
- Convention/Knight Center →
- Freedom Tower →
- Olympia Theater →
- Miami Circle →
- Welcome Center ? →

ADJACENT

- Baseball Stadium →

PARKS

- Virginia Key Beach →
- Bayfront Park →
- Museum Park →
- Margaret Pace Park →
- Mary Brickell Park →
- Miami Circle →
- Simpson Park →
- Southside Park →
- Lummus Park →
- Fort Dallas Park →
- P Walker Urbanscape →
- Allen Morris Park →

METRORAIL STATION

- MetroRail Station →

METROMOVER STATIONS

- School Board Station →
- Arsht Center Station →
- Museum Park Station →
- Eleventh Street Station →
- Park West Station →
- Freedom Tower Station →
- College North Station →
- WD Ferguson Station →
- Govt Center Station →
- Miami Avenue Station →
- Third Street Station →
- Knight Center Station →
- Bayfront Park Station →
- First Street Station →
- College/Bayside Station →
- Riverwalk Station →
- Fifth Street Station →
- Eighth Street Station →
- 10th/Promenade Station →
- Brickell Station →
- Financial District Station →

STRUCTURAL DESIGN ONLY

SPECIFICATIONS

Terminology shown represents graphic breaks for Pedestrian Directional Signs with 1 inch high copy.

ALL TYPE SHALL BE SET EXACTLY AS SPECIFIED.

NOTES

The Owner, and destination shown, shall verify all terminology and abbreviations are accurate.

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CLIENT / PROJECT

**Downtown Miami  
City of Miami, Florida**

PROJECT NO.

SHEET TITLE

**Word Breaks  
Pedestrian Directionals**

SHEET NO.

**A.7**

DATE	10 December 2010	DRAWN BY:	PR
REVISIONS		04/20/2012 PR	
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		03/12/2014 PR	
		05/02/2014 PR	

drawings prior to fabrication for review and approval by the Designer. The Designer and fabricator shall be held responsible for any shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

**GRAPHICS, PATTERNS and ARROWS**

**DWNTWN**

Downtown Wordmark

**MIAMIDDA**  
DOWNTOWN DEVELOPMENT AUTHORITY

DDA Wordmark



District Icons for PDIR signs



MPA Wordmark



CRA Wordmark



District Icons for VDIR signs

**ARROWS**



Left Arrow

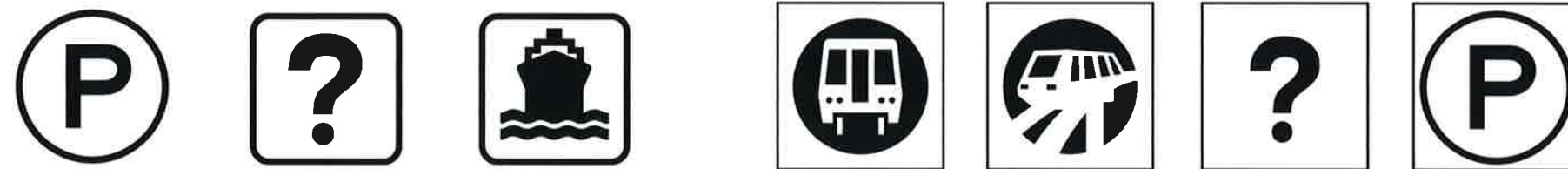
Up-Left Arrow

Straight Arrow

Up-Right Arrow

Right Arrow

**GRAPHICS**



District Icons for VDIR signs

District Icons for PDIR signs

**STRUCTURAL DESIGN ONLY**

**SPECIFICATIONS**

All artwork illustrated on this page will be provided by owner/designer as electronic vector art (Adobe Illustrator EPS file).

The Contractor shall utilize all artwork provided exactly as specified. NO substitutions will be accepted. None!

**NOTE: Symbols and wordmarks shown in this document are NOT camera ready artwork, and should NOT be created as a substitute for the actual vector art.**

**USE of Arrows**

When multiple directions are required on a sign, the following directional hierarchy shall take precedent. See Example below. Reference Message Schedule for individual Messages.














↑ Straight Arrow

← Left Arrow








→ Right Arrow

**NOTES**

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	DRAWN BY:	Project Artwork
10 December 2010	PR	
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		SHEET NO.
03/12/2014 PR		
05/02/2014 PR		
<small>drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings are not consistent with the design details from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.</small>		<b>A.8</b>

P PAINTS	NAME	SPECIFICATION	PROCESS
P1	 Macaw Blue	To match PMS 287C	Surface painted, with Matthews Polyurethane Clear Coat Satin Finish
P2	 Big Country Blue	To match PMS Process Blue C	Surface painted, with Matthews Polyurethane Clear Coat Satin Finish
P3	 Hot Lips	To match PMS Rubine Red C	Surface painted, with Matthews Polyurethane Clear Coat Satin Finish
P4	 Startling Orange	To match PMS Orange 021 C	Surface painted, with Matthews Polyurethane Clear Coat Satin Finish
P5	 Galvanized Steel	Galvanized Steel	
P6	 Light Silver Metallic	Matthews Paint MP 18071 Light Silver Metallic <b>Clear Coat HIGH GLOSS</b>	Surface painted, with Matthews Polyurethane <b>Clear Coat HIGH GLOSS</b> Finish
P7	 Light Silver Metallic	Matthews Paint MP 18071 Light Silver Metallic	Surface painted, with Matthews Polyurethane Clear Coat Satin Finish
P8	 Natural Aluminum	Natural Aluminum Sandblasted Light	<b>Anodized Clear</b>
P9	 Black Stallion	Matthews Paint MP 33653 Black Stallion	Surface painted, with Matthews Polyurethane Clear Coat Satin Finish
P10	 Deep River Grey	Matthews Paint MP 07102 Deep River	Surface painted, with Matthews Polyurethane Clear Coat Satin Finish
P11	 Verizon White	Matthews Paint MP 27386 Verizon White	Surface painted, with Matthews Polyurethane Clear Coat Satin Finish
P12	 (Parking) Orange	To match PMS 1375C	Surface painted, with Matthews Polyurethane Clear Coat Satin Finish
P13	 COOL GREY	To match PMS COOL GREY 2C	IZONE EMBEDDED GRAPHIC BACKGROUND or approved equal.

**STRUCTURAL DESIGN ONLY**

V VINYL	NAME	SPECIFICATION	PROCESS
V1	 Blue	3M High Intensity Prismatic Reflective Sheeting 3930 Color Match: PMS 287 C	Knockout White: Background and Characters 3M custom inks direct to 3930 with 3M approved clear UV/Graffiti Vinyl Over-laminates. *Process shall carry 7 year warranty per Durst RHO 161 TS Printer - printed by Sherine Industries or equal
V2	 District Blue	3M High Intensity Prismatic Reflective Sheeting 3930 Color Match: PMS Process Blue C	Knockout White: Background and Characters 3M custom inks direct to 3930 with 3M approved clear UV/Graffiti Vinyl Over-laminates. *Process shall carry 7 year warranty per Durst RHO 161 TS Printer - printed by Sherine Industries or equal
V3	 District Pink	3M High Intensity Prismatic Reflective Sheeting 3930 Color Match: PMS Rubine Red C	Knockout White: Background and Characters 3M custom inks direct to 3930 with 3M approved clear UV/Graffiti Vinyl Over-laminates. *Process shall carry 7 year warranty per Durst RHO 161 TS Printer - printed by Sherine Industries or equal
V4	 District Orange	3M High Intensity Prismatic Reflective Sheeting 3930 Color Match: PMS Orange 021 C	Knockout White: Background and Characters 3M custom inks direct to 3930 with 3M approved clear UV/Graffiti Vinyl Over-laminates. *Process shall carry 7 year warranty per Durst RHO 161 TS Printer - printed by Sherine Industries or equal
V5	 Opaque White	3M Opaque Vinyl Color: 180C-10 "White"	*Applied according to Manufacturers Spec to aluminum sheet. Exterior Grade
V6	 Opaque Blue	3M Opaque Vinyl Color: Match PMS 287 C	*Applied according to Manufacturers Spec to aluminum sheet. Exterior Grade
V7	 (Parking) FDOT Green	3M High Intensity Prismatic Reflective Sheeting 3930 Color Match: PMS 1375C	Knockout White: Background and Characters 3M custom inks direct to 3930 with 3M approved clear UV/Graffiti Vinyl Over-laminates. *Process shall carry 7 year warranty per Durst RHO 161 TS Printer - printed by Sherine Industries or equal


\* MUST comply with MUTCD section Table 2A-3 – Minimum maintained retroreflectivity levels. Approved process: Durst RHO 161 TS printer, Sherine Industries; (604) 513-1887, or equal.  
 NOTE: All 3M products are to be processed and applied according to 3M specifications using component matching system. The seaming of material is NOT preferred. If the height of a sign panel is greater than 48 inches, the 3M 3930 material should be oriented vertically with stripes at 0 degrees, to avoid the seaming of material. If seaming is required, it should occur at the rule line or between messages.

**SPECIFICATIONS**

The Contractor shall submit 3 identical sets of each color specified for approval to the client prior to any painting. Sample swatches are to be produced on the substrate material of the final product.

The colors must look exactly the same every time they are used so that people associate them with Downtown Miami, City of Miami, Florida. All media, vinyl, paint, and inks must be produced so that the colors match as specified on this page.

**NOTES**

ENVIRONMENTS & EXPERIENCES  		CLIENT / PROJECT  <b>Downtown Miami City of Miami, Florida</b>	
		PROJECT NO.	
SUBCONSULTANT		SHEET TITLE  <b>Color Chart</b>	
DATE 10 December 2010	DRAWN BY: PR	REVISIONS 04/20/2012 PR 11/30/2012 GS 08/16/2013 GS 03/12/2014 PR 05/02/2014 PR	
<small>The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.</small>		SHEET NO.  <b>A.9</b>	

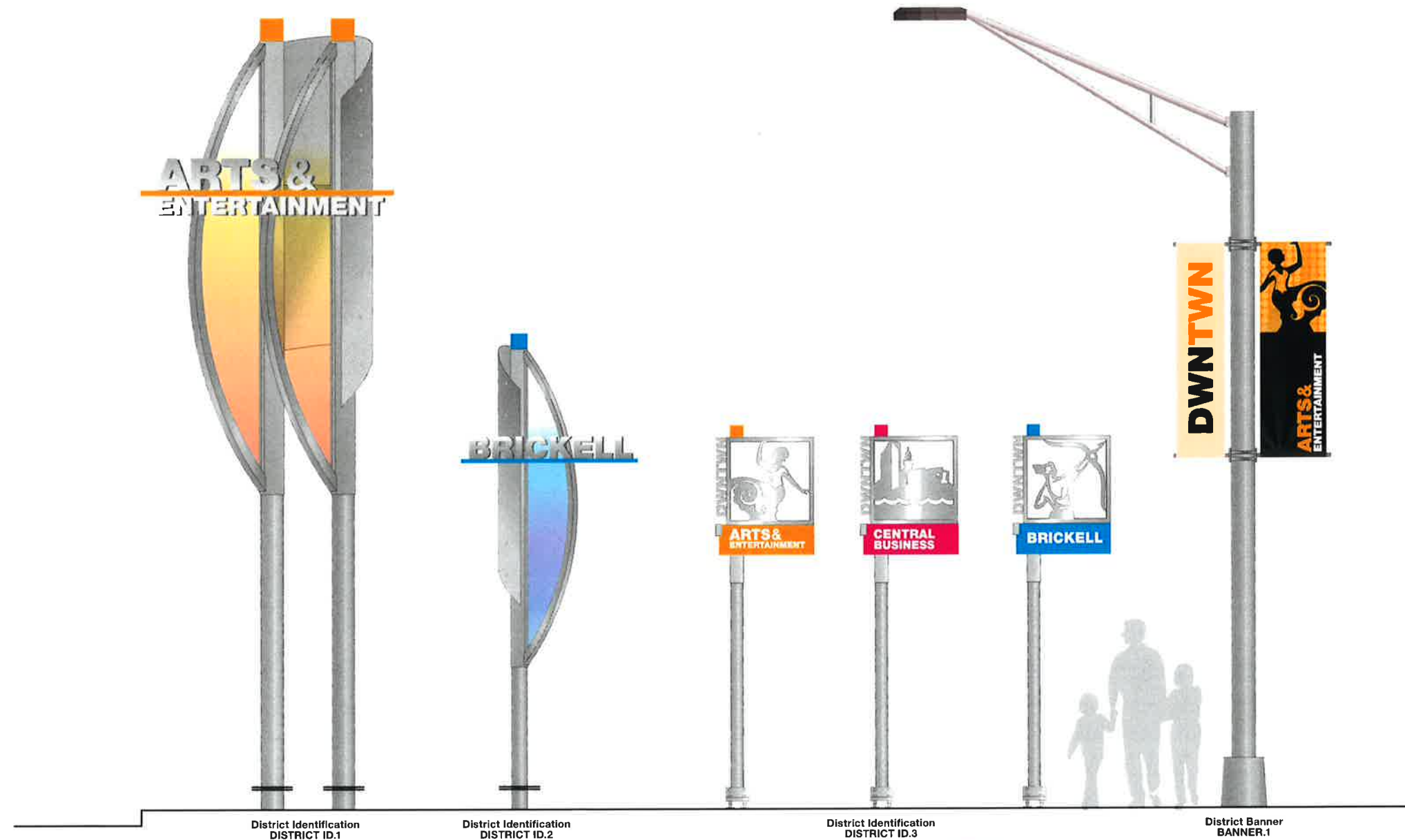
**SECTION 2** | Signage Drawings

STRUCTURAL DESIGN ONLY

**B. Menu of Sign Types**

STRUCTURAL DESIGN ONLY





**LEGEND**

**MENU OF SIGN TYPES**  
DISTRICT IDENTIFICATION

Sign Types include:  
 DISTRICT-ID.1  
 DISTRICT-ID.2  
 DISTRICT-ID.3  
 BANNER.1

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

ENVIRONMENTS & EXPERIENCES

**merje**

120 North Church Street  
 Suite 208  
 West Chester, PA 19380  
 T 484.266.0648  
[www.merjedesign.com](http://www.merjedesign.com)

SUBCONSULTANT

DATE 18 November 2010

CLIENT / PROJECT

DRAWN BY: PR

**Downtown Miami  
 City of Miami, Florida**

The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the project.

PROJECT NO.

SHEET TITLE

**Menu of Sign Types  
 District Identification**

REVISIONS  
 04/20/2012 PR

SHEET NO.

11/30/2012 GS

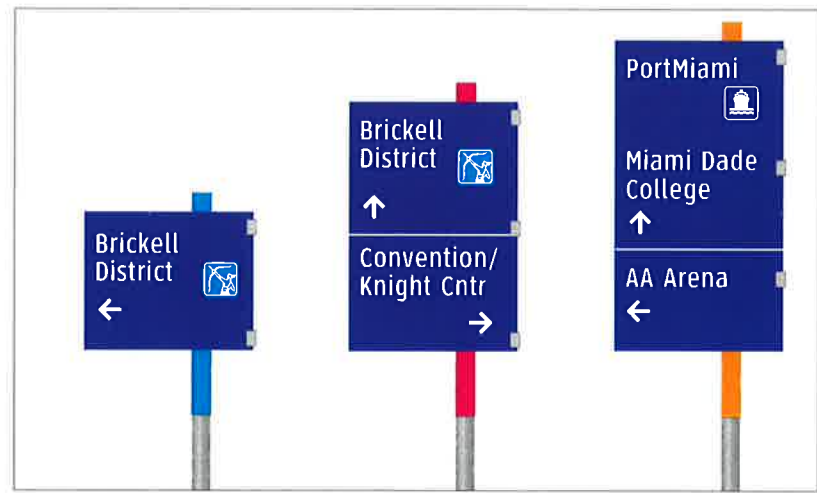
08/16/2013 GS

03/12/2014 PR

05/02/2014 PR

**B.1**

**STRUCTURAL DESIGN ONLY**



Vehicular Directional  
VDIR.1\_Left

Vehicular Directional  
VDIR.2\_Left

Vehicular Directional  
VDIR.3\_Left



Vehicular Directional  
VDIR.4



Vehicular Directional  
VDIR.5



Vehicular Directional  
VDIR.1

Vehicular Directional  
VDIR.2

Vehicular Directional  
VDIR.3



Parking Trailblazer  
PARK.1



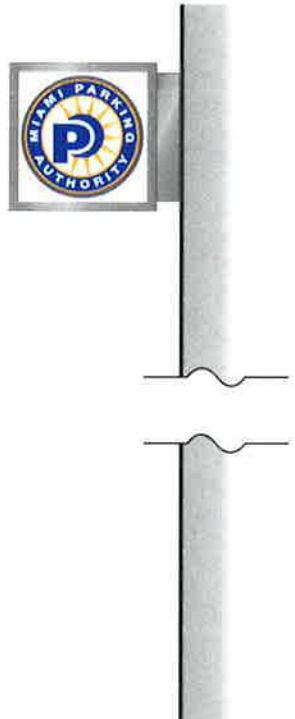
Parking Trailblazer  
New Pole  
PARK.1A



Parking Garage  
Directional  
PARK.2



Parking Garage Information  
PARK.3



Parking Arrival Garage  
PARK.4

**STRUCTURAL DESIGN ONLY**

**LEGEND**

**MENU OF SIGN TYPES**

VEHICULAR DIRECTIONALS  
PARKING DIRECTIONALS + IDENTIFICATION

Sign Types include:

- VDIR.1
- VDIR.1-LEFT
- VDIR.2
- VDIR.2-LEFT
- VDIR.3
- VDIR.3-LEFT
- VDIR.4
- VDIR.5
- PARK.1
- PARK.1A
- PARK.2
- PARK.3
- PARK.4

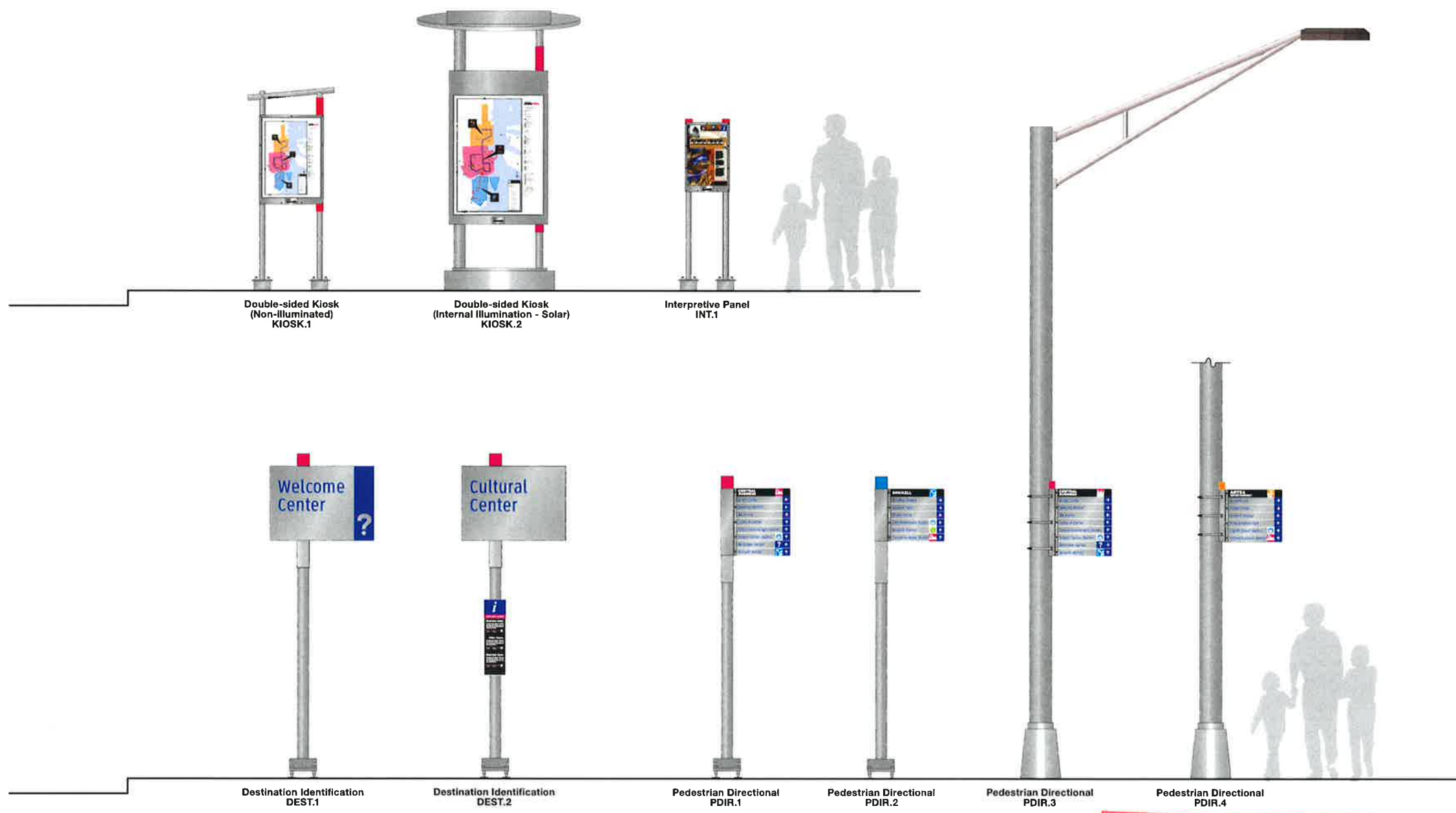
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

ENVIRONMENTS & EXPERIENCES

**merje**  
120 North Church Street  
Suite 208  
West Chester, PA 19380  
T 484.266.0648  
[www.merjedesign.com](http://www.merjedesign.com)

SUBCONSULTANT

DATE	18 November 2010	CLIENT / PROJECT	Downtown Miami City of Miami, Florida
DRAWN BY:	PR	PROJECT NO.	
REVISIONS	11/30/2012 GS	SHEET TITLE	Menu of Sign Types Vehicular/Parking
	08/16/2013 GS	SHEET NO.	<b>B.2</b>
	03/12/2014 PR		
	05/02/2014 PR		



Double-sided Kiosk  
(Non-Illuminated)  
KIOSK.1

Double-sided Kiosk  
(Internal Illumination - Solar)  
KIOSK.2

Interpretive Panel  
INT.1

Destination Identification  
DEST.1

Destination Identification  
DEST.2

Pedestrian Directional  
PDIR.1

Pedestrian Directional  
PDIR.2

Pedestrian Directional  
PDIR.3

Pedestrian Directional  
PDIR.4

**STRUCTURAL DESIGN ONLY**

**LEGEND**

- MENU OF SIGN TYPES**  
 DESTINATION IDENTIFICATION  
 PEDESTRIAN DIRECTIONALS  
 PEDESTRIAN KIOSKS  
 PEDESTRIAN INTERPRETIVE

- Sign Types include:  
 DEST.1  
 DEST.2  
 PDIR.1  
 PDIR.2  
 PDIR.3  
 PDIR.4  
 KIOSK.1  
 KIOSK.2  
 INT.1

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

ENVIRONMENTS & EXPERIENCES

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[www.merjedesign.com](http://www.merjedesign.com)

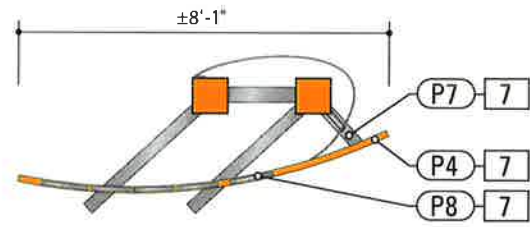
SUBCONSULTANT

DATE	18 November 2010
DRAWN BY:	PR
REVISIONS	04/20/2012 PR 11/30/2012 GS 08/16/2013 GS 03/12/2014 PR 05/02/2014 PR

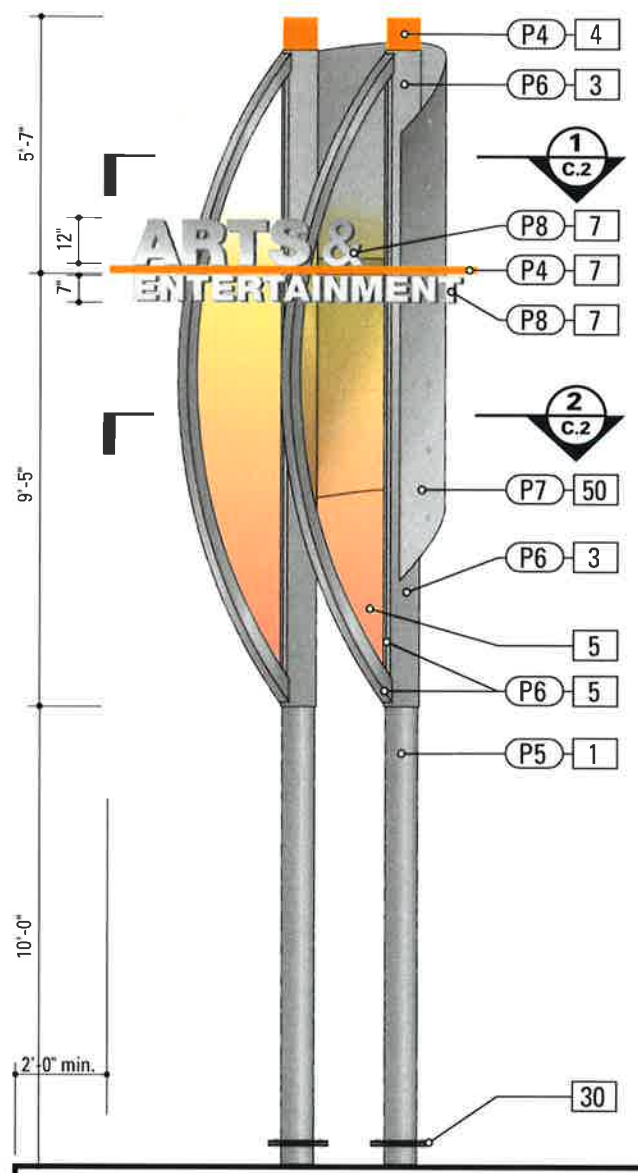
CLIENT / PROJECT	Downtown Miami City of Miami, Florida
PROJECT NO.	
SHEET TITLE	Menu of Sign Types Destination ID and Pedestrian
SHEET NO.	<b>B.3</b>

**C. Design Intent Drawings**

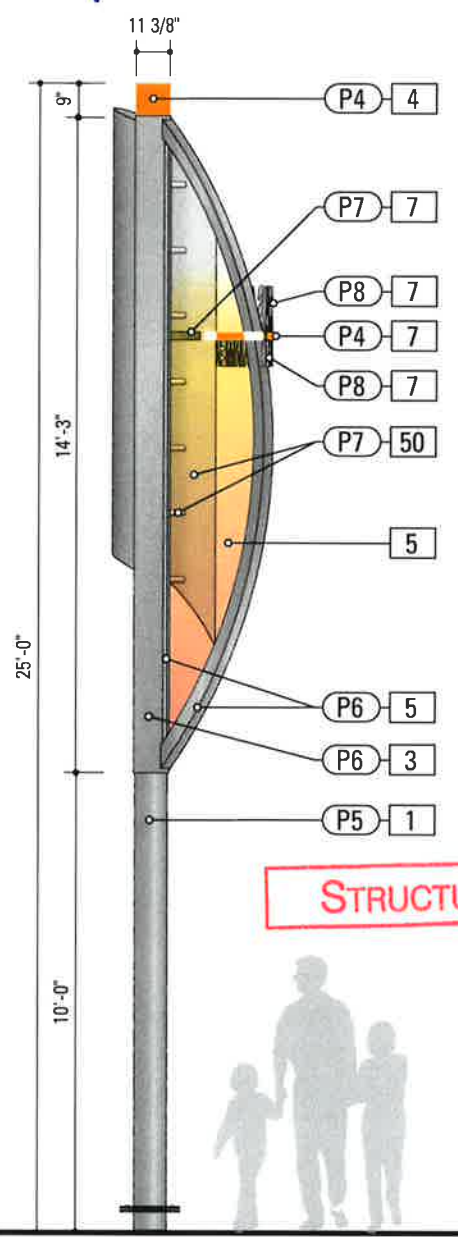
**STRUCTURAL DESIGN ONLY**



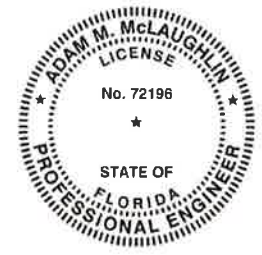
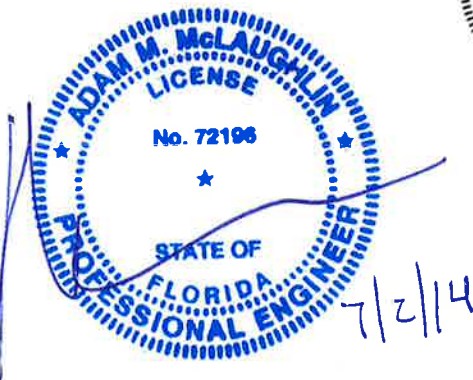
**3** Top View: DISTRICT ID.1  
SCALE: 1/4" = 1'-0"



**1** Front Elevation: DISTRICT ID.1  
SCALE: 1/4" = 1'-0"



**2** Side Elevation: DISTRICT ID.1  
SCALE: 1/4" = 1'-0"



**SPECIFICATIONS** SIGN TYPE: District ID.1 FUNCTION: District Identification

- POLE**  
POLE: Pipe 10 X-Strong (SCH 80) OD 10.8 ID 9.75  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: Sign Fabricator's Structural Engineer is responsible for the design of the sign foundation. Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®.
- SLEEVE**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: Square  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole, minimal exposed.
- TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- SUPPORT ARM / ACRYLIC PANEL**  
MATERIAL: Aluminum extrusion and sheet  
FABRICATION PROCESS: Custom Fabricated  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to pole.  
**RESIN PANEL INSERT**  
PRODUCT: 1/2" thick Acrylite® Satin Ice Colorless, frosted (866-900-6244, www.acrylite-magic.com) or approved equal.  
FASTENER: Inserted into fabricated sign frame (weather resistant glazing).
- DIMENSIONAL GRAPHICS / CURVED METAL ARM**  
MATERIAL: 1/2" thk Aluminum sheet  
FABRICATION PROCESS: Water-Jet or Router-cut  
EDGES: Smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Aluminum angle w/gussets mechanically fastens to Curved Metal Arm.
- CURVED METAL ARM**  
MATERIAL: Aluminum extrusion and sheet  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Male/Female extrusion mechanically fastens to pole. Aluminum angle w/gussets mechanically fastens to Support Arm/Acrylic Panel frame.
- BREAKAWAY FOOTER**  
Product: Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®, or an FDOT approved equal breakaway system.  
NOTE: This specific sign is NOT positioned within FDOT R.O.W., but shall be breakaway as per FDOT breakaway specifications.
- CURVED METAL PANEL / SUPPORT RIBS**  
MATERIAL: 1/8" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: square and smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastens to Sleeve.  
**SUPPORT RIBS**  
MATERIAL: Aluminum rod  
FABRICATION PROCESS: Custom fabricated.  
EDGES: square and smooth  
SURFACE PROCESS: Natural, Satin, 150 grit, horizontal grain.  
FASTENER: Mechanically fastens to pole, and supports Curved Metal Panel.
- LIGHT FIXTURE**  
PRODUCT: ColorGraze™ Powercore LED Fixture  
As manufactured by Phillips Solid-State Lighting Solutions (3 Burlington Woods Drive, Burlington, MA 01803, 888-385-5741 ; www.colorkinetics.com) or approved equal.  
SPECIFICATIONS:  
Length: As Required  
Color Temp: 4000K  
Beam Angle: 30° X 60°  
Line Voltage: VAC as determined by project electrical engineer.

NOTE: Sign Fabricator to determine the District ID.1 sign location in the field per the location guidelines, and where to make electrical connection from City utility. Sign Fabricator to pull permit from City of Miami.

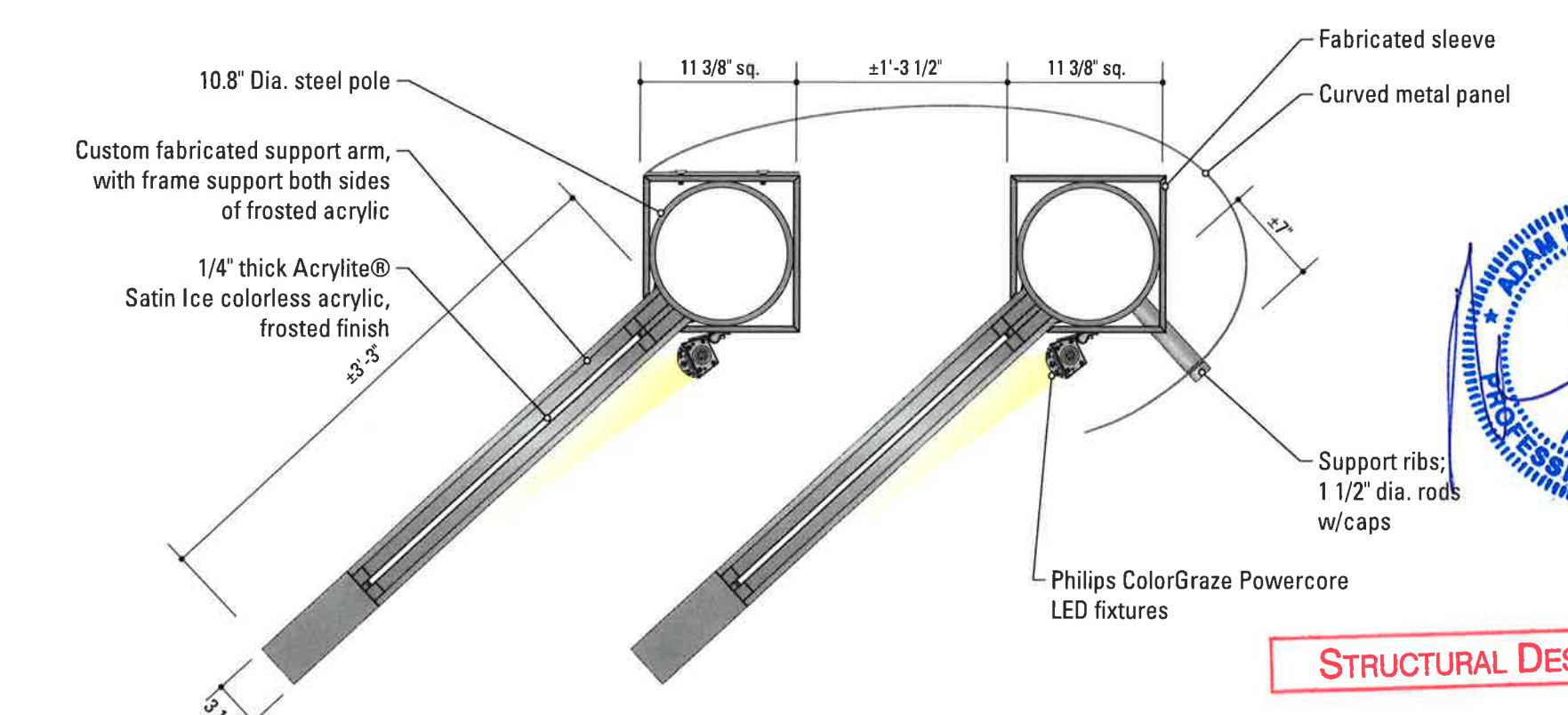
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 
  - Hardware: All hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - Approved Sign: Grade 1 reflective/anti-graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

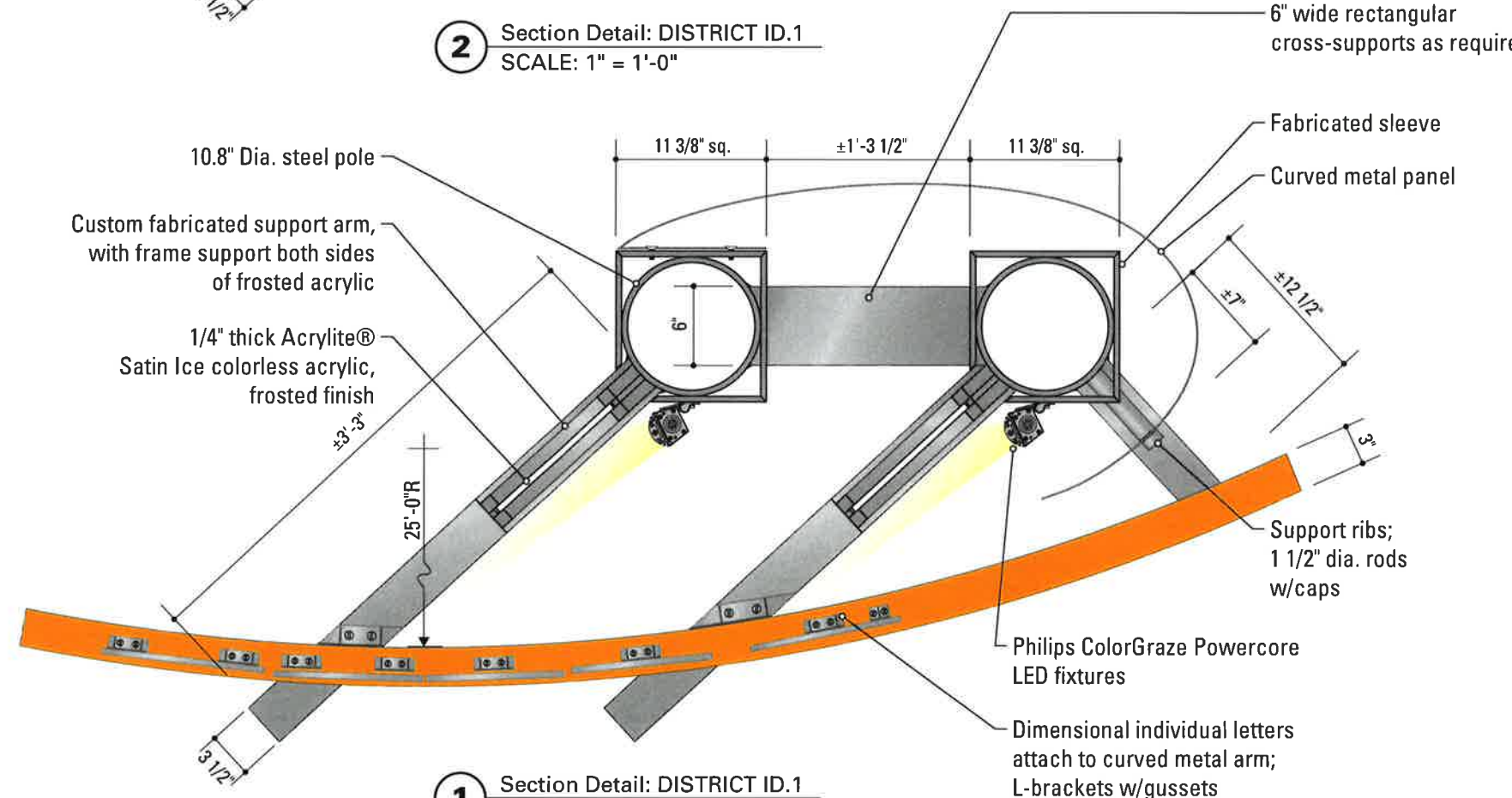
**STRUCTURAL DESIGN ONLY**

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 www.merjedesign.com		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type District ID.1 District Identification
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>C.1</b>

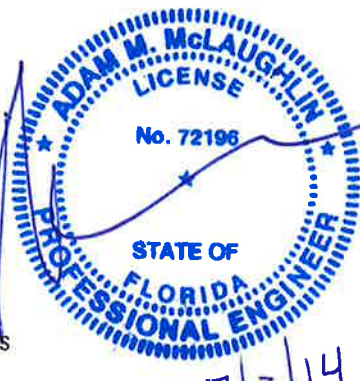
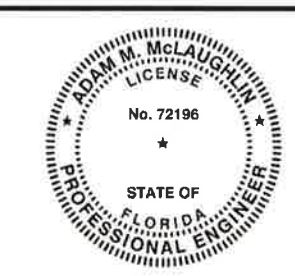
The design of this fabrication is based on the design of the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



2 Section Detail: DISTRICT ID.1  
SCALE: 1" = 1'-0"



1 Section Detail: DISTRICT ID.1  
SCALE: 1" = 1'-0"



**STRUCTURAL DESIGN ONLY**

**SPECIFICATIONS** SIGN TYPE: District ID.1 FUNCTION: District Identification

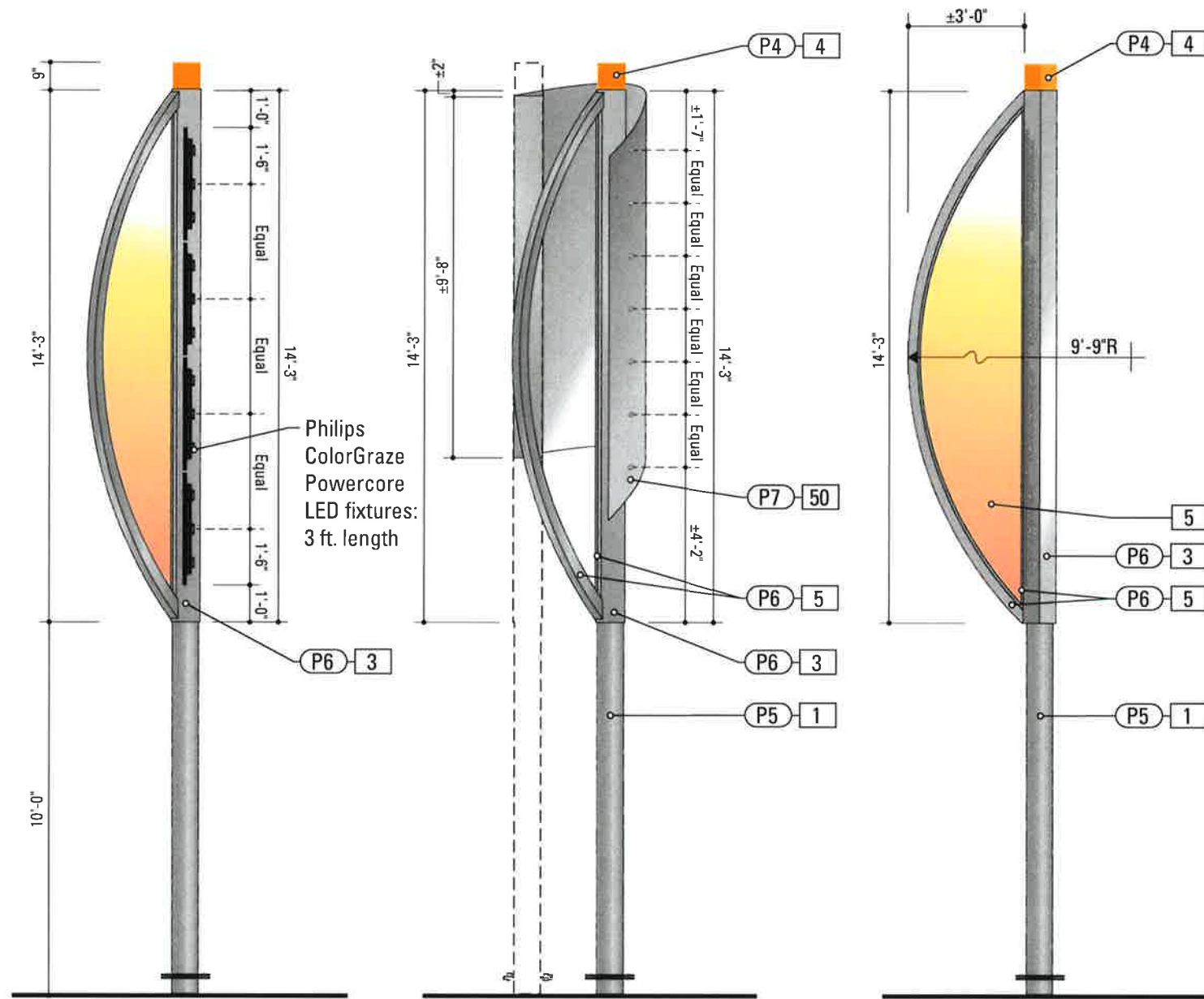
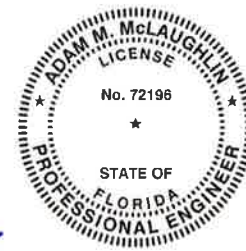
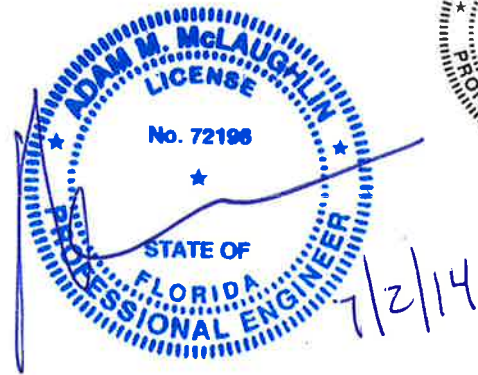
- POLE**  
POLE: Pipe 10 X-Strong (SCH 80) OD 10.8 ID 9.75  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: Sign Fabricator's Structural Engineer is responsible for the design of the sign foundation, Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®.
  - CURVED METAL ARM**  
MATERIAL: Aluminum extrusion and sheet  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Male/Female extrusion mechanically fastens to pole. Aluminum angle w/gussets mechanically fastens to Support Arm/Acrylic Panel frame.
  - SLEEVE**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: Square  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole, minimal exposed.
  - TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
  - SUPPORT ARM / ACRYLIC PANEL**  
MATERIAL: Aluminum extrusion and sheet  
FABRICATION PROCESS: Custom Fabricated  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to pole.  
**RESIN PANEL INSERT**  
PRODUCT: 1/2" thick Acrylite® Satin Ice Colorless, frosted (866-900-6244, www.acrylite-magic.com) or approved equal.  
FASTENER: Inserted into fabricated sign frame (weather resistant glazing).
  - DIMENSIONAL GRAPHICS / CURVED METAL ARM**  
MATERIAL: 1/2" thk Aluminum sheet  
FABRICATION PROCESS: Water-Jet or Router-cut  
EDGES: Smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Aluminum angle w/gussets mechanically fastens to Curved Metal Arm.
  - BREAKAWAY FOOTER**  
Product: Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®, or an FDOT approved equal breakaway system.  
NOTE: This specific sign is NOT positioned within FDOT R.O.W., but shall be breakaway as per FDOT breakaway specifications.
  - CURVED METAL PANEL / SUPPORT RIBS**  
MATERIAL: 1/8" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: square and smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastens to Sleeve.  
**SUPPORT RIBS**  
MATERIAL: Aluminum rod  
FABRICATION PROCESS: Custom fabricated.  
EDGES: square and smooth  
SURFACE PROCESS: Natural, Satin, 150 grit, horizontal grain.  
FASTENER: Mechanically fastens to pole, and supports Curved Metal Panel.
  - LIGHT FIXTURE**  
PRODUCT: ColorGraze™ Powercore LED Fixture  
As manufactured by Phillips Solid-State Lighting Solutions (3 Burlington Woods Drive, Burlington, MA 01803, 888-385-5741 ; www.colorkinetics.com) or approved equal.  
SPECIFICATIONS:  
Length: As Required  
Color Temp: 4000K  
Beam Angle: 30° X 60°  
Line Voltage: VAC as determined by project electrical engineer.  
  
NOTE: Sign Fabricator to determine the District ID.1 sign location in the field per the location guidelines, and where to make electrical connection from City utility. Sign Fabricator to pull permit from City of Miami.
- GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 
  - Welds shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - Approved sign materials to receive 1x Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 www.merjedesign.com		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type District ID.1 District Identification
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>C.2</b>

If the fabricator fabricates the sign in a manner that deviates from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

**STRUCTURAL DESIGN ONLY**



**1** Lighting Detail: DISTRICT ID.1  
SCALE: 1/4" = 1'-0"

**2** Curved Metal Panel & Support Ribs Detail: DISTRICT ID.1  
SCALE: 1/4" = 1'-0"

**3** Acrylic Panel Insert: DISTRICT ID.1  
SCALE: 1/4" = 1'-0"

**SPECIFICATIONS** SIGN TYPE: District ID.1 FUNCTION: District Identification

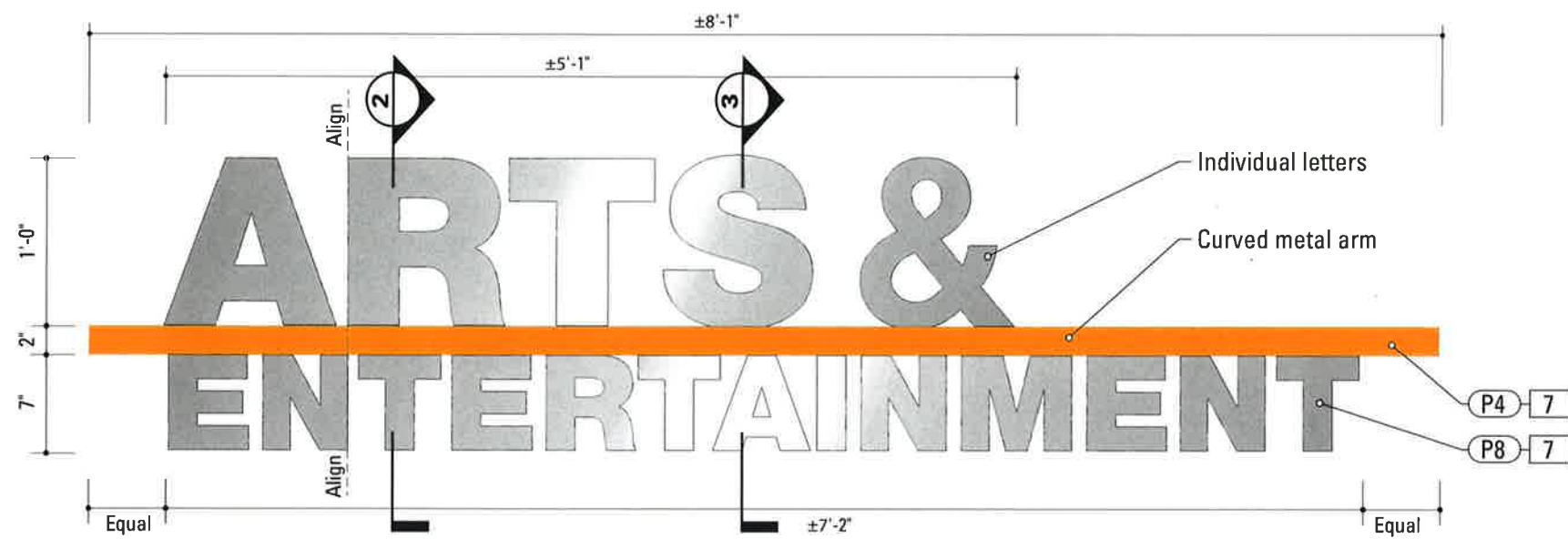
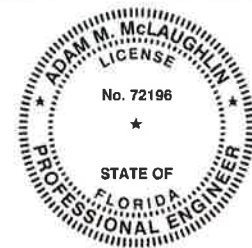
- POLE**  
POLE: Pipe 10 X Strong (SCH 80) OD 10.8 ID 9.75  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: Sign Fabricator's Structural Engineer is responsible for the design of the sign foundation. Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®.
- SLEEVE**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: Square  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole, minimal exposed.
- TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- SUPPORT ARM / ACRYLIC PANEL**  
MATERIAL: Aluminum extrusion and sheet  
FABRICATION PROCESS: Custom Fabricated  
EDGES: Square AND Clean (NO exposed seams)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to pole.  
**RESIN PANEL INSERT**  
PRODUCT: 1/2" thick Acrylite® Satin Ice Colorless, frosted (866-900-6244, www.acrylite-magic.com) or approved equal.  
FASTENER: Inserted into fabricated sign frame (weather resistant glazing).
- DIMENSIONAL GRAPHICS / CURVED METAL ARM**  
MATERIAL: 1/2" thk Aluminum sheet  
FABRICATION PROCESS: Water-Jet or Router-cut  
EDGES: Smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Aluminum angle w/gussets mechanically fastens to Curved Metal Arm.
- CURVED METAL ARM**  
MATERIAL: Aluminum extrusion and sheet  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Male/Female extrusion mechanically fastens to pole. Aluminum angle w/gussets mechanically fastens to Support Arm/Acrylic Panel frame.
- BREAKAWAY FOOTER**  
Product: Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®, or an FDOT approved equal breakaway system.  
NOTE: This specific sign is NOT positioned within FDOT R.O.W., but shall be breakaway as per FDOT breakaway specifications.
- CURVED METAL PANEL / SUPPORT RIBS**  
MATERIAL: 1/8" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: square and smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastens to Sleeve.  
**SUPPORT RIBS**  
MATERIAL: Aluminum rod  
FABRICATION PROCESS: Custom fabricated.  
EDGES: square and smooth  
SURFACE PROCESS: Natural, Satin, 150 grit, horizontal grain.  
FASTENER: Mechanically fastens to pole, and supports Curved Metal Panel.
- LIGHT FIXTURE**  
PRODUCT: ColorGraze™ Powercore LED Fixture  
As manufactured by Phillips Solid-State Lighting Solutions (3 Burlington Woods Drive, Burlington, MA 01803, 888-385-5741 ; www.colorkinetics.com) or approved equal.  
SPECIFICATIONS:  
Length: As Required  
Color Temp: 4000K  
Beam Angle: 30° X 60°  
Line Voltage: VAC as determined by project electrical engineer.  
  
NOTE: Sign Fabricator to determine the District ID.1 sign location in the field per the location guidelines, and where to make electrical connection from City utility. Sign Fabricator to pull permit from City of Miami.

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 
  - Weathering: All outdoor sign hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - Approved Sign Fabricator to determine Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

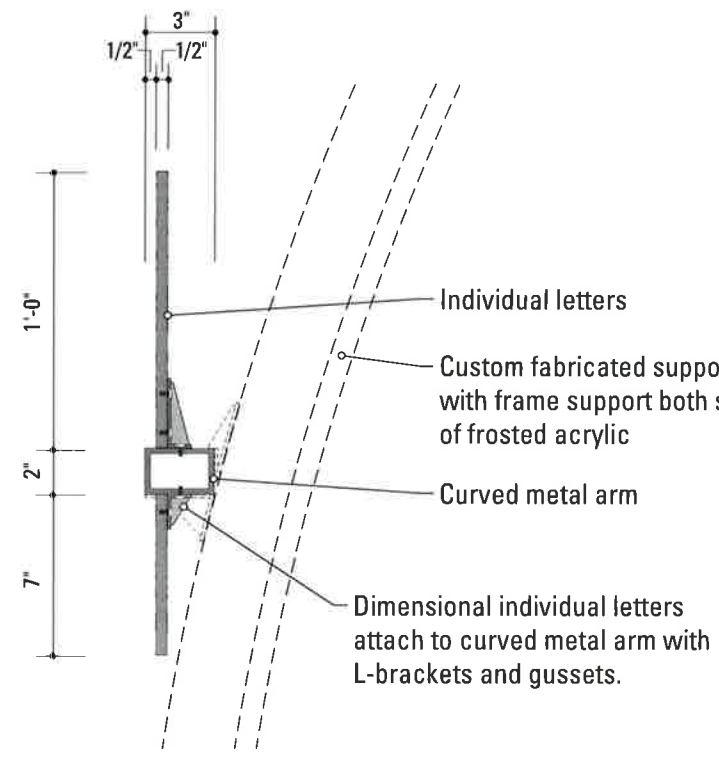
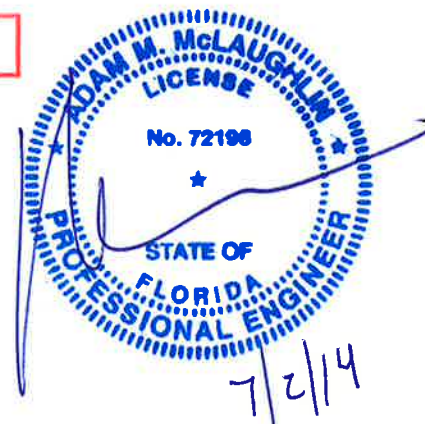
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
 120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		<b>Downtown Miami</b> City of Miami, Florida
SUBCONSULTANT		PROJECT NO.
DATE	DRAWN BY:	SHEET TITLE <b>Sign Type District ID.1</b> <b>District Identification</b>
10 December 2010	PR	
	REVISIONS	
	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	SHEET NO.
	03/12/2014 PR	
	05/02/2014 PR	

**C.3**

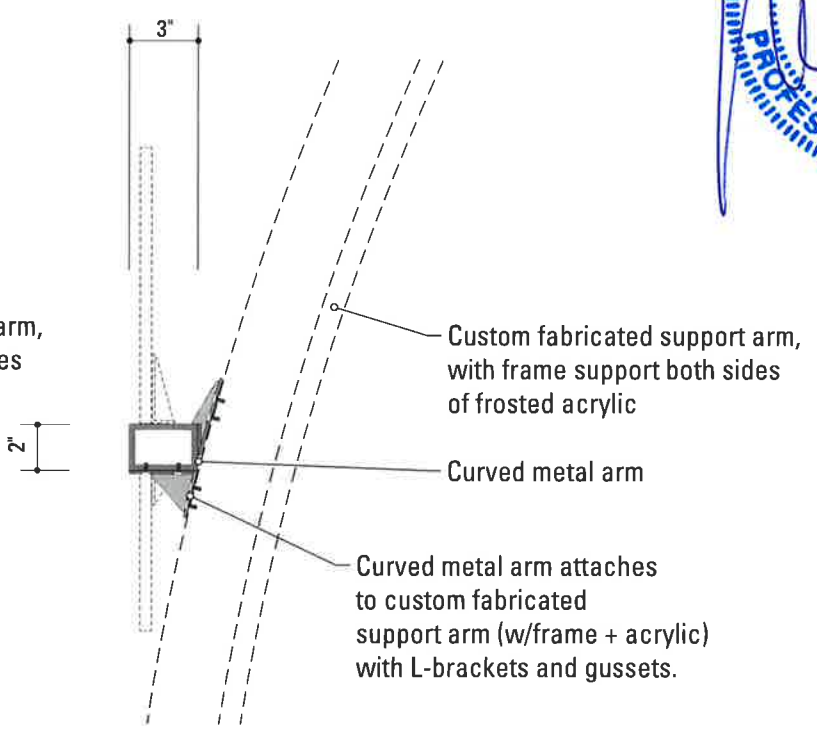


**1** Letters + Curved Metal Arm elevation: DISTRICT ID.1  
SCALE: 1" = 1'-0"

**STRUCTURAL DESIGN ONLY**



**2** Section Detail: DISTRICT ID.1  
SCALE: 1 1/2" = 1'-0"



**3** Section Detail: DISTRICT ID.1  
SCALE: 1 1/2" = 1'-0"

**SPECIFICATIONS** SIGN TYPE: District ID.1 FUNCTION: District Identification

- 1. POLE**  
POLE: Pipe 10 X-Strong (SCH 80) OD 10.8 ID 9.75  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: Sign Fabricator's Structural Engineer is responsible for the design of the sign foundation. Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®.
- 3. SLEEVE**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: Square  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole, minimal exposed.
- 4. TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 5. SUPPORT ARM / ACRYLIC PANEL**  
MATERIAL: Aluminum extrusion and sheet  
FABRICATION PROCESS: Custom Fabricated  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to pole.  
**RESIN PANEL INSERT**  
PRODUCT: 1/2" thick Acrylite® Satin Ice Colorless, frosted (866-900-6244, www.acrylite-magic.com) or approved equal.  
FASTENER: Inserted into fabricated sign frame (weather resistant glazing).
- 7. DIMENSIONAL GRAPHICS / CURVED METAL ARM**  
MATERIAL: 1/2" thk Aluminum sheet  
FABRICATION PROCESS: Water-Jet or Router-cut  
EDGES: Smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Aluminum angle w/gussets mechanically fastens to Curved Metal Arm.
- CURVED METAL ARM**  
MATERIAL: Aluminum extrusion and sheet  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Male/Female extrusion mechanically fastens to pole. Aluminum angle w/gussets mechanically fastens to Support Arm/Acrylic Panel frame.
- 30. BREAKAWAY FOOTER**  
Product: Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®, or an FDOT approved equal breakaway system.  
NOTE: This specific sign is NOT positioned within FDOT R.O.W., but shall be breakaway as per FDOT breakaway specifications.
- 50. CURVED METAL PANEL / SUPPORT RIBS**  
MATERIAL: 1/8" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: square and smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastens to Sleeve.  
**SUPPORT RIBS**  
MATERIAL: Aluminum rod  
FABRICATION PROCESS: Custom fabricated.  
EDGES: square and smooth  
SURFACE PROCESS: Natural, Satin, 150 grit, horizontal grain.  
FASTENER: Mechanically fastens to pole, and supports Curved Metal Panel.
- 60. LIGHT FIXTURE**  
PRODUCT: ColorGraze™ Powercore LED Fixture  
As manufactured by Phillips Solid-State Lighting Solutions (3 Burlington Woods Drive, Burlington, MA 01803, 888-385-5741 ; www.colorkinetics.com) or approved equal.  
SPECIFICATIONS:  
Length: As Required  
Color Temp: 4000K  
Beam Angle: 30° X 60°  
Line Voltage: VAC as determined by project electrical engineer.

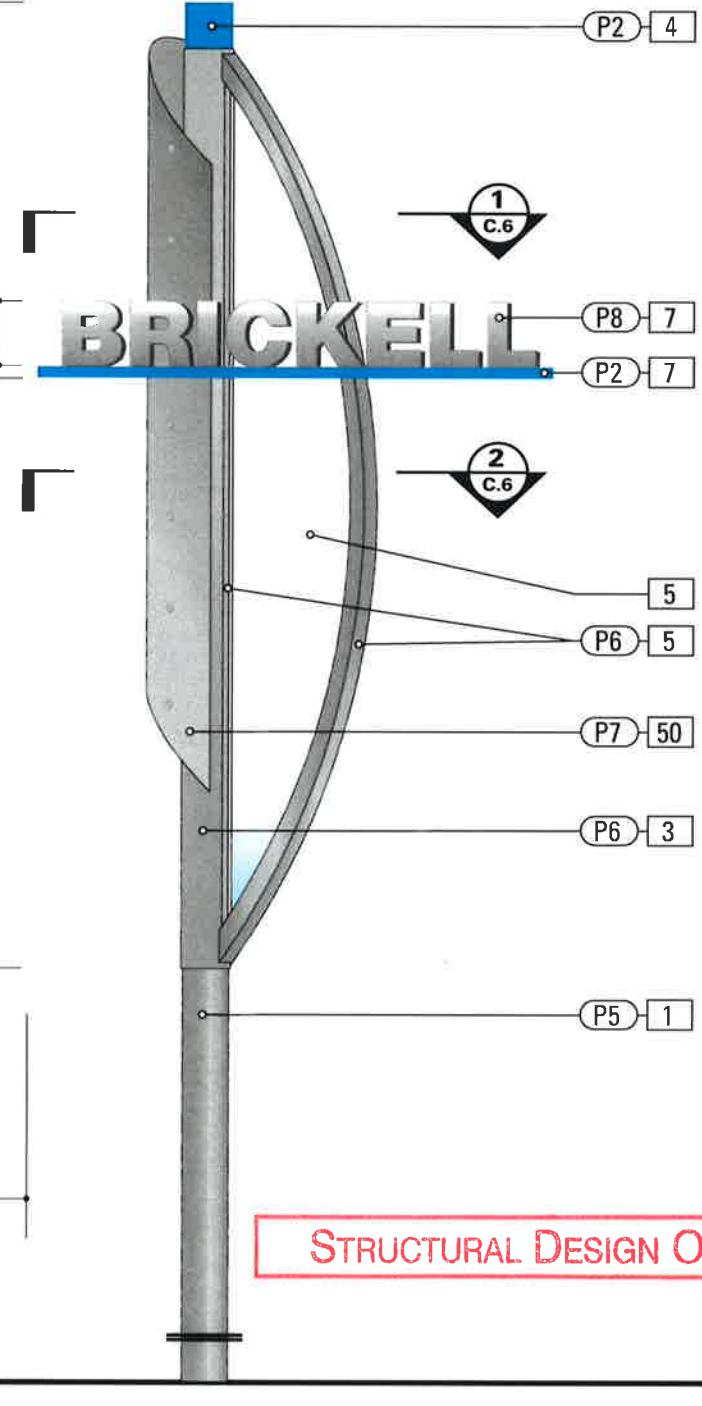
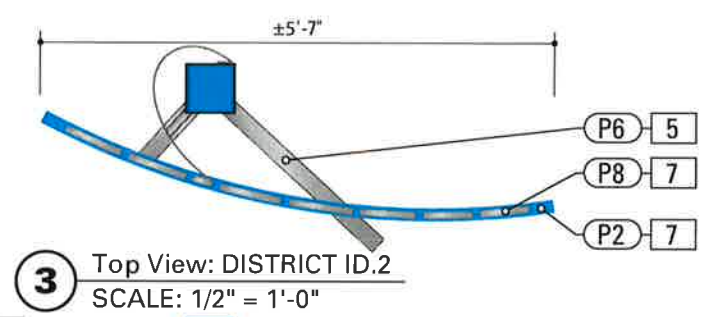
NOTE: Sign Fabricator to determine the District ID.1 sign location in the field per the location guidelines, and where to make electrical connection from City utility. Sign Fabricator to pull permit from City of Miami.

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

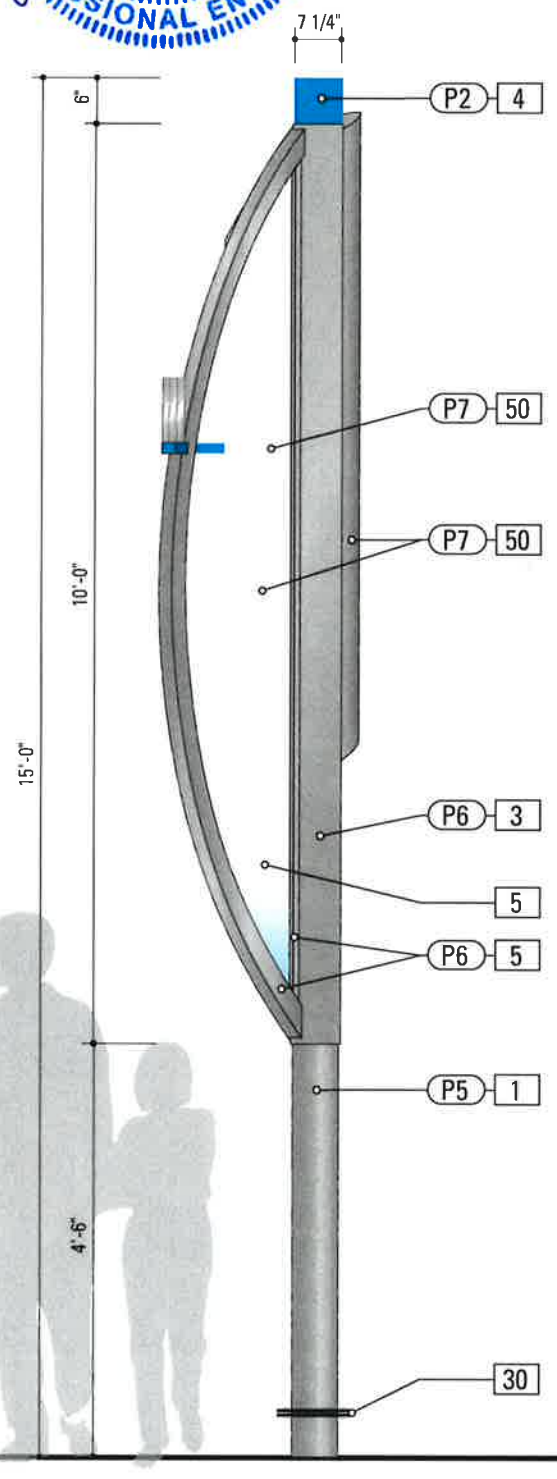
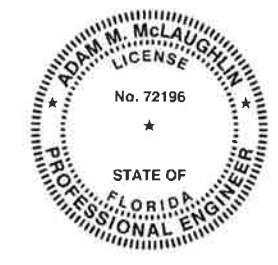
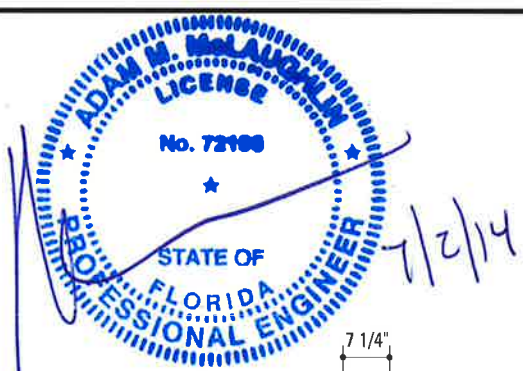
- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 2.
  3. ~~Welded~~ All fasteners shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  4. All provided signs shall be treated with Anti-Grffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		<b>Downtown Miami</b> <b>City of Miami, Florida</b>
SUBCONSULTANT		PROJECT NO.
DATE	10 December 2010	<b>Sign Type District ID.1</b> <b>District Identification</b>
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
If any design or fabrication is proposed for a project, the fabricator shall obtain approval from the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.		SHEET TITLE
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	





1 Front Elevation: DISTRICT ID.2  
SCALE: 1/2" = 1'-0"



2 Side Elevation: DISTRICT ID.2  
SCALE: 1/2" = 1'-0"

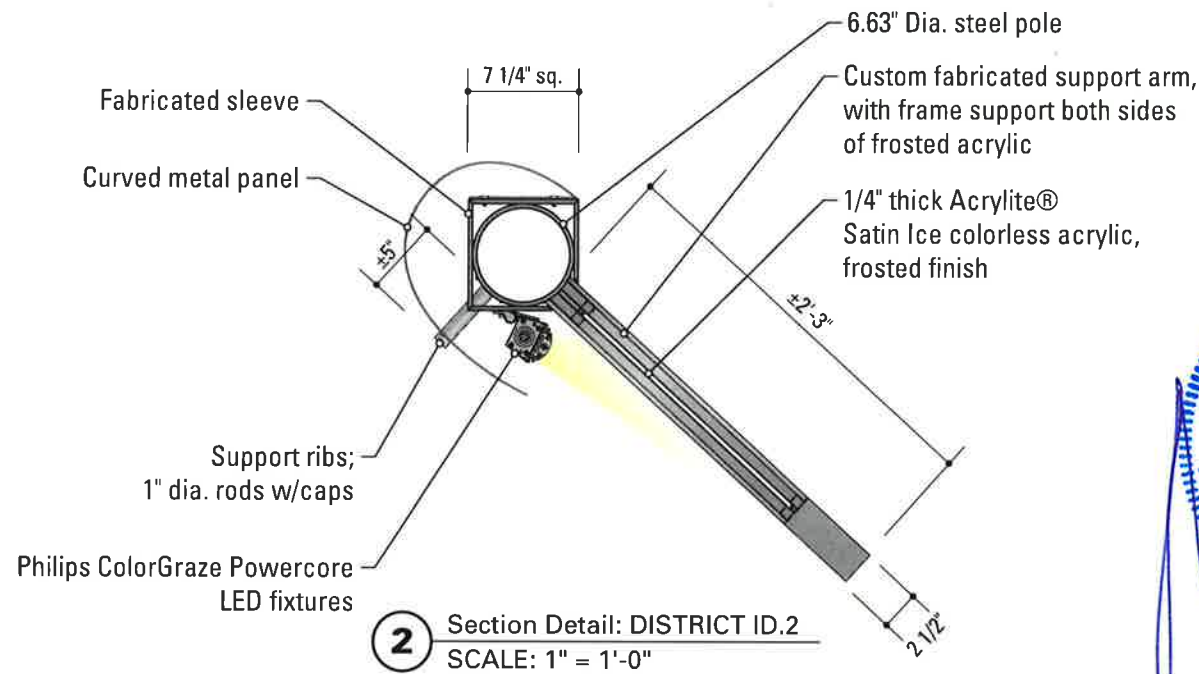
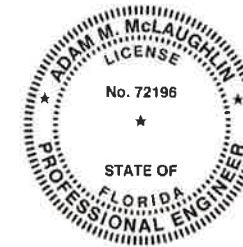
**SPECIFICATIONS** SIGN TYPE: District ID.2 FUNCTION: District Identification

- POLE**  
POLE: Pipe 6 x-strong (SCH 80) OD 6.63 ID 5.76  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: Sign Fabricator's Structural Engineer is responsible for the design of the sign foundation. Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®.
  - SLEEVE**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: Square  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole, minimal exposed.
  - TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
  - SUPPORT ARM / ACRYLIC PANEL**  
MATERIAL: Aluminum extrusion and sheet  
FABRICATION PROCESS: Custom Fabricated  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to pole.  
**RESIN PANEL INSERT**  
PRODUCT: 1/2" thick Acrylite® Satin Ice Colorless, frosted (866-900-6244, www.acrylite-magic.com) or approved equal.  
FASTENER: Inserted into fabricated sign frame (weather resistant glazing).
  - DIMENSIONAL GRAPHICS / CURVED METAL ARM**  
MATERIAL: 1/2" thk Aluminum sheet  
FABRICATION PROCESS: Water-Jet or Router-cut  
EDGES: Smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Aluminum angle w/gussets mechanically fastens to Curved Metal Arm.
  - CURVED METAL ARM**  
MATERIAL: Aluminum extrusion and sheet  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Male/Female extrusion mechanically fastens to pole. Aluminum angle w/gussets mechanically fastens to Support Arm/Acrylic Panel frame.
  - BREAKAWAY FOOTER**  
Product: Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®, or an FDOT approved equal breakaway system.  
NOTE: This specific sign is NOT positioned within FDOT R.O.W. but shall be breakaway as per FDOT breakaway specifications.
  - CURVED METAL PANEL / SUPPORT RIBS**  
MATERIAL: 1/8" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: square and smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastens to Sleeve.  
**SUPPORT RIBS**  
MATERIAL: Aluminum rod  
FABRICATION PROCESS: Custom fabricated.  
EDGES: square and smooth  
SURFACE PROCESS: Natural, Satin, 150 grit, horizontal grain.  
FASTENER: Mechanically fastens to pole, and supports Curved Metal Panel.
  - LIGHT FIXTURE**  
PRODUCT: ColorGraze™ Powercore LED Fixture  
As manufactured by Phillips Solid-State Lighting Solutions (3 Burlington Woods Drive, Burlington, MA 01803, 888-385-5741 ; www.colorkinetics.com) or approved equal.  
SPECIFICATIONS:  
Length: As Required  
Color Temp: 4000K  
Beam Angle: 30° X 60°  
Line Voltage: VAC as determined by project electrical engineer.  
  
NOTE: Sign Fabricator to determine the District ID.2 sign location in the field per the location guidelines, and where to make electrical connection from City utility. Sign Fabricator to pull permit from City of Miami.
- GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

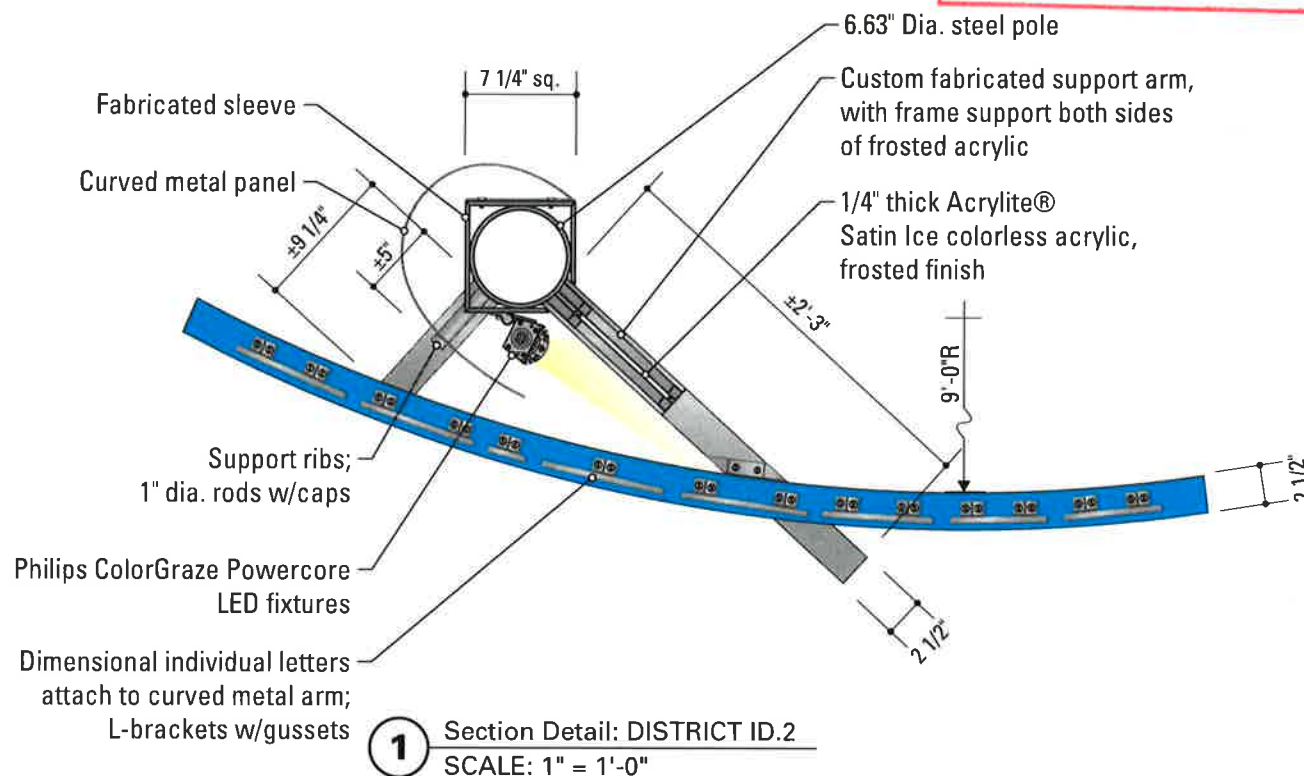
- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 
  - Hardware: All fasteners shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - Approved Anti-Graffiti to be removed/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
		<b>Downtown Miami</b> <b>City of Miami, Florida</b>
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	<b>Sign Type District ID.2</b> <b>District Identification</b>
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>C.5</b>

STRUCTURAL DESIGN ONLY



**STRUCTURAL DESIGN ONLY**



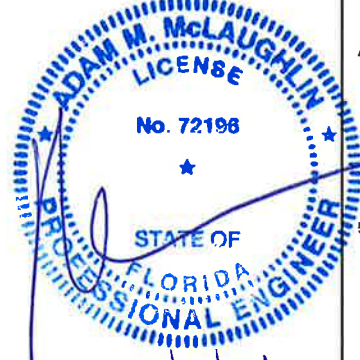
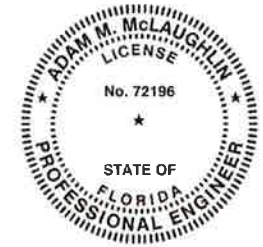
**SPECIFICATIONS SIGN TYPE: District ID.2 FUNCTION: District Identification**

- POLE**  
POLE: Pipe 6 x-strong (SCH 80) OD 6.63 ID 5.76  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: Sign Fabricator's Structural Engineer is responsible for the design of the sign foundation. Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®.
- SLEEVE**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: Square  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole, minimal exposed.
- TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- SUPPORT ARM / ACRYLIC PANEL**  
MATERIAL: Aluminum extrusion and sheet  
FABRICATION PROCESS: Custom Fabricated  
EDGES: Square AND Clean (NO exposed seams),  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to pole.  
**RESIN PANEL INSERT**  
PRODUCT: 1/2" thick Acrylite® Satin Ice Colorless, frosted (866-900-6244, www.acrylite-magic.com) or approved equal.  
FASTENER: Inserted into fabricated sign frame (weather resistant glazing).
- DIMENSIONAL GRAPHICS / CURVED METAL ARM**  
MATERIAL: 1/2" thk Aluminum sheet  
FABRICATION PROCESS: Water-Jet or Router-cut  
EDGES: Smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Aluminum angle w/gussets mechanically fastens to Curved Metal Arm.
- CURVED METAL ARM**  
MATERIAL: Aluminum extrusion and sheet  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Male/Female extrusion mechanically fastens to pole. Aluminum angle w/gussets mechanically fastens to Support Arm/Acrylic Panel frame.
- BREAKAWAY FOOTER**  
Product: Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®, or an FDOT approved equal breakaway system.  
NOTE: This specific sign is NOT positioned within FDOT R.O.W., but shall be breakaway as per FDOT breakaway specifications.
- CURVED METAL PANEL / SUPPORT RIBS**  
MATERIAL: 1/8" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: square and smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastens to Sleeve.  
**SUPPORT RIBS**  
MATERIAL: Aluminum rod  
FABRICATION PROCESS: Custom fabricated.  
EDGES: square and smooth  
SURFACE PROCESS: Natural, Satin, 150 grit, horizontal grain.  
FASTENER: Mechanically fastens to pole, and supports Curved Metal Panel.
- LIGHT FIXTURE**  
PRODUCT: ColorGraze™ Powercore LED Fixture  
As manufactured by Phillips Solid-State Lighting Solutions (3 Burlington Woods Drive, Burlington, MA 01803, 888-385-5741 ; www.colorkinetics.com) or approved equal.  
SPECIFICATIONS:  
Length: As Required  
Color Temp: 4000K  
Beam Angle: 30° X 60°  
Line Voltage: VAC as determined by project electrical engineer.  
  
NOTE: Sign Fabricator to determine the District ID.2 sign location in the field per the location guidelines, and where to make electrical connection from City utility. Sign Fabricator to pull permit from City of Miami.

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 
  - Weathering: All dimensional graphics and curved metal arm hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - Approved Signatures to be received: Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
<p>120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a></p>		<p><b>Downtown Miami</b> City of Miami, Florida</p>
SUBCONSULTANT		PROJECT NO.
DATE	10 December 2010	<p><b>Sign Type District ID.2</b> <b>District Identification</b></p> <p>SHEET NO.</p> <p><b>C.6</b></p>
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	



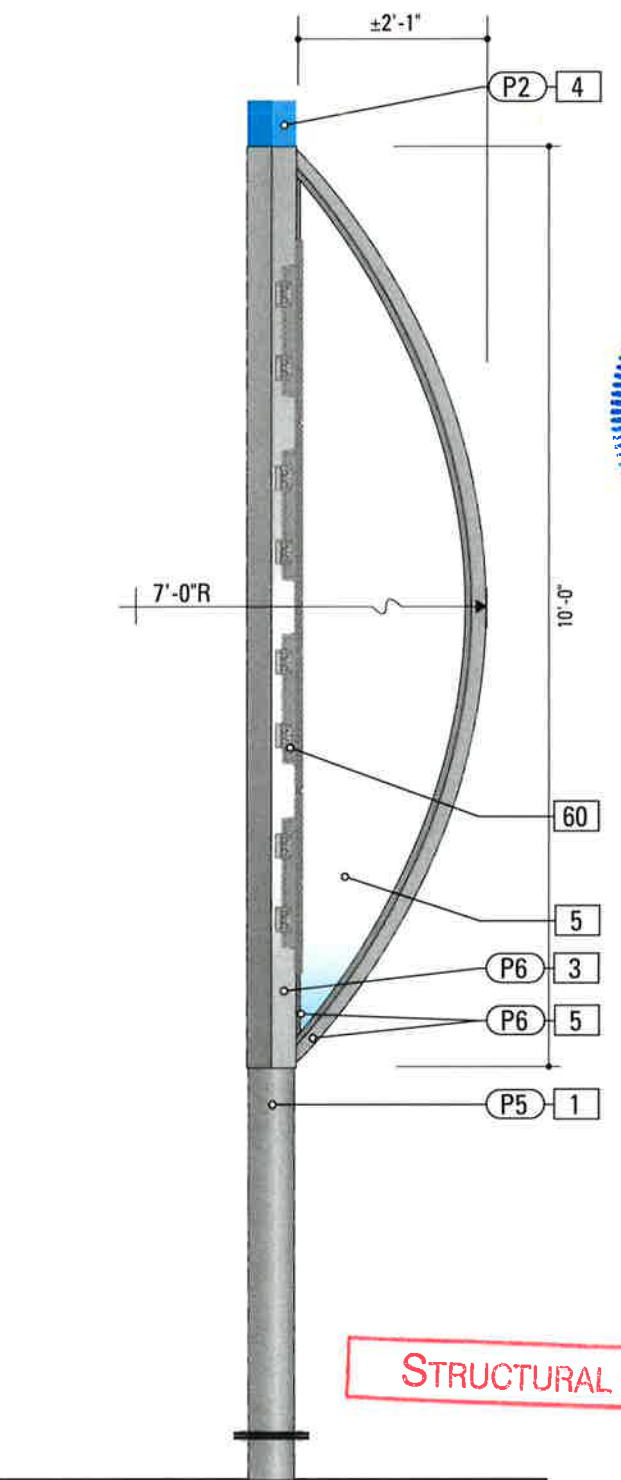
**SPECIFICATIONS** SIGN TYPE: District ID.2 FUNCTION: District Identification

- POLE**  
POLE: Pipe 6 x strong (SCH 80) OD 6.63 ID 5.76  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: Sign Fabricator's Structural Engineer is responsible for the design of the sign foundation. Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®.
- SLEEVE**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: Square  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole, minimal exposed.
- TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- SUPPORT ARM / ACRYLIC PANEL**  
MATERIAL: Aluminum extrusion and sheet  
FABRICATION PROCESS: Custom Fabricated  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to pole.  
**RESIN PANEL INSERT**  
PRODUCT: 1/2" thick Acrylite® Satin Ice Colorless, frosted (866-900-6244, www.acrylite-magic.com) or approved equal.  
FASTENER: Inserted into fabricated sign frame (weather resistant glazing).
- DIMENSIONAL GRAPHICS / CURVED METAL ARM**  
MATERIAL: 1/2" thk Aluminum sheet  
FABRICATION PROCESS: Water-Jet or Router-cut  
EDGES: Smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Aluminum angle w/gussets mechanically fastens to Curved Metal Arm.
- CURVED METAL ARM**  
MATERIAL: Aluminum extrusion and sheet  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Male/Female extrusion mechanically fastens to pole. Aluminum angle w/gussets mechanically fastens to Support Arm/Acrylic Panel frame.
- BREAKAWAY FOOTER**  
Product: Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®, or an FDOT approved equal breakaway system.  
NOTE: This specific sign is NOT positioned within FDOT R.O.W., but shall be breakaway as per FDOT breakaway specifications.
- CURVED METAL PANEL / SUPPORT RIBS**  
MATERIAL: 1/8" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: square and smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish  
FASTENER: Mechanically fastens to Sleeve.  
**SUPPORT RIBS**  
MATERIAL: Aluminum rod  
FABRICATION PROCESS: Custom fabricated.  
EDGES: square and smooth  
SURFACE PROCESS: Natural, Satin, 150 grit, horizontal grain.  
FASTENER: Mechanically fastens to pole, and supports Curved Metal Panel.
- LIGHT FIXTURE**  
PRODUCT: ColorGraze™ Powercore LED Fixture  
As manufactured by Phillips Solid-State Lighting Solutions (3 Burlington Woods Drive, Burlington, MA 01803, 888-385-5741 ; www.colorkinetics.com) or approved equal.  
SPECIFICATIONS:  
Length: As Required  
Color Temp: 4000K  
Beam Angle: 30° X 60°  
Line Voltage: VAC as determined by project electrical engineer.  
  
**NOTE:** Sign Fabricator to determine the District ID.2 sign location in the field per the location guidelines, and where to make electrical connection from City utility. Sign Fabricator to pull permit from City of Miami.

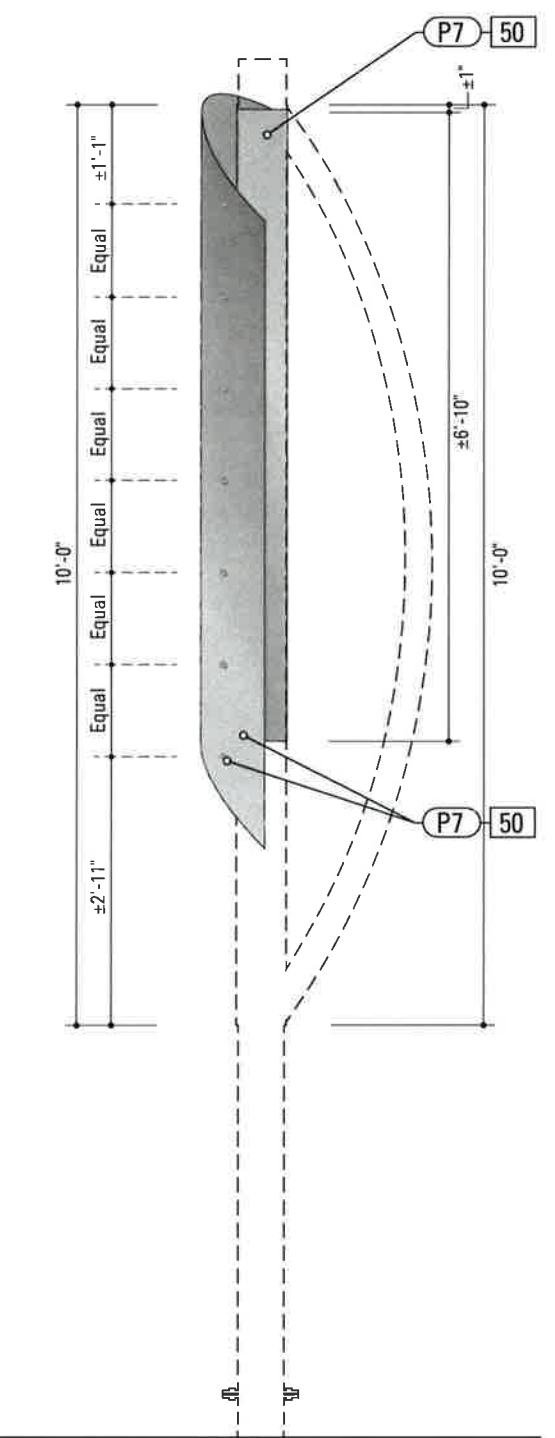
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 
  - Warning: All fasteners, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - Approved Sign Fabricator to receive Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

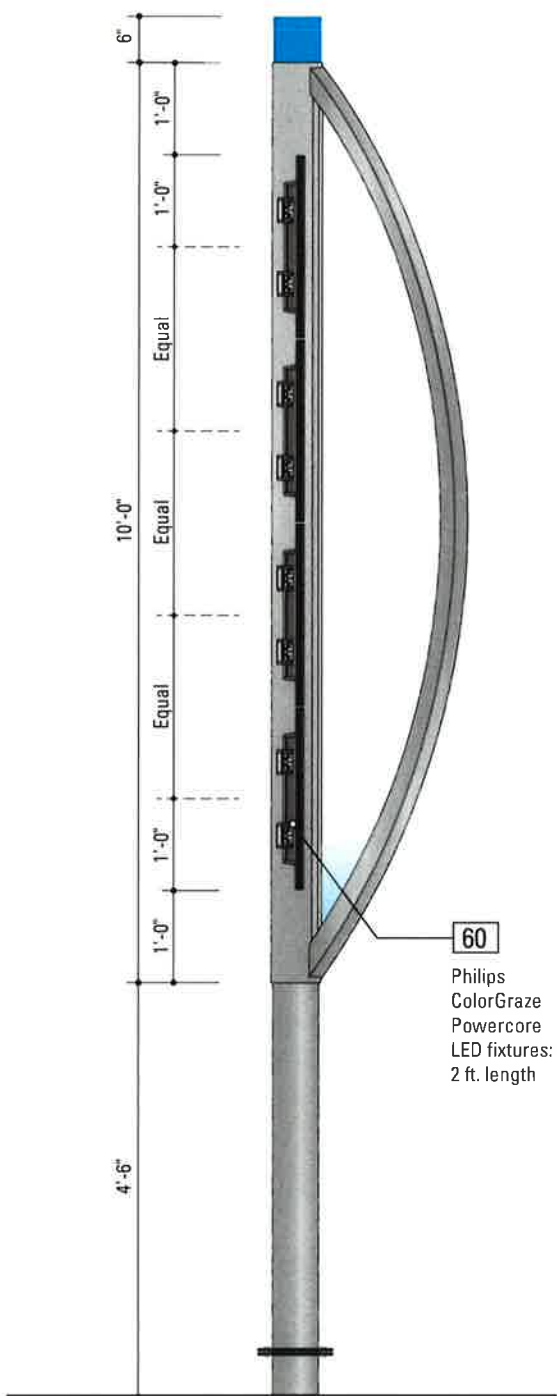
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 www.merjedesign.com		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE 10 December 2010	DRAWN BY: PR	Sign Type District ID.2 District Identification
REVISIONS 04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		
03/12/2014 PR		
05/02/2014 PR		SHEET NO. <b>C.7</b>



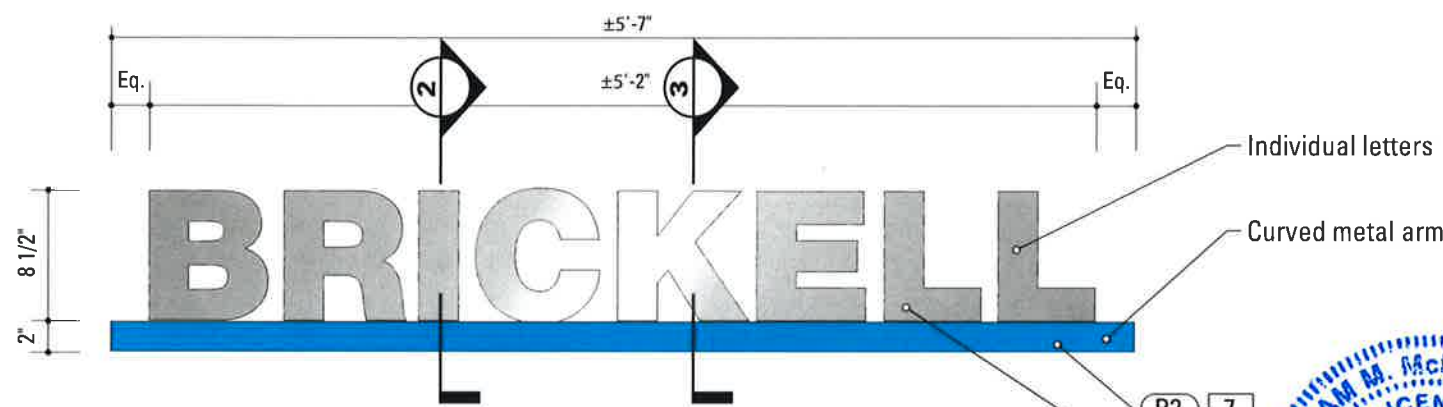
**3** Acrylic Panel Insert: DISTRICT ID.2  
SCALE: 1/2" = 1'-0"



**2** Curved Metal Panel & Support Ribs Detail: DISTRICT ID.2  
SCALE: 1/2" = 1'-0"

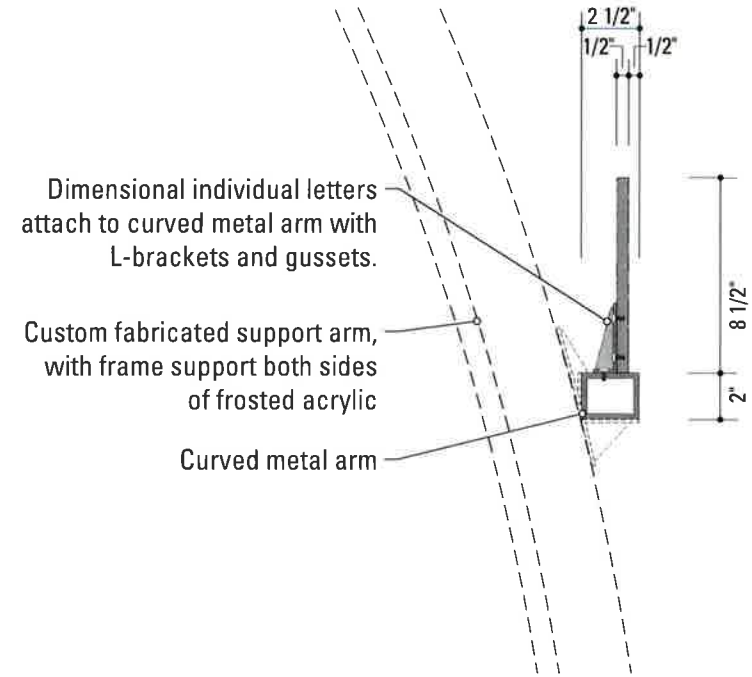
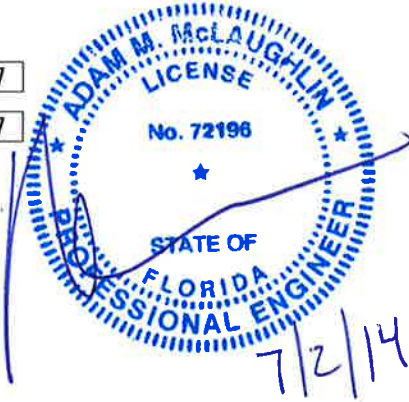


**1** Lightig Detail: DISTRICT ID.2  
SCALE: 1/2" = 1'-0"

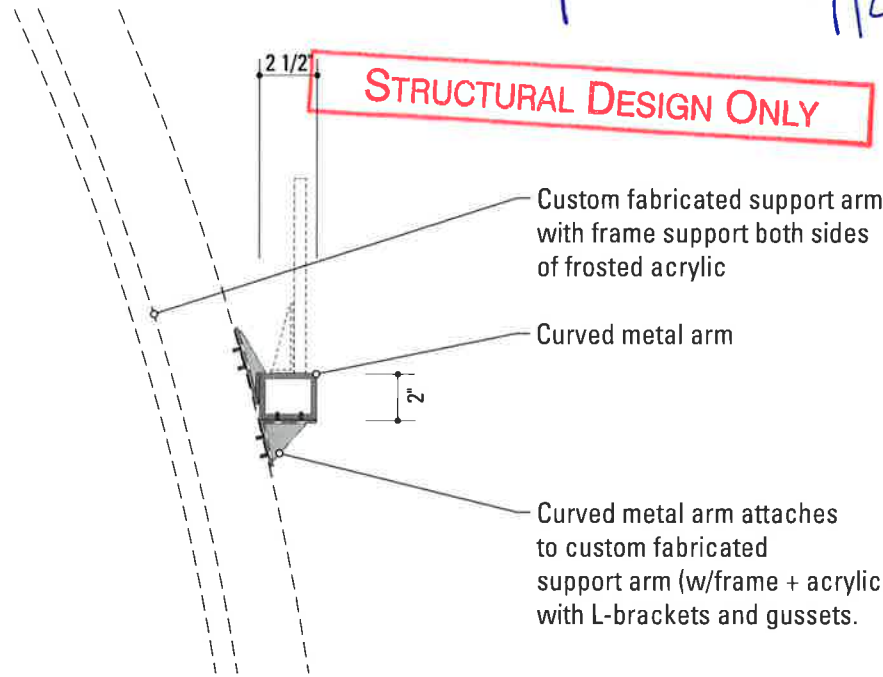


**1** Letters + Curved Metal Arm elevation: DISTRICT ID.2  
SCALE: 1" = 1'-0"

P2 - 7  
P8 - 7



**2** Section Detail: DISTRICT ID.2  
SCALE: 1 1/2" = 1'-0"



**3** Section Detail: DISTRICT ID.2  
SCALE: 1 1/2" = 1'-0"

**SPECIFICATIONS** SIGN TYPE: District ID.2 FUNCTION: District Identification

- 1. POLE**  
POLE: Pipe 6 x-strong (SCH 80) OD 6.63 ID 5.76  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: Sign Fabricator's Structural Engineer is responsible for the design of the sign foundation. Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®.
- 3. SLEEVE**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: Square  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole, minimal exposed.
- 4. TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 5. SUPPORT ARM / ACRYLIC PANEL**  
MATERIAL: Aluminum extrusion and sheet  
FABRICATION PROCESS: Custom Fabricated  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to pole.  
**RESIN PANEL INSERT**  
PRODUCT: 1/2" thick Acrylite® Satin Ice Colorless, frosted (866-900-6244, www.acrylite-magic.com) or approved equal.  
FASTENER: Inserted into fabricated sign frame (weather resistant glazing).
- 7. DIMENSIONAL GRAPHICS / CURVED METAL ARM**  
MATERIAL: 1/2" thk Aluminum sheet  
FABRICATION PROCESS: Water-Jet or Router-cut  
EDGES: Smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Aluminum angle w/gussets mechanically fastens to Curved Metal Arm.
- CURVED METAL ARM**  
MATERIAL: Aluminum extrusion and sheet  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Male/Female extrusion mechanically fastens to pole. Aluminum angle w/gussets mechanically fastens to Support Arm/Acrylic Panel frame.
- 30. BREAKAWAY FOOTER**  
Product: Sign Fabricator and Structural Engineer to design base plate application and coordinate design of Pole-Safe Breakaway couplings with Transpo®, or an FDOT approved equal breakaway system.  
NOTE: This specific sign is NOT positioned within FDOT R.O.W., but shall be breakaway as per FDOT breakaway specifications.
- 50. CURVED METAL PANEL / SUPPORT RIBS**  
MATERIAL: 1/8" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: square and smooth  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastens to Sleeve.  
**SUPPORT RIBS**  
MATERIAL: Aluminum rod  
FABRICATION PROCESS: Custom fabricated.  
EDGES: square and smooth  
SURFACE PROCESS: Natural, Satin, 150 grit, horizontal grain.  
FASTENER: Mechanically fastens to pole, and supports Curved Metal Panel.
- 60. LIGHT FIXTURE**  
PRODUCT: ColorGraze™ Powercore LED Fixture  
As manufactured by Phillips Solid-State Lighting Solutions (3 Burlington Woods Drive, Burlington, MA 01803, 888-385-5741 ; www.colorkinetics.com) or approved equal.  
SPECIFICATIONS:  
Length: As Required  
Color Temp: 4000K  
Beam Angle: 30° X 60°  
Line Voltage: VAC as determined by project electrical engineer.

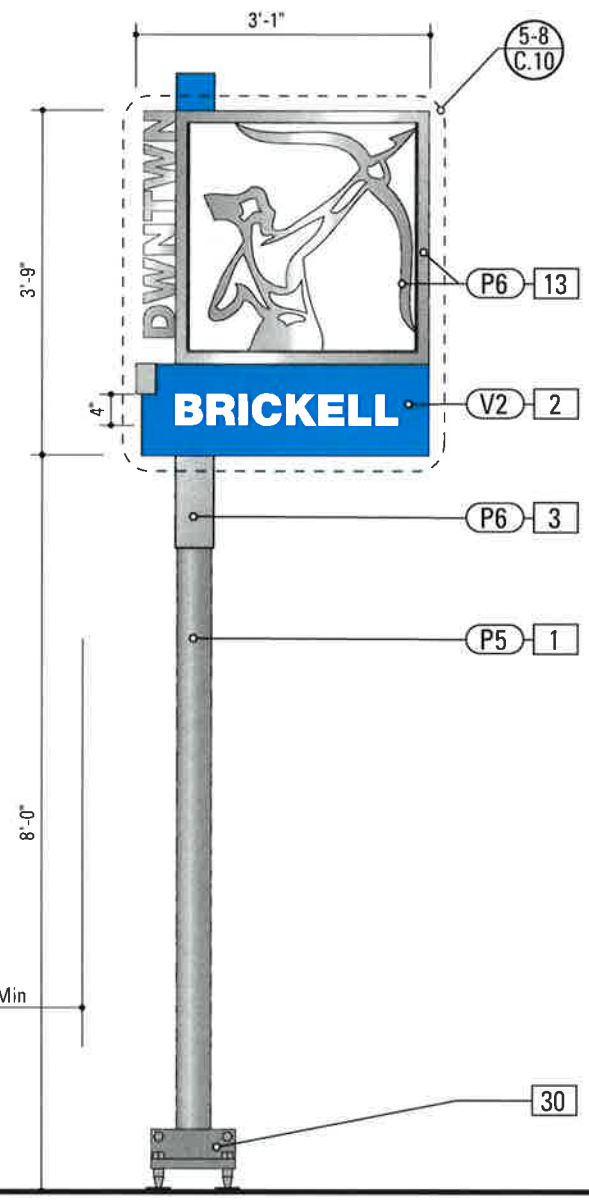
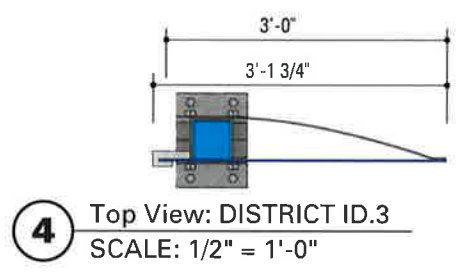
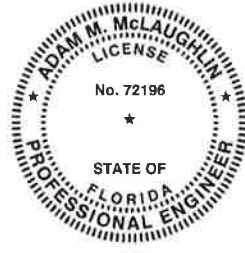
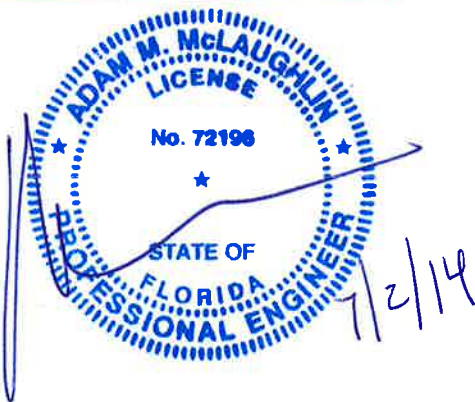
NOTE: Sign Fabricator to determine the District ID.2 sign location in the field per the location guidelines, and where to make electrical connection from City utility. Sign Fabricator to pull permit from City of Miami.

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

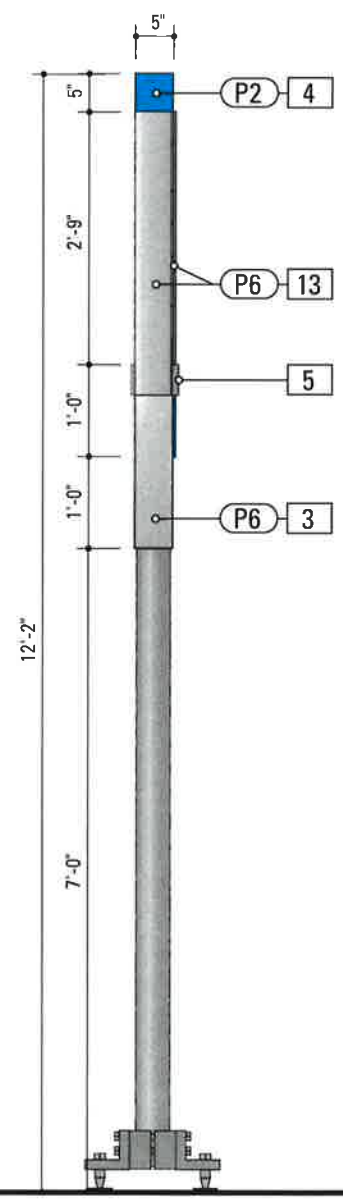
- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 2.
  3. ~~Warning: All electrical hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.~~
  4. ~~Approved by City of Miami for Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M~~

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 www.merjedesign.com		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type District ID.2 District Identification
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>C.8</b>

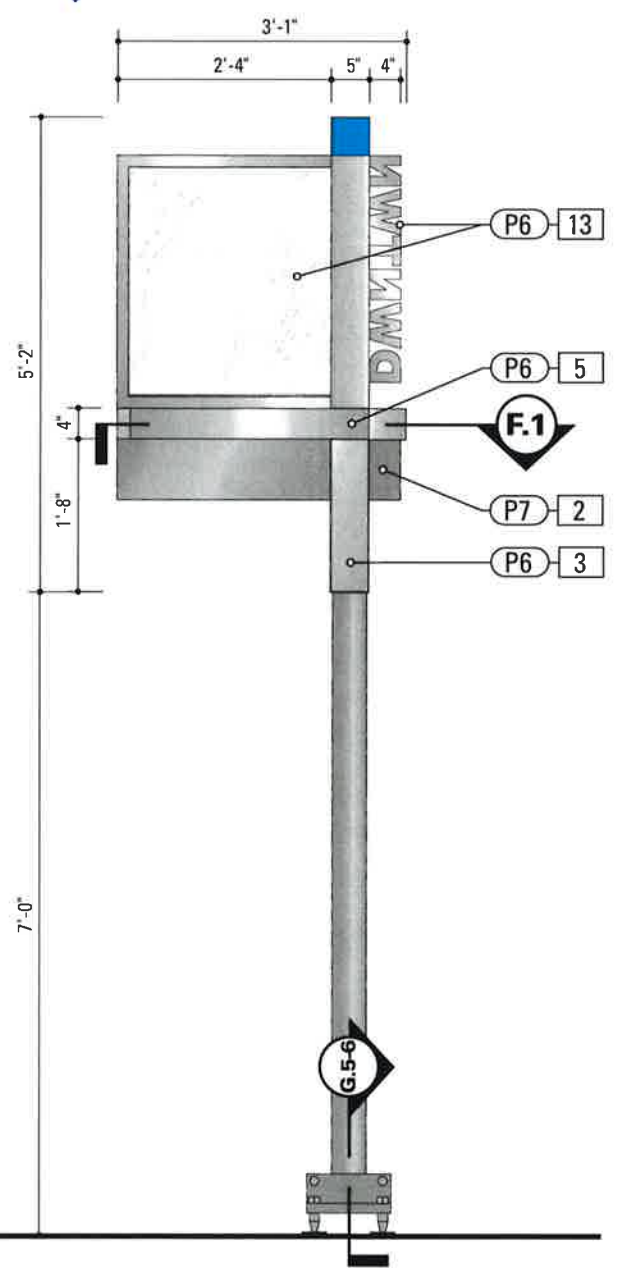
**STRUCTURAL DESIGN ONLY**



**1** Front Elevation: DISTRICT ID.3  
SCALE: 1/2" = 1'-0"



**2** Side Elevation: DISTRICT ID.3  
SCALE: 1/2" = 1'-0"



**3** Rear Elevation: DISTRICT ID.3  
SCALE: 1/2" = 1'-0"

**SPECIFICATIONS** SIGN TYPE: District ID.3 FUNCTION: District Identification

- 1. POLE**  
POLE: Pipe 4 STD. (SCH 40) OD 4.5 ID 4  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 2. SIGN PANEL - REFLECTIVE VINYL**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut  
EDGES: Smooth  
CORNERS: Square  
COLOR: Custom, as noted  
GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
FASTENER: Mechanically fastened/WELD to sleeve assembly/L bracket
- 3. SLEEVE ASSEMBLY - L BRACKET**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Breakformed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld to Sign Panel
- SLEEVE ASSEMBLY - COVER**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically Fastened / Weld to Sign Panel  
Note: Area below sign panel requires 1/8" thk front cover plate. Finish to match Cover. Mechanically Fasten to L Bracket.
- 4. TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 5. SUPPORT ARM**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Curved Panel, Trim to size  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten & weld unit to Sleeve Assembly Cover.
- PANEL CLIP**  
MATERIAL: 1" thick Aluminum block  
FABRICATION PROCESS: Milled/Machined/Slotted  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to Sleeve Assembly Cover & Panel. Slotted cut fits over sign panel.
- 13. CUT METAL GRAPHIC**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-Cut  
EDGES: Square, Smooth  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole
- ACRYLIC BACKER**  
MATERIAL: .354" (9 mm) Acrylite® Satin ICE (WDD08DF) acrylic panel  
PROCESS: Backer for cut Metal Graphic - inside U-Channel Frame  
FASTENER: Mechanically fastened to U-Channel Frame, Laminate to Cut Metal Graphic.
- 30. BREAKAWAY FOOTER**  
Product: TRANSPO® Break-Safe Model AP Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.

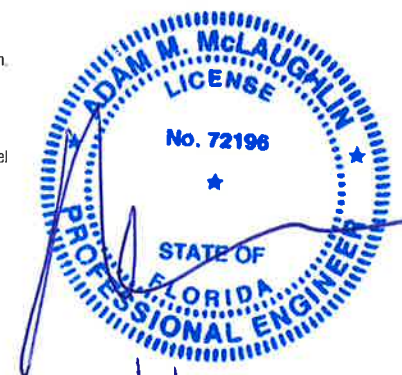
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 2.
  3. Hardware used shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  4. Approved Anti-Graffiti to be used/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

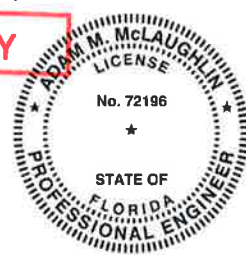
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
 120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		<b>Downtown Miami</b> City of Miami, Florida
SUBCONSULTANT		PROJECT NO.
DATE	10 December 2010	SHEET TITLE <b>Sign Type District ID.3</b> <b>District Identification</b> SHEET NO. <b>C.9</b>
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	
	05/02/2014 PR	

**2. SIGN PANEL - REFLECTIVE VINYL**  
 MATERIAL: 1/4" thk Aluminum sheet  
 FABRICATION PROCESS: Router-cut  
 EDGES: Smooth  
 CORNERS: Square  
 COLOR: Custom, as noted  
 GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
 FASTENER: Mechanically fastened/WELD to sleeve assembly/L bracket

**13. CUT METAL GRAPHIC**  
 MATERIAL: 1/4" thk Aluminum sheet  
 FABRICATION PROCESS: Router-Cut  
 EDGES: Square, Smooth  
 COLOR: custom, as noted  
 SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
 FASTENER: Mechanically fastened to pole  
**ACRYLIC BACKER**  
 MATERIAL: .354" (9 mm) Acrylite® Satin ICE (WD008DF) acrylic panel  
 PROCESS: Backer for cut Metal Graphic - inside U-Channel Frame  
 FASTENER: Mechanically fastened to U-Channel Frame, Laminate to Cut Metal Graphic,



**STRUCTURAL DESIGN ONLY**

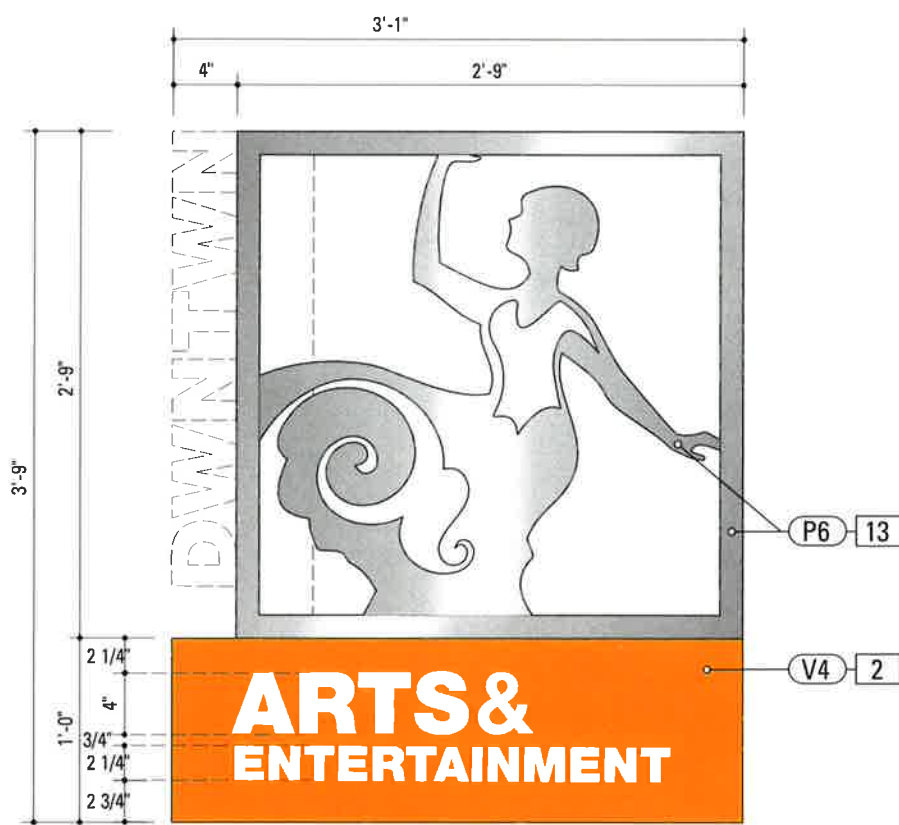


GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

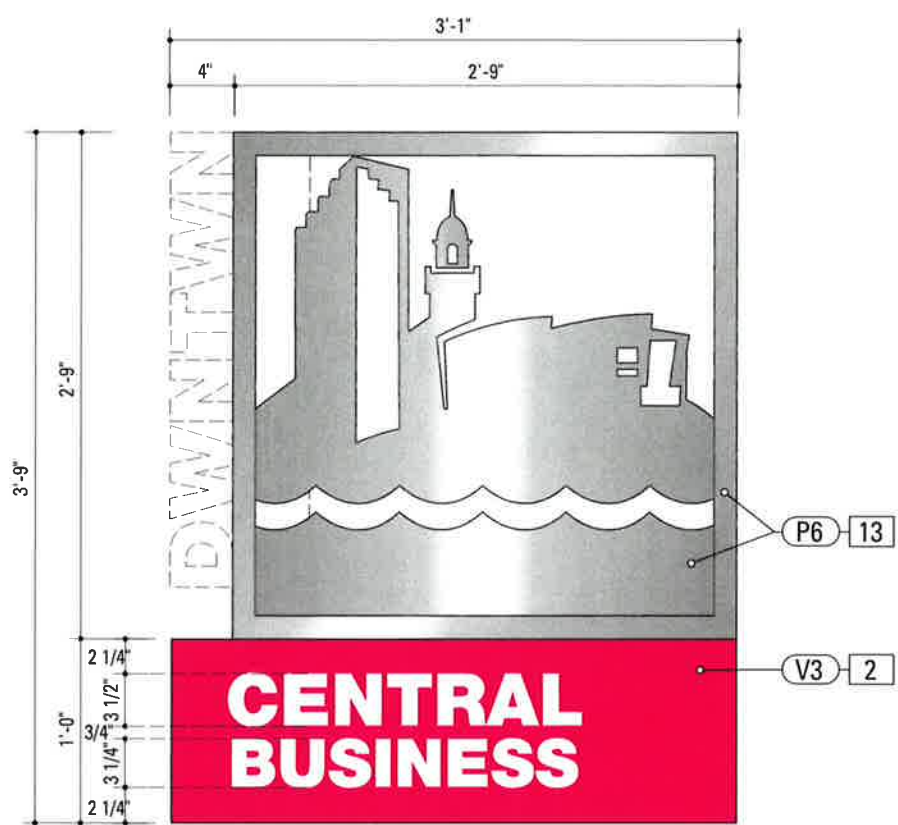
- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 2.
  3. Hardware: All fasteners shall be concealed if exposed hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  4. Approved UV Anti-Graffiti overcoat/UV-Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type District ID.3 District Identification
DRAWN BY:	PR	
REVISIONS		SHEET NO.
	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
03/12/2014 PR		<b>C.10</b>
05/02/2014 PR		

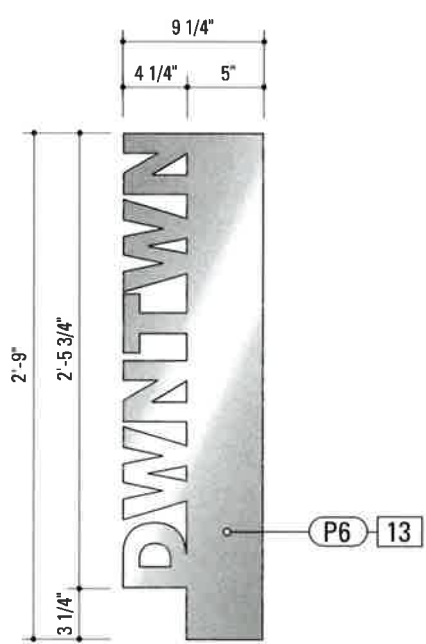
The Designer, by the fabrication of these drawings, warrants that the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



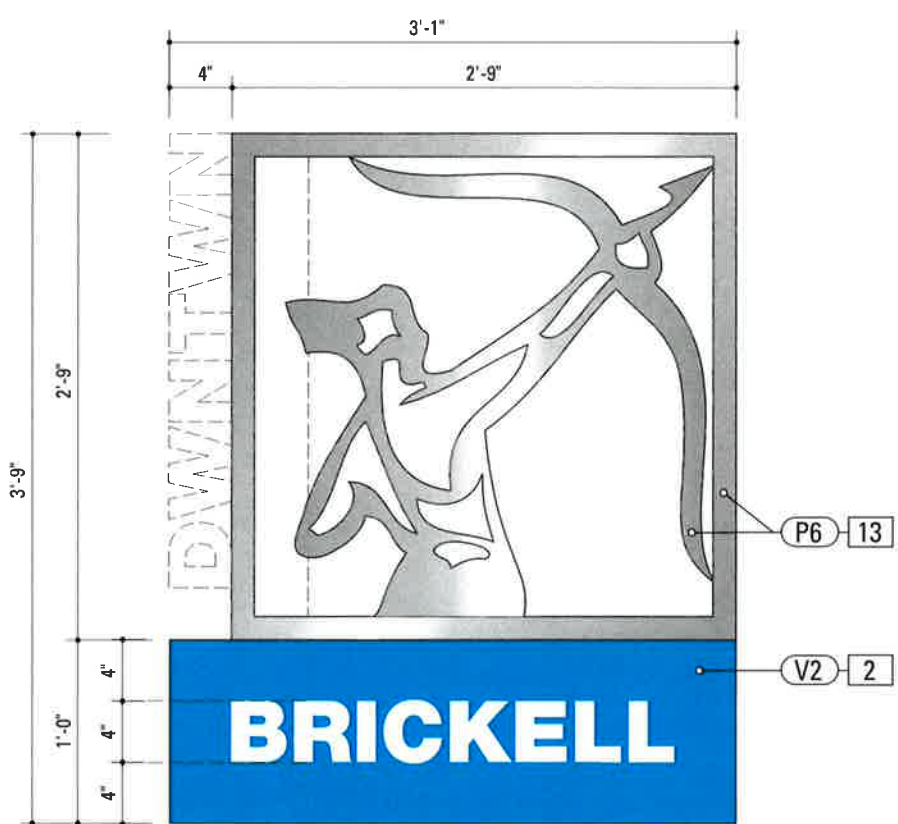
**7** Panel Detail: DISTRICT ID.3  
SCALE: 1" = 1'-0"



**8** Panel Detail: DISTRICT ID.3  
SCALE: 1" = 1'-0"

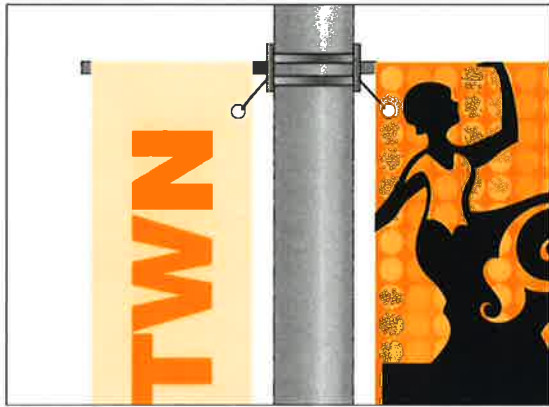


**5** "DWNTWN" Panel Detail: DISTRICT ID.3  
SCALE: 1" = 1'-0"

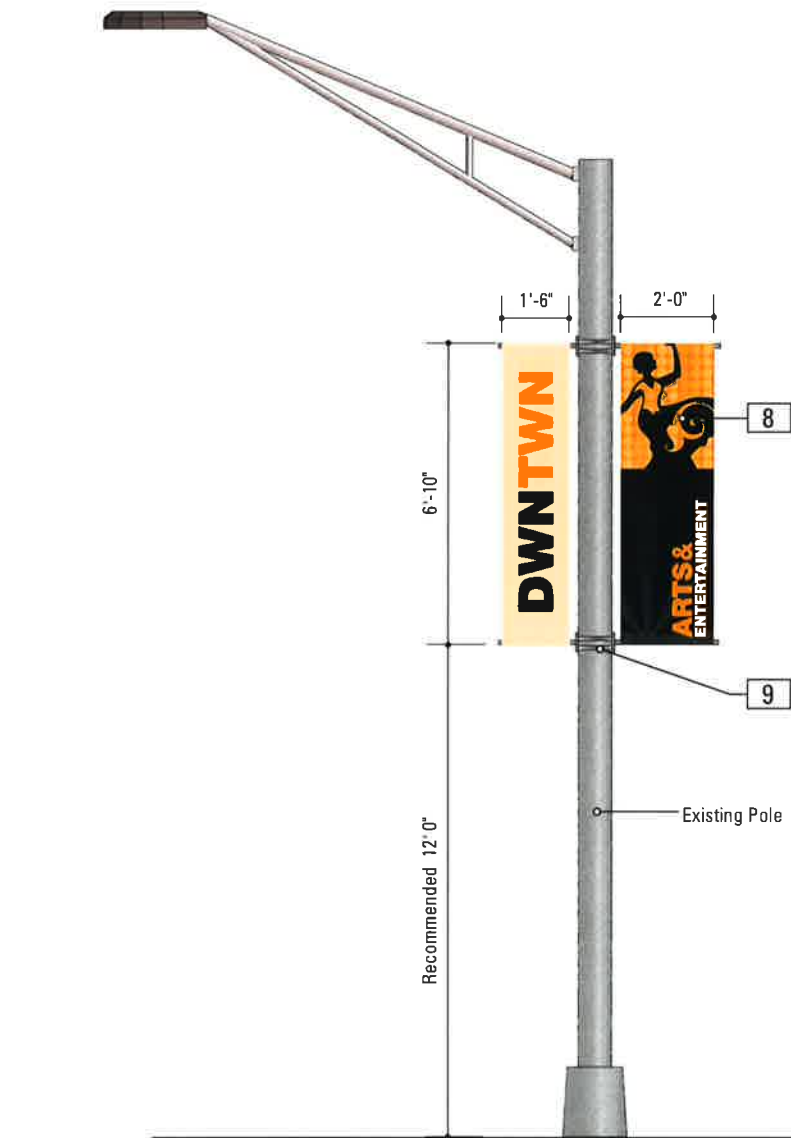


**6** Panel Detail: DISTRICT ID.3  
SCALE: 1" = 1'-0"

STRUCTURAL DESIGN ONLY



**3** Bracket Detail: BANNER.1  
SCALE: NTS



**1** Front Elevation: BANNER.1  
SCALE: 1/4" = 1'-0"



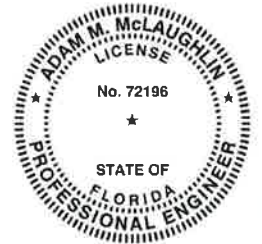
**2** Banner Graphics: BANNER.1  
SCALE: 1/2" = 1'-0"

**SPECIFICATIONS**      **SIGN TYPE:** BANNER.1      **FUNCTION:** District Banners

**8. SUNBRELLA® FABRIC BANNER**  
**MATERIAL:** Sunbrella® 100% Solution-Dyed acrylic marine fabric (NO substitutes acceptable).  
**FABRIC COLOR:** Chosen from fabric color standards.  
**FABRIC PRINTING:** Screen-printed with UV Resistant/Inhibitor, heat set, permanent pigment ink. Heat dried processing.  
**SCREEN-PRINT COLOR:** Custom, as noted.  
**STITCHING:** Thread must be UV-treated heavy duty to match fabric.  
**WARRANTY:** Sunbrella® marine-grade fabric for 10 years.  
**CONSTRUCTION:** 2 inch pole pockets on top and bottom, secured with double-lock stitching and back-stitching in areas of stress. Side-hems are double-rolled and double lock stitched. Brass-spurred grommets are applied to the 2 inside corners locking the hem and providing security at stress points.  
**ATTACHMENT:** Slide banner pole pockets onto bracket fiberglass rods. Attach flexible plastic tie, or cable, to brass grommet and to Banner Saver™ Pro 2000 bracket (spring loaded wind release brackets), top and bottom.

**VINYL BANNER (OPTIONAL MATERIAL)**  
**MATERIAL:** 18 oz. opaque white blackout vinyl.  
**PRINTED GRAPHICS:** All graphics must be printed at 720 DPI maximum, using UV resistant inks.  
**CLEAR COAT:** Formulated UV clear coat allowing for flexibility, and scratch resistant.  
**STITCHING:** Thread must be UV-treated heavy duty to match fabric.  
**WARRANTY:** Complete vinyl printed banner for 3 years.  
**CONSTRUCTION:** 2 inch pole pockets on top and bottom, secured with double-lock stitching and back-stitching in areas of stress. Side-hems are double-rolled and double lock stitched. Brass-spurred grommets are applied to the 2 inside corners locking the hem and providing security at stress points.  
**ATTACHMENT:** Slide banner pole pockets onto bracket fiberglass rods. Attach flexible plastic tie, or cable, to brass grommet and to Banner Saver™ Pro 2000 bracket (spring loaded wind release brackets), top and bottom.

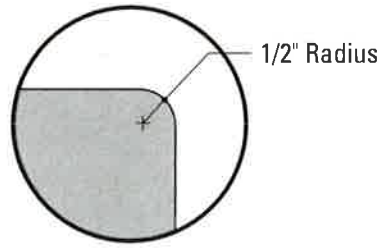
**9. BANNER BRACKET**  
**PRODUCT:** KBW BannerFlex D3 Banner System, or approved equal. See sheet F.6 for more details.  
**MATERIAL:** Cast aluminum base, with 13/16" removable fiberglass banner arm.  
**POLE STRAP ATTACHMENT:** Stainless Steel 3/4" Band-It Band, or approved equal.  
**NOTE:** Use of listed proprietary products are contingent on the manufacturer providing calculations and sufficient information showing that the intended products meets the design standards set forth by the FBC and FDOT.



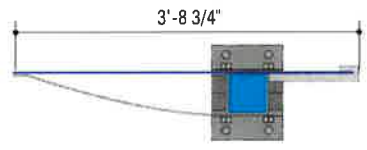
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 2.
  3. Hardware - All hardware shall be concealed if required. Hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  4. Approved Light Colors to be used: Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

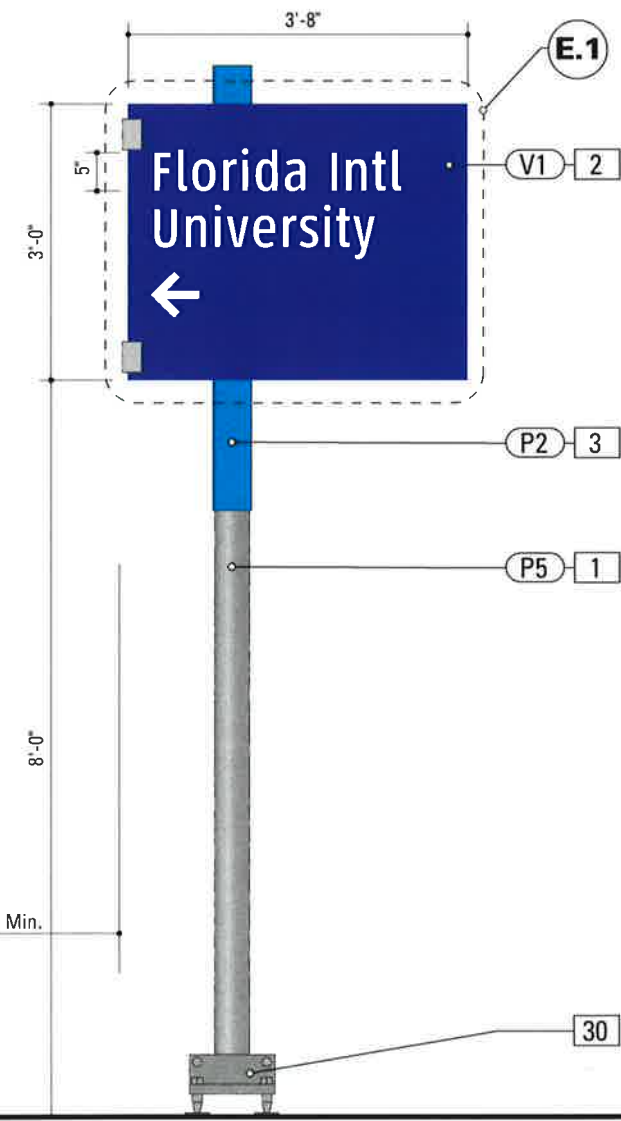
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe 120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		Downtown Miami City of Miami, Florida
SUBCONSULTANT		PROJECT NO.
DATE 10 December 2010	DRAWN BY: PR	SHEET TITLE <b>Sign Type BANNER.1 District Banners</b>
REVISIONS 04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		
03/12/2014 PR		
05/02/2014 PR		SHEET NO. <b>C.11</b>



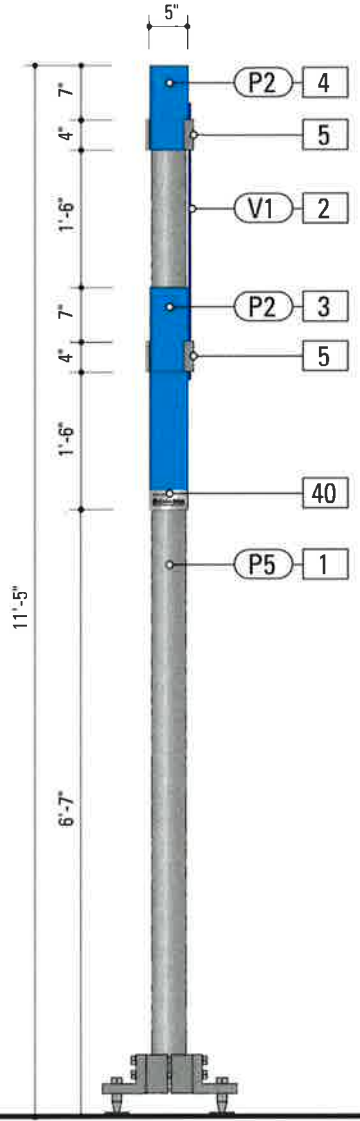
**STRUCTURAL DESIGN ONLY**



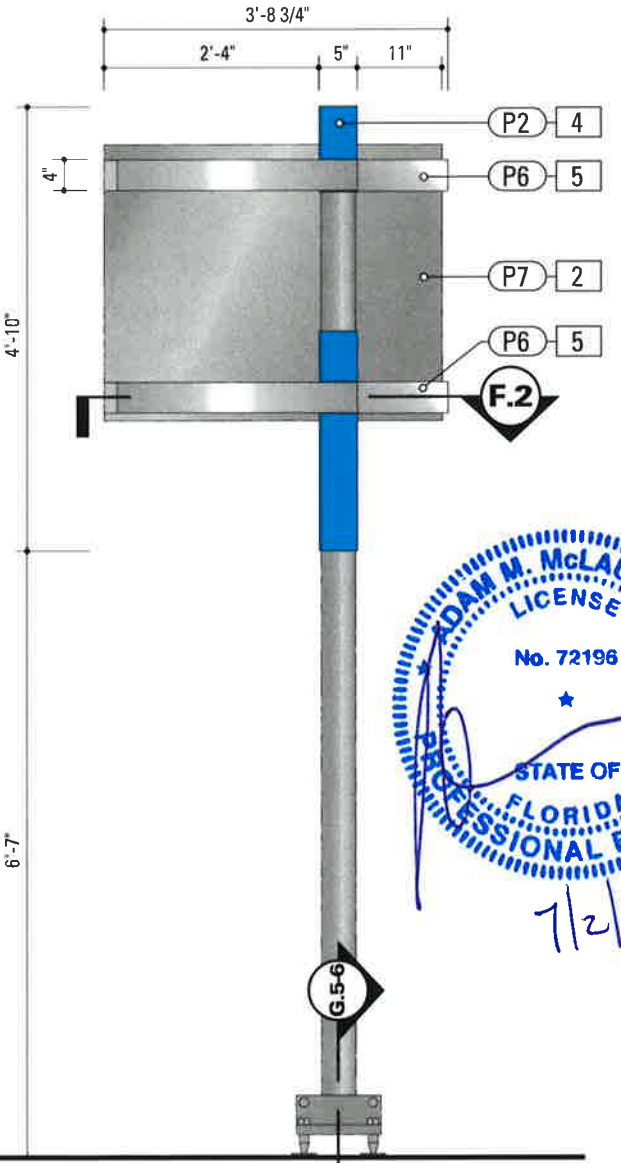
**4** Top View: VDIR.1  
SCALE: 1/2" = 1'-0"



**1** Front Elevation: VDIR.1  
SCALE: 1/2" = 1'-0"



**2** Side Elevation: VDIR.1  
SCALE: 1/2" = 1'-0"



**3** Back Elevation: VDIR.1  
SCALE: 1/2" = 1'-0"



**SPECIFICATIONS**      **SIGN TYPE:** VDIR.1      **FUNCTION:** Vehicular Directional

- 1. POLE**  
POLE: Pipe 4 STD (SCH 40) OD 4.5 ID 4  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 2. SIGN PANEL - REFLECTIVE VINYL**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted  
GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
FASTENER: Mechanically fastened/WELD to sleeve assembly/L bracket
- 3. SLEEVE ASSEMBLY - L BRACKET**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Breakformed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld to Sign Panel  
**SLEEVE ASSEMBLY - COVER**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically Fastened / Weld to Sign Panel  
Note: Area below sign panel requires 1/8" thick front cover plate. Finish to match Cover. Mechanically Fasten to L Bracket.
- 4. TOP CAP**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 5. SUPPORT ARM**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Curved Panel, Trim to size  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten & weld unit to Sleeve Assembly Cover.  
**PANEL CLIP**  
MATERIAL: 1" thick Aluminum block  
FABRICATION PROCESS: Milled/Machined/Slotted  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to Sleeve Assembly Cover & Panel. Slotted cut fits over sign panel.
- 30. BREAKAWAY FOOTER**  
Product: TRANSPO® Break-Safe Model AP Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are POSITIONED within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.



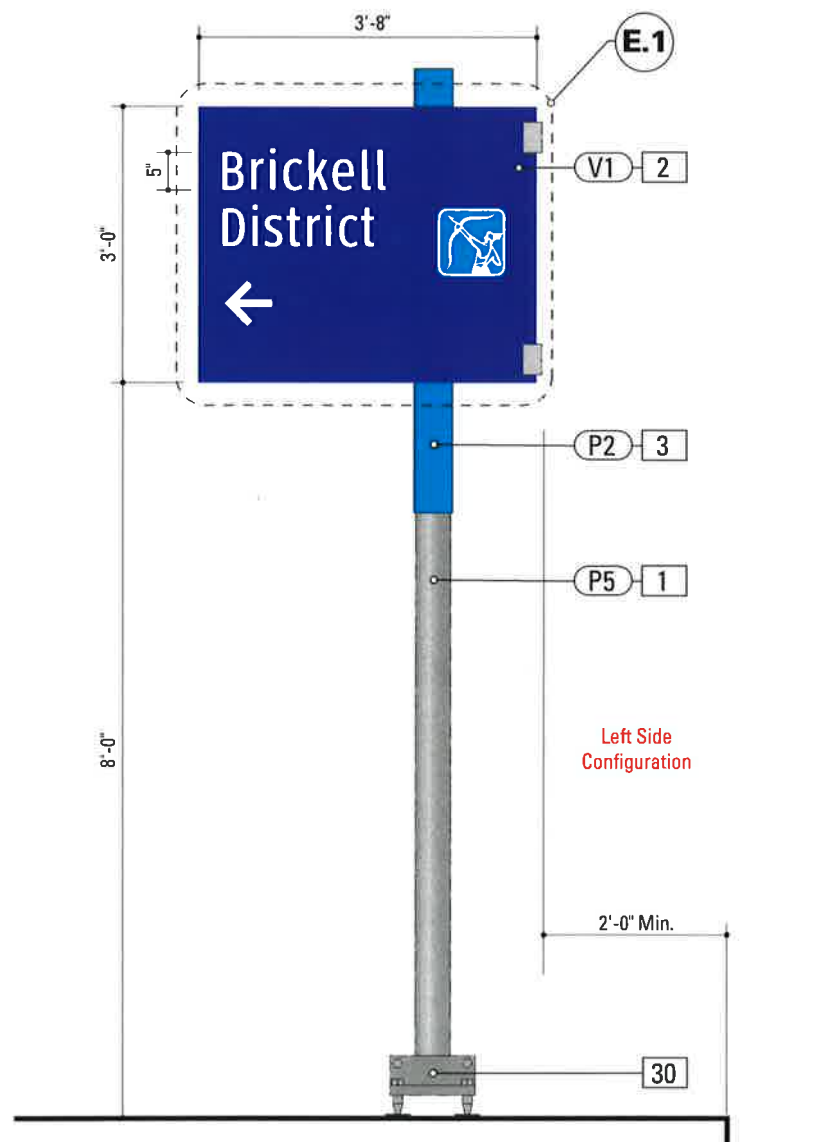
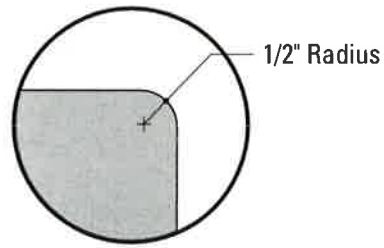
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - Welds: All welds shall be ground smooth, paint all seams.
  - Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

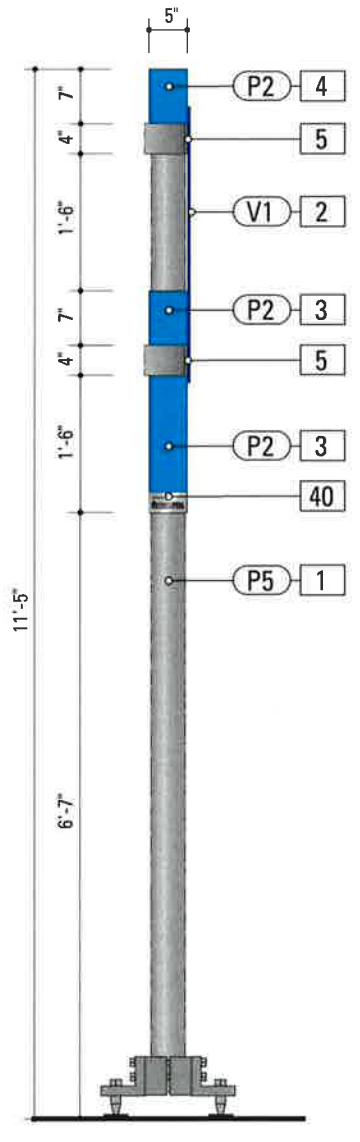
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe 120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		Downtown Miami City of Miami, Florida
SUBCONSULTANT		PROJECT NO.
DATE	DRAWN BY:	SHEET TITLE
10 December 2010	PR	Sign Type VDIR.1 Vehicular Directional
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		
03/12/2014 PR		SHEET NO.
05/02/2014 PR		<b>C.12</b>

The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

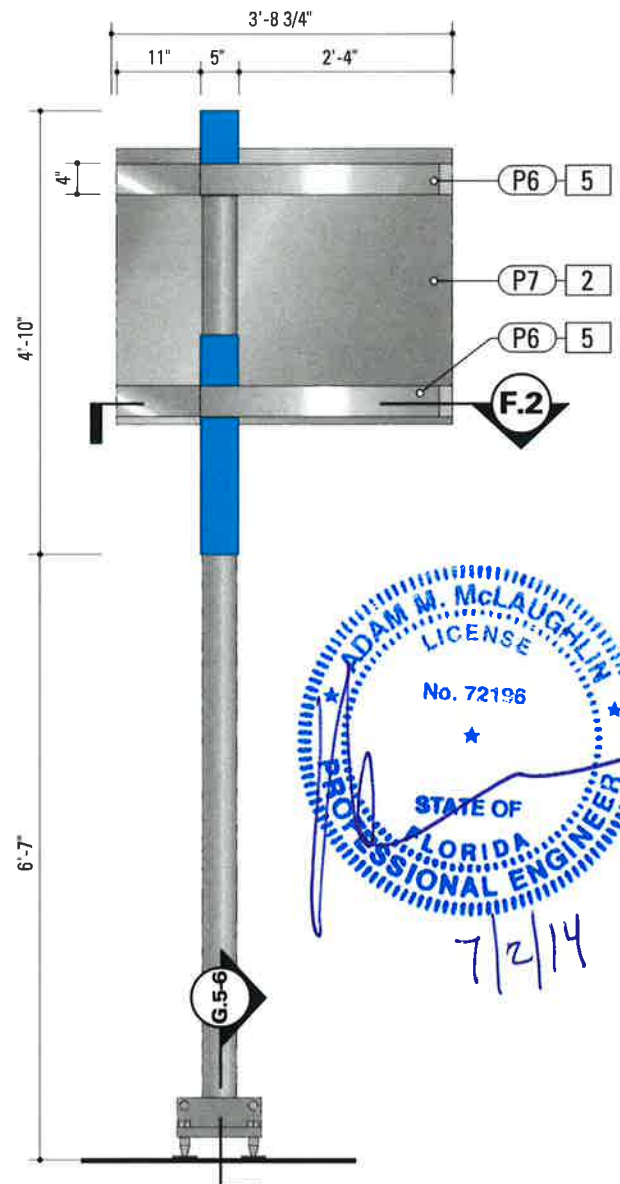




**1** Front Elevation: VDIR.1\_LEFT  
SCALE: 1/2" = 1'-0"

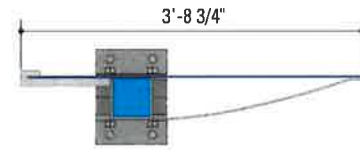


**2** Side Elevation: VDIR.1\_LEFT  
SCALE: 1/2" = 1'-0"



**3** Back Elevation: VDIR.1\_LEFT  
SCALE: 1/2" = 1'-0"

**STRUCTURAL DESIGN ONLY**



**4** Top View: VDIR.1\_LEFT  
SCALE: 1/2" = 1'-0"



**SPECIFICATIONS SIGN TYPE: VDIR.1\_LEFT FUNCTION: Vehicular Directional**

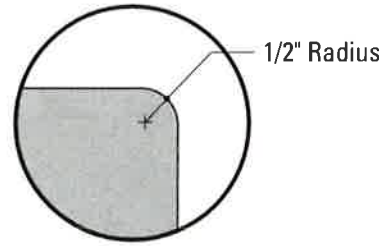
- 1. POLE**  
POLE: Pipe 4 STD (SCH 40) OD 4.5 ID 4  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 2. SIGN PANEL - REFLECTIVE VINYL**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted  
GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
FASTENER: Mechanically fastened/WELD to sleeve assembly/L bracket
- 3. SLEEVE ASSEMBLY - L BRACKET**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Breakformed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld to Sign Panel  
**SLEEVE ASSEMBLY - COVER**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically Fastened / Weld to Sign Panel  
Note: Area below sign panel requires 1/8" thk front cover plate. Finish to match Cover. Mechanically Fasten to L Bracket.
- 4. TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 5. SUPPORT ARM**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Curved Panel, Trim to size  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten & weld unit to Sleeve Assembly Cover.  
**PANEL CLIP**  
MATERIAL: 1" thick Aluminum block  
FABRICATION PROCESS: Milled/Machined/Slotted  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to Sleeve Assembly Cover & Panel. Slotted cut fits over sign panel.
- 30. BREAKAWAY FOOTER**  
Product: TRANSPO® Break-Safe Model AP Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.



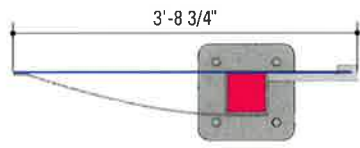
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  2. Welds: All welds shall be ground smooth, paint all seams.
  3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  4. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

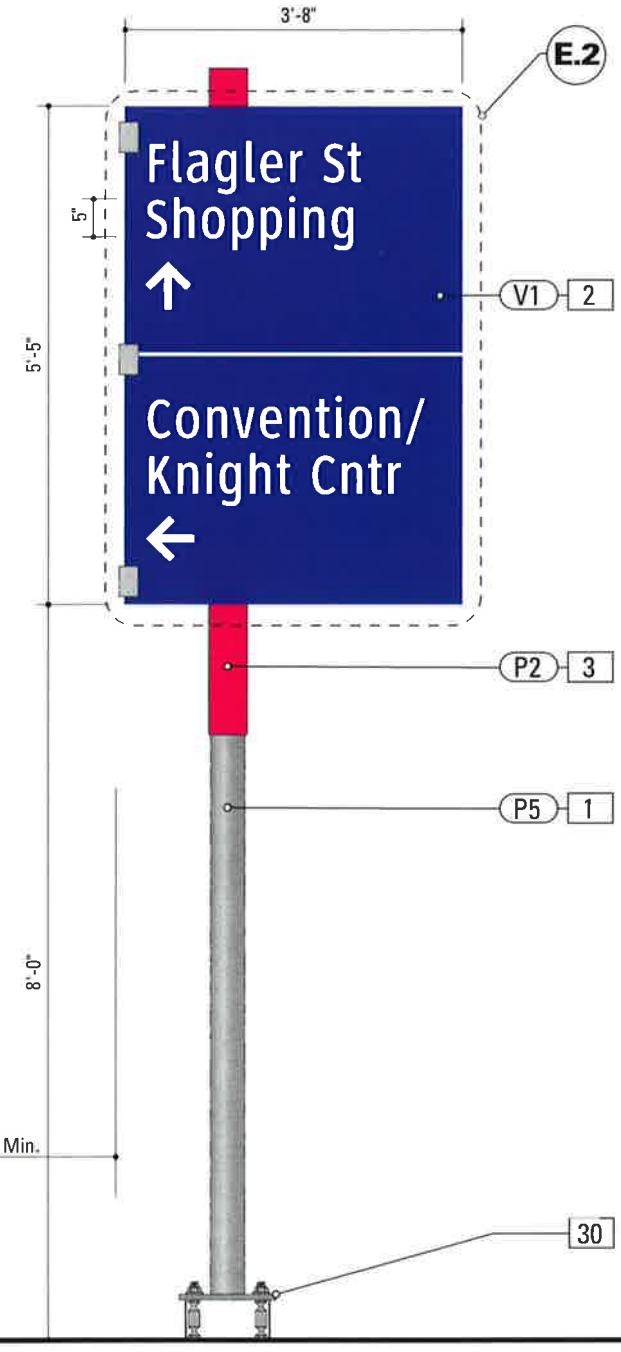
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	DRAWN BY:	Sign Type VDIR.1_LEFT Vehicular Directional
10 December 2010	PR	
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		SHEET NO.
03/12/2014 PR		C.13
05/02/2014 PR		



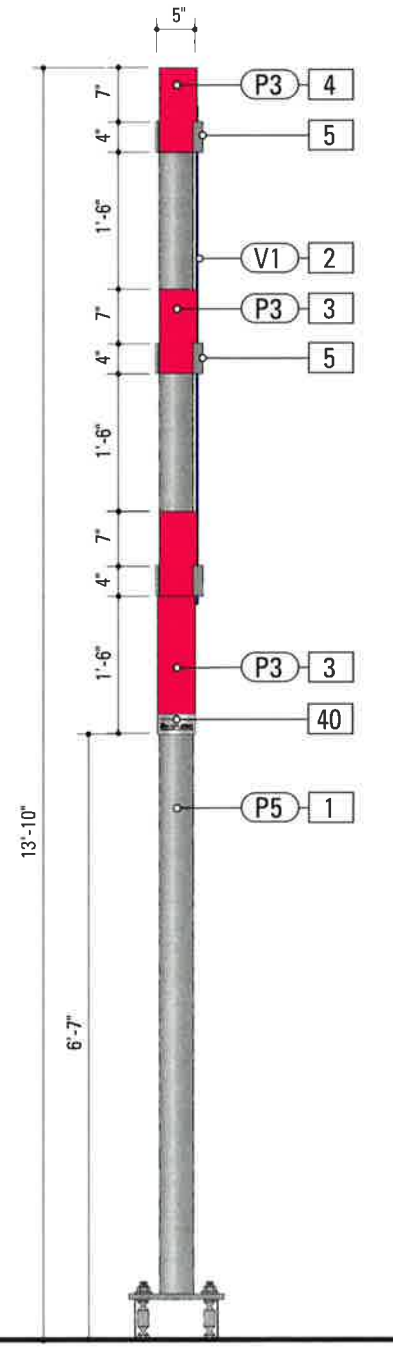
**STRUCTURAL DESIGN ONLY**



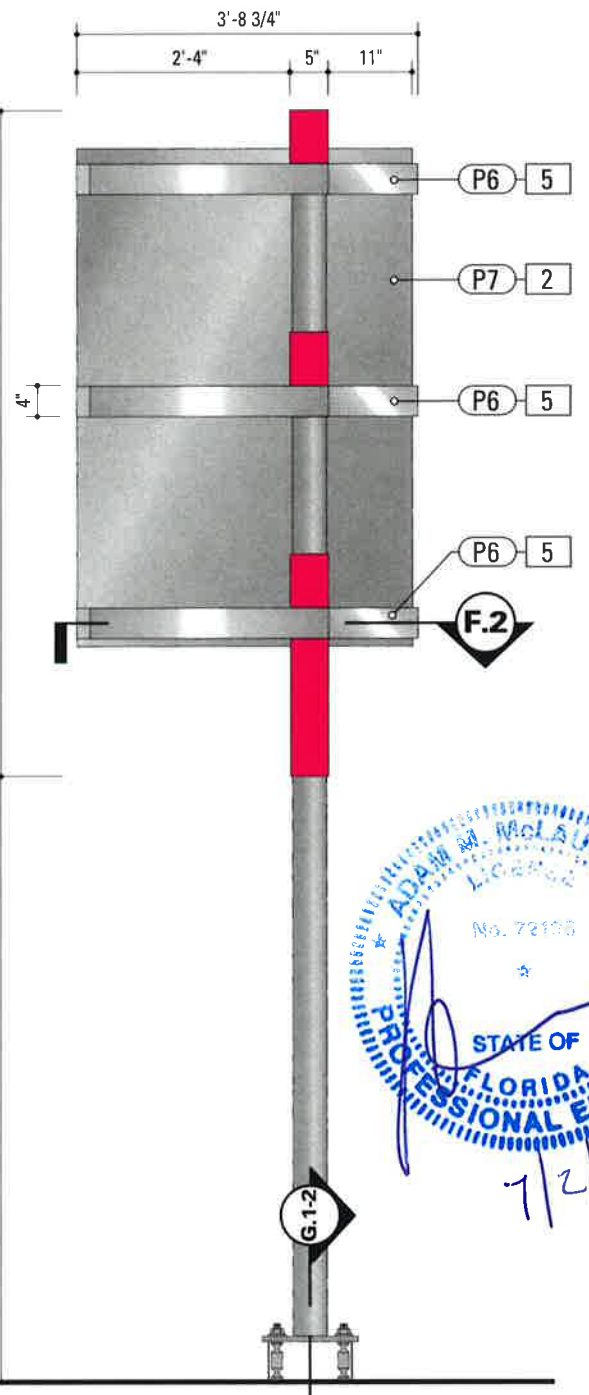
**4** Top View: VDIR.2  
SCALE: 1/2" = 1'-0"



**1** Front Elevation: VDIR.2  
SCALE: 1/2" = 1'-0"



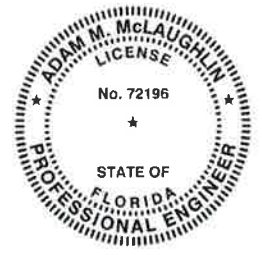
**2** Side Elevation: VDIR.2  
SCALE: 1/2" = 1'-0"



**3** Back Elevation: VDIR.2  
SCALE: 1/2" = 1'-0"

**SPECIFICATIONS** SIGN TYPE: VDIR.2 FUNCTION: Vehicular Directional

- 1. POLE**  
POLE: Pipe 4 XX-STRONG OD 4.5 ID 3.15  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
BASE PLATE: 12.5" Dia. x 1" thick Steel plate  
FOOTER: As per FDOT Breakaway specifications
- 2. SIGN PANEL - REFLECTIVE VINYL**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted  
GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
FASTENER: Mechanically fastened/WELD to sleeve assembly/L bracket
- 3. SLEEVE ASSEMBLY - L BRACKET**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Breakformed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld to Sign Panel  
**SLEEVE ASSEMBLY - COVER**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically Fastened / Weld to Sign Panel  
Note: Area below sign panel requires 1/8" thk front cover plate. Finish to match Cover. Mechanically Fasten to L Bracket.
- 4. TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 5. SUPPORT ARM**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Curved Panel, Trim to size  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten & weld unit to Sleeve Assembly Cover.  
**PANEL CLIP**  
MATERIAL: 1" thick Aluminum block  
FABRICATION PROCESS: Milled/Machined/Slotted  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to Sleeve Assembly Cover & Panel. Slotted cut fits over sign panel.
- 30. BREAKAWAY FOOTER**  
Product: TRANSPO® Pole-Safe Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.

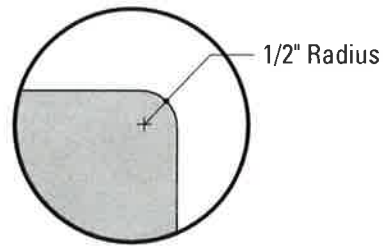


GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

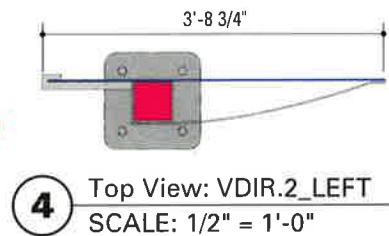
- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  2. Welds shall be made in accordance with the design.
  3. Hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  4. All sign surfaces shall be treated with Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
		Downtown Miami City of Miami, Florida
		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	<b>Sign Type VDIR.2</b> <b>Vehicular Directional</b>
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>C.14</b>

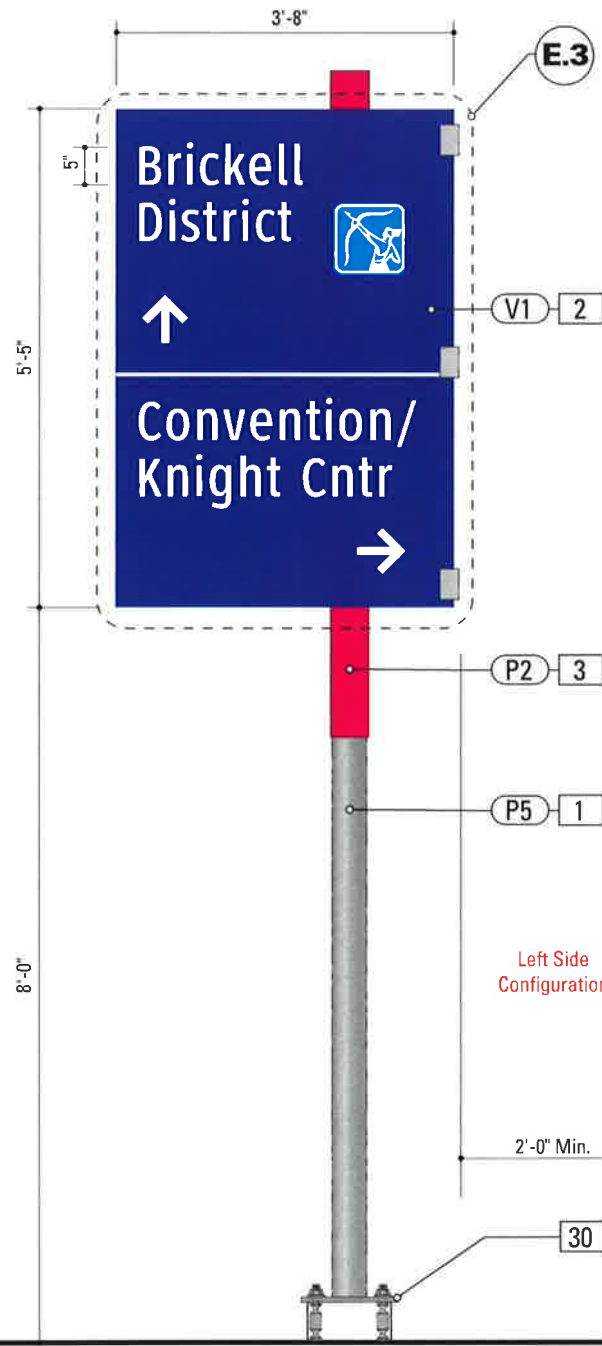
The design of the sign and pole support system is the responsibility of the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



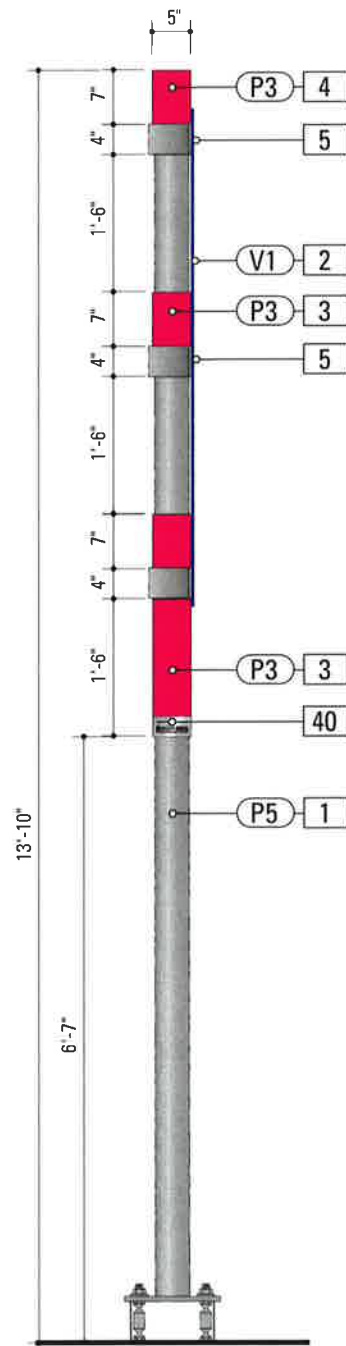
**STRUCTURAL DESIGN ONLY**



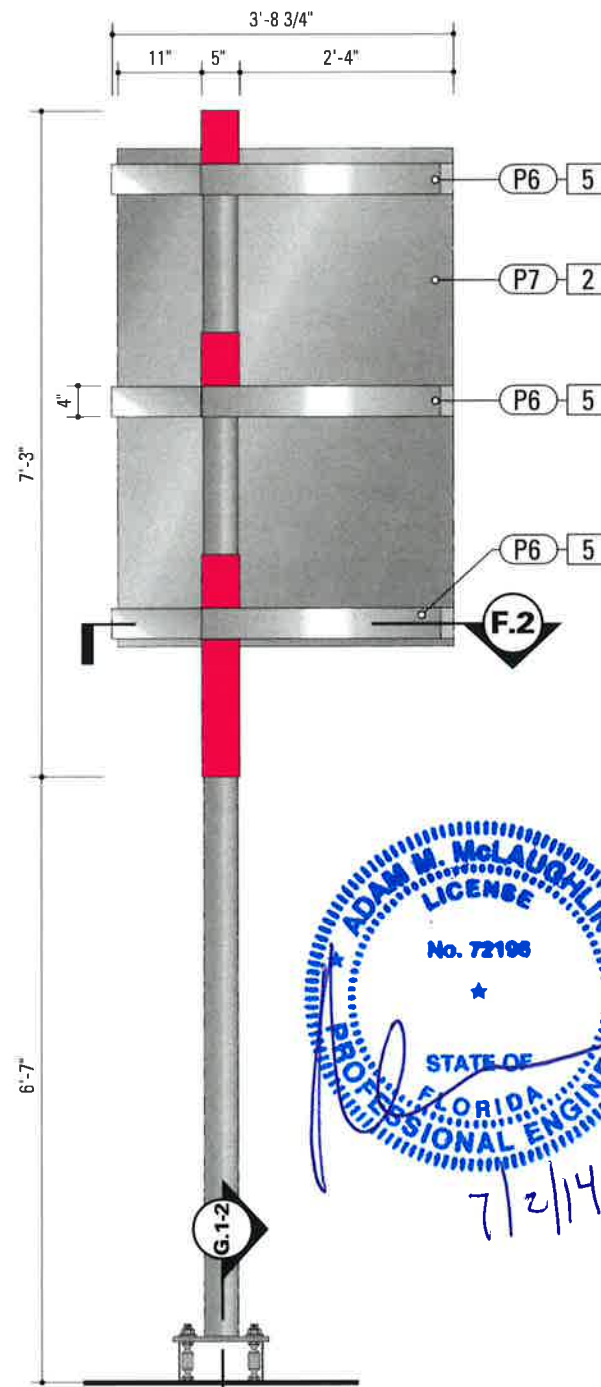
**4** Top View: VDIR.2\_LEFT  
SCALE: 1/2" = 1'-0"



**1** Front Elevation: VDIR.2\_LEFT  
SCALE: 1/2" = 1'-0"



**2** Side Elevation: VDIR.2\_LEFT  
SCALE: 1/2" = 1'-0"



**3** Back Elevation: VDIR.2\_LEFT  
SCALE: 1/2" = 1'-0"

**SPECIFICATIONS SIGN TYPE: VDIR.2\_LEFT FUNCTION: Vehicular Directional**

- POLE**  
POLE: Pipe 4 XX-STRONG OD 4.5 ID 3.15  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
BASE PLATE: 12.5" Dia. x 1" thick Steel plate  
FOOTER: As per FDOT Breakaway specifications
- SIGN PANEL - REFLECTIVE VINYL**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted  
GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
FASTENER: Mechanically fastened/WELD to sleeve assembly/L bracket
- SLEEVE ASSEMBLY - L BRACKET**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Breakformed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld to Sign Panel  
**SLEEVE ASSEMBLY - COVER**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically Fastened / Weld to Sign Panel  
Note: Area below sign panel requires 1/8" thk front cover plate. Finish to match Cover. Mechanically Fasten to L Bracket.
- TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- SUPPORT ARM**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Curved Panel, Trim to size  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten & weld unit to Sleeve Assembly Cover.  
**PANEL CLIP**  
MATERIAL: 1" thick Aluminum block  
FABRICATION PROCESS: Milled/Machined/Slotted  
EDGES: Square AND Clean (NO exposed seams),  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to Sleeve Assembly Cover & Panel. Slotted cut fits over sign panel.
- BREAKAWAY FOOTER**  
Product: TRANSPO® Pole-Safe Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.

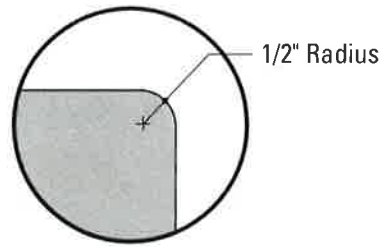


GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

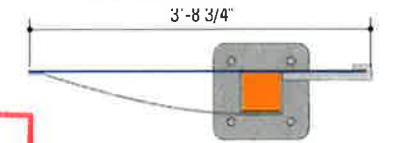
- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - Welds: All welds shall be ground smooth, paint all seams.
  - Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - All painted sign surfaces to receive UV/Anti-Graffiti spray coating, All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe 120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		Downtown Miami City of Miami, Florida
SUBCONSULTANT		PROJECT NO.
DATE	DRAWN BY:	SHEET TITLE
10 December 2010	PR	Sign Type VDIR.2 LEFT Vehicular Directional
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		
DATE		SHEET NO.
03/12/2014 PR		C.15
05/02/2014 PR		

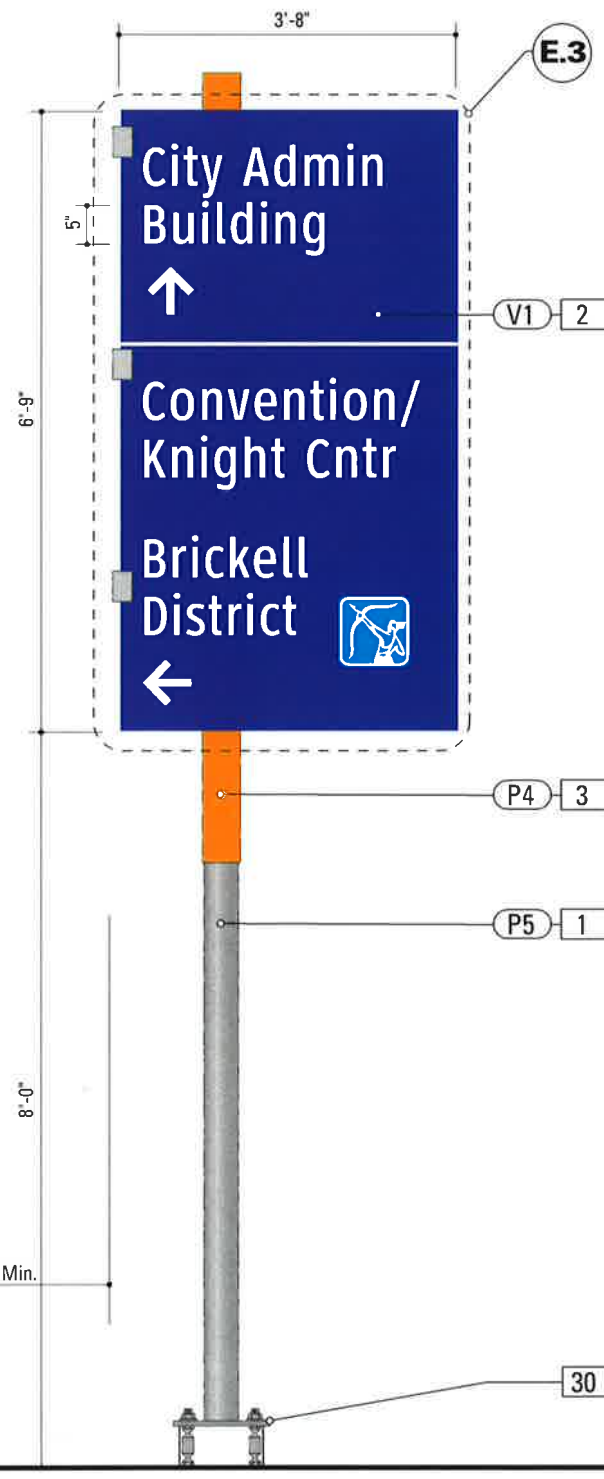




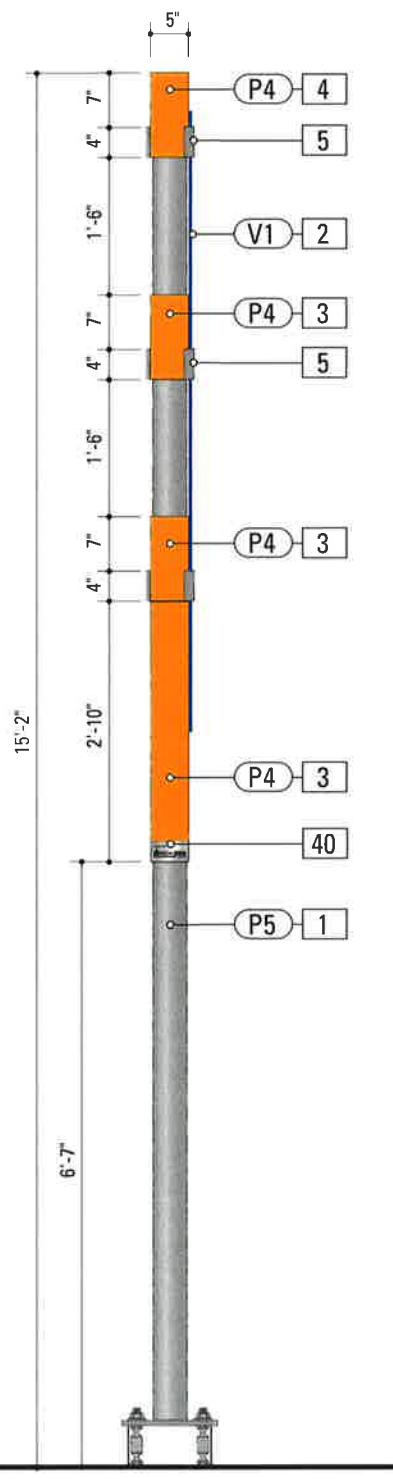
**STRUCTURAL DESIGN ONLY**



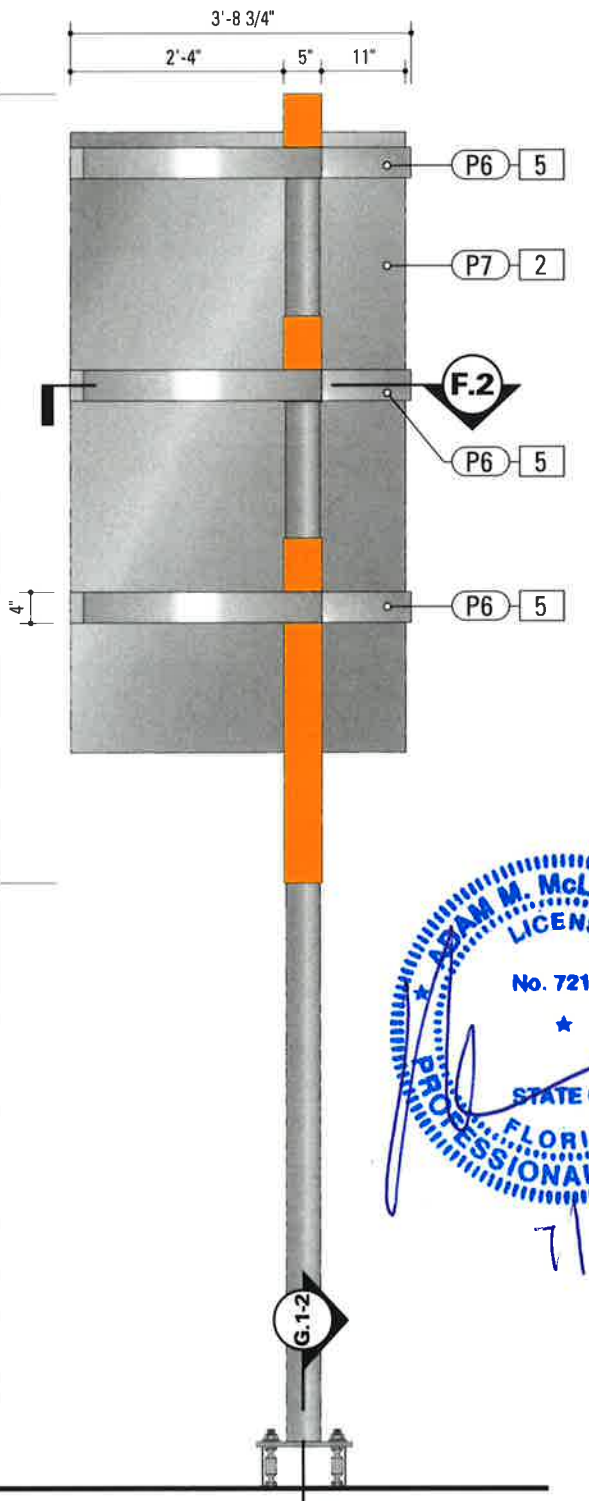
**4** Top View: VDIR.3  
SCALE: 1/2" = 1'-0"



**1** Front Elevation: VDIR.3  
SCALE: 1/2" = 1'-0"



**2** Side Elevation: VDIR.3  
SCALE: 1/2" = 1'-0"

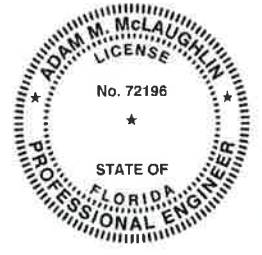


**3** Back Elevation: VDIR.3  
SCALE: 1/2" = 1'-0"



**SPECIFICATIONS SIGN TYPE: VDIR.3 FUNCTION: Vehicular Directional**

- POLE**  
POLE: Pipe 4 XX-STRONG OD 4.5 ID 3.15  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
BASE PLATE: 12.5" Dia. x 1" thick Steel plate  
FOOTER: As per FDOT Breakaway specifications
- SIGN PANEL - REFLECTIVE VINYL**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted  
GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
FASTENER: Mechanically fastened/WELD to sleeve assembly/L bracket
- SLEEVE ASSEMBLY - L BRACKET**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Breakformed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld to Sign Panel  
**SLEEVE ASSEMBLY - COVER**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically Fastened / Weld to Sign Panel  
Note: Area below sign panel requires 1/8" thk front cover plate. Finish to match Cover. Mechanically Fasten to L Bracket.
- TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- SUPPORT ARM**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Curved Panel, Trim to size  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten & weld unit to Sleeve Assembly Cover.  
**PANEL CLIP**  
MATERIAL: 1" thick Aluminum block  
FABRICATION PROCESS: Milled/Machined/Slotted  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to Sleeve Assembly Cover & Panel. Slotted cut fits over sign panel.
- BREAKAWAY FOOTER**  
Product: TRANSPO® Pole-Safe Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.

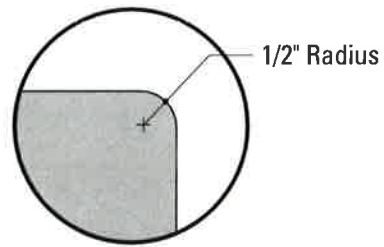


GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

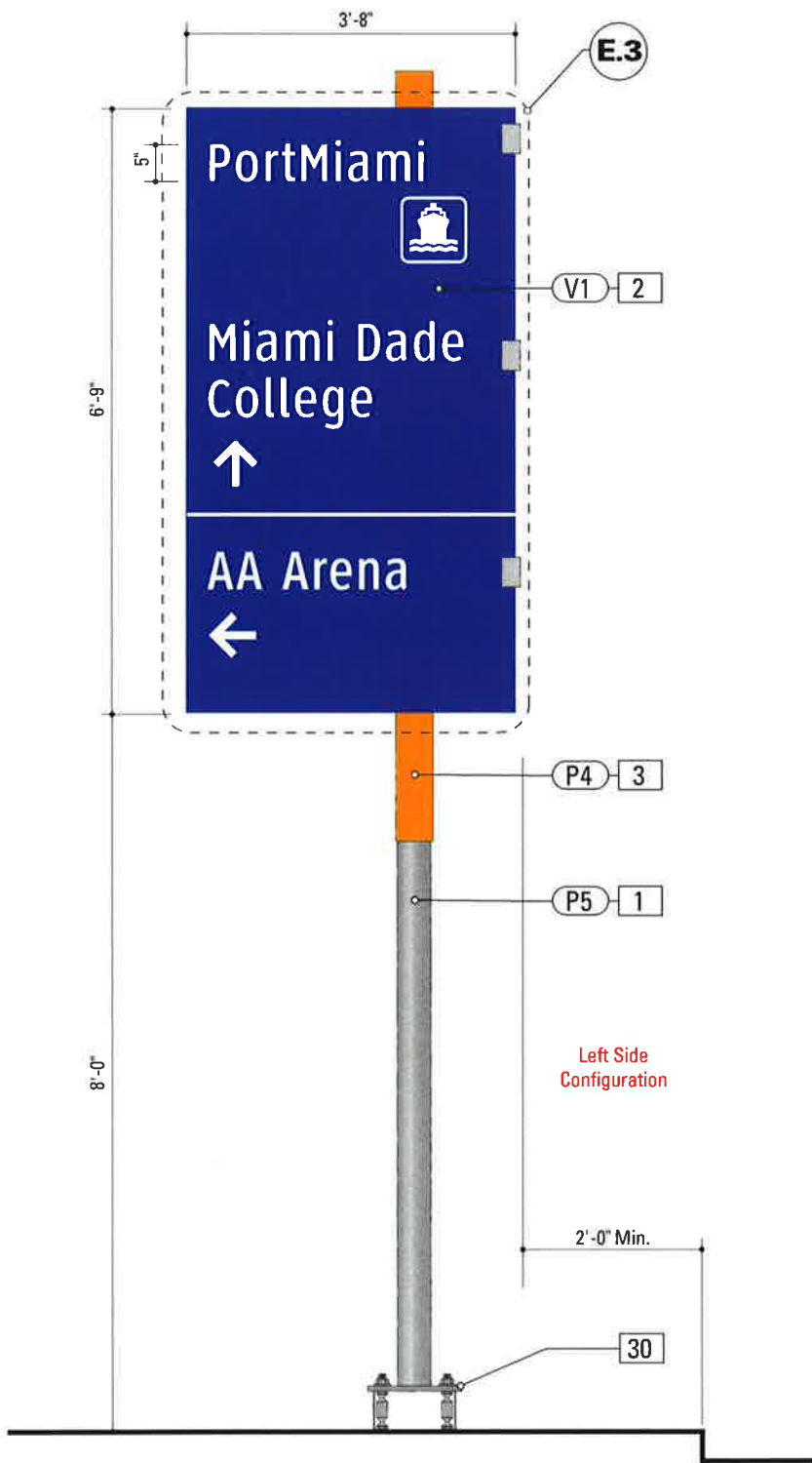
- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 
  - Hardware - All fasteners shall be concealed, if exposed hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - Approved Sign Surfaces to receive Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	DRAWN BY:	<b>Sign Type VDIR.3</b> <b>Vehicular Directional</b>
10 December 2010	PR	
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		SHEET NO.
03/12/2014 PR		<b>C.16</b>
05/02/2014 PR		

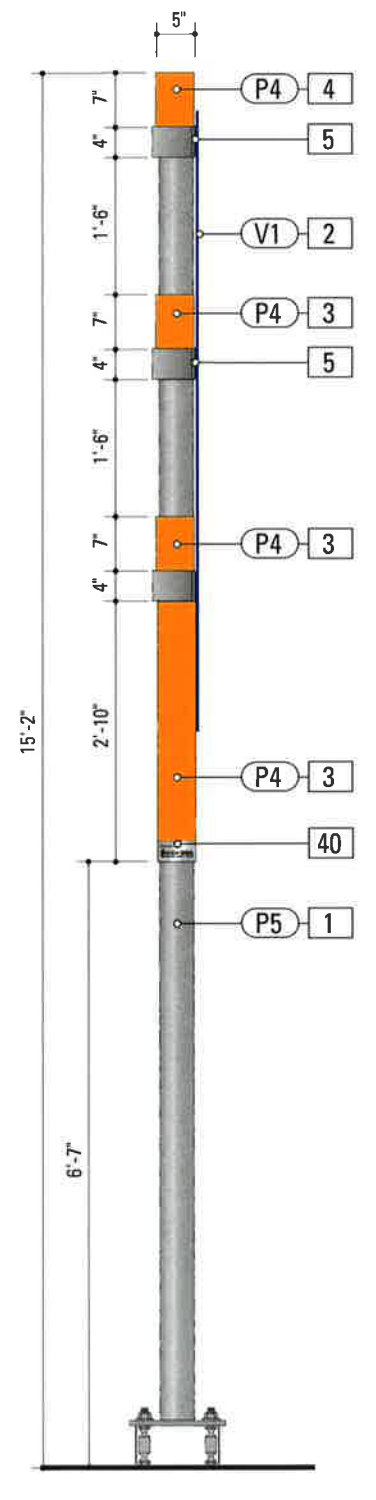
Drawings or fabric fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



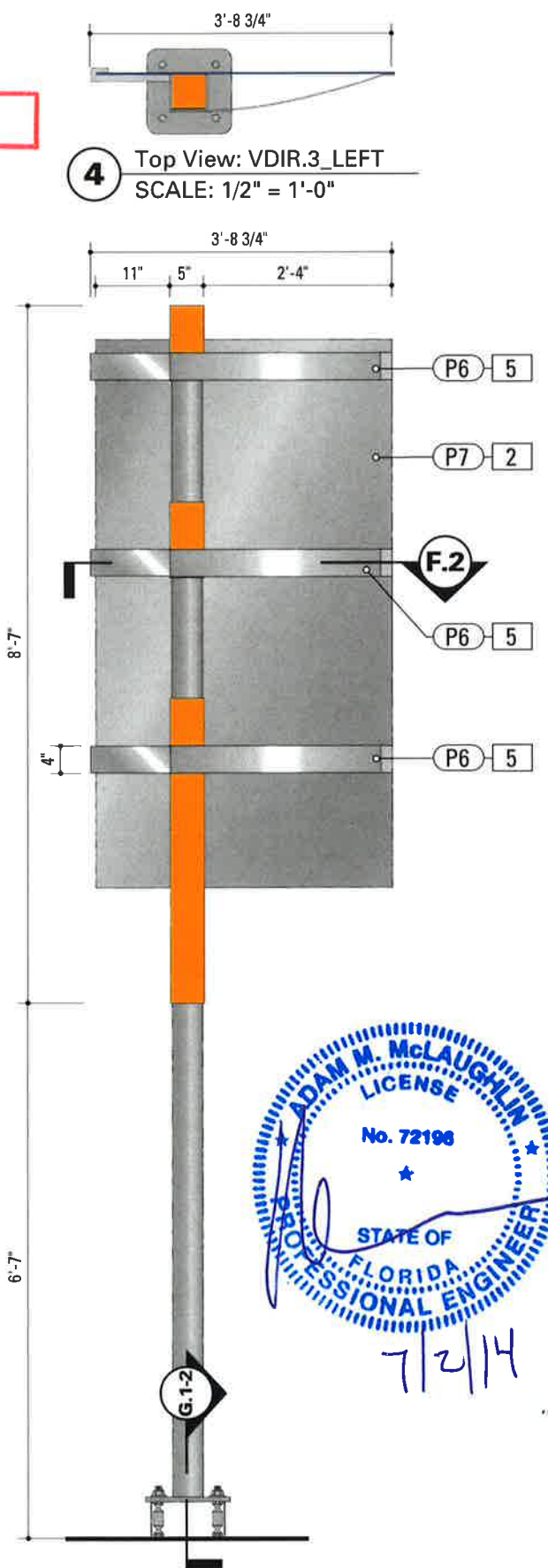
**STRUCTURAL DESIGN ONLY**



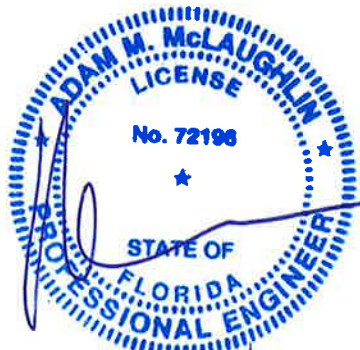
**1** Front Elevation: VDIR.3\_LEFT  
SCALE: 1/2" = 1'-0"



**2** Side Elevation: VDIR.3\_LEFT  
SCALE: 1/2" = 1'-0"

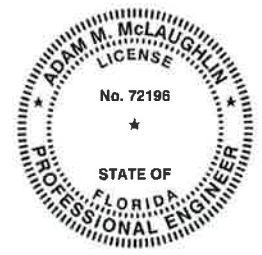


**4** Top View: VDIR.3\_LEFT  
SCALE: 1/2" = 1'-0"



**SPECIFICATIONS SIGN TYPE: VDIR.3\_LEFT FUNCTION: Vehicular Directional**

- POLE**  
POLE: Pipe 4 XX-STRONG OD 4.5 ID 3.15  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
BASE PLATE: 12.5" Dia. x 1" thick Steel plate  
FOOTER: As per FDOT Breakaway specifications
- SIGN PANEL - REFLECTIVE VINYL**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted  
GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
FASTENER: Mechanically fastened/WELD to sleeve assembly/L bracket
- SLEEVE ASSEMBLY - L BRACKET**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Breakformed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld to Sign Panel
- SLEEVE ASSEMBLY - COVER**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically Fastened / Weld to Sign Panel  
Note: Area below sign panel requires 1/8" thk front cover plate. Finish to match Cover. Mechanically Fasten to L Bracket.
- TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- SUPPORT ARM**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Curved Panel, Trim to size  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten & weld unit to Sleeve Assembly Cover.
- PANEL CLIP**  
MATERIAL: 1" thick Aluminum block  
FABRICATION PROCESS: Milled/Machined/Slotted  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to Sleeve Assembly Cover & Panel. Slotted cut fits over sign panel.
- BREAKAWAY FOOTER**  
Product: TRANSPO® Pole-Safe Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.

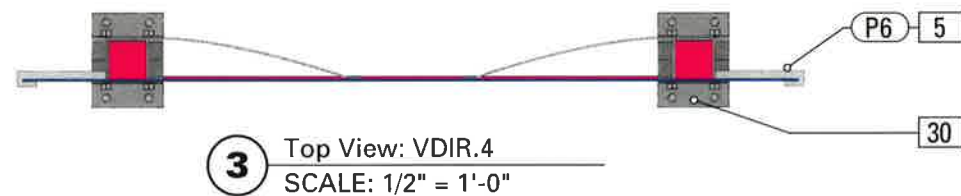
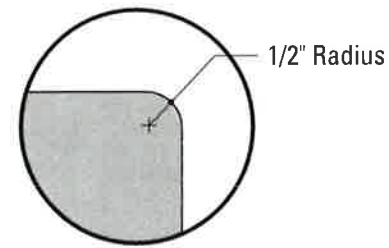


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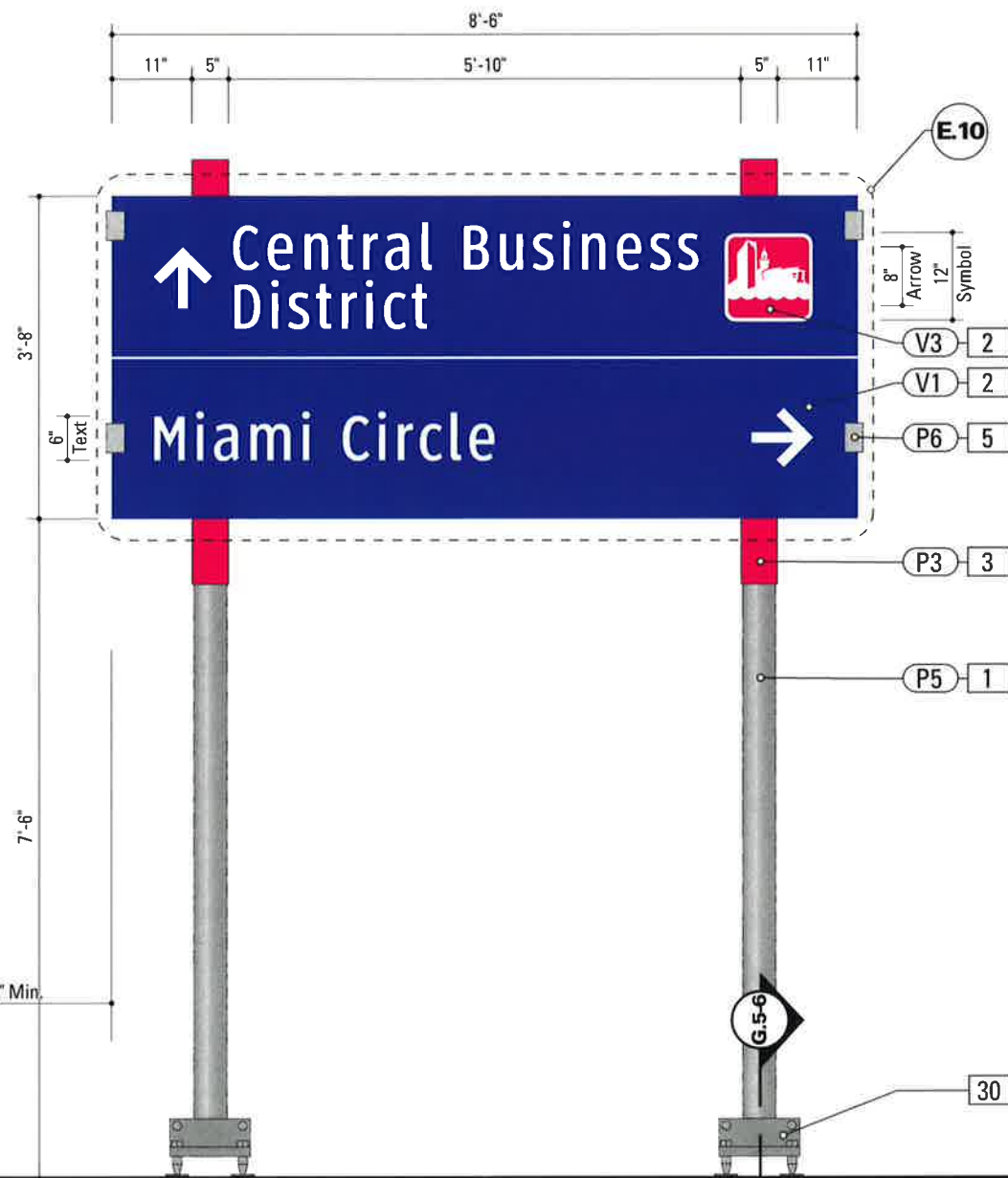
- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - Welds: All welds shall be ground smooth, paint all seams.
  - Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe 120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		Downtown Miami City of Miami, Florida
SUBCONSULTANT		PROJECT NO.
DATE: 10 December 2010	DRAWN BY: PR	SHEET TITLE
REVISIONS 04/20/2012 PR 11/30/2012 GS 08/16/2013 GS 03/12/2014 PR 05/02/2014 PR		Sign Type VDIR.3_LEFT Vehicular Directional
DRAWINGS prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.		SHEET NO.
		<b>C.17</b>

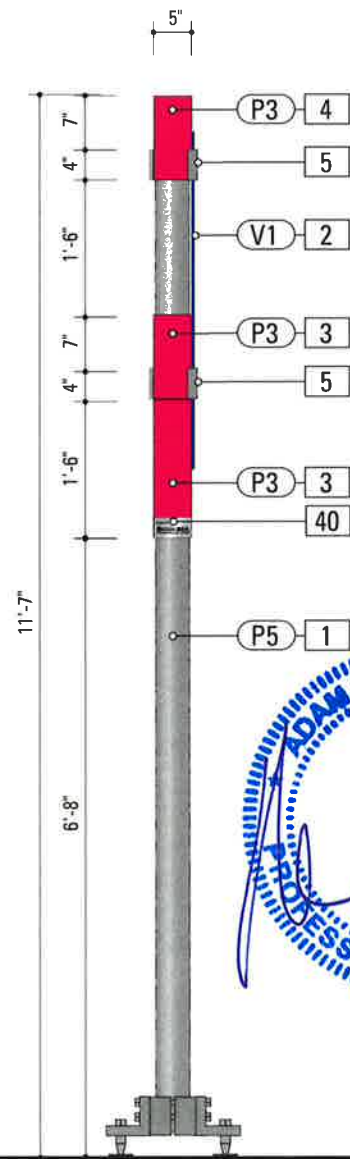
**STRUCTURAL DESIGN ONLY**



**3** Top View: VDIR.4  
SCALE: 1/2" = 1'-0"



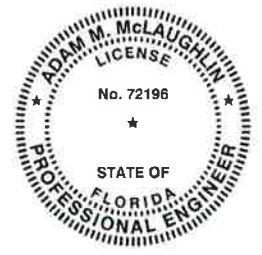
**1** Front Elevation: VDIR.4  
SCALE: 1/2" = 1'-0"



**2** Side Elevation: VDIR.4  
SCALE: 1/2" = 1'-0"

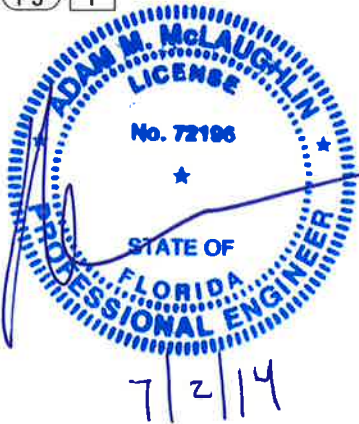
**SPECIFICATIONS**      **SIGN TYPE:** VDIR.4      **FUNCTION:** Vehicular Directional

- 1. POLE**  
POLE: Pipe 4 X-STRONG (SCH 80) OD 4.5 ID 3.83  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 2. SIGN PANEL - REFLECTIVE VINYL**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted  
GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
FASTENER: Mechanically fastened/WELD to sleeve assembly/L bracket
- 3. SLEEVE ASSEMBLY - L BRACKET**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Breakformed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld to Sign Panel
- SLEEVE ASSEMBLY - COVER**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically Fastened / Weld to Sign Panel  
Note: Area below sign panel requires 1/8" thk front cover plate. Finish to match Cover. Mechanically Fasten to L Bracket.
- 4. TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 5. SUPPORT ARM**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Curved Panel, Trim to size  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten & weld unit to Sleeve Assembly Cover.
- PANEL CLIP**  
MATERIAL: 1" thick Aluminum block  
FABRICATION PROCESS: Milled/Machined/Slotted  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to Sleeve Assembly Cover & Panel. Slotted cut fits over sign panel.
- 30. BREAKAWAY FOOTER**  
Product: TRANSPO® Break-Safe Model AP Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.



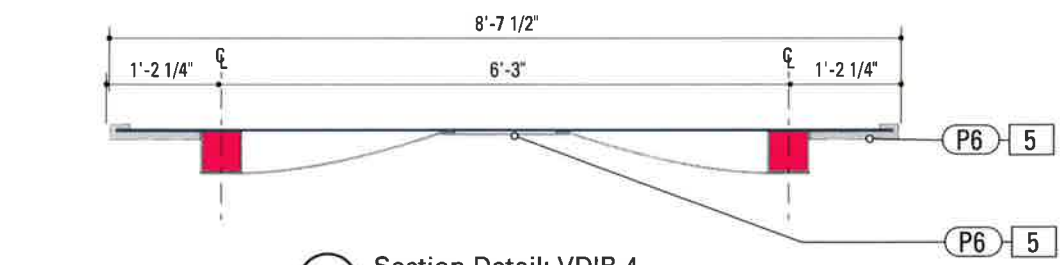
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 2.
  3. Hardware - All fasteners shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  4. Approved Sign Panels to receive Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

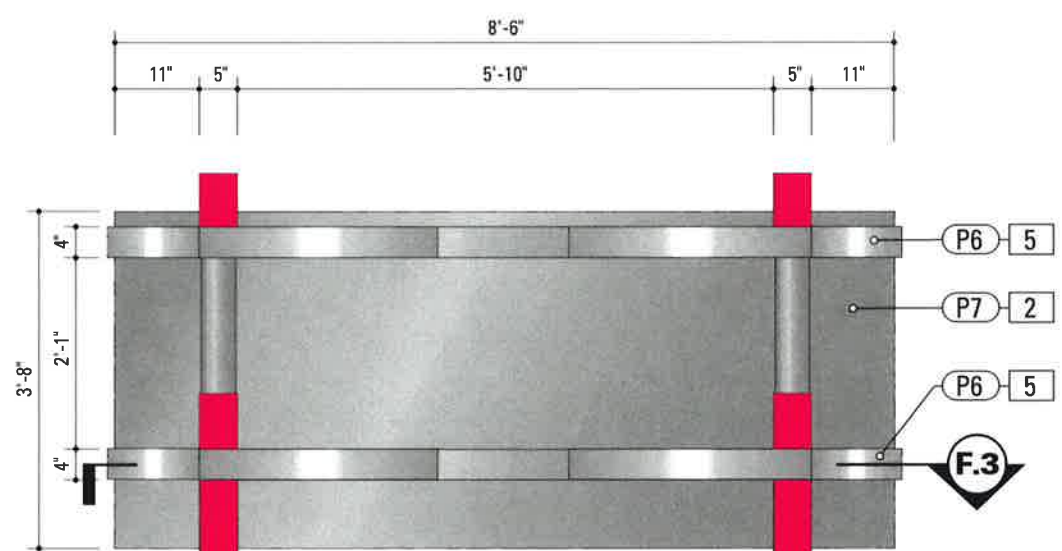


ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe 120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		Downtown Miami City of Miami, Florida
SUBCONSULTANT		PROJECT NO.
DATE	DRAWN BY:	SHEET TITLE
10 December 2010	PR	Sign Type VDIR.4 Vehicular Directional
REVISIONS		SHEET NO.
04/20/2012 PR		C.18
11/30/2012 GS		
08/16/2013 GS		
03/12/2014 PR		
05/02/2014 PR		

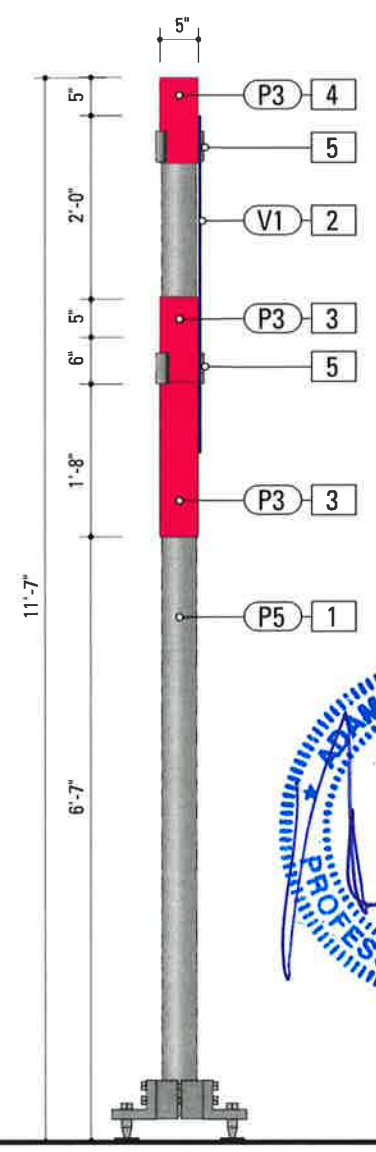
Drawings of this fabrication, erection and assembly are the property of the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



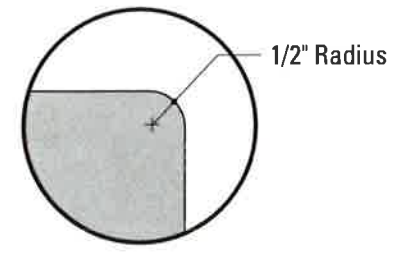
**6** Section Detail: VDIR.4  
SCALE: 1/2" = 1'-0"



**4** Rear Elevation: VDIR.4  
SCALE: 1/2" = 1'-0"



**5** Section Detail: VDIR.4  
SCALE: 1/2" = 1'-0"



**STRUCTURAL DESIGN ONLY**



**SPECIFICATIONS**      **SIGN TYPE:** VDIR.4      **FUNCTION:** Vehicular Directional

- 1. POLE**  
POLE: Pipe 4 X-STRONG (SCH 80) OD 4.5 ID 3.83  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 2. SIGN PANEL - REFLECTIVE VINYL**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted  
GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
FASTENER: Mechanically fastened/WELD to sleeve assembly/L bracket
- 3. SLEEVE ASSEMBLY - L BRACKET**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Breakformed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld to Sign Panel
- SLEEVE ASSEMBLY - COVER**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically Fastened / Weld to Sign Panel  
Note: Area below sign panel requires 1/8" thk front cover plate. Finish to match Cover. Mechanically Fasten to L Bracket.
- 4. TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 5. SUPPORT ARM**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Curved Panel, Trim to size  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten & weld unit to Sleeve Assembly Cover.
- PANEL CLIP**  
MATERIAL: 1" thick Aluminum block  
FABRICATION PROCESS: Milled/Machined/Slotted  
EDGES: Square AND Clean (NO exposed seams)  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to Sleeve Assembly Cover & Panel. Slotted cut fits over sign panel.
- 30. BREAKAWAY FOOTER**  
Product: TRANSPLO® Break-Safe Model AP Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.



GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

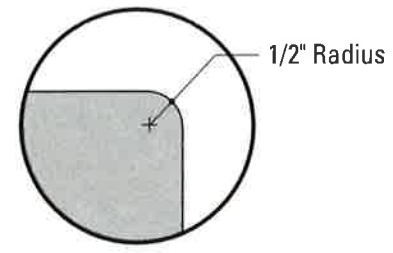
- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 2.
  3. ~~Words on All fasteners shall be concealed. Hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.~~
  4. ~~Approved by the Designer to receive UV/ Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M~~

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	DRAWN BY:	Sign Type VDIR.4 Vehicular Directional
10 December 2010	PR	
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		SHEET NO.
03/12/2014 PR		C.19
05/02/2014 PR		

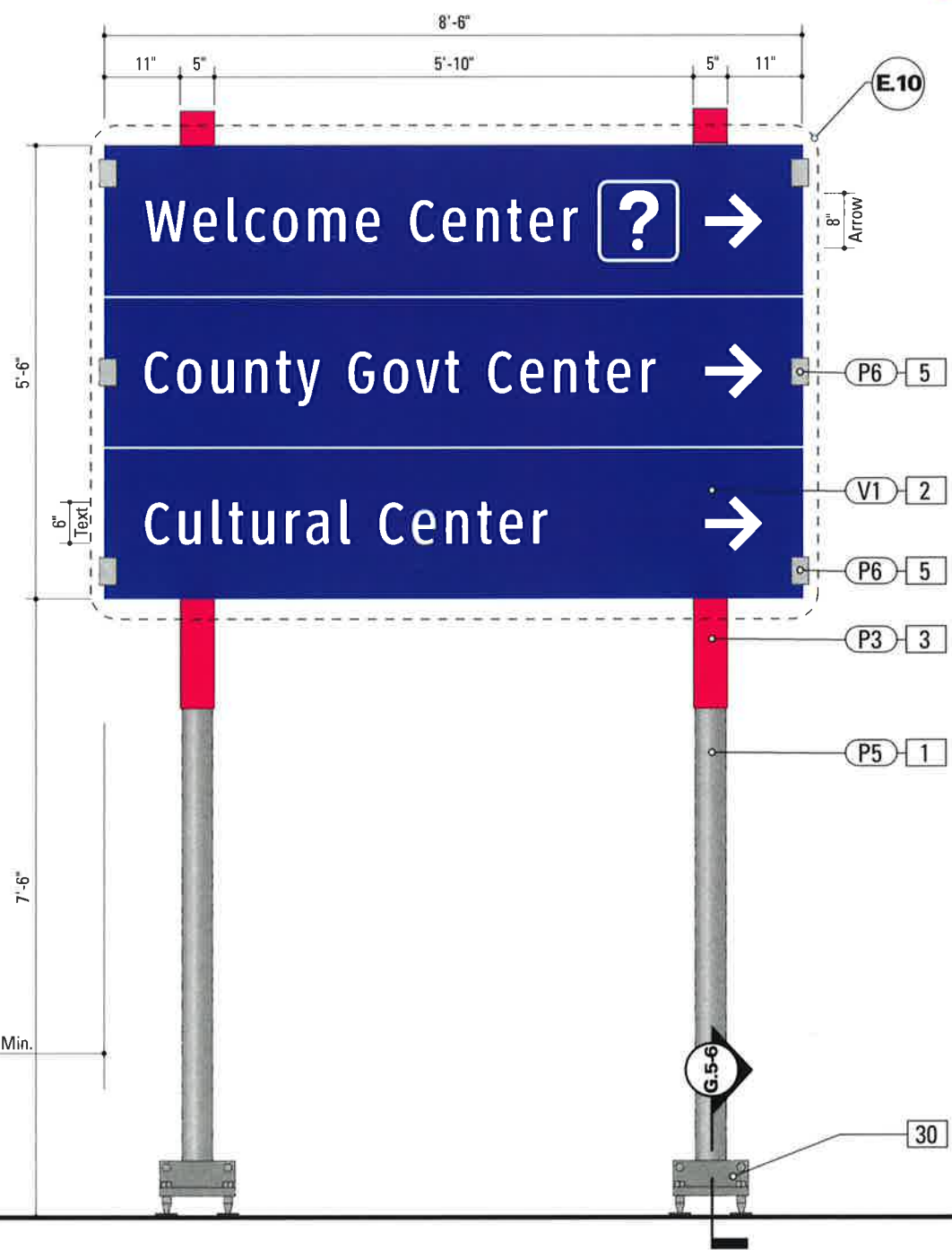
Drawings or fabrications, specifications and components for the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



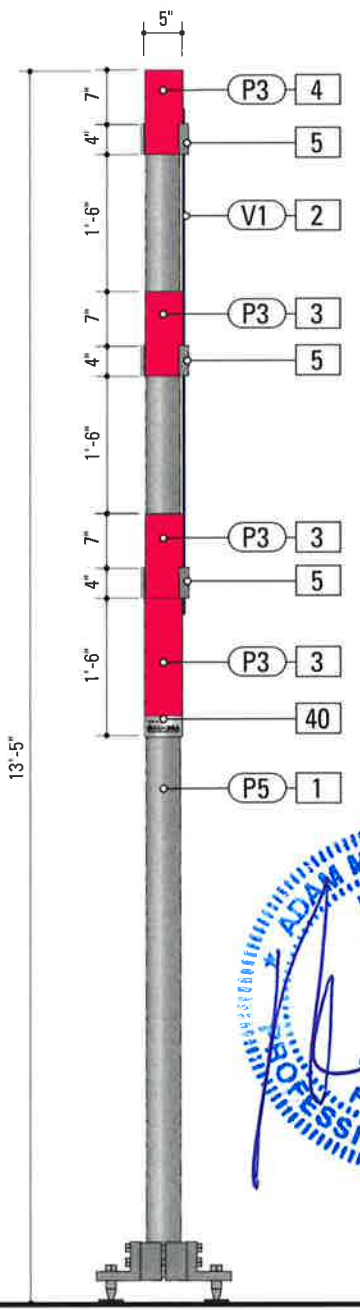
**3** Top View: VDIR.5  
SCALE: 1/2" = 1'-0"



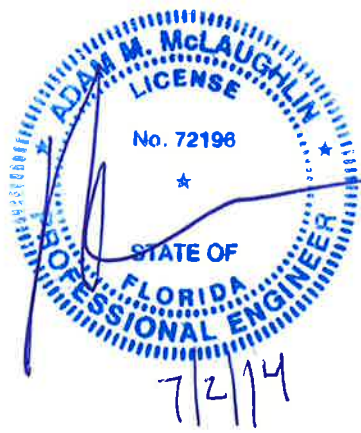
**STRUCTURAL DESIGN ONLY**



**1** Front Elevation: VDIR.5  
SCALE: 1/2" = 1'-0"



**2** Side Elevation: VDIR.5  
SCALE: 1/2" = 1'-0"



**SPECIFICATIONS**      **SIGN TYPE:** VDIR.5      **FUNCTION:** Vehicular Directional

- 1. POLE**  
POLE: Pipe 4 XX-STRONG (SCH 80) OD 4.5 ID 3.15  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 2. SIGN PANEL - REFLECTIVE VINYL**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted  
GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
FASTENER: Mechanically fastened/WELD to sleeve assembly/L bracket
- 3. SLEEVE ASSEMBLY - L BRACKET**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Breakformed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld to Sign Panel  
**SLEEVE ASSEMBLY - COVER**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically Fastened / Weld to Sign Panel  
Note: Area below sign panel requires 1/8" thick front cover plate. Finish to match Cover. Mechanically Fasten to L Bracket.
- 4. TOP CAP**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 5. SUPPORT ARM**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Curved Panel, Trim to size  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten & weld unit to Sleeve Assembly Cover.
- PANEL CLIP**  
MATERIAL: 1" thick Aluminum block  
FABRICATION PROCESS: Milled/Machined/Slotted  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to Sleeve Assembly Cover & Panel. Slotted cut fits over sign panel.
- 30. BREAKAWAY FOOTER**  
Product: TRANSPO® Break-Safe Model AP Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.



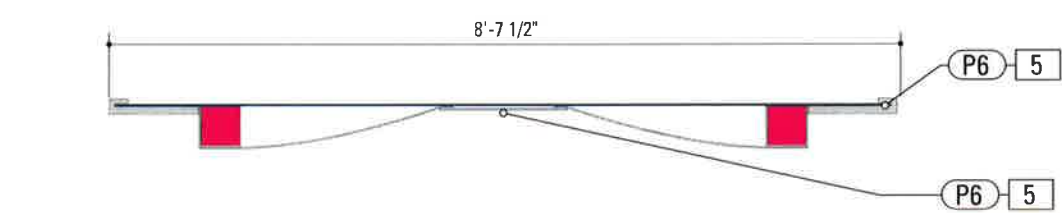
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 2.
  3. Hardware: All fasteners shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  4. Approved Sign: Anti-graffiti or clear coat/UV/ Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

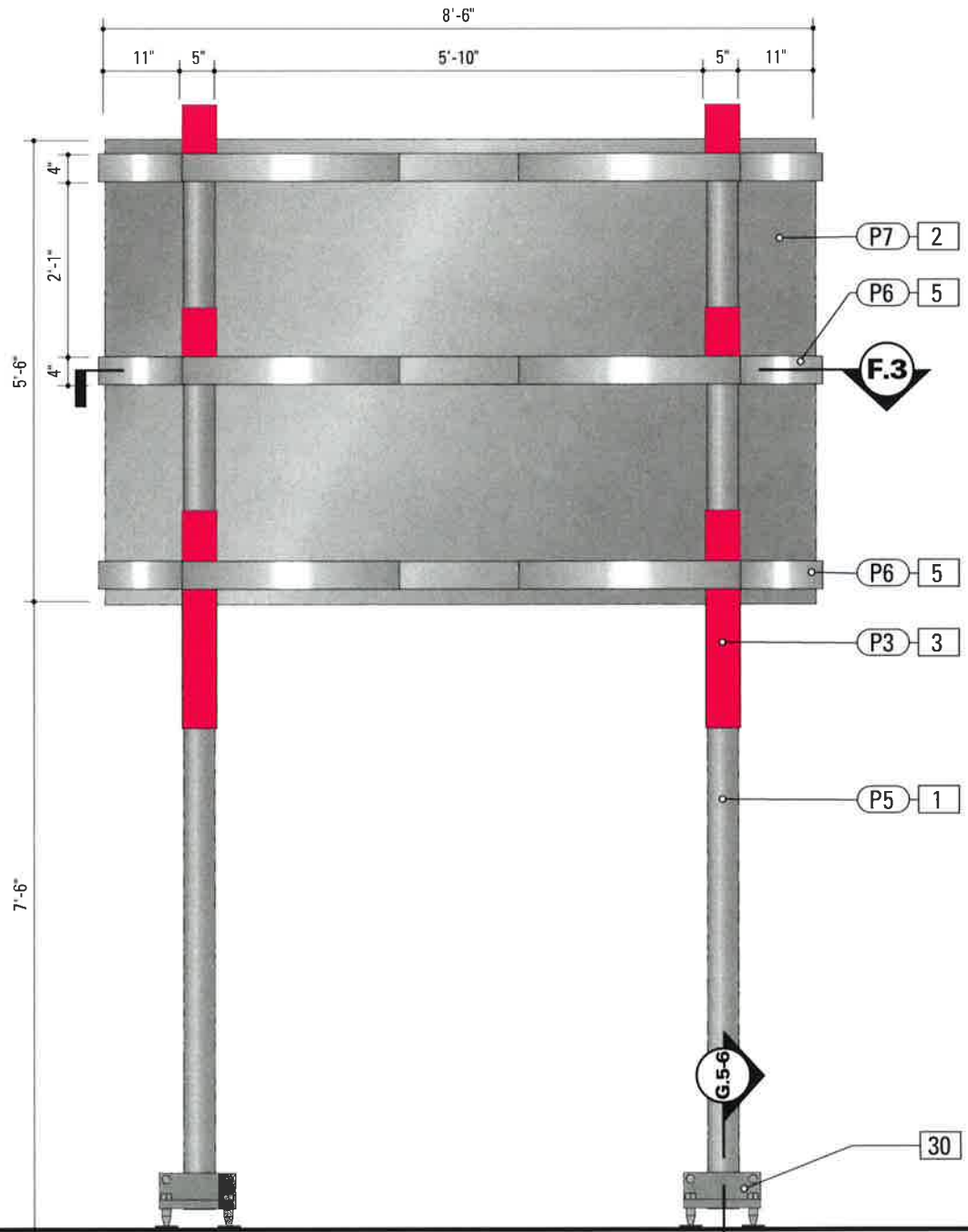
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	DRAWN BY:	Sign Type VDIR.5 Vehicular Directional
10 December 2010	PR	
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		SHEET NO.
03/12/2014 PR		C.20
05/02/2014 PR		

Drawings of this fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

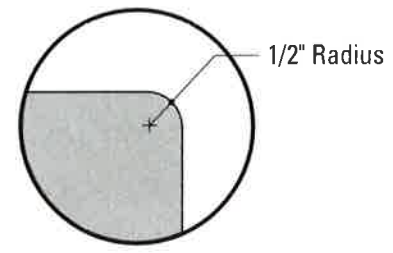




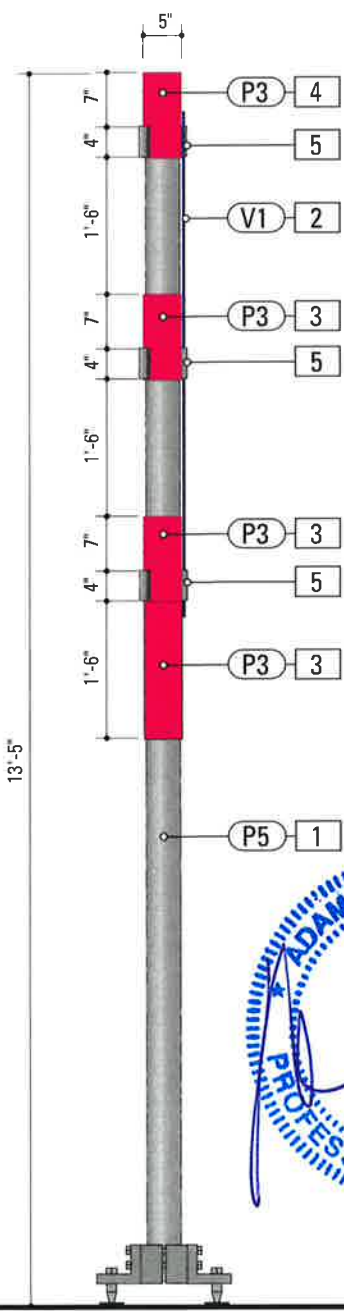
**6** Section Detail: VDIR.5  
SCALE: 1/2" = 1'-0"



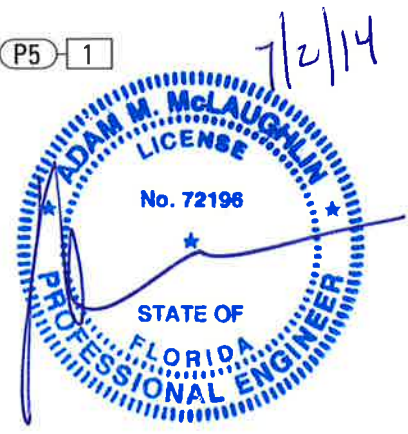
**4** Rear Elevation: VDIR.5  
SCALE: 1/2" = 1'-0"



**STRUCTURAL DESIGN ONLY**

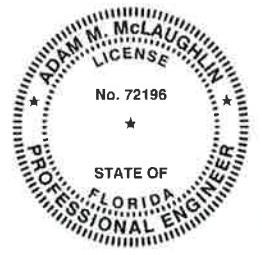


**5** Section Detail: VDIR.5  
SCALE: 1/2" = 1'-0"



**SPECIFICATIONS**      **SIGN TYPE:** VDIR.5      **FUNCTION:** Vehicular Directional

- 1. POLE**  
POLE: Pipe 4 XX-STRONG (SCH 80) OD 4.5 ID 3.15  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 2. SIGN PANEL - REFLECTIVE VINYL**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted  
GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
FASTENER: Mechanically fastened/WELD to sleeve assembly/L bracket
- 3. SLEEVE ASSEMBLY - L BRACKET**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Breakformed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld to Sign Panel  
**SLEEVE ASSEMBLY - COVER**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically Fastened / Weld to Sign Panel  
Note: Area below sign panel requires 1/8" thk front cover plate. Finish to match Cover. Mechanically Fasten to L Bracket.
- 4. TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 5. SUPPORT ARM**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Curved Panel, Trim to size  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten & weld unit to Sleeve Assembly Cover.  
**PANEL CLIP**  
MATERIAL: 1" thick Aluminum block  
FABRICATION PROCESS: Milled/Machined/Slotted  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to Sleeve Assembly Cover & Panel. Slotted cut fits over sign panel.
- 30. BREAKAWAY FOOTER**  
Product: TRANSPO® Break-Safe Model AP Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.

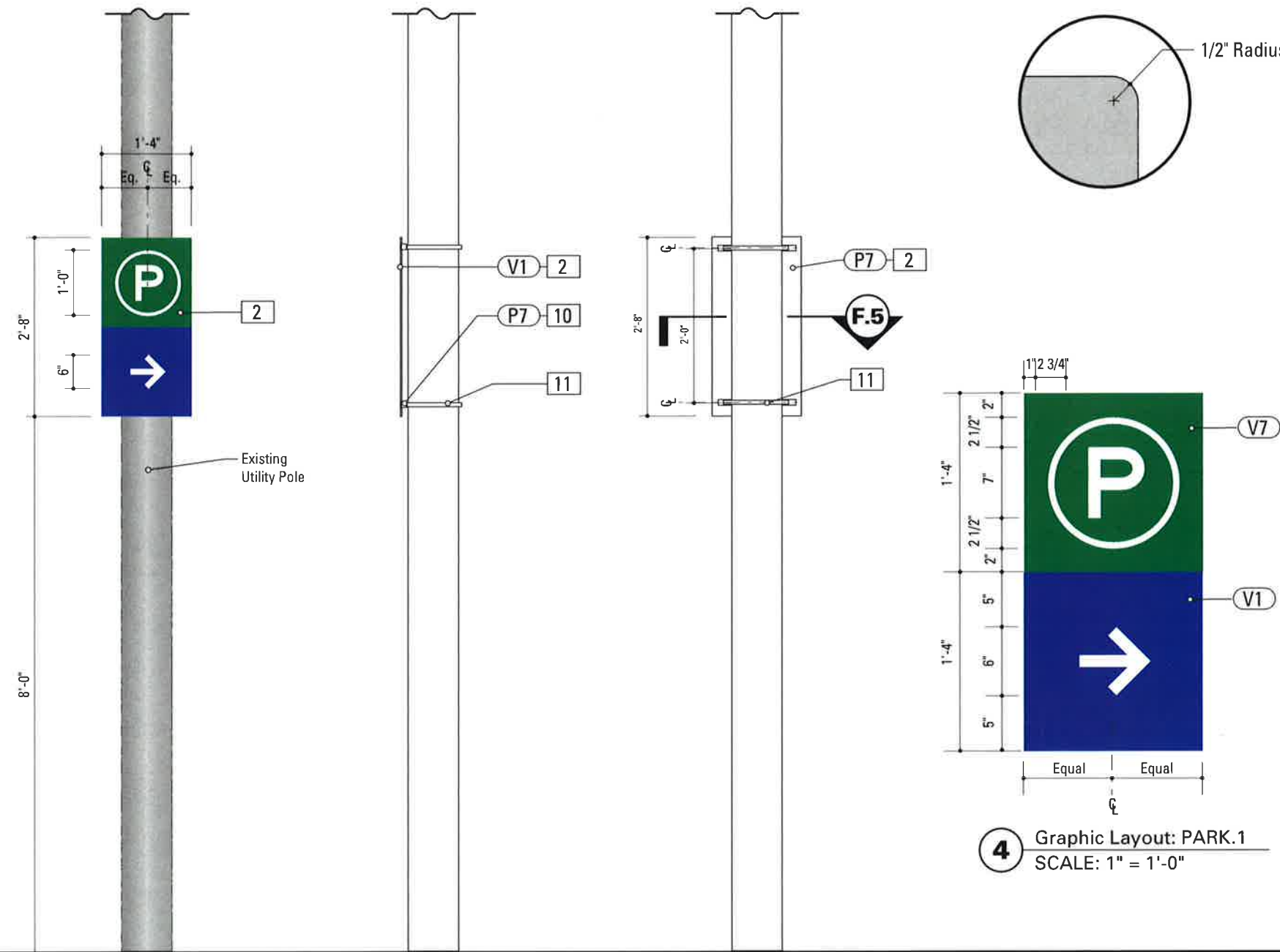


GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 2.
  3. Hardware: All fasteners shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  4. Approved Signage: Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
		<b>Downtown Miami</b> <b>City of Miami, Florida</b>
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	DRAWN BY:	<b>Sign Type VDIR.5</b> <b>Vehicular Directional</b>
10 December 2010	PR	
REVISIONS 04/20/2012 PR 11/30/2012 GS		
08/16/2013 GS		
03/12/2014 PR		
05/02/2014 PR		SHEET NO.
<small>Drawings or table fabrications proposed and approved by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.</small>		<b>C.21</b>

**STRUCTURAL DESIGN ONLY**



**1** Front Elevation: PARK.1  
SCALE: 1/2" = 1'-0"

**2** Side Elevation: PARK.1  
SCALE: 1/2" = 1'-0"

**3** Rear Elevation: PARK.1  
SCALE: 1/2" = 1'-0"

**4** Graphic Layout: PARK.1  
SCALE: 1" = 1'-0"

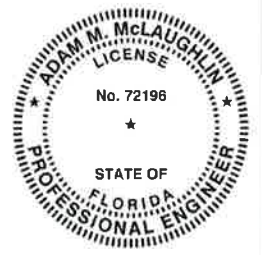
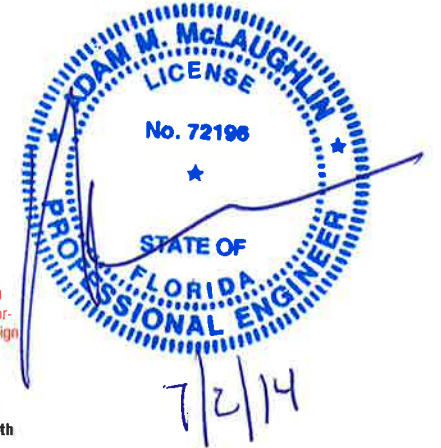
**SPECIFICATIONS**      **SIGN TYPE:** PARK.1      **FUNCTION:** Parking Trailblazer

**2. SIGN PANEL - REFLECTIVE VINYL**  
 MATERIAL: 1/4" thk Aluminum sheet  
 FABRICATION PROCESS: Router Cut  
 EDGES: Smooth  
 CORNERS: 1/2" radius, as required per FDOT  
 COLOR: Custom, as noted  
 GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
 FASTENER: Mechanically fasten to support channel extrusion.

**10. SUPPORT CHANNEL EXTRUSION**  
 PRODUCT: SignFix SX0073 Medium Channel Extrusion  
 MATERIAL: Aluminum  
 FABRICATION PROCESS: Extruded  
 COLOR: Custom, as noted  
 SURFACE PROCESS: Paint all exposed surfaces  
 CLEARCOAT: Acrylic Polyurethane Clear Satin  
 FASTENER: Mechanically fasten to sign panel

**11. POLE STRAP ATTACHMENT**  
 PRODUCT: Band-It Band  
 MATERIAL: Type 201 SS  
 SIZE: 1/2 inch  
 FINISH: Stainless steel.  
 FASTENER: Universal Channel Clamp SignFix SX0073  
 NOTE: Use of listed proprietary products are contingent on the manufacturer providing calculations and sufficient information showing that the intended products meets the design standards set forth by the FBC and FDOT.

NOTE: Sign Contractor to coordinate the removal or movement of interfering existing signs on poles, with the city.

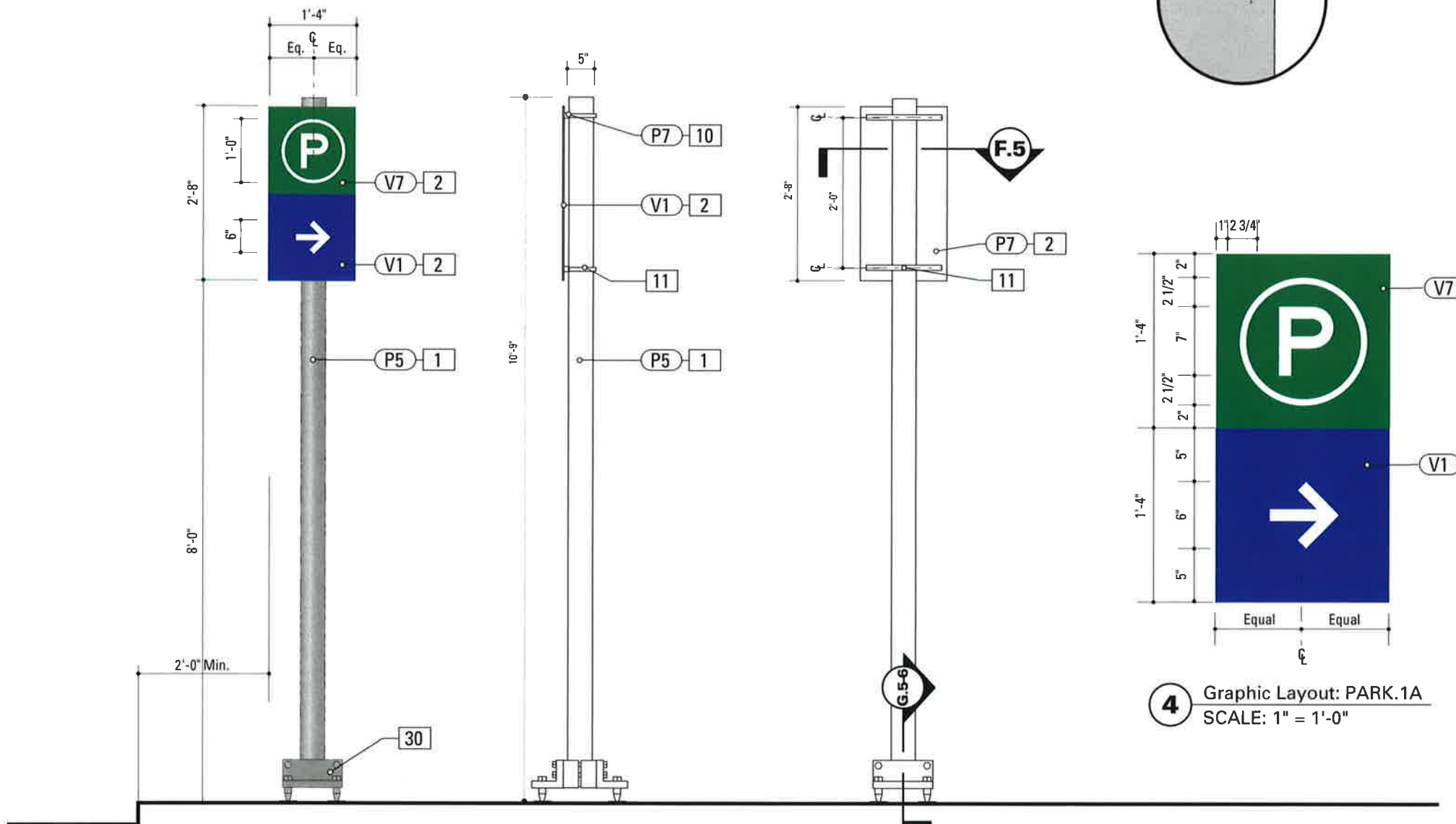


GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 2.
  3. ~~Welding: All cast steel to be welded on the pole exposed hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.~~
  4. ~~Approved by the City to receive Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M~~

ENVIRONMENTS & EXPERIENCES  <b>merJe</b> 120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		CLIENT / PROJECT  <b>Downtown Miami</b> City of Miami, Florida
SUBCONSULTANT		PROJECT NO.
DATE 10 December 2010	DRAWN BY: PR	SHEET TITLE  <b>Sign Type PARK.1</b> <b>Parking Trailblazer</b>
REVISIONS 04/20/2012 PR 11/30/2012 GS 08/16/2013 GS 03/12/2014 PR 05/02/2014 PR		
SHEET NO.		
INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.		
C.22		

**STRUCTURAL DESIGN ONLY**



**1** Front Elevation: PARK.1A  
SCALE: 1/2" = 1'-0"

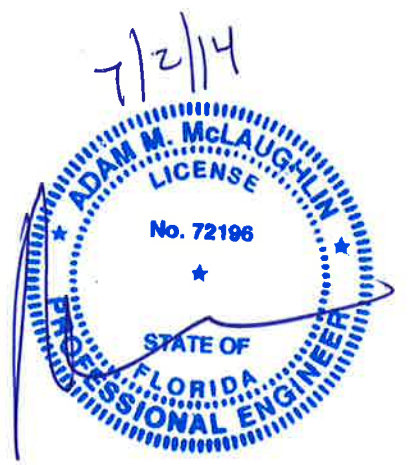
**2** Side Elevation: PARK.1A  
SCALE: 1/2" = 1'-0"

**3** Rear Elevation: PARK.1A  
SCALE: 1/2" = 1'-0"

**4** Graphic Layout: PARK.1A  
SCALE: 1" = 1'-0"


**SPECIFICATIONS**      **SIGN TYPE:** PARK.1A      **FUNCTION:** Parking Trailblazer

- 1. POLE**  
POLE: Pipe 4 STD (SCH 40) OD 4.5 ID 4  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 2. SIGN PANEL - REFLECTIVE VINYL**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted  
GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
FASTENER: Mechanically fasten to support channel extrusion.
- 10. SUPPORT CHANNEL EXTRUSION**  
PRODUCT: SignFix SX0073 Medium Channel Extrusion  
MATERIAL: Aluminum  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces  
CLEARCOAT: Acrylic Polyurethane Clear Satin  
FASTENER: Mechanically fasten to sign panel
- 11. POLE STRAP ATTACHMENT**  
PRODUCT: Band-It Band  
MATERIAL: Type 201 SS  
SIZE: 1/2 inch  
FINISH: Stainless steel.  
FASTENER: Universal Channel Clamp SignFix SX0073  
**NOTE: Use of listed proprietary products are contingent on the manufacturer providing calculations and sufficient information showing that the intended products meets the design standards set forth by the FBC and FDOT.**
- 30. BREAKAWAY FOOTER**  
Product: TRANSP@ Break-Safe Model AP Breakaway sign support system, or FDOT approved equal.  
**NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.**

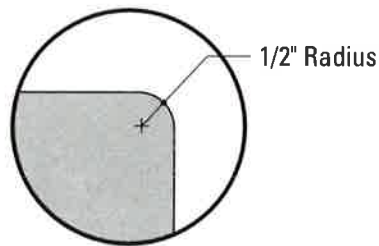


GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

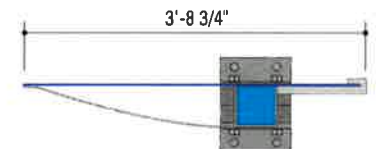
- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  2. Welds: All welds shall be ground smooth, paint all seams.
  3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  4. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

<b>ENVIRONMENTS &amp; EXPERIENCES</b>   120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		CLIENT / PROJECT
		Downtown Miami City of Miami, Florida
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type PARK.1A Parking Trailblazer New Pole
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>C.23</b>

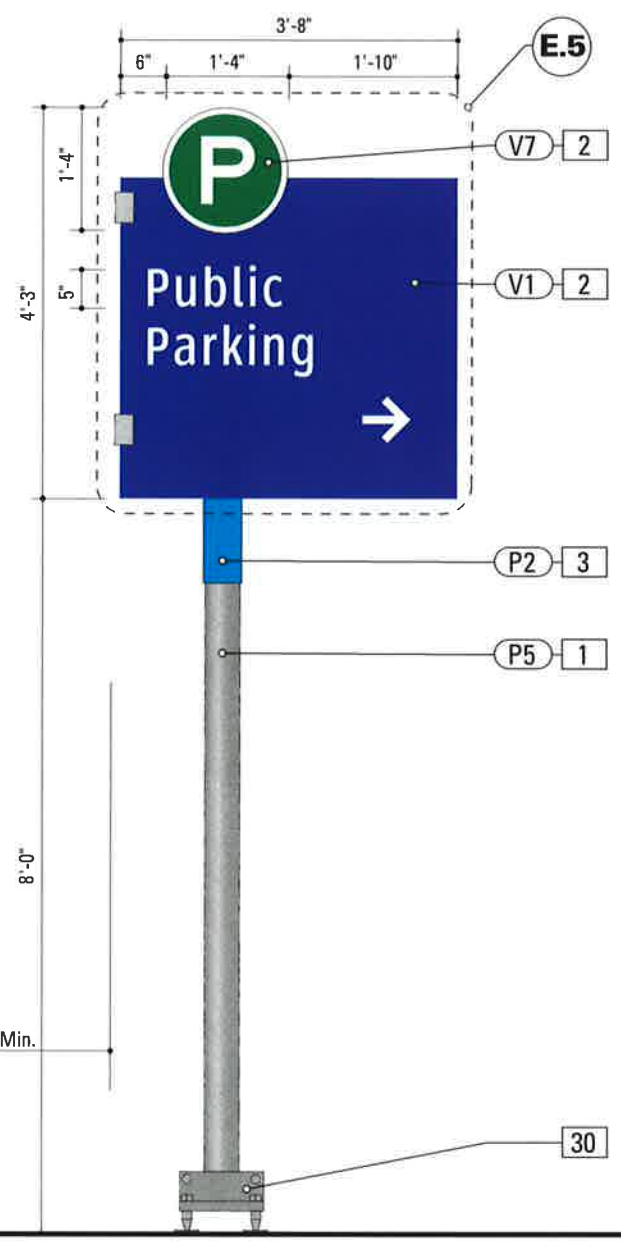
Waiving of fabric fabrication, bracing and mounting by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



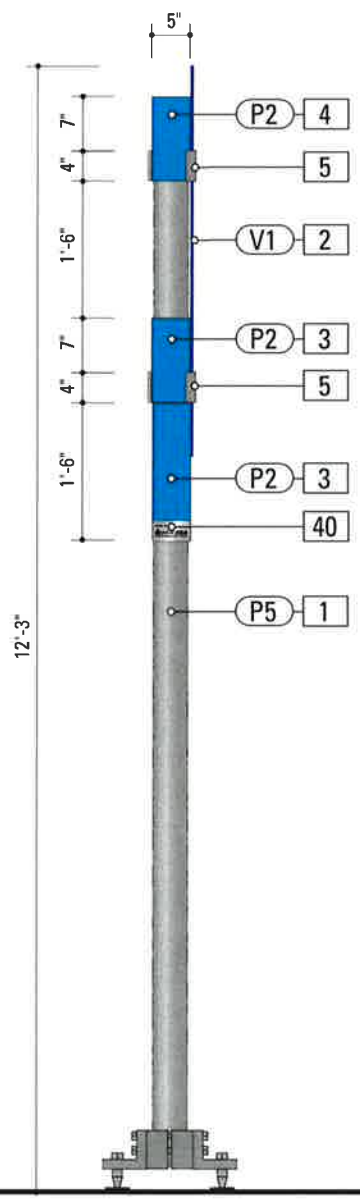
**STRUCTURAL DESIGN ONLY**



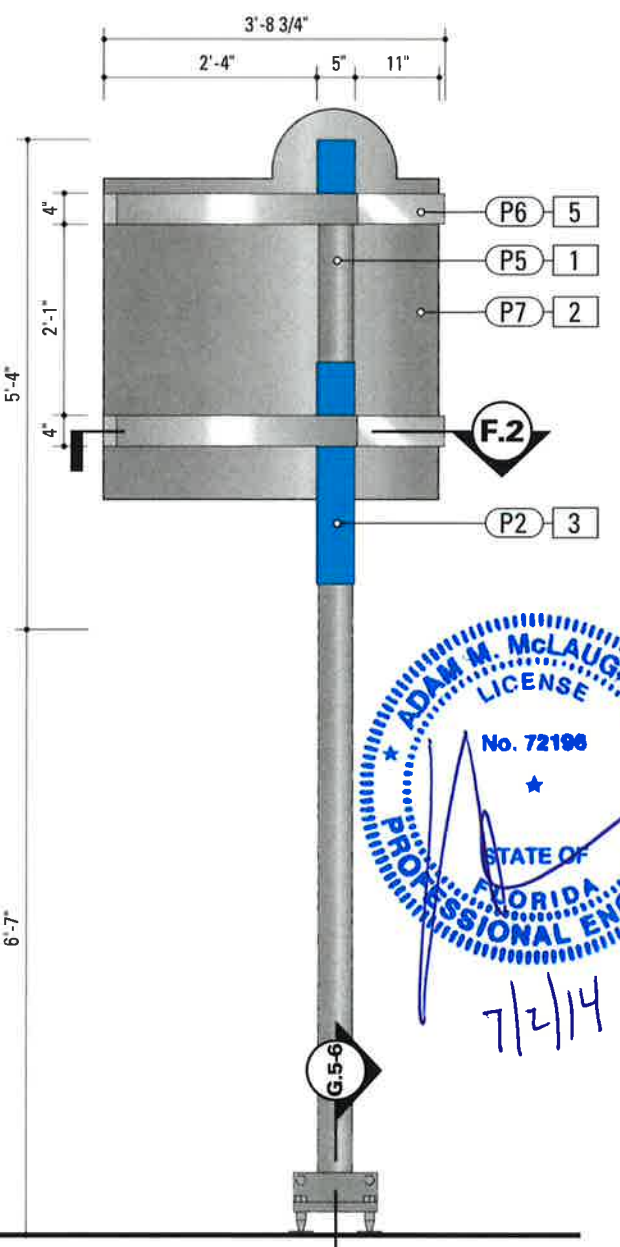
**4** Top View: PARK.2  
SCALE: 1/2" = 1'-0"



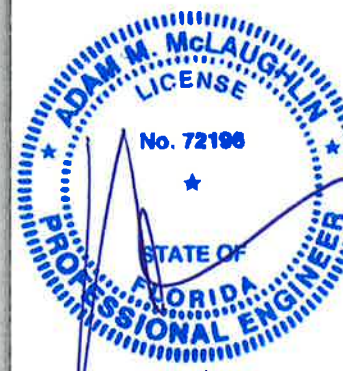
**1** Front Elevation: PARK.2  
SCALE: 1/2" = 1'-0"



**2** Side Elevation: PARK.2  
SCALE: 1/2" = 1'-0"



**3** Back Elevation: PARK.2  
SCALE: 1/2" = 1'-0"



**SPECIFICATIONS SIGN TYPE: PARK.2 FUNCTION: Parking Directional**

- 1. POLE**  
POLE: Pipe 4 X-STRONG (SCH 80) OD 4.5 ID 3.83  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 2. SIGN PANEL - REFLECTIVE VINYL**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted  
GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
FASTENER: Mechanically fastened/WELD to sleeve assembly/L bracket
- 3. SLEEVE ASSEMBLY - L BRACKET**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Breakformed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld to Sign Panel  
**SLEEVE ASSEMBLY - COVER**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically Fastened / Weld to Sign Panel  
Note: Area below sign panel requires 1/8" thick front cover plate. Finish to match Cover. Mechanically Fasten to L Bracket.
- 4. TOP CAP**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 5. SUPPORT ARM**  
MATERIAL: 1/4" thick Aluminum sheet  
FABRICATION PROCESS: Curved Panel, Trim to size  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten & weld unit to Sleeve Assembly Cover.  
**PANEL CLIP**  
MATERIAL: 1" thick Aluminum block  
FABRICATION PROCESS: Milled/Machined/Slotted  
EDGES: Square AND Clean (NO exposed seams).  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fasten unit to Sleeve Assembly Cover & Panel. Slotted cut fits over sign panel.
- 30. BREAKAWAY FOOTER**  
Product: TRANSPO® Break-Safe Model AP Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.

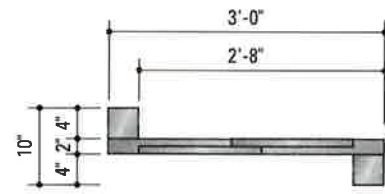


GKM & Associates design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

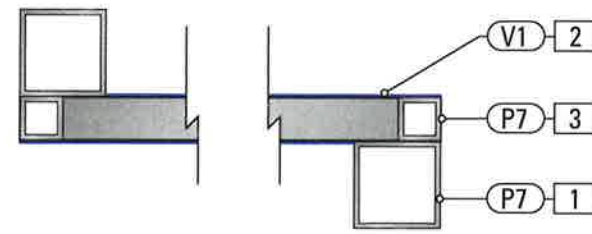
- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication.
  - Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - Hardware: All fasteners shall be corrosion resistant hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - Approved Anti-Graffiti or equivalent Anti-Grffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type PARK.2 Parking Directional
DRAWN BY:	PR	
REVISIONS		
	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	SHEET NO.
	03/12/2014 PR	<b>C.24</b>
	05/02/2014 PR	

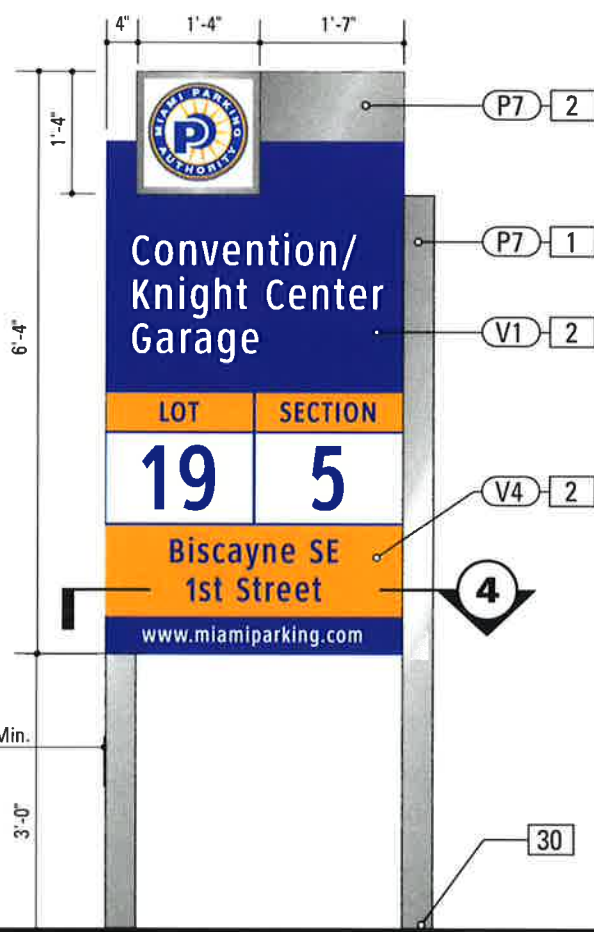
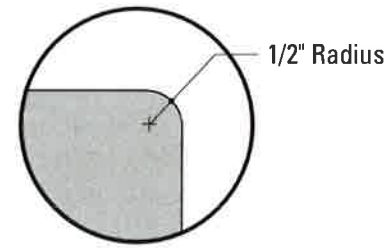
It is the responsibility of the fabricator to ensure that the shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS. The fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



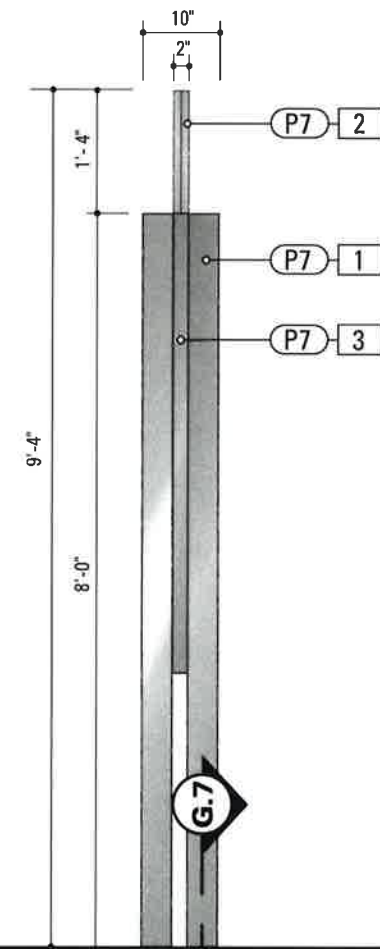
**3** Top View: PARK.3  
SCALE: 1/2" = 1'-0"



**4** Section Detail: PARK.3  
SCALE: 1/2" = 1'-0"



**1** Front and Rear Elevation: PARK.3  
SCALE: 1/2" = 1'-0"



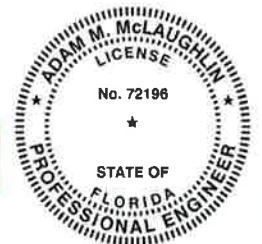
**2** Side Elevation: PARK.3  
SCALE: 1/2" = 1'-0"



**5** Graphic Layout: PARK.3  
SCALE: 1" = 1'-0"

**SPECIFICATIONS** SIGN TYPE: PARK.3 FUNCTION: Parking Garage Info

- POST**  
MATERIAL: Aluminum square tube 4" x 4" x 1/4" wall  
BASE PLATE: 1/2" thick Aluminum sheet  
FABRICATION PROCESS: Extruded  
EDGES: Smooth  
COLOR: custom as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FOOTER: Fabricated plate-to-plate sign support system, below grade, with self-leveling nuts.
- SIGN PANEL**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
COLOR: Custom, as noted  
GRAPHIC BACKGROUND AND COPY PROCESS: 3M custom inks print direct to 3930 with 3M approved UV/Graffiti Vinyl Over-laminates. (See Color Sheet A6 for all color and material specifications)  
FASTENER: Mechanically fastened to pole
- MONOLITH**  
MATERIAL: Aluminum Fascia thickness - as required  
STRUCTURE: Aluminum Extrusion Framing - as required  
FABRICATION PROCESS: Cut / Welded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.
- BREAKAWAY FOOTER**  
PRODUCT: Fabricated plate-to-plate sign support system, below grade, with self-leveling nuts.  
NOTE: This specific sign is NOT positioned within FDOT R.O.W.

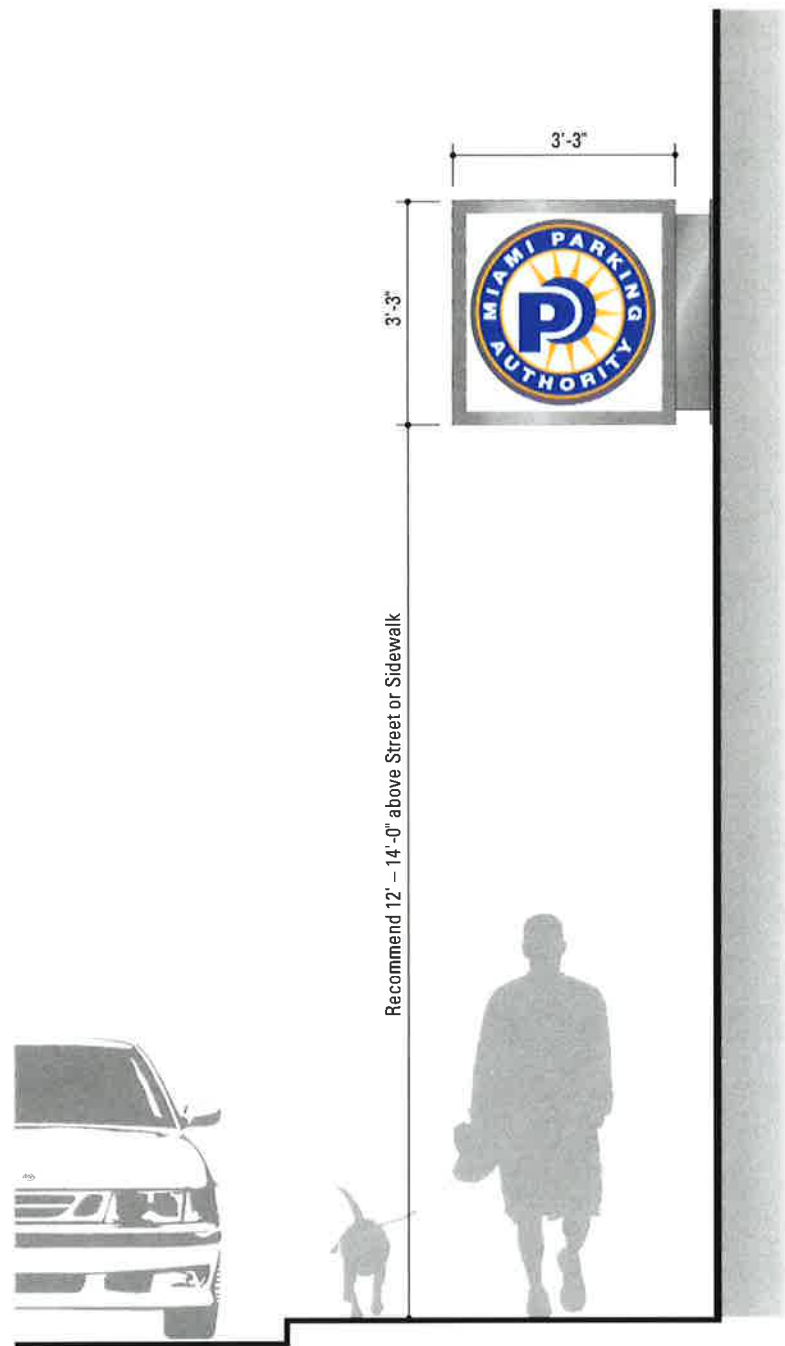


**STRUCTURAL DESIGN ONLY**

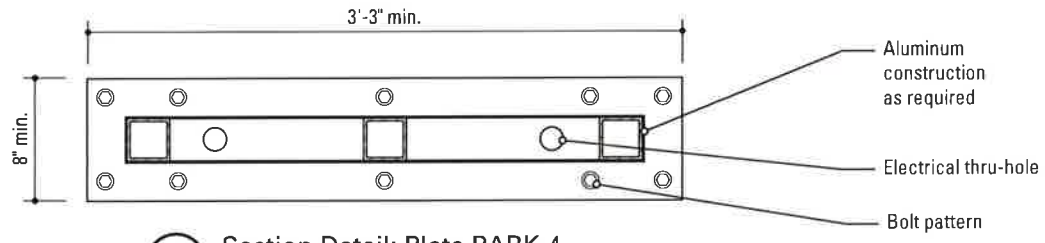
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 
  - Hardware: All hardware to be used on the sign shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - Approved UV Inks to be used for Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

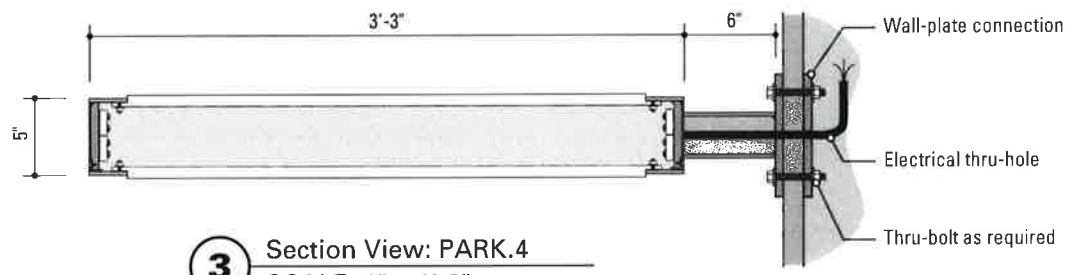
<b>ENVIRONMENTS &amp; EXPERIENCES</b>		CLIENT / PROJECT
merJe 120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 www.merjedesign.com		Downtown Miami City of Miami, Florida
SUBCONSULTANT		PROJECT NO.
DATE	10 December 2010	SHEET TITLE <b>Sign Type PARK.3 Parking Garage Information</b>
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>C.25</b>



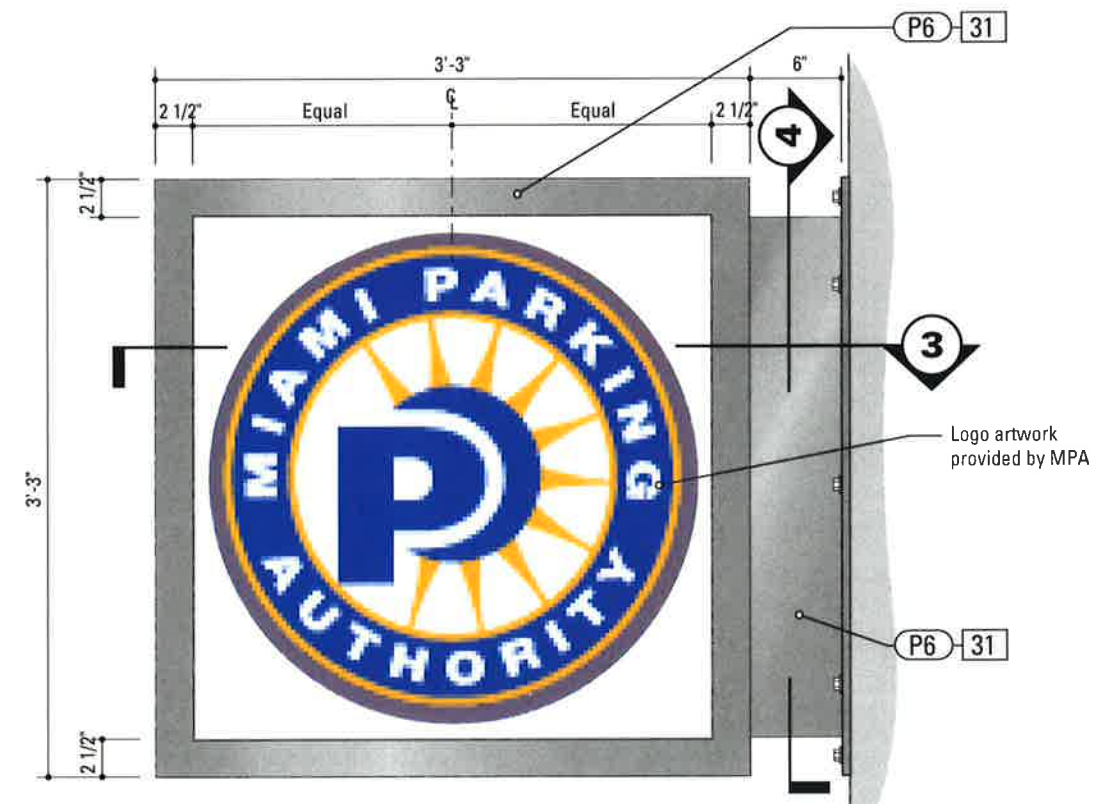
**1** Elevation: PARK.4  
SCALE: 3/8" = 1'-0"



**4** Section Detail: Plate PARK.4  
SCALE: 1" = 1'-0"



**3** Section View: PARK.4  
SCALE: 1" = 1'-0"

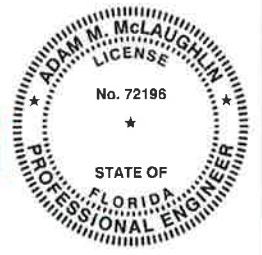
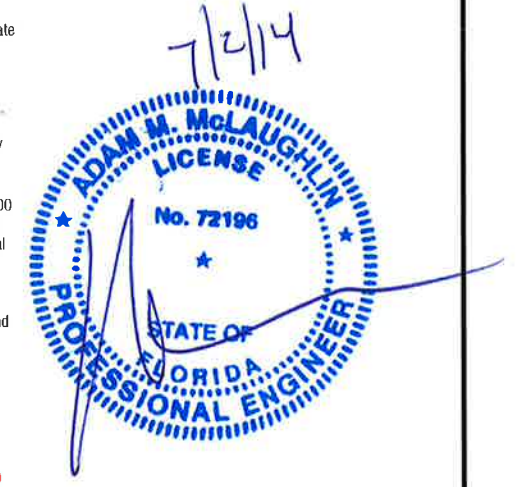


**2** Front and Rear Elevation: PARK.4  
SCALE: 1" = 1'-0"

**SPECIFICATIONS** SIGN TYPE: PARK.4 FUNCTION: Parking Garage ID

**31. SIGN CABINET**  
 MATERIAL: 1/8" thick Aluminum sheet cover, internal extruded Aluminum square tube construction  
 FABRICATION PROCESS: Welded/Fabricated  
 Provide internal support as required per Fabricators structural engineer recommendation.  
 EDGES: Square  
 COLOR: custom, as noted  
 SURFACE PROCESS: Paint all exposed surfaces with Mathews Acrylic Polyurethane, with clear coat satin finish.  
 FASTENER: Mechanically fastened to wall surface with non-corrosive fasteners.  
 SIGN FACE: 1/4" thick Acrylite® Milk-White acrylic substrate for light box application.  
 GRAPHICS: 3M translucent vinyl printed application  
 SURFACE PROCESS: Paint all exposed surfaces with Mathews Acrylic Polyurethane, with clear coat satin finish.  
 NOTE: Fabricator to supply fabrication details for adhering/holding and changing graphic panel in channel.  
 LIGHTING: Internally Illuminated - color temperature of 4000 ± 1000 K, a Color Rendering Index (CRI) of 85 to 100, and an illuminance of at least 50 footcandles (538 lux). General Electric Deluxe Cool White Fluorescent Lamps (or similar lamps made by several manufacturers) meet these conditions. You can also use warmer lamps such as the Phillips 5000 K Ultralume, or a mixture of incandescent and fluorescent lamps. For each pair of 40-watt cool white deluxe fluorescent lamps, use a 75-watt frosted tungsten bulb. Fabricator to provide exact number of fixtures to provide even illumination without shadows or hotspots.  
 Power Requirement: 120 V  
 Power to be provided by others within 3 feet of Unit.

NOTE: Sign Fabricator to verify each location in the field in order to determine mounting condition, and where to make electrical connection. Fabricator's structural engineer is responsible for verifying the existing structures material and condition, and for designing an appropriate connection type. Sign Fabricator to pull permit for City of Miami for each location.



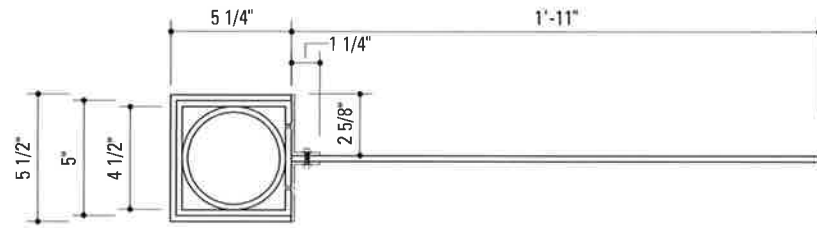
**STRUCTURAL DESIGN ONLY**

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

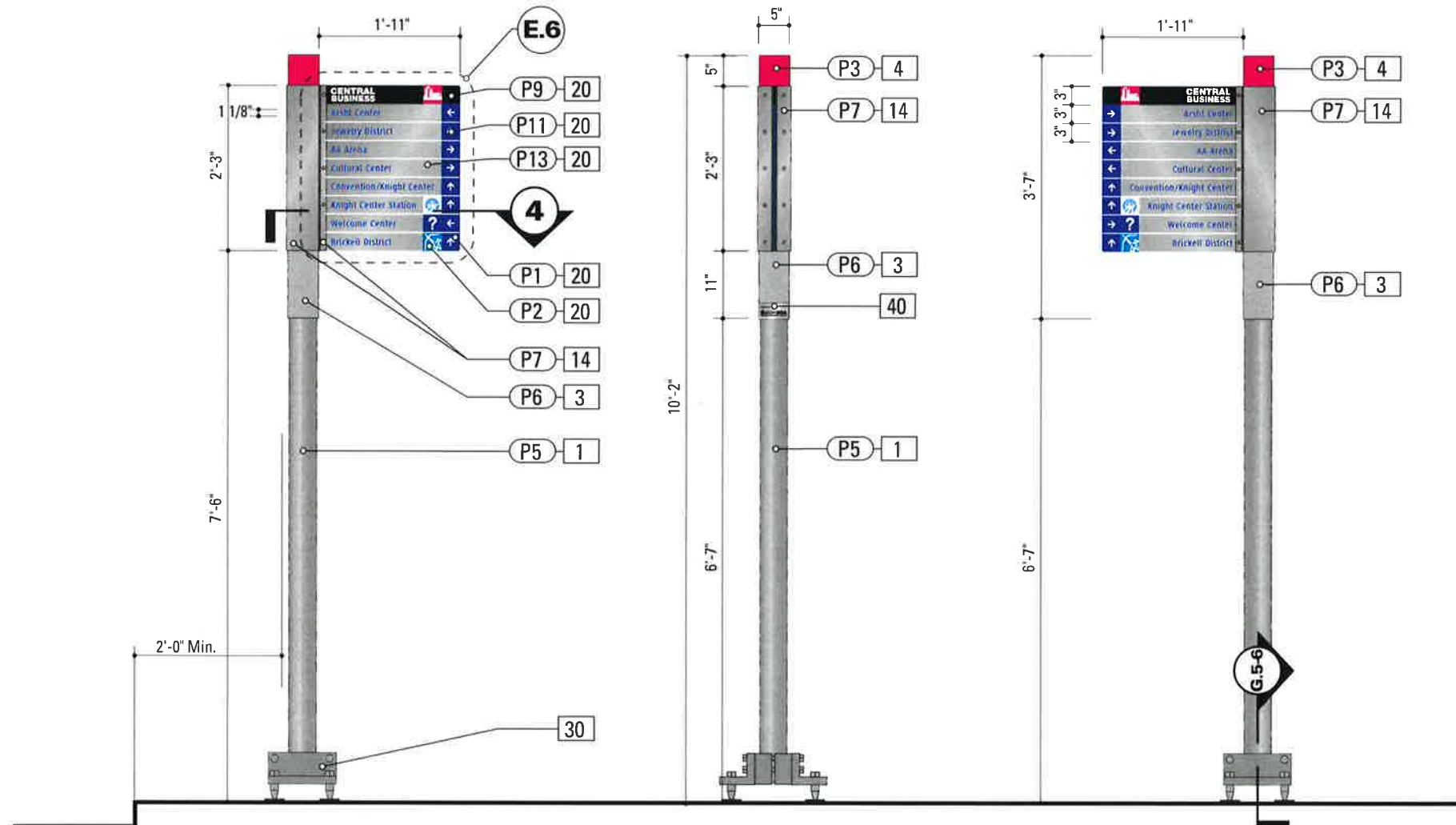
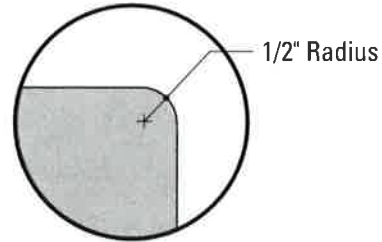
- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  2. Welds shall be structural and shall be protected with a corrosion resistant paint.
  3. All hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  4. All signs shall be treated with Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe 120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		Downtown Miami City of Miami, Florida
SUBCONSULTANT		PROJECT NO.
DATE 10 December 2010	DRAWN BY: PR	SHEET TITLE
REVISIONS 04/20/2012 PR 11/30/2012 GS 08/16/2013 GS 03/12/2014 PR 05/02/2014 PR		Sign Type PARK.4 Parking Garage ID
<small>If the sign is fabricated for installation and is not to be installed by the Design Team and Project Engineer, if the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.</small>		SHEET NO. <b>C.26</b>

**STRUCTURAL DESIGN ONLY**



**4** Section Detail: PDIR.1  
SCALE: 1 1/2" = 1'-0"



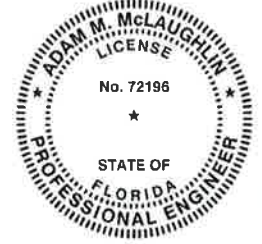
**1** Front Elevation: PDIR.1  
SCALE: 1/2" = 1'-0"

**2** Side Elevation: PDIR.1  
SCALE: 1/2" = 1'-0"

**3** Back Elevation: PDIR.1  
SCALE: 1/2" = 1'-0"

**SPECIFICATIONS**      **SIGN TYPE:** PDIR.1      **FUNCTION:** Pedestrian Directional

- 1. POLE**  
POLE: Pipe 4 STD (SCH 40) OD 4.5 ID 4  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 3. SLEEVE**  
MATERIAL: 1/4" thk Aluminum  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole
- 4. TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole
- 14. BRACKET**  
MATERIAL: 1/8" thk Aluminum angle and sheet  
FABRICATION PROCESS: Router-cut, brake-formed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to sleeve.
- 20. SIGN PANEL - EMBEDDED GRAPHIC**  
PRODUCT NAME: iZone, 2526 Charter Oak Drive, Suite 100, Temple Texas 76502. (888) 464-9663, www.izoneimaging.com, email: info@izoneimaging.com or approved equal  
PRODUCT: Digital high pressure phenolic laminate (dHPL)  
GRAPHIC APPROVAL PROCESS: Submit 12x12 inch phenolic sample of section of typical project panel for image and color quality approval, prior to complete panel production.  
WARRANTY PERIOD: Ten (10) years from product ship date.  
THICKNESS: 1/4 inch.  
SIDES: Double-Sided.  
FINISH: Matte or Ice.  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted : Colors Shown are for Matching Only. Sample prints to be provided for approval  
FASTENER: Mechanically fastened to sleeve as required, Fabricator to verify Bracket Assembly depth, to protect sign panel from loosening, breaking and snapping along bracket edge, if forced.
- 30. BREAKAWAY FOOTER**  
Product: TRANSPO® Break-Safe Model AP Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.

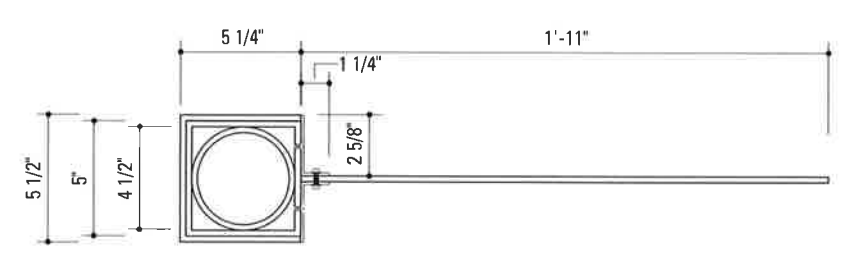


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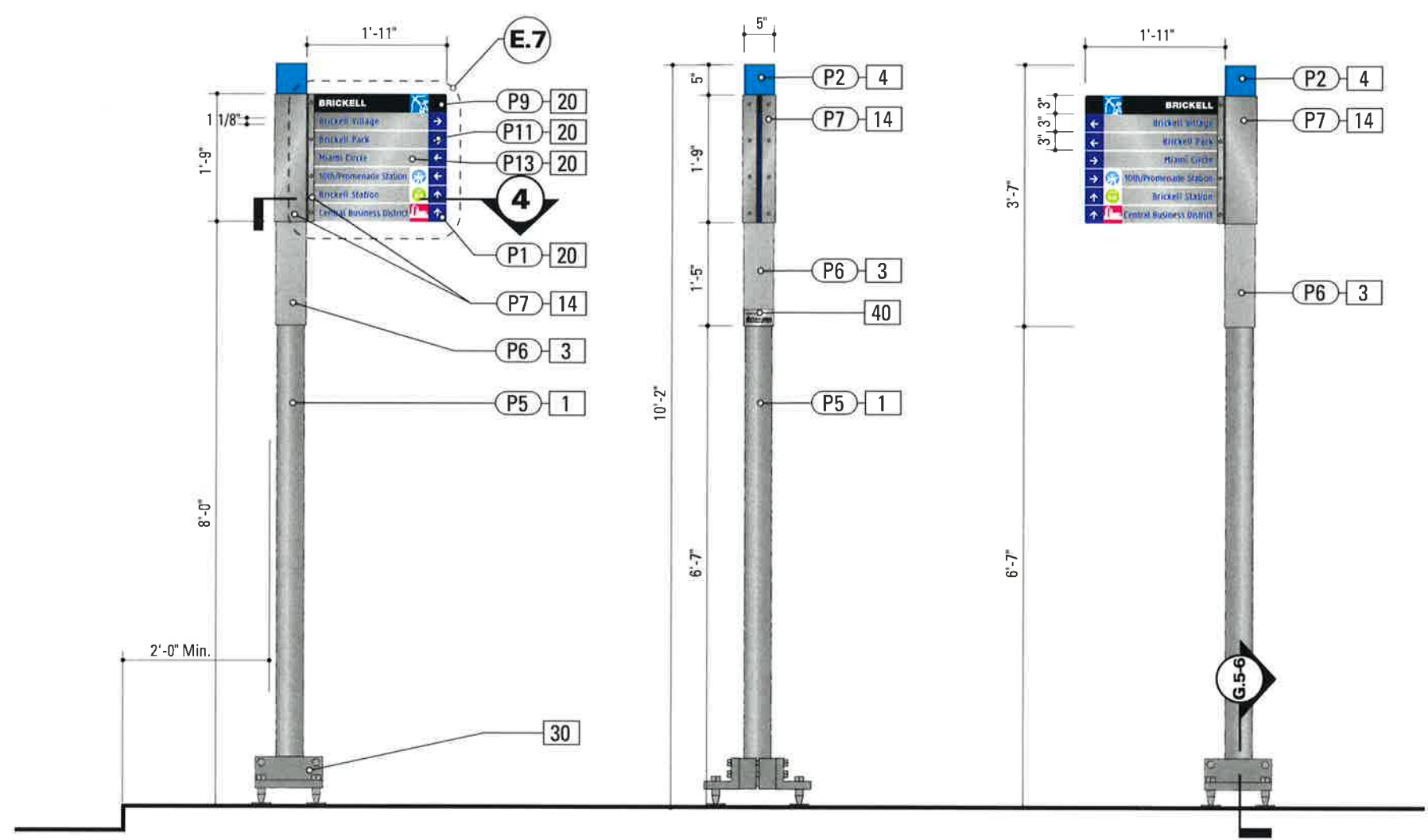
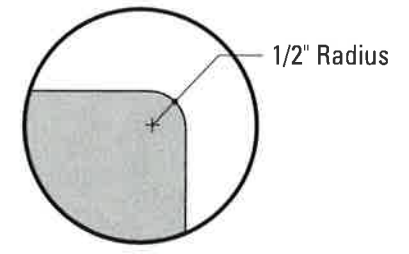
- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 
  - Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces. Smooth, paint all seams.
  - approved UV/Anti-Graffiti overlamine. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 www.merjedesign.com		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type PDIR.1 Pedestrian Directional
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>C.27</b>

**STRUCTURAL DESIGN ONLY**



**4** Section Detail: PDIR.2  
SCALE: 1 1/2" = 1'-0"



**1** Front Elevation: PDIR.2  
SCALE: 1/2" = 1'-0"

**2** Side Elevation: PDIR.2  
SCALE: 1/2" = 1'-0"

**3** Back Elevation: PDIR.2  
SCALE: 1/2" = 1'-0"

**SPECIFICATIONS**      **SIGN TYPE:** PDIR.2      **FUNCTION:** Pedestrian Directional

- 1. POLE**  
POLE: Pipe 4 STD (SCH 40) OD 4.5 ID 4  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 3. SLEEVE**  
MATERIAL: 1/4" thk Aluminum  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole
- 4. TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 14. BRACKET**  
MATERIAL: 1/8" thk Aluminum angle and sheet  
FABRICATION PROCESS: Router-cut, brake-formed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to sleeve.
- 20. SIGN PANEL - EMBEDDED GRAPHIC**  
PRODUCT NAME: Izone, 2526 Charter Oak Drive, Suite 100, Temple Texas 76502. (888) 464-9663, www.izonemaging.com, email: info@izonemaging.com or approved equal  
PRODUCT: Digital high pressure phenolic laminate (dHPL)  
GRAPHIC APPROVAL PROCESS: Submit 12x12 inch phenolic sample of section of typical project panel for image and color quality approval, prior to complete panel production.  
WARRANTY PERIOD: Ten (10) years from product ship date.  
THICKNESS: 1/4 inch.  
SIDES: Double-Sided.  
FINISH: Matte or Ice.  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted : Colors Shown are for Matching Only. Sample prints to be provided for approval  
FASTENER: Mechanically fastened to sleeve as required.  
Fabricator to verify Bracket Assembly depth, to protect sign panel from loosening, breaking and snapping along bracket edge, if forced.
- 30. BREAKAWAY FOOTER**  
Product: TRANSP0® Break-Safe Model AP Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.



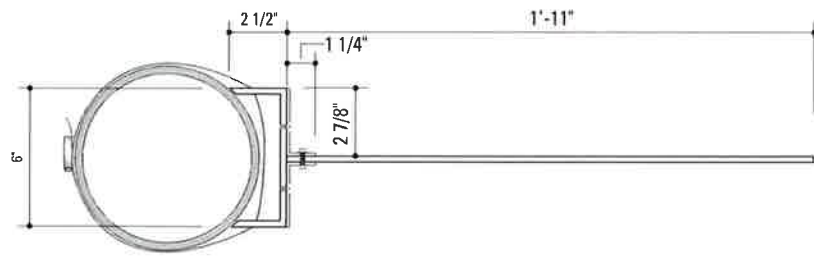
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  2. ~~Verify all fasteners are tamper proof, corrosion resistant, and color matching adjacent surfaces.~~
  3. ~~Verify all fasteners are tamper proof, corrosion resistant, and color matching adjacent surfaces.~~
  4. ~~Apply Anti-Graffiti to pole and sign panel.~~ All sign surfaces with reflective graphics to receive 3M

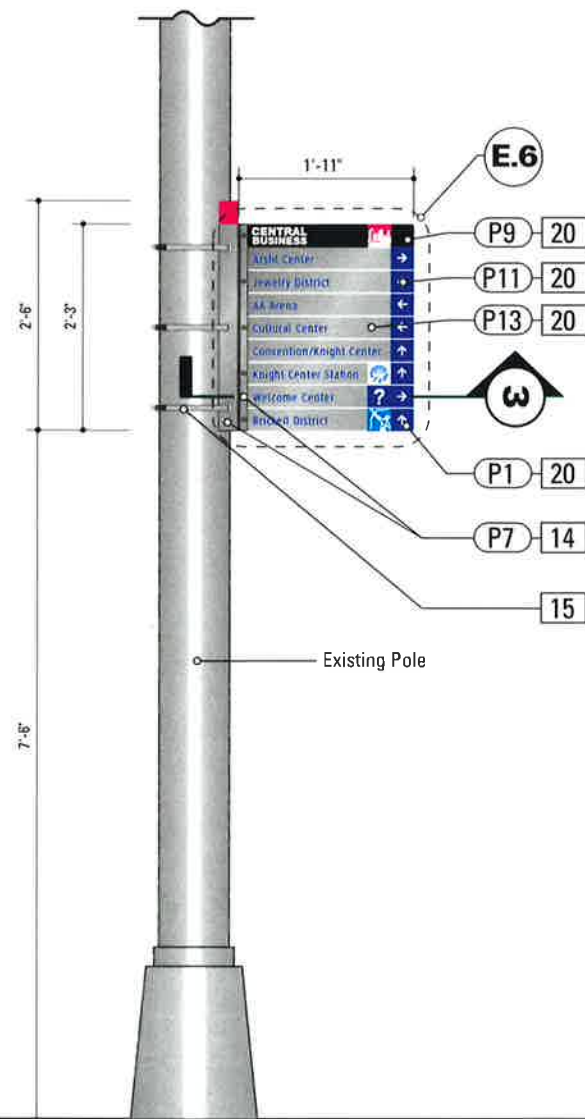
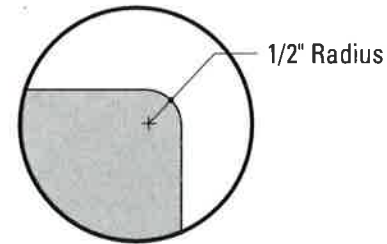
<b>ENVIRONMENTS &amp; EXPERIENCES</b>		CLIENT / PROJECT	
		120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>	
SUBCONSULTANT		PROJECT NO.	
DATE		SHEET TITLE	
10 December 2010		<b>Sign Type PDIR.2</b> <b>Pedestrian Directional</b>	
DRAWN BY:		SHEET NO.	
PR		<b>C.28</b>	
REVISIONS			
04/20/2012 PR			
11/30/2012 GS			
08/16/2013 GS			
03/12/2014 PR			
05/02/2014 PR			

It is the responsibility of the fabricator to ensure compliance with the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

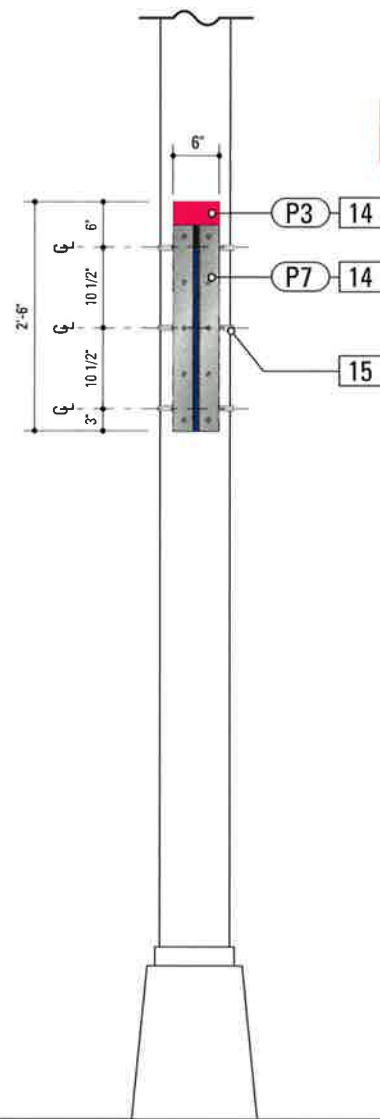




**3** Top View: PDIR.3  
SCALE: 1 1/2" = 1'-0"

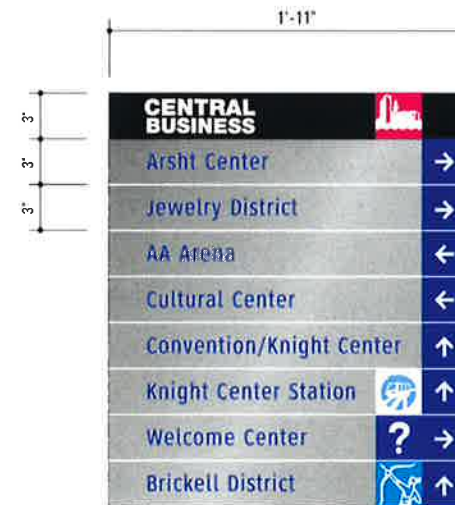


**1** Front & Rear Elevation: PDIR.3  
SCALE: 1/2" = 1'-0"



**2** Side Elevation: PDIR.3  
SCALE: 1/2" = 1'-0"

**STRUCTURAL DESIGN ONLY**



**4** Tab Detail: PDIR.3  
SCALE: 1/2" = 1'-0"

**SPECIFICATIONS**      **SIGN TYPE:** PDIR.3      **FUNCTION:** Pedestrian Directional

**14. BRACKET**  
MATERIAL: 1/8" thk Aluminum angle and sheet  
FABRICATION PROCESS: Router-cut, brake-formed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to sleeve.

**15. STRAP**  
MATERIAL: Stainless steel with threaded tightening assembly including hardware  
MOUNTING: Adjustable for utility and street poles (round square up to 10" dia.)  
COLOR: Match pole finish. Black for black or dark colored poles. Stainless steel for light or stainless steel poles.  
QUANTITY: 3 per sign  
HARDWARE: As required - located on panel not interfere with graphic sign elements.  
**NOTE:** Use of listed proprietary products are contingent on the manufacturer providing calculations and sufficient information showing that the intended products meets the design standards set forth by the FBC and FDOT.

**20. SIGN PANEL - EMBEDDED GRAPHIC**  
PRODUCT NAME: iZone, 2526 Charter Oak Drive, Suite 100, Temple Texas 76502. (888) 464-9663, www.izoneimaging.com, email: info@izoneimaging.com or approved equal  
PRODUCT: Digital high pressure phenolic laminate (dHPL)  
GRAPHIC APPROVAL PROCESS: Submit 12x12 inch phenolic sample of section of typical project panel for image and color quality approval, prior to complete panel production.  
WARRANTY PERIOD: Ten (10) years from product ship date.  
THICKNESS: 1/4 inch.  
SIDES: Double-Sided.  
FINISH: Matte or Ice.  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted : Colors Shown are for Matching Only. Sample prints to be provided for approval  
FASTENER: Mechanically fastened to sleeve as required. Fabricator to verify Bracket Assembly depth, to protect sign panel from loosening, breaking and snapping along bracket edge, if forced.

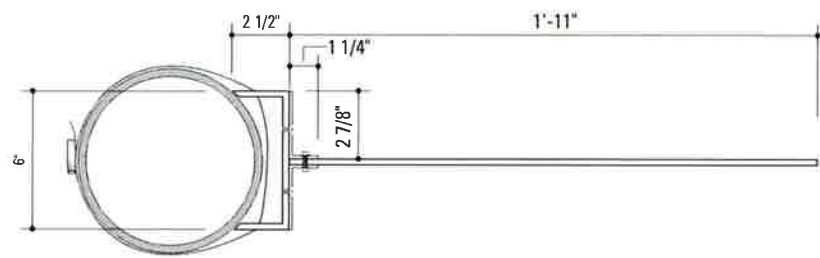


GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

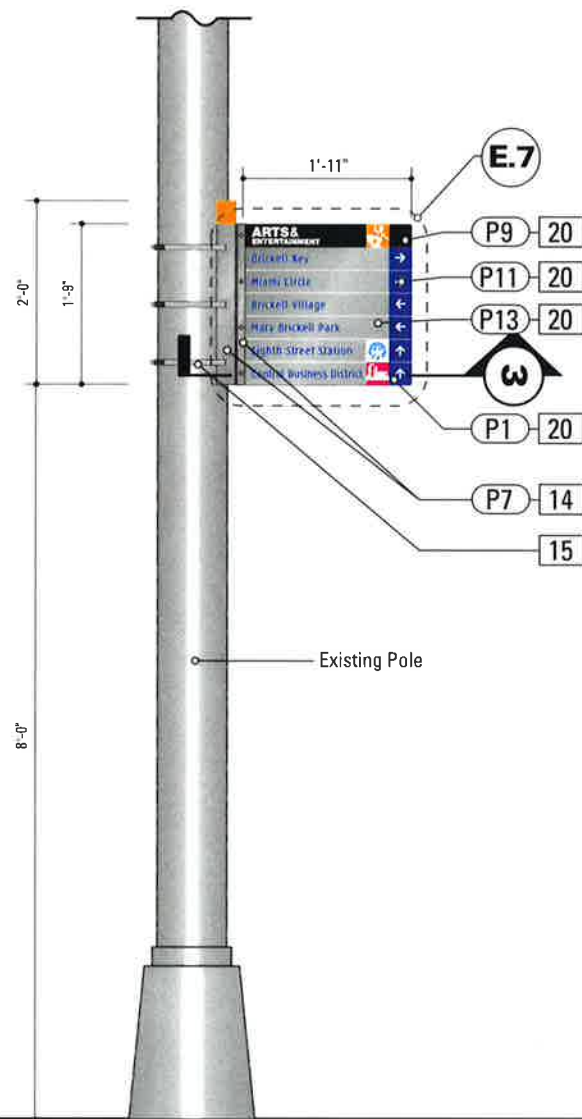
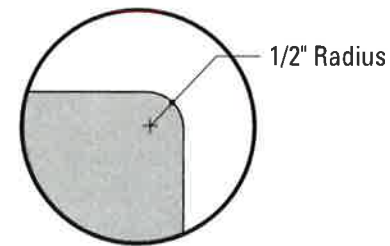
**NOTES**  
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.  
2.  
3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.  
4. approved UV/Anti-Graffiti overlaminate. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 www.merjedesign.com		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type PDIR.3 Pedestrian Directional
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>C.29</b>

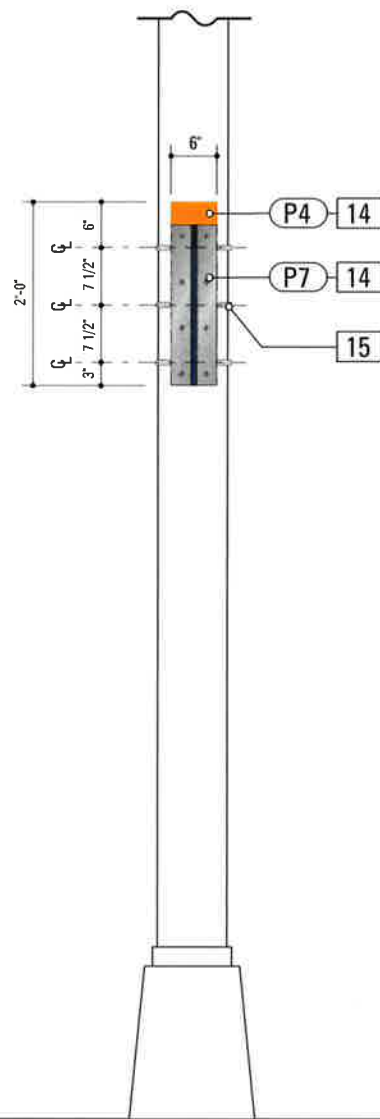
drawings prior to fabrication for review and approval by the Designer or Client. The Designer or Client shall be responsible for the design and the fabricator shall be responsible for the fabrication. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



**3** Top View: PDIR.4  
SCALE: 1 1/2" = 1'-0"

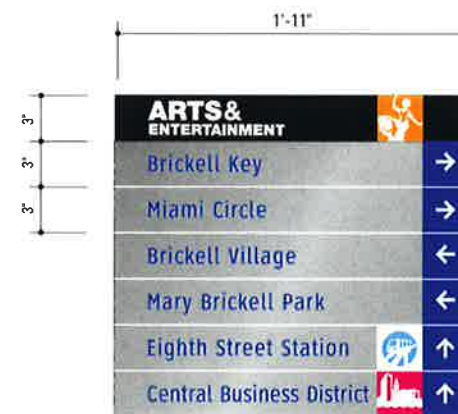


**1** Front & Rear Elevation: PDIR.4  
SCALE: 1/2" = 1'-0"



**2** Side Elevation: PDIR.4  
SCALE: 1/2" = 1'-0"

**STRUCTURAL DESIGN ONLY**



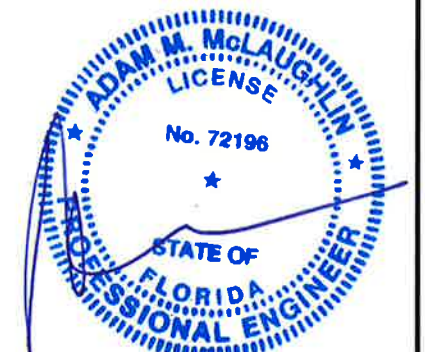
**4** Tab Detail: PDIR.4  
SCALE: 1/2" = 1'-0"

**SPECIFICATIONS**      **SIGN TYPE:** PDIR.4      **FUNCTION:** Pedestrian Directional

**14. BRACKET**  
MATERIAL: 1/8" thk Aluminum angle and sheet  
FABRICATION PROCESS: Router-cut, brake-formed  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to sleeve.

**15. STRAP**  
MATERIAL: Stainless steel with threaded tightening assembly including hardware  
MOUNTING: Adjustable for utility and street poles (round square up to 10" dia.)  
COLOR: Match pole finish, Black for black or dark colored poles. Stainless steel for light or stainless steel poles.  
QUANTITY: 3 per sign  
HARDWARE: As required - located on panel not interfere with graphic sign elements.  
**NOTE:** Use of listed proprietary products are contingent on the manufacturer providing calculations and sufficient information showing that the intended products meets the design standards set forth by the FBC and FDOT.

**20. SIGN PANEL - EMBEDDED GRAPHIC**  
PRODUCT NAME: iZone, 2526 Charter Oak Drive, Suite 100, Temple Texas 76502. (888) 464-9663, www.izoneimaging.com, email: info@izoneimaging.com or approved equal  
PRODUCT: Digital high pressure phenolic laminate (dHPL)  
GRAPHIC APPROVAL PROCESS: Submit 12x12 inch phenolic sample of section of typical project panel for image and color quality approval, prior to complete panel production.  
WARRANTY PERIOD: Ten (10) years from product ship date.  
THICKNESS: 1/4 inch.  
SIDES: Double-Sided.  
FINISH: Matte or Ice.  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted : Colors Shown are for Matching Only. Sample prints to be provided for approval  
FASTENER: Mechanically fastened to sleeve as required.  
Fabricator to verify Bracket Assembly depth, to protect sign panel from loosening, breaking and snapping along bracket edge, if forced.



7/2/14

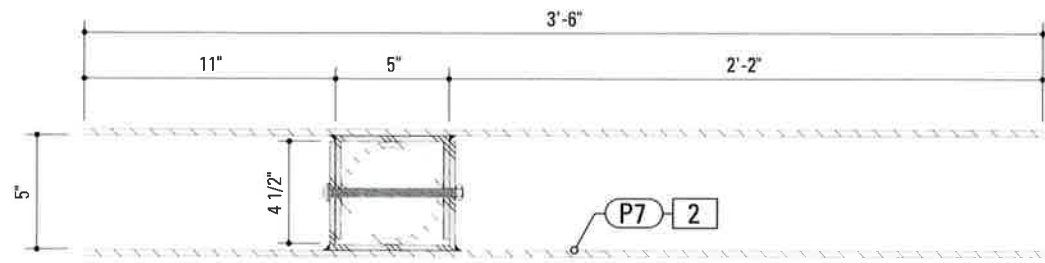


GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

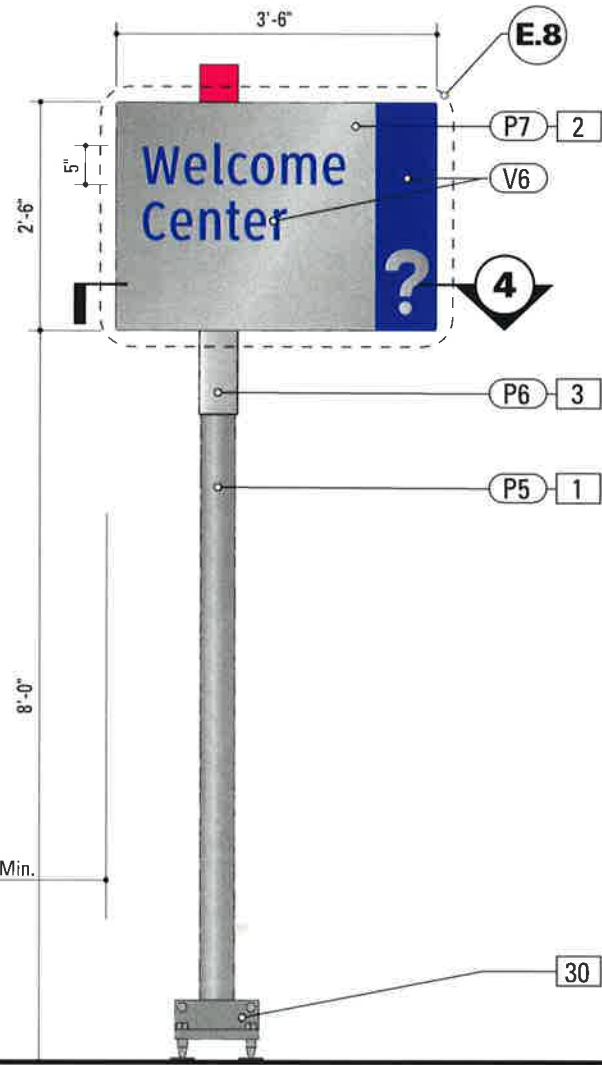
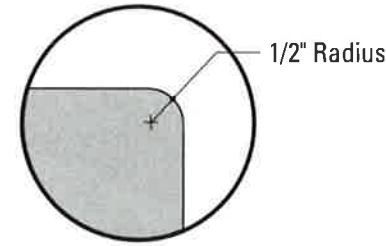
**NOTES**  
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.  
2.  
3. Hardware: All fasteners shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.  
4. Approved Sign Coatings or Materials: Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 www.merjedesign.com		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	DRAWN BY:	Sign Type PDIR.4 Pedestrian Directional
10 December 2010	PR	
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		SHEET NO.
03/12/2014 PR		C.30
05/02/2014 PR		

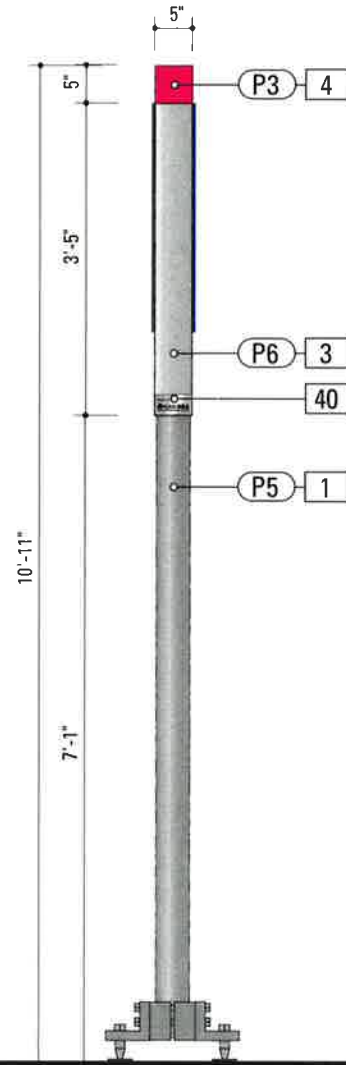
**STRUCTURAL DESIGN ONLY**



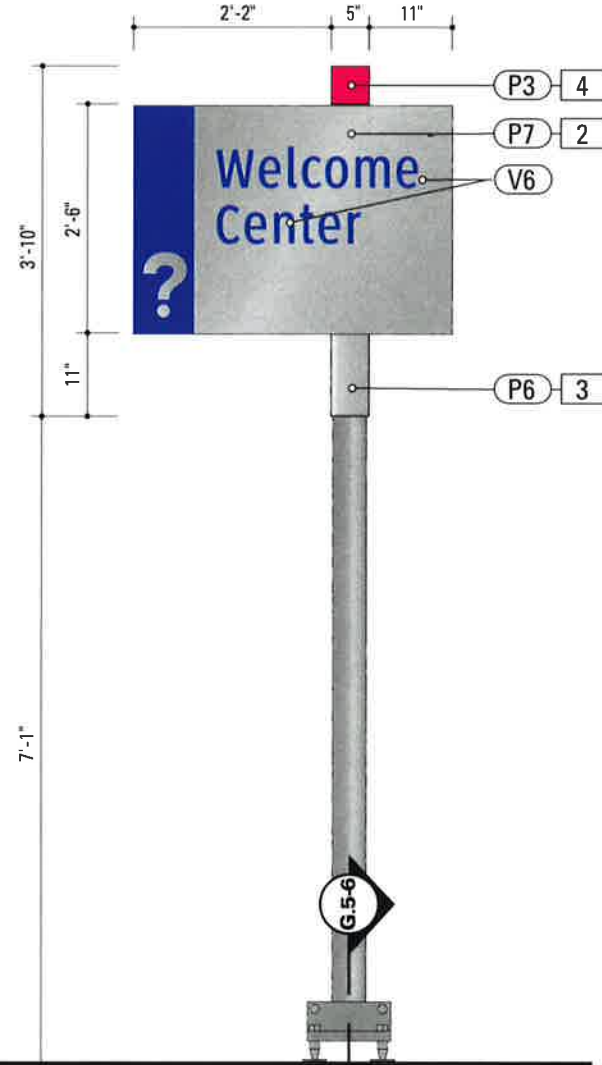
**4** Section View: DEST.1  
SCALE: 1/2" = 1'-0"



**1** Front Elevation: DEST.1  
SCALE: 1/2" = 1'-0"



**2** Side Elevation: DEST.1  
SCALE: 1/2" = 1'-0"



**3** Back Elevation: DEST.1  
SCALE: 1/2" = 1'-0"

**SPECIFICATIONS**      **SIGN TYPE:** DEST.1      **FUNCTION:** Destination ID

- POLE**  
POLE: Pipe 4 STD (SCH 40) OD 4.5 ID 4  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- SIGN PANEL - PAINTED GRAPHICS**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Stitch weld to sleeve.
- SLEEVE ASSEMBLY - U-CHANNEL**  
MATERIAL: 3/16" thk Aluminum U-Channel  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Through-bolt mechanical fasteners.
- TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- BREAKAWAY FOOTER**  
Product: TRANSPOND Break-Safe Model AP Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.

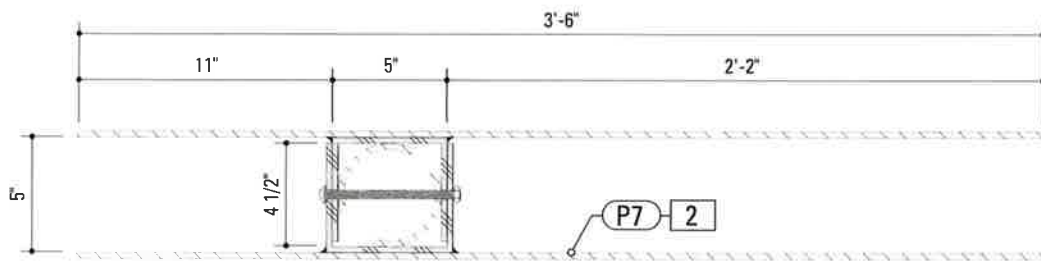


GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

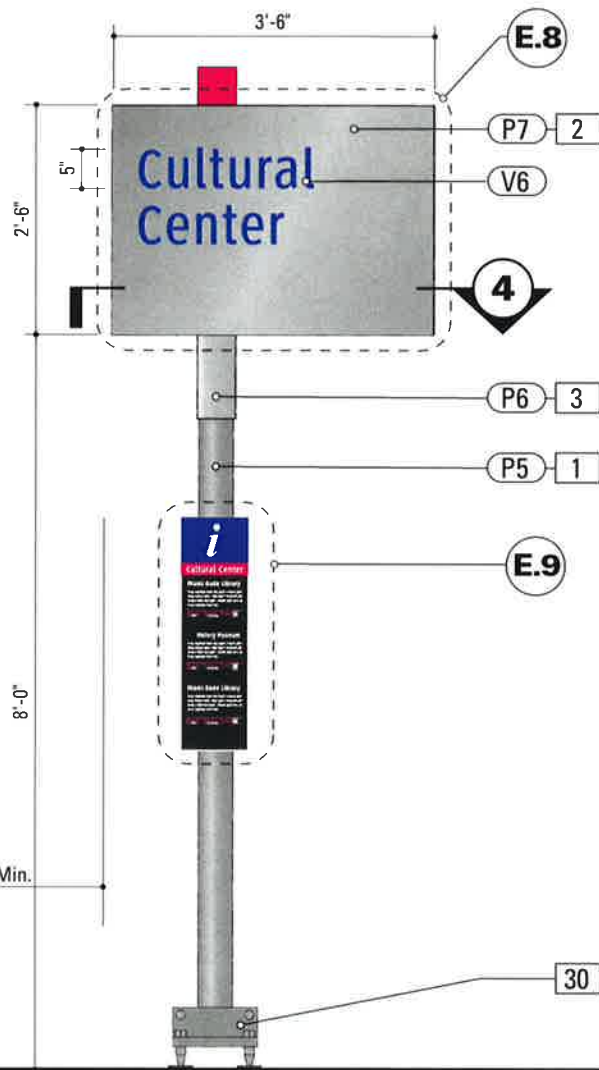
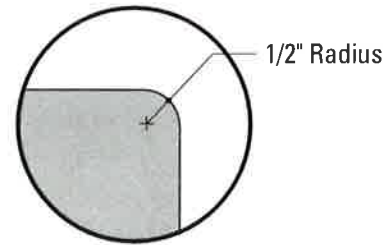
- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 
  - Hardware: All fasteners shall be concealed if exposed. Hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - Approved Anti-Graffiti treatment/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	DRAWN BY:	<b>Sign Type DEST.1</b> <b>Destination Identification</b>
10 December 2010	PR	
REVISIONS 04/20/2012 PR 11/30/2012 GS		
08/16/2013 GS		
03/12/2014 PR		
05/02/2014 PR		SHEET NO.
<small>                     The design of this drawing is the property of GKM &amp; Associates, Inc. and is not to be used for any other project without the written consent of GKM &amp; Associates, Inc. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.                 </small>		<b>C.31</b>

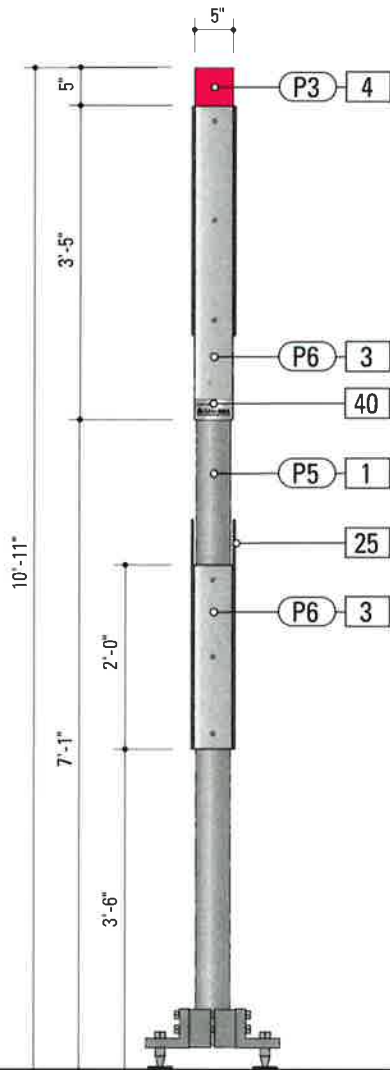
**STRUCTURAL DESIGN ONLY**



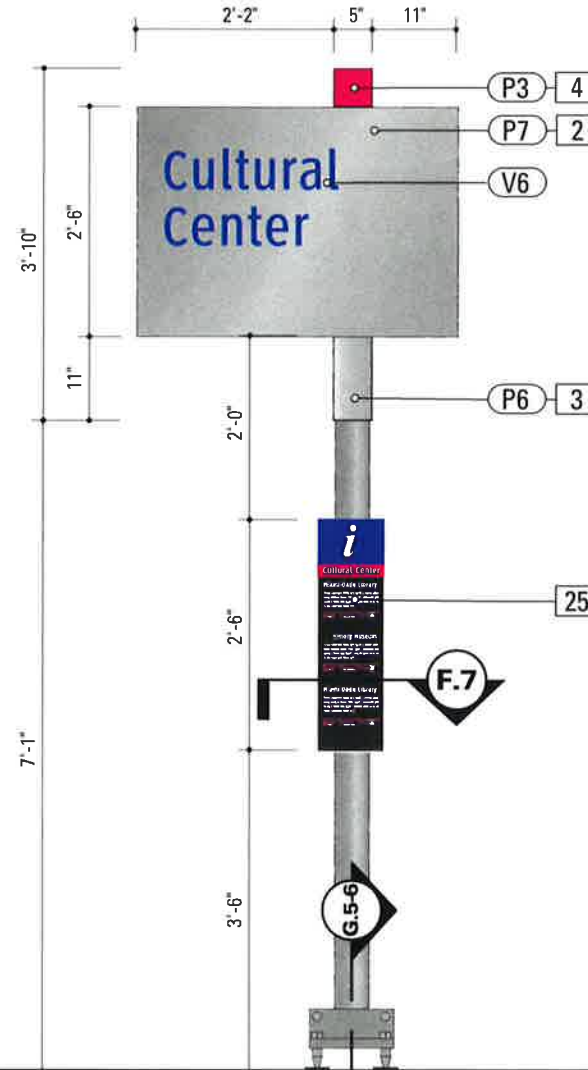
**4** Section View: DEST.2  
SCALE: 1 1/2" = 1'-0"



**1** Front Elevation: DEST.2  
SCALE: 1/2" = 1'-0"



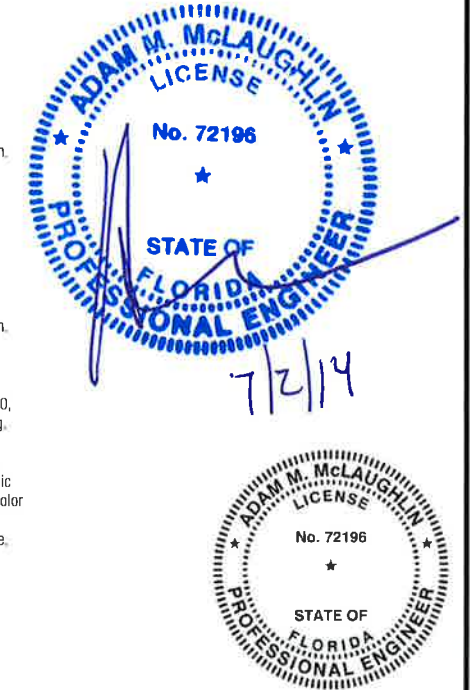
**2** Side Elevation: DEST.2  
SCALE: 1/2" = 1'-0"



**3** Back Elevation: DEST.2  
SCALE: 1/2" = 1'-0"

**SPECIFICATIONS**      **SIGN TYPE:** DEST.2      **FUNCTION:** Destination ID

- 1. POLE**  
POLE: Pipe 4 STD (SCH 40) OD 4.5 ID 4  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 2. SIGN PANEL - PAINTED GRAPHICS**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router Cut  
EDGES: Smooth  
CORNERS: 1/2" radius, as required per FDOT  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Stitch weld to sleeve.
- 3. SLEEVE ASSEMBLY - U-CHANNEL**  
MATERIAL: 3/16" thk Aluminum U-Channel  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Through-bolt mechanical fasteners.
- 4. TOP CAP**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Router-cut, fabricated  
EDGES: Square AND Clean (NO gaps)  
COLOR: Custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 25. GRAPHIC PANEL**  
PRODUCT NAME: iZone, 2526 Charter Oak Drive, Suite 100, Temple Texa 76502, (888) 464-9663, www.izoneimaging.com, email: info@zoneimaging.com  
PRODUCT: Digital high pressure phenolic laminate (dHPL)  
GRAPHIC APPROVAL PROCESS: Submit 12x12 inch phenolic sample of section of typical project panel for image and color quality approval, prior to complete panel production.  
WARRANTY PERIOD: Ten (10) years from product ship date.  
THICKNESS: 1/4 inch.  
FINISH: Matte or Ice.  
FASTENER: Mechanically fasten from back of Sleeve.
- 30. BREAKAWAY FOOTER**  
Product: TRANSP0® Break-Safe Model AP Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sleeve.

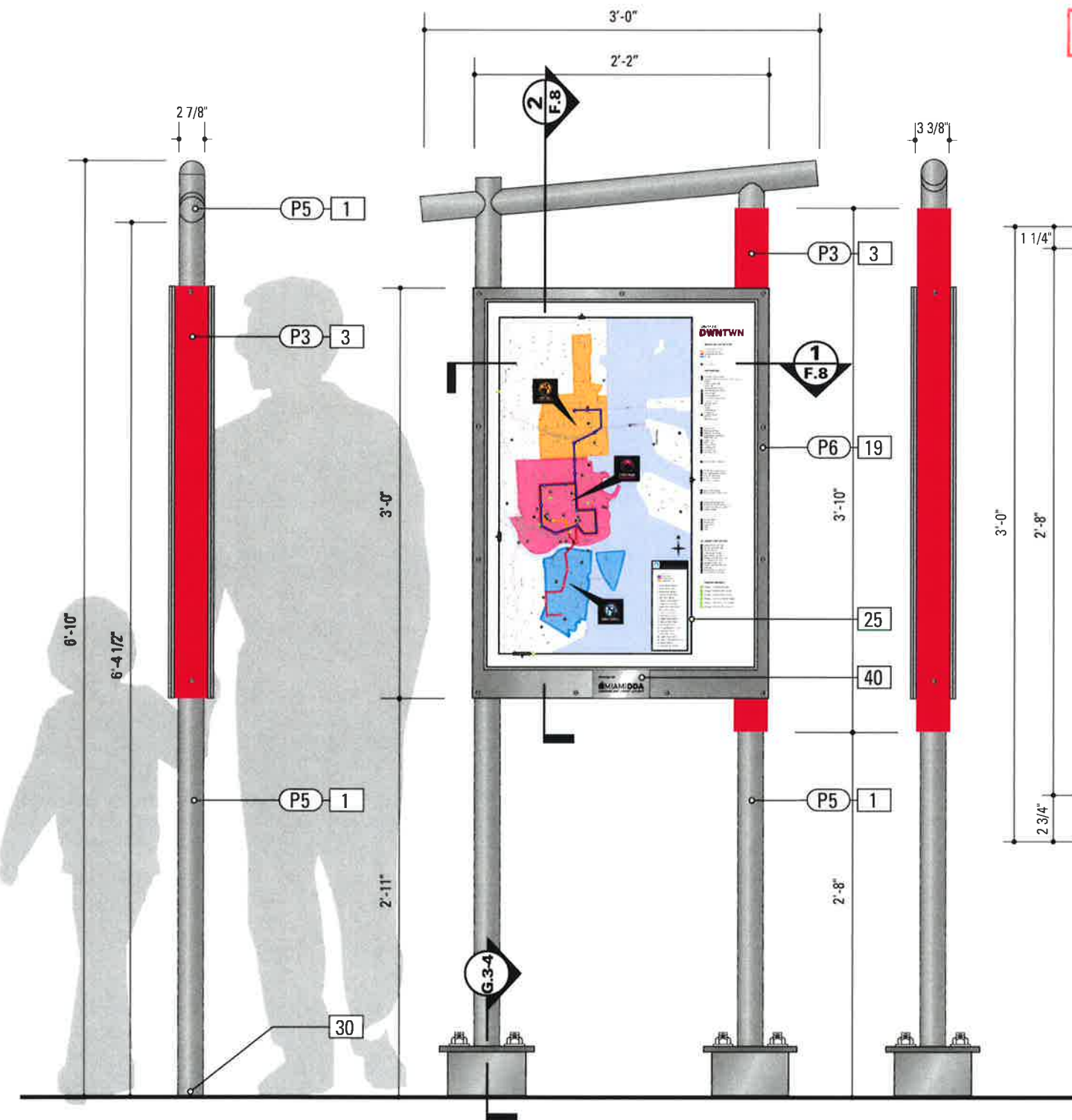


GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  2. ~~Vendor: All fasteners shall be tamper proof hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.~~
  3. ~~Approved Vandal Graffiti Resistant/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M~~

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 www.merjedesign.com		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type DEST.2 Destination Identification
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>C.32</b>

The Designer or Project Engineer shall not be responsible for the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS. The fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

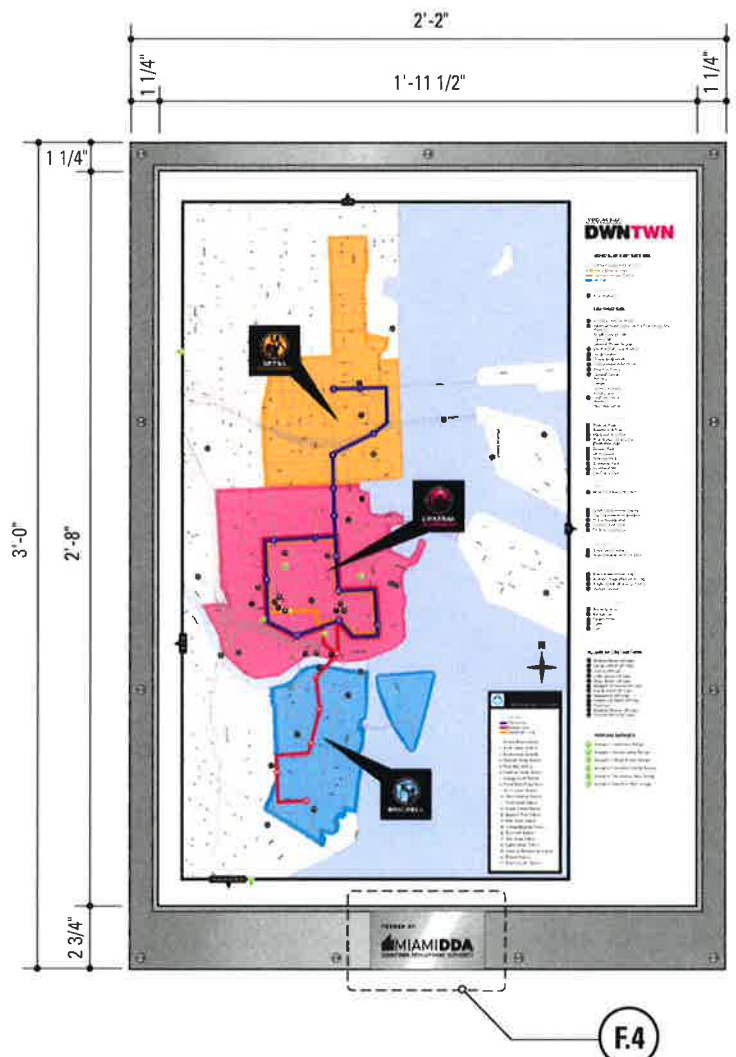


**1** Side Elevation: KIOSK.1  
SCALE: 1" = 1'-0"

**2** Front Elevation: KIOSK.1  
SCALE: 1" = 1'-0"

**3** Side Elevation: KIOSK.1  
SCALE: 1" = 1'-0"

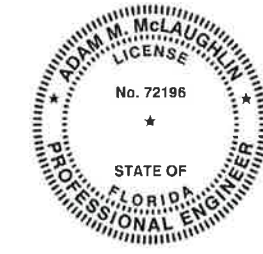
**STRUCTURAL DESIGN ONLY**



**4** Graphic Detail: KIOSK.1  
SCALE: 1 1/2" = 1'-0"

**SPECIFICATIONS**      **SIGN TYPE: KIOSK.1**      **FUNCTION: Pedestrian Kiosk**

- 1. POLE**  
POLE: Pipe 2 1/2 STD (SCH 40) OD 2.875 ID 2.375  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 2. SLEEVE**  
MATERIAL: 1/4" thk Aluminum U-channel and sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Mathews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 30. BREAKAWAY FOOTER**  
Product: TRANSPO® Pole-Safe Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sign.
- 18. SIGN BACKER PANEL**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Square Cut  
EDGES: Smooth  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Mathews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to sleeve/pole.
- 19. SIGN FRAME**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Fabricated  
EDGES: Square  
INSIDE FRAME: Beveled edge  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces  
CLEARCOAT: UV Anti/Graffiti  
SURFACE PROCESS: Paint all exposed surfaces with Mathews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened through graphic panel and sleeve.
- 25. GRAPHIC PANEL**  
PRODUCT NAME: iZone, 2526 Charter Oak Drive, Suite 100, Temple Texa 76502. (888) 464-9663, www.izoneimaging.com, email: info@izoneimaging.com  
PRODUCT: Digital high pressure phenolic laminate (dHPL)  
GRAPHIC APPROVAL PROCESS: Submit 12x12 inch phenolic sample of section of typical project panel for image and color quality approval, prior to complete panel production.  
WARRANTY PERIOD: Ten (10) years from product ship date.  
THICKNESS: 1/8 inch.  
FINISH: Matte or Ice.  
FASTENER: Mechanically fastened in-between Sign Backer Panel and Frame.



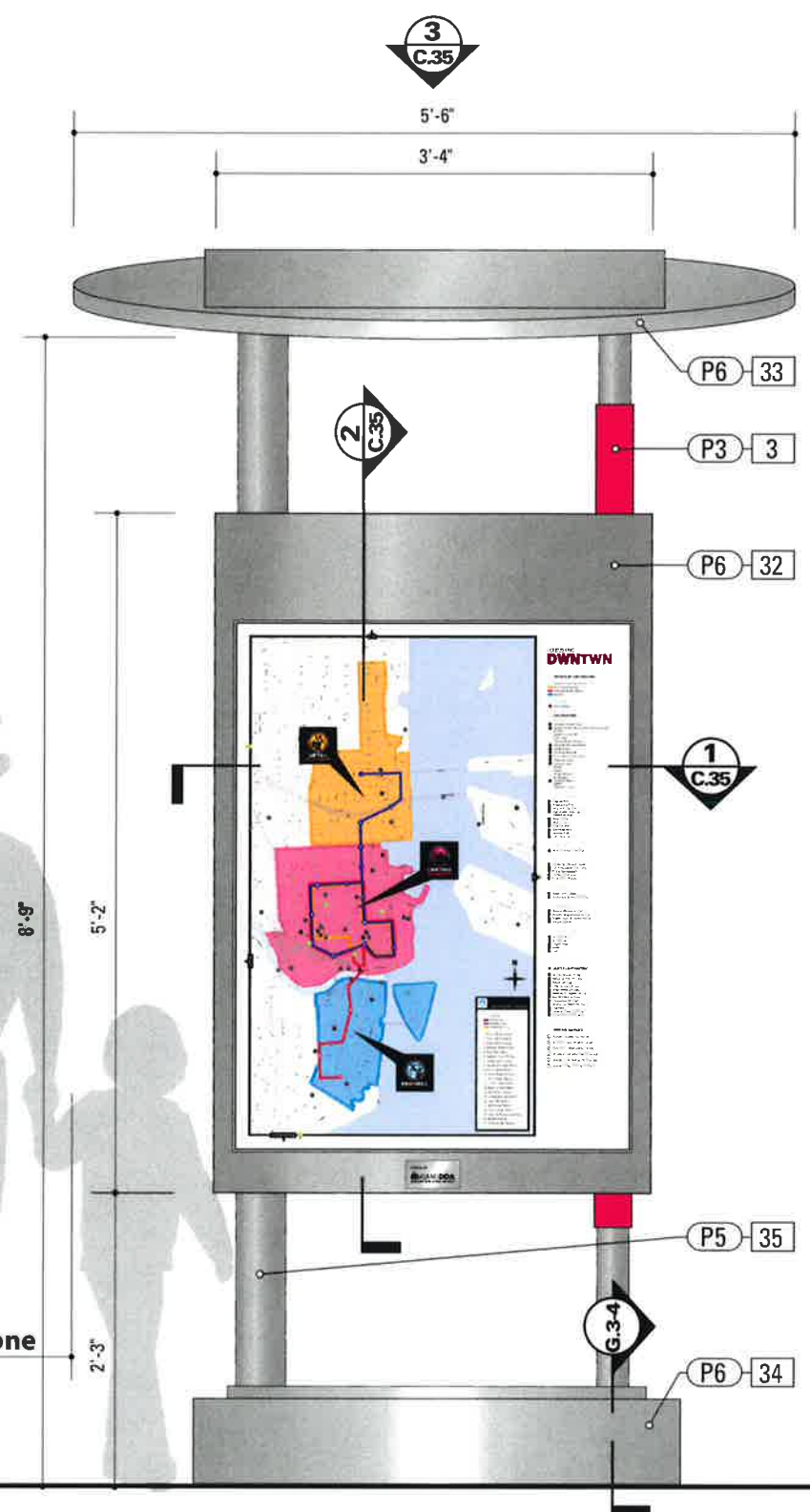
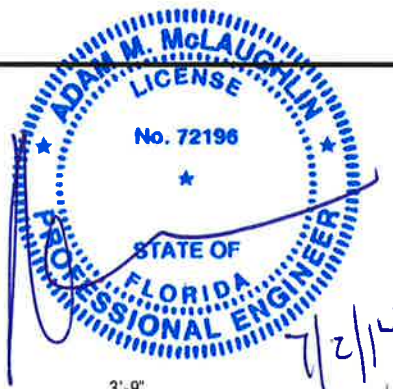
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - Welds: All welds shall be ground smooth, paint all seams.
  - Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

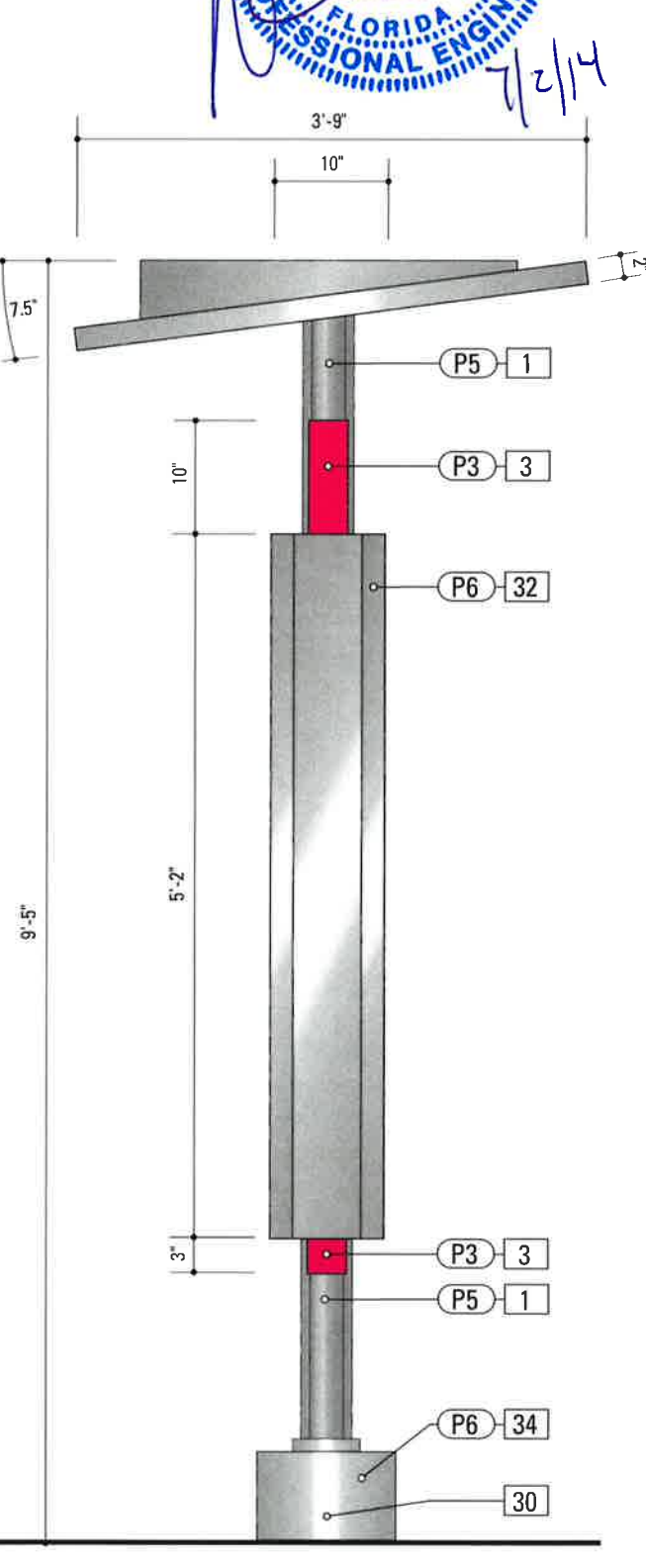
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 www.merjedesign.com		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type KIOSK.1 Pedestrian Kiosk
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>C.33</b>

The Designer or Client shall be responsible for obtaining all necessary permits and approvals for the project. The Designer or Client shall be responsible for providing all necessary information and data for the project. The Designer or Client shall be responsible for providing all necessary information and data for the project. The Designer or Client shall be responsible for providing all necessary information and data for the project.

**STRUCTURAL DESIGN ONLY**



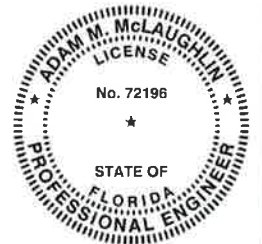
**1** Front Elevation: KIOSK.2  
SCALE: 3/4" = 1'-0"



**2** Side Elevation: KIOSK.2  
SCALE: 3/4" = 1'-0"

**SPECIFICATIONS**      **SIGN TYPE:** KIOSK.2      **FUNCTION:** Pedestrian Kiosk

- 1. POLE**  
POLE: Pipe 2 1/2 STD (SCH 40) OD 2.875 ID 2.375  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 2. SIGN CABINET - ILLUMINATED**  
MATERIAL: Fabricated 1/8" thick Aluminum sheet exterior, extruded aluminum internal framing, hinged doors 2 sides with Non-glare UV-resistant acrylic, and locking mechanism for both doors.  
EDGES: Square  
INSIDE FRAME: Beveled edge  
ILLUMINATION: Internally illuminated with LED Tube Lights.  
SOLAR TECHNOLOGY: Cabinet must hold: 2 valve-regulated, gelled-electrolyte batteries; Pre-wired Control Board with Lighting Controller; and Solar Panel output wire.  
ARTWORK: Duratrans (backlit display print), mounted in-between 2 sheets of 1/8" thick acrylic, with 3M Diffuser Film 3735-60 White applied to back side of acrylic sheets.  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld and mechanically fasten to internal poles.
- 30. BREAKAWAY FOOTER**  
Product: TRANSPO® Pole-Safe Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 34. ESCUTCHEON COVER**  
MATERIAL: Fabricated 1/8" thick Aluminum sheet exterior, with extruded aluminum internal framing.  
FABRICATION PROCESS: Extruded, Router-cut  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to poles, and base plate.
- 35. POLE COVER**  
POLE: Pipe OD 4 1/2" X .125" wall  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
NOTE: The cover is NON-structural, and is to match the galvanized appearance of the other (structural) exposed pole.  
FASTENER: Mechanically fastened to internal pole, and base plate.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sign.
- 33. SOLAR PANEL CANOPY**  
MATERIAL: Fabricated 1/8" thick Aluminum sheet exterior, with extruded aluminum internal framing.  
FABRICATION PROCESS: Fabricated, Router-cut  
EDGES: Square  
SOLAR PANELS: Two (2) 60W Solar Modules, approx. 33"W x 21"L x 2"H. Rugged construction, precision engineered, quality components, tempered glass, EVA lamination and weatherproof backskin.  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld and mechanically fasten to internal poles.

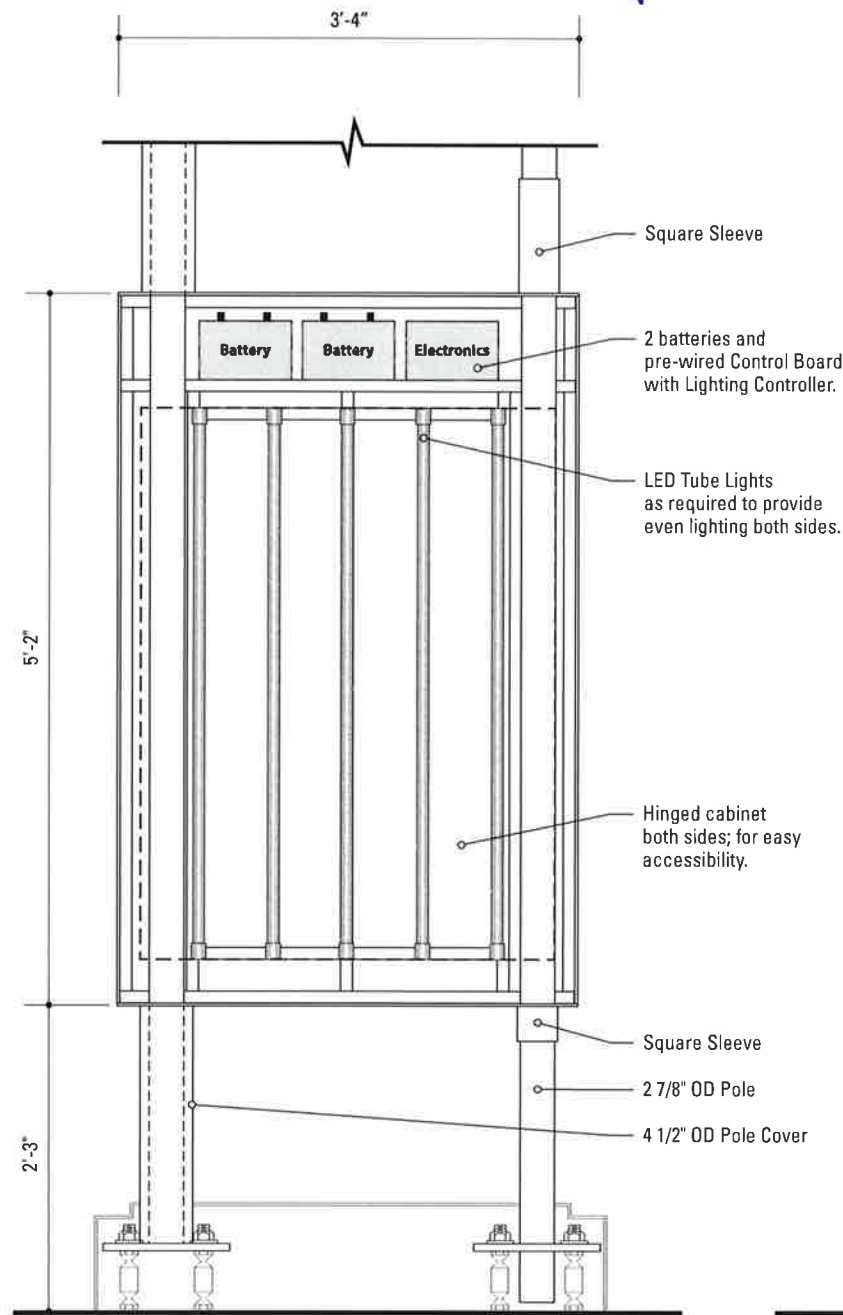


GKM & Associates design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

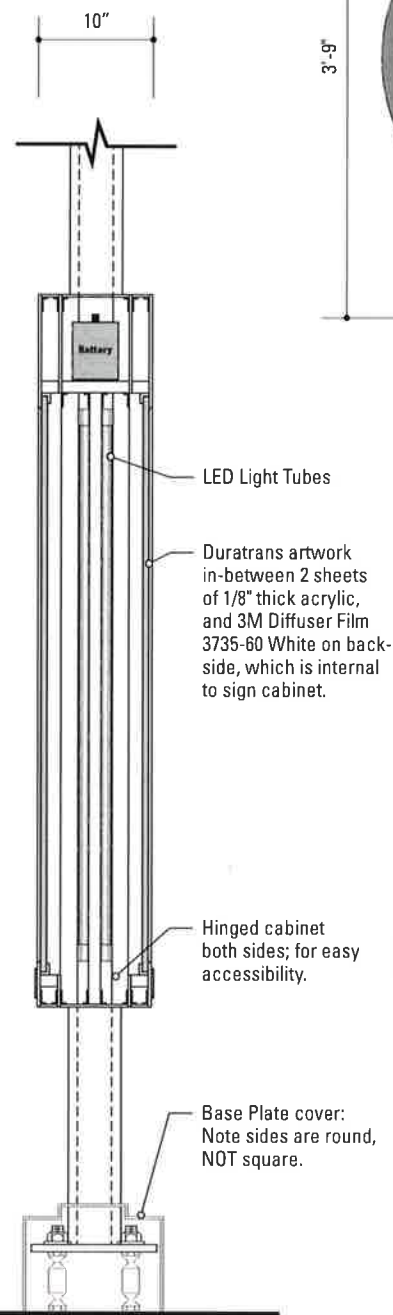
- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  2. Welds: All welds shall be ground smooth, paint all seams.
  3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  4. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlamine.

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type KIOSK.2 Pedestrian Kiosk
DRAWN BY: PR		
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		SHEET NO.
03/12/2014 PR		<b>C.34</b>
05/02/2014 PR		

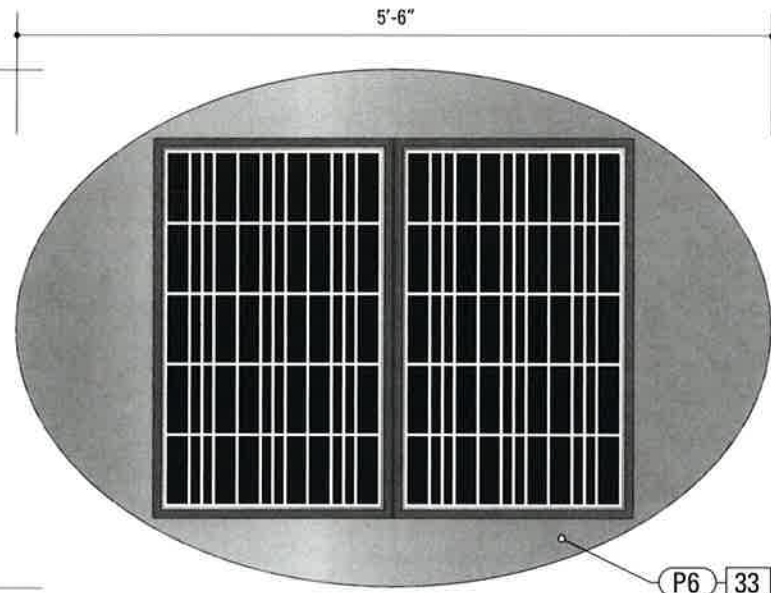
**STRUCTURAL DESIGN ONLY**



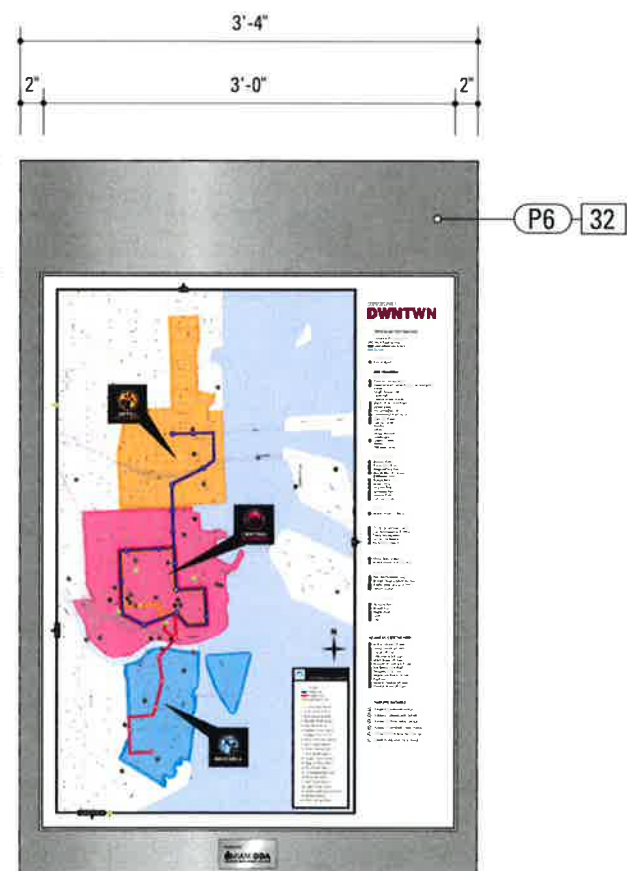
**1** Section Detail: KIOSK.2  
SCALE: 3/4" = 1'-0"



**2** Section Detail: KIOSK.2  
SCALE: 3/4" = 1'-0"



**3** Top View: KIOSK.2  
SCALE: 3/4" = 1'-0"



**4** Frame/Door Detail: KIOSK.2  
SCALE: 3/4" = 1'-0"

**SPECIFICATIONS SIGN TYPE: KIOSK.2 FUNCTION: Pedestrian Kiosk**

- 1. POLE**  
POLE: Pipe 2 1/2 STD (SCH 40) OD 2.875 ID 2.375  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 3. SLEEVE**  
MATERIAL: 1/4" thk Aluminum U-channel and sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 30. BREAKAWAY FOOTER**  
Product: TRANSP@ Pole-Safe Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 32. SIGN CABINET - ILLUMINATED**  
MATERIAL: Fabricated 1/8" thick Aluminum sheet exterior, extruded aluminum internal framing, hinged doors 2 sides with Non-glare UV-resistant acrylic, and locking mechanism for both doors.  
EDGES: Square  
INSIDE FRAME: Beveled edge  
ILLUMINATION: Internally illuminated with LED Tube Lights.  
SOLAR TECHNOLOGY: Cabinet must hold: 2 valve-regulated, gelled-electrolyte batteries; Pre-wired Control Board with Lighting Controller; and Solar Panel output wire.  
ARTWORK: Duratrans (backlit display print), mounted in-between 2 sheets of 1/8" thick acrylic, with 3M Diffuser Film 3735-60 White applied to back side of acrylic sheets.  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld and mechanically fasten to internal poles.
- 33. SOLAR PANEL CANOPY**  
MATERIAL: Fabricated 1/8" thick Aluminum sheet exterior, with extruded aluminum internal framing.  
FABRICATION PROCESS: Fabricated, Router-cut  
EDGES: Square  
SOLAR PANELS: Two (2) 60W Solar Modules, approx. 33"W x 21"L x 2"H. Rugged construction, precision engineered, quality components, tempered glass, EVA lamination and weatherproof backskin.  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Weld and mechanically fasten to internal poles.
- 34. ESCUTCHEON COVER**  
MATERIAL: Fabricated 1/8" thick Aluminum sheet exterior, with extruded aluminum internal framing.  
FABRICATION PROCESS: Extruded, Router-cut  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to poles, and base plate.
- 35. POLE COVER**  
POLE: Pipe OD 4 1/2" X 125" wall  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
NOTE: The cover is NON-structural, and is to match the galvanized appearance of the other (structural) exposed pole.  
FASTENER: Mechanically fastened to internal pole, and base plate.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sign.

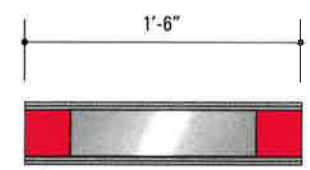


GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 
  - Welds shall be ground and smoothed. All hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - Approved Signage to be used: Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

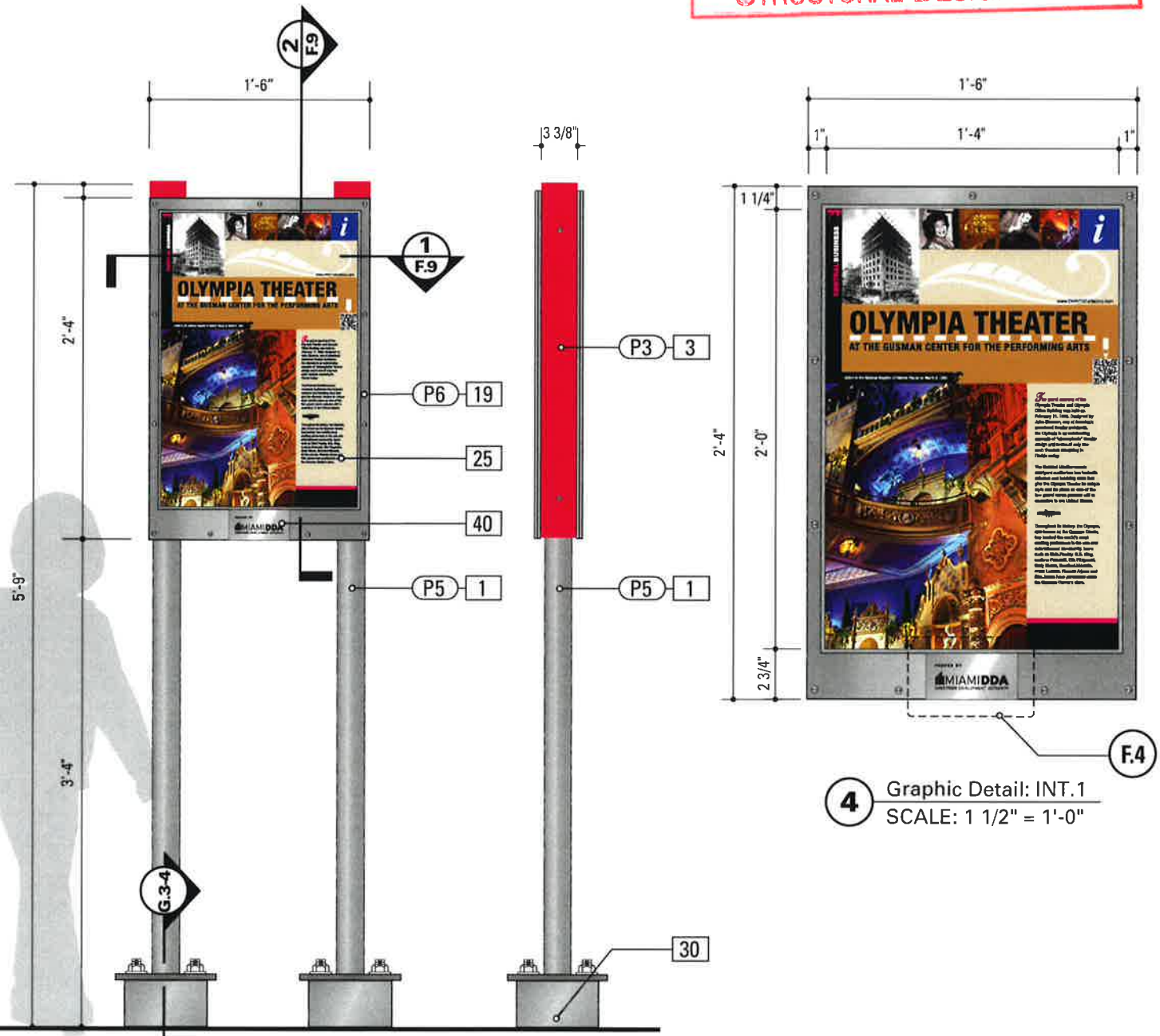
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	<b>Sign Type KIOSK.2 Pedestrian Kiosk Details</b>
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>C.35</b>

The Design Team and Project Engineer, if the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



**3** Top View: INT.1  
SCALE: 1" = 1'-0"

**STRUCTURAL DESIGN ONLY**



**1** Front & Back Elevation: INT.1  
SCALE: 1" = 1'-0"

**2** Side Elevation: INT.1  
SCALE: 1" = 1'-0"

**4** Graphic Detail: INT.1  
SCALE: 1 1/2" = 1'-0"



GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**SPECIFICATIONS**      **SIGN TYPE:** INT.1      **FUNCTION:** Interpretive Panel

- 1. POLE**  
POLE: Pipe 2 1/2 STD (SCH 40) OD 2.875 ID 2.375  
MATERIAL: Steel  
FABRICATION PROCESS: Extruded  
COLOR: Custom, as noted  
SURFACE PROCESS: Galvanized  
FOOTER: As per FDOT Breakaway specifications
- 3. SLEEVE**  
MATERIAL: 1/4" thk Aluminum U-channel and sheet  
FABRICATION PROCESS: Extruded  
EDGES: Square  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to pole.
- 18. SIGN BACKER PANEL**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Square Cut  
EDGES: Smooth  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened to sleeve/pole.
- 19. SIGN FRAME**  
MATERIAL: 1/4" thk Aluminum sheet  
FABRICATION PROCESS: Fabricated  
EDGES: Square  
INSIDE FRAME: Beveled edge  
COLOR: custom, as noted  
SURFACE PROCESS: Paint all exposed surfaces  
CLEARCOAT: UV Anti/Graffiti  
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.  
FASTENER: Mechanically fastened through graphic panel and sleeve.
- 25. GRAPHIC PANEL**  
PRODUCT NAME: iZone, 2526 Charter Oak Drive, Suite 100, Temple Texa 76502 (888) 464-9663, www.izoneimaging.com, email: info@izoneimaging.com  
PRODUCT: Digital high pressure phenolic laminate (dHPL)  
GRAPHIC APPROVAL PROCESS: Submit 12x12 inch phenolic sample of section of typical project panel for image and color quality approval, prior to complete panel production.  
WARRANTY PERIOD: Ten (10) years from product ship date.  
THICKNESS: 1/8 inch.  
FINISH: Matte or Ice.  
FASTENER: Mechanically fastened in-between Sign Backer Panel and Frame.
- 30. BREAKAWAY FOOTER**  
Product: TRANSPO® Pole-Safe Breakaway sign support system, or FDOT approved equal.  
NOTE: All signs are positioned within FDOT R.O.W. and shall be breakaway as per FDOT breakaway specifications.
- 40. SPONSOR PLAQUE**  
MATERIAL: 1/8" Stainless Steel sheet  
FABRICATION PROCESS: Etched and filled  
EDGES: Smooth  
COLOR: Filled with Black  
FASTENER: Mechanically fastened to sign.

- NOTES**
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - Welds: All welds shall be ground smooth, paint all seams.
  - Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.marjedesign.com">www.marjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	<b>INT.1</b> <b>Interpretive Panel/          Stanchion</b>
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>C.36</b>

The Designer or Client shall be responsible for providing the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



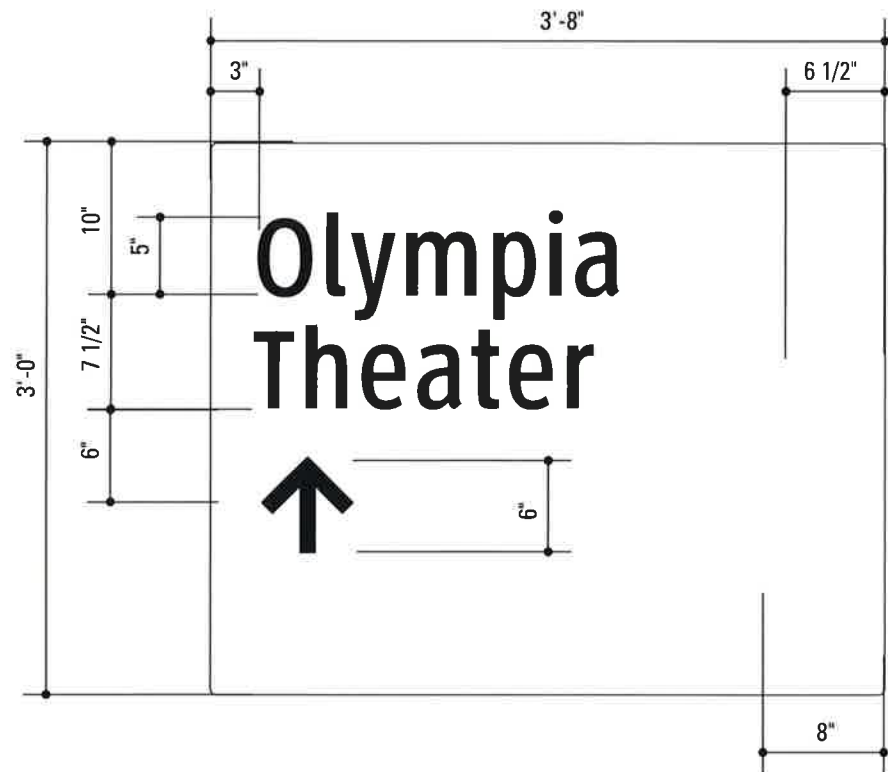
**E. Graphic Layouts**

**STRUCTURAL DESIGN ONLY**

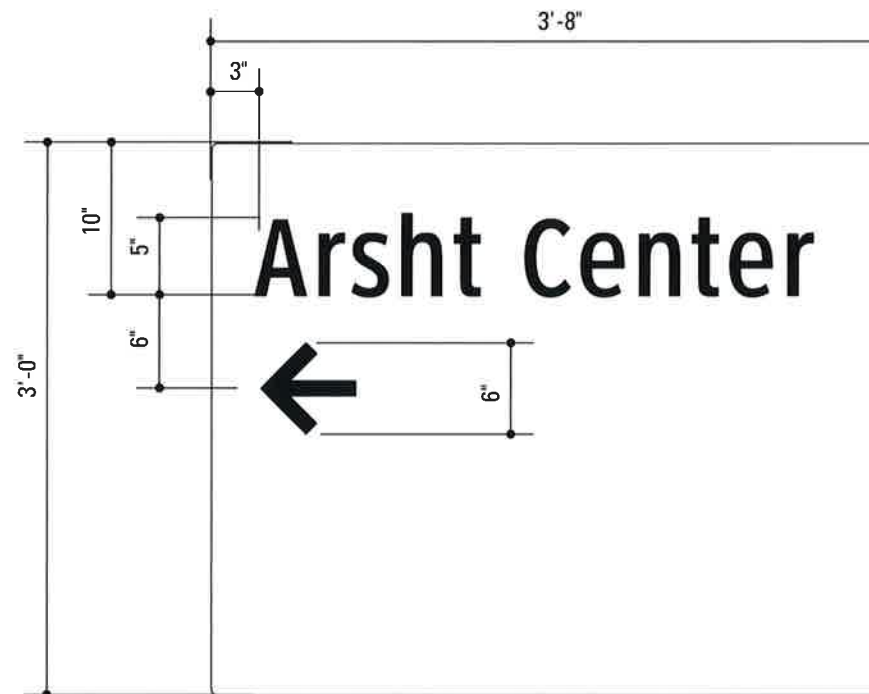
**SIGN TYPE LAYOUT**

VDIR.1 - Vehicular Directional

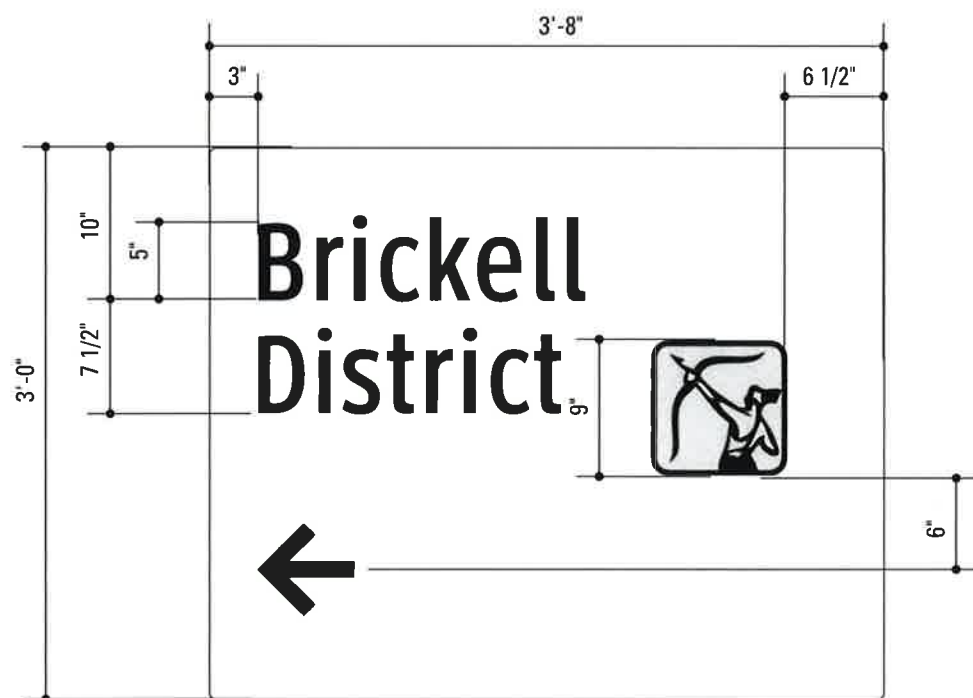
Sign panel layouts illustrated on this page are NOT actual signs. The layouts provide proper message size, spacing and arrow locations.



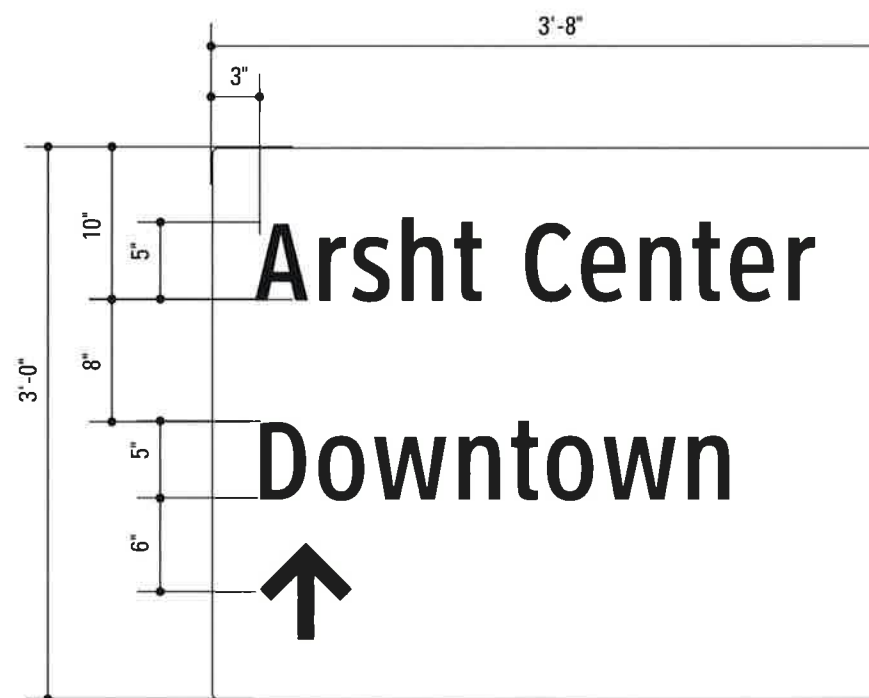
**1** Graphic Layout: VDIR.1  
SCALE: 1" = 1'-0"



**2** Graphic Layout: VDIR.1  
SCALE: 1" = 1'-0"



**3** Graphic Layout: VDIR.1  
SCALE: 1" = 1'-0"



**4** Graphic Layout: VDIR.1  
SCALE: 1" = 1'-0"

**STRUCTURAL DESIGN ONLY**

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

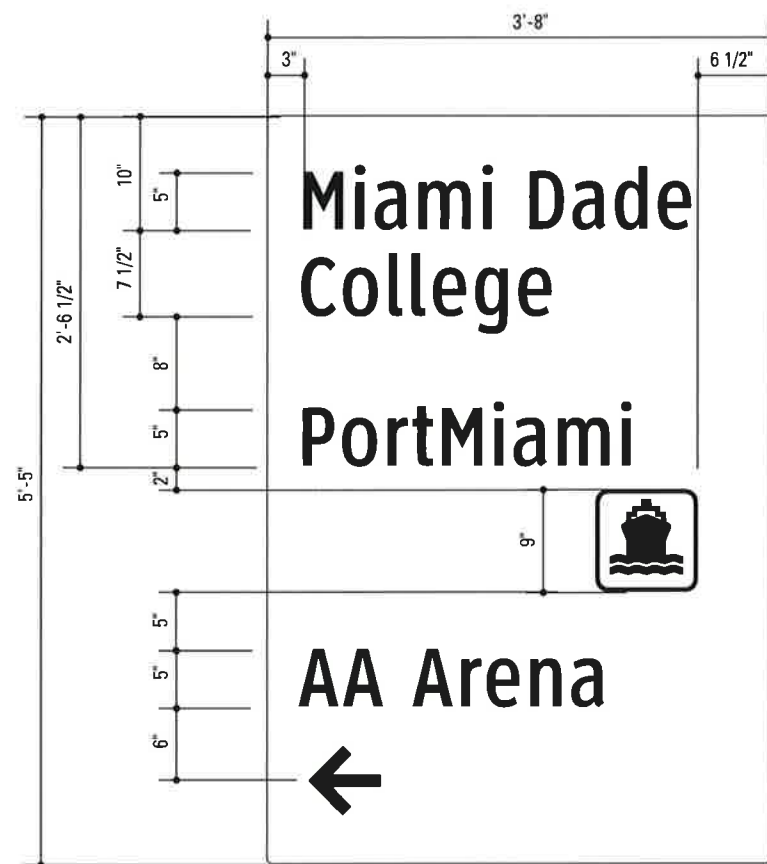
**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
- 2.
3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
- 4.

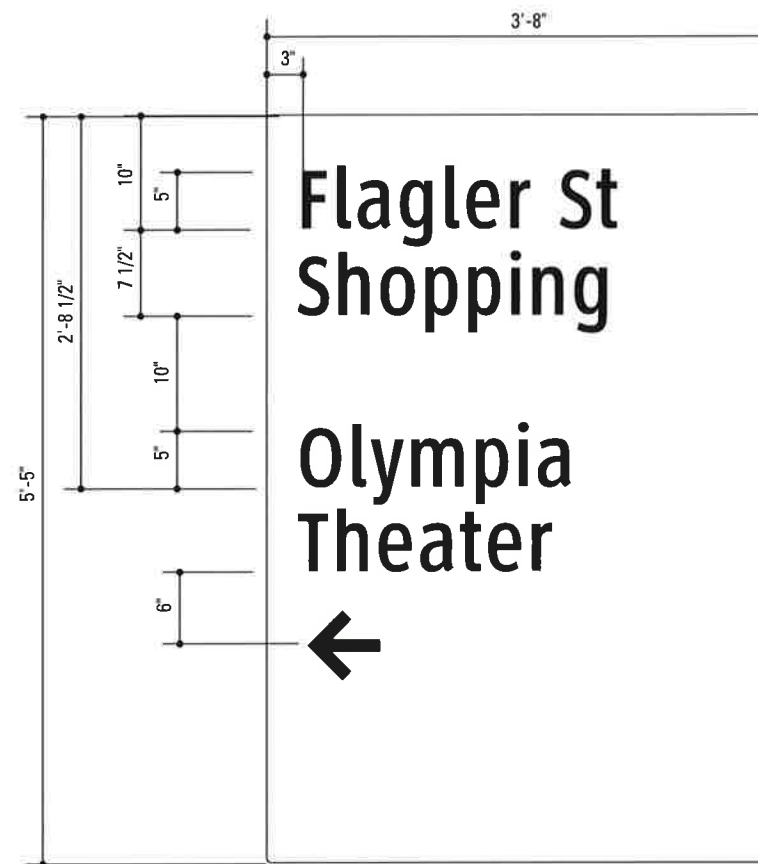
Approved UV/Anti-Graffiti overlaminates or repair UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merje		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	DRAWN BY:	Sign Type VDIR.1 Vehicular Directional
10 December 2010	PR	
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		SHEET NO.
03/12/2014 PR		E.1
05/02/2014 PR		

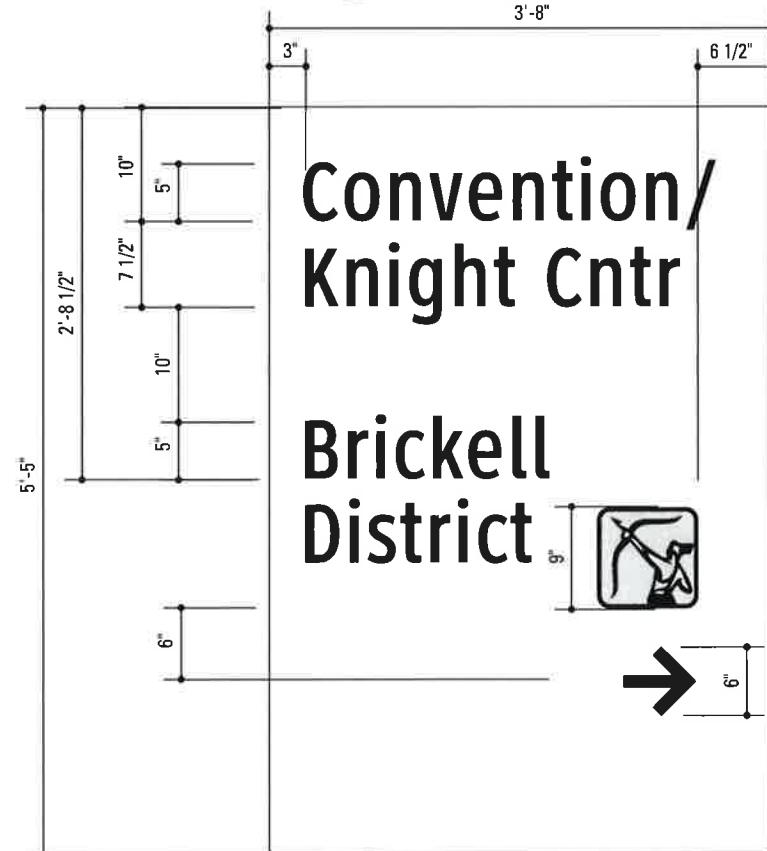
Drawings prior to fabrication for review and approval by the design team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



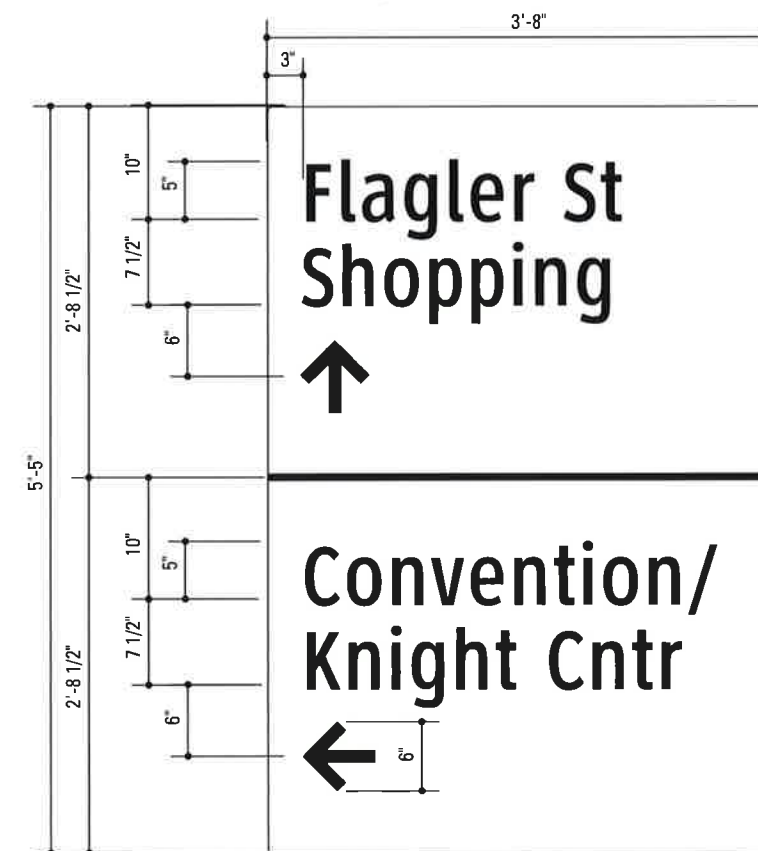
1 Graphic Layout: VDIR.2  
SCALE: 3/4" = 1'-0



2 Graphic Layout: VDIR.2  
SCALE: 3/4" = 1'-0



3 Graphic Layout: VDIR.2  
SCALE: 3/4" = 1'-0



4 Graphic Layout: VDIR.2  
SCALE: 3/4" = 1'-0

**SIGN TYPE LAYOUT**  
VDIR.2 - Vehicular Directional

Sign panel layouts illustrated on this page are NOT actual signs. The layouts provide proper message size, spacing and arrow locations.

**STRUCTURAL DESIGN ONLY**

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES**
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - 2.
  3. Hardware: All fasteners shall be concealed if possible. Hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  4. Approved by Miami-Dade County: Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

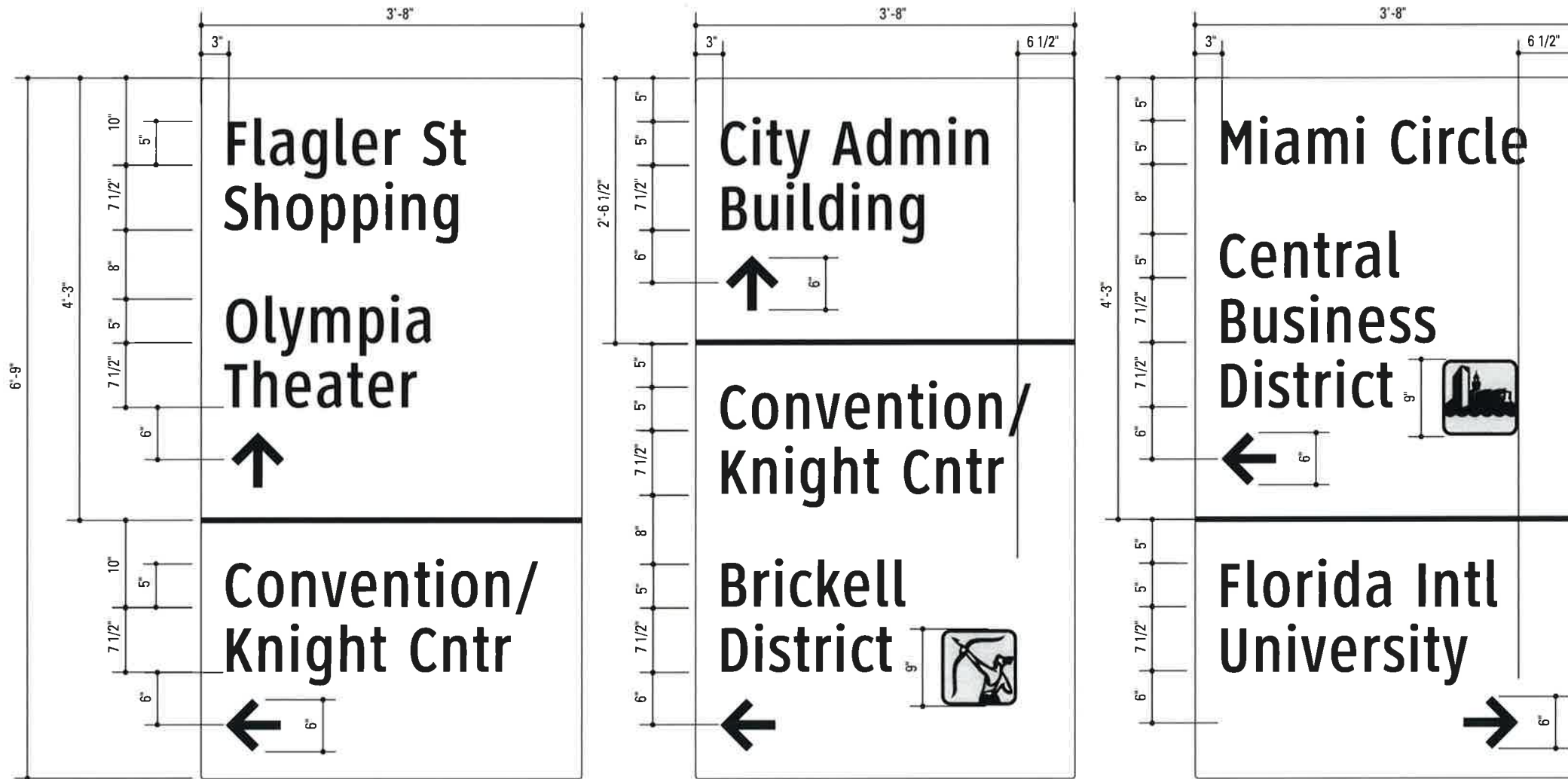
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merje		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	DRAWN BY:	Sign Type VDIR.2 Vehicular Directional
10 December 2010	PR	
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		SHEET NO.
03/12/2014 PR		E.2
05/02/2014 PR		

If drawings are to be fabricated, installed and used under the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

**SIGN TYPE LAYOUT**

VDIR.3 - Vehicular Directional

Sign panel layouts illustrated on this page are NOT actual signs. The layouts provide proper message size, spacing and arrow locations.



**1** Graphic Layout: VDIR.3  
SCALE: 1" = 1'-0

**2** Graphic Layout: VDIR.3  
SCALE: 1" = 1'-0

**3** Graphic Layout: VDIR.3  
SCALE: 1" = 1'-0

**STRUCTURAL DESIGN ONLY**

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

- NOTES** All welds shall be ground smooth, paint all seams.
- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
  - All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M
  - Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
  - approved UV/Anti-Graffiti overlaminates.

ENVIRONMENTS & EXPERIENCES

**merJe**

120 North Church Street  
Suite 208  
West Chester, PA 19380  
T 484.266.0648  
[www.merjedesign.com](http://www.merjedesign.com)

CLIENT / PROJECT  
**Downtown Miami  
City of Miami, Florida**

SUBCONSULTANT

DATE: 10 December 2010

DRAWN BY: PR

drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

REVISIONS  
04/20/2012 PR  
11/30/2012 GS  
08/16/2013 GS  
03/12/2014 PR  
05/02/2014 PR

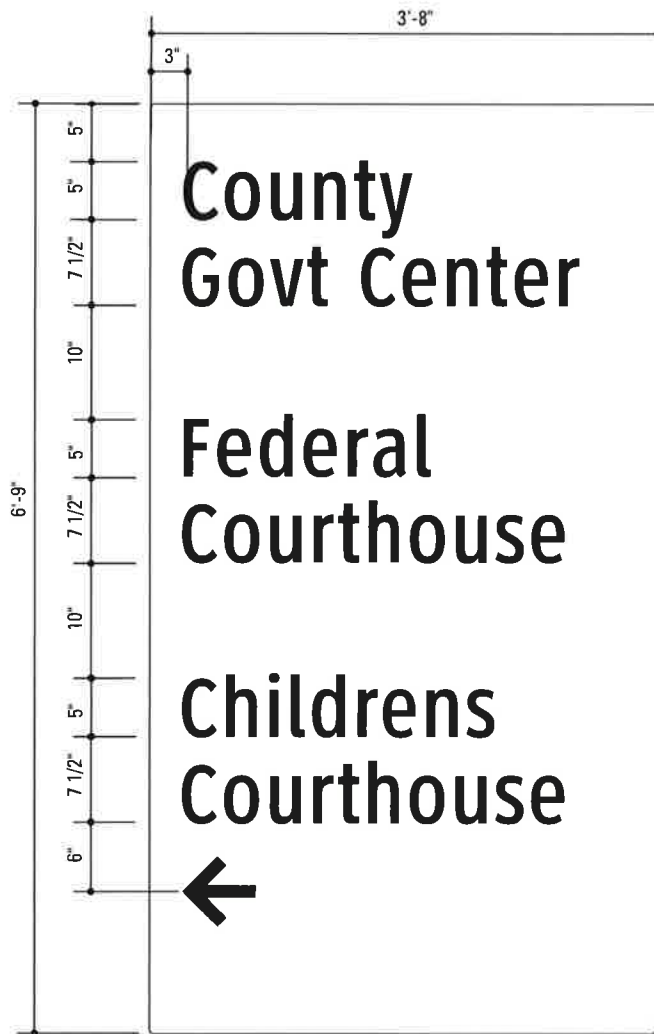
PROJECT NO.  
SHEET TITLE  
**Sign Type VDIR.3  
Vehicular Directional**

SHEET NO.  
**E.3**

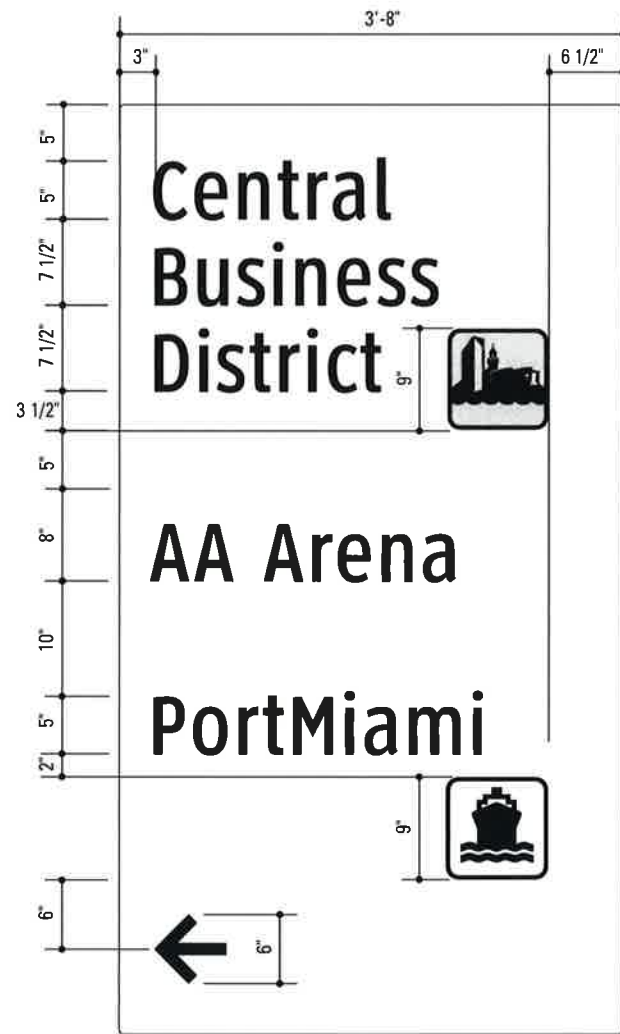
**SIGN TYPE LAYOUT**

VDIR.3 - Vehicular Directional

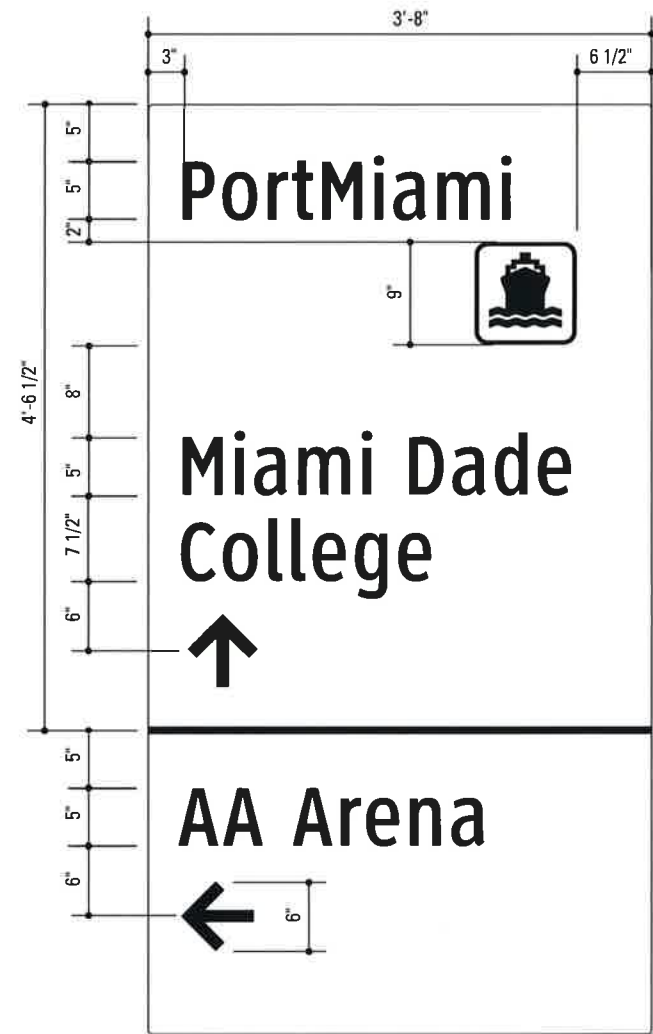
Sign panel layouts illustrated on this page are NOT actual signs. The layouts provide proper message size, spacing and arrow locations.



**4** Graphic Layout: VDIR.3  
SCALE: 1" = 1'-0



**5** Graphic Layout: VDIR.3  
SCALE: 1" = 1'-0



**6** Graphic Layout: VDIR.3  
SCALE: 1" = 1'-0

**STRUCTURAL DESIGN ONLY**

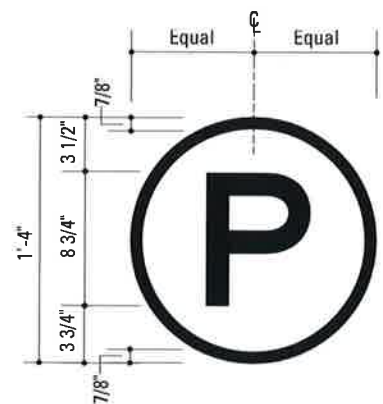
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

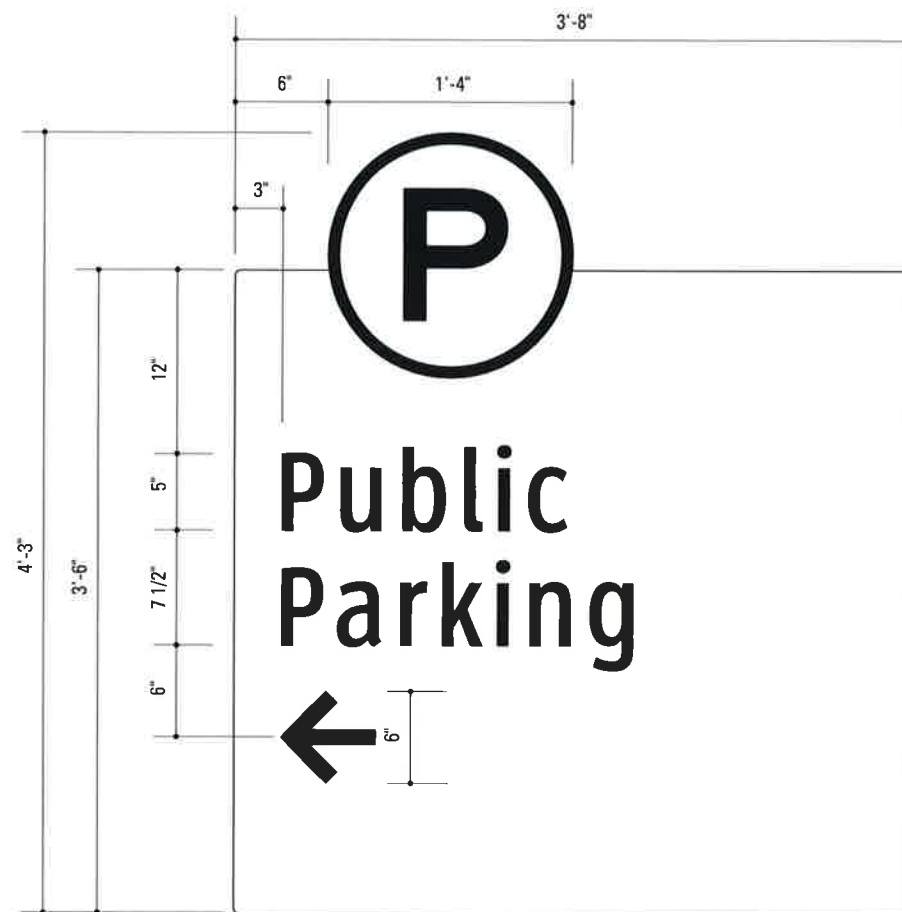
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
2. All welds shall be ground and smoothed.
3. All hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. All sign surfaces shall receive an Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M Approved reflective film.

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SUBCONSULTANT		SHEET TITLE
DATE	DRAWN BY:	Sign Type VDIR.3 Vehicular Directional
10 December 2010	PR	
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		SHEET NO.
03/12/2014 PR		<b>E.4</b>
05/02/2014 PR		

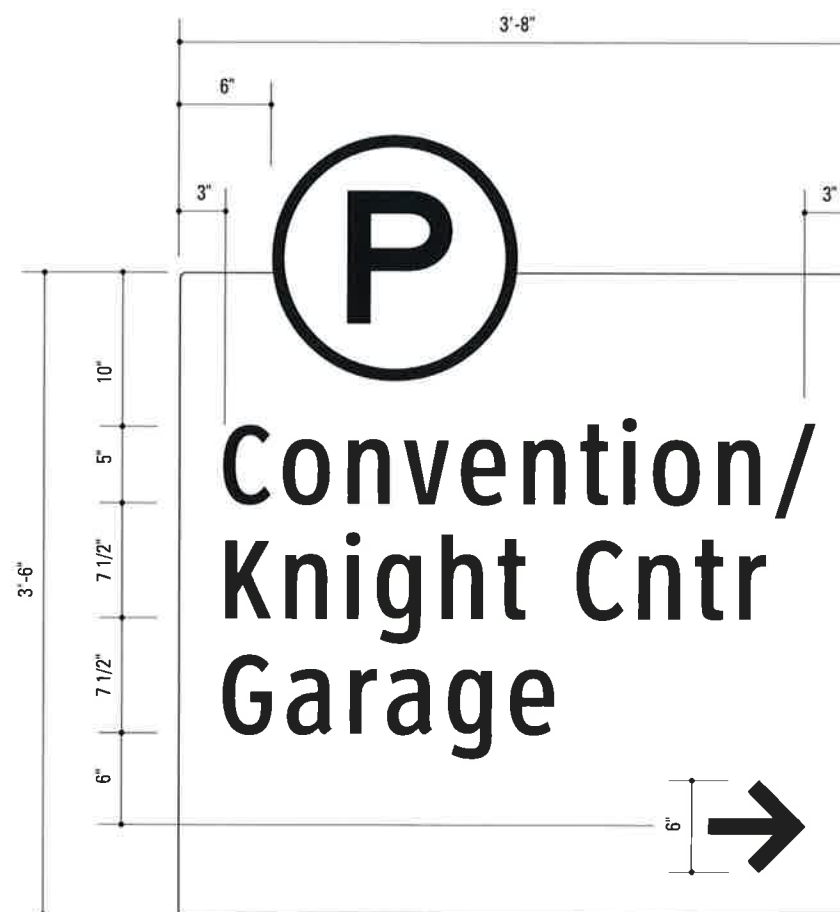
The drawings of fabricator is responsible for are designed by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



3 Graphic Layout: PARK.2  
SCALE: 1" = 1'-0



1 Graphic Layout: PARK.2  
SCALE: 1" = 1'-0



2 Graphic Layout: PARK.2  
SCALE: 1" = 1'-0

**SPECIFICATIONS**      **SIGN TYPE:** PARK.2      **FUNCTION:** Parking Directional

**SIGN TYPE LAYOUT**

PARK.2 - Parking Directional

Sign panel layouts illustrated on this page are NOT actual signs. The layouts provide proper message size, spacing and arrow locations.

**STRUCTURAL DESIGN ONLY**

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**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
2. All welds shall be ground on both ends.
3. All hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. All painted surfaces shall be primed and finished with Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

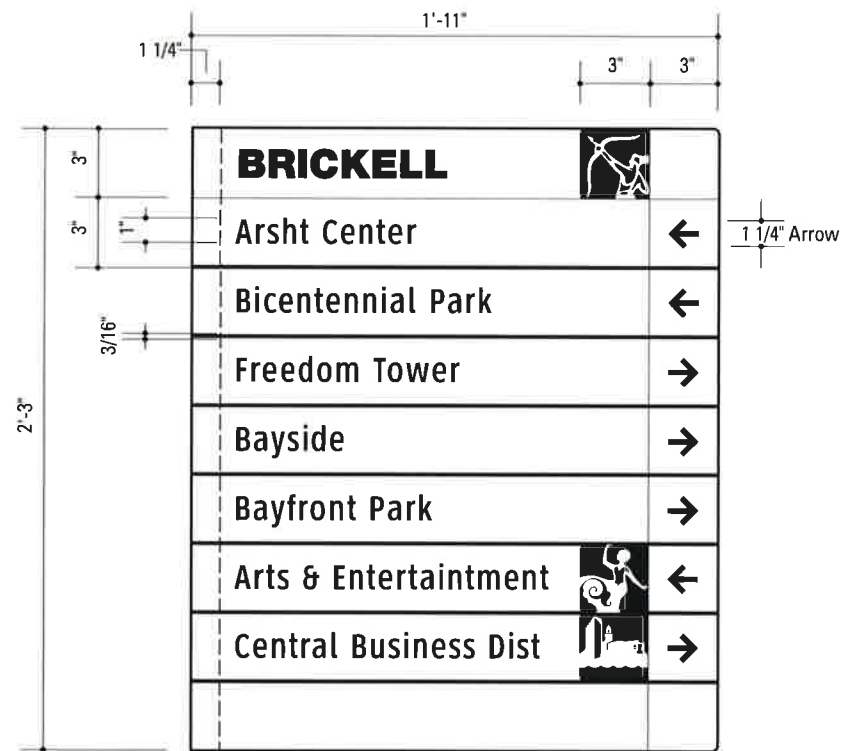
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type PARK.2 Parking Directional
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
SHEET NO.		E.5

Having approved these drawings, I warrant and agree that I am the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

**SIGN TYPE LAYOUT**

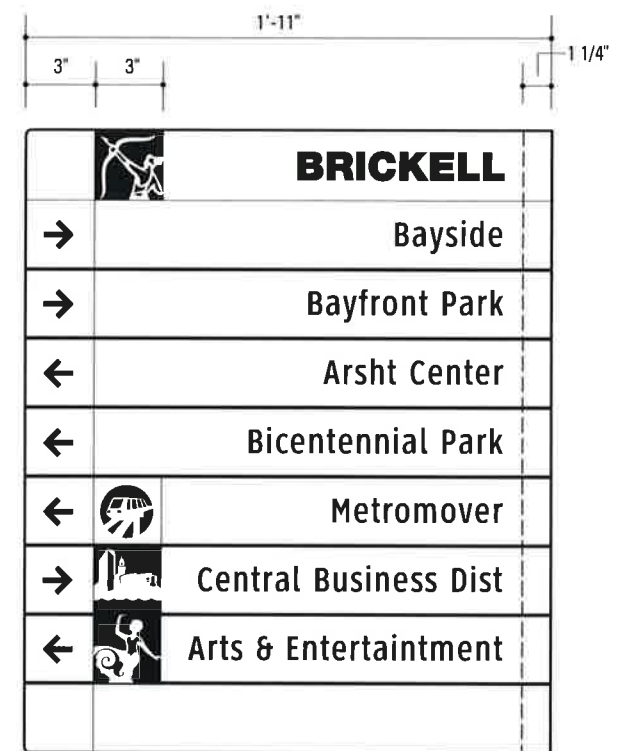
PDIR.1 and .3 - Pedestrian Directionals

Sign panel layouts illustrated on this page are NOT actual signs. The layouts provide proper message size, spacing and arrow locations.

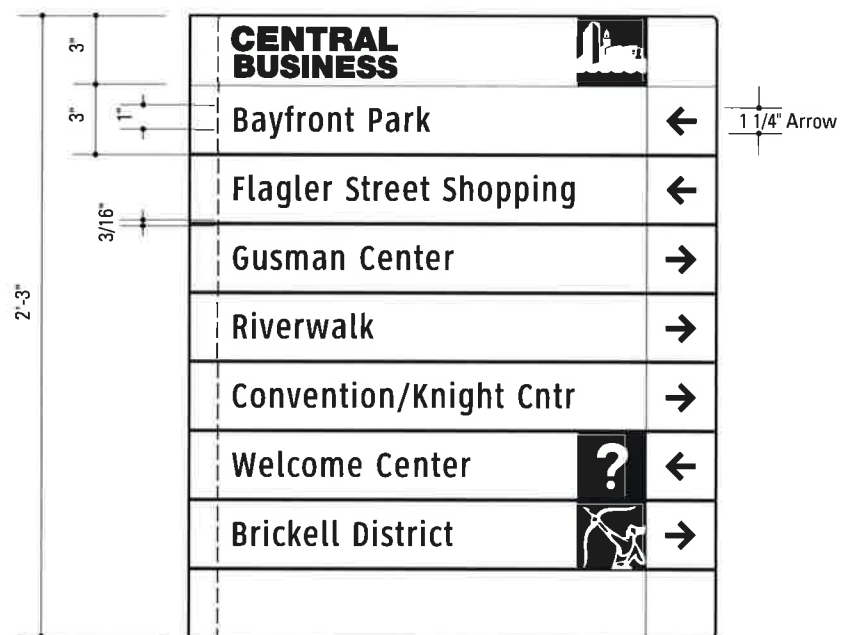


**FACE A**

**1** Graphic Layout: PDIR.1 and .3  
SCALE: 1 1/2" = 1'-0"

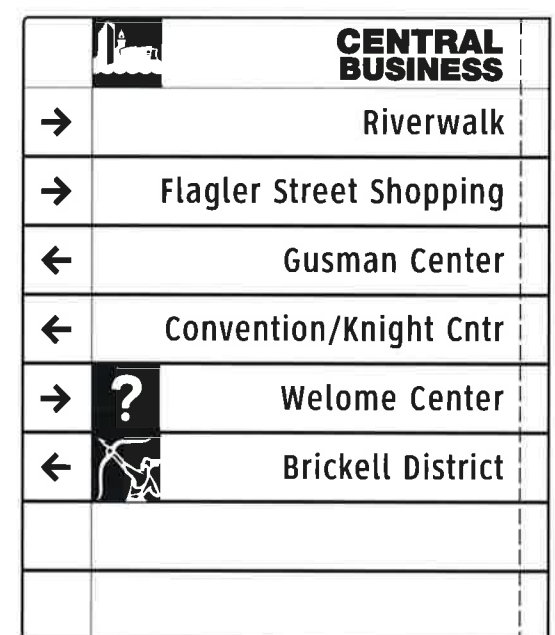


**FACE B**



**FACE A**

**2** Graphic Layout: PDIR.1 and .3  
SCALE: 1 1/2" = 1'-0"



**FACE B**

**STRUCTURAL DESIGN ONLY**

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

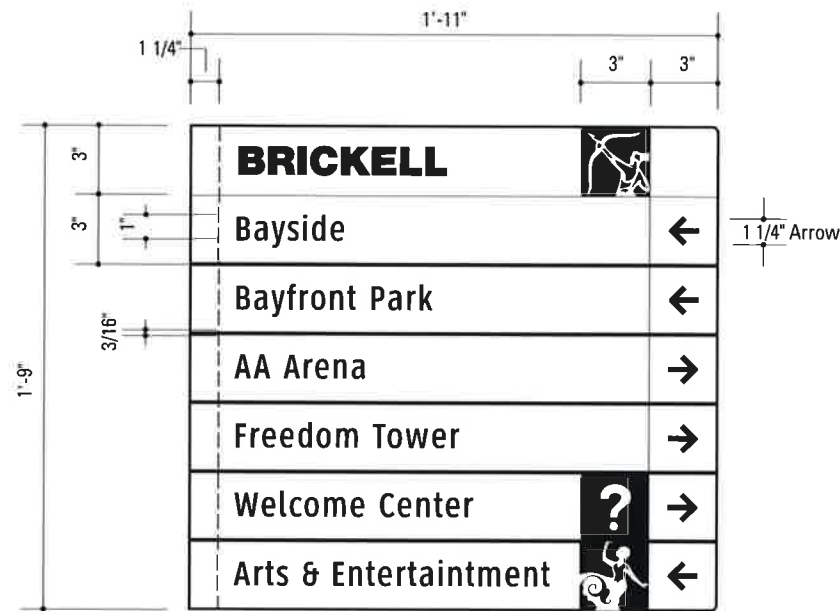
1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
- 2.
3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and all fasteners shall be painted to match the sign face.
4. approved UV/Anti-Graffiti overlamine. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

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SUBCONSULTANT		PROJECT NO.	
DATE	10 December 2010	SHEET TITLE	
DRAWN BY:	PR		
<small>drawings prior to fabrication for review and approval by the design team or project engineer. The fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS. The fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.</small>	REVISIONS	<b>Sign Type PDIR.1 + .3 Pedestrian Directional</b>	
	04/20/2012		PR
	11/30/2012		GS
	08/16/2013		GS
	03/12/2014	PR	SHEET NO.
	05/02/2014	PR	<b>E.6</b>

**SIGN TYPE LAYOUT**

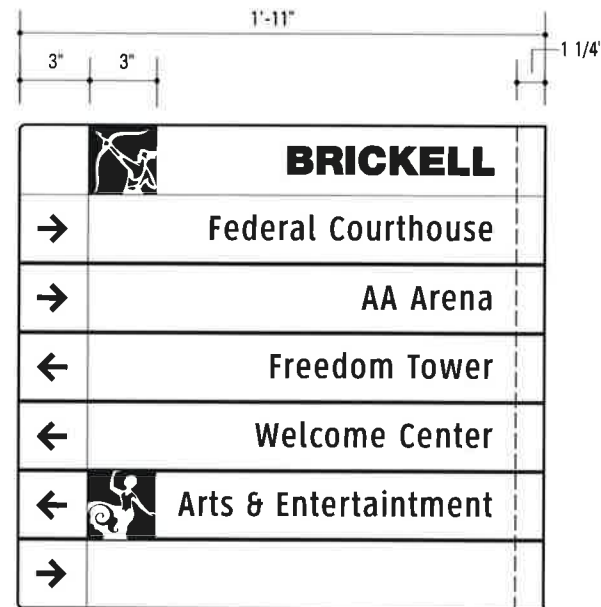
PDIR.2 and .4 - Pedestrian Directional

Sign panel layouts illustrated on this page are NOT actual signs. The layouts provide proper message size, spacing and arrow locations.

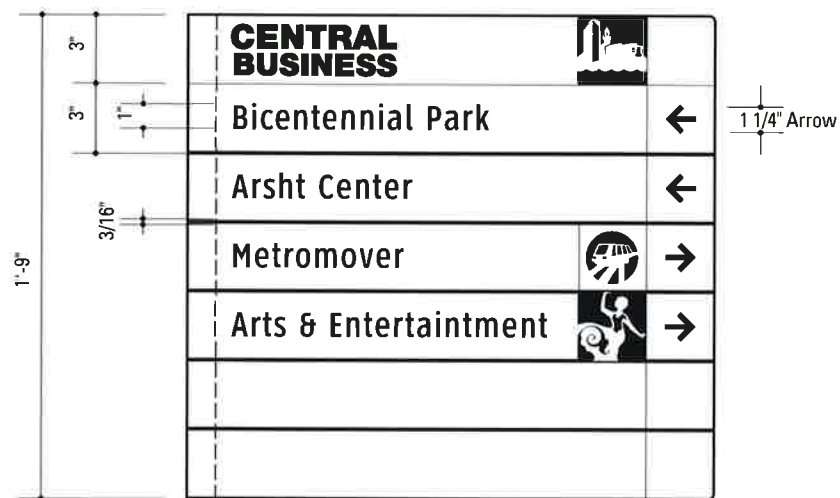


**FACE A**

**1** Graphic Layout: PDIR.2 and .4  
SCALE: 1 1/2" = 1'-0

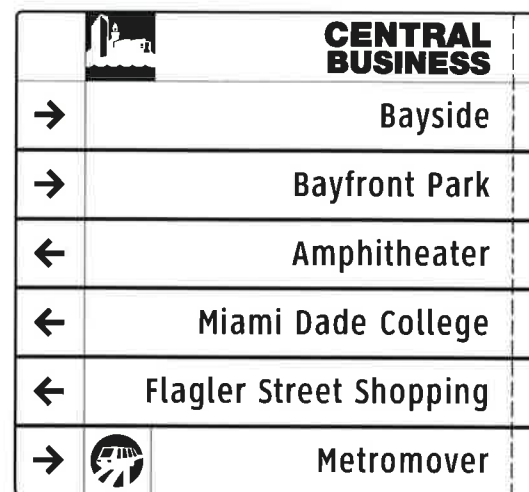


**FACE B**



**FACE A**

**2** Graphic Layout: PDIR.2 and .4  
SCALE: 1 1/2" = 1'-0



**FACE B**

**STRUCTURAL DESIGN ONLY**

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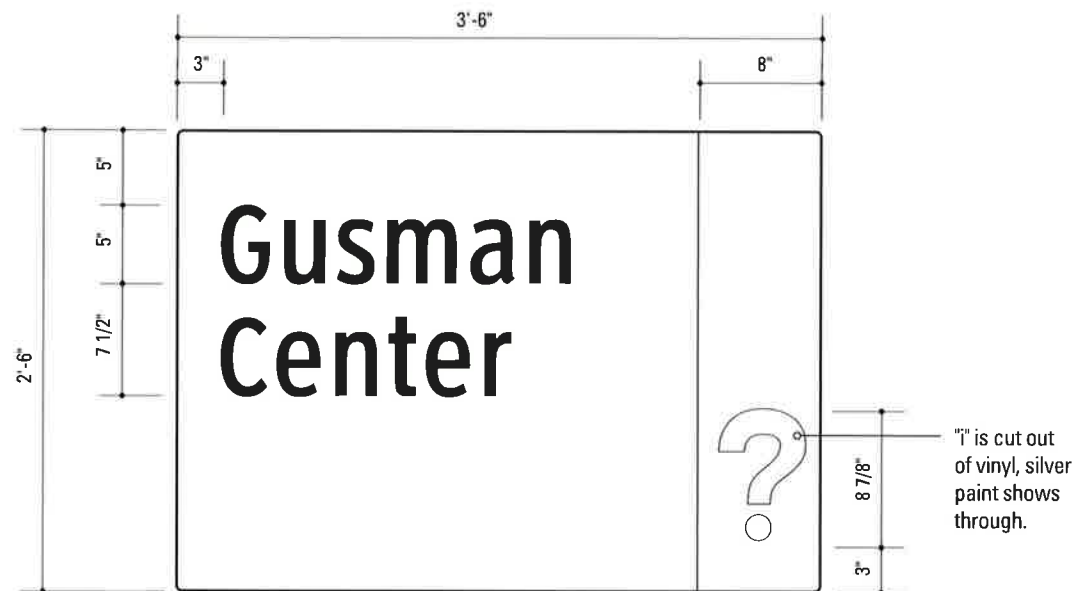
**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
- 2.
3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and shall match the substrate. All surfaces shall be smooth, paint all seams.
4. approved UV/Anti-Graffiti overlaminates. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

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SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type PDIR.2 + .4 Pedestrian Directional
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>E.7</b>

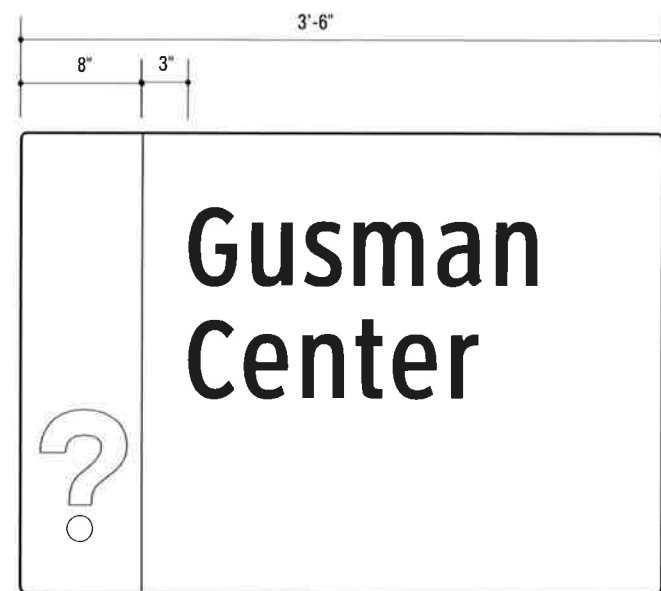
drawings prior to fabrication for review and approval by the Designer and Project Engineer. The fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.





FACE A

1 Graphic Layout: DEST.1  
SCALE: 1" = 1'-0



FACE B



FACE A

2 Graphic Layout: DEST.2  
SCALE: 1" = 1'-0



FACE B

SPECIFICATIONS SIGN TYPE: DEST.1 + .2 FUNCTION: Destination ID

SIGN TYPE LAYOUT

DEST.1 and .2 - Destination Identification

Sign panel layouts illustrated on this page are NOT actual signs. The layouts provide proper message size, spacing and arrow locations.

STRUCTURAL DESIGN ONLY

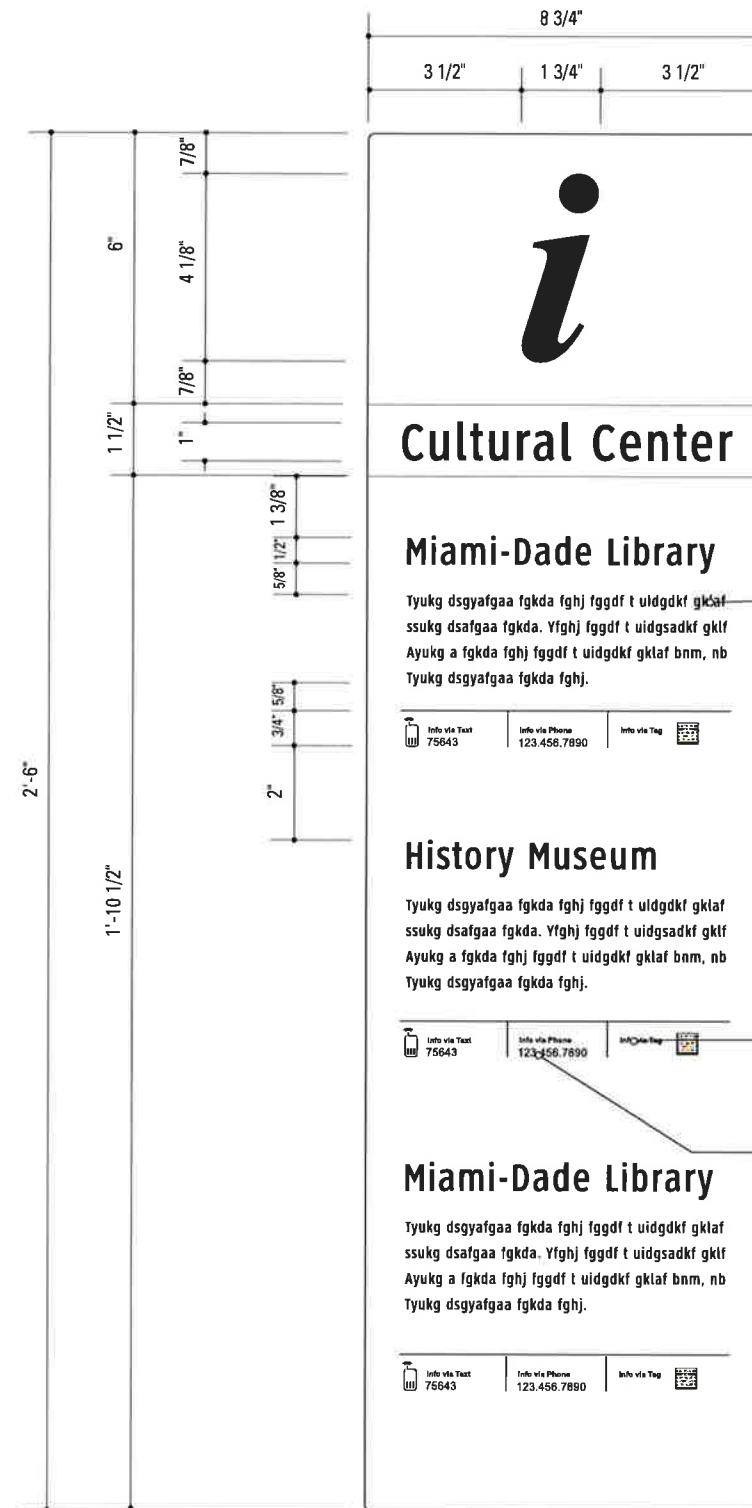
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

NOTES

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
2. Welds: All welds shall be ground smooth, paint all seams.
3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

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SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type DEST.1 + .2 Destination ID
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	SHEET NO.
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	
	05/02/2014 PR	E.8

It is the responsibility of the fabricator to provide the shop drawings and verify the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS. The fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



text: Clearview Hwy 2-W  
25 pt / 40 pt  
color: White

text: Helvetica Neue 75 Bold , 13 pt  
color: Pink

text: Helvetica Neue 65 Medium , 17 pt  
color: White

1 Graphic Layout: DEST.2  
SCALE: 3" = 1'-0"

**SPECIFICATIONS**      **SIGN TYPE:** DEST.2      **FUNCTION:** Destination ID

**SIGN TYPE LAYOUT**

DEST.2 - Destination Identification-Graphic Panel

Sign panel layouts illustrated on this page are NOT actual signs. The layouts provide proper message size, spacing and arrow locations.

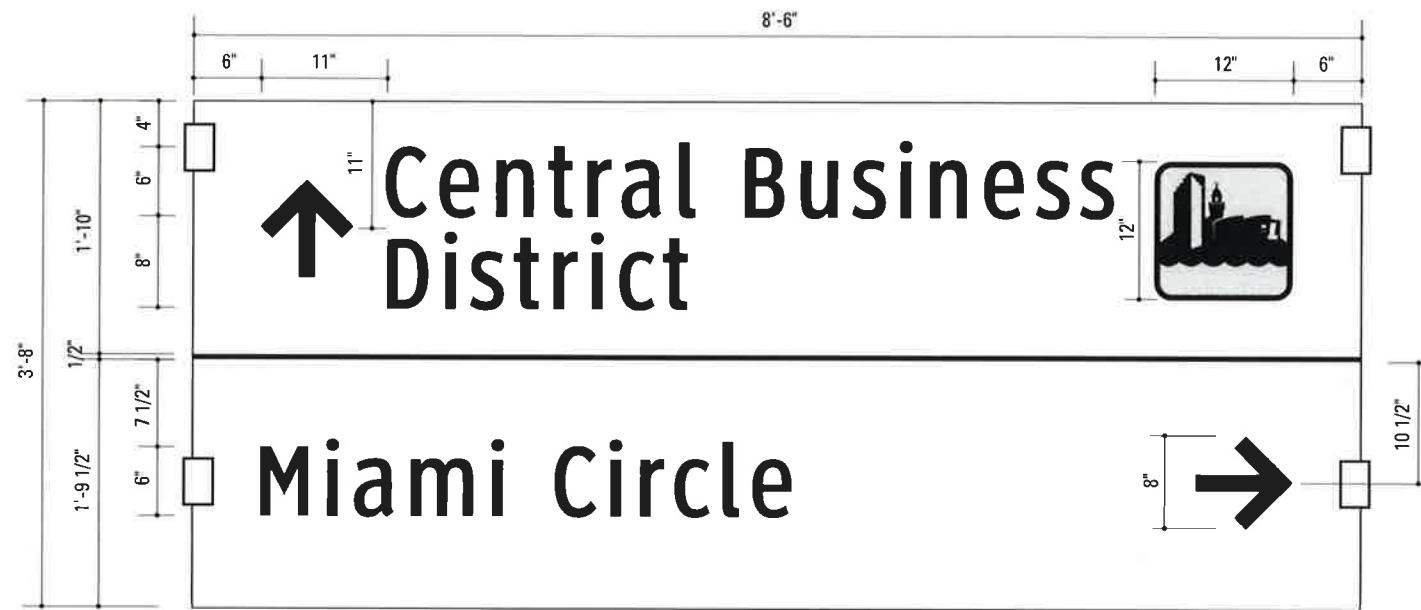
**STRUCTURAL DESIGN ONLY**

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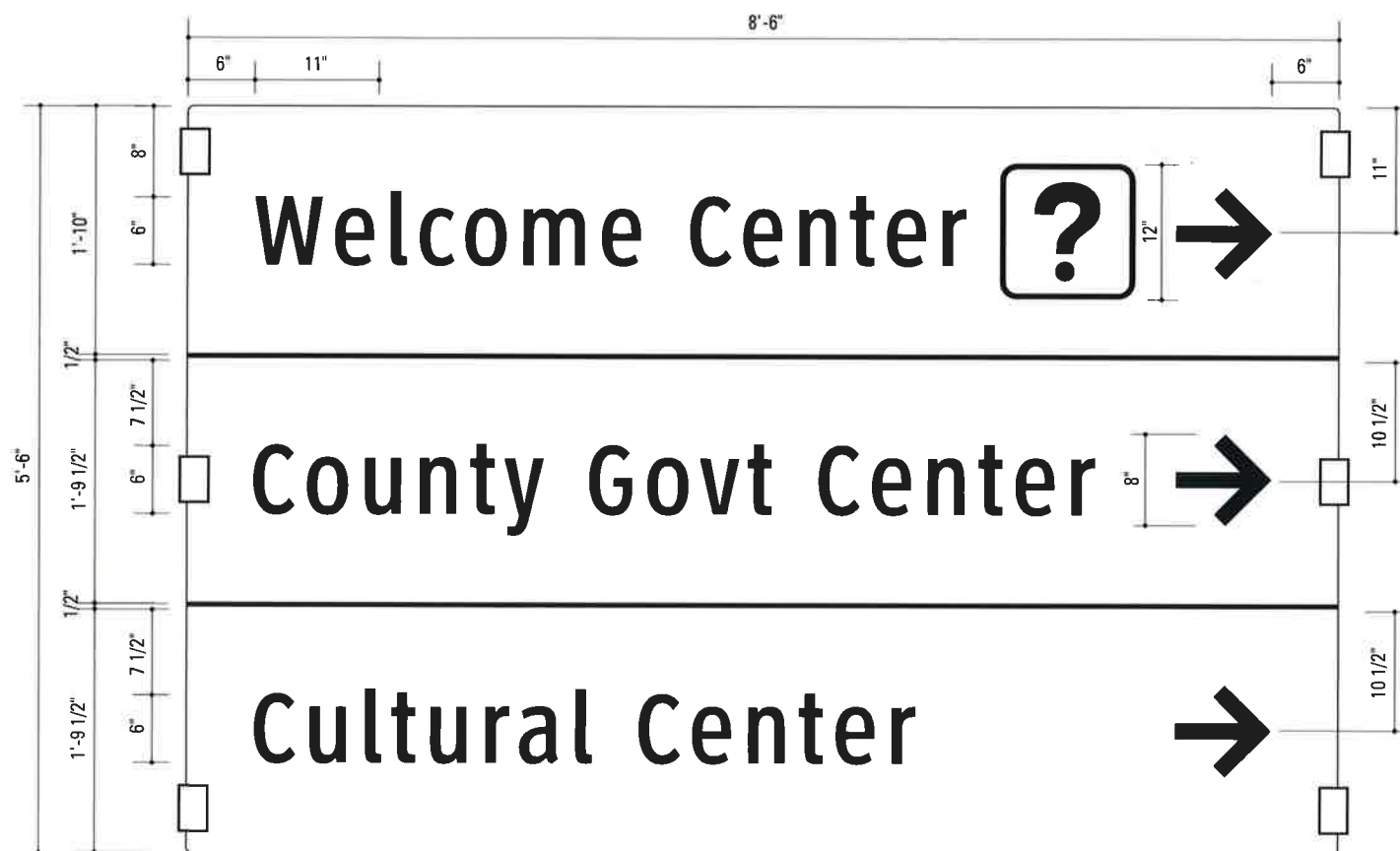
**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
2. Welds: All welds shall be ground smooth, paint all seams.
3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT		
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		Downtown Miami City of Miami, Florida		
SUBCONSULTANT		PROJECT NO.		
DATE	10 December 2010	SHEET TITLE		
DRAWN BY:	PR	Sign Type DEST.2 Destination ID Graphic Panel		
REVISIONS				SHEET NO.
04/20/2012 PR				<b>E.9</b>
11/30/2012 GS				
08/16/2013 GS				
03/12/2014 PR				
05/02/2014 PR				



1 Graphic Layout: VDIR.4  
SCALE: 3/4" = 1'-0



2 Graphic Layout: VDIR.5  
SCALE: 3/4" = 1'-0

**SPECIFICATIONS** SIGN TYPE: VDIR.4 + .5 FUNCTION: Vehicular Directional

**SIGN TYPE LAYOUT**

VDIR.4 and .5 - Vehicular Directional

Sign panel layouts illustrated on this page are NOT actual signs. The layouts provide proper message size, spacing and arrow locations.

**STRUCTURAL DESIGN ONLY**

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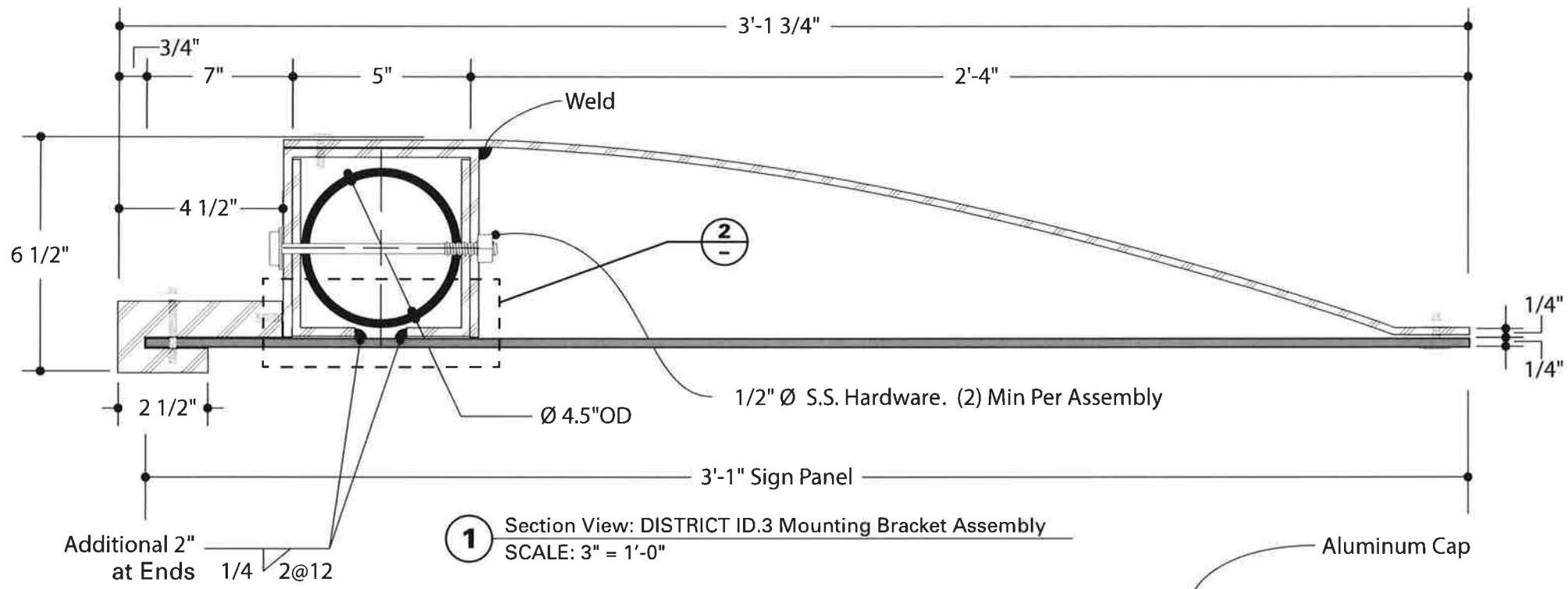
**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
2. Welds: All welds shall be ground smooth, paint all seams.
3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

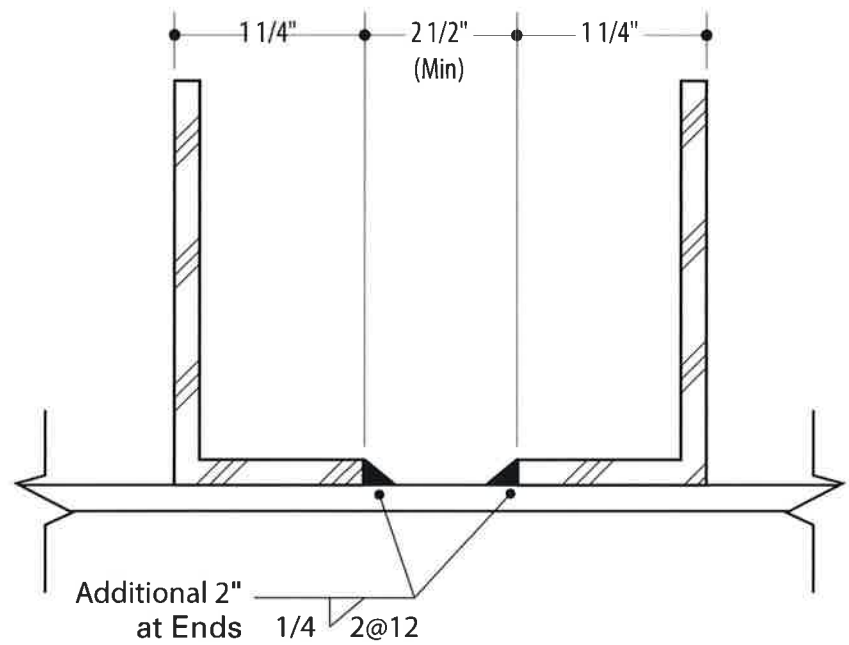
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	Sign Type VDIR.4 + .5 Vehicular Directional
DRAWN BY:	PR	
REVISIONS		SHEET NO.
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		
03/12/2014 PR		<b>E.10</b>
05/02/2014 PR		

**F. Construction Details**

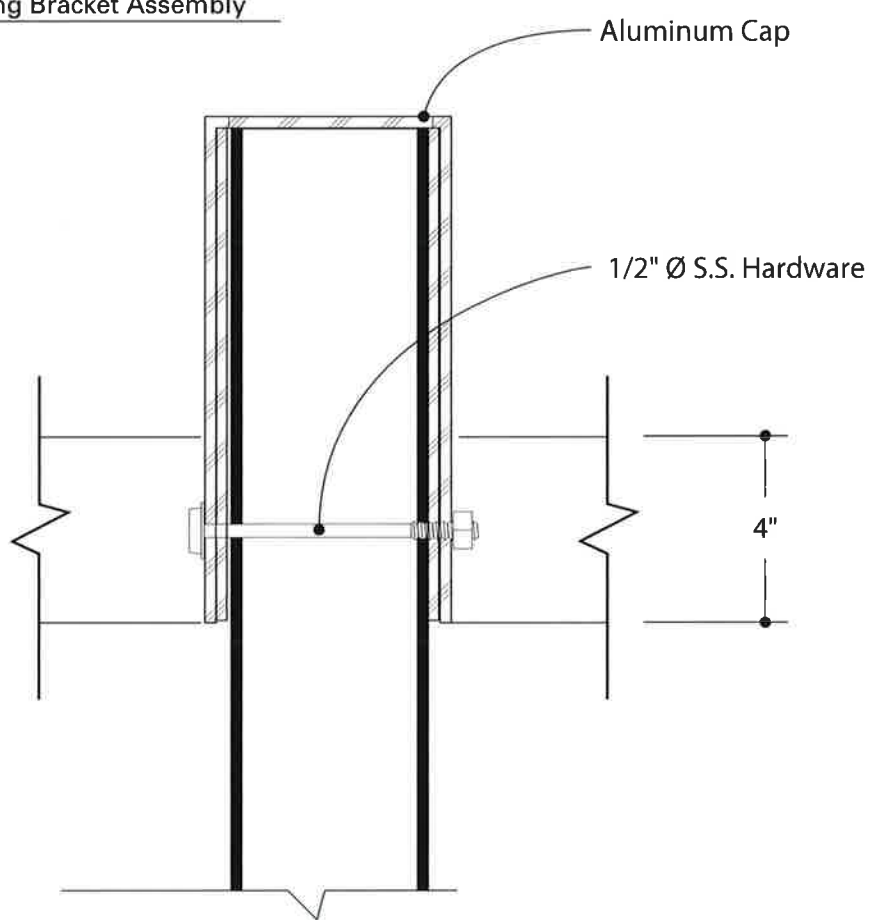
**STRUCTURAL DESIGN ONLY**



**1** Section View: DISTRICT ID.3 Mounting Bracket Assembly  
SCALE: 3" = 1'-0"



**2** Detail  
NTS



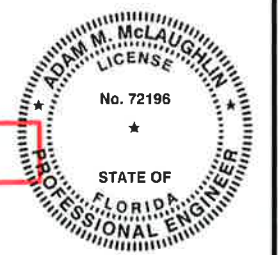
**3** Section View: Cap / Bracket  
SCALE: 1/4" = 1"

**SPECIFICATIONS**

**SIGN TYPE:**  
**DISTRICT ID.3**  
**CONSTRUCTION DETAILS**

**WELDS:**  
Weld Fillers to be 4043 Aluminum

**HARDWARE:**  
1. All hardware to be type 316 stainless steel, U.N.O.  
2. All hardware to be tamper proof



**STRUCTURAL DESIGN ONLY**

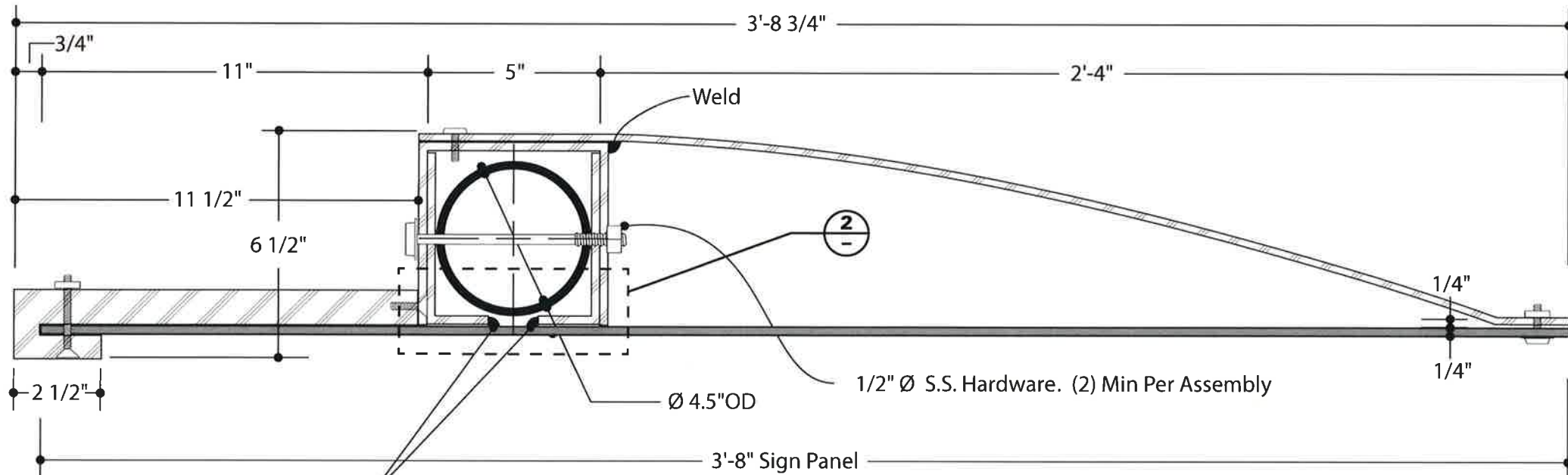
GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
- 2.
3. Hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. Approved Sign Graphics to receive 3M Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

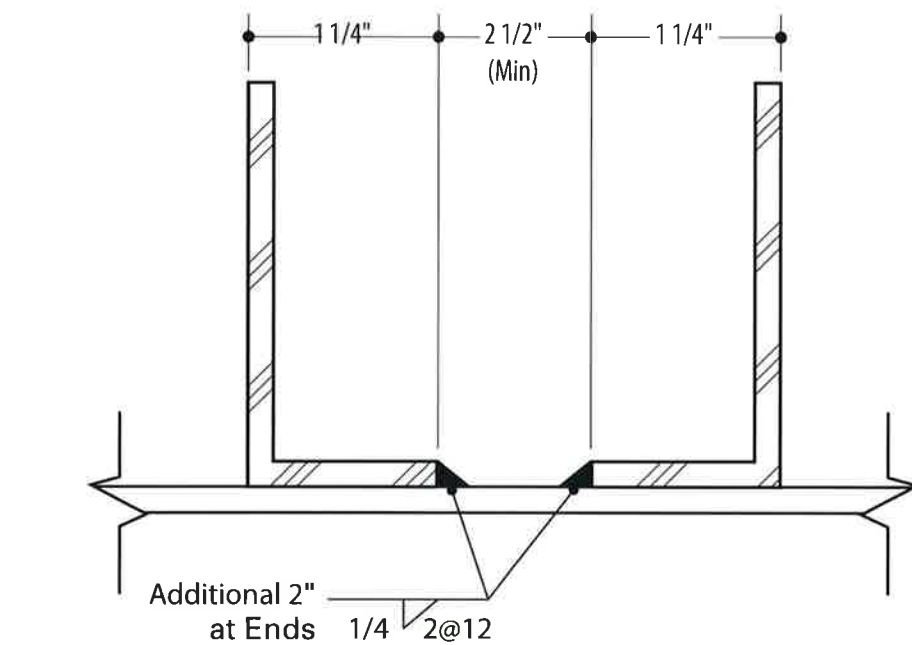
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 www.merjedesign.com		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	10 December 2010	DISTRICT ID.3 Construction Details
DRAWN BY:	PR	
REVISIONS	04/20/2012 PR	
	11/30/2012 GS	
	08/16/2013 GS	
	03/12/2014 PR	SHEET NO.
	05/02/2014 PR	<b>F.1</b>

The Design Team and Project Engineer are not responsible for the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS. The fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

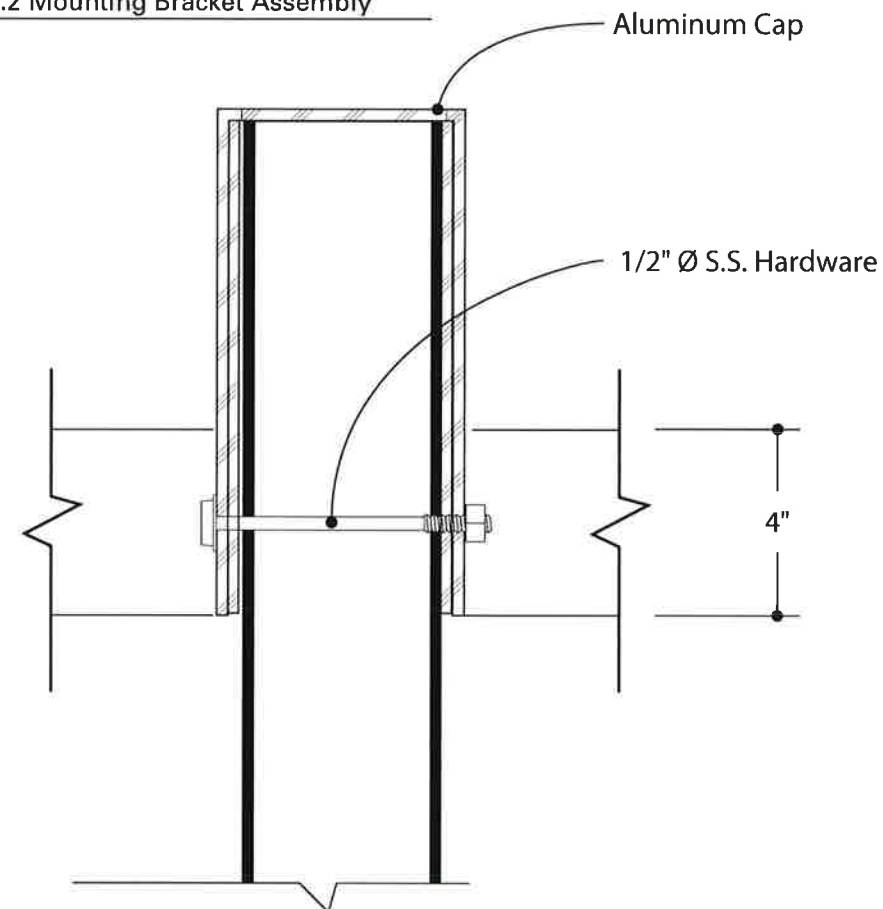


**1** Section View: VDIR.1-3 + PARK.2 Mounting Bracket Assembly  
SCALE: 3" = 1'-0"

Additional 2" at Ends 1/4 2@12



**2** Detail NTS



**3** Section View: Cap / Bracket  
SCALE: 1/4" = 1"

**SPECIFICATIONS**

**SIGN TYPE:**

- VDIR.1
- VDIR.2
- VDIR.3
- PARK.2

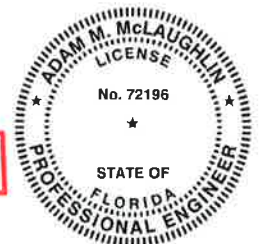
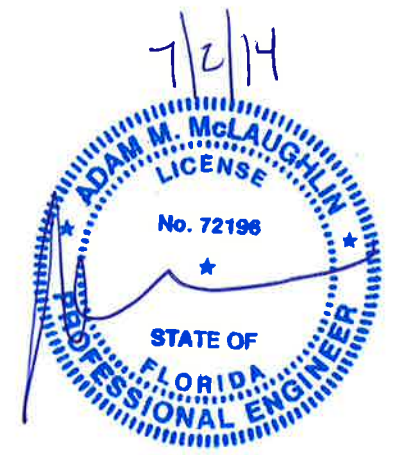
**CONSTRUCTION DETAILS**

**WELDS:**

Weld Fillers to be 4043 Aluminum

**HARDWARE:**

- 1. All hardware to be type 316 stainless steel, U.N.O.
- 2. All hardware to be tamper proof



**STRUCTURAL DESIGN ONLY**

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

- 1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
- 2.
- 3. Hardware will be tamper proof tamper proof hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
- 4. Approved Anti-Graffiti to be applied/ Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M Approved Anti-Graffiti to be applied.

**ENVIRONMENTS & EXPERIENCES**

**merJe**

120 North Church Street  
Suite 208  
West Chester, PA 19380  
T 484.266.0648  
[www.merjedesign.com](http://www.merjedesign.com)

**CLIENT / PROJECT**

**Downtown Miami  
City of Miami, Florida**

**PROJECT NO.**

**SUBCONSULTANT**

**SHEET TITLE**

DATE 10 December 2010

DRAWN BY: PR

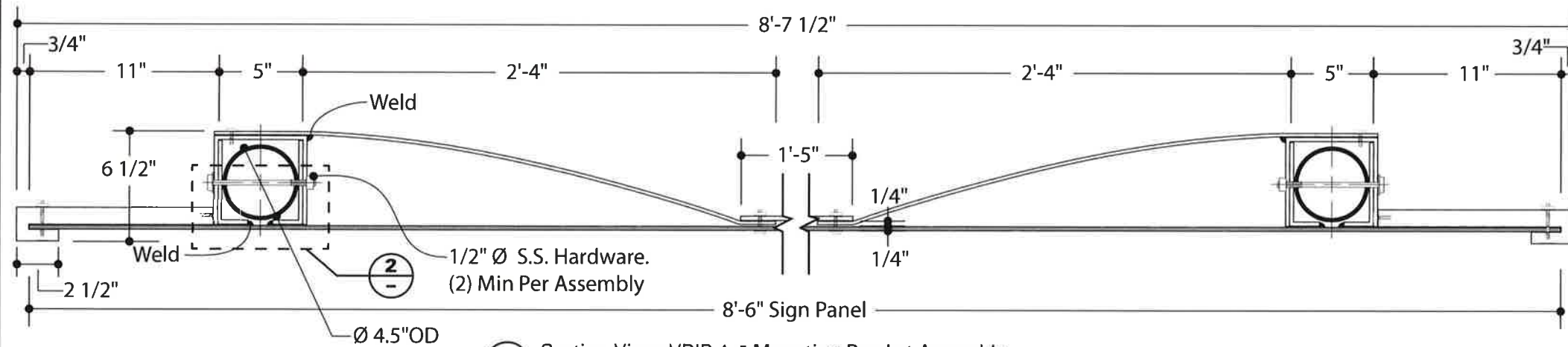
**VDIR.1-3 + PARK.2  
Construction Details**

Revisions table:

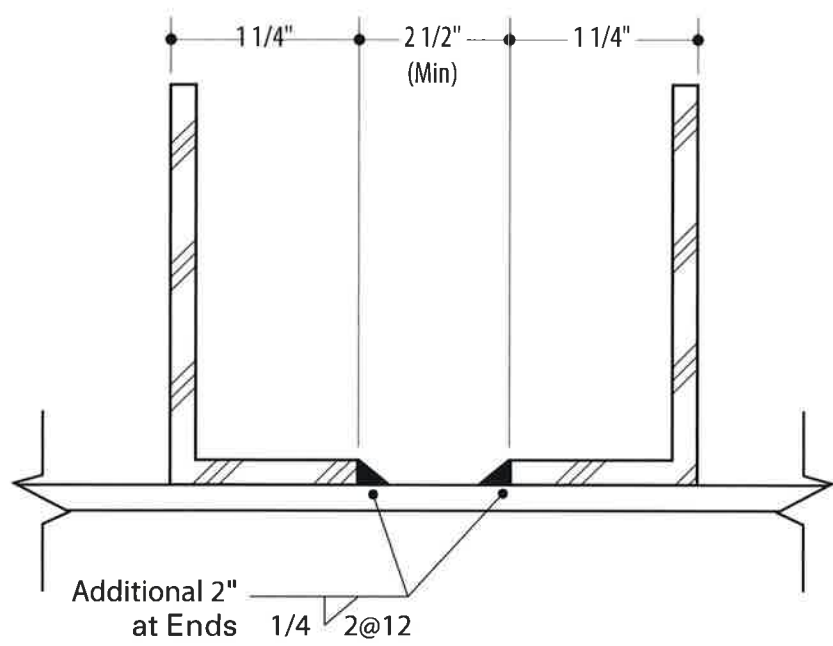
REVISIONS	DATE	BY
04/20/2012	PR	
11/30/2012	GS	
08/16/2013	GS	
03/12/2014	PR	
05/02/2014	PR	

**SHEET NO.**

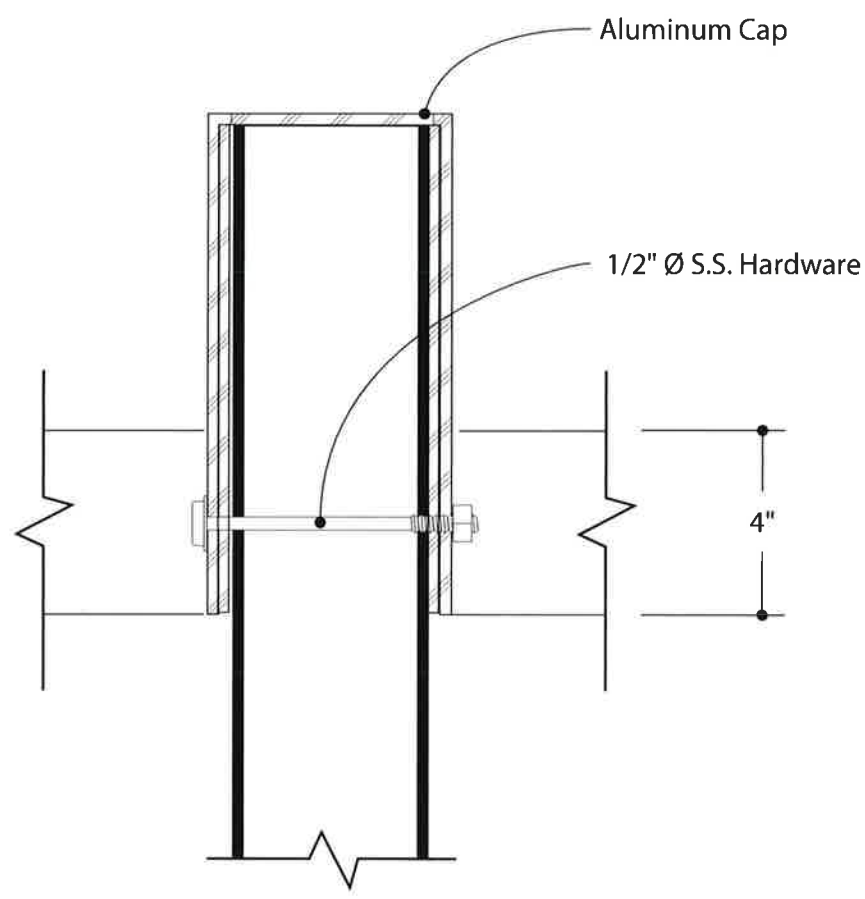
**F.2**



**1** Section View: VDIR.4-5 Mounting Bracket Assembly  
SCALE: 1 1/2" = 1'-0"



**2** Detail NTS



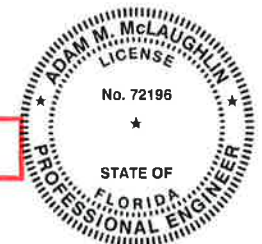
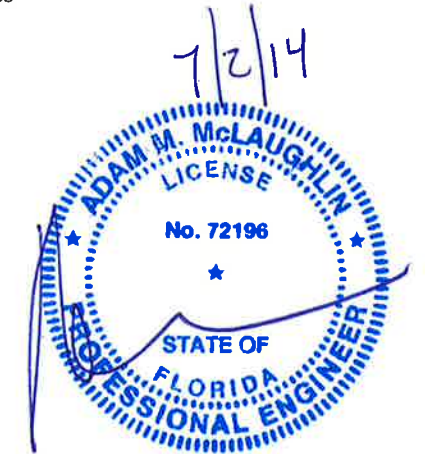
**3** Section View: Cap / Bracket  
SCALE: 1/4" = 1"

**SPECIFICATIONS**

**SIGN TYPE:**  
VDIR.4  
VDIR.5  
**CONSTRUCTION DETAILS**

**WELDS:**  
Weld Fillers to be 4043 Aluminum

**HARDWARE:**  
1. All hardware to be type 316 stainless steel, U.N.O.  
2. All hardware to be tamper proof



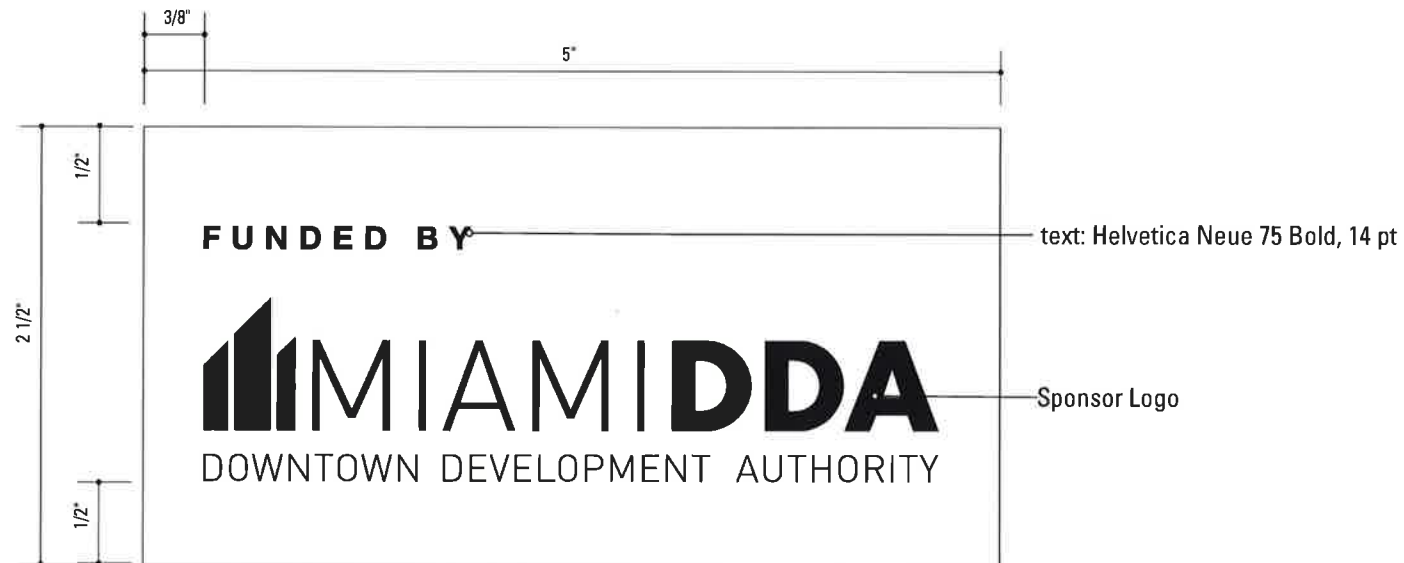
**STRUCTURAL DESIGN ONLY**

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
- 2.
3. Welds on all structural steel components shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. Approved Anti-Graffiti or reflective Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 www.merjedesign.com		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	DRAWN BY:	VDIR.4-5 Construction Details
10 December 2010	PR	
REVISIONS		
04/20/2012	PR	
11/30/2012	GS	
08/16/2013	GS	SHEET NO.
03/12/2014	PR	F.3
05/02/2014	PR	



1 Sponsor Plaque: DETAIL  
SCALE: 1'-0" = 1'-0"



Sponsor Plaque: OPTIONS



**SPECIFICATIONS**

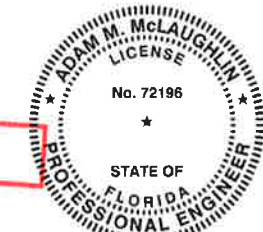
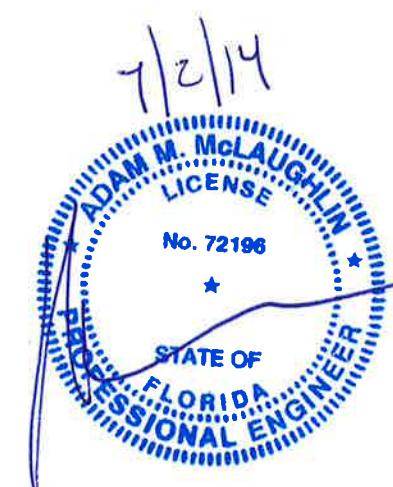
**SPONSOR PLACQUE**

**FOR SIGN TYPES:**

- VDIR.1
- VDIR.2
- VDIR.3
- VDIR.4
- VDIR.5
- PARK.2
- PDIR.1
- PDIR.2
- DEST.1
- DEST.2
- KIOSK.1
- KIOSK.2
- INT.1

**HARDWARE:**

1. All hardware to be type 316 stainless steel, U.N.O.
2. All hardware to be tamper proof.



**STRUCTURAL DESIGN ONLY**

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
2. Hardware: All fasteners to be tamper proof hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
3. Hardware: All fasteners to be tamper proof hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. Approved Sign: Anti-graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

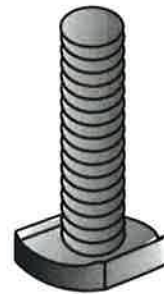
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe 120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		Downtown Miami City of Miami, Florida
SUBCONSULTANT		PROJECT NO.
DATE	DRAWN BY:	SHEET TITLE
10 December 2010	PR	
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		SHEET NO.
03/12/2014 PR		
05/02/2014 PR		
<small>Wherever the fabricator constructs and installs signs for the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.</small>		<b>F.4</b>



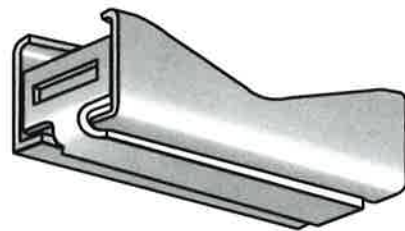
## Lip-Lok Bolt Assembly

SX0121

- Shape of head provides maximum contact with inside of channel extrusion for superior holding power.
- Stainless Steel, M8 Metric Thread.
- Includes nut and washer.



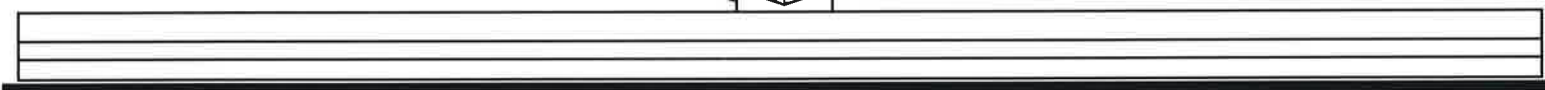
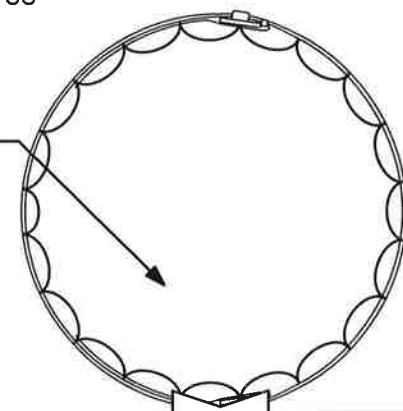
## Universal Channel Clamp



SX0220

- Compatible with all SIGNFIX Channel extrusions.
- During installation, the assembly becomes fully adjustable to any size or style sign post when used with BAND-IT Band and Buckle or Ultra-Lok Free End System.


Existing Lamp Post

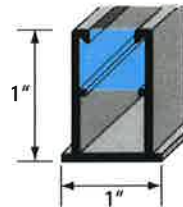


1 Mounting Detail Section View: PARK.1/1A  
SCALE: 1/2" = 1"

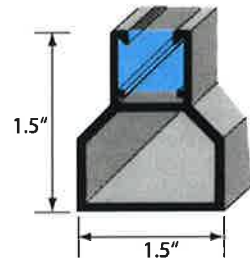
## Support Channel Extrusions

For mounting and stiffening any size sign.

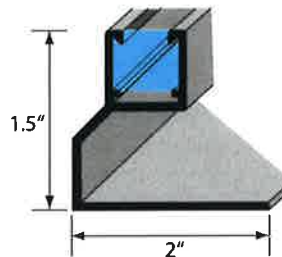
 SIGNFIX Channel Extrusions have identical configurations allowing the use of all SIGNFIX hardware with any extrusion.



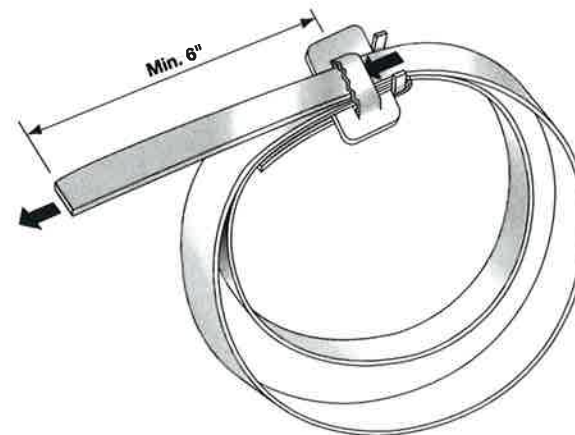
SX0073 Medium Channel Extrusion  
10' Stock Length



SX0130 Large Channel Extrusion  
10' Stock Length



SX0090 Large Corner Angle Channel Extrusion  
10' Stock Length



## SPECIFICATIONS

### SUPPORT CHANNEL EXTRUSIONS

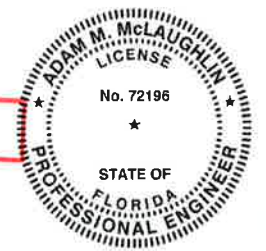
### POLE STRAP ATTACHMENT

#### FOR SIGN TYPES:

**BANNER.1**  
**PARK.1**  
**PARK.1A**  
**PDIR.3**  
**PDIR.4**



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#### NOTES

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
2. Welds: All welds shall be ground smooth, paint all seams.
3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

ENVIRONMENTS & EXPERIENCES

**merJe**

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[www.merjedesign.com](http://www.merjedesign.com)

CLIENT / PROJECT

**Downtown Miami**  
**City of Miami, Florida**

PROJECT NO.

SUBCONSULTANT

SHEET TITLE

DATE 10 December 2010

DRAWN BY: PR

REVISIONS  
04/20/2012 PR

11/30/2012 GS

08/16/2013 GS

03/12/2014 PR

05/02/2014 PR

05/02/2014 PR

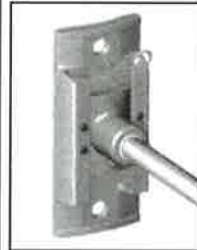
SHEET NO.

**Support Channel Extrusion**  
**Pole Strap Attachment**  
**Details**

**F.5**

drawings prior to fabrication for review and approval by the Designer or Client. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

### KBW BannerFlex® D3 Bracket



The KBW BannerFlex D3 is the most recent manifestation of the first-ever fiberglass arm banner bracket system. After 25 years of extensive research and engineering, the KBW BannerFlex D3 is the most trusted, most recommended banner hardware in the industry. For quality and reliability look no further than the original, Kalamazoo Banner Works.

KBW/Consort's goal is to always be ahead of the curve. Placing a banner on a light pole is like adding a sail to an immovable object. Who will you trust to protect pedestrians, automobiles and light poles - the innovator or the novice? Reduce your liability and protect your investment with the BannerFlex line of banner hardware. Available with both the standard 13/16" round fiberglass arm or the new premium Airow® fiberglass arm. The BannerFlex D3 is protected by US patent.

### Wind Tunnel Tested

KBW by Consort utilizes full-scale wind tunnel and material testing facilities along with computer-aided design programs to develop and affirm our product components, capabilities, features and warranties. For specific engineering data, including our BannerFlex Wind Force Calculator, visit us at [www.kalamazoobanner.com](http://www.kalamazoobanner.com) or contact your KBW/Consort Sales Representative at (800) 525-6424.

### FEATURES AND BENEFITS

#### KBW BannerFlex D3 Main Casting



FEATURES	BENEFITS
356T6 Heat-Treated Cast Aluminum	<ul style="list-style-type: none"> <li>• Superior strength and durability</li> <li>• Corrosion resistant</li> <li>• Accepts powder coating</li> </ul>
Bolt Holes	<ul style="list-style-type: none"> <li>• Casting may be easily bolted to poles in lieu of banding application</li> </ul>
Banding Channels	<ul style="list-style-type: none"> <li>• Easily allows positioning of up to 3/4" wide banding to fasten casting to pole</li> </ul>
Arm Slide Flanges	<ul style="list-style-type: none"> <li>• Banner can be installed or removed without moving or removing main casting</li> <li>• Allows banner-length adjustment of 1" at both top and bottom of banner</li> <li>• Arms may be removed when no banners are installed</li> <li>• Flower Pot Holder or Flag Pole Adapters may be installed when banners are not in use</li> </ul>
Dacromet®-Coated Set Screws and Zinc-Plated Hitch Pins	<ul style="list-style-type: none"> <li>• Corrosion resistant</li> <li>• Allows for easy installation and adjustment</li> <li>• Hitch pin provides added security</li> </ul>
Warranty	<ul style="list-style-type: none"> <li>• 10 Years when properly installed and maintained (see warranty information)</li> </ul>

CONSORT DISPLAY GROUP • 2129 PORTAGE STREET • KALAMAZOO, MI 49001  
PH: 800 525 6424 • FAX: 888 880 6341 • [www.consort.com](http://www.consort.com) • [info@consort.com](mailto:info@consort.com)

### KBW BannerFlex D3 Arm Casting



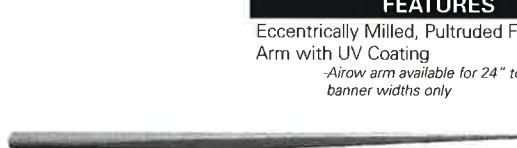
FEATURES	BENEFITS
356T6 Heat-Treated Cast Aluminum	<ul style="list-style-type: none"> <li>• Superior strength and durability</li> <li>• Corrosion resistant</li> <li>• Accepts powder coating</li> </ul>
4-Degree Cantilevered Casting • Top arm is canted up • Bottom arm is canted down	<ul style="list-style-type: none"> <li>• Wind energy is transferred from banner to fiberglass arm</li> <li>• Keeps banner trim and in tension</li> <li>• Promotes banner longevity</li> </ul>
Eyelet Included in Casting	<ul style="list-style-type: none"> <li>• Allows for cable ties to be utilized through both the banner grommet and casting to secure banner</li> <li>• Added security from loss or theft</li> </ul>

### KBW BannerFlex Standard 13/16" Round Fiberglass Arm



FEATURES	BENEFITS
Pultruded Fiberglass Arm	<ul style="list-style-type: none"> <li>• Provides flexibility while maintaining strength</li> <li>• Absorbs wind energy to reduce stress on banner and light pole</li> <li>• Inherent flexibility of the arm allows for return of banner to original taut position once wind subsides</li> <li>• Increases banner longevity</li> </ul>

### KBW BannerFlex Premium 3/4" Airow Fiberglass Arm



FEATURES	BENEFITS
Eccentrically Milled, Pultruded Fiberglass Arm with UV Coating <i>-Airow arm available for 24" to 30" banner widths only</i>	<ul style="list-style-type: none"> <li>• Specially designed taper of fiberglass rod increases flexibility over standard rods by up to 50%</li> <li>• Dissipates more wind energy to reduce stress on banner and light pole</li> <li>• Inherent flexibility of the arm allows for return of arm and banner to original taut position once wind subsides</li> <li>• Increases banner longevity</li> <li>• Increases flexibility while maintaining strength</li> <li>• Perfect for high wind areas and when extra wind load reduction is required</li> <li>• Patent applied for</li> </ul>

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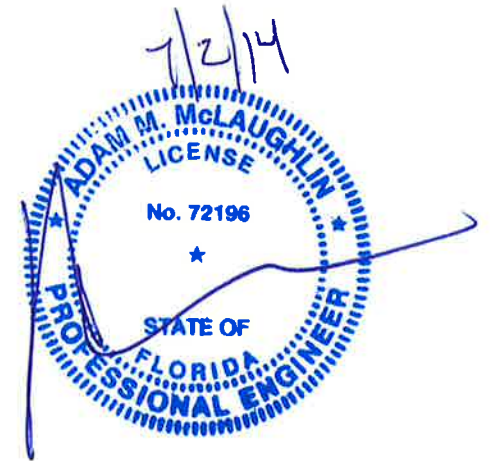
BFL D3FB

### SPECIFICATIONS

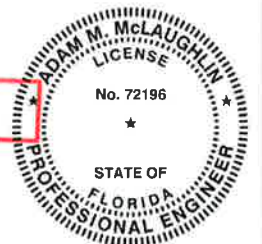
#### BANNER POLE ATTACHMENT

#### BANNER ARM

#### FOR SIGN TYPES: BANNER.1



**STRUCTURAL DESIGN ONLY**



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#### NOTES

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
2. Welds: All welds shall be ground smooth, paint all seams.
3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

#### ENVIRONMENTS & EXPERIENCES

**merJe**

120 North Church Street  
Suite 208  
West Chester, PA 19380  
T 484.266.0648  
[www.merjedesign.com](http://www.merjedesign.com)

#### CLIENT / PROJECT

**Downtown Miami  
City of Miami, Florida**

#### PROJECT NO.

#### SUBCONSULTANT

DATE 10 December 2010 DRAWN BY: PR

REVISIONS  
04/20/2012 PR

11/30/2012 GS

08/16/2013 GS

03/12/2014 PR

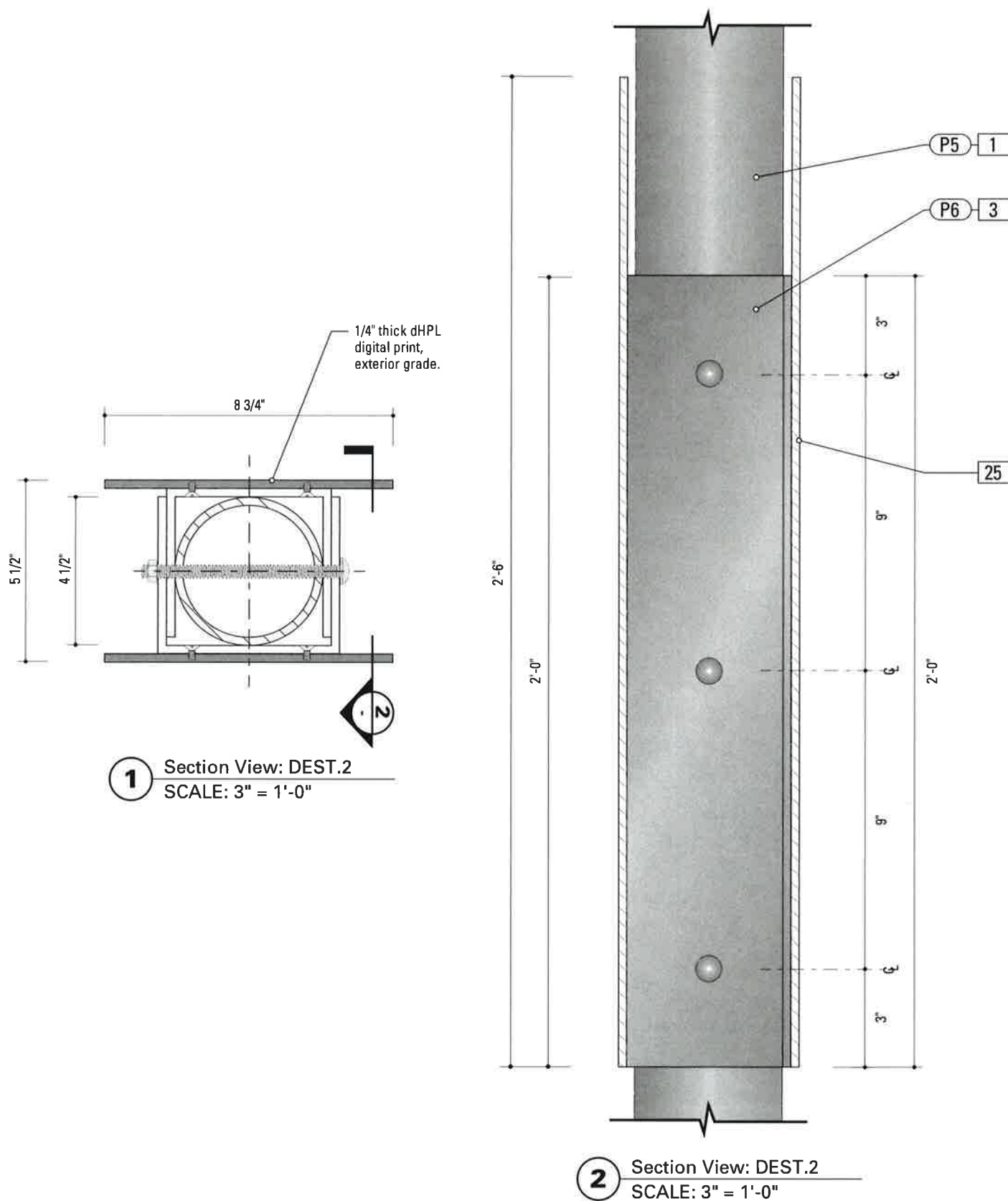
05/02/2014 PR

#### SHEET TITLE

**Banner Pole Attachment  
Banner Arm  
Details**

#### SHEET NO.

**F.6**



**1** Section View: DEST.2  
SCALE: 3" = 1'-0"

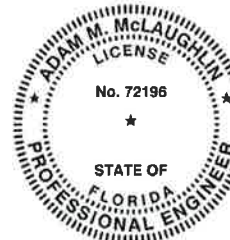
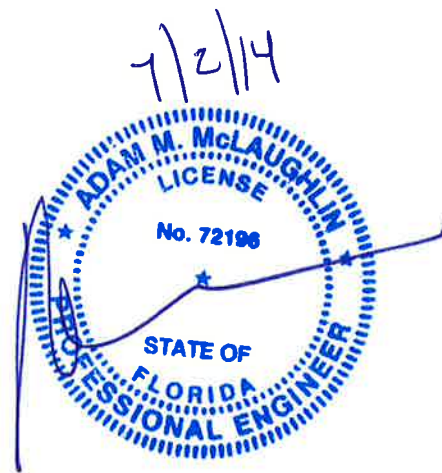
**2** Section View: DEST.2  
SCALE: 3" = 1'-0"

**SPECIFICATIONS**

**DESTINATION IDENTIFICATION**

**SIGN TYPE:**  
**DEST.2**  
**INFORMATION PANEL ATTACHMENT**  
**CONSTRUCTION DETAILS**

- HARDWARE:**
1. All hardware to be type 316 stainless steel, U.N.O.
  2. All hardware to be tamper proof




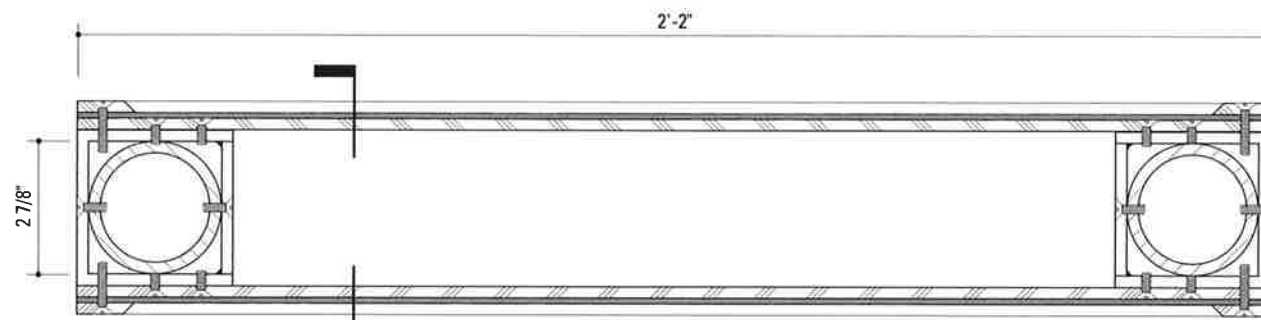
**STRUCTURAL DESIGN ONLY**

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

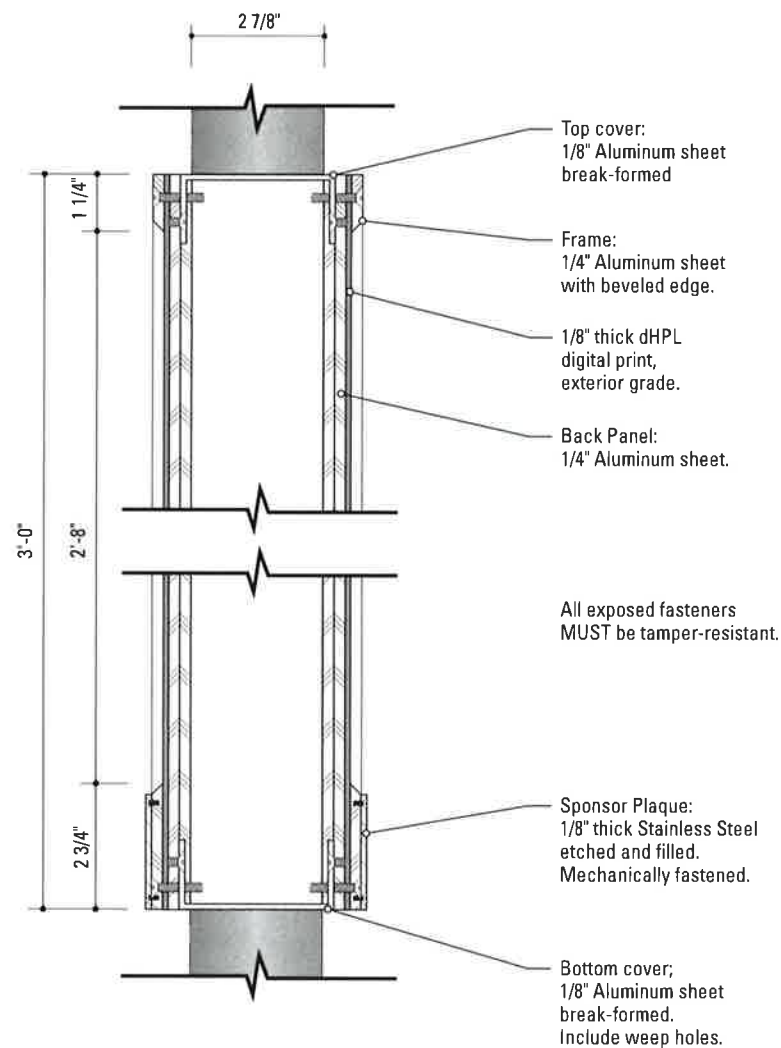
**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
- 2.
3. Hardware shall be tamper proof and corrosion resistant. Hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. Approved sign surfaces to be treated with Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
 120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		<b>Downtown Miami</b> <b>City of Miami, Florida</b>
SUBCONSULTANT		PROJECT NO.
DATE	DRAWN BY:	SHEET TITLE
10 December 2010	PR	
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		SHEET NO.
03/12/2014 PR		
05/02/2014 PR		



**1** Section View: KIOSK.1  
SCALE: 3" = 1'-0"



**2** Section View: KIOSK.1  
SCALE: 3" = 1'-0"

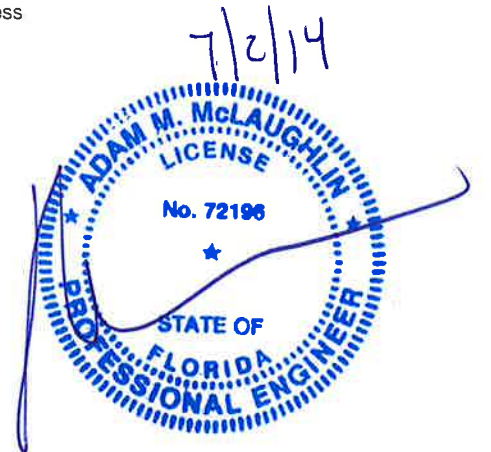
**SPECIFICATIONS**

**PEDESTRIAN KIOSK**

**SIGN TYPE:**  
KIOSK.1  
**FRAME PANEL AND ARTWORK**  
**ATTACHMENT**  
**CONSTRUCTION DETAILS**

**WELDS:**  
Weld Fillers to be 4043 Aluminum

**HARDWARE:**  
1. All hardware to be type 316 stainless steel, U.N.O.  
2. All hardware to be tamper proof

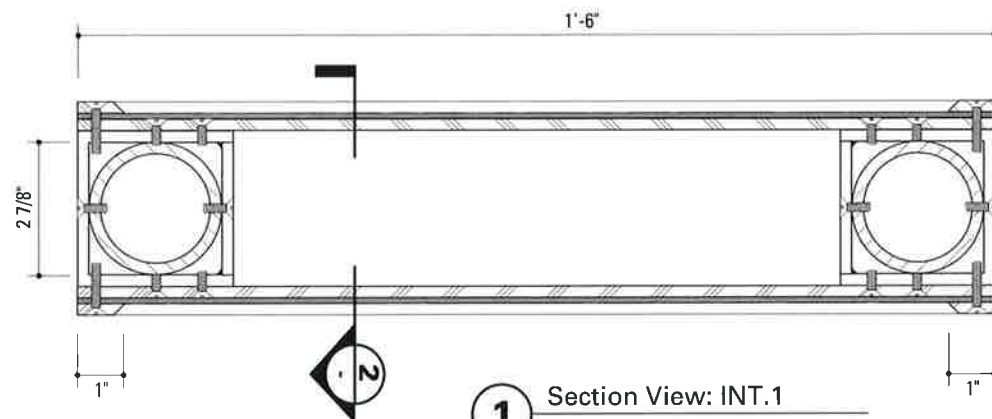


GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

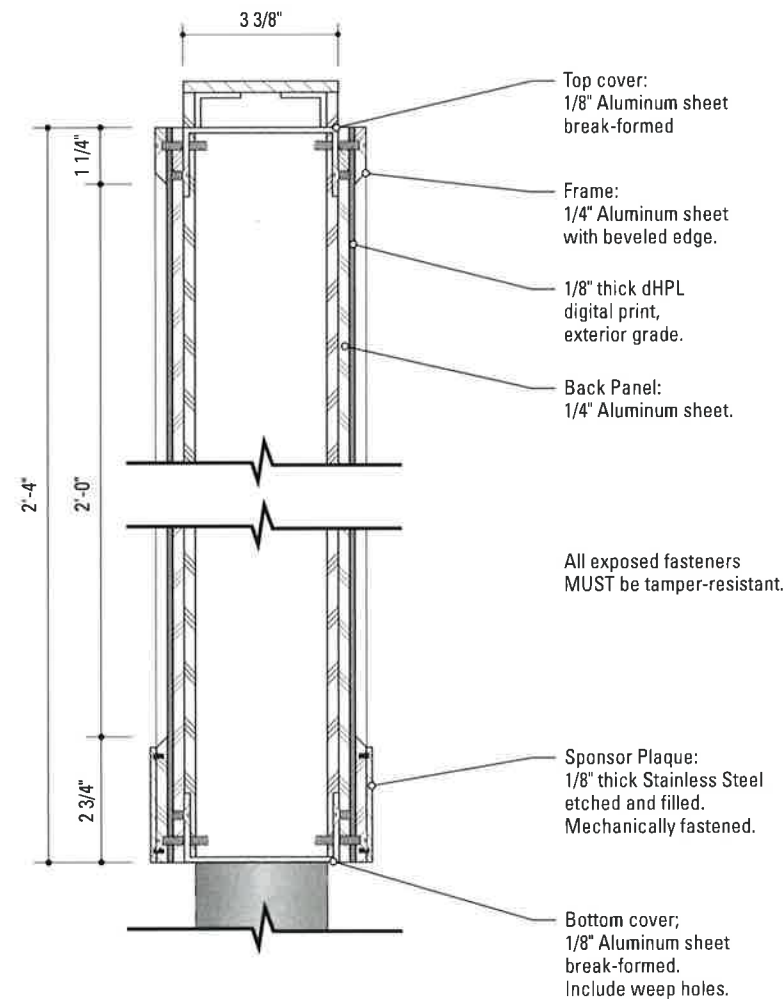
**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
2. Welds: All welds shall be ground smooth, paint all seams.
3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT	
		120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>	
		<b>Downtown Miami</b> City of Miami, Florida	
SUBCONSULTANT		PROJECT NO.	
DATE	10 December 2010	DRAWN BY:	PR
<small>Having the fabricator responsible for the project, the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.</small>		SHEET TITLE	
		<b>KIOSK.1</b> <b>Frame Panel Attachment</b> <b>Details</b>	
		SHEET NO.	
		<b>F.8</b>	
REVISIONS			
04/20/2012 PR			
11/30/2012 GS			
08/16/2013 GS			
03/12/2014 PR			
05/02/2014 PR			



**1** Section View: INT.1  
SCALE: 3" = 1'-0"



**2** Section View: INT.1  
SCALE: 3" = 1'-0"

**SPECIFICATIONS**

**INTERPRETIVE PANELS**

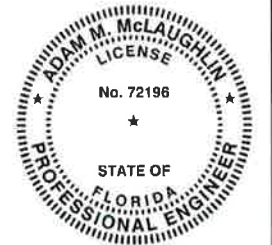
**SIGN TYPE:**  
INT.1  
**FRAME PANEL AND ARTWORK ATTACHMENT CONSTRUCTION DETAILS**

**WELDS:**  
Weld Fillers to be 4043 Aluminum

**HARDWARE:**  
1. All hardware to be type 316 stainless steel, U.N.O.  
2. All hardware to be tamper proof



**STRUCTURAL DESIGN ONLY**



GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
2. Welds shall be ground and smoothed to match the adjacent surfaces.
3. All hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. All sign surfaces shall be treated with Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M Approved reflective material.

ENVIRONMENTS & EXPERIENCES

**merJe**

120 North Church Street  
Suite 208  
West Chester, PA 19380  
T 484.266.0648  
[www.merjedesign.com](http://www.merjedesign.com)

CLIENT / PROJECT  
**Downtown Miami  
City of Miami, Florida**

SUBCONSULTANT

DATE 10 December 2010

DRAWN BY: PR

REVISIONS  
04/20/2012 PR  
11/30/2012 GS  
08/16/2013 GS  
03/12/2014 PR  
05/02/2014 PR

PROJECT NO.

SHEET TITLE

**INT.1  
Frame Panel Attachment  
Details**

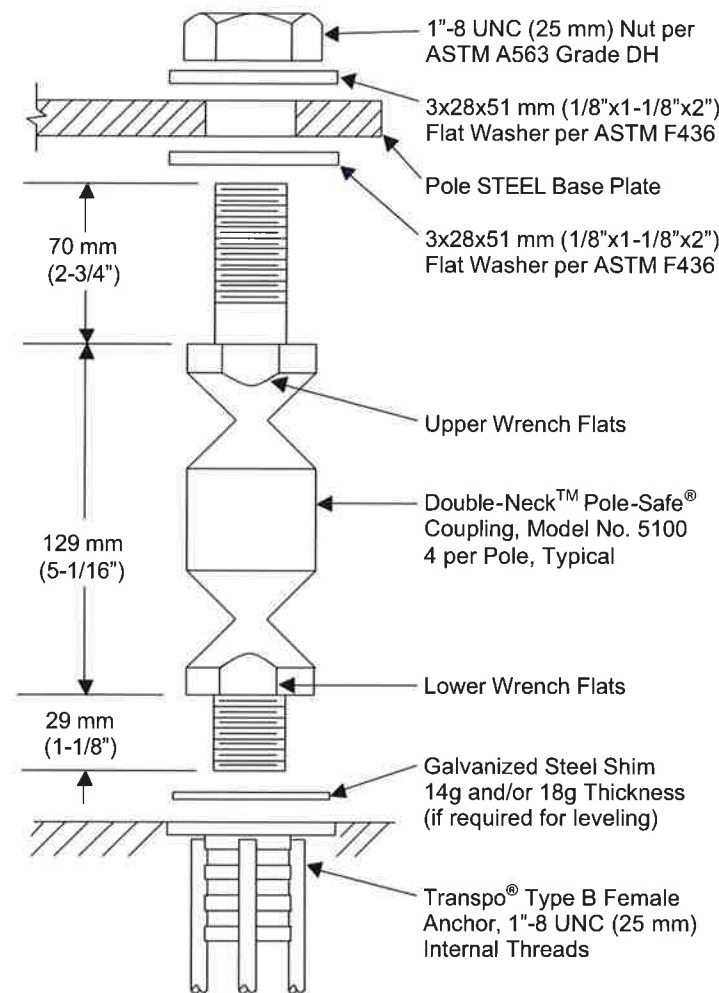
SHEET NO.

**F.9**

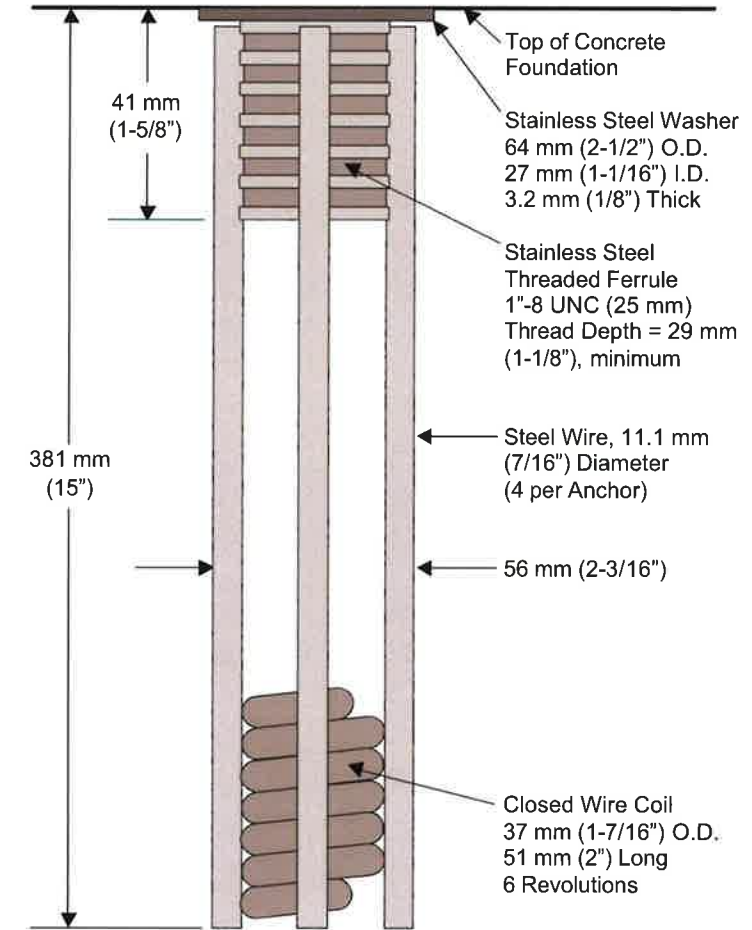
The design of the fabricator is responsible for and the design shall be approved by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

**G. Footers**

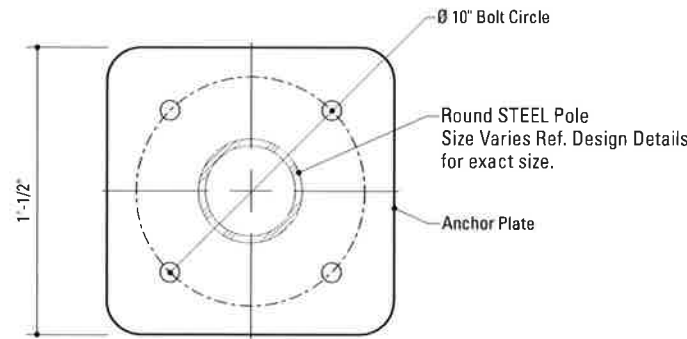
**STRUCTURAL DESIGN ONLY**



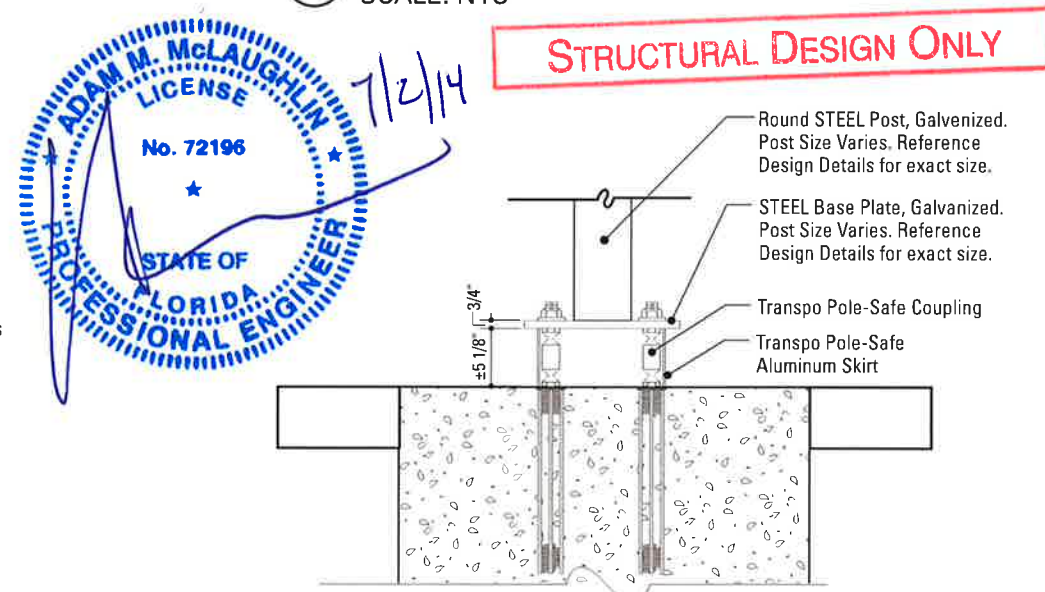
**1** POLE-SAFE SERIES 5100 BREAKAWAY ASSEMBLY  
SCALE: NTS



**2** TRANSPO TYPE B FEMALE ANCHOR  
SCALE: NTS



**3** Anchor Plate Detail  
SCALE: 1 1/2" = 1'-0"



**4** Assembled Section View  
SCALE: 3/4" = 1'-0"

**ADAM M. McLAUGHLIN**  
LICENSE  
No. 72196  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER

**STRUCTURAL DESIGN ONLY**

7/2/14

**SPECIFICATIONS**

**SIGN TYPES:**  
VDIR.2  
VDIR.2-LEFT  
VDIR.3  
VDIR.3-LEFT

The Contractor shall be familiar with all site conditions and shall be responsible for all underground utility checks.

The Contractor shall be familiar with all basement/vault locations by obtaining plans from the City of Miami Department of Public Works.

Where a basement/vault interferes with a proposed location. The sign shall be relocated to a location deemed appropriate by the City of Miami Department of Public Works

Where relocation is not an option the Contractor will develop the appropriate mounting/footer solution at no additional charge. The solution shall meet all engineering criteria as established by the standard footings. (i.e. windloads)

**The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.**

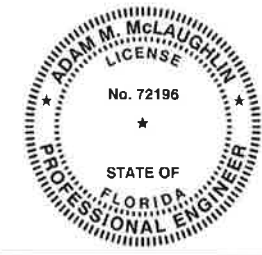
**NOTE:**  
1) SOIL IS AVERAGE WITH MAXIMUM ALLOWABLE SOIL PRESSURE OF 2,000 POUNDS PER SQUARE FOOT. (ASSUMED).

2) CONCRETE STRENGTH AT 28 DAYS F'C=4,000 PSI REINFORCEMENT SHALL BE ASTM A615, FY=60,000 PSI

3) FOLLOW 2008 FDOT DESIGN STANDARDS FOR MATERIAL AND CONSTRUCTION INFORMATION FOR THE SIGN POST BASES AND FOUNDATIONS NOT OTHERWISE SPECIFIED IN THESE CONTRACT DRAWINGS

4) FOR SIGN POST SIZES REFER TO THE DESIGN INTENT DRAWING SHEETS, CONTRACTOR TO VERIFY APPROPRIATE STRUCTURAL POST SIZE REQUIREMENTS.

5) FOUNDATION SIZES MAY BE REDUCED BASED ON SIGN SPECIFIC LOADING CRITERIA. FABRICATORS STRUCTURAL ENGINEER TO VERIFY.

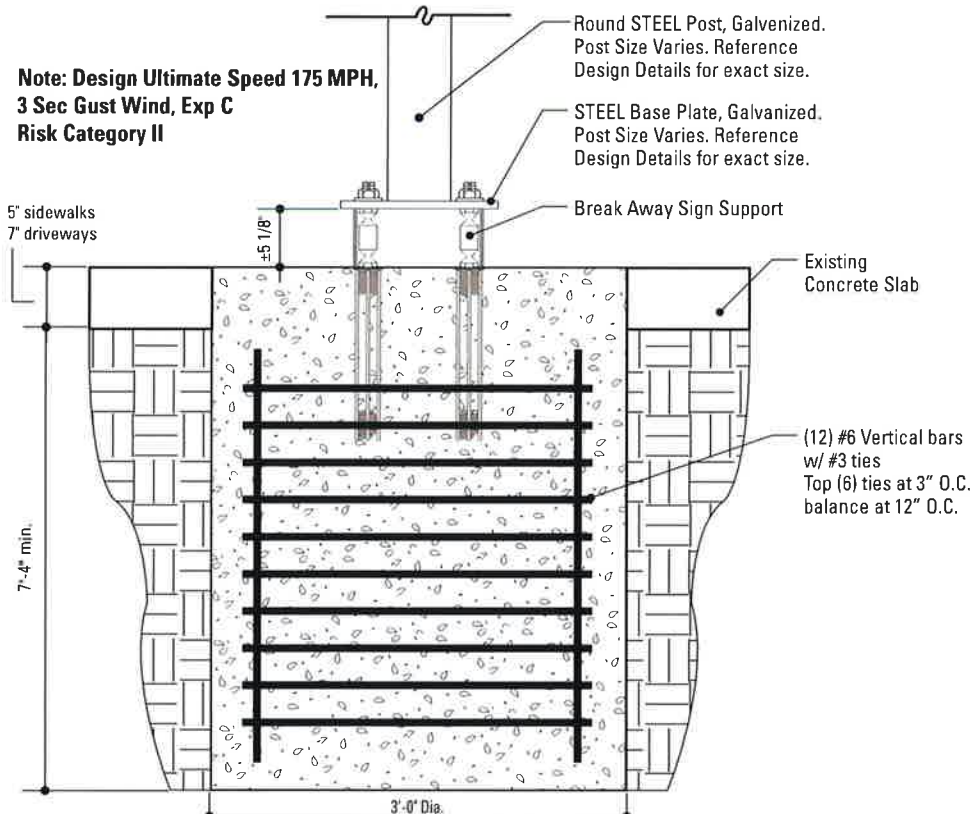


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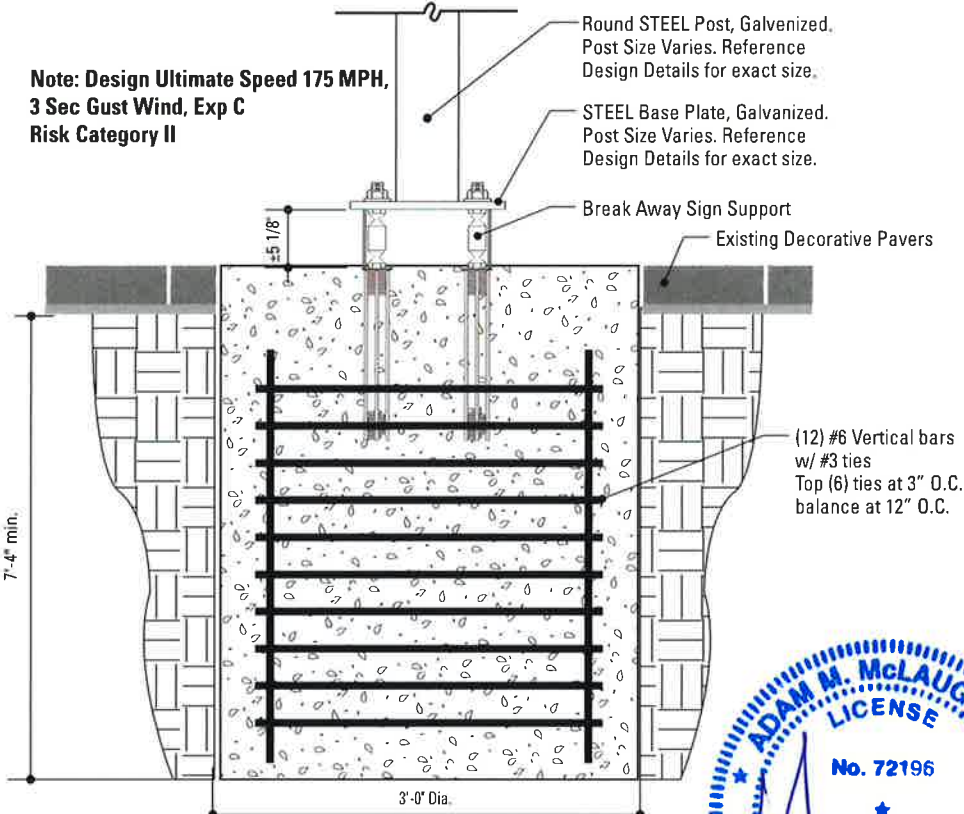
**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
2. Welds: All welds shall be ground smooth, paint all seams.
3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

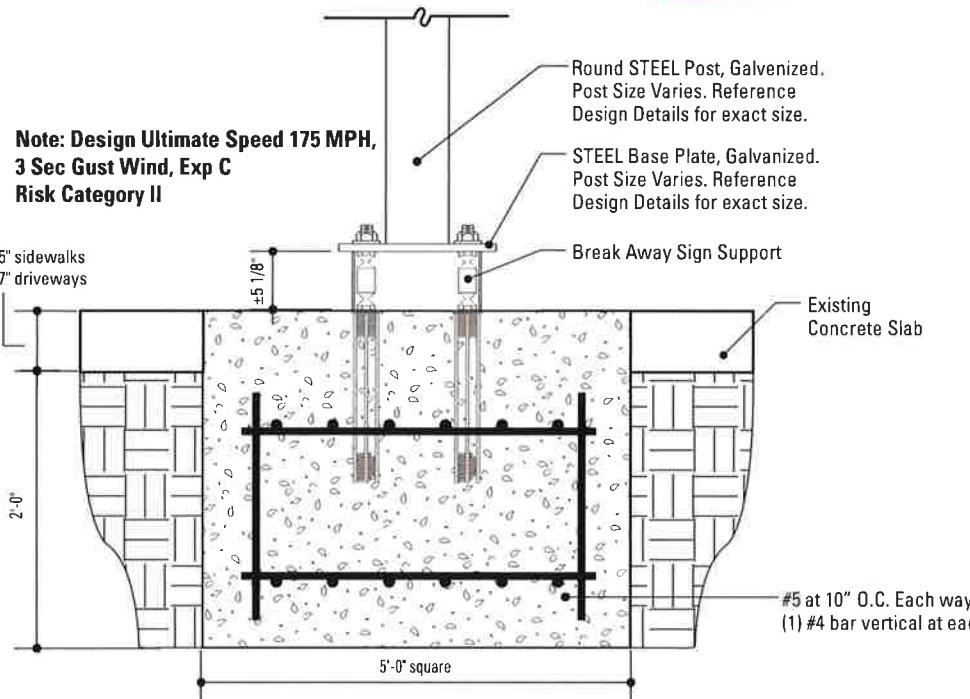
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
<p>120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.marjedesign.com">www.marjedesign.com</a></p>		<p><b>Downtown Miami</b> City of Miami, Florida</p>
SUBCONSULTANT		PROJECT NO.
DATE	DRAWN BY:	SHEET TITLE
10 December 2010	PR	
REVISIONS		
04/20/2012	PR	
11/30/2012	GS	
08/16/2013		SHEET NO.
03/12/2014		
05/02/2014		
<p><b>Breakaway Footer Details</b> <b>Pole-Safe Model 5100</b></p>		<b>G.1</b>



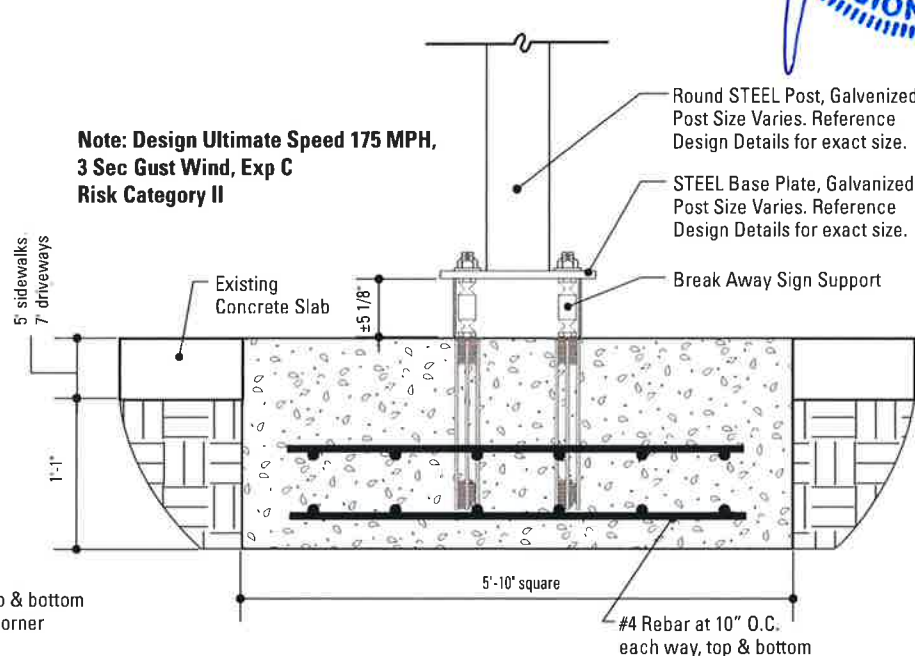
**1** Section View: Foundation @ Concrete  
SCALE: 3/4" = 1'-0"



**2** Section View: Foundation @ Pavers  
SCALE: 3/4" = 1'-0"

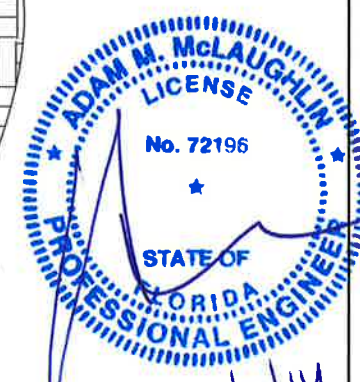


**3** Section View: Foundation: Shallow Depth  
SCALE: 3/4" = 1'-0"



**4** Section View: Foundation: Extremely Shallow Depth  
SCALE: 3/4" = 1'-0"

**STRUCTURAL DESIGN ONLY**



**SPECIFICATIONS**

**SIGN TYPES:**  
VDIR.2  
VDIR.2-LEFT  
VDIR.3  
VDIR.3-LEFT

The Contractor shall be familiar with all site conditions and shall be responsible for all underground utility checks.

The Contractor shall be familiar with all basement/vault locations by obtaining plans from the City of Miami Department of Public Works.

Where a basement/vault interferes with a proposed location. The sign shall be relocated to a location deemed appropriate by the City of Miami Department of Public Works

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**The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.**

**NOTE:**  
1) SOIL IS AVERAGE WITH MAXIMUM ALLOWABLE SOIL PRESSURE OF 2,000 POUNDS PER SQUARE FOOT. (ASSUMED).

2) CONCRETE STRENGTH AT 28 DAYS F'C=4,000 PSI REINFORCEMENT SHALL BE ASTM A615, FY=60,000 PSI

3) FOLLOW 2008 FDOT DESIGN STANDARDS FOR MATERIAL AND CONSTRUCTION INFORMATION FOR THE SIGN POST BASES AND FOUNDATIONS NOT OTHERWISE SPECIFIED IN THESE CONTRACT DRAWINGS

4) FOR SIGN POST SIZES REFER TO THE DESIGN INTENT DRAWING SHEETS, CONTRACTOR TO VERIFY APPROPRIATE STRUCTURAL POST SIZE REQUIREMENTS.

5.) FOUNDATION SIZES MAY BE REDUCED BASED ON SIGN SPECIFIC LOADING CRITERIA. FABRICATORS STRUCTURAL ENGINEER TO VERIFY.



GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
- 2.
3. Welds: All welds shall be ground smooth on both the inside and outside surfaces. Hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. All signs shall be treated with Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

**ENVIRONMENTS & EXPERIENCES**

**merJe**

120 North Church Street  
Suite 208  
West Chester, PA 19380  
T 484.266.0648  
[www.merjedesign.com](http://www.merjedesign.com)

**CLIENT / PROJECT**

**Downtown Miami**  
City of Miami, Florida

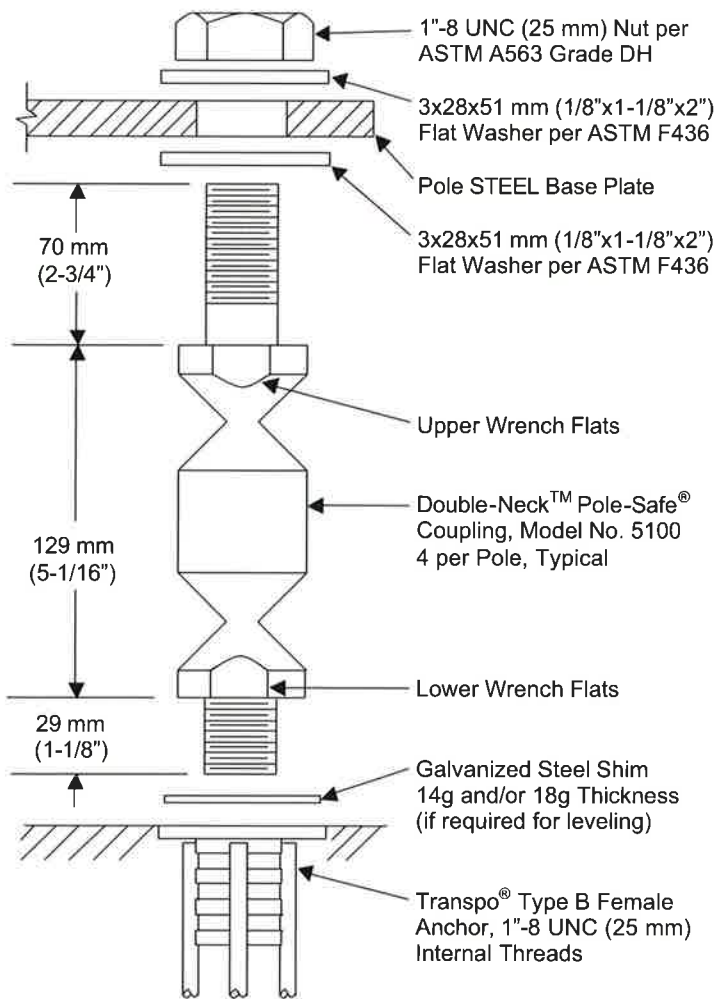
**PROJECT NO.**

<b>SUBCONSULTANT</b>		<b>SHEET TITLE</b>	
<b>DATE</b>	10 December 2010	<b>DRAWN BY:</b>	PR
<p><small>The design fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.</small></p>		<b>REVISIONS</b>	
		04/20/2012	PR
		11/30/2012	GS
		08/16/2013	GS
03/12/2014	PR	<b>SHEET NO.</b>	
05/02/2014	PR	<b>G.2</b>	

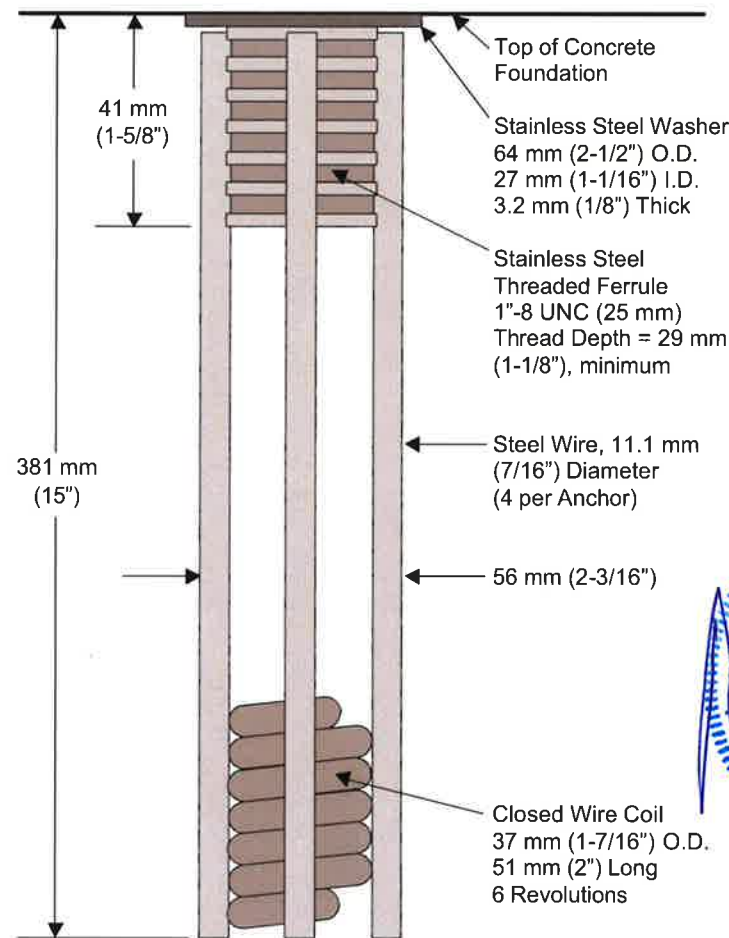
**Breakaway Footer Details**

**Pole-Safe Model 5100**





**1** POLE-SAFE SERIES 5100 BREAKAWAY ASSEMBLY  
SCALE: NTS



**2** TRANSPO TYPE B FEMALE ANCHOR  
SCALE: NTS



**SPECIFICATIONS**

**SIGN TYPES:  
KIOSK.1  
KIOSK.2  
INT.1**

The Contractor shall be familiar with all site conditions and shall be responsible for all underground utility checks.

The Contractor shall be familiar with all basement/vault locations by obtaining plans from the City of Miami Department of Public Works.

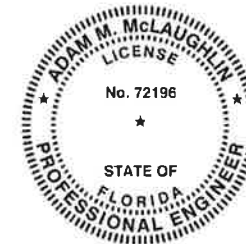
Where a basement/vault interferes with a proposed location. The sign shall be relocated to a location deemed appropriate by the City of Miami Department of Public Works

Where relocation is not an option the Contractor will develop the appropriate mounting/footer solution at no additional charge. The solution shall meet all engineering criteria as established by the standard footings. (i.e. windloads)

**The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.**

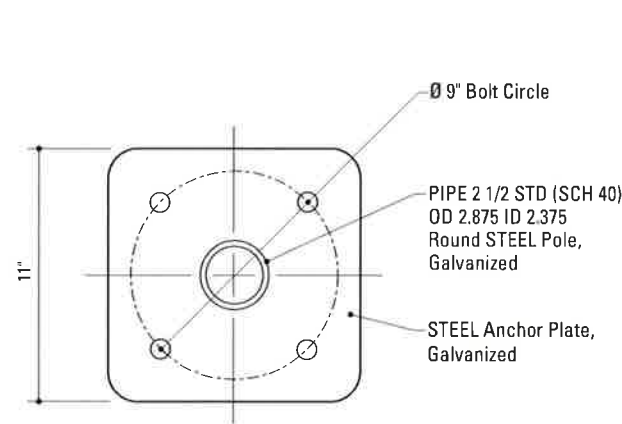
**NOTE:**

- 1) SOIL IS AVERAGE WITH MAXIMUM ALLOWABLE SOIL PRESSURE OF 2,000 POUNDS PER SQUARE FOOT. (ASSUMED).
- 2) CONCRETE STRENGTH AT 28 DAYS F'C=4,000 PSI REINFORCEMENT SHALL BE ASTM A615, FY=60,000 PSI
- 3) FOLLOW 2008 FDOT DESIGN STANDARDS FOR MATERIAL AND CONSTRUCTION INFORMATION FOR THE SIGN POST BASES AND FOUNDATIONS NOT OTHERWISE SPECIFIED IN THESE CONTRACT DRAWINGS
- 4) FOR SIGN POST SIZES REFER TO THE DESIGN INTENT DRAWING SHEETS, CONTRACTOR TO VERIFY APPROPRIATE STRUCTURAL POST SIZE REQUIREMENTS.
- 5) FOUNDATION SIZES MAY BE REDUCED BASED ON SIGN SPECIFIC LOADING CRITERIA. FABRICATORS STRUCTURAL ENGINEER TO VERIFY.

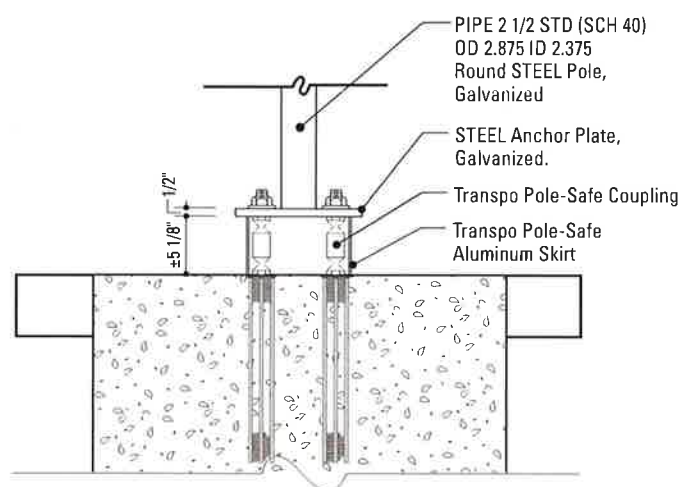


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**STRUCTURAL DESIGN ONLY**

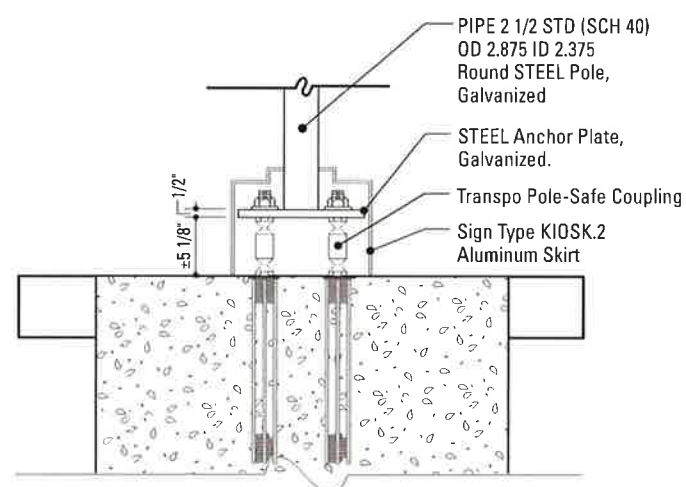


**3** Anchor Plate Detail  
SCALE: 1 1/2" = 1'-0"



**NOTE: SEE DWG. G.4 FOR FOUNDATION DETAILS**

**4** Assembled Section View  
SCALE: 3/4" = 1'-0"



**NOTE: SEE DWG. G.4 FOR FOUNDATION DETAILS**

**5** Assembled Section View  
SCALE: 3/4" = 1'-0"

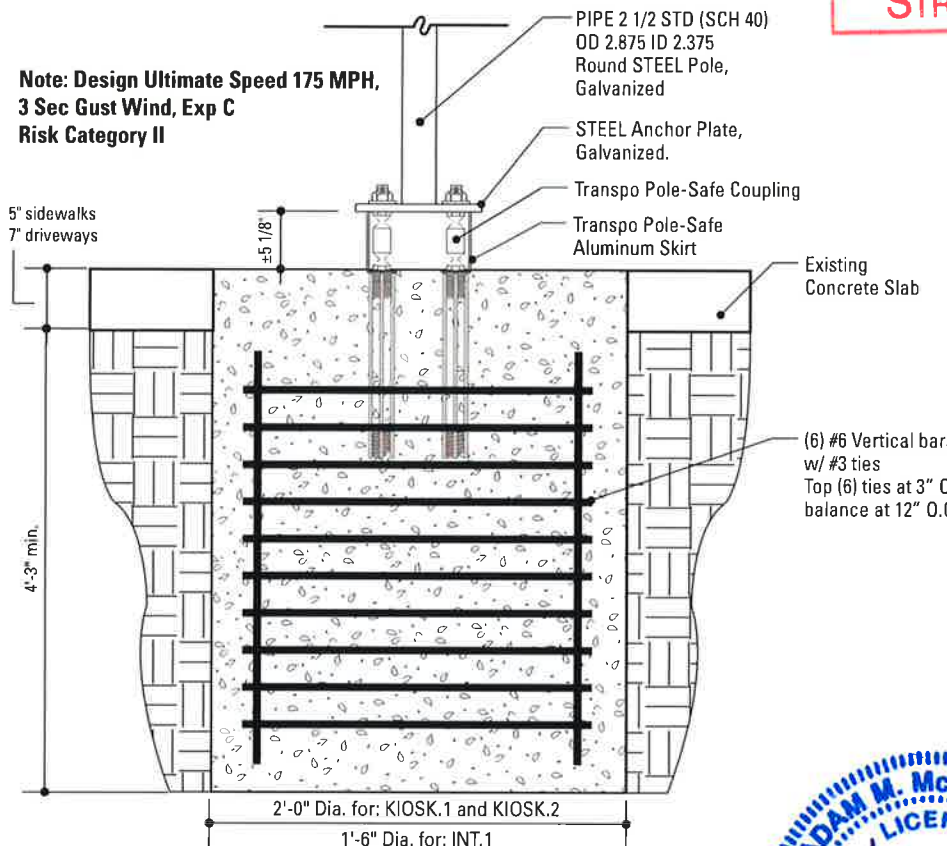
**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
- 2.
3. ~~Welds~~ All fasteners and mounting hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. ~~Approved Sign Fabricator to be used~~ Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

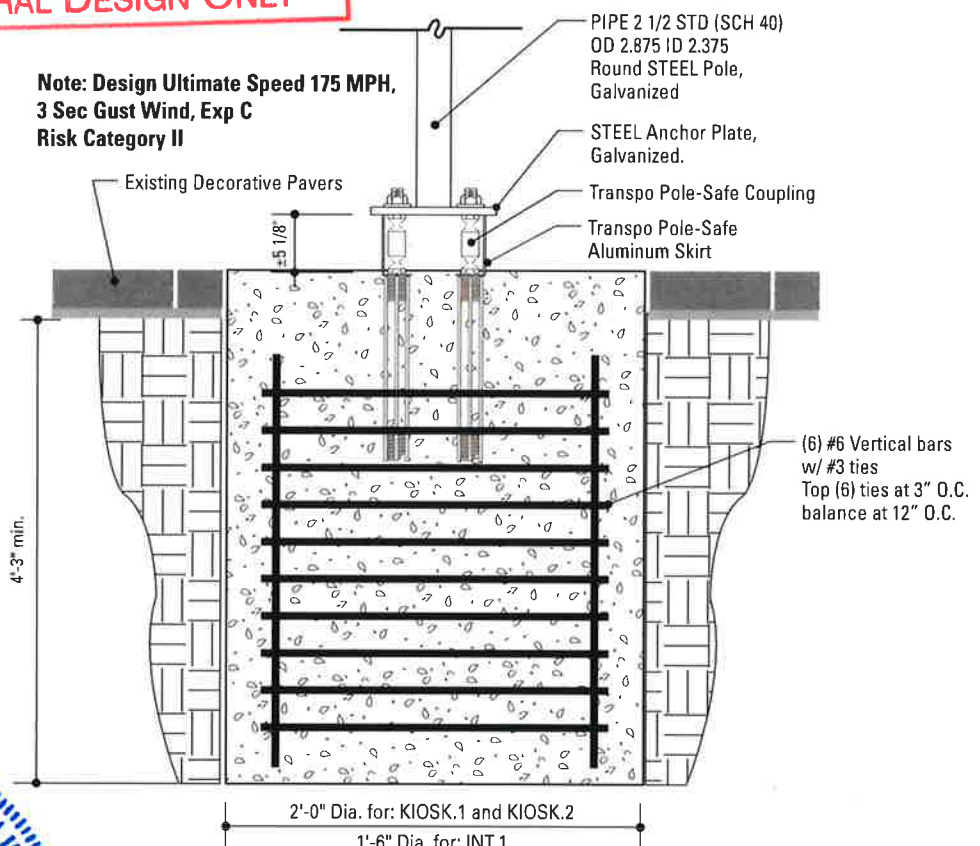
ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
 120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		Downtown Miami City of Miami, Florida
		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	DRAWN BY:	<b>Breakaway Footer Details</b>  <b>Pole-Safe Model 5100 Steel Pipe 2 1/2" STD</b>
10 December 2010	PR	
REVISIONS		
04/20/2012	PR	
11/30/2012	GS	
		SHEET NO.
		<b>G.3</b>

If the fabricator proposes means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

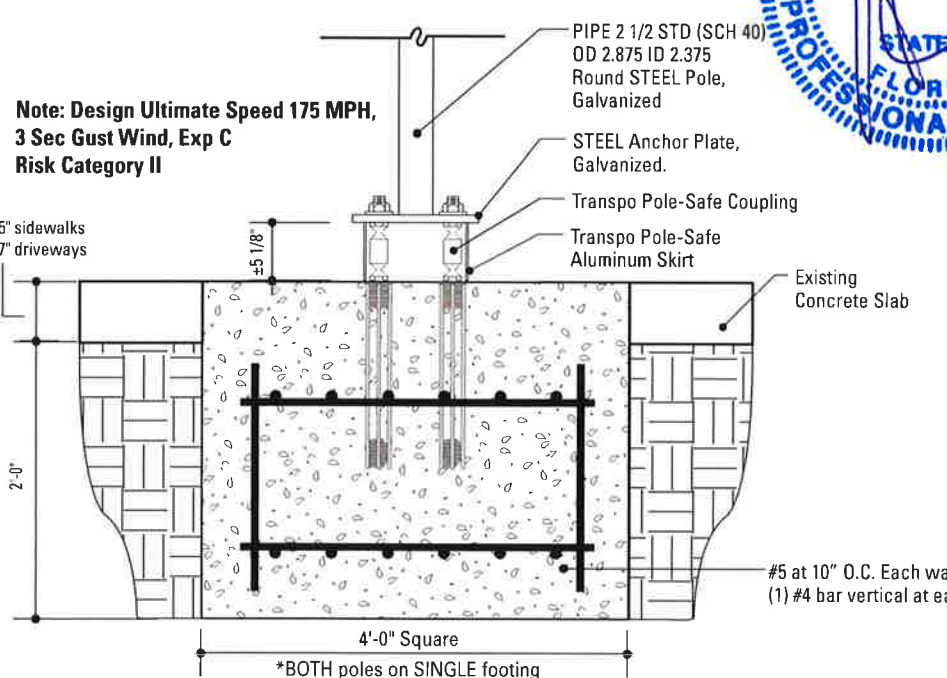
**STRUCTURAL DESIGN ONLY**



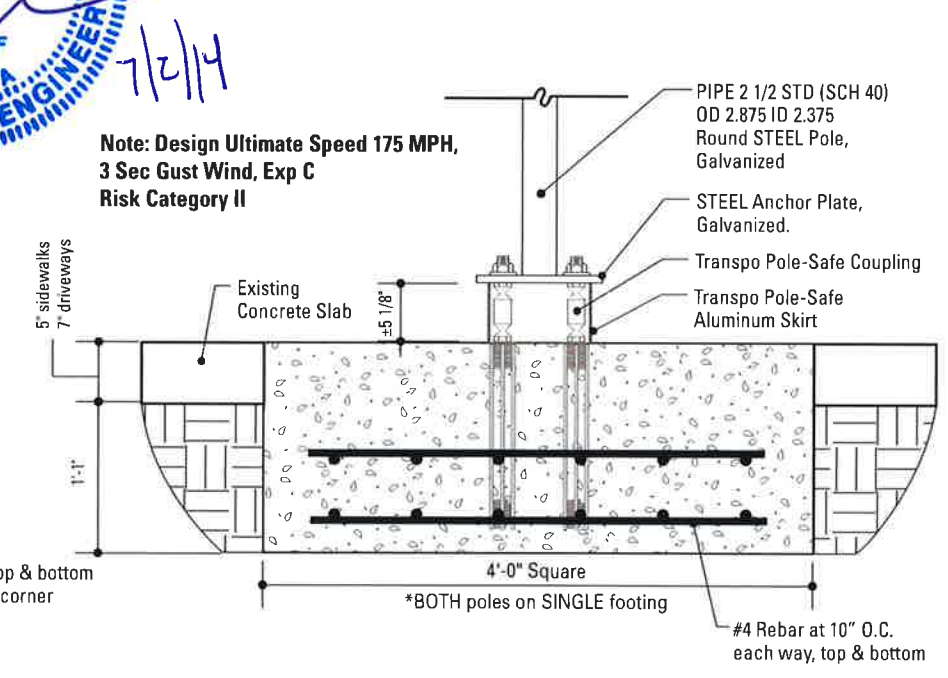
**1** Section View: Foundation @ Concrete  
SCALE: 3/4" = 1'-0"



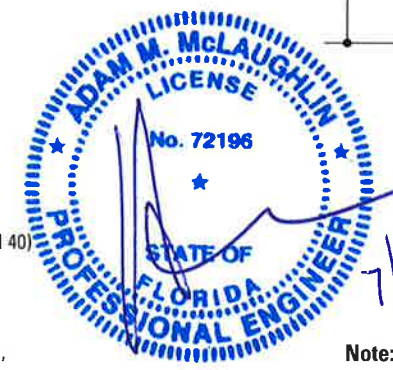
**2** Section View: Foundation @ Pavers  
SCALE: 3/4" = 1'-0"



**3** Section View: Foundation: Shallow Depth  
SCALE: 3/4" = 1'-0"



**4** Section View: Foundation: Extremely Shallow Depth  
SCALE: 3/4" = 1'-0"



7/2/14

**SPECIFICATIONS**

**SIGN TYPES:**  
KIOSK.1  
KIOSK.2  
INT.1

The Contractor shall be familiar with all site conditions and shall be responsible for all underground utility checks.

The Contractor shall be familiar with all basement/vault locations by obtaining plans from the City of Miami Department of Public Works.

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**NOTE:**  
1) SOIL IS AVERAGE WITH MAXIMUM ALLOWABLE SOIL PRESSURE OF 2,000 POUNDS PER SQUARE FOOT. (ASSUMED).

2) CONCRETE STRENGTH AT 28 DAYS F'C=4,000 PSI REINFORCEMENT SHALL BE ASTM A615, FY=60,000 PSI

3) FOLLOW 2008 FDOT DESIGN STANDARDS FOR MATERIAL AND CONSTRUCTION INFORMATION FOR THE SIGN POST BASES AND FOUNDATIONS NOT OTHERWISE SPECIFIED IN THESE CONTRACT DRAWINGS

4) FOR SIGN POST SIZES REFER TO THE DESIGN INTENT DRAWING SHEETS, CONTRACTOR TO VERIFY APPROPRIATE STRUCTURAL POST SIZE REQUIREMENTS.

5.) FOUNDATION SIZES MAY BE REDUCED BASED ON SIGN SPECIFIC LOADING CRITERIA. FABRICATORS STRUCTURAL ENGINEER TO VERIFY.



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**NOTES**

- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
- 
- Hardware: All casters, bolts, nuts, washers, and other hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
- Approved sign materials to include: Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

**ENVIRONMENTS & EXPERIENCES**

**merJe**  
120 North Church Street  
Suite 208  
West Chester, PA 19380  
T 484.266.0648  
[www.merjedesign.com](http://www.merjedesign.com)

CLIENT / PROJECT  
**Downtown Miami  
City of Miami, Florida**

**SUBCONSULTANT**

DATE	10 December 2010	DRAWN BY:	PR
If the project fabricator is responsible for providing shop drawings, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.	REVISIONS	04/20/2012	PR
		11/30/2012	GS
		08/16/2013	GS
		03/12/2014	PR
		05/02/2014	PR

**PROJECT NO.**

**SHEET TITLE**

**Breakaway Footer  
Details  
Pole-Safe Model 5100  
Steel Pipe 2 1/2" STD**

**SHEET NO.**

**G.4**

**PARTS LIST**

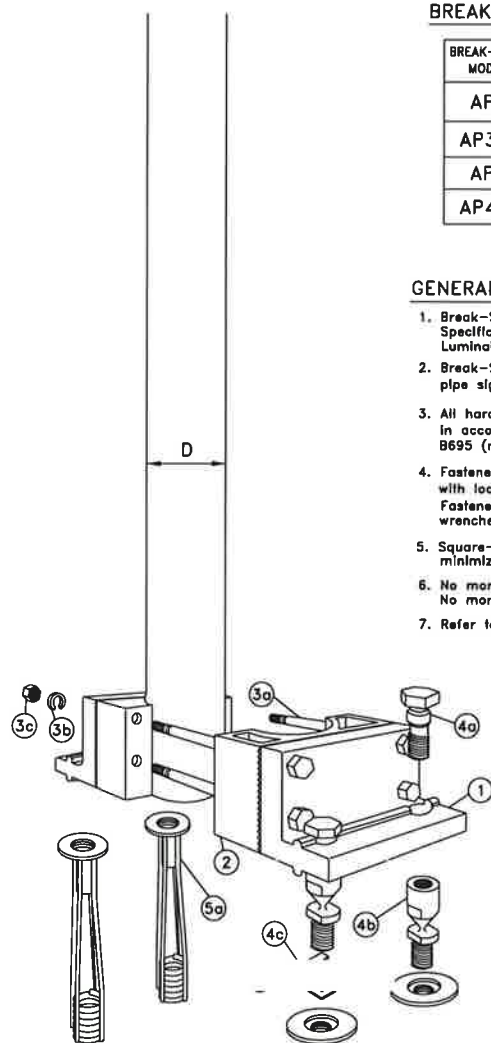
ITEM	DESCRIPTION	SIZE/SPECIFICATIONS	QTY/POST	PART NUMBER
1	Bracket, Type AP3, AP3.5, AP4, AP4.5	6061-T6 Aluminum	2	SBAK6172, 6173, 6174
2	Bracket Adaptor, Type AP3, AP3.5, AP4, AP4.5	6061-T6 Aluminum	2	SBADP30, 35, 40, 45
3	Bracket Hardware Assembly, Type AP3, AP3.5, AP4, AP4.5, Includes:			
3a	Bolt	12.7mm(1/2")-13UNC, Hex Head, ASTM A325, Galv. ASTM A153	4	
3b	Lock Washer	12.7mm(1/2"), ANSI B18-21-1, Galv. ASTM A153	4	
3c	Nut	12.7mm(1/2")-13UNC, Heavy Hex, ASTM A563 Gr. DH, Galv. ASTM A153	4	
4	Coupling & Special Bolt Assembly, Type A, Includes:			
4a	Special Bolt	15.9mm(5/8")-11UNC, ASTM A449, Galv. ASTM A153/B695	4	
4b	Coupling	15.9mm(5/8")-11UNC, LP, AMS 6378D, Galv. ASTM A153, Polyester Coat	4	
4c	Shim	15.9mm(5/8") Horseshoe, 14 Gauge, Galv. Steel Sheet	2	
4d	Shim	15.9mm(5/8") Horseshoe, 18 Gauge, Galv. Steel Sheet	2	
5	Anchor Assembly, Type A, Includes:			
5a	Anchor	15.9mm(5/8")-11UNC, 304 S.S. Ferrule, AISI 1045 Rod, AISI 1008 Coll	4	SBAAPK

**BREAK-SAFE MODEL AP SELECTION TABLE**

BREAK-SAFE MODEL	OUTSIDE PIPE DIAMETER (D)	NOMINAL SCH. 40 PIPE SIZE
AP3	76 mm (3")	-
AP3.5	89 mm (3-1/2")	76 mm (3")
AP4	102 mm (4")	89 mm (3-1/2")
AP4.5	114 mm (4-1/2")	102 mm (4")

**GENERAL NOTES:**

1. Break-Safe meets all requirements of "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals."
2. Break-Safe Model AP is designed to fit steel or aluminum round pipe signposts. See table above for pipe sizes.
3. All hardware items are American Standard sizes, galvanized in accordance with ASTM A153 (hot dipped) or ASTM B695 (mechanically applied).
4. Fasteners, except for special bolt and coupling, are installed with lockwashers, and do not have specific torque requirements. Fasteners should be secured as tight as possible with conventional wrenches, unless noted otherwise.
5. Square-up and level individual components, particularly Anchors to minimize the need for shimming between the Couplings and Anchors.
6. No more than two shims shall be placed under any one coupling. No more than three shims underneath any pair of couplings.
7. Refer to other side of page for complete installation instructions.



Patent Nos. 4,528,786 and 5,596,845

**TRANSPO** 20 Jones Street  
New Rochelle, NY 10801  
914-636-1000  
The Smart Solutions Company www.transpo.com

**Break-Safe Model AP**  
Breakaway Support System for Sign Posts

Scale: Not To Scale Date: November 2000  
Drawing No. BS-AP-1 of 2

**INSTALLATION INSTRUCTIONS**

**ANCHOR ASSEMBLY:**

- Note: Precise positioning of the anchors is critical to proper assembly of the system. It is recommended that actual posts be used to locate the correct position of the anchors.
1. Fabricate a flat, rigid template with four (4) 16mm (5/8") diameter holes located to match the specified anchor pattern of the Break-Safe Brackets attached to the signpost. See diagram below.
  2. Attach four (4) Transpo Type A Female Anchors to the template using four (4) 16mm (5/8") diameter bolts. Ensure that each Anchor Washer is snug against the bottom of the template.
  3. Lower Anchor Assembly into fresh concrete foundation, and vibrate into position such that the tops of the Anchor Washers are flush with the finished top surface of the foundation. Support the template such that all Anchors are level and in their proper locations.
  4. Allow concrete to cure, and then remove the bolts and template from the top of the foundation.

**BRACKET ASSEMBLY:**

1. Place Bracket Adaptors and Brackets squarely on the bottom of the post, such that the lower end of the post is flush with the bottom of both Bracket Adaptors.
2. Secure the Bracket assembly with bolts, lock washers, and nuts. Then, tighten all 1/2 turn beyond snug.

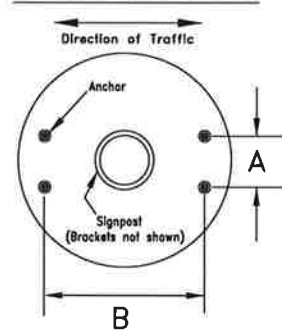
**COUPLING ASSEMBLY:**

1. Thread four (4) Break-Safe Couplings into Anchors. Do not tighten.
2. Suspend post assembly over foundation, Insert Special Bolts through holes in the Brackets, and thread them snug into the Couplings.
3. If post is not plumb, Insert Shims (14g and/or 18g) between the Couplings and Anchors, where needed.
4. Use lower wrench flats to tighten Couplings into Anchors as tight as possible using a conventional wrench. Do not use a pipe wrench. Couplings must be seated squarely.
5. Tighten Special Bolts while holding Couplings by the upper wrench flats with an additional wrench to prevent an induced torque stress across the necked portion of the Coupling. All Special Bolts shall also be tightened as tight as possible using conventional wrenches.

**SIGN PANEL ASSEMBLY:**

1. After all signposts are secured in place, attach sign panel assembly to posts in accordance with the sign manufacturer's recommendations.

**PLAN VIEW OF TYPICAL FOUNDATION**



**BREAK-SAFE MODEL AP ANCHOR SPACING**

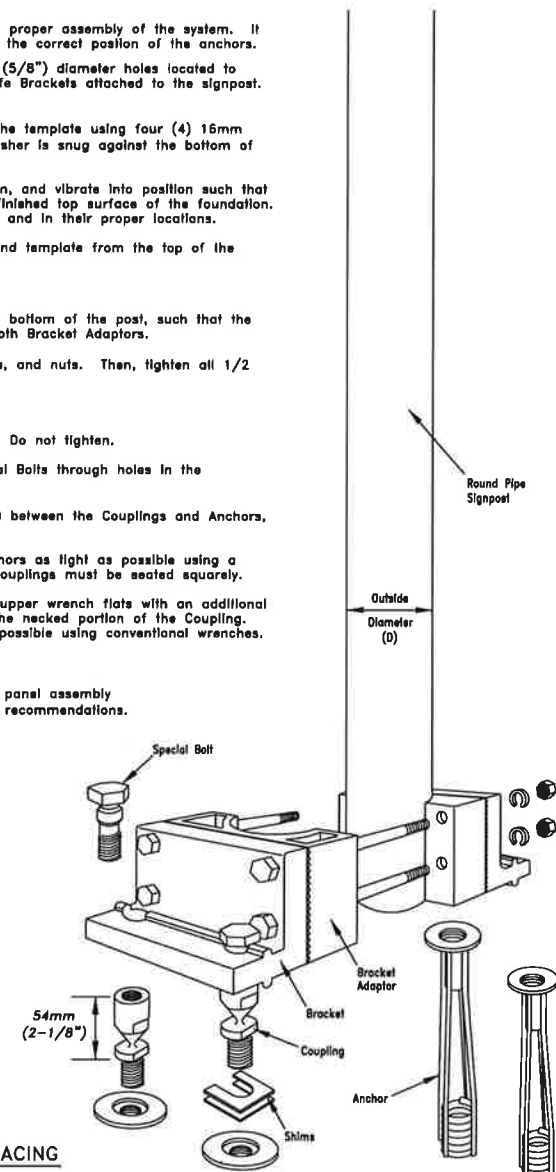
BREAK-SAFE MODEL	POST OUTSIDE DIAMETER (D)	NOMINAL PIPE SIZE	A	B
AP3	89 mm (3-1/2")	76 mm (3")	70 mm (2-3/4")	202 mm (7-15/16")
AP3.5	89 mm (3-1/2")	76 mm (3")	70 mm (2-3/4")	202 mm (7-15/16")
AP4	102 mm (4")	89 mm (3-1/2")	83 mm (3-1/4")	227 mm (8-15/16")
AP4.5	114 mm (4-1/2")	102 mm (4")	83 mm (3-1/4")	227 mm (8-15/16")

Patent Nos. 4,528,786 and 5,596,845

**TRANSPO** 20 Jones Street  
New Rochelle, NY 10801  
914-636-1000  
The Smart Solutions Company www.transpo.com

**Break-Safe Model AP**  
Breakaway Support System for Sign Posts

Scale: Not To Scale Date: October 2004  
Drawing No. BS-AP-1 of 2



**ADAM M. McLAUGHLIN**  
LICENSE  
No. 72196  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
7/2/14

**STRUCTURAL DESIGN ONLY**

**SPECIFICATIONS**

**SIGN TYPES:  
DISTRICT-ID.3**

- VDIR.1
- VDIR.1-LEFT
- VDIR.4-5
- PARK.1A
- PARK.2
- PDIR.1-2
- DEST.1-2

**PERFORMANCE CRITERIA:**

1. Double-Neck Pole-Safe meets all requirements of "AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals."
2. Double-Neck Pole-Safe has been crash-tested and FHWA approved in accordance with the requirements of NCHRP Report 350, "Recommended Procedures for the Safety Performance Evaluation of Highway Features."

3. Maximum Allowable Pole Mass = 450 kg (922 lb) (total including fixtures).

**PHYSICAL PROPERTIES PER**

**COUPLING: (Type A)**

1. Ultimate Tensile Strength = 84 kN (18.9 kips), minimum

**CORROSION PROTECTION:**

All Hardware items are American Standard sizes, galvanized in accordance with ASTM A153 (hot dipped).

The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

**ADAM M. McLAUGHLIN**  
LICENSE  
No. 72196  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER

GKM & Associates design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
2. Welds: All welds shall be ground smooth, paint all seams.
3. Hardware: All fasteners shall be concealed. If exposed, hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. All painted sign surfaces to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved UV/Anti-Graffiti overlaminate.

**ENVIRONMENTS & EXPERIENCES**

**merJe**  
120 North Church Street  
Suite 208  
West Chester, PA 19380  
T 484.266.0648  
www.merjedesign.com

CLIENT / PROJECT  
**Downtown Miami**  
City of Miami, Florida

**SUBCONSULTANT**

DATE	10 December 2010	DRAWN BY:	PR
REVISIONS			
04/20/2012	PR		
11/30/2012	GS		
08/16/2013	GS		
03/12/2014	PR		
05/02/2014	PR		

**PROJECT NO.**

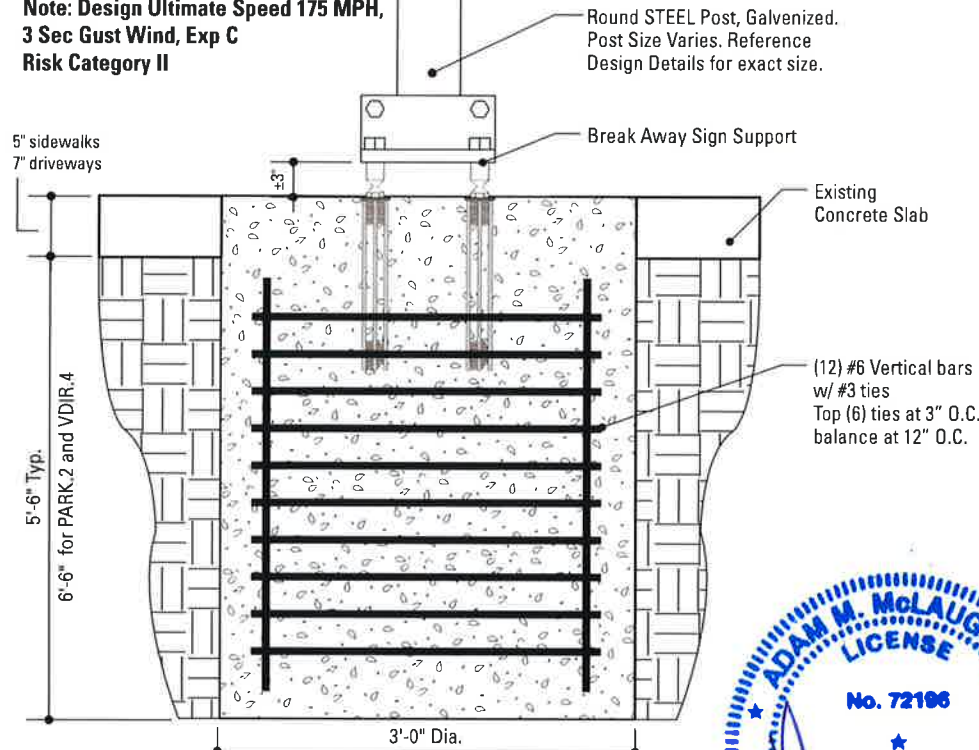
**SHEET TITLE**

**Breakaway Footer Details**  
**Break-Safe Model AP**

**SHEET NO.**

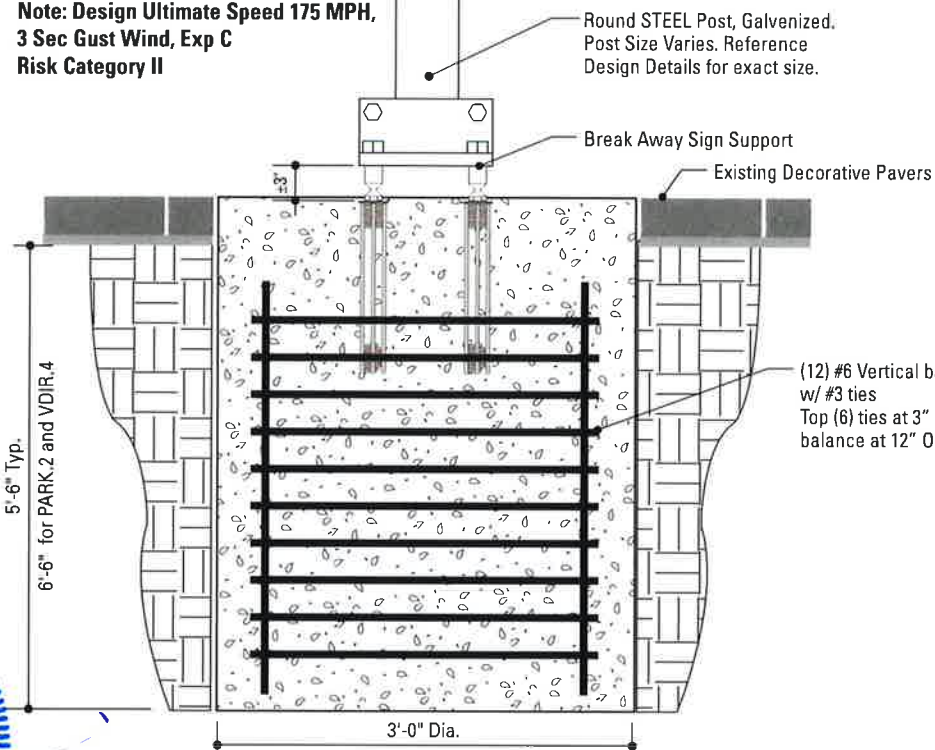
**G.5**

Note: Design Ultimate Speed 175 MPH,  
3 Sec Gust Wind, Exp C  
Risk Category II

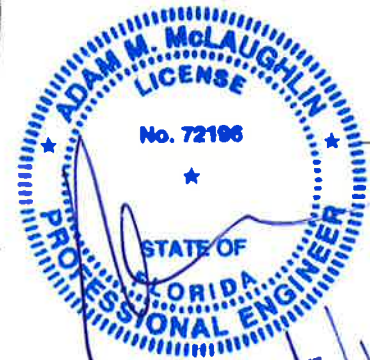


1 Section View: Foundation @ Concrete  
SCALE: 3/4" = 1'-0"

Note: Design Ultimate Speed 175 MPH,  
3 Sec Gust Wind, Exp C  
Risk Category II

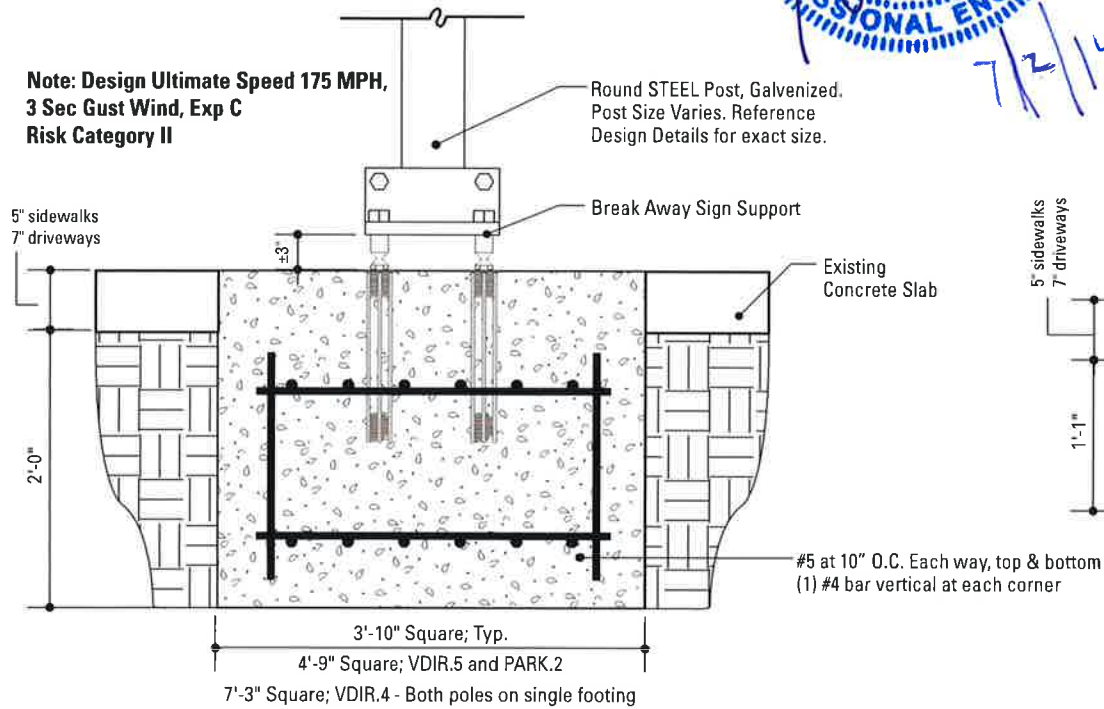


2 Section View: Foundation @ Pavers  
SCALE: 3/4" = 1'-0"



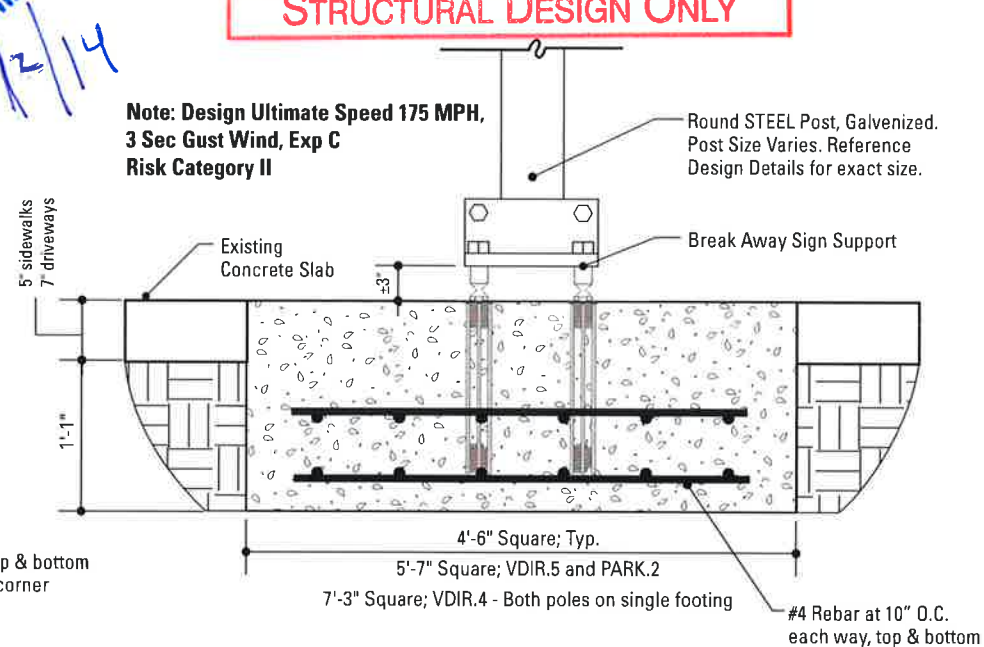
**STRUCTURAL DESIGN ONLY**

Note: Design Ultimate Speed 175 MPH,  
3 Sec Gust Wind, Exp C  
Risk Category II



3 Section View: Foundation: Shallow Depth  
SCALE: 3/4" = 1'-0"

Note: Design Ultimate Speed 175 MPH,  
3 Sec Gust Wind, Exp C  
Risk Category II



4 Section View: Foundation: Extremely Shallow Depth  
SCALE: 3/4" = 1'-0"

**SPECIFICATIONS**

**SIGN TYPES:**  
DISTRICT-ID.3  
VDIR.1  
VDIR.1-LEFT  
VDIR.4-5  
PARK.1A  
PARK.2  
PDIR.1-2  
DEST.1-2

to the level of quality and structural integrity necessary for the projects location.

**NOTE:**

- 1) SOIL IS AVERAGE WITH MAXIMUM ALLOWABLE SOIL PRESSURE OF 2,000 POUNDS PER SQUARE FOOT. (ASSUMED).
- 2) CONCRETE STRENGTH AT 28 DAYS F'C=4,000 PSI REINFORCEMENT SHALL BE ASTM A615, FY=60,000 PSI
- 3) FOLLOW 2008 FDOT DESIGN STANDARDS FOR MATERIAL AND CONSTRUCTION INFORMATION FOR THE SIGN POST BASES AND FOUNDATIONS NOT OTHERWISE SPECIFIED IN THESE CONTRACT DRAWINGS
- 4) FOR SIGN POST SIZES REFER TO THE DESIGN INTENT DRAWING SHEETS. CONTRACTOR TO VERIFY APPROPRIATE STRUCTURAL POST SIZE REQUIREMENTS.
- 5.) FOUNDATION SIZES MAY BE REDUCED BASED ON SIGN SPECIFIC LOADING CRITERIA. FABRICATORS STRUCTURAL ENGINEER TO VERIFY.

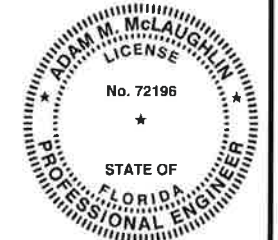
The Contractor shall be familiar with all site conditions and shall be responsible for all underground utility checks.

The Contractor shall be familiar with all basement/vault locations by obtaining plans from the City of Miami Department of Public Works.

Where a basement/vault interferes with a proposed location. The sign shall be relocated to a location deemed appropriate by the City of Miami Department of Public Works

Where relocation is not an option the Contractor will develop the appropriate mounting/footer solution at no additional charge. The solution shall meet all engineering criteria as established by the standard footings. (i.e. windloads)

The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs



GRM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
2. ~~Welds shall be smooth and free of sharp edges.~~
3. ~~Welds shall be smooth and free of sharp edges.~~ Hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. ~~Approved sign surfaces to receive Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M~~

**ENVIRONMENTS & EXPERIENCES**

**merje**

120 North Church Street  
Suite 208  
West Chester, PA 19380  
T 484.266.0648  
[www.merjedesign.com](http://www.merjedesign.com)

CLIENT / PROJECT  
**Downtown Miami  
City of Miami, Florida**

**SUBCONSULTANT**

DATE 10 December 2010

DRAWN BY: PR

**REVISIONS**

- |            |    |
|------------|----|
| 04/20/2012 | PR |
| 11/30/2012 | GS |
| 08/16/2013 | GS |
| 03/12/2014 | PR |
| 05/02/2014 | PR |

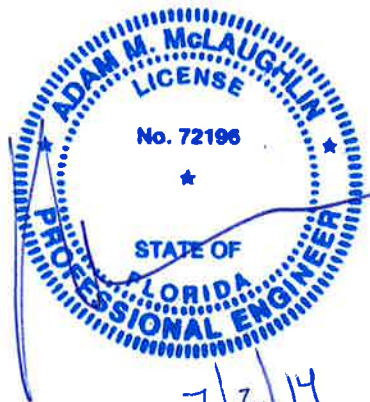
**PROJECT NO.**

**SHEET TITLE**

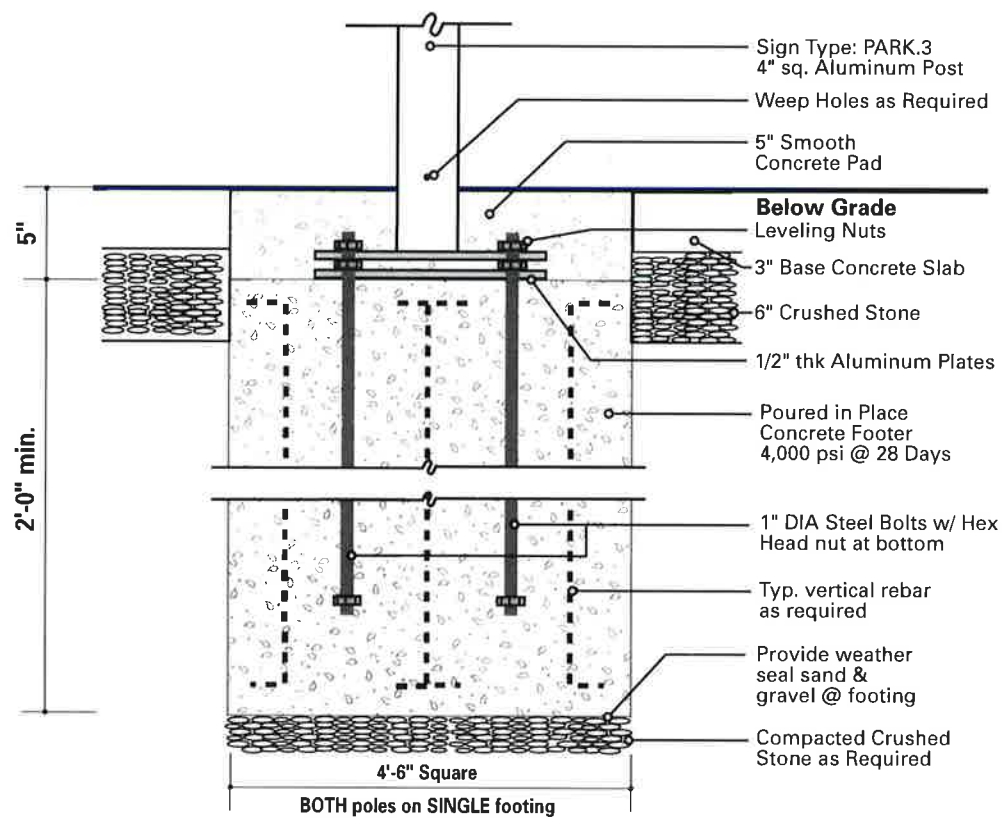
**Breakaway Footer  
Details  
Break-Safe Model AP**

**SHEET NO.**

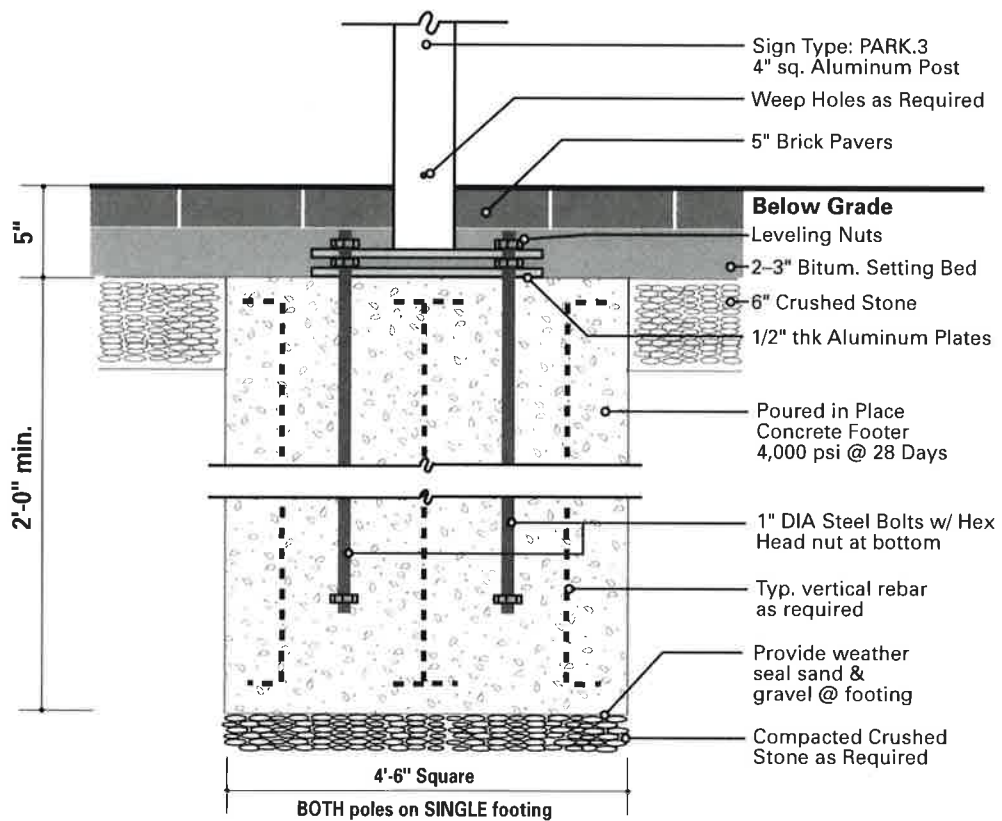
**G.6**



**STRUCTURAL DESIGN ONLY**



**1** Section: Bolt w/ Nut Plate-to-Plate MOUNTING  
Concrete Pavement Surface  
SCALE: 1" = 1' - 0"



**2** Section: Bolt w/ Nut Plate-to-Plate MOUNTING  
Brick Pavers Surface  
SCALE: 1" = 1' - 0"

**SPECIFICATIONS**

**SIGN TYPE: PARK.3**

The Contractor shall be familiar with all site conditions and shall be responsible for all underground utility checks.

The Contractor shall be familiar with all basement/vault locations by obtaining plans from the City of Miami Department of Public Works.

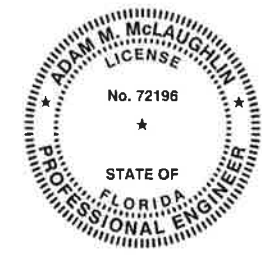
Where a basement/vault interferes with a proposed location. The sign shall be relocated to a location deemed appropriate by the City of Miami Department of Public Works

Where relocation is not an option the Contractor will develop the appropriate mounting/footer solution at no additional charge. The solution shall meet all engineering criteria as established by the standard footings. (i.e. windloads)

**The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.**

**NOTE:**

- 1) SOIL IS AVERAGE WITH MAXIMUM ALLOWABLE SOIL PRESSURE OF 2,000 POUNDS PER SQUARE FOOT. (ASSUMED).
- 2) CONCRETE STRENGTH AT 28 DAYS F'C=4,000 PSI REINFORCEMENT SHALL BE ASTM A615, FY=60,000 PSI
- 3) FOLLOW 2008 FDOT DESIGN STANDARDS FOR MATERIAL AND CONSTRUCTION INFORMATION FOR THE SIGN POST BASES AND FOUNDATIONS NOT OTHERWISE SPECIFIED IN THESE CONTRACT DRAWINGS
- 4) FOR SIGN POST SIZES REFER TO THE DESIGN INTENT DRAWING SHEETS, CONTRACTOR TO VERIFY APPROPRIATE STRUCTURAL POST SIZE REQUIREMENTS.
- 5.) FOUNDATION SIZES MAY BE REDUCED BASED ON SIGN SPECIFIC LOADING CRITERIA. FABRICATORS STRUCTURAL ENGINEER TO VERIFY.



GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
2. All welds shall be ground smooth on both sides.
3. All hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. All painted surfaces to receive Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M approved reflective material.

**ENVIRONMENTS & EXPERIENCES**

**merje**

120 North Church Street  
Suite 208  
West Chester, PA 19380  
T 484.266.0648  
[www.merjedesign.com](http://www.merjedesign.com)

CLIENT / PROJECT

**Downtown Miami  
City of Miami, Florida**

SUBCONSULTANT

PROJECT NO.

DATE 10 December 2010

DRAWN BY: PR

SHEET TITLE

**PARK.3  
Plate-To-Plate  
Footer Details**

REVISIONS

04/20/2012 PR

11/30/2012 GS

08/16/2013 GS

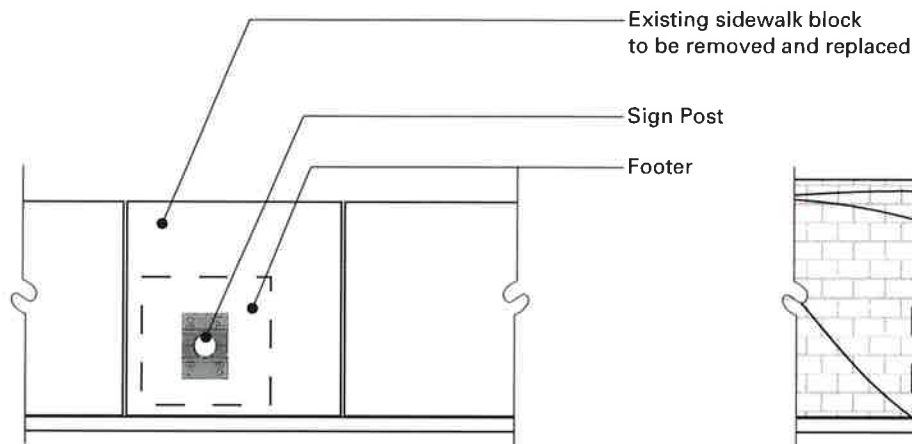
03/12/2014 PR

05/02/2014 PR

SHEET NO.

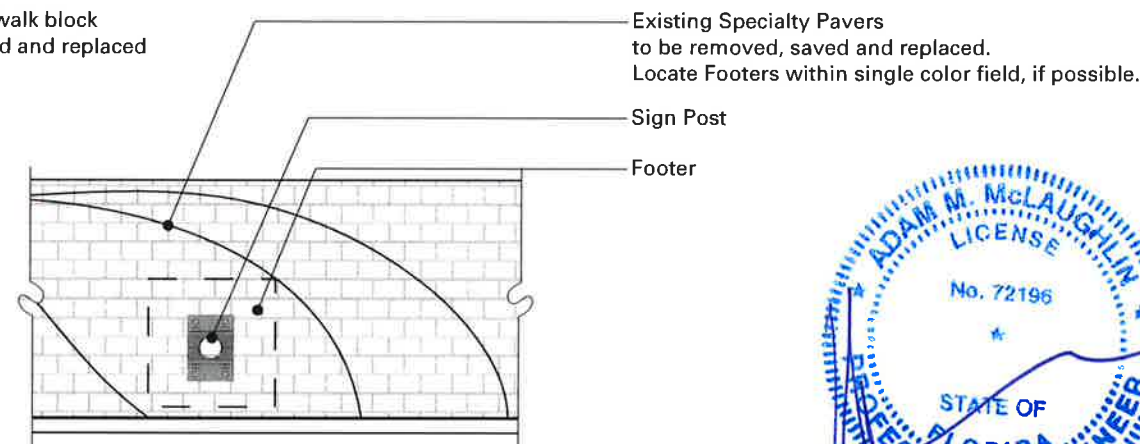
**G.7**

If the contractor fabricator proposes means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.



NOTE: When locating a footer within a single pavement block adjacent to at least 2 expansion joints, the entire block of pavement shall be removed and replaced with the same materials and finish of adjacent sidewalk areas.

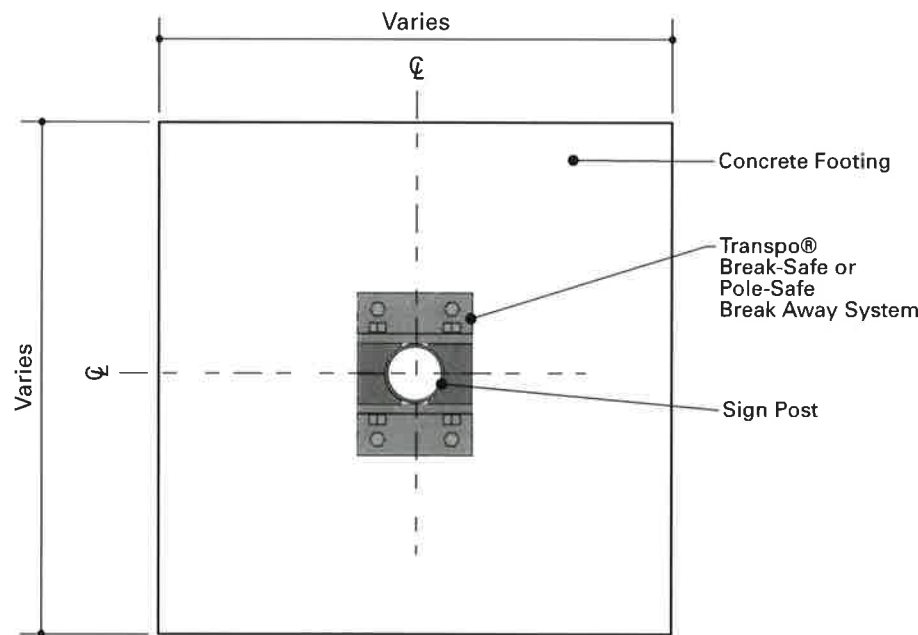
**1** Plan: Footer Placement  
SCALE: NTS



NOTE: The Specialty Pavers located on Biscayne Boulevard between the Arsht Center and the InterContinental Hotel is an ART installation. The Pattern of bricks need to be removed, stored and replaced in the order they were removed. **All installation along this area will need to be coordinated with the City.** Specifications for the Burle Marx Installation are available at the City planning office. **Marking the Sidewalk with Spray Paint will NOT be allowed.**

**3** Plan: Specialty Footer Placement  
SCALE: NTS

**STRUCTURAL DESIGN ONLY**



**2** Plan View: Footer  
SCALE: 1" = 1' - 0"



**4** Plan: Specialty Pavers Reference Image  
SCALE: NTS



**SPECIFICATIONS**

The Contractor shall be familiar with all site conditions and shall be responsible for all underground utility checks.

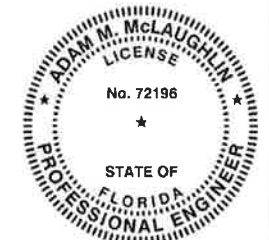
The Contractor shall be familiar with all basement/vault locations by obtaining plans from the City of Miami Department of Public Works.

Where a basement/vault interferes with a proposed location. The sign shall be relocated to a location deemed appropriate by the City of Miami Department of Public Works

Where relocation is not an option the Contractor will develop the appropriate mounting/footer solution at no additional charge. The solution shall meet all engineering criteria as established by the standard footings. (i.e. windloads)

**The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.**

- NOTE:**
- 1) SOIL IS AVERAGE WITH MAXIMUM ALLOWABLE SOIL PRESSURE OF 2,000 POUNDS PER SQUARE FOOT. (ASSUMED).**
  - 2) CONCRETE STRENGTH AT 28 DAYS F'C=4,000 PSI REINFORCEMENT SHALL BE ASTM A615, FY=60,000 PSI**
  - 3) FOLLOW 2008 FDOT DESIGN STANDARDS FOR MATERIAL AND CONSTRUCTION INFORMATION FOR THE SIGN POST BASES AND FOUNDATIONS NOT OTHERWISE SPECIFIED IN THESE CONTRACT DRAWINGS**
  - 4) FOR SIGN POST SIZES REFER TO THE DESIGN INTENT DRAWING SHEETS, CONTRACTOR TO VERIFY APPROPRIATE STRUCTURAL POST SIZE REQUIREMENTS.**
  - 5.) FOUNDATION SIZES MAY BE REDUCED BASED ON SIGN SPECIFIC LOADING CRITERIA. FABRICATORS STRUCTURAL ENGINEER TO VERIFY.**

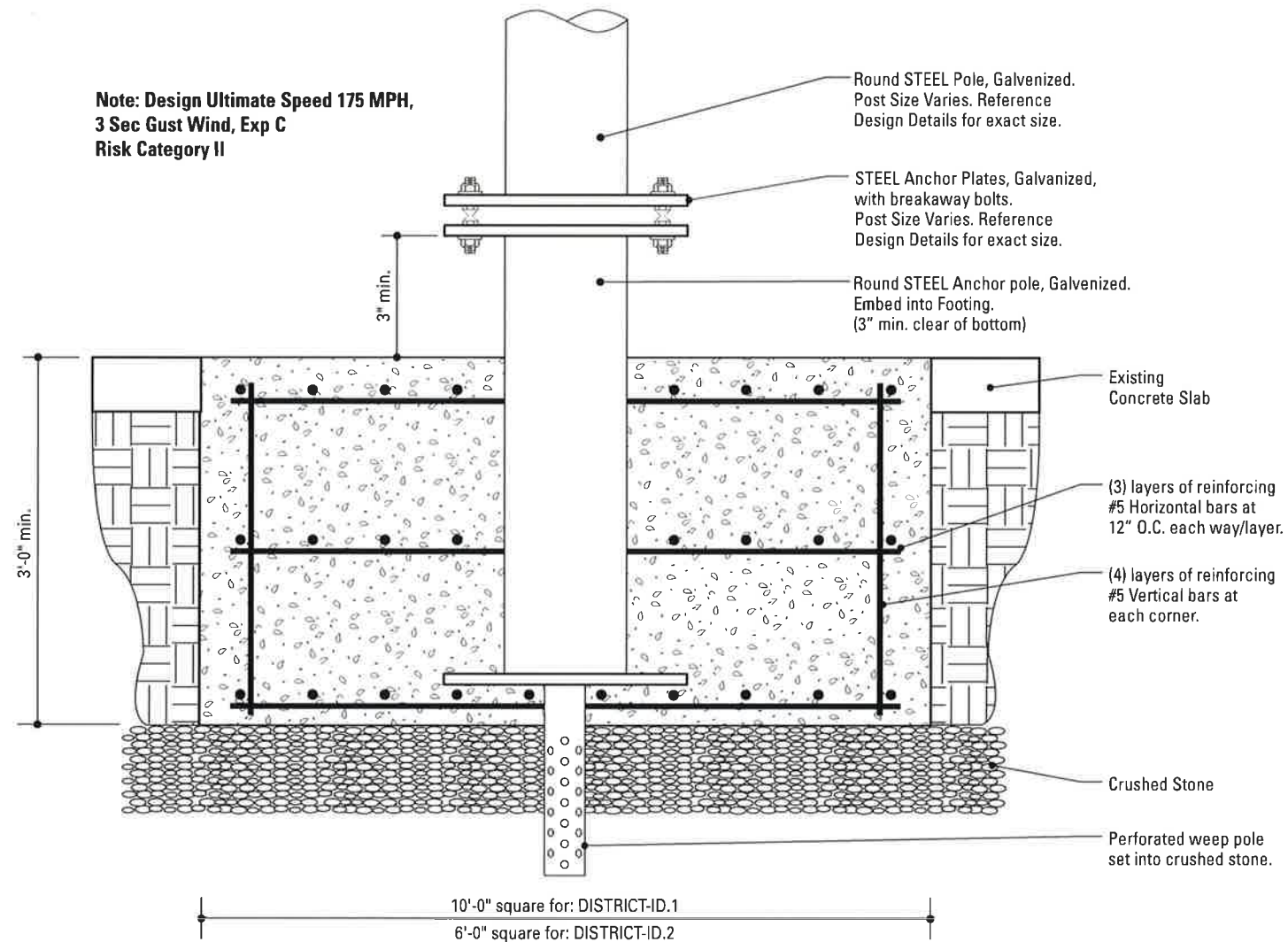


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**NOTES**

- Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
- 
- Warning:** All fasteners and hardware shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
- Approved Sign Fabricator to receive UV/Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M**

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT
merJe		Downtown Miami City of Miami, Florida
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 <a href="http://www.merjedesign.com">www.merjedesign.com</a>		PROJECT NO.
SUBCONSULTANT		SHEET TITLE
DATE	DRAWN BY:	Sidewalk Location Details
10 December 2010	PR	
REVISIONS		
04/20/2012 PR		
11/30/2012 GS		
08/16/2013 GS		SHEET NO.
03/12/2014 PR		G.8
05/02/2014 PR		

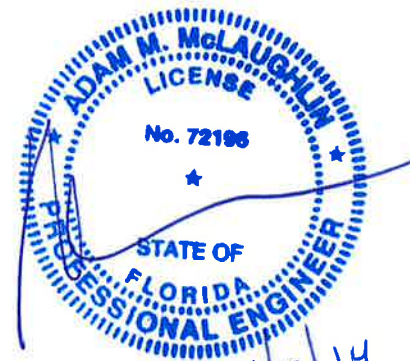


Note: Design Ultimate Speed 175 MPH,  
3 Sec Gust Wind, Exp C  
Risk Category II

1 Section View: Foundation @ Concrete  
SCALE: 3/4" = 1'-0"

NOTE: AVERAGE GROUND WATER TABLE TO BE BELOW THE BOTTOM OF THE FOOTING. IF NOT, CONTRACTOR'S STRUCTURAL ENGINEER IS RESPONSIBLE FOR PROVIDE ANCHORING DETAILS.

STRUCTURAL DESIGN ONLY



SPECIFICATIONS

SIGN TYPES:  
DISTRICT-ID.1  
DISTRICT-ID.2

The Contractor shall be familiar with all site conditions and shall be responsible for all underground utility checks.

The Contractor shall be familiar with all basement/vault locations by obtaining plans from the City of Miami Department of Public Works.

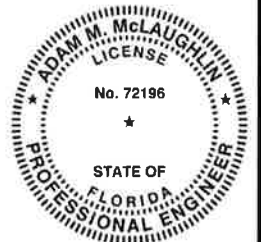
Where a basement/vault interferes with a proposed location. The sign shall be relocated to a location deemed appropriate by the City of Miami Department of Public Works

Where relocation is not an option the Contractor will develop the appropriate mounting/footer solution at no additional charge. The solution shall meet all engineering criteria as established by the standard footings. (i.e. windloads)

The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

NOTE:

- 1) SOIL IS AVERAGE WITH MAXIMUM ALLOWABLE SOIL PRESSURE OF 2,000 POUNDS PER SQUARE FOOT. (ASSUMED).
- 2) CONCRETE STRENGTH AT 28 DAYS F'C=4,000 PSI REINFORCEMENT SHALL BE ASTM A615, FY=60,000 PSI
- 3) FOLLOW 2008 FDOT DESIGN STANDARDS FOR MATERIAL AND CONSTRUCTION INFORMATION FOR THE SIGN POST BASES AND FOUNDATIONS NOT OTHERWISE SPECIFIED IN THESE CONTRACT DRAWINGS
- 4) FOR SIGN POST SIZES REFER TO THE DESIGN INTENT DRAWING SHEETS, CONTRACTOR TO VERIFY APPROPRIATE STRUCTURAL POST SIZE REQUIREMENTS.
- 5) FOUNDATION SIZES MAY BE REDUCED BASED ON SIGN SPECIFIC LOADING CRITERIA. FABRICATORS STRUCTURAL ENGINEER TO VERIFY.



GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

NOTES

1. Fabricator shall verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator shall obtain approval from the Designer or Client for placement prior to fabrication.
- 2.
3. Welds shall be done by a qualified welder and all fasteners shall be tamper proof fasteners, corrosion resistant, and color matching adjacent surfaces.
4. Approved with Client to retain Anti-Graffiti spray coating. All sign surfaces with reflective graphics to receive 3M

ENVIRONMENTS & EXPERIENCES

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CLIENT / PROJECT  
**Downtown Miami  
City of Miami, Florida**

SUBCONSULTANT

DATE	10 December 2010	DRAWN BY:	PR
REVISIONS		04/20/2012 PR	
		11/30/2012 GS	
		08/16/2013 GS	
		03/12/2014 PR	
		05/02/2014 PR	

PROJECT NO.  
SHEET TITLE  
**DISTRICT-ID.1-2  
Breakaway Footer  
Details**

SHEET NO.  
**G.9**

**H. Placement Guidelines**

**STRUCTURAL DESIGN ONLY**



Figure 1

Sign A: VDIR.1-5

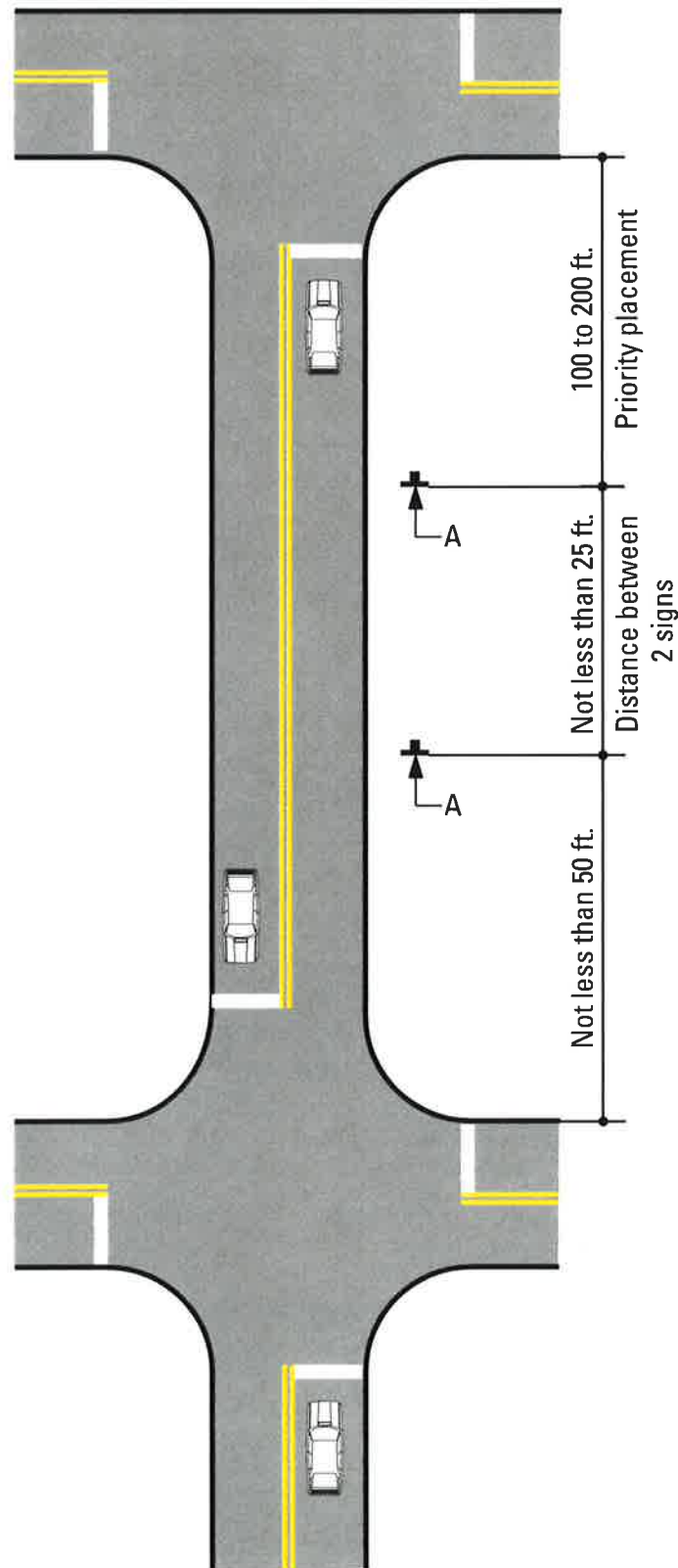
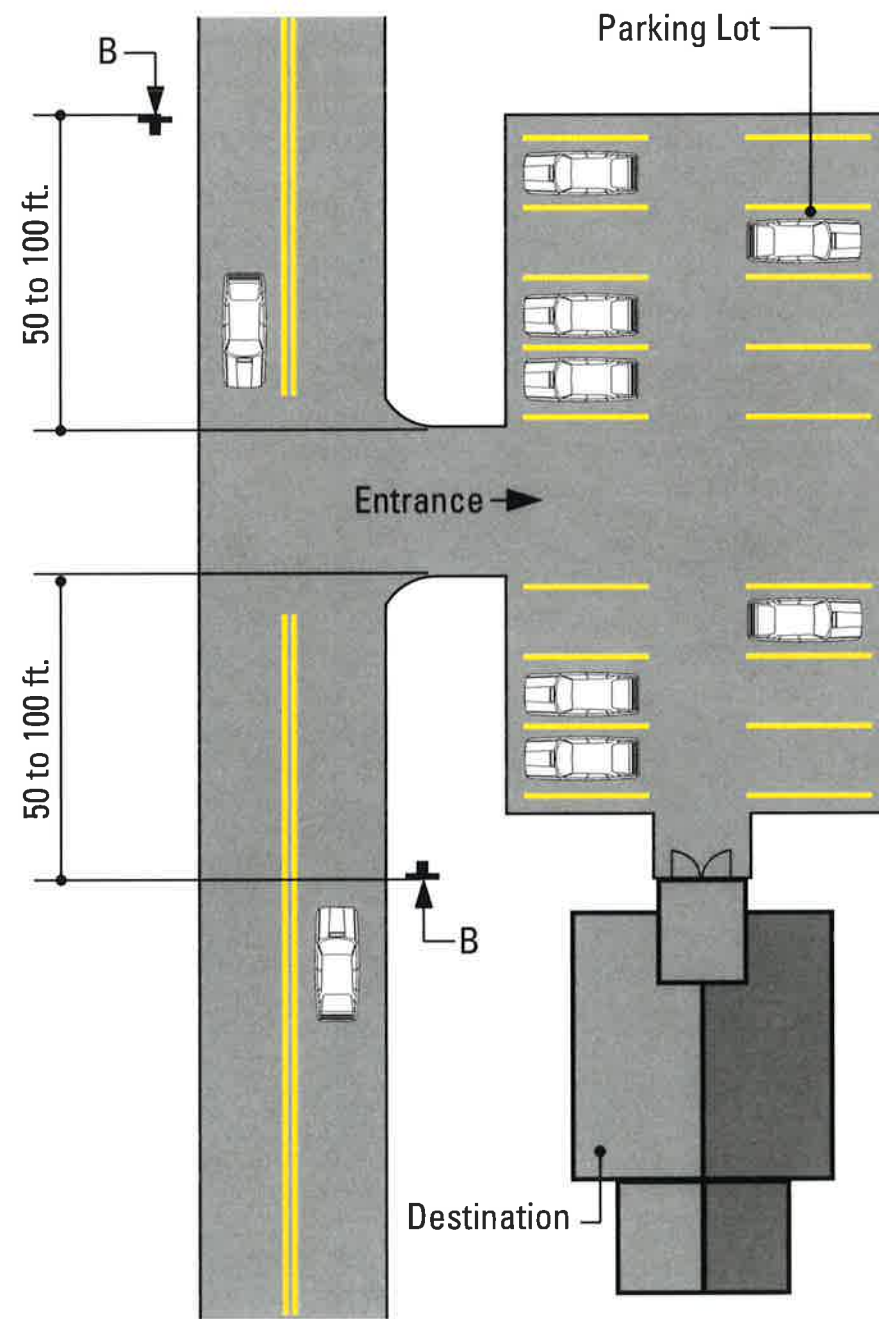


Figure 2

Sign B: DEST.1, PARK.1A or PARK.2



**SPECIFICATIONS**

**FIGURE 1 - Vehicular Directional - Sign Placement Guideline**  
**FIGURE 2 - Destination Arrival or Parking Identification - Sign Placement Guideline**

Unless approved by the Client or its designated agent, all signs shall be installed to the right of the direction of traffic and where sufficient space is available.

(a) Signs shall be located to take advantage of natural terrain, to minimize impacts on scenic environment and to avoid visual conflicts with other signs, trees and lamp posts within the City right-of-way.

(b) Signs shall be located so as not to interfere with, obstruct or divert driver's attention from any other Official Traffic Control Device. Other Official Traffic Control Devices placed at intersection approaches, subsequent to the placement of a Wayfinding Sign, shall have precedence as to location and may require the relocation of the Wayfinding Sign. In the locations where Official Traffic Control Devices are integrated into the Wayfinding Signage System, the Official Traffic Control Devices shall take precedence with regard to order, space and location, over other information.

(c) Wayfinding Signs shall be positioned in such a manner that does not restrict driver's attention or view when making turns or driving through an intersection.

(d) There shall be a goal of one sign per block, although two are permissible, where necessary.

The following pages illustrate installation guidelines for the location and spacing of the various sign types. Figures 1 through 6 represent the guidelines for the location of the various sign types, while Figure 7 illustrates the lateral clearance guidelines.

**STRUCTURAL DESIGN ONLY**

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

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CLIENT / PROJECT  
**Downtown Miami**  
 City of Miami, Florida

SUBCONSULTANT

DATE 10 December 2010

DRAWN BY: PR

The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

REVISIONS  
 04/20/2012 PR  
 11/30/2012 GS  
 08/16/2013 GS  
 03/12/2014 PR  
 05/02/2014 PR

PROJECT NO.

SHEET TITLE

**Sign Placement Guidelines**

SHEET NO.

**H.1**

Figure 3

Sign C: VDIR.4-5

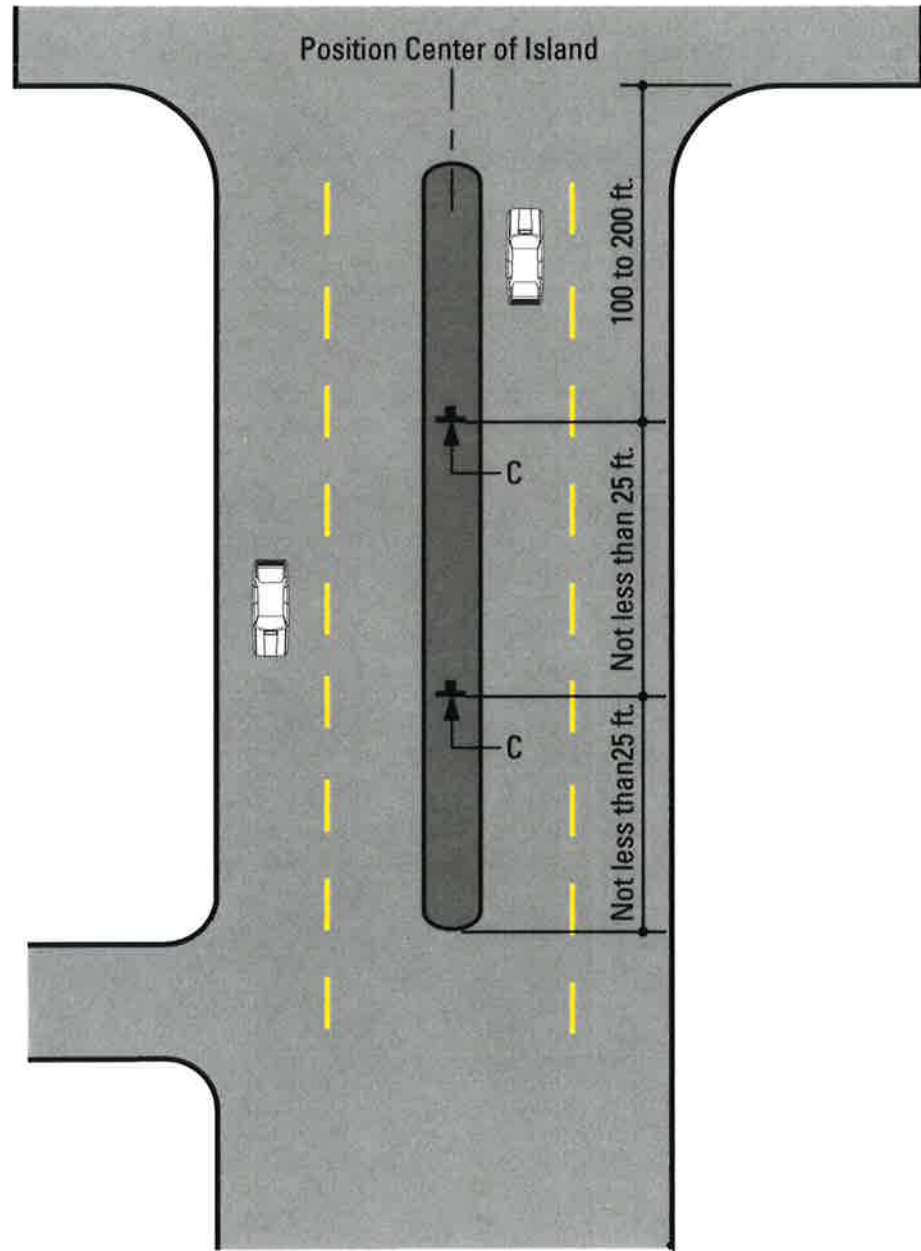
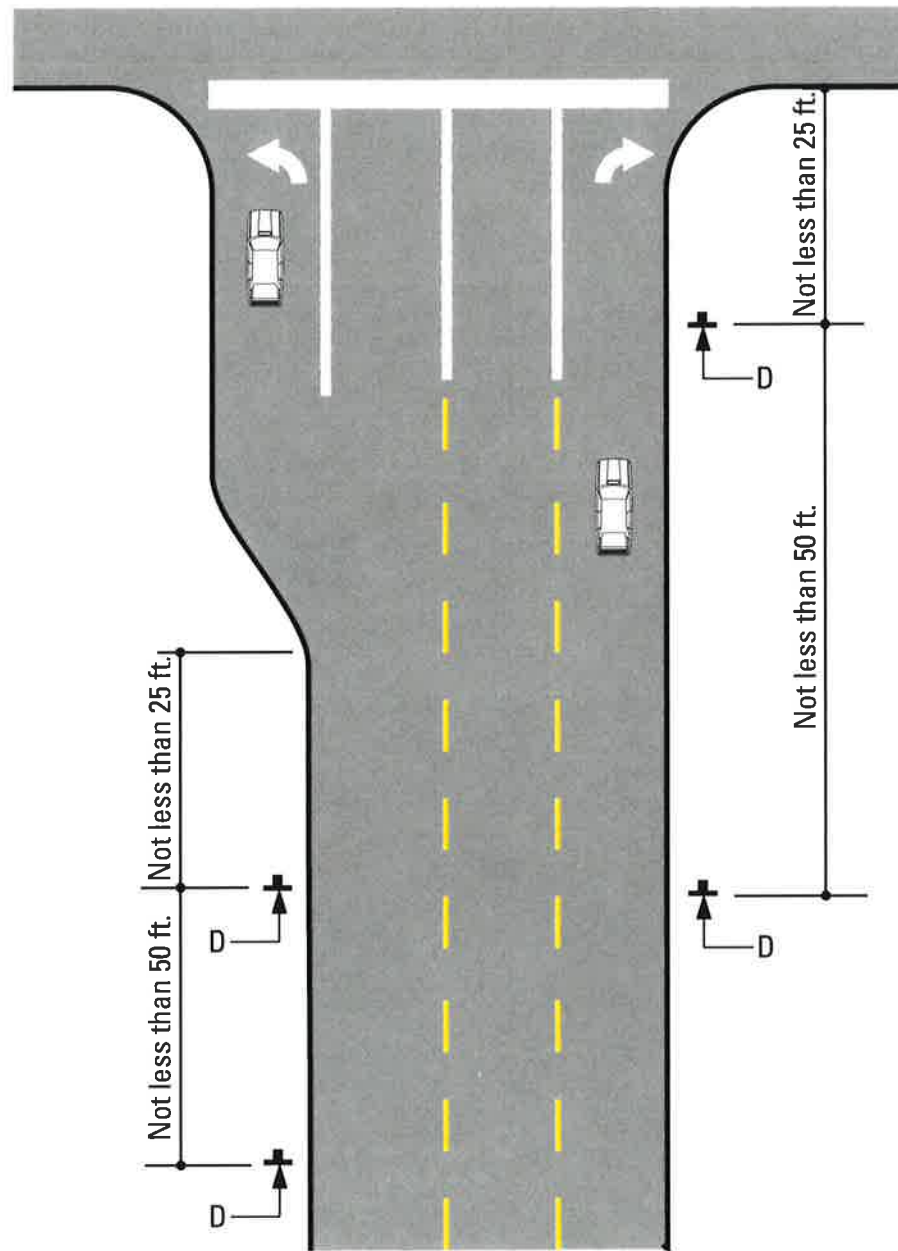


Figure 4

Sign D: VDIR.1-5



**SPECIFICATIONS**

**FIGURE 3 - Vehicular Directional - Sign Placement Guideline**  
**FIGURE 4 - Vehicular Directional - Sign Placement Guideline**

Unless approved by the Client or its designated agent, all signs shall be installed to the right of the direction of traffic and where sufficient space is available.

(a) Signs shall be located to take advantage of natural terrain, to minimize impacts on scenic environment and to avoid visual conflicts with other signs, trees and lamp posts within the City right-of-way.

(b) Signs shall be located so as not to interfere with, obstruct or divert driver's attention from any other Official Traffic Control Device. Other Official Traffic Control Devices placed at intersection approaches, subsequent to the placement of a Wayfinding Sign, shall have precedence as to location and may require the relocation of the Wayfinding Sign. In the locations where Official Traffic Control Devices are integrated into the Wayfinding Signage System, the Official Traffic Control Devices shall take precedence with regard to order, space and location, over other information.

(c) Wayfinding Signs shall be positioned in such a manner that does not restrict driver's attention or view when making turns or driving through an intersection.

(d) There shall be a goal of one sign per block, although two are permissible, where necessary.

The following pages illustrate installation guidelines for the location and spacing of the various sign types. Figures 1 through 6 represent the guidelines for the location of the various sign types, while Figure 7 illustrates the lateral clearance guidelines.

**STRUCTURAL DESIGN ONLY**

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

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CLIENT / PROJECT  
**Downtown Miami**  
**City of Miami, Florida**

SUBCONSULTANT

DATE 10 December 2010

DRAWN BY: PR

The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

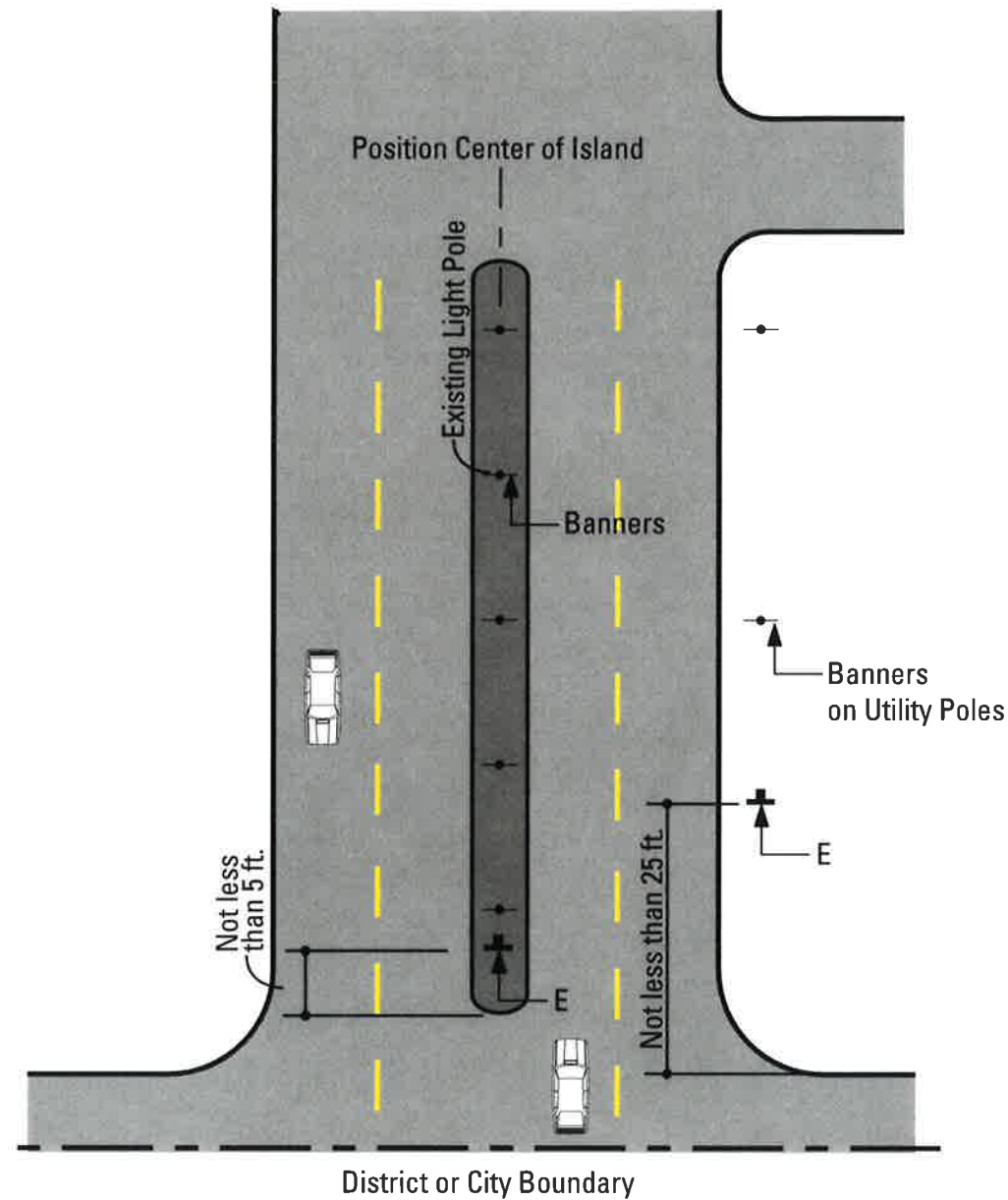
REVISIONS  
 04/20/2012 PR  
 11/30/2012 GS  
 08/16/2013 GS  
 03/12/2014 PR  
 05/02/2014 PR

PROJECT NO.  
 SHEET TITLE  
**Sign Placement Guidelines**

SHEET NO.  
**H.2**

Figure 5

Sign E: DISTRICT ID.3



**SPECIFICATIONS**

**FIGURE 5 - Gateway/District Arrival-Vehicular - Sign Placement Guideline**

Unless approved by the Client or its designated agent, all signs shall be installed to the right of the direction of traffic and where sufficient space is available.

(a) Signs shall be located to take advantage of natural terrain, to minimize impacts on scenic environment and to avoid visual conflicts with other signs, trees and lamp posts within the City right-of-way.

(b) Signs shall be located so as not to interfere with, obstruct or divert driver's attention from any other Official Traffic Control Device. Other Official Traffic Control Devices placed at intersection approaches, subsequent to the placement of a Wayfinding Sign, shall have precedence as to location and may require the relocation of the Wayfinding Sign. In the locations where Official Traffic Control Devices are integrated into the Wayfinding Signage System, the Official Traffic Control Devices shall take precedence with regard to order, space and location, over other information.

(c) Wayfinding Signs shall be positioned in such a manner that does not restrict driver's attention or view when making turns or driving through an intersection.

(d) There shall be a goal of one sign per block, although two are permissible, where necessary.

The following pages illustrate installation guidelines for the location and spacing of the various sign types. Figures 1 through 6 represent the guidelines for the location of the various sign types, while Figure 7 illustrates the lateral clearance guidelines.

**STRUCTURAL DESIGN ONLY**

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

ENVIRONMENTS & EXPERIENCES		CLIENT / PROJECT	
merJe		Downtown Miami City of Miami, Florida	
120 North Church Street Suite 208 West Chester, PA 19380 T 484.266.0648 www.merjedesign.com		PROJECT NO.	
SUBCONSULTANT		SHEET TITLE	
DATE	10 December 2010	DRAWN BY:	PR
The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.		SIGN PLACEMENT GUIDELINES	
		REVISIONS	
		04/20/2012 PR	
		11/30/2012 GS	
		08/16/2013 GS	
03/12/2014 PR		SHEET NO.	
05/02/2014 PR		<b>H.3</b>	

**Figure 6**

References the following Sign Types:

VDIR.1-3

PARK.1A

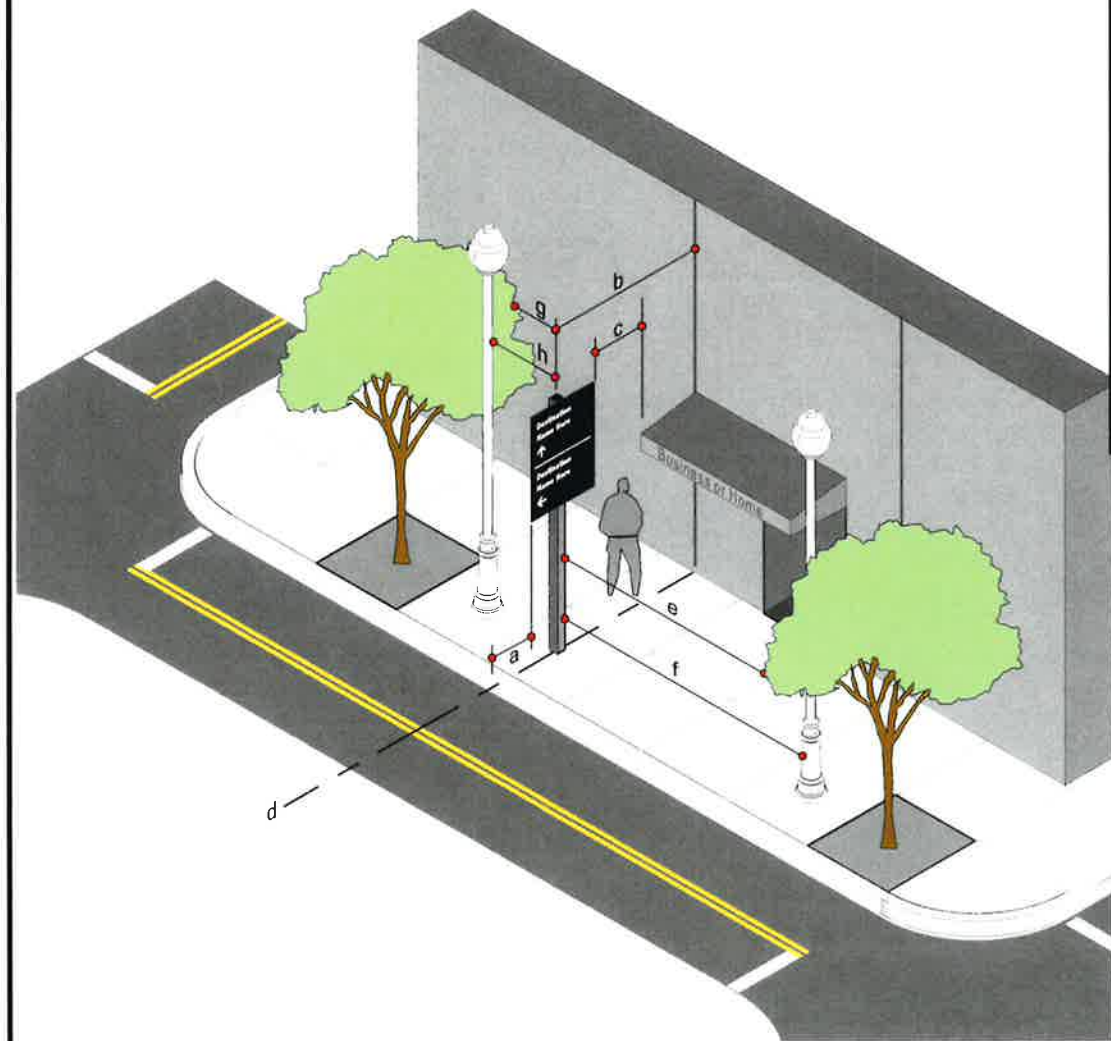
PARK.2

DEST.1-2

PDIR.1-4

KIOSK.1-2

INT.1



SIGN TYPE	MEASURE	PREFERRED DISTANCE	MINIMUM DISTANCE
a	Distance from Edge of Sign Panel to Edge of Curb	2'-0" or more	1' - 0"
b	Distance from Sign Post to Nearest Obstruction	4' - 0" or more	3' - 0"
c	Distance from Edge of Sign Panel to Nearest Overhead Obstruction	4' - 0" or more	1' - 0"
d	Sign Placement in Relation to Adjacent Building	align to building Edge	Do Not obstruct Entrance
e	Distance from Face of Sign to Nearest Tree Branch	20' - 0" or more	15' - 0"
f	Distance from Face of Sign to Nearest Utility Pole	15' - 0" or more	10' - 0"
g	Distance from Back of Sign to Nearest Tree Branch	8' - 0" or more	3' - 0"
h	Distance from Back of Sign to Nearest Utility Pole	15' - 0" or more	10' - 0"

Measurements and Distances shown are guidelines only prevailing local and state codes shall supersede information presented.

**SPECIFICATIONS**

**FIGURE 6 - Lateral Clearance Guidelines**

Within some of the Downtown areas, urban conditions and narrow sidewalks may cause deviation from the standards articulated in the previous figures. Conditions may include less lateral clearance for the 2'-0" or 5'-0" preferred distance from edge of sign panel to curb, or placement at 2'-0" or 5'-0" would create an obstacle (i.e. post positioned in middle of the side walk) or create situations of non-compliance to ADA clearances.

In these cases guidelines must be consistent with MUTCD Section 2A.19 options for urban areas.

Suggested recommendations for relocation of signs if placement is in conflict with guidelines.

OPTION A: Position the sign at a minimum of 2'-0" or 5'-0" (face of curb to edge of sign panel) as required.

OPTION B: If the sign can be moved, without disrupting routing or sequencing, then it should be repositioned to achieve the 2'-0" or 5'-0" min.

If 2'-0" is not physically possible, then the following options should be allowed:

OPTION C: The sign set back should be position at 1'-6". If that is not possible then...

OPTION D: Utilize a minimum 1'- 0", in accordance with MUTCD, only as a final option.

**STRUCTURAL DESIGN ONLY**

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

**NOTES**

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CLIENT / PROJECT

**Downtown Miami  
City of Miami, Florida**

PROJECT NO.

SUBCONSULTANT

SHEET TITLE

DATE 10 December 2010

DRAWN BY: PR

Drawings are fabricated in accordance with and designed by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

REVISIONS  
04/20/2012 PR  
11/30/2012 GS  
08/16/2013 GS  
03/12/2014 PR  
05/02/2014 PR

SHEET NO.

**Sign Placement  
Guidelines**

**H.4**

**SPECIFICATIONS**

**FIGURE 7 - Lateral Clearance Guidelines**

Within some of the Downtown areas, urban conditions and narrow sidewalks may cause deviation from the standards articulated in the previous figures. Conditions may include less lateral clearance for the 2'-0" or 5'-0" preferred distance from edge of sign panel to curb, or placement at 2'-0" or 5'-0" would create an obstacle (i.e. post positioned in middle of the sidewalk) or create situations of non-compliance to ADA clearances.

In these cases guidelines must be consistent with MUTCD Section 2A.19 options for urban areas.

Suggested recommendations for relocation of signs if placement is in conflict with guidelines.

OPTION A: Position the sign at a minimum of 2'-0" or 5'-0" (face of curb to edge of sign panel) as required.

OPTION B: If the sign can be moved, without disrupting routing or sequencing, then it should be repositioned to achieve the 2'-0" or 5'-0" min.

If 2'-0" is not physically possible, then the following options should be allowed:

OPTION C: The sign set back should be position at 1'-6". If that is not possible then...

OPTION D: Utilize a minimum 1'-0", in accordance with MUTCD, only as a final option.

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**NOTES**

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CLIENT / PROJECT

**Downtown Miami  
City of Miami, Florida**

PROJECT NO.

SUBCONSULTANT

SHEET TITLE

DATE 10 December 2010

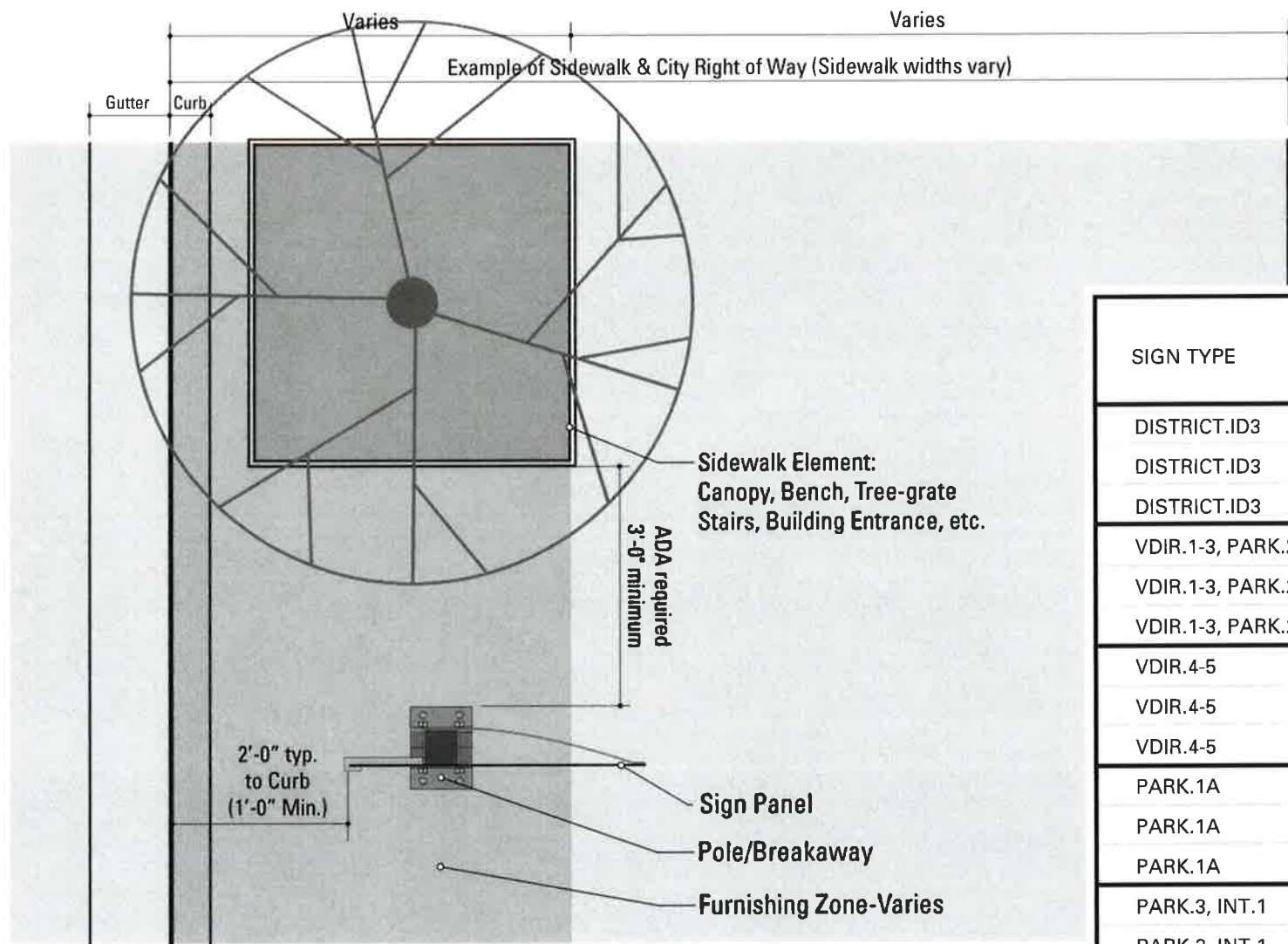
DRAWN BY: PR

drawings prior to fabrication for review and approval by the design fabricator. The design fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS. The fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.

REVISIONS  
04/20/2012 PR  
11/30/2012 GS  
08/16/2013 GS  
03/12/2014 PR  
05/02/2014 PR

SHEET NO.

**H.5**



SIGN TYPE	DISTANCE FROM EDGE OF CURB TO EDGE OF SIGN PANEL	DISTANCE FROM CENTER OF POST TO EDGE OF CURB
DISTRICT.ID3	1'-0"	1'-7 1/2"
DISTRICT.ID3	1'-6"	2'-1 1/2"
DISTRICT.ID3	2'-0"	2'-7 1/2"
VDIR.1-3, PARK.2	1'-0"	2'-2 1/2"
VDIR.1-3, PARK.2	1'-6"	2'-8 1/2"
VDIR.1-3, PARK.2	2'-0"	3'-2 1/2"
VDIR.4-5	1'-0"	2'-2 1/2"
VDIR.4-5	1'-6"	2'-8 1/2"
VDIR.4-5	2'-0"	3'-2 1/2"
PARK.1A	1'-0"	1'-8"
PARK.1A	1'-6"	2'-4"
PARK.1A	2'-0"	2'-8"
PARK.3, INT.1	1'-0"	1'-2"
PARK.3, INT.1	1'-6"	1'-8"
PARK.3, INT.1	2'-0"	2'-2"
PDIR.1+2	1'-0"	1'-2 1/2"
PDIR.1+2	1'-6"	1'-8 1/2"
PDIR.1+2	2'-0"	2'-2 1/2"
DEST.1+2	1'-0"	2'-1 1/2"
DEST.1+2	1'-6"	2'-7 1/2"
DEST.1+2	2'-0"	3'-1 1/2"
KIOSK.1	1'-0"	1'-7 1/2"
KIOSK.1	1'-6"	2'-2 1/2"
KIOSK.1	2'-0"	3'-7 1/2"
KIOSK.2	3'-0" Min. Clear Zone REQUIRED	4'-6"

**NOTE:**

All locations shall be installed within the City ROW. If during the initial survey it is determined any part of the sign (pole or panel) extends outside of the City's Right of Way vertical plane and into private property, the installer must notify the city prior to fabrication/installation.

**1** Reference View: Example - Furnishing Zone / City Right of Way  
SCALE: Not To Scale

Note: Top View of VDIR.1-3 shown as example.

**Figure 7**

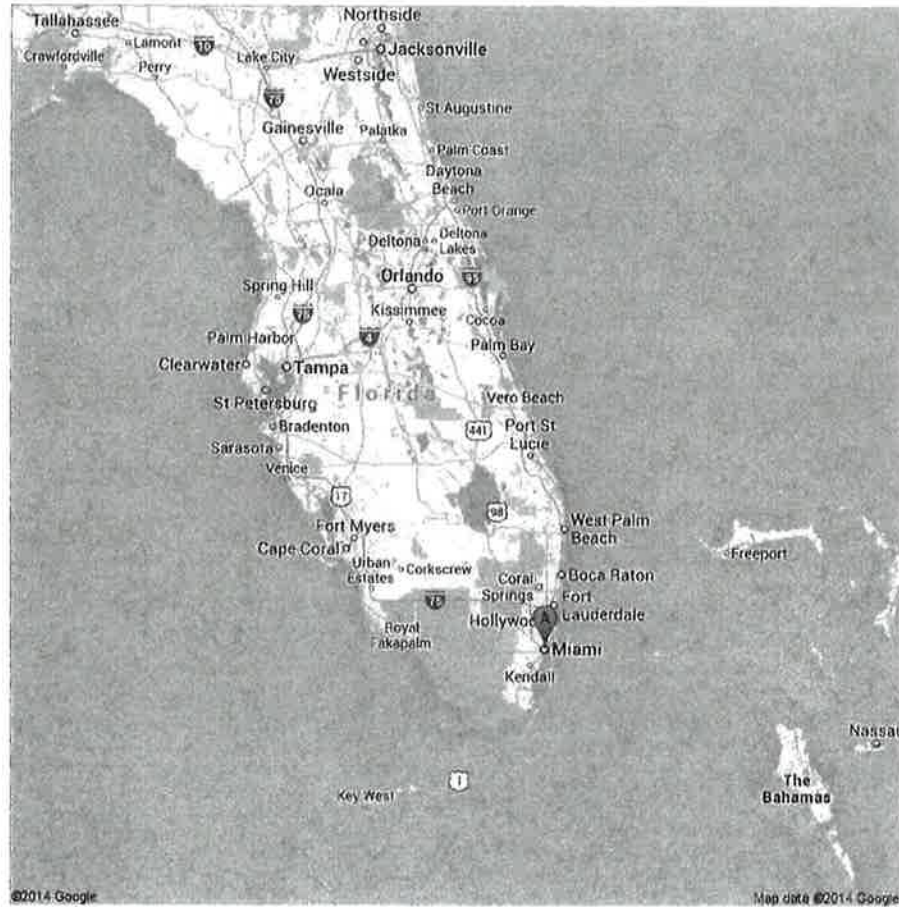
Not to Scale

**J. Engineer Calculations**

**STRUCTURAL DESIGN ONLY**

Google

Address Miami, FL

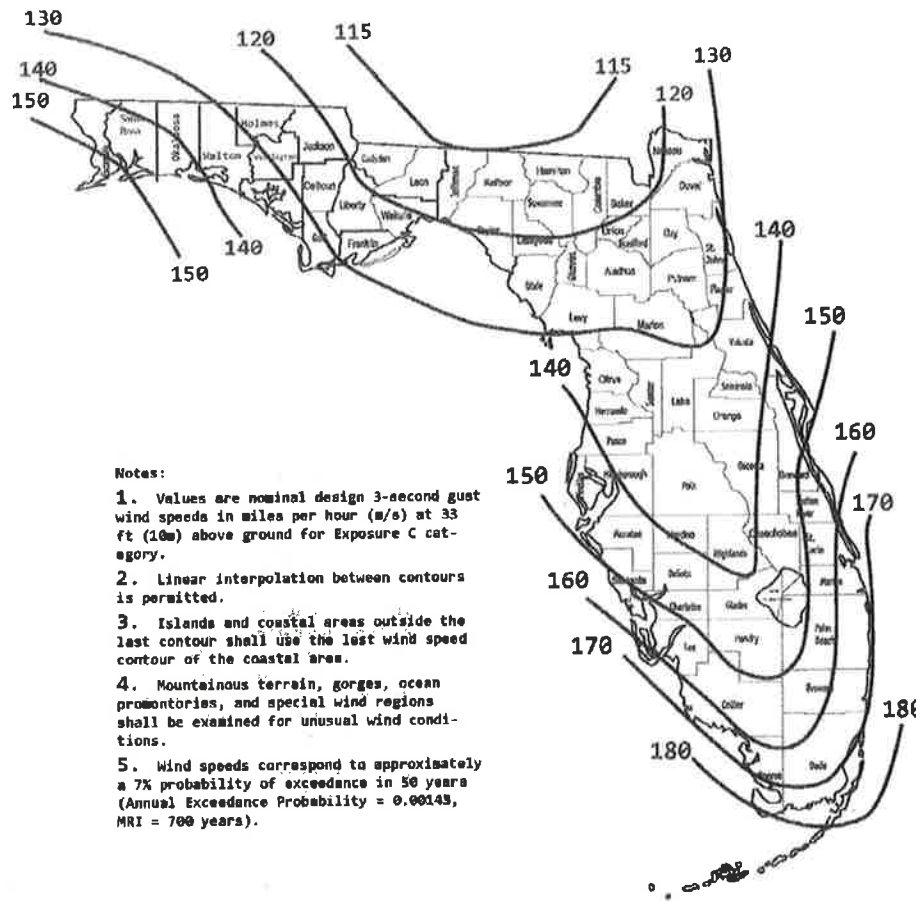


©2014 Google

Map data ©2014 Google

STRUCTURAL DESIGN

$V_{ULT} = 175 \text{ mph}$   
EXPOSURE C



- Notes:
1. Values are nominal design 3-second gust wind speeds in miles per hour (m/s) at 33 ft (10m) above ground for Exposure C category.
  2. Linear interpolation between contours is permitted.
  3. Islands and coastal areas outside the last contour shall use the least wind speed contour of the coastal area.
  4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.
  5. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (Annual Exceedance Probability = 0.00143, MRI = 700 years).

FIGURE 1609A  
ULTIMATE DESIGN WIND SPEEDS,  $V_{ult}$  FOR RISK CATEGORY II BUILDINGS AND OTHER STRUCTURES

2010 FLORIDA BUILDING CODE — BUILDING

16.14

**STRUCTURAL DESIGN ONLY**

LEGEND

ENGINEERING CALCULATIONS

Location  
Wind Speeds

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

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SUBCONSULTANT

DATE	18 November 2010	CLIENT / PROJECT	Downtown Miami City of Miami, Florida
DRAWN BY:	PR		
The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the project.		PROJECT NO.	
REVISIONS	04/20/2012 PR	SHEET TITLE	Engineering Calculations Location Wind Speed
	11/30/2012 GS	SHEET NO.	
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

**J.1**

Gary K. Munkelt & Assoc.  
1180 Welsh Rd., Suite 190  
North Wales, PA 19454  
Phone: 215-855-8713  
Fax: 215-855-8714

JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. \_\_\_\_\_ SHEET NO. DIST\_ID.1  
CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	24.3 ft	s/h = 0.59	<b>Case A &amp; B</b>
Height (s)	14.3 ft	B/s = 0.57	C <sub>r</sub> = 1.72
Width (B)	8.1 ft	Lr/s = 0.00	F = qz G C <sub>f</sub> A <sub>s</sub> = <b>91.8 As</b>
Wall Return (Lr) =		Kz = 0.940	A <sub>s</sub> = 115.8 sf
Directionality (Kd)	0.85	qz = 62.6 psf	F = 10634 lbs
Percent of open area to gross area	0.0%		
		Open reduction factor = 1.00	<b>Case C</b>
		Horiz dist from windward edge	C <sub>f</sub> F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25 119.8 As
		s to 2s	1.50 79.8 As
		<b>Case C reduction factors</b>	
		Factor if s/h > 0.8 = 1.00	
		Wall return factor for C <sub>f</sub> at 0 to s = 1.00	

$\frac{B}{s} < 2$  ∴ CASE C DOES NOT APPLY

Gary K. Munkelt & Assoc.  
1180 Welsh Rd., Suite 190  
North Wales, PA 19454  
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Fax: 215-855-8714

JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. \_\_\_\_\_ SHEET NO. DIST\_ID.2  
CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	14.5 ft	s/h = 0.69	<b>Case A &amp; B</b>
Height (s)	10.0 ft	B/s = 0.56	C <sub>r</sub> = 1.70
Width (B)	5.6 ft	Lr/s = 0.00	F = qz G C <sub>f</sub> A <sub>s</sub> = <b>81.6 As</b>
Wall Return (Lr) =		Kz = 0.849	A <sub>s</sub> = 56.0 sf
Directionality (Kd)	0.85	qz = 56.6 psf	F = 4569 lbs
Percent of open area to gross area	0.0%		
		Open reduction factor = 1.00	<b>Case C</b>
		Horiz dist from windward edge	C <sub>f</sub> F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25 108.2 As
		s to 2s	1.50 72.1 As
		<b>Case C reduction factors</b>	
		Factor if s/h > 0.8 = 1.00	
		Wall return factor for C <sub>f</sub> at 0 to s = 1.00	

$\frac{B}{s} < 2$  ∴ CASE C DOES NOT APPLY

**LEGEND**

**ENGINEERING CALCULATIONS**

**Sign Type:**

DIST-ID.1 and ID.2 - District Identification

Reference Design Intent Drawing Sheets C.1-4 for DIST-ID.1.

Reference Design Intent Drawing Sheets C.5-8 for DIST-ID.2.

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ENVIRONMENTS & EXPERIENCES

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DATE	18 November 2010	CLIENT / PROJECT	Downtown Miami City of Miami, Florida
DRAWN BY:	PR	PROJECT NO.	
The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the project.		SHEET TITLE	Engineering Calculations DIST-ID.1 + ID.2
REVISIONS	04/20/2012 PR	SHEET NO.	
	11/30/2012 GS		<b>J.2</b>
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

**STRUCTURAL DESIGN ONLY**



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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. SHEET NO. DIST\_ID.3  
CALCULATED BY DATE  
CHECKED BY DATE

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	11.8 ft	s/h = 0.32	<b>Case A &amp; B</b>	C <sub>r</sub> = 1.79
Height (s)	3.8 ft	B/s = 0.82	F = qz G C <sub>f</sub> A <sub>s</sub> =	<b>86.3 As</b>
Width (B)	3.1 ft	Lr/s = 0.00	A <sub>s</sub> =	11.8 sf
Wall Return (Lr) =		Kz = 0.849	F =	1016 lbs
Directionality (Kd)	0.85	qz = 56.6 psf		
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	C <sub>f</sub>	F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25	108.2 As
		s to 2s	1.50	72.1 As
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00	

$\frac{B}{s} < 2$  CASE C DOES NOT APPLY

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. SHEET NO. Banner.1  
CALCULATED BY DATE  
CHECKED BY DATE

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	18.8 ft	s/h = 0.36	<b>Case A &amp; B</b>	C <sub>r</sub> = 1.83
Height (s)	6.8 ft	B/s = 0.22	F = qz G C <sub>f</sub> A <sub>s</sub> =	<b>92.4 As</b>
Width (B)	1.5 ft	Lr/s = 0.00	A <sub>s</sub> =	10.2 sf
Wall Return (Lr) =		Kz = 0.891	F =	947 lbs
Directionality (Kd)	0.85	qz = 59.3 psf		
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	C <sub>f</sub>	F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25	113.5 As
		s to 2s	1.50	75.7 As
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00	

$\frac{B}{s} < 2$  CASE C DOES NOT APPLY

**LEGEND**

**ENGINEERING CALCULATIONS**

**Sign Type:**

DIST-ID.3 - District Identification

BANNER.1 - District Banners

Reference Design Intent Drawing Sheets C.9-10 for DIST-ID.3.

Reference Design Intent Drawing Sheets C.11 for BANNER.1.

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DATE	18 November 2010	CLIENT / PROJECT	Downtown Miami City of Miami, Florida
DRAWN BY:	PR	PROJECT NO.	
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REVISIONS	04/20/2012 PR	SHEET NO.	J.3
	11/30/2012 GS		
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. \_\_\_\_\_ SHEET NO. VDIR.1  
CALCULATED BY \_\_\_\_\_ DATE 11/30/12 LEFT  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	11.0 ft	s/h = 0.27	<b>Case A &amp; B</b>	C <sub>r</sub> = 1.80
Height (s)	3.0 ft	B/s = 1.23	F = qz G C <sub>f</sub> A <sub>s</sub> =	<b>86.6 As</b>
Width (B)	3.7 ft	Lr/s = 0.00	As =	11.1 sf
Wall Return (Lr) =		Kz = 0.849	F =	961 lbs
Directionality (Kd)	0.85	qz = 56.6 psf		
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	C <sub>f</sub>	F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25	108.2 As
		s to 2s	1.50	72.1 As
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00	

$\frac{B}{s} < 2 \therefore$  CASE C DOES NOT APPLY

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. \_\_\_\_\_ SHEET NO. VDIR.2  
CALCULATED BY \_\_\_\_\_ DATE 11/30/12 LEFT  
CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	13.4 ft	s/h = 0.40	<b>Case A &amp; B</b>	C <sub>r</sub> = 1.77
Height (s)	5.4 ft	B/s = 0.69	F = qz G C <sub>f</sub> A <sub>s</sub> =	<b>85.3 As</b>
Width (B)	3.7 ft	Lr/s = 0.00	As =	20.0 sf
Wall Return (Lr) =		Kz = 0.849	F =	1705 lbs
Directionality (Kd)	0.85	qz = 56.6 psf		
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	C <sub>f</sub>	F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25	108.2 As
		s to 2s	1.50	72.1 As
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00	

$\frac{B}{s} < 2 \therefore$  CASE C DOES NOT APPLY

**LEGEND**

**ENGINEERING CALCULATIONS**

**Sign Type:**

VDIR.1 + .1LEFT - Vehicular Directional  
VDIR.2 + .2LEFT - Vehicular Directional

Reference Design Intent Drawing Sheets C.12-13 for VDIR.1 + .1LEFT.

Reference Design Intent Drawing Sheets C.14-15 for VDIR.2 + .2LEFT.

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DATE	18 November 2010	CLIENT / PROJECT	Downtown Miami City of Miami, Florida
DRAWN BY:	PR	PROJECT NO.	
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REVISIONS	04/20/2012 PR	SHEET NO.	
	11/30/2012 GS		<b>J.4</b>
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. SHEET NO. VDIR.3  
CALCULATED BY DATE VDIR.3 LEFT  
CHECKED BY DATE

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	14.8 ft	s/h = 0.46	<b>Case A &amp; B</b>
Height (s)	6.8 ft	B/s = 0.54	C <sub>r</sub> = 1.76
Width (B)	3.7 ft	Lr/s = 0.00	F = qz G C <sub>f</sub> A <sub>s</sub> = <b>84.6 As</b>
Wall Return (Lr) =		Kz = 0.849	A <sub>s</sub> = 25.2 sf
Directionality (Kd)	0.85	qz = 56.6 psf	F = 2129 lbs
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>
		Horiz dist from windward edge	C <sub>f</sub> F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25 108.2 As
		s to 2s	1.50 72.1 As
		<b>Case C reduction factors</b>	
		Factor if s/h > 0.8 =	1.00
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00

$\frac{B}{s} < 2$  CASE C DOES NOT APPLY

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. SHEET NO. VDIR.4  
CALCULATED BY DATE  
CHECKED BY DATE

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	11.2 ft	s/h = 0.33	<b>Case A &amp; B</b>
Height (s)	3.7 ft	B/s = 2.30	C <sub>r</sub> = 1.76
Width (B)	8.5 ft	Lr/s = 0.00	F = qz G C <sub>f</sub> A <sub>s</sub> = <b>85.8 As</b>
Wall Return (Lr) =		Kz = 0.849	A <sub>s</sub> = 31.5 sf
Directionality (Kd)	0.85	qz = 56.6 psf	F = 2699 lbs
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>
		Horiz dist from windward edge	C <sub>f</sub> F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.35 113.2 As
		s to 2s	1.56 75.0 As
		2s to 3s	1.15 55.3 As
		<b>Case C reduction factors</b>	
		Factor if s/h > 0.8 =	1.00
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00

**LEGEND**

**ENGINEERING CALCULATIONS**

**Sign Type:**

VDIR.3 + .3LEFT - Vehicular Directional  
VDIR.4 - Vehicular Directional

Reference Design Intent Drawing Sheets C.16-17 for VDIR.3 + .3LEFT.

Reference Design Intent Drawing Sheets C.18-19 for VDIR.4.

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SUBCONSULTANT

DATE 18 November 2010

CLIENT / PROJECT

DRAWN BY: PR

**Downtown Miami  
City of Miami, Florida**

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PROJECT NO.

SHEET TITLE

**Engineering Calculations  
VDIR.3 + .3LEFT  
VDIR.4**

REVISIONS  
04/20/2012 PR

11/30/2012 GS

08/16/2013 GS

03/12/2014 PR

05/02/2014 PR

SHEET NO.

**J.5**

**STRUCTURAL DESIGN ONLY**

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. SHEET NO. VDIR.5  
CALCULATED BY DATE  
CHECKED BY DATE

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	13.0 ft	s/h = 0.42	<b>Case A &amp; B</b>	C <sub>r</sub> = 1.75
Height (s)	5.5 ft	B/s = 1.55	F = qz G C <sub>f</sub> A <sub>s</sub> =	<b>84.3 As</b>
Width (B)	8.5 ft	Lr/s = 0.00	A <sub>s</sub> =	48.8 sf
Wall Return (Lr) =		Kz = 0.849	F =	3939 lbs
Directionality (Kd)	0.85	qz = 56.6 psf		
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	C <sub>f</sub>	F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25	108.2 As
		s to 2s	1.50	72.1 As
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00	

$\frac{B}{s} < 2$  ∴ CASE C DOES NOT APPLY

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. SHEET NO. PARK.1A  
CALCULATED BY DATE  
CHECKED BY DATE

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	10.7 ft	s/h = 0.25	<b>Case A &amp; B</b>	C <sub>r</sub> = 1.80
Height (s)	2.7 ft	B/s = 0.48	F = qz G C <sub>f</sub> A <sub>s</sub> =	<b>86.7 As</b>
Width (B)	1.3 ft	Lr/s = 0.00	A <sub>s</sub> =	3.5 sf
Wall Return (Lr) =		Kz = 0.849	F =	304 lbs
Directionality (Kd)	0.85	qz = 56.6 psf		
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	C <sub>f</sub>	F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25	108.2 As
		s to 2s	1.50	72.1 As
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00	

$\frac{B}{s} < 2$  ∴ CASE C DOES NOT APPLY

**LEGEND**

**ENGINEERING CALCULATIONS**

**Sign Type:**

VDIR.5 - Vehicular Directional  
PARK.1 + .1A - Parking Trailblazer

Reference Design Intent Drawing Sheets C.20-21 for VDIR.5.

Reference Design Intent Drawing Sheets C.22-23 for PARK.1 + .1A.

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DATE 18 November 2010

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04/20/2012 PR

REVISIONS: 11/30/2012 GS

08/16/2013 GS

03/12/2014 PR

05/02/2014 PR

CLIENT / PROJECT

Downtown Miami  
City of Miami, Florida

PROJECT NO.

SHEET TITLE

Engineering Calculations  
VDIR.5  
PARK.1 + .1A

SHEET NO.

J.6

STRUCTURAL DESIGN ONLY

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. SHEET NO. PARK 2  
CALCULATED BY DATE  
CHECKED BY DATE

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	12.3 ft	s/h = 0.35	<b>Case A &amp; B</b>	
Height (s)	4.3 ft	B/s = 0.86	C <sub>i</sub> = 1.79	
Width (B)	3.7 ft	Lr/s = 0.00	F = qz G C <sub>f</sub> A <sub>s</sub> = <b>86.0 As</b>	
Wall Return (Lr) =		Kz = 0.849	A <sub>s</sub> = 15.9 sf	
Directionality (Kd) =	0.85	qz = 56.6 psf	F = 1368 lbs	
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	C <sub>f</sub>	F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25	108.2 As
		s to 2s	1.50	72.1 As
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00	

$\frac{B}{s} < 2$  ∴ CASE C DOES NOT APPLY

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. SHEET NO. PARK 3  
CALCULATED BY DATE  
CHECKED BY DATE

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	9.3 ft	s/h = 0.68	<b>Case A &amp; B</b>	
Height (s)	6.3 ft	B/s = 0.48	C <sub>i</sub> = 1.71	
Width (B)	3.0 ft	Lr/s = 0.00	F = qz G C <sub>f</sub> A <sub>s</sub> = <b>82.2 As</b>	
Wall Return (Lr) =		Kz = 0.849	A <sub>s</sub> = 18.9 sf	
Directionality (Kd) =	0.85	qz = 56.6 psf	F = 1554 lbs	
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	C <sub>f</sub>	F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25	108.2 As
		s to 2s	1.50	72.1 As
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00	

$\frac{B}{s} < 2$  ∴ CASE C DOES NOT APPLY

**LEGEND**

**ENGINEERING CALCULATIONS**

**Sign Type:**  
PARK.2 - Parking Garage Directional  
PARK.3 - Parking Garage Information

Reference Design Intent Drawing Sheets C.24 for PARK.2.

Reference Design Intent Drawing Sheets C.25 for PARK.3.

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

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DATE	18 November 2010	CLIENT / PROJECT	Downtown Miami City of Miami, Florida
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<p>The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the project.</p>		SHEET TITLE	Engineering Calculations PARK.2 + .3
		REVISIONS	
	11/30/2012 GS	SHEET NO.	<b>J.7</b>
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. SHEET NO. PARK.4  
CALCULATED BY DATE  
CHECKED BY DATE

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	17.3 ft	s/h = 0.19	<b>Case A &amp; B</b>	
Height (s)	3.3 ft	B/s = 1.00	C <sub>r</sub> = 1.80	
Width (B)	3.3 ft	Lr/s = 0.00	F = qz G C <sub>f</sub> A <sub>s</sub> = <b>89.1 As</b>	
Wall Return (Lr) =		Kz = 0.874	A <sub>s</sub> = 10.6 sf	
Directionality (Kd)	0.85	qz = 58.3 psf	F = 941 lbs	
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	C <sub>f</sub>	F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25	111.4 As
		s to 2s	1.50	74.3 As
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00	

$\frac{B}{s} < 2$  CASE C DOES NOT APPLY

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. SHEET NO. PDIR.1  
CALCULATED BY DATE  
CHECKED BY DATE

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	9.8 ft	s/h = 0.23	<b>Case A &amp; B</b>	
Height (s)	2.3 ft	B/s = 1.00	C <sub>r</sub> = 1.80	
Width (B)	2.3 ft	Lr/s = 0.00	F = qz G C <sub>f</sub> A <sub>s</sub> = <b>86.6 As</b>	
Wall Return (Lr) =		Kz = 0.849	A <sub>s</sub> = 5.3 sf	
Directionality (Kd)	0.85	qz = 56.6 psf	F = 458 lbs	
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	C <sub>f</sub>	F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25	108.2 As
		s to 2s	1.50	72.1 As
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00	

$\frac{B}{s} < 2$  CASE C DOES NOT APPLY

**LEGEND**

**ENGINEERING CALCULATIONS**

**Sign Type:**

PARK.4 - Parking Garage Identification  
PDIR.1 + .3 - Pedestrian Directional

Reference Design Intent Drawing Sheets C.26 for PARK.4.

Reference Design Intent Drawing Sheets C.27 for PDIR.1, and C.29 for PDIR.3.

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REVISIONS	04/20/2012 PR	SHEET NO.	
	11/30/2012 GS		<b>J.8</b>
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. SHEET NO. PDIR.2  
CALCULATED BY DATE 11/11/12  
CHECKED BY DATE

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	9.8 ft	s/h = 0.18	<b>Case A &amp; B</b>	C <sub>r</sub> = 1.80
Height (s)	1.8 ft	B/s = 1.28	F = qz G Cf As =	<b>86.6 As</b>
Width (B)	2.3 ft	Lr/s = 0.00	As =	4.1 sf
Wall Return (Lr) =		Kz = 0.849	F =	358 lbs
Directionality (Kd)	0.85	qz = 56.6 psf		
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	Cf	F=qzGCfAs (psf)
		0 to s	2.25	108.2 As
		s to 2s	1.50	72.1 As
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for Cf at 0 to s =	1.00	

$\frac{B}{s} < 2 \therefore$  CASE C DOES NOT APPLY

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. SHEET NO. DEST.1&2  
CALCULATED BY DATE  
CHECKED BY DATE

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	10.5 ft	s/h = 0.24	<b>Case A &amp; B</b>	C <sub>r</sub> = 1.80
Height (s)	2.5 ft	B/s = 1.40	F = qz G Cf As =	<b>86.6 As</b>
Width (B)	3.5 ft	Lr/s = 0.00	As =	8.8 sf
Wall Return (Lr) =		Kz = 0.849	F =	757 lbs
Directionality (Kd)	0.85	qz = 56.6 psf		
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	Cf	F=qzGCfAs (psf)
		0 to s	2.25	108.2 As
		s to 2s	1.50	72.1 As
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for Cf at 0 to s =	1.00	

$\frac{B}{s} < 2 \therefore$  CASE C DOES NOT APPLY

**LEGEND**

**ENGINEERING CALCULATIONS**

**Sign Type:**

PDIR.2 + .4 - Pedestrian Directional  
DEST.1 + .2 - Destination Identification

Reference Design Intent Drawing Sheets C.28 for PDIR.2, and C.30 for PDIR.4.

Reference Design Intent Drawing Sheets C.31-32 for DEST.1 + .2.

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REVISIONS	04/20/2012 PR	SHEET NO.	
	11/30/2012 GS		<b>J.9</b>
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. SHEET NO. KIOSK.1  
CALCULATED BY DATE  
CHECKED BY DATE

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	6.0 ft	s/h = 0.50	<b>Case A &amp; B</b>	C <sub>r</sub> = 1.75
Height (s)	3.0 ft	B/s = 0.73	F = qz G C <sub>f</sub> A <sub>s</sub> =	<b>84.1 As</b>
Width (B)	2.2 ft	Lr/s = 0.00	A <sub>s</sub> =	6.6 sf
Wall Return (L <sub>r</sub> ) =		Kz = 0.849	F =	555 lbs
Directionality (K <sub>d</sub> )	0.85	qz = 56.6 psf		
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	C <sub>f</sub>	F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25	108.2 As
		s to 2s	1.50	72.1 As
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00	

$\frac{B}{S} < Z$  ∴ CASE C DOES NOT APPLY

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JOB TITLE Downtown Miami  
Wayfinding & Signage Program  
JOB NO. SHEET NO. KIOSK.2  
CALCULATED BY DATE  
CHECKED BY DATE

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	6.8 ft	s/h = 0.66	<b>Case A &amp; B</b>	C <sub>r</sub> = 1.69
Height (s)	4.5 ft	B/s = 0.73	F = qz G C <sub>f</sub> A <sub>s</sub> =	<b>81.3 As</b>
Width (B)	3.3 ft	Lr/s = 0.00	A <sub>s</sub> =	14.9 sf
Wall Return (L <sub>r</sub> ) =		Kz = 0.849	F =	1207 lbs
Directionality (K <sub>d</sub> )	0.85	qz = 56.6 psf		
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	C <sub>f</sub>	F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25	108.2 As
		s to 2s	1.50	72.1 As
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00	

$\frac{B}{S} < Z$  ∴ CASE C DOES NOT APPLY

**LEGEND**

**ENGINEERING CALCULATIONS**

**Sign Type:**

KIOSK.1 - Pedestrian Kiosk  
KIOSK.2 - Pedestrian Kiosk

Reference Design Intent Drawing Sheets C.33 for KIOSK.1.

Reference Design Intent Drawing Sheets C.34-35 for KIOSK.2.

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		SHEET NO.	J.10
REVISIONS	04/20/2012 PR		
	11/30/2012 GS		
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

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JOB TITLE Downtown Miami  
 Wayfinding & Signage Program  
 JOB NO. \_\_\_\_\_ SHEET NO. INT.1  
 CALCULATED BY \_\_\_\_\_ DATE \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_ DATE \_\_\_\_\_

**Wind Loads - Other Structures:** ASCE 7 - 10 Ultimate Wind Pressures

Wind Factor = 1.00  
 Gust Effect Factor (G) = 0.85 Ultimate Wind Speed = 175 mph  
 Kzt = 1.00 Exposure = C

**A. Solid Freestanding Walls & Solid Signs (& open signs with less than 30% open)**

Dist to sign top (h)	5.8 ft	s/h = 0.40	<b>Case A &amp; B</b>	C <sub>r</sub> = 1.78
Height (s)	2.3 ft	B/s = 0.65	F = qz G C <sub>f</sub> A <sub>s</sub> =	<b>85.4 A<sub>s</sub></b>
Width (B)	1.5 ft	Lr/s = 0.00	A <sub>s</sub> =	3.5 sf
Wall Return (Lr) =		Kz = 0.849	F =	295 lbs
Directionality (Kd) =	0.85	qz = 56.6 psf		
Percent of open area to gross area	0.0%	Open reduction factor = 1.00	<b>Case C</b>	
		Horiz dist from windward edge	C <sub>f</sub>	F=qzGC <sub>f</sub> A <sub>s</sub> (psf)
		0 to s	2.25	108.2 A <sub>s</sub>
		s to 2s	1.50	72.1 A <sub>s</sub>
		<b>Case C reduction factors</b>		
		Factor if s/h > 0.8 =	1.00	
		Wall return factor for C <sub>f</sub> at 0 to s =	1.00	

$\frac{B}{s} < z$  ; CASE C DOES NOT APPLY

**STRUCTURAL DESIGN ONLY**

**LEGEND**

**ENGINEERING CALCULATIONS**

**Sign Type:**

INT.1 - Pedestrian Kiosk

Reference Design Intent Drawing Sheets C.36 for INT.1.

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REVISIONS	04/20/2012 PR	SHEET NO.	<b>J.11</b>
	11/30/2012 GS		
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

$$S = 1.28 \sqrt{\frac{E}{F_{cy}}} \quad F_{cy} = 10,100 \text{ ksi}$$

$$S = 1.28 \sqrt{\frac{E}{F_{cy}}} \quad F_{cy} = 35 \text{ ksi}$$

**Table 2-21  
ALLOWABLE STRESSES FOR  
BUILDING TYPE STRUCTURES**

6061-T6 Sheet, -T651 Plate up through 4,000 in. thick  
6061-T6, -T651 Rolled or Cold Finished Rod and Bar  
6061-T6 Drawn Tube

White bars apply to unwelded metal

Shaded bars apply to all thicknesses with fillets 5183, 5355, 5555, and thicknesses  $\leq 0.375$  in. with fillets 4043, 5054, or 5654  
For tubes with circumferential welds, Sections 3.4.10, 3.4.12, and 3.4.16.1 apply for  $R_2/t \leq 20$

Type of Stress	Type of Member or Element	Sec. 3.4.	Allowable Stress	
			$S_1$	$S_2$
TENSION, axial	Any tension member	1	22	12.5
	Flat elements in uniform tension	2	21	9
	Round or oval tubes	3	25	10.5
	Flat elements in bending in their own plane, symmetric shapes	4	28	12
	On rivets and bolts	5	43	25
	On flat surfaces and pins and on bolts in slotted holes	6	29	16
COMPRESSION IN COLUMNS, axial	All columns	7	-	-
	Flat elements supported on one edge - columns buckling about a symmetry axis	8	21	2.4
	Flat elements supported on one edge - columns not buckling about a symmetry axis	8.1	9	3.9
	Flat elements supported on both edges	9	21	7.6
	Flat elements supported on one edge and with stiffener on other edge	9.1	9	12
	Flat elements supported on both edges and with an intermediate stiffener	9.2	21	1.4
	Curved elements supported on both edges	10	9	5.9
			21	14
			9	5.9
			21	14

VII-66

January 2005

**TABLE 2-21 CONT'D**

PLATES  
RODS, BARS, TUBES

COMPRESSION IN BEAMS, extreme fiber, gross section	Single web shapes	11	21	21	23.9 - 0.124 $L_b/r_f$	79	87000 $(L_b/r_f)^2$
	Round or oval tubes	12	25	26	10.2 - 0.043 $L_b/r$	180	87000 $(L_b/r)^2$
	Solid rectangular and round sections	13	10.5	28	39.3 - 2.70 $\sqrt{R_b/t}$	81	Same as
	Tubular shapes	14	28	14	17.7 - 0.832 $\sqrt{R_b/t}$	187	Section 3.4.10
	Flat elements supported on one edge	15	21	18	40.5 - 0.927 $\frac{d}{t} \sqrt{\frac{L_b}{d}}$	29	11400 $\left(\frac{d}{t}\right) \sqrt{\frac{L_b}{d}}$
	Flat elements supported on both edges	16	21	12	16.0 - 0.230 $\frac{d}{t} \sqrt{\frac{L_b}{d}}$	46	11400 $\left(\frac{d}{t}\right) \sqrt{\frac{L_b}{d}}$
	Curved elements supported on both edges	16.1	21	123	23.9 - 0.238 $\frac{2L_b S_x}{\sqrt{I_y}}$	1680	23600 $\frac{2L_b S_x}{\sqrt{I_y}}$
	Flat elements supported on one edge and with stiffener on other edge	16.2	9	186	10.2 - 0.082 $\frac{2L_b S_x}{\sqrt{I_y}}$	6940	23600 $\frac{2L_b S_x}{\sqrt{I_y}}$
	Flat elements supported on both edges	16.3	21	6.5	27.3 - 0.930 $b/t$	10	182 $(b/t)$
	Flat elements supported on both edges	16.4	9	9	12.0 - 0.334 $b/t$	18	109 $(b/t)$
	Flat elements supported on both edges	16.5	21	21	27.3 - 0.292 $b/t$	33	580 $(b/t)$
	Curved elements supported on both edges	16.6	9	28	12.0 - 0.105 $b/t$	58	346 $(b/t)$
	Flat elements supported on one edge and with stiffener on other edge	16.7	25	2.1	26.2 - 0.944 $\sqrt{R_b/t}$	141	3780 $\left(\frac{R_b}{t}\right) \left[1 + \frac{\sqrt{R_b/t}}{35}\right]$
Flat elements supported on both edges	16.8	10.5	8.4	11.8 - 0.396 $\sqrt{R_b/t}$	390	3780 $\left(\frac{R_b}{t}\right) \left[1 + \frac{\sqrt{R_b/t}}{35}\right]$	
Flat elements supported on both edges and with an intermediate stiffener	16.9	28	8.1	40.5 - 1.41 $b/t$	19	4930 $(b/t)^2$	
Flat elements supported on both edges and with a longitudinal stiffener	17	12	12	16.0 - 0.360 $b/t$	30	4930 $(b/t)^2$	
Unstiffened flat elements supported on both edges	18	28	48	40.5 - 0.270 $h/t$	75	1520 $(h/t)$	
Stiffened flat elements supported on both edges	19	12	82	16.0 - 0.067 $h/t$	119	852 $(h/t)$	
Unstiffened flat elements supported on both edges	20	28	110	40.5 - 0.117 $h/t$	173	3500 $(h/t)$	
Stiffened flat elements supported on both edges	21	12	144	16.0 - 0.029 $h/t$	280	2200 $(h/t)$	
		5	36	15.8 - 0.101 $h/t$	64	38700 $(h/t)^2$	
		5	48	7.0 - 0.035 $h/t$	129	38700 $(h/t)^2$	
		12	-	-	12	59200 $(h/t)^2$	
		5	88	9.6 - 0.050 $a/t$	129	59200 $(h/t)^2$	

January 2005

VII-67

**STRUCTURAL DESIGN ONLY**

**LEGEND**

**ENGINEERING CALCULATIONS**

Table 2-21  
ALLOWABLE STRESSES FOR BUILDING TYPE  
STRUCTURES

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

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DATE 18 November 2010

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DRAWN BY: PR

**Downtown Miami  
City of Miami, Florida**

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PROJECT NO.

SHEET TITLE

**Engineering Calculations  
Table 2-21**

REVISIONS: 04/20/2012 PR

SHEET NO.

11/30/2012 GS

08/16/2013 GS

03/12/2014 PR

05/02/2014 PR

**J.12**

DETERMINE ALLOWABLE STRESS FOR SIGN PANEL:

ALLOWABLE STRESSES IN SIGN PANELS ARE REDUCED DUE TO WELDING

ALLOWABLE STRESSES:

	$F_u$ (UNWELDED)	$F_w$ (WELDED)
TENSION IN BEAMS:	25 KSI	10.5 KSI
COMPRESSION IN BEAMS:	28 KSI	12.0 KSI

$t = 0.25$  in  
 TRAIL WIDTH = 12"  
 $L_{we} = 2'$   
 WELDED AFFECTED LENGTH =  $2" + 1" + 1" = 4"$

$A = 12" \times 0.25" = 3 \text{ in}^2$   
 $A_w = 4" \times 0.25" = 1 \text{ in}^2$

$F_{Tension} = 25 \text{ KSI} - \left(\frac{1 \text{ in}^2}{3 \text{ in}^2}\right)(25 \text{ KSI} - 10.5 \text{ KSI}) = 20.17 \text{ KSI}$  GOVERNS

$F_{Compression} = 28 \text{ KSI} - \left(\frac{1 \text{ in}^2}{3 \text{ in}^2}\right)(28 \text{ KSI} - 12 \text{ KSI}) = 22.67 \text{ KSI}$

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Sign Panel Design:

Sign Type	TOS Elev. (ft)	BOS Elev. (ft)	Centroid Elev. (ft)	Sign Height (ft)	Sign Width (ft)	Sign Area (ft <sup>2</sup> )	Dist. Btwn. Posts (ft)	Long Cant. (ft)	Short Cant. (ft)	Wind Press. (psf)	Allowable Stress (psi)	Moment (lb-ft)	Sx req'd (in <sup>3</sup> )	Sx actual (in <sup>3</sup> )	Results
DIST.ID.3	11.750	8.000	9.875	3.750	3.083	11.56	0.00	2.33	0.33	86.3	20167	528	0.31	0.469	OK
VDIR.1	11.000	8.000	9.500	3.000	3.667	11.00	0.00	2.33	0.92	86.6	20167	423	0.25	0.375	OK
VDIR.1_LEFT	11.000	8.000	9.500	3.000	3.667	11.00	0.00	2.33	0.92	86.6	20167	423	0.25	0.375	OK
VDIR.2	13.417	8.000	10.709	5.417	3.667	19.86	0.00	2.33	0.92	85.3	20167	753	0.45	0.677	OK
VDIR.2_LEFT	13.417	8.000	10.709	5.417	3.667	19.86	0.00	2.33	0.92	85.3	20167	753	0.45	0.677	OK
VDIR.3	14.750	8.000	11.375	6.750	3.667	24.75	0.00	2.33	0.92	84.6	20167	930	0.55	0.844	OK
VDIR.3_LEFT	14.750	8.000	11.375	6.750	3.667	24.75	0.00	2.33	0.92	84.6	20167	930	0.55	0.844	OK
VDIR.4 *	11.167	7.500	9.334	3.667	8.500	31.17	5.83	0.00	0.00	85.8	25000	803	0.39	0.458	OK
VDIR.5 *	13.000	7.500	10.250	5.500	8.500	46.75	5.83	0.00	0.00	84.3	25000	1183	0.57	0.688	OK
PARK.1	10.667	8.000	9.334	2.667	1.333	3.56	0.00	0.67	0.67	86.7	20167	31	0.02	0.333	OK
PARK.1A	10.667	8.000	9.334	2.667	1.333	3.56	0.00	0.67	0.67	86.7	20167	31	0.02	0.333	OK
PARK.2	12.250	8.000	10.125	4.250	3.667	15.58	0.00	2.33	0.33	86.0	20167	595	0.35	0.531	OK
PARK.3 *	9.333	3.000	6.167	6.333	3.000	19.00	2.33	0.00	0.00	82.2	25000	213	0.10	0.792	OK
PDIR.1	9.750	7.500	8.625	2.250	2.333	5.25	0.00	1.92	0.00	86.6	20167	215	0.13	0.281	OK
PDIR.2	9.750	8.000	8.875	1.750	2.333	4.08	0.00	1.92	0.00	86.6	20167	167	0.10	0.219	OK
PDIR.3	9.750	7.500	8.625	2.250	3.333	7.50	0.00	1.83	0.00	86.6	20167	153	0.09	0.219	OK
PDIR.4	9.750	8.000	8.875	1.750	4.333	7.58	0.00	1.83	0.00	86.6	20167	305	0.18	0.313	OK
DEST.1	10.500	8.000	9.250	2.500	3.500	8.75	0.00	2.17	0.92	86.6	20167	305	0.18	0.313	OK
DEST.2	10.500	8.000	9.250	2.500	3.500	8.75	0.00	2.17	0.92	86.6	20167	305	0.18	0.313	OK
KIOSK.1 *	6.000	3.000	4.500	3.000	2.167	6.50	2.00	0.00	0.00	84.1	25000	76	0.04	0.375	OK
KIOSK.2 *	6.750	2.250	4.500	4.500	3.250	14.63	3.25	0.00	0.00	81.3	25000	290	0.14	0.563	OK
INT.1 *	5.833	3.500	4.667	2.333	1.500	3.50	1.50	0.00	0.00	85.4	10500	34	0.04	0.292	OK

Notes:  
 All sign panels designed assuming 1/4" thick aluminum (6061-T6)  
 \* indicates the sign is supported by (2) poles

**STRUCTURAL DESIGN ONLY**

**LEGEND**  
**ENGINEERING CALCULATIONS**

Calculations determining allowable stress for sign panel.  
 CHART: Calculations determining allowable stress for sign panel.

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DATE	18 November 2010	Downtown Miami City of Miami, Florida
DRAWN BY:	PR	
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REVISIONS		SHEET TITLE
04/20/2012 PR		Engineering Calculations
11/30/2012 GS		
08/16/2013 GS		
03/12/2014 PR		
05/02/2014 PR		
SHEET NO.		J.13

CALC BY: AMM CHECK BY: \_\_\_\_\_ SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
 DATE: \_\_\_\_\_ REV: \_\_\_\_\_ PROJECT: \_\_\_\_\_

DESIGN WELDS:

WELDS BETWEEN SIGN PANEL & SLEEVE ASSEMBLY - BARS

1/4" FILLET WELD - 2" LONG @ 12" C.C.

CHECK WORST CASE CANTILEVER LENGTH & WIND PRESSURE

CHECK 12" TRIB. WIDTH & APPLY TO ENTIRE SIGN HEIGHT.

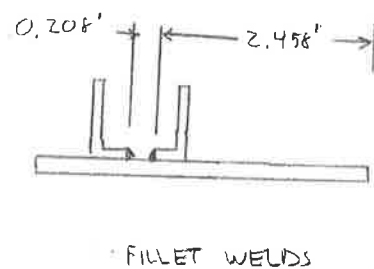
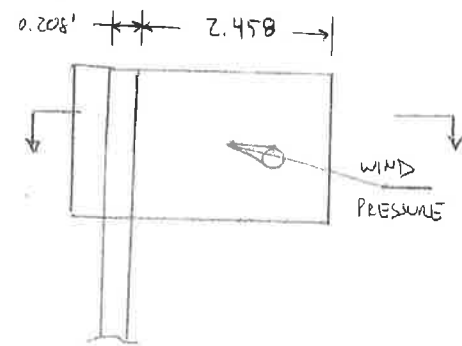
$L_{CANT} = 2.458' (29.5'')$  ;  $L = 0.208' (2.5'')$

WIND PRESSURE =  $0.6 \times (86.7 \text{ psf}) = 52.0 \text{ psf}$

$M_{req} = \frac{(52.0 \text{ psf} \times 1') \times (2.458')^2}{2} = 157 \text{ lb-ft}$

$R_1 = \frac{52 \text{ psf}}{2(0.208')} ((0.208')^2 - (2.458')^2) = \pm 750 \text{ lbs/FT LENGTH}$

$R_2 = \frac{52 \text{ psf}}{2(0.208')} (0.208' + 2.458')^2 = \pm 888 \text{ lbs/FT LENGTH}$



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 DATE: \_\_\_\_\_ REV: \_\_\_\_\_ PROJECT: \_\_\_\_\_

DESIGN WELDS CONT'D

$V_w = \frac{F_{sw} \cdot L_{we}}{n_w}$

$L_{we} = 2''$  ;  $n_w = 1.95$

EFFECTIVE THREAT =  $0.707 \times 0.25'' = 0.177''$

FILLET TO BE ALUM 4043 ; ULT. SHEAR STRENGTH = 11.5 KSI

$F_{sw} = \text{LEAST OF:}$

- 1)  $11.5 \text{ KSI} \times 0.177'' = 2.04 \text{ KLI}$
- 2)  $5.0 \text{ KSI} \times 0.25'' = 1.25 \text{ KLI}$  ← GOVERNS
- 3)  $9.0 \text{ KSI} \times 0.25'' = 2.25 \text{ KLI}$

$V_w = \frac{1.25 \text{ KLI} \times 2''}{1.95} = 1.282 \text{ KLI/FT OF LENGTH}$   
 $= 1282 \text{ lbs/FT OF LENGTH}$

$V_w = 1282 \text{ lbs} > R_2 = 888 \text{ lbs}$   
 $> R_1 = 750 \text{ lbs}$

∴ 1/4" FILLET WELD 2" @ 12" C.C. IS OK  
 FILLER MATERIAL TO BE 4043

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**LEGEND**

**ENGINEERING CALCULATIONS**

Design Welds calculations

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DATE 18 November 2010

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**Downtown Miami  
 City of Miami, Florida**

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PROJECT NO.

SHEET TITLE

**Engineering Calculations**

REVISIONS: 04/20/2012 PR

11/30/2012 GS

08/16/2013 GS

03/12/2014 PR

05/02/2014 PR

SHEET NO.

**J.14**

**STRUCTURAL DESIGN ONLY**

CALC BY: Amn CHECK BY: \_\_\_\_\_ SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
 DATE: \_\_\_\_\_ REV: \_\_\_\_\_ PROJECT: \_\_\_\_\_

DESIGN SLEEVE ASSEMBLY - COVER ATTACHMENT

- (2) 1/2"  $\phi$  STAINLESS STEEL BOLTS MIN. FOR EACH SIGN TYPE
- DESIGN FOR WEAIR CASE SIGN ADENT  $\phi$  LOADING

$$L_{CANT} = 2.354' (28\frac{1}{4}"); L = 0.375' (4.5")$$

$$TRIB. WIDTH / SIGN HEIGHT = 6.75' (MAX)$$

$$WIND PRESSURE = 0.6 (86.7 psf) = 52.0 psf$$

$$R_1 = \frac{(52.0 psf \times 1(6.75'))}{2(0.375')} ((0.375')^2 - (2.354')^2) = \pm 2528 lbs$$

$$R_2 = \frac{(52 psf \times 6.75')}{2(0.375')} (0.375' + 2.354')^2 = \pm 3485 lbs$$

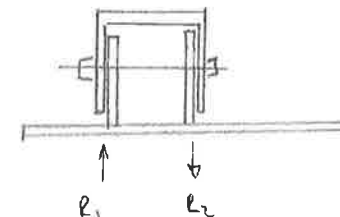
(2) 1/2"  $\phi$  S.S. BOLTS

$$V_{ALLOW} = 2984 lbs/BOLT \times 2 BOLTS$$

$$V_{ALLOW} = 5968 lbs > R_2 = 3485 lbs$$

$$> R_1 = 2528 lbs$$

$\therefore$  1/2"  $\phi$  S.S. BOLTS ARE OK



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**STRUCTURAL DESIGN ONLY**

**LEGEND**

**ENGINEERING CALCULATIONS**

Design Sleeve Assembly - Cover Attachment calculations

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<small>The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the project.</small>		SHEET TITLE	Engineering Calculations
		SHEET NO.	J.15
REVISIONS	04/20/2012 PR		
	1/30/2012 GS		
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

STAINLESS STEEL BOLT - ALLOWABLE LOADS TABLE

**TABLE 11**  
STAINLESS STEEL - Alloy Groups 1, 2 and 3, Condition CW

Nominal Thread Diameter & Thread/Inch	D Nominal Thread Diameter (Inch)	A(S) Tensile Stress Area (Sq. In.)	A(R) Thread Root Area (Sq. In.)	Allowable Tension (Pounds)	Allowable Shear		Bearing (Pounds)			Minimum Material Thickness to Equal Tensile Capacity of Fastener (In.)		
					Single (Pounds)	Double (Pounds)	1/8" Sl. A36	1/8" Al. 6063-T5	1/8" Al. 6063 T6	A36	6063-T5	6063-T6
#6-32	0.1380	0.0091	0.0078	354	180	360	1201	276	414	0.126	0.274	0.198
#8-32	0.1640	0.0140	0.0124	560	286	573	1427	328	492	0.152	0.368	0.261
#10-24	0.1900	0.0175	0.0152	760	391	782	1653	380	570	0.170	0.372	0.267
#12-24	0.2160	0.0242	0.0214	993	494	988	1879	432	648	0.200	0.450	0.321
1/4-20	0.2500	0.0318	0.0280	1272	637	1273	2175	500	750	0.226	0.541	0.360
5/16-18	0.3125	0.0524	0.0469	2096	1048	2096	3219	625	938	0.284	---	0.459
3/8-16	0.3750	0.0775	0.0699	3160	1614	3229	3262	750	1125	0.341	---	0.553
7/16-14	0.4375	0.1063	0.0961	4252	2219	4439	3806	875	1313	0.395	---	0.642
1/2-13	0.5000	0.1419	0.1292	5676	2984	5967	4350	1000	1500	0.456	---	0.745
9/16-12	0.5625	0.1819	0.1664	7276	3843	7686	4894	1125	1688	0.510	---	0.836
5/8-11	0.6250	0.2360	0.2071	9040	4783	9566	5437	1250	1875	0.563	---	0.923
3/4-10	0.7500	0.3345	0.3091	11289	6023	12046	6525	1500	2250	0.590	---	0.963
7/8-9	0.8750	0.4617	0.4285	15382	8352	16703	7612	1750	2625	0.656	---	1.123
1-8	1.0000	0.6057	0.5630	20442	10970	21941	8700	2000	3000	0.778	---	1.276

**DIAMETER**

Up thru 5/8" 3/4" and Over

For Diameters 3/4" and Over:

$$A(R) = 0.7854 \left[ D - \frac{1.2269}{N} \right]^2$$

$$A(S) = 0.7854 \left[ D - \frac{0.9743}{N} \right]^2$$

$$F_u \text{ (Min. Ultimate Tensile Strength)} = 110,000 \text{ psi}$$

$$F_y \text{ (Min. Tensile Yield Strength)} = 65,000 \text{ psi}$$

$$F_u \text{ (Allowable Tensile Stress)} = 40,000 \text{ psi}$$

$$F_v \text{ (Allowable Shear Stress)} = 23,094 \text{ psi}$$

$$F_u = 0.40 F_u$$

$$F_v = \frac{0.40}{\sqrt{3}} F_u$$

Allowable tension =  $0.40 F_u A(S)$

Allowable shear (Single) =  $\frac{0.40}{\sqrt{3}} F_u A(R)$

In Tables 9 thru 15, for Group Type and Condition Definitions see pages 21 and 22.

~~**TABLE 12**  
STAINLESS STEEL - Alloy Groups 1, 2 and 3, Condition SH~~

Nominal Thread Diameter & Thread/Inch	D Nominal Thread Diameter (Inch)	A(S) Tensile Stress Area (Sq. In.)	A(R) Thread Root Area (Sq. In.)	Allowable Tension (Pounds)	Allowable Shear		Bearing (Pounds)			Minimum Material Thickness to Equal Tensile Capacity of Fastener (In.)		
					Single (Pounds)	Double (Pounds)	A36	1/8" Al. 6063-T5	1/8" Al. 6063 T6	A36	6063-T5	6063-T6
#6-32	0.1380	0.0091	0.0078	354	216	432	1301	276	414	0.144	0.231	0.188
#8-32	0.1640	0.0140	0.0124	560	344	687	1427	328	492	0.188	0.308	0.240
#10-24	0.1900	0.0175	0.0152	760	441	882	1653	380	570	0.195	0.313	0.246
#12-24	0.2160	0.0242	0.0214	993	591	1186	1879	432	648	0.231	0.377	0.291
1/4-20	0.2500	0.0318	0.0280	1272	776	1552	2175	500	750	0.241	0.432	0.339
5/16-18	0.3125	0.0524	0.0469	2096	1300	2600	3219	625	938	0.330	0.539	0.412
3/8-16	0.3750	0.0775	0.0699	3160	1937	3874	3806	750	1125	0.396	0.651	0.506
7/16-14	0.4375	0.1063	0.0961	4252	2663	5326	3806	875	1313	0.440	0.756	0.585
1/2-13	0.5000	0.1419	0.1292	5676	3811	7622	4350	1000	1500	0.522	0.878	0.678
9/16-12	0.5625	0.1819	0.1664	7276	4611	9223	4894	1125	1688	0.596	0.985	0.765
5/8-11	0.6250	0.2360	0.2071	9040	6179	11479	5437	1250	1875	0.657	1.089	0.840
3/4-10	0.7500	0.3345	0.3091	11289	8512	15704	6525	1500	2250	0.739	1.225	0.947
7/8-9	0.8750	0.4617	0.4285	15382	10888	21776	7612	1750	2625	0.860	1.431	1.100
1-8	1.0000	0.6057	0.5630	20442	14302	28604	8700	2000	3000	0.977	1.626	1.256

~~**DIAMETER**~~

~~Up thru 5/8" 3/4" and Over~~

~~For Diameters 3/4" and Over:~~

~~$$A(R) = 0.7854 \left[ D - \frac{1.2269}{N} \right]^2$$~~
~~$$A(S) = 0.7854 \left[ D - \frac{0.9743}{N} \right]^2$$~~
~~$$F_u \text{ (Min. Ultimate Tensile Strength)} = 120,000 \text{ psi}$$~~
~~$$F_y \text{ (Min. Tensile Yield Strength)} = 95,000 \text{ psi}$$~~
~~$$F_u \text{ (Allowable Tensile Stress)} = 46,000 \text{ psi}$$~~
~~$$F_v \text{ (Allowable Shear Stress)} = 27,713 \text{ psi}$$~~
~~$$F_u = 0.40 F_u$$~~
~~$$F_v = \frac{0.40}{\sqrt{3}} F_u$$~~
~~Allowable tension =  $0.40 F_u A(S)$~~ 
~~Allowable shear (Single) =  $\frac{0.40}{\sqrt{3}} F_u A(R)$~~

REV. 1 4/28/14

ANUAL:

INTERACTION	Value	Results
	0.95	<1.0, OK
	0.88	<1.0, OK
	0.88	<1.0, OK
	0.72	<1.0, OK
	0.72	<1.0, OK
	0.93	<1.0, OK
	0.93	<1.0, OK
	0.86	<1.0, OK
	0.79	<1.0, OK
	0.35	<1.0, OK
	0.94	<1.0, OK
	0.42	<1.0, OK
	0.43	<1.0, OK
	0.37	<1.0, OK
	0.71	<1.0, OK
	0.71	<1.0, OK
	0.34	<1.0, OK
	0.91	<1.0, OK
	0.23	<1.0, OK

Pole Wt. (lbs)	Sign Wt. (lbs)	Assembly Wt. (lbs)	K*L (ft)	P Allow (kips)	Pole Results
127	38	0.165	21	16.1	OK
119	37	0.155	20	17.8	OK
119	37	0.155	20	17.8	OK
370	66	0.436	22	31.7	OK
370	66	0.436	22	31.7	OK
407	82	0.489	24	26.7	OK
407	82	0.489	24	26.7	OK
335	104	0.439	20	47.6	OK
718	156	0.873	22	63.4	OK
115	12	0.127	20	17.8	OK
184	52	0.236	21	21.6	OK
82	63	0.146	13	31.6	OK
105	17	0.123	18	22	OK
105	14	0.119	19	19.7	OK
113	29	0.143	19	19.7	OK
113	29	0.143	19	19.7	OK
70	22	0.091	9	34.6	OK
78	47	0.126	9	34.6	OK
126	12	0.138	10	30.2	OK

Sign Type	Shear Req'd. per post (lbs)	D (in)	D/t	Lv (in)	Ag (in <sup>2</sup> )	Fcr (ksi)	Shear Allow. (lbs)	Pole Results
DIST.ID.3	754	4.50	20.40	2.25	2.97	21	37347	OK
VDIR.1	727	4.50	20.40	2.25	2.97	21	37347	OK
VDIR.1 LEFT	727	4.50	20.40	2.25	2.97	21	37347	OK
VDIR.2	1170	4.50	7.17	2.25	7.64	21	96072	OK
VDIR.2 LEFT	1170	4.50	7.17	2.25	7.64	21	96072	OK
VDIR.3	1409	4.50	7.17	2.25	7.64	21	96072	OK
VDIR.3 LEFT	1409	4.50	7.17	2.25	7.64	21	96072	OK
VDIR.4 **	947	4.50	14.30	2.25	4.14	21	52060	OK
VDIR.5 **	1325	4.50	7.17	2.25	7.64	21	96072	OK
PARK.1A	341	4.50	20.40	2.25	2.97	21	37347	OK
PARK.2	959	4.50	14.30	2.25	4.14	21	52060	OK
PARK.3 **	518	4.00	14.00	3.75	5	18750	OK	
PDIR.1	419	4.50	20.40	2.25	2.97	21	37347	OK
PDIR.2	368	4.50	20.40	2.25	2.97	21	37347	OK
DEST.1	611	4.50	20.40	2.25	2.97	21	37347	OK
DEST.2	611	4.50	20.40	2.25	2.97	21	37347	OK
KIOSK.1 **	200	2.88	15.20	1.44	1.59	21	19994	OK
KIOSK.2 **	441	2.88	15.20	1.44	1.59	21	19994	OK
INT.1 **	157	4.50	20.40	2.25	2.97	21	37347	OK

Sign Posts Design Cont'd.: SHEAR:

**STRUCTURAL DESIGN ONLY**

**LEGEND**

**ENGINEERING CALCULATIONS**

Stainless Steel Bolt Chart - Table 11

CHART: Calculations for sign posts design

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GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and the straps, are based on manufacturer supplied product data.

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SUBCONSULTANT

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DATE: 18 November 2010

DRAWN BY: PR

CLIENT / PROJECT: Downtown Miami, City of Miami, Florida

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PROJECT NO.

SHEET TITLE: Engineering Calculations

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REVISIONS:

- 04/20/2012 PR
- 11/30/2012 GS
- 08/16/2013 GS
- 03/12/2014 PR
- 05/02/2014 PR

SHEET NO. **J.16**

REV 1 4/28/14

Sign Posts Desired:

GENERAL INFORMATION & BENDING

Sign Type	TOS Elev. (ft)	BOS Elev. (ft)	Centroid Elev. (ft)	Sign Ht (ft)	Sign Width (ft)	Sign Area (ft <sup>2</sup> )	Wind Press. (psf)	Allowable Stress (psi)	No. of Posts	Post Dia. (in)	Moment (lb-ft)	Zx req'd (in <sup>2</sup> )	Post Size	Zx actual (in <sup>2</sup> )	Pole Results
DIST.ID.3	11.750	8.000	9.875	3.750	3.083	11.56	86.3	20958	1	4.5	6533	3.74	Pipe 4 Std.	4.05	OK
VDIR.1	11.000	8.000	9.500	3.000	3.667	11.00	86.6	20958	1	4.5	6054	3.47	Pipe 4 Std.	4.05	OK
VDIR.1 LEFT	11.000	8.000	9.500	3.000	3.667	11.00	86.6	20958	1	4.5	6054	3.47	Pipe 4 Std.	4.05	OK
VDIR.2	13.417	8.000	10.709	5.417	3.667	19.86	85.3	20958	1	4.5	11501	6.59	Pipe 4 XX-Strong	9.50	OK
VDIR.2 LEFT	13.417	8.000	10.709	5.417	3.667	19.86	85.3	20958	1	4.5	11501	6.59	Pipe 4 XX-Strong	9.50	OK
VDIR.3	14.750	8.000	11.375	6.750	3.667	24.75	84.6	20958	1	4.5	14901	8.53	Pipe 4 XX-Strong	9.50	OK
VDIR.3 LEFT	14.750	8.000	11.375	6.750	3.667	24.75	84.6	20958	1	4.5	14901	8.53	Pipe 4 XX-Strong	9.50	OK
VDIR.4 **	11.167	7.500	9.334	3.667	8.500	31.17	85.8	20958	2	4.5	8031	4.60	(2) Pipe 4 X-Strong	5.53	OK
VDIR.5 **	13.000	7.500	10.250	5.500	8.500	46.75	84.3	20958	2	4.5	12652	7.24	(2) Pipe 4 XX-Strong	9.50	OK
PARK.1A	10.667	8.000	9.334	2.667	1.333	3.56	86.7	20958	1	4.5	2350	1.35	Pipe 4 Std.	4.05	OK
PARK.2	12.250	8.000	10.125	4.250	3.667	15.58	86.0	20958	1	4.5	8761	5.02	Pipe 4 X-Strong	5.53	OK
PARK.3 **	9.333	3.000	6.167	6.333	3.000	19.00	82.2	20958	2	4	2963	1.70	* (2) ST 4" x 4" x 0.25"	4.41	OK
PDIR.1	9.750	7.500	8.625	2.250	2.333	5.25	86.6	20958	1	4.5	2900	1.66	Pipe 4 Std.	4.05	OK
PDIR.2	9.750	8.000	8.875	1.750	2.333	4.08	86.6	20958	1	4.5	2506	1.44	Pipe 4 Std.	4.05	OK
DEST.1	10.500	8.000	9.250	2.500	3.500	8.75	86.6	20958	1	4.5	4829	2.76	Pipe 4 Std.	4.05	OK
DEST.2	10.500	8.000	9.250	2.500	3.500	8.75	86.6	20958	1	4.5	4829	2.76	Pipe 4 Std.	4.05	OK
KIOSK.1 **	6.000	3.000	4.500	3.000	2.167	6.50	84.1	20958	2	2.88	793	0.45	(2) Pipe 2.5 Std.	1.37	OK
KIOSK.2 **	6.750	2.250	4.500	4.500	3.167	14.25	81.3	20958	2	2.88	2118	1.21	(2) Pipe 2.5 Std.	1.37	OK
INT.1 **	5.833	3.500	4.667	2.333	1.500	3.50	85.4	20958	2	4.5	536	0.31	(2) Pipe 4 Std.	1.37	OK

Notes:  
 All sign posts are designed assuming Pipe Steel, ASTM A53 Gr. B, Fy = 35 ksi, u.n.o.  
 \* indicates the section is aluminum (6061-T6) and unwelded  
 \*\* indicates the sign is supported by (2) poles

**STRUCTURAL DESIGN ONLY**

LEGEND

ENGINEERING CALCULATIONS

CHART: Calculations for sign posts design

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

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<p>The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the project location.</p>		PROJECT NO.	
REVISIONS	04/20/2012 PR	SHEET TITLE	Engineering Calculations
	11/30/2012 GS	SHEET NO.	<b>J.17</b>
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

CALC BY: Amm CHECK BY: SHEET NO. OF  
 DATE: REV: PROJECT:

SIGN POST DESIGN CONT'D:  
 DISTRICT ID.1 - GENERAL INFORMATION & BENDING  
 T.O.S = 24.25' B.O.S. = 10'  
 CENTROID = 17.125'  
 SIGN HT = 14.25' WIDTH = 8.083'  
 AREA = 14.25' x 8.083' = 115 SFT  
 ULT WIND PRESSURE = 91.8 psf  
 FACTORED WIND PRESSURE = 0.6 x 91.8 psf = 55.1 psf  
 ASSUME EITHER POST WILL HAVE TO RESIST 2/3 OF THE WIND LOAD  
 $P_{req} = \frac{2}{3} \times 55.1 \text{ psf} \times 115 \text{ SFT} = 4224 \text{ lbs}$   
 $w_{req} = 55.1 \text{ psf} \times 10.8' / (12'/1) = 50 \text{ plf}$   
 $M_{req} = (4224 \text{ lbs} \times 17.125') + (50 \text{ plf} \times (10')^2 / 2) = 74,836 \text{ lb-ft}$   
 $F_y = 35,000 \text{ psi}$   
 $\phi = 1.67$   
 $Z_{req} = \frac{(74,836 \text{ lb-ft} \times 12'/1) \times 1.67}{35,000 \text{ psi}} = 42.8 \text{ in}^3$   
 PIPE 10 X - STRONG (SEE 80)  
 $Z_{ACTUAL} = 49.2 \text{ in}^3 > Z_{req} \therefore \underline{OK}$

GARY K. MUNKELT & ASSOC. Structural Engineers

CALC BY: Amm CHECK BY: SHEET NO. OF  
 DATE: REV: 4/24/14 PROJECT:

SIGN POST DESIGN CONT'D:  
 DISTRICT ID.1 CONT'D  
 SHEAR:  
 $V_{req} = 4224 \text{ lbs} + (50 \text{ plf} \times 10') = 4724 \text{ lbs}$   
 $V_{allow} = \frac{0.6(35,000 \text{ psi})(15.0 \text{ in}^2)}{1.67} = 188,623 \text{ lbs} > V_{req} \therefore \underline{OK}$   
 AXIAL:  
 POLE WT. = 54.8 plf x 24.25' = 1329 lbs  
 SIGN WT =  $\frac{2}{3} \times 160 \text{ psf} \times 0.0208' \times 115 \text{ SFT} = 255 \text{ lbs}$   
 MISC WT = 250 lbs  
 ASSEMBLY WT,  $P_{req} = 1329 \text{ lbs} + 255 \text{ lbs} + 250 \text{ lbs} = 1834 \text{ lbs}$   
 $KL = 2.1 \times 17.125' = 36'$   
 $P_A = 153 \text{ K @ } KL = 36' > P_{req} \therefore \underline{OK}$   
 INTERACTION VALUE:  
 $\left( \frac{1,834 \text{ K}}{153 \text{ K}} \right) + \left( \frac{4,724 \text{ lbs}}{188,623 \text{ lbs}} \right) + \left( \frac{74,836 \text{ lb-ft}}{85,928 \text{ lb-ft}} \right) = 0.91 < 1.0 \therefore \underline{OK}$

GARY K. MUNKELT & ASSOC. Structural Engineers Fax 215-855-8714

**STRUCTURAL DESIGN ONLY**

**LEGEND**  
**ENGINEERING CALCULATIONS**

DISTRICT ID.1 - Sign Post Design Calculations continued

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

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DATE 18 November 2010	CLIENT / PROJECT Downtown Miami City of Miami, Florida
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REVISIONS 04/20/2012 PR	SHEET TITLE Engineering Calculations
11/30/2012 GS	SHEET NO.
08/16/2013 GS	<b>J.18</b>
03/12/2014 PR	
05/02/2014 PR	



CALC BY: Amn CHECK BY: \_\_\_\_\_ SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
 DATE: \_\_\_\_\_ REV: 4/28/14 PROJECT: \_\_\_\_\_

SIGN POST DESIGN CONT'D:  
DISTRICT ID.2 - GENERAL INFORMATION & BENDING  
 T.O.S = 14.5' B.O.S. = 4.5'  
 CENTROID = 9.5'  
 SIGN HT = 10' WIDTH = 5.583'  
 AREA = 10' x 5.583' = 55.83 sft  
 ULT. WIND PRESSURE = 81.6 psf  
 FACTORED WIND PRESSURE =  $0.6 \times 81.6 \text{ psf} = 49.0 \text{ psf}$   
 $P_{req} = 49.0 \text{ psf} \times 55.83 \text{ sft} = 2736 \text{ lbs}$   
 $w_{req} = 49.0 \text{ psf} \times (6.63' / 12'') = 27.1 \text{ plf}$   
 $M_{req} = (2736 \text{ lbs} \times 9.5') + (27.1 \text{ plf} \times (4.5')^2 / 2) = 26,266 \text{ lb-ft}$   
 $F_y = 35,000 \text{ psi}$   
 $\alpha = 1.67$   
 $Z_{req} = \frac{(26,266 \text{ lb-ft} \times 12'') \times 1.67}{35,000 \text{ psi}} = 15.0 \text{ in}^3$   
 PIPE 6" x - STRONG (SCH. 80)  
 $Z_{ACTUAL} = 15.6 \text{ in}^3 > Z_{req} \therefore \text{OK}$

GARY K. MUNKELT & ASSOC. Structural Engineers

CALC BY: Amn CHECK BY: \_\_\_\_\_ SHEET NO. \_\_\_\_\_ OF \_\_\_\_\_  
 DATE: \_\_\_\_\_ REV: 4/28/14 PROJECT: \_\_\_\_\_

SIGN POST DESIGN CONT'D:  
DISTRICT ID.2 CONT'D:  
SHEAR:  
 $V_{req} = 2736 \text{ lbs} + (27.1 \text{ plf} \times 4.5') = 2858 \text{ lbs}$   
 $V_{allow} = \frac{0.6(35,000 \text{ psi})(7.88 \text{ in}^2)}{1.67} = 99,090 \text{ lbs} > V_{req} \therefore \text{OK}$   
AXIAL:  
 POLE WT. = 28.6 plf x 15' = 429 lbs  
 SIGN WT. = 1600 plf x 0.0208' x 10' x 5.583' = 185 lbs  
 MISC. WT = 250 lbs  
 ASSEMBLY WT.,  $P_{req} = 429 \text{ lbs} + 185 \text{ lbs} + 250 \text{ lbs} = 864 \text{ lbs}$   
 $KL = 2.1 \times 9.5' = 20'$   
 $P_A = 90 \text{ k} @ KL = 20' > P_{req} \therefore \text{OK}$   
INTERACTION VALUE:  
 $\left( \frac{0.864 \text{ k}}{90 \text{ k}} \right) + \left( \frac{2,858 \text{ lbs}}{99,090 \text{ lbs}} \right) + \left( \frac{26,266 \text{ lb-ft}}{27,246 \text{ lb-ft}} \right) = 1.0 \leq 1.0 \therefore \text{OK}$

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**STRUCTURAL DESIGN ONLY**

**LEGEND**  
**ENGINEERING CALCULATIONS**

DISTRICT ID.2 - Sign Post Design Calculations continued

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04/20/2012 PR		SHEET TITLE
REVISIONS		Engineering Calculations
11/30/2012 GS		SHEET NO.
08/16/2013 GS		<b>J.19</b>
03/12/2014 PR		
05/02/2014 PR		

STEEL PIPE SECTION PROPERTIES

FOR POST DESIGN

**Table 1-14  
Pipe  
Dimensions and Properties**



Shape	Nominal Wt. lb/ft	Dimensions		Nominal Wall Thickness in.	Design Wall Thickness in.	Area in. <sup>2</sup>	D/t	l in. <sup>4</sup>	S in. <sup>3</sup>	r in.	J in. <sup>4</sup>	Z in. <sup>3</sup>
		Outside Diameter in.	Inside Diameter in.									
<b>Standard Weight (Std.)</b>												
Pipe 12 Std.	49.6	12.8	12.0	0.375	0.349	13.6	36.5	262	41.0	4.39	523	53.7
Pipe 10 Std.	40.5	10.8	10.0	0.365	0.340	11.1	31.6	151	28.1	3.68	302	36.9
Pipe 8 Std.	28.6	8.63	7.98	0.322	0.300	7.85	28.8	68.1	15.8	2.95	136	20.8
Pipe 6 Std.	19.0	6.63	6.07	0.280	0.261	5.22	25.4	26.5	7.99	2.25	52.9	10.6
Pipe 5 Std.	14.6	5.56	5.05	0.258	0.241	4.03	23.1	14.3	5.14	1.88	28.6	6.83
Pipe 4 Std.	10.8	4.50	4.03	0.237	0.221	2.97	20.4	6.82	3.03	1.51	13.6	4.05
Pipe 3 1/2 Std.	9.12	4.00	3.55	0.226	0.211	2.51	19.0	4.52	2.26	1.34	9.04	3.03
Pipe 3 Std.	7.58	3.50	3.07	0.216	0.201	2.08	17.4	2.85	1.63	1.17	5.69	2.19
Pipe 2 1/2 Std.	5.80	2.88	2.47	0.203	0.189	1.59	15.2	1.45	1.01	0.952	2.89	1.37
Pipe 2 Std.	3.66	2.38	2.07	0.154	0.143	1.00	16.6	0.627	0.528	0.791	1.25	0.713
Pipe 1 1/2 Std.	2.72	1.90	1.61	0.145	0.135	0.750	14.1	0.293	0.309	0.626	0.586	0.421
Pipe 1 1/4 Std.	2.27	1.66	1.38	0.140	0.130	0.620	12.8	0.184	0.222	0.543	0.368	0.305
Pipe 1 Std.	1.68	1.32	1.05	0.133	0.124	0.460	10.6	0.0830	0.126	0.423	0.166	0.177
Pipe 3/4 Std.	1.13	1.05	0.824	0.113	0.105	0.310	10.0	0.0350	0.0671	0.336	0.0700	0.0942
Pipe 1/2 Std.	0.850	0.840	0.622	0.109	0.101	0.230	8.32	0.0160	0.0388	0.264	0.0320	0.0555
<b>Extra Strong (x-Strong)</b>												
Pipe 12 x-Strong	65.5	12.8	11.8	0.500	0.465	17.9	27.4	339	53.2	4.35	678	70.2
Pipe 10 x-Strong	54.8	10.8	9.75	0.500	0.465	15.0	23.1	199	37.0	3.64	398	49.2
Pipe 8 x-Strong	43.4	8.63	7.63	0.500	0.465	11.9	18.5	100	23.1	2.89	199	31.0
Pipe 6 x-Strong	28.6	6.63	5.76	0.432	0.403	7.88	16.4	38.3	11.6	2.20	76.6	15.6
Pipe 5 x-Strong	20.8	5.56	4.81	0.375	0.349	5.72	15.9	19.5	7.02	1.85	39.0	9.50
Pipe 4 x-Strong	15.0	4.50	3.83	0.337	0.315	4.14	14.3	9.12	4.05	1.48	18.2	5.53
Pipe 3 1/2 x-Strong	12.5	4.00	3.36	0.318	0.296	3.44	13.5	5.94	2.97	1.31	11.9	4.07
Pipe 3 x-Strong	10.3	3.50	2.90	0.300	0.280	2.83	12.5	3.70	2.11	1.14	7.40	2.91
Pipe 2 1/2 x-Strong	7.67	2.88	2.32	0.276	0.257	2.11	11.2	1.83	1.27	0.930	3.66	1.77
Pipe 2 x-Strong	5.03	2.38	1.94	0.218	0.204	1.39	11.6	0.827	0.696	0.771	1.65	0.964
Pipe 1 1/2 x-Strong	3.63	1.90	1.50	0.200	0.186	1.00	10.2	0.372	0.392	0.610	0.744	0.549
Pipe 1 1/4 x-Strong	3.00	1.66	1.28	0.191	0.178	0.830	9.33	0.231	0.279	0.528	0.462	0.393
Pipe 1 x-Strong	2.17	1.32	0.957	0.179	0.166	0.600	7.92	0.101	0.154	0.410	0.202	0.221
Pipe 3/4 x-Strong	1.48	1.05	0.742	0.154	0.143	0.410	7.34	0.0430	0.0818	0.325	0.0860	0.119
Pipe 1/2 x-Strong	1.09	0.840	0.546	0.147	0.137	0.300	6.13	0.0190	0.0462	0.253	0.0380	0.0686
<b>Double-Extra Strong (xx-Strong)</b>												
Pipe 8 xx-Strong	72.5	8.63	6.88	0.675	0.616	20.0	10.6	154	35.8	2.78	308	49.9
Pipe 6 xx-Strong	53.2	6.63	4.90	0.664	0.605	14.7	8.23	63.5	19.2	2.08	127	27.4
Pipe 5 xx-Strong	38.6	5.56	4.06	0.750	0.699	10.7	7.96	32.2	11.6	1.74	64.4	16.7
Pipe 4 xx-Strong	27.6	4.50	3.15	0.674	0.628	7.64	7.17	14.7	6.53	1.39	29.4	9.50
Pipe 3 xx-Strong	18.6	3.50	2.30	0.600	0.559	5.16	6.26	5.79	3.31	1.06	11.6	4.89
Pipe 2 1/2 xx-Strong	13.7	2.88	1.77	0.552	0.514	3.81	5.59	2.78	1.94	0.854	5.56	2.91
Pipe 2 xx-Strong	9.04	2.38	1.50	0.436	0.406	2.51	5.85	1.27	1.07	0.711	2.54	1.60

ALUMINUM SQUARE TUBE

SECTION PROPERTIES

FOR POST DESIGN

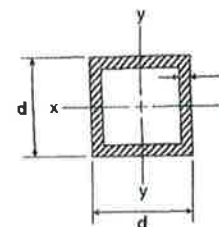


TABLE 23 - SQUARE TUBES

Designation	Depth width d in.	Thickness t in.	Weight lb/ft	Area A in. <sup>2</sup>	Axis x-x, y-y			J in. <sup>4</sup>
					I <sub>x</sub> , I <sub>y</sub> in. <sup>4</sup>	S <sub>x</sub> , S <sub>y</sub> in. <sup>3</sup>	r <sub>x</sub> , r <sub>y</sub> in.	
RT 1 x 1 x .065	1.000	0.065	0.286	0.243	0.0356	0.0712	0.383	0.0531
RT 1 x 1 x .095	1.000	0.095	0.404	0.344	0.0475	0.0949	0.371	0.0704
RT 1 x 1 x .125	1.000	0.125	0.515	0.438	0.0570	0.114	0.361	0.0837
RT 1.25 x 1.25 x .065	1.250	0.065	0.362	0.308	0.0723	0.116	0.485	0.108
RT 1.25 x 1.25 x .095	1.250	0.095	0.516	0.439	0.0882	0.157	0.473	0.146
RT 1.25 x 1.25 x .125	1.250	0.125	0.662	0.563	0.120	0.192	0.462	0.178
RT 1.375 x 1.375 x .125	1.375	0.125	0.735	0.625	0.164	0.239	0.513	0.244
RT 1.5 x 1.5 x .065	1.500	0.065	0.439	0.373	0.128	0.171	0.586	0.192
RT 1.5 x 1.5 x .078	1.500	0.078	0.522	0.444	0.150	0.200	0.581	0.224
RT 1.5 x 1.5 x .095	1.500	0.095	0.628	0.534	0.176	0.235	0.575	0.263
RT 1.5 x 1.5 x .125	1.500	0.125	0.809	0.688	0.218	0.291	0.564	0.325
RT 1.5 x 1.5 x .250	1.500	0.250	1.47	1.25	0.339	0.451	0.520	0.488
RT 1.75 x 1.75 x .125	1.750	0.125	0.956	0.813	0.360	0.411	0.665	0.536
RT 2 x 2 x .095	2.000	0.095	0.851	0.724	0.439	0.439	0.779	0.657
RT 2 x 2 x .125	2.000	0.125	1.10	0.938	0.552	0.552	0.767	0.824
RT 2 x 2 x .156	2.000	0.156	1.35	1.15	0.657	0.657	0.755	0.978
RT 2 x 2 x .188	2.000	0.188	1.60	1.36	0.754	0.754	0.744	1.12
RT 2 x 2 x .250	2.000	0.250	2.06	1.75	0.911	0.911	0.722	1.34
RT 2.25 x 2.25 x .125	2.250	0.125	1.25	1.06	0.802	0.713	0.869	1.20
RT 2.5 x 2.5 x .125	2.500	0.125	1.40	1.19	1.12	0.896	0.971	1.67
RT 2.5 x 2.5 x .188	2.500	0.188	2.04	1.74	1.56	1.25	0.947	2.32
RT 2.5 x 2.5 x .250	2.500	0.250	2.65	2.25	1.92	1.54	0.924	2.85
RT 2.75 x 2.75 x .125	2.750	0.125	1.54	1.31	1.51	1.10	1.07	2.26
RT 2.75 x 2.75 x .188	2.750	0.188	2.27	1.93	2.12	1.54	1.05	3.16
RT 3 x 3 x .095	3.000	0.095	1.30	1.10	1.55	1.04	1.19	2.33
RT 3 x 3 x .125	3.000	0.125	1.69	1.44	1.98	1.32	1.17	2.97
RT 3 x 3 x .188	3.000	0.188	2.49	2.11	2.80	1.87	1.15	4.18
RT 3 x 3 x .250	3.000	0.250	3.23	2.75	3.49	2.33	1.13	5.20
RT 3 x 3 x .375	3.000	0.375	4.63	3.94	4.61	3.08	1.08	6.78
RT 3.5 x 3.5 x .125	3.500	0.125	1.98	1.69	3.21	1.83	1.38	4.81
RT 3.5 x 3.5 x .250	3.500	0.250	3.82	3.25	5.76	3.29	1.33	6.58
RT 3.5 x 3.5 x .375	3.500	0.375	5.51	4.69	7.74	4.42	1.28	11.4
RT 4 x 4 x .125	4.000	0.125	2.28	1.94	4.85	2.43	1.58	7.27
RT 4 x 4 x .188	4.000	0.188	3.37	2.87	6.98	3.48	1.56	10.4
RT 4 x 4 x .250	4.000	0.250	4.41	3.75	8.83	4.41	1.53	13.2
RT 4 x 4 x .375	4.000	0.375	6.39	5.44	12.0	6.02	1.49	17.9
RT 4 x 4 x .500	4.000	0.500	8.23	7.00	14.6	7.29	1.44	21.4

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DATE	18 November 2010	CLIENT / PROJECT	Downtown Miami City of Miami, Florida
DRAWN BY:	PR		
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		SHEET TITLE	Engineering Calculations
REVISIONS		SHEET NO.	J.20
	04/20/2012 PR		
	11/30/2012 GS		
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

**STRUCTURAL DESIGN ONLY**

Break-Safe Breakaway Support System for Sign Posts

TRANSPO DESIGN CALCULATIONS  
 WORST CASE SINGLE POLE SIGN  
 USING BREAK SAFE MODEL AP4.5

A		B	
1	ROUND STEEL PIPE POST ANALYSIS, AASHTO 2001		
2	Click "INPUT-OUTPUT" Tab below to Return.	Ver. 2.2	
3	<b>Technical Design Parameters:</b>		
4	<b>Input Values:</b>		
5	Basic Wind Speed for Location (mph)		150
6	Structure Design Life (10, 25, 50, or 100 Years)		25
7	Yield Stress for Steel Round Pipe Post (psi)		35000
8	Width of Sign Panel (ft)		3.667
9	Height of Sign Panel (ft)		4.25
10	Maximum Under Sign Clearance (ft)		8
11	Number of Posts		1
12	Clear Distance Between Adjacent Posts (ft)		0
13	<b>Output Values:</b>		
14	Minimum Round Pipe Size		4.5 OD Sch. 80
15	Break-Safe Model		Model AP4.5
16	<b>Load Data:</b>		
17	Design Wind Pressure on Sign Panel (psf)		51.18640128
18	Design Wind Pressure on Post (psf)		50.2723584
19	Wind Importance Factor		0.8
20	Maximum Moment at Base per Post (lb-in)		104163.08259244
21	Maximum Torsion at Base (Single Post Only) (lb-in)		5265.47860086038
22	<b>Post Design Data:</b>		
23	Maximum X-Direction Post Bending Stress (psi)		24394.1645415551
24	Maximum Y-Direction Post Bending Stress (psi)		4878.83290831102
25	Maximum Shear Stress from Torsion (psi)		405.458289764483
26	Allowable X-Direction Post Bending Stress (psi)		30723
27	Allowable Y-Direction Post Bending Stress (psi)		30723
28	Allowable Post Shear Stress (psi)		15361.5
29	Combined Stress Ratio for Post - Load Case 1		0.953500671943912
30	Combined Stress Ratio for Post - Load Case 2		0.714853803903773
31	<b>Break-Safe Couplings Design Data:</b>		
32	Maximum Coupling Axial Stress (psi)		71913.4016383602
33	Maximum Coupling Bending Stress (psi)		8550.1942728042
34	Maximum Coupling Shear Stress (psi)		2722.92552982632
35	Allowable Coupling Axial Stress (psi)		103740
36	Allowable Coupling Bending Stress (psi)		129675
37	Allowable Coupling Shear Stress (psi)		57057
38	Combined Stress Ratio for Couplings - Load Case 1		0.781421075154912
39	Combined Stress Ratio for Couplings - Load Case 2		0.67806198659253E

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2/14/2014 3:21 PM

Break-Safe Breakaway Support System for Sign Posts

TRANSPO DESIGN CALCULATIONS  
 SIGN TYPE VDIR.4

A		B	
1	ROUND STEEL PIPE POST ANALYSIS, AASHTO 2001		
2	Click "INPUT-OUTPUT" Tab below to Return.	Ver. 2.2	
3	<b>Technical Design Parameters:</b>		
4	<b>Input Values:</b>		
5	Basic Wind Speed for Location (mph)		150
6	Structure Design Life (10, 25, 50, or 100 Years)		25
7	Yield Stress for Steel Round Pipe Post (psi)		35000
8	Width of Sign Panel (ft)		8.5
9	Height of Sign Panel (ft)		3.667
10	Maximum Under Sign Clearance (ft)		7.5
11	Number of Posts		2
12	Clear Distance Between Adjacent Posts (ft)		5.833
13	<b>Output Values:</b>		
14	Minimum Round Pipe Size		4.5 OD Sch. 80
15	Break-Safe Model		Model AP4.5
16	<b>Load Data:</b>		
17	Design Wind Pressure on Sign Panel (psf)		54.38555138
18	Design Wind Pressure on Post (psf)		50.2723584
19	Wind Importance Factor		0.8
20	Maximum Moment at Base per Post (lb-in)		101293.835344912
21	Maximum Torsion at Base (Single Post Only) (lb-in)		0
22	<b>Post Design Data:</b>		
23	Maximum X-Direction Post Bending Stress (psi)		23722.2096826492
24	Maximum Y-Direction Post Bending Stress (psi)		2372.22096826492
25	Maximum Shear Stress from Torsion (psi)		0
26	Allowable X-Direction Post Bending Stress (psi)		30723
27	Allowable Y-Direction Post Bending Stress (psi)		30723
28	Allowable Post Shear Stress (psi)		15361.5
29	Combined Stress Ratio for Post - Load Case 1		0.849345137223388
30	Combined Stress Ratio for Post - Load Case 2		0.579098957197765
31	<b>Break-Safe Couplings Design Data:</b>		
32	Maximum Coupling Axial Stress (psi)		51321.4278672833
33	Maximum Coupling Bending Stress (psi)		12951.6313845616
34	Maximum Coupling Shear Stress (psi)		393.700728327134
35	Allowable Coupling Axial Stress (psi)		103740
36	Allowable Coupling Bending Stress (psi)		129675
37	Allowable Coupling Shear Stress (psi)		57057
38	Combined Stress Ratio for Couplings - Load Case 1		0.594637287514149
39	Combined Stress Ratio for Couplings - Load Case 2		0.41068125368661

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LEGEND

ENGINEERING CALCULATIONS

Transpo® Design Calculations - Model AP

Transpo® Design Calculations - VDIR.4

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DATE	18 November 2010	CLIENT / PROJECT	
DRAWN BY:	PR		<b>Downtown Miami City of Miami, Florida</b>
The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the project.		PROJECT NO.	
REVISIONS:	04/20/2012 PR 11/30/2012 GS 08/16/2013 GS 03/12/2014 PR 05/02/2014 PR	SHEET TITLE	<b>Engineering Calculations Transpo® Design</b>
		SHEET NO.	<b>J.21</b>

STRUCTURAL DESIGN ONLY

Break-Safe Breakaway Support System for Sign Posts

TRANSPO DESIGN CALCULATIONS  
SIGN TYPE VDIR.5

A	B
1	<b>ROUND STEEL PIPE POST ANALYSIS, AASHTO 2001</b>
2	Click "INPUT-OUTPUT" Tab below to Return. Ver. 2.2
3	<b>Technical Design Parameters:</b>
4	<b>Input Values:</b>
5	Basic Wind Speed for Location (mph) 150
6	Structure Design Life (10, 25, 50, or 100 Years) 25
7	Yield Stress for Steel Round Pipe Post (psi) 35000
8	Width of Sign Panel (ft) 8.5
9	Height of Sign Panel (ft) 5.5
10	Maximum Under Sign Clearance (ft) 7.5
11	Number of Posts 2
12	Clear Distance Between Adjacent Posts (ft) 7
13	<b>Output Values:</b>
14	Minimum Round Pipe Size 4.5 OD XXS
15	Break-Safe Model Model AP4.5
16	<b>Load Data:</b>
17	Design Wind Pressure on Sign Panel (psf) 54.38555138
18	Design Wind Pressure on Post (psf) 50.2723584
19	Wind Importance Factor 0.8
20	Maximum Moment at Base per Post (lb-in) 182727.85371392
21	Maximum Torsion at Base (Single Post Only) (lb-in) 0
22	<b>Post Design Data:</b>
23	Maximum X-Direction Post Bending Stress (psi) 23965.8105816966
24	Maximum Y-Direction Post Bending Stress (psi) 2396.58105816966
25	Maximum Shear Stress from Torsion (psi) 0
26	Allowable X-Direction Post Bending Stress (psi) 30723
27	Allowable Y-Direction Post Bending Stress (psi) 30723
28	Allowable Post Shear Stress (psi) 15361.5
29	Combined Stress Ratio for Post - Load Case 1 0.858088973207899
30	Combined Stress Ratio for Post - Load Case 2 0.58504586355084
31	<b>Break-Safe Couplings Design Data:</b>
32	Maximum Coupling Axial Stress (psi) 82447.5228718472
33	Maximum Coupling Bending Stress (psi) 8538.48481953552
34	Maximum Coupling Shear Stress (psi) 582.361970955414
35	Allowable Coupling Axial Stress (psi) 103740
36	Allowable Coupling Bending Stress (psi) 128875
37	Allowable Coupling Shear Stress (psi) 57057
38	Combined Stress Ratio for Couplings - Load Case 1 0.860678507813419
39	Combined Stress Ratio for Couplings - Load Case 2 0.603028370310426

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2/14/2014 3:04 PM

TRANSPO DESIGN CALCULATION  
SIGN TYPES VDIR.2 & VDIR.3

Transpo Industries, Inc.  
Pole-Safe Design Table  
Model 5100, 1" Diameter  
Project: Downtown Miami, Florida  
Sign Type: VDIR3 (R & L)  
Date: 2/14/2014

Parameter	Value	lbf or ft-lbf
Base Shear	Vx (lbf)	1256
Base Shear	Vy (lbf)	251
Dead Load	DLz (lbf)	214
Base moment	Mx (ft-lbf)	14292
Base Moment	My (ft-lbf)	2858
Torsion	Tz (ft-lbf)	890
Bolt Circle Diameter	BCD (in)	10
Lat/Long Bolt Spacing	Leg (in)	7.071135624
Maximum Coupling Axial Load	Pcmax (lbf)	14605.618
Shear, torsion component	Vct (lbf)	534
Shear, x-direction	Vcx (lbf)	691.5986423
Shear, y-direction	Vcy (lbf)	440.3486423
Maximum Coupling Shear Load	Vcmax (lbf)	819.8875587
Maximum Coupling Axial Stress	Fa (psi)	44125.73414
Maximum Coupling Bending Stress	Fb (psi)	47623.58031
Maximum Coupling Shear Stress	Fv (psi)	2477.001688
Axial Stress Ratio	SRa	0.425349278
Bending Stress Ratio	SRb	0.459066708
Shear Stress Ratio	SRv	0.001884667
Coupling Combined Stress Ratio (<1.0)	Coupling CSR	0.886300654

Page 1

**STRUCTURAL DESIGN ONLY**

**LEGEND**

**ENGINEERING CALCULATIONS**

Transpo® Design Calculations - VDIR.5

Transpo® Design Calculations - VDIR.2 & .3

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DRAWN BY:	PR	PROJECT NO.	
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REVISIONS	04/20/2012 PR	SHEET NO.	<b>J.22</b>
	11/30/2012 GS		
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

CALC BY: Amn CHECK BY: SHEET NO. OF  
 DATE: REV: 7/28/14 PROJECT:

**DETERMINE CIRCULAR BASE PLATE THICKNESS**

$M_{max} = 14,292 \text{ lb-ft}$   
 (171.4 K-m)

MOMENT ARM,  $d = 7.07''$

$P_{req} = \frac{171.4 \text{ K-m}}{7.07''} = 24.2 \text{ K}$

$L = 2''$

$M_{req_{PL}} = 24.2 \text{ K} \times 2 = 48.4 \text{ K-in}$

$F_y = 36 \text{ Ksi} ; \alpha = 1.67$

$Z_{req} = \frac{48.4 \text{ K-in} \cdot 1.67}{36 \text{ Ksi}} = 2.25 \text{ in}^3$

$W = 10.3''$

$t_{req} = \sqrt{\frac{4 \times 2.25 \text{ in}^3}{10.3 \text{ in}}} = 0.93''$

USE A 12.5"  $\phi$  x 1" THICK BASE PLATE  
 w/ (4) HOLES w/ A 10" BOLT CIRCLE  
 THE SIGN SHOULD SPLIT THE (4) HOLES IN HALF

GARY K. MUNKELT & ASSOC. Structural Engineers

**Problem: Design Footing**

DIST.ID.3 Extremely Shallow Depth

$F_1 = 599 \text{ lb.}$   
 $S_1 = 9.9 \text{ ft.}$

$L = 4.42 \text{ ft.}$   
 $W = 4.42 \text{ ft.}$   
 $b = 0.0 \text{ ft.}$   
 $t = 1.5 \text{ ft.}$   
 $d = 1.5 \text{ ft.}$

SIGN WT = 165 lb.

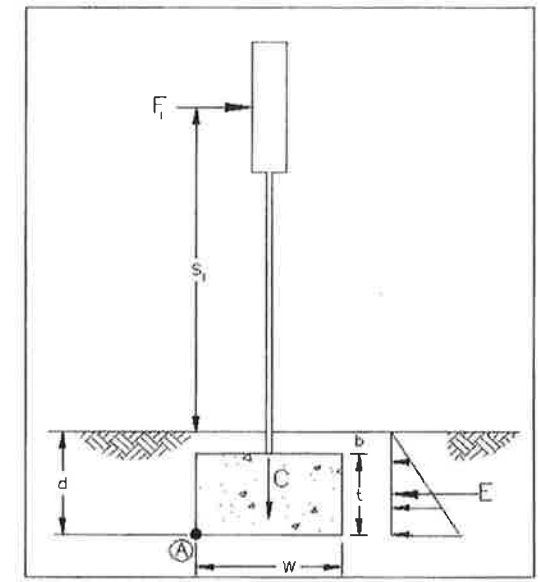
**Overturning Moment:**

$M_{OT} = \Sigma(F \cdot (S+d))$   
 $M_{OT} = 6839 \text{ ft.-lb.}$

**Resisting Moment:**

$C = 150 \text{ pcf} \cdot L \cdot W \cdot t + \text{Sign Weight} = 4554.7 \text{ lb.}$   
 $E = (150 \text{ pcf} \cdot d^2 \cdot L) / 2 = 745 \text{ lb.}$   
 $M_{RES} = (C \cdot W/2) + (E \cdot d/3) = 10432 \text{ ft.-lb.}$

Factor of Safety =  $M_{RES} / M_{OT} = 1.53 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Circular Base Plate

Footing: DIST-ID.3

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DATE 18 November 2010

CLIENT / PROJECT

DRAWN BY: PR

**Downtown Miami  
 City of Miami, Florida**

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PROJECT NO.

SHEET TITLE

**Engineering Calculations  
 Footings**

REVISIONS: 04/20/2012 PR

11/30/2012 GS

08/16/2013 GS

03/12/2014 PR

05/02/2014 PR

SHEET NO.

**J.23**

**STRUCTURAL DESIGN ONLY**

**Problem: Design Footing**

DIST.ID.3 Shallow Depth

$F_1 = 599$  lb.  
 $S_1 = 9.9$  ft.

$L = 3.75$  ft.  
 $W = 3.75$  ft.  
 $b = 0.0$  ft.  
 $t = 2.5$  ft.  
 $d = 2.5$  ft.

SIGN WT = 165 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 7438$  ft.-lb.

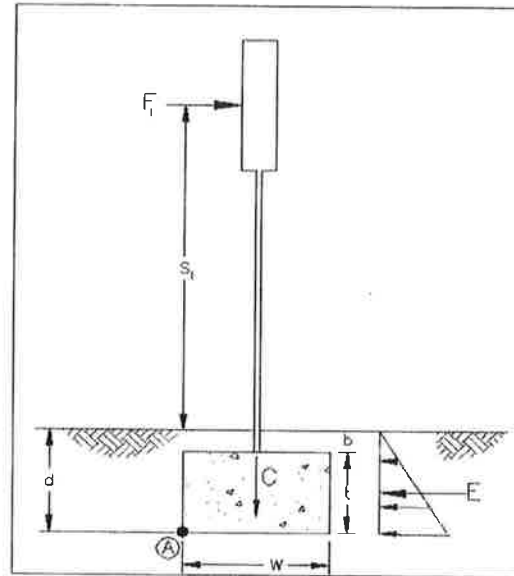
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 5438.4$  lb.

$E = (150 \text{ pcf} * d^2 * L) / 2 = 1758$  lb.

$M_{RES} = (C * W/2) + (E * d/3) = 11662$  ft.-lb.

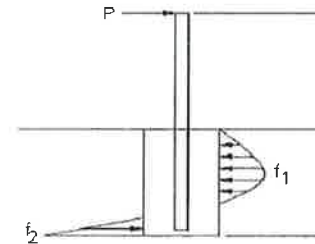
Factor of Safety =  $M_{RES} / M_{OT} = 1.57 > 1.5$



PROBLEM: Design Pole Footing  
DIST.ID.3

$P = 599$  lbs  
 $h = 9.88$  ft  
 $d = 5.33$  ft  
 $b = 3.00$  ft

Allowable pressure From FBC  
for soil types SW, SP, SM, SC, GM & GC  
 $q = 150$  pcf



**ACTUAL PRESSURE**

$f_2 = (7.62 P (2h + d)) / (bd^2) = 1,343$  psf

$f_1 = (2.85 P) / (bd) + f_2/4 = 443$  psf

Allowable Pressure for Pole Signs =  $2 * q * h$

$P2 = 2 * 150 \text{ psf} * d = 1,599$  psf ok

$P1 = 2 * 150 \text{ psf} * d/3 = 533$  psf ok

**Check FBC Equation**

$S1 = d/3 * q = 266.5$  psf

$A = (2.34 * P) / (S1 * b) = 1.7531707$

$d_{req} = 0.5A(1+(4.36h)/(A))^5 = 5.31$  ft ok

**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: DIST-ID.3

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DATE 18 November 2010	CLIENT / PROJECT  <b>Downtown Miami City of Miami, Florida</b>
DRAWN BY: PR	
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PROJECT NO.	SHEET TITLE  <b>Engineering Calculations Footings</b>
SHEET NO.	
REVISIONS	SHEET NO.  <b>J.24</b>
04/20/2012 PR	
11/30/2012 GS	
08/16/2013 GS	
03/12/2014 PR	
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**

**Problem: Design Footing**

VDIR.1 Extremely Shallow Depth  
VDIR.1 LEFT

$F_1 = 572$  lb.  
 $S_1 = 9.5$  ft.

$L = 4.33$  ft.  
 $W = 4.33$  ft.  
 $b = 0.0$  ft.  
 $t = 1.5$  ft.  
 $d = 1.5$  ft.

SIGN WT = 155 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 6292$  ft.-lb.

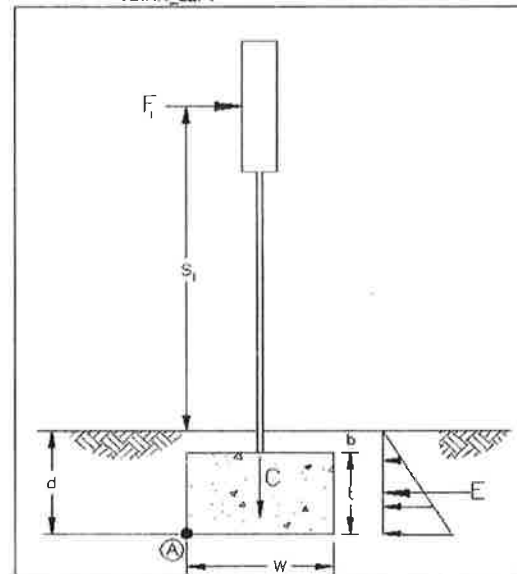
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 4373.5$  lb.

$E = (150 \text{ pcf} * d^2 * L) / 2 = 731$  lb.

$M_{RES} = (C * W/2) + (E * d/3) = 9834$  ft.-lb.

Factor of Safety =  $M_{RES} / M_{OT} = 1.56 > 1.5$



**Problem: Design Footing**

VDIR.1 Shallow Depth  
VDIR.1 LEFT

$F_1 = 572$  lb.  
 $S_1 = 9.5$  ft.

$L = 3.67$  ft.  
 $W = 3.67$  ft.  
 $b = 0.0$  ft.  
 $t = 2.5$  ft.  
 $d = 2.5$  ft.

SIGN WT = 155 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 6864$  ft.-lb.

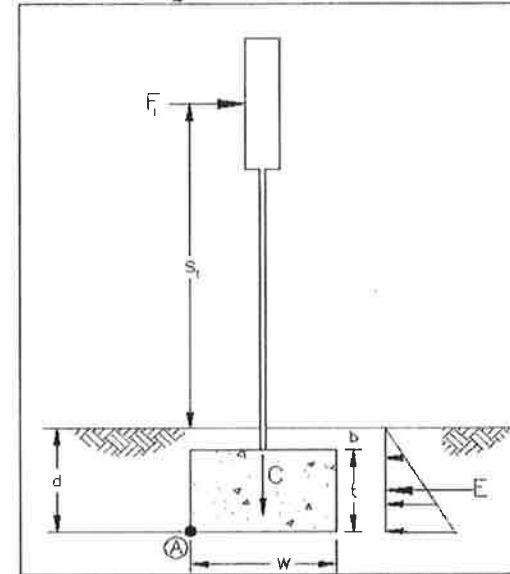
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 5205.8$  lb.

$E = (150 \text{ pcf} * d^2 * L) / 2 = 1720$  lb.

$M_{RES} = (C * W/2) + (E * d/3) = 10986$  ft.-lb.

Factor of Safety =  $M_{RES} / M_{OT} = 1.60 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: VDIR.1 & VDIR.1-LEFT

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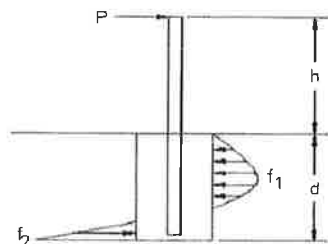
DATE	18 November 2010	CLIENT / PROJECT	Downtown Miami City of Miami, Florida
DRAWN BY:	PR	PROJECT NO.	
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REVISIONS	04/20/2012 PR	SHEET NO.	<b>J.25</b>
	11/30/2012 GS		
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

**STRUCTURAL DESIGN ONLY**

PROBLEM: Design Pole Footing  
 VDIR.1  
 VDIR.1\_LEFT

P = 572 lbs  
 h = 9.50 ft  
 d = 5.25 ft  
 b = 3.00 ft

Allowable pressure From FBC  
 for soil types SW, SP, SM, SC, GM & GC  
 q = 150 pcf



**ACTUAL PRESSURE**

$f_2 = (7.62 P (2h + d)) / (bd^2) = 1,278 \text{ psf}$

$f_1 = (2.85 P) / (bd) + f_2/4 = 423 \text{ psf}$

Allowable Pressure for Pole Signs =  $2 \times q \times h$

$P2 = 2 \times 150 \text{ psf} \times d = 1,575 \text{ psf} \quad \text{ok}$

$P1 = 2 \times 150 \text{ psf} \times d/3 = 525 \text{ psf} \quad \text{ok}$

**Check FBC Equation**

$S1 = d/3 \times q = 262.5 \text{ psf}$

$A = (2.34 \times P) / (S1 \times b) = 1.6996571$

$d_{req} = 0.5A(1+(4.36h)/(A))^2 = 5.13 \text{ ft} \quad \text{ok}$

**Problem: Design Footing**

VDIR 2 Extremely Shallow Depth  
 VDIR.2\_LEFT

$F_1 = 1016 \text{ lb.}$   
 $S_1 = 10.7 \text{ ft.}$

$L = 5.33 \text{ ft.}$   
 $W = 5.33 \text{ ft.}$   
 $b = 0.0 \text{ ft.}$   
 $t = 1.5 \text{ ft.}$   
 $d = 1.5 \text{ ft.}$

SIGN WT = 436 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F \cdot (S+d))$

$M_{OT} = 12405 \text{ ft.-lb.}$

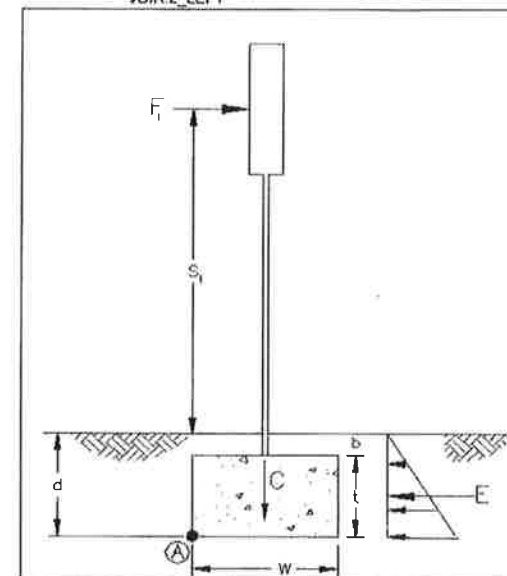
**Resisting Moment:**

$C = 150 \text{ pcf} \cdot L \cdot W \cdot t + \text{Sign Weight} = 6828 \text{ lb.}$

$E = (150 \text{ pcf} \cdot d^2 \cdot L) / 2 = 899 \text{ lb.}$

$M_{RES} = (C \cdot W/2) + (E \cdot d/3) = 18646 \text{ ft.-lb.}$

Factor of Safety =  $M_{RES} / M_{OT} = 1.50 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: VDIR.1 & VDIR.1-LEFT

Footing: VDIR.2 & VDIR.2-LEFT

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DRAWN BY: PR	
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REVISIONS 04/20/2012 PR	PROJECT NO.
11/30/2012 GS	SHEET TITLE  <b>Engineering Calculations Footings</b>
08/16/2013 GS	SHEET NO.
03/12/2014 PR	<b>J.26</b>
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**



**Problem: Design Footing**

$F_1 = 1016 \text{ lb.}$   
 $S_1 = 10.7 \text{ ft.}$

$L = 4.58 \text{ ft.}$   
 $W = 4.58 \text{ ft.}$   
 $b = 0.0 \text{ ft.}$   
 $t = 2.5 \text{ ft.}$   
 $d = 2.5 \text{ ft.}$

SIGN WT = 436 lb.

**Overturning Moment:**

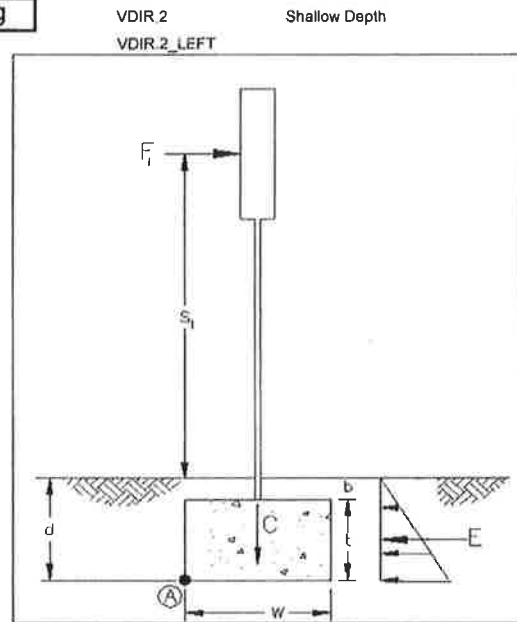
$M_{OT} = \Sigma(F \cdot (S+d))$

$M_{OT} = 13421 \text{ ft.-lb.}$

**Resisting Moment:**

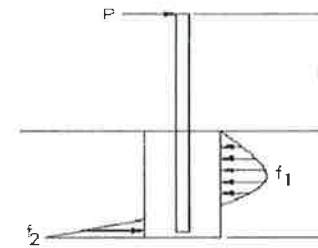
$C = 150 \text{ pcf} \cdot L \cdot W \cdot t + \text{Sign Weight} = 8312.5 \text{ lb.}$   
 $E = (150 \text{ pcf} \cdot d^2 \cdot L) / 2 = 2148 \text{ lb.}$   
 $M_{RES} = (C \cdot W/2) + (E \cdot d/3) = 20838 \text{ ft.-lb.}$

Factor of Safety =  $M_{RES} / M_{OT} = 1.55 > 1.5$



PROBLEM: Design Pole Footing  
 VDIR.2  
 $P = 1,016 \text{ lbs}$   
 $h = 10.71 \text{ ft}$   
 $d = 6.67 \text{ ft}$   
 $b = 3.00 \text{ ft}$

Allowable pressure From FBC  
 for soil types SW, SP, SM, SC, GM & GC  
 $q = 150 \text{ pcf}$



**ACTUAL PRESSURE**

$f_2 = (7.62 P (2h + d)) / (bd^2) = 1,629 \text{ psf}$   
 $f_1 = (2.85 P) / (bd) + f_2/4 = 552 \text{ psf}$

Allowable Pressure for Pole Signs =  $2 \times q \times h$

$P2 = 2 \times 150 \text{ psf} \times d = 2,001 \text{ psf}$  ok  
 $P1 = 2 \times 150 \text{ psf} \times d/3 = 667 \text{ psf}$  ok

**Check FBC Equation**

$S1 = d/3 \times q = 333.5 \text{ psf}$   
 $A = (2.34 \times P) / (S1 \times b) = 2.3762519$   
 $dreq = 0.5A(1+(4.36h)/(A))^5 = 6.59 \text{ ft}$  ok

**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: VDIR.2 & VDIR.2-LEFT

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REVISIONS 04/20/2012 PR	PROJECT NO.
11/30/2012 GS	SHEET TITLE  <b>Engineering Calculations Footings</b>
08/16/2013 GS	SHEET NO.  <b>J.27</b>
03/12/2014 PR	
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**

**Problem: Design Footing**

VDIR.3 Extremely Shallow Depth  
VDIR.3\_LEFT

$F_1 = 1256$  lb.  
 $S_1 = 11.4$  ft.

$L = 5.83$  ft.  
 $W = 5.83$  ft.  
 $b = 0.0$  ft.  
 $t = 1.5$  ft.  
 $d = 1.5$  ft.

SIGN WT = 489 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 16171$  ft.-lb.

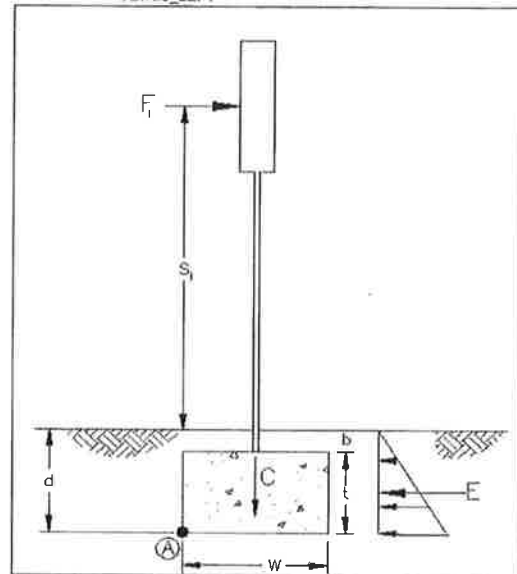
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 8136.5$  lb.

$E = (150 \text{ pcf} * d^2 * L) / 2 = 984$  lb.

$M_{RES} = (C * W/2) + (E * d/3) = 24210$  ft.-lb.

Factor of Safety =  $M_{RES} / M_{OT} = 1.50 > 1.5$



**Problem: Design Footing**

VDIR.3 Shallow Depth  
VDIR.3\_LEFT

$F_1 = 1256$  lb.  
 $S_1 = 11.4$  ft.

$L = 5.00$  ft.  
 $W = 5.00$  ft.  
 $b = 0.0$  ft.  
 $t = 2.5$  ft.  
 $d = 2.5$  ft.

SIGN WT = 489 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 17427$  ft.-lb.

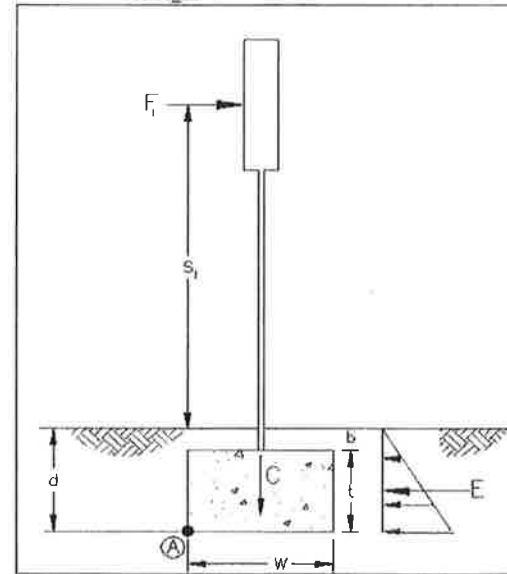
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 9864$  lb.

$E = (150 \text{ pcf} * d^2 * L) / 2 = 2344$  lb.

$M_{RES} = (C * W/2) + (E * d/3) = 26613$  ft.-lb.

Factor of Safety =  $M_{RES} / M_{OT} = 1.53 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: VDIR.3 & VDIR.3-LEFT

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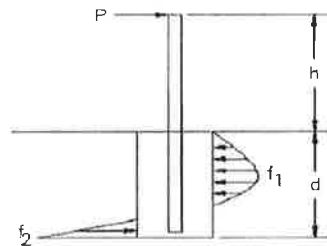
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DATE	18 November 2010	CLIENT / PROJECT	Downtown Miami City of Miami, Florida
DRAWN BY:	PR	PROJECT NO.	
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REVISIONS	04/20/2012 PR	SHEET NO.	<b>J.28</b>
	11/30/2012 GS		
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

**STRUCTURAL DESIGN ONLY**

PROBLEM: Design Pole Footing  
 VDIR.3  
 VDIR.3\_LEFT  
 P = 1,256 lbs  
 h = 11.38 ft  
 d = 7.33 ft  
 b = 3.00 ft

Allowable pressure From FBC  
 for soil types SW, SP, SM, SC, GM & GC  
 q = 150 pcf



**ACTUAL PRESSURE**

$f_2 = (7.62 P (2h + d)) / (bd^2) = 1,786 \text{ psf}$   
 $f_1 = (2.85 P) / (bd) + f_2/4 = 609 \text{ psf}$

Allowable Pressure for Pole Signs =  $2 \times q \times h$

$P2 = 2 \times 150 \text{ psf} \times d = 2,199 \text{ psf} \quad \text{ok}$   
 $P1 = 2 \times 150 \text{ psf} \times d/3 = 733 \text{ psf} \quad \text{ok}$

**Check FBC Equation**

$S1 = d/3 \times q = 366.5 \text{ psf}$   
 $A = (2.34 \times P) / (S1 \times b) = 2.6730696$   
 $dreq = 0.5A(1+(1+(4.36h)/(A)))^5 = 7.25 \text{ ft} \quad \text{ok}$

**Problem: Design Footing**

VDIR.4 Extremely Shallow Depth

$F_1 = 1668 \text{ lb.}$   
 $S_1 = 9.3 \text{ ft.}$

$L = 7.25 \text{ ft.}$   
 $W = 7.25 \text{ ft.}$   
 $b = 0.0 \text{ ft.}$   
 $t = 1.5 \text{ ft.}$   
 $d = 1.5 \text{ ft.}$

SIGN WT = 439 lb.

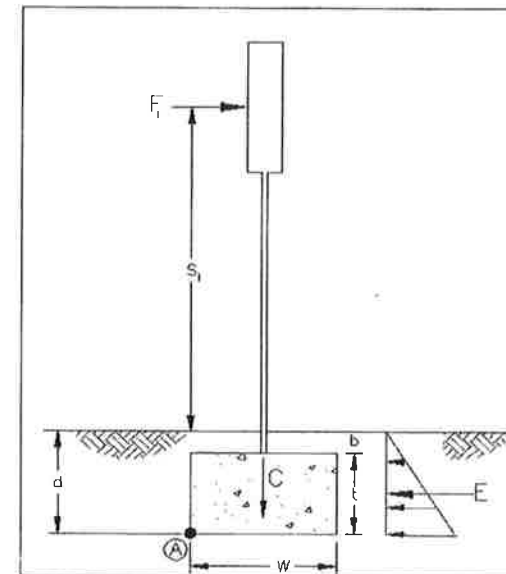
**Overturning Moment:**

$M_{OT} = \Sigma(F \cdot (S+d))$   
 $M_{OT} = 18064 \text{ ft.-lb.}$

**Resisting Moment:**

$C = 150 \text{ pcf} \cdot L \cdot W \cdot t + \text{Sign Weight} = 12266 \text{ lb.}$   
 $E = (150 \text{ pcf} \cdot d^2 \cdot L) / 2 = 1223 \text{ lb.}$   
 $M_{RES} = (C \cdot W/2) + (E \cdot d/3) = 45074 \text{ ft.-lb.}$

Factor of Safety =  $M_{RES} / M_{OT} = 2.50 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: VDIR.3 & VDIR.3-LEFT

Footing: VDIR.4

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REVISIONS 04/20/2012 PR	PROJECT NO.
11/30/2012 GS	SHEET TITLE  <b>Engineering Calculations Footings</b>
08/16/2013 GS	SHEET NO.
03/12/2014 PR	<b>J.29</b>
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**

**Problem: Design Footing**

VDIR.4 Shallow Depth

$F_1 = 1668 \text{ lb.}$   
 $S_1 = 9.3 \text{ ft.}$

$L = 7.25 \text{ ft.}$   
 $W = 7.25 \text{ ft.}$   
 $b = 0.0 \text{ ft.}$   
 $t = 2.5 \text{ ft.}$   
 $d = 2.5 \text{ ft.}$

SIGN WT = 439 lb.

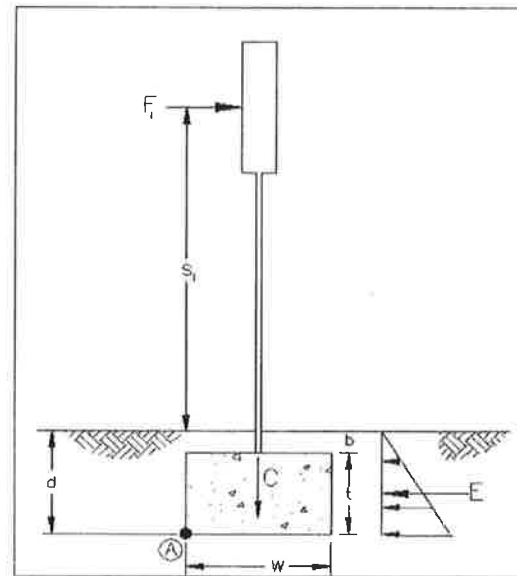
**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$   
 $M_{OT} = 19732 \text{ ft.-lb.}$

**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 20150 \text{ lb.}$   
 $E = (150 \text{ pcf} * d^2 * L) / 2 = 3398 \text{ lb.}$   
 $M_{RES} = (C * W/2) + (E * d/3) = 75876 \text{ ft.-lb.}$

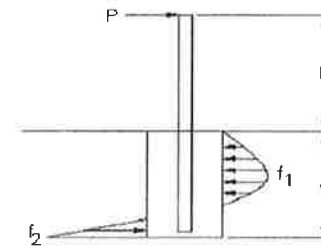
Factor of Safety =  $M_{RES} / M_{OT} = 3.85 > 1.5$



**PROBLEM: Design Pole Footing**  
VDIR.4

$P = 1,013 \text{ lbs}$   
 $h = 9.33 \text{ ft}$   
 $d = 6.42 \text{ ft}$   
 $b = 3.00 \text{ ft}$

Allowable pressure From  $F\theta c$   
 for soil types SW, SP, SM, SC, GM & GC  
 $q = 150 \text{ pcf}$



**ACTUAL PRESSURE**

$f_2 = (7.62 P (2h + d)) / (bd^2) = 1,567 \text{ psf}$   
 $f_1 = (2.85 P) / (bd) + f_2/4 = 542 \text{ psf}$

Allowable Pressure for Pole Signs =  $2 * q * h$

$P2 = 2 * 150 \text{ psf} * d = 1,925 \text{ psf} \quad \text{ok}$   
 $P1 = 2 * 150 \text{ psf} * d/3 = 642 \text{ psf} \quad \text{ok}$

**Check  $F\theta c$  Equation**

$S1 = d/3 * q = 320.85 \text{ psf}$   
 $A = (2.34 * P) / (S1 * b) = 2.4626461$   
 $dreq = 0.5A(1+(1+(4.36h)/(A)))^{.5} = 6.39 \text{ ft} \quad \text{ok}$

**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: VDIR.4

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DATE 18 November 2010	CLIENT / PROJECT  <b>Downtown Miami City of Miami, Florida</b>
DRAWN BY: PR	
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PROJECT NO.	SHEET TITLE  <b>Engineering Calculations Footings</b>
SHEET NO.	
REVISIONS	SHEET NO.  <b>J.30</b>
08/16/2012 PR	
08/16/2013 GS	
03/12/2014 PR	
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**

**Problem: Design Footing**

VDIR.5 Extremely Shallow Depth

$F_1 = 1182$  lb.  
 $S_1 = 10.3$  ft.

$L = 5.58$  ft.  
 $W = 5.58$  ft.  
 $b = 0.0$  ft.  
 $t = 1.5$  ft.  
 $d = 1.5$  ft.

SIGN WT = 437 lb.

**Overturning Moment:**

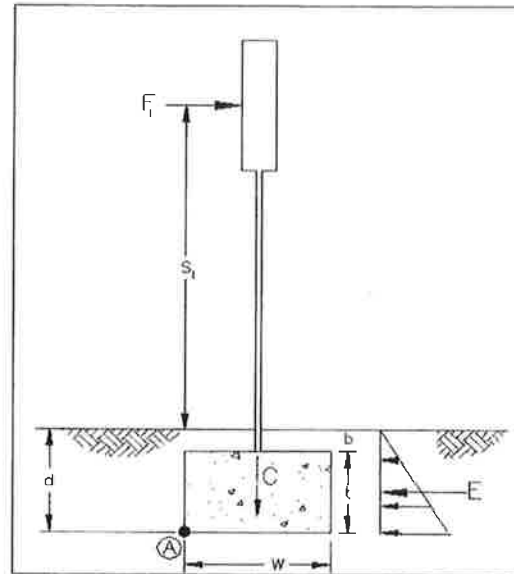
$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 13889$  ft.-lb.

**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 7450.2$  lb.  
 $E = (150 \text{ pcf} * d^2 * L) / 2 = 942$  lb.  
 $M_{RES} = (C * W/2) + (E * d/3) = 21268$  ft.-lb.

Factor of Safety =  $M_{RES} / M_{OT} = 1.53 > 1.5$



**Problem: Design Footing**

VDIR.5 Shallow Depth

$F_1 = 1182$  lb.  
 $S_1 = 10.3$  ft.

$L = 4.75$  ft.  
 $W = 4.75$  ft.  
 $b = 0.0$  ft.  
 $t = 2.5$  ft.  
 $d = 2.5$  ft.

SIGN WT = 437 lb.

**Overturning Moment:**

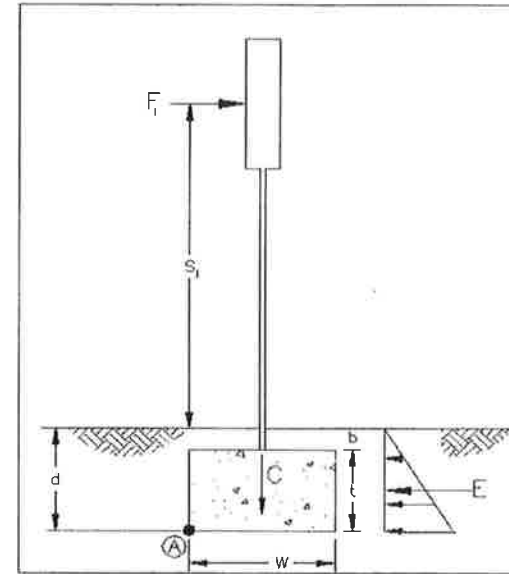
$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 15071$  ft.-lb.

**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 8897.9$  lb.  
 $E = (150 \text{ pcf} * d^2 * L) / 2 = 2227$  lb.  
 $M_{RES} = (C * W/2) + (E * d/3) = 22988$  ft.-lb.

Factor of Safety =  $M_{RES} / M_{OT} = 1.53 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: VDIR.5

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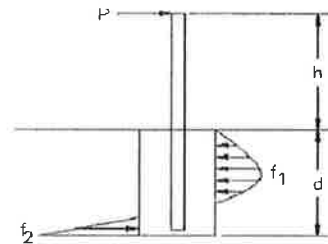
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REVISIONS 04/20/2012 PR	PROJECT NO.
11/30/2012 GS	SHEET TITLE  <b>Engineering Calculations Footings</b>
08/16/2013 GS	SHEET NO.
03/12/2014 PR	<b>J.31</b>
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**

PROBLEM: Design Pole Footing  
VDIR.5

P = 591 lbs  
h = 10.25 ft  
d = 5.42 ft  
b = 3.00 ft

Allowable pressure From FBC  
for soil types SW, SP, SM, SC, GM & GC  
q = 150 pcf



ACTUAL PRESSURE

$f_2 = (7.62 P (2h + d)) / (bd^2)$       1,326 psf

$f_1 = (2.85 P) / (bd) + f_2/4$       435 psf

Allowable Pressure for Pole Signs =  $2 \times q \times h$

$P2 = 2 \times 150 \text{ psf} \times d$       1,625 psf      ok

$P1 = 2 \times 150 \text{ psf} \times d/3$       542 psf      ok

Check FBC Equation

$S1 = d/3 \times q = 270.85 \text{ psf}$

$A = (2.34 \times P) / (S1 \times b) = 1.7019753$

$d_{req} = 0.5A(1+(1+(4.36h)/(A))^5) = 5.29 \text{ ft}$       ok

**Problem: Design Footing**

PARK.1A Extremely Shallow Depth

$F_1 = 185 \text{ lb.}$   
 $S_1 = 9.3 \text{ ft.}$

L = 3.00 ft.  
W = 3.00 ft.  
b = 0.0 ft.  
t = 1.5 ft.  
d = 1.5 ft.

SIGN WT = 127 lb.

Overturning Moment:

$M_{OT} = \Sigma(F \cdot (S+d))$

$M_{OT} = 2004 \text{ ft.-lb.}$

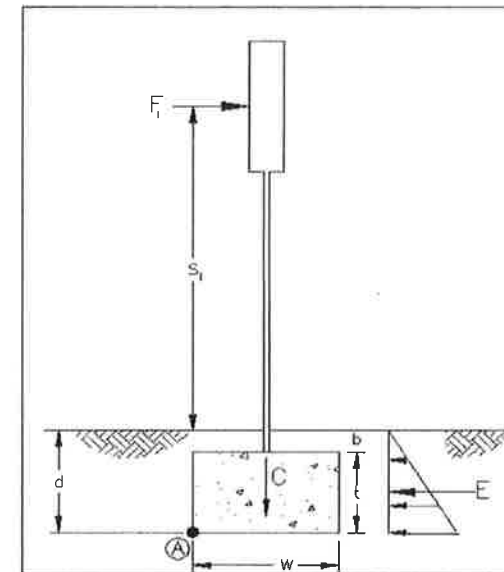
Resisting Moment:

$C = 150 \text{ pcf} \cdot L \cdot W \cdot t + \text{Sign Weight} = 2152 \text{ lb.}$

$E = (150 \text{ pcf} \cdot d^2 \cdot L) / 2 = 506 \text{ lb.}$

$M_{RES} = (C \cdot W/2) + (E \cdot d/3) = 3481.1 \text{ ft.-lb.}$

Factor of Safety =  $M_{RES} / M_{OT} = 1.74 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: VDIR.5

Footing: PARK.1A

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DATE 18 November 2010	CLIENT / PROJECT  <b>Downtown Miami City of Miami, Florida</b>
DRAWN BY: PR	
PROJECT NO.	
SHEET TITLE  <b>Engineering Calculations Footings</b>	
SHEET NO.  <b>J.32</b>	

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REVISIONS
04/20/2012 PR
07/30/2012 GS
08/16/2013 GS
03/12/2014 PR
05/02/2014 PR

**STRUCTURAL DESIGN ONLY**

**Problem: Design Footing**

PARK 1A Shallow Depth

$F_1 = 185 \text{ lb.}$   
 $S_1 = 9.3 \text{ ft.}$

$L = 2.50 \text{ ft.}$   
 $W = 2.50 \text{ ft.}$   
 $b = 0.0 \text{ ft.}$   
 $t = 2.5 \text{ ft.}$   
 $d = 2.5 \text{ ft.}$

SIGN WT = 127 lb.

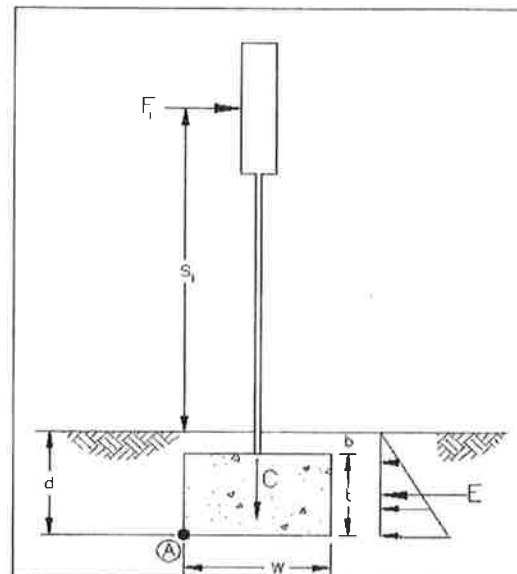
**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$   
 $M_{OT} = 2189 \text{ ft.-lb.}$

**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 2470.8 \text{ lb.}$   
 $E = (150 \text{ pcf} * d^2 * L) / 2 = 1172 \text{ lb.}$   
 $M_{RES} = (C * W/2) + (E * d/3) = 4065 \text{ ft.-lb.}$

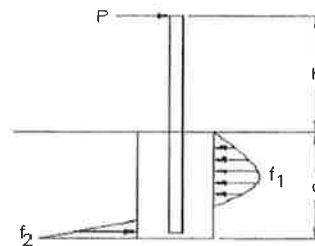
Factor of Safety =  $M_{RES} / M_{OT} = 1.86 > 1.5$



**PROBLEM: Design Pole Footing**  
PARK 1

$P = 185 \text{ lbs}$   
 $h = 9.25 \text{ ft}$   
 $d = 3.42 \text{ ft}$   
 $b = 3.00 \text{ ft}$

Allowable pressure From F8c  
 for soil types SW, SP, SM, SC, GM & GC  
 $q = 150 \text{ pcf}$



**ACTUAL PRESSURE**

$f_2 = (7.62 P (2h + d)) / (bd^2) = 882 \text{ psf}$   
 $f_1 = (2.85 P) / (bd) + f_2/4 = 272 \text{ psf}$

Allowable Pressure for Pole Signs =  $2 * q * h$

$P2 = 2 * 150 \text{ psf} * d = 1,025 \text{ psf} \quad \text{ok}$   
 $P1 = 2 * 150 \text{ psf} * d/3 = 342 \text{ psf} \quad \text{ok}$

**Check F8c Equation**

$S1 = d/3 * q = 170.85 \text{ psf}$   
 $A = (2.34 * P) / (S1 * b) = 0.8446005$   
 $dreq = 0.5A(1+(4.36h)/(A))^5 = 3.37 \text{ ft} \quad \text{ok}$

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REVISIONS 04/20/2012 PR	PROJECT NO.
11/30/2012 GS	SHEET TITLE  <b>Engineering Calculations Footings</b>
08/16/2013 GS	SHEET NO.  <b>J.33</b>
03/12/2014 PR	
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**

**Problem: Design Footing**

PARK.2 Extremely Shallow Depth

$F_1 = 804$  lb.  
 $S_1 = 10.1$  ft.

$L = 5.00$  ft.  
 $W = 5.00$  ft.  
 $b = 0.0$  ft.  
 $t = 1.5$  ft.  
 $d = 1.5$  ft.

SIGN WT = 236 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 9347$  ft.-lb.

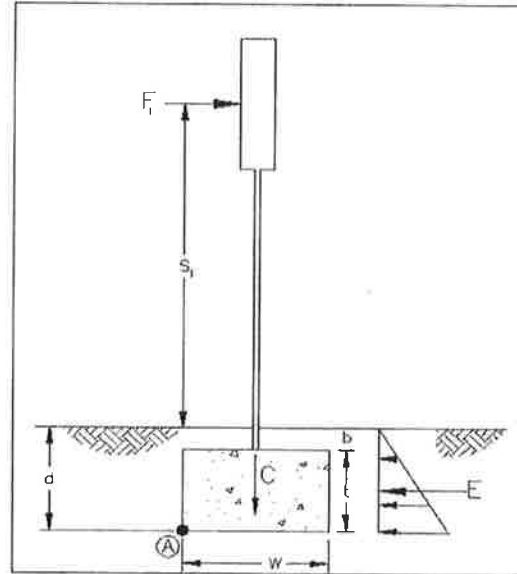
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 5861$  lb.

$E = (150 \text{ pcf} * d^2 * L) / 2 = 844$  lb.

$M_{RES} = (C * W/2) + (E * d/3) = 15074$  ft.-lb.

Factor of Safety =  $M_{RES} / M_{OT} = 1.61 > 1.5$



**Problem: Design Footing**

PARK.2 Shallow Depth

$F_1 = 804$  lb.  
 $S_1 = 10.1$  ft.

$L = 4.25$  ft.  
 $W = 4.25$  ft.  
 $b = 0.0$  ft.  
 $t = 2.5$  ft.  
 $d = 2.5$  ft.

SIGN WT = 236 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 10151$  ft.-lb.

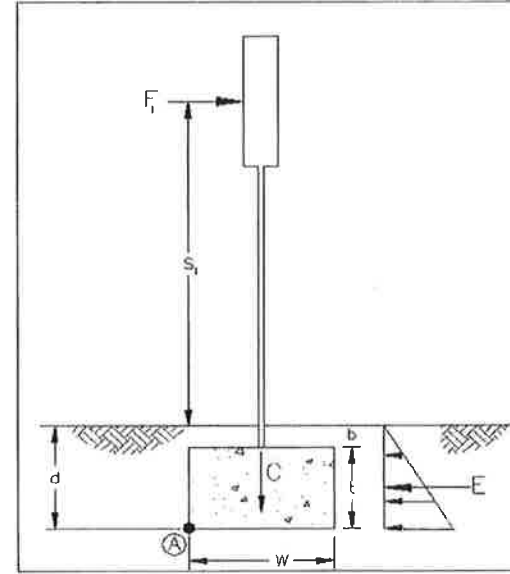
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 7009.4$  lb.

$E = (150 \text{ pcf} * d^2 * L) / 2 = 1992$  lb.

$M_{RES} = (C * W/2) + (E * d/3) = 16555$  ft.-lb.

Factor of Safety =  $M_{RES} / M_{OT} = 1.63 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: PARK.2

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11/30/2012 GS	SHEET TITLE  <b>Engineering Calculations Footings</b>
08/16/2013 GS	SHEET NO.  <b>J.34</b>
03/12/2014 PR	
05/02/2014 PR	

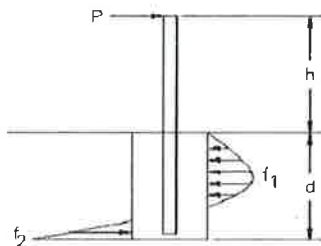
**STRUCTURAL DESIGN ONLY**



PROBLEM: Design Pole Footing  
PARK 2

P = 804 lbs  
h = 10.13 ft  
d = 6.00 ft  
b = 3.00 ft

Allowable pressure From FBC  
for soil types SW, SP, SM, SC, GM & GC  
q = 150 pcf



**ACTUAL PRESSURE**

$f_2 = (7.62 P (2h + d)) / (bd^2)$       1,489 psf

$f_1 = (2.85 P) / (bd) + f_2/4$       500 psf

Allowable Pressure for Pole Signs =  $2 \times q \times h$

$P2 = 2 \times 150 \text{ psf} \times d$       1,800 psf      ok

$P1 = 2 \times 150 \text{ psf} \times d/3$       600 psf      ok

Check FBC Equation

$S1 = d/3 \times q = 300 \text{ psf}$

$A = (2.34 \times P) / (S1 \times b) = 2.0904$

$dreq = 0.5A(1+(1+(4.36h)/(A))^5) = 5.96 \text{ ft}$       ok

**Problem: Design Footing**

PARK 3 Extremely Shallow Depth

\* DOUBLE POLE SIGN

$F_1 = 937 \text{ lb.}$   
 $S_1 = 6.2 \text{ ft.}$

L = 4.50 ft.  
W = 4.50 ft.  
b = 0.0 ft.  
t = 1.5 ft.  
d = 1.5 ft.

SIGN WT = 146 lb.

Overturning Moment:

$M_{OT} = \Sigma(F \cdot (S+d))$

$M_{OT} = 7184 \text{ ft.-lb.}$

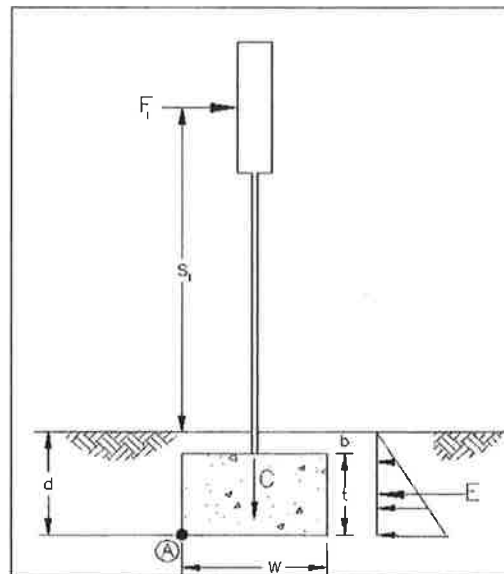
Resisting Moment:

$C = 150 \text{ pcf} \cdot L \cdot W \cdot t + \text{Sign Weight} = 4702.3 \text{ lb.}$

$E = (150 \text{ pcf} \cdot d^2 \cdot L) / 2 = 759 \text{ lb.}$

$M_{RES} = (C \cdot W/2) + (E \cdot d/3) = 10960 \text{ ft.-lb.}$

Factor of Safety =  $M_{RES} / M_{OT} = 1.53 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: PARK.2

Footing: PARK.3

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11/30/2012 GS	SHEET TITLE  <b>Engineering Calculations Footings</b>
08/16/2013 GS	SHEET NO.
03/12/2014 PR	<b>J.35</b>
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**

**Problem: Design Footing**

PARK.3 Shallow Depth

\* DOUBLE POLE SIGN

$F_1 = 937$  lb.  
 $S_1 = 6.2$  ft.

$L = 3.83$  ft.  
 $W = 3.83$  ft.  
 $b = 0.0$  ft.  
 $t = 2.5$  ft.  
 $d = 2.5$  ft.

SIGN WT = 146 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 8121$  ft.-lb.

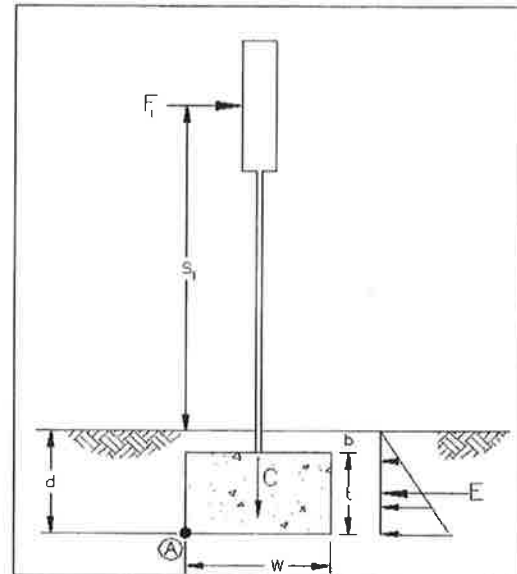
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 5646.8$  lb.

$E = (150 \text{ pcf} * d^2 * L) / 2 = 1795$  lb.

$M_{RES} = (C * W/2) + (E * d/3) = 12310$  ft.-lb.

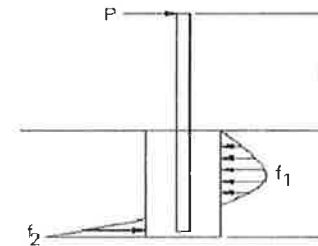
Factor of Safety =  $M_{RES} / M_{OT} = 1.52 > 1.5$



**PROBLEM: Design Pole Footing**  
PARK.3

$P = 469$  lbs  
 $h = 6.17$  ft  
 $d = 4.33$  ft  
 $b = 3.00$  ft

Allowable pressure From FBC  
for soil types SW, SP, SM, SC, GM & GC  
 $q = 150$  pcf



**ACTUAL PRESSURE**

$f_2 = (7.62 P (2h + d)) / (bd^2) = 1,059$  psf

$f_1 = (2.85 P) / (bd) + f_2/4 = 368$  psf

Allowable Pressure for Pole Signs =  $2 * q * x$

$P2 = 2 * 150 \text{ pcf} * x * d = 1,299$  psf ok

$P1 = 2 * 150 \text{ pcf} * x * d/3 = 433$  psf ok

**Check FBC Equation**

$S1 = d/3 * q = 216.5$  psf

$A = (2.34 * P) / (S1 * b) = 1.6896998$

$dreq = 0.5A(1+(4.36h)/(A))^5 = 4.32$  ft ok

**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: PARK.3

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PROJECT NO. 04/2012 PR	SHEET TITLE <b>Engineering Calculations Footings</b>
REVISIONS 11/30/2012 GS	SHEET NO.  <b>J.36</b>
08/16/2013 GS	
03/12/2014 PR	
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**

**Problem: Design Footing**

PDIR.1 Extremely Shallow Depth

$F_1 = 273$  lb.  
 $S_1 = 8.6$  ft.

$L = 3.25$  ft.  
 $W = 3.25$  ft.  
 $b = 0.0$  ft.  
 $t = 1.5$  ft.  
 $d = 1.5$  ft.

SIGN WT = 123 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 2764$  ft.-lb.

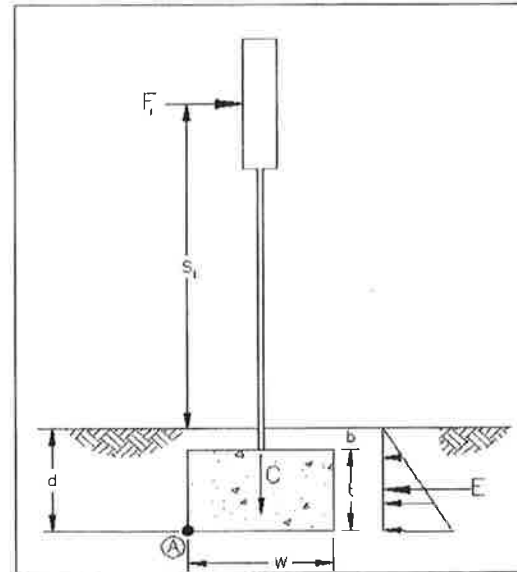
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 2499.6$  lb.

$E = (150 \text{ pcf} * d^2 * L) / 2 = 548$  lb.

$M_{RES} = (C * W/2) + (E * d/3) = 4336$  ft.-lb.

Factor of Safety =  $M_{RES} / M_{OT} = 1.57 > 1.5$



**Problem: Design Footing**

PDIR.1 Shallow Depth

$F_1 = 273$  lb.  
 $S_1 = 8.6$  ft.

$L = 2.75$  ft.  
 $W = 2.75$  ft.  
 $b = 0.0$  ft.  
 $t = 2.5$  ft.  
 $d = 2.5$  ft.

SIGN WT = 123 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 3037$  ft.-lb.

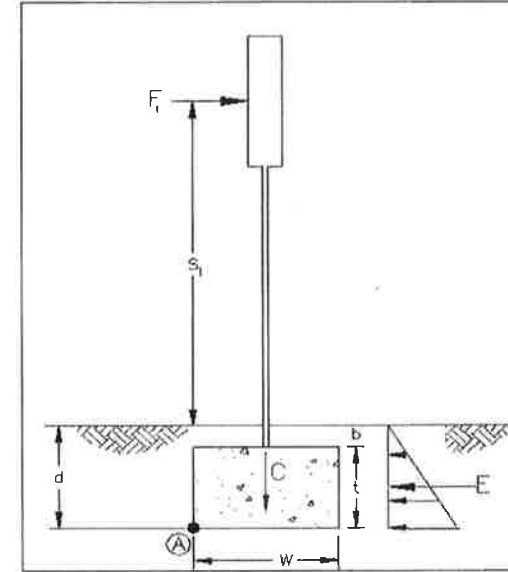
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 2958.9$  lb.

$E = (150 \text{ pcf} * d^2 * L) / 2 = 1289$  lb.

$M_{RES} = (C * W/2) + (E * d/3) = 5142.8$  ft.-lb.

Factor of Safety =  $M_{RES} / M_{OT} = 1.69 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: PDIR.1

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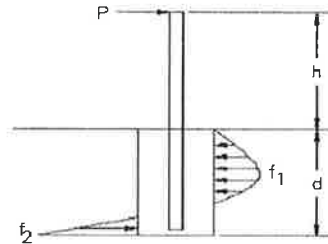
DATE 18 November 2010	CLIENT / PROJECT  <b>Downtown Miami City of Miami, Florida</b>
DRAWN BY: PR	
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REVISIONS 04/20/2012 PR	PROJECT NO.
11/30/2012 GS	SHEET TITLE  <b>Engineering Calculations Footings</b>
08/16/2013 GS	SHEET NO.
03/12/2014 PR	<b>J.37</b>
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**

PROBLEM: Design Pole Footing  
PDIR.1

P = 273 lbs  
h = 8.63 ft  
d = 3.92 ft  
b = 3.00 ft

Allowable pressure From FBC  
for soil types SW, SP, SM, SC, GM & GC  
q = 150 pcf



ACTUAL PRESSURE

$f_2 = (7.62 P (2h + d)) / (bd^2)$  957 psf

$f_1 = (2.85 P) / (bd) + f_2/4$  305 psf

Allowable Pressure for Pole Signs =  $2 \times q \times h$

$P2 = 2 \times 150 \text{ psf} \times d$  1,175 psf ok

$P1 = 2 \times 150 \text{ psf} \times d/3$  392 psf ok

Check FBC Equation

$S1 = d/3 \times q = 195.85 \text{ psf}$

$A = (2.34 \times P) / (S1 \times b) = 1.0872607$

$d_{req} = 0.5A(1+(1+(4.36h)/(A))^2)^{0.5} = 3.79 \text{ ft}$  ok

**Problem: Design Footing**

PDIR.2 Extremely Shallow Depth

$F_1 = 212 \text{ lb.}$   
 $S_1 = 8.9 \text{ ft.}$

L = 3.00 ft.  
W = 3.00 ft.  
b = 0.0 ft.  
t = 1.5 ft.  
d = 1.5 ft.

SIGN WT = 119 lb.

Overturning Moment:

$M_{OT} = \Sigma(F \cdot (S+d))$

$M_{OT} = 2200 \text{ ft.-lb.}$

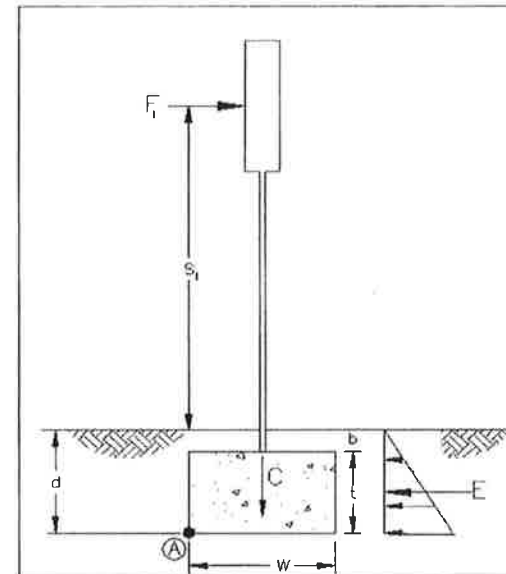
Resisting Moment:

$C = 150 \text{ pcf} \cdot L \cdot W \cdot t + \text{Sign Weight} = 2144 \text{ lb.}$

$E = (150 \text{ pcf} \cdot d^2 \cdot L) / 2 = 506 \text{ lb.}$

$M_{RES} = (C \cdot W/2) + (E \cdot d/3) = 3469.1 \text{ ft.-lb.}$

Factor of Safety =  $M_{RES} / M_{OT} = 1.58 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: PDIR.1

Footing: PDIR.2

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DRAWN BY: PR	
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REVISIONS 04/20/2012 PR	PROJECT NO.
11/30/2012 GS	SHEET TITLE  <b>Engineering Calculations Footings</b>
08/16/2013 GS	SHEET NO.
03/12/2014 PR	<b>J.38</b>
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**

**Problem: Design Footing**

PDIR.2 Shallow Depth

$F_1 = 212 \text{ lb.}$   
 $S_1 = 8.9 \text{ ft.}$

$L = 2.58 \text{ ft.}$   
 $W = 2.58 \text{ ft.}$   
 $b = 0.0 \text{ ft.}$   
 $t = 2.5 \text{ ft.}$   
 $d = 2.5 \text{ ft.}$

SIGN WT = 119 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 2412 \text{ ft.-lb.}$

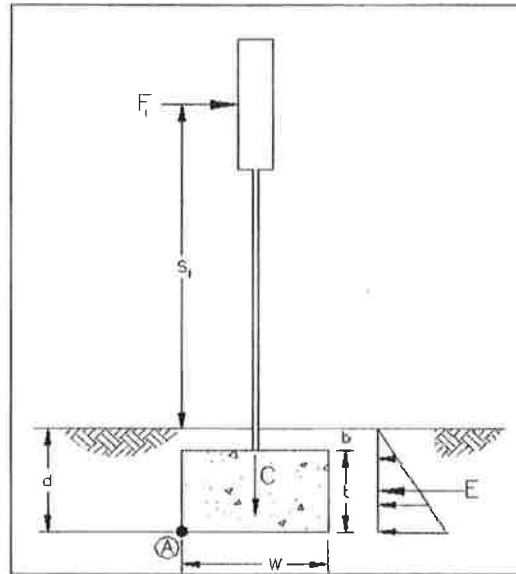
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 2621 \text{ lb.}$

$E = (150 \text{ pcf} * d^2 * L) / 2 = 1211 \text{ lb.}$

$M_{RES} = (C * W/2) + (E * d/3) = 4394 \text{ ft.-lb.}$

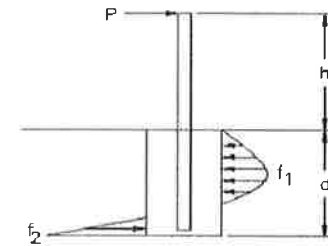
Factor of Safety =  $M_{RES} / M_{OT} = 1.82 > 1.5$



**PROBLEM: Design Pole Footing**  
 PDIR.2

$P = 212 \text{ lbs}$   
 $h = 8.88 \text{ ft}$   
 $d = 3.58 \text{ ft}$   
 $b = 3.00 \text{ ft}$

Allowable pressure From F&C  
 for soil types SW, SP, SM, SC, GM & GC  
 $q = 150 \text{ pcf}$



**ACTUAL PRESSURE**

$f_2 = (7.62 P (2h + d)) / (bd^2) = 895 \text{ psf}$

$f_1 = (2.85 P) / (bd) + f_2/4 = 280 \text{ psf}$

Allowable Pressure for Pole Signs =  $2 * q * h$

$P2 = 2 * 150 \text{ psf} * d = 1,075 \text{ psf} \quad \text{ok}$

$P1 = 2 * 150 \text{ psf} * d/3 = 358 \text{ psf} \quad \text{ok}$

**Check F&C Equation**

$S1 = d/3 * q = 179.15 \text{ psf}$

$A = (2.34 * P) / (S1 * b) = 0.9230254$

$dreq = 0.5A(1+(1+(4.36h)/(A))^5) = 3.49 \text{ ft} \quad \text{ok}$

**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: PDIR.2

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	SHEET NO.
	<b>J.39</b>

**STRUCTURAL DESIGN ONLY**

**Problem: Design Footing**

DEST.1 Extremely Shallow Depth  
DEST.2

$F_1 = 455 \text{ lb.}$   
 $S_1 = 9.3 \text{ ft.}$

$L = 4.00 \text{ ft.}$   
 $W = 4.00 \text{ ft.}$   
 $b = 0.0 \text{ ft.}$   
 $t = 1.5 \text{ ft.}$   
 $d = 1.5 \text{ ft.}$

SIGN WT = 143 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 4891 \text{ ft.-lb.}$

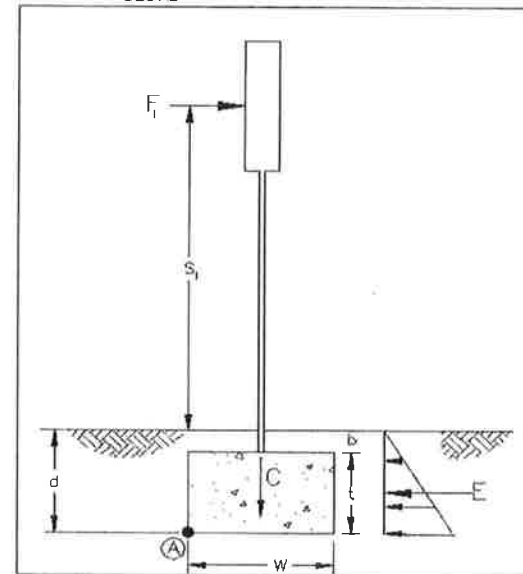
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 3743 \text{ lb.}$

$E = (150 \text{ pcf} * d^2 * L) / 2 = 675 \text{ lb.}$

$M_{RES} = (C * W/2) + (E * d/3) = 7823.5 \text{ ft.-lb.}$

Factor of Safety =  $M_{RES} / M_{OT} = 1.60 > 1.5$



**Problem: Design Footing**

DEST.1 Shallow Depth  
DEST.2

$F_1 = 455 \text{ lb.}$   
 $S_1 = 9.3 \text{ ft.}$

$L = 3.33 \text{ ft.}$   
 $W = 3.33 \text{ ft.}$   
 $b = 0.0 \text{ ft.}$   
 $t = 2.5 \text{ ft.}$   
 $d = 2.5 \text{ ft.}$

SIGN WT = 143 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 5346 \text{ ft.-lb.}$

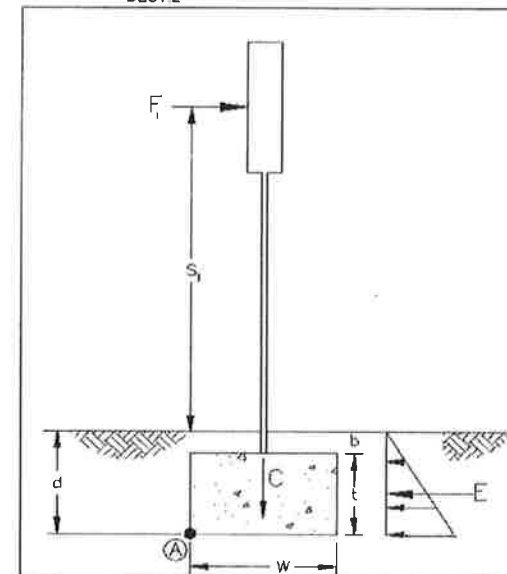
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 4301.3 \text{ lb.}$

$E = (150 \text{ pcf} * d^2 * L) / 2 = 1561 \text{ lb.}$

$M_{RES} = (C * W/2) + (E * d/3) = 8462.5 \text{ ft.-lb.}$

Factor of Safety =  $M_{RES} / M_{OT} = 1.58 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: DEST.1 & 2

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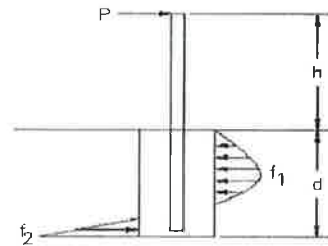
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11/30/2012 GS	SHEET TITLE  <b>Engineering Calculations Footings</b>
08/16/2013 GS	SHEET NO.
03/12/2014 PR	<b>J.40</b>
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**

PROBLEM: Design Pole Footing  
DEST.1  
DEST.2

P = 455 lbs  
h = 9.25 ft  
d = 4.75 ft  
b = 3.00 ft

Allowable pressure From FBC  
for soil types SW, SP, SM, SC, GM & GC  
q = 150 pcf



ACTUAL PRESSURE

$f_2 = (7.62 P (2h + d)) / (bd^2)$  1,191 psf

$f_1 = (2.85 P) / (bd) + f_2/4$  389 psf

Allowable Pressure for Pole Signs =  $2 \times q \times h$

$P2 = 2 \times 150 \text{ psf} \times d$  1,425 psf ok

$P1 = 2 \times 150 \text{ psf} \times d/3$  475 psf ok

Check FBC Equation

$S1 = d/3 \times q = 237.5 \text{ psf}$

$A = (2.34 \times P) / (S1 \times b) = 1.4943158$

$dreq = 0.5A(1+(1+(4.36h)/(A))^5) = 4.70 \text{ ft}$  ok

**Problem: Design Footing**

KIOSK.1 Extremely Shallow Depth

\* DOUBLE RIB SIGN

$F_1 = 328 \text{ lb.}$   
 $S_1 = 4.5 \text{ ft.}$

$L = 3.50 \text{ ft.}$   
 $W = 3.50 \text{ ft.}$   
 $b = 0.0 \text{ ft.}$   
 $t = 1.5 \text{ ft.}$   
 $d = 1.5 \text{ ft.}$

SIGN WT = 151 lb.

Overturning Moment:

$M_{OT} = \Sigma(F \cdot (S+d))$

$M_{OT} = 1968 \text{ ft.-lb.}$

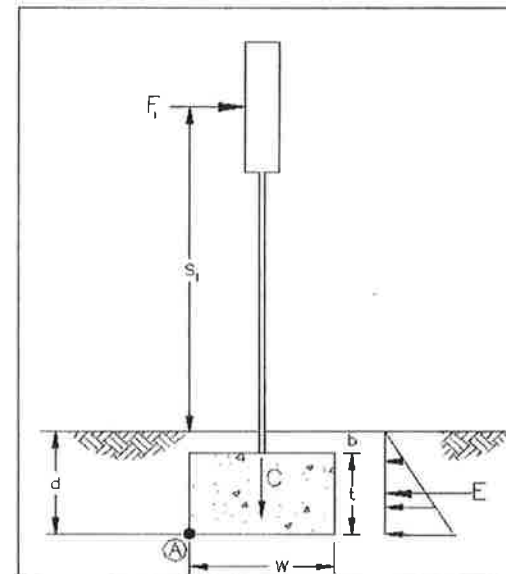
Resisting Moment:

$C = 150 \text{ pcf} \cdot L \cdot W \cdot t + \text{Sign Weight} = 2907.3 \text{ lb.}$

$E = (150 \text{ pcf} \cdot d^2 \cdot L) / 2 = 591 \text{ lb.}$

$M_{RES} = (C \cdot W/2) + (E \cdot d/3) = 5383 \text{ ft.-lb.}$

Factor of Safety =  $M_{RES} / M_{OT} = 2.74 > 1.5$



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**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: DEST.1 & 2

Footing: KIOSK.1

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REVISIONS 04/20/2012 PR	PROJECT NO.
11/30/2012 GS	SHEET TITLE  <b>Engineering Calculations Footings</b>
08/16/2013 GS	SHEET NO.  <b>J.41</b>
03/12/2014 PR	
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**

**Problem: Design Footing**

\* DOUBLE POLE SIGN

$F_1 = 328$  lb.  
 $S_1 = 4.5$  ft.

$L = 3.50$  ft.  
 $W = 3.50$  ft.  
 $b = 0.0$  ft.  
 $t = 2.5$  ft.  
 $d = 2.5$  ft.

SIGN WT = 151 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 2296$  ft.-lb.

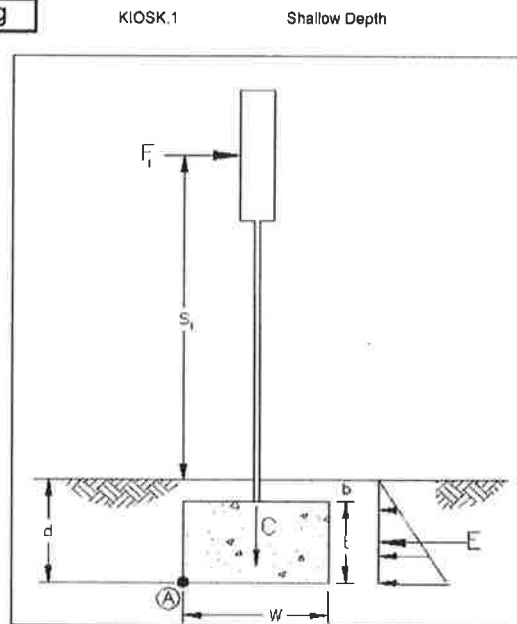
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 4744.8$  lb.

$E = (150 \text{ pcf} * d^2 * L) / 2 = 1641$  lb.

$M_{RES} = (C * W/2) + (E * d/3) = 9670.5$  ft.-lb.

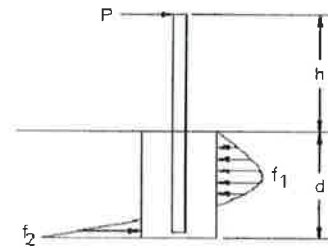
Factor of Safety =  $M_{RES} / M_{OT} = 4.21 > 1.5$



**PROBLEM: Design Pole Footing KIOSK.1**

$P = 164$  lbs  
 $h = 4.50$  ft  
 $d = 3.17$  ft  
 $b = 2.00$  ft

Allowable pressure From F&C  
for soil types SW, SP, SM, SC, GM & GC  
 $q = 150$  pcf



**ACTUAL PRESSURE**

$f_2 = (7.62 P (2h + d)) / (bd^2) = 758$  psf

$f_1 = (2.85 P) / (bd) + f_2/4 = 263$  psf

Allowable Pressure for Pole Signs =  $2 * q * h$

$P2 = 2 * 150 \text{ pcf} * d = 950$  psf ok

$P1 = 2 * 150 \text{ pcf} * d/3 = 317$  psf ok

**Check F&C Equation**

$S1 = d/3 * q = 158.35$  psf

$A = (2.34 * P) / (S1 * b) = 1.2117461$

$dreq = 0.5A(1+(1+(4.36h)/(A))^5) = 3.12$  ft ok

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REVISIONS	04/20/2012 PR	SHEET NO.	<b>J.42</b>
	11/30/2012 GS		
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

**STRUCTURAL DESIGN ONLY**



**Problem: Design Footing**

KIOSK.2 Extremely Shallow Depth

\* DOUBLE POLE SIGN

$F_1 = 714$  lb.  
 $S_1 = 4.5$  ft.

$L = 3.75$  ft.  
 $W = 3.75$  ft.  
 $b = 0.0$  ft.  
 $t = 1.5$  ft.  
 $d = 1.5$  ft.

SIGN WT = 193 lb.

**Overturning Moment:**

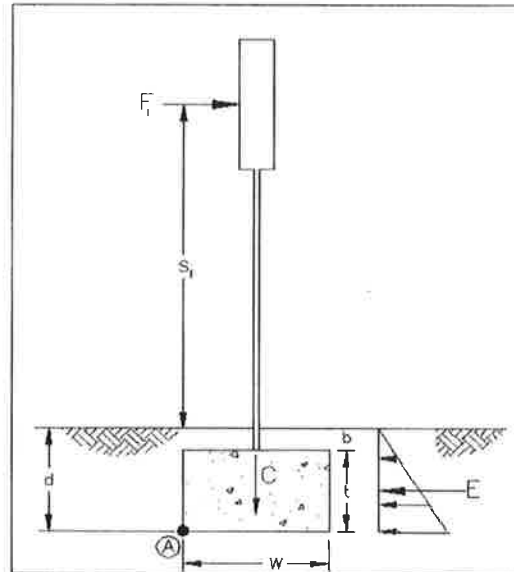
$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 4284$  ft.-lb.

**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 3357.1$  lb.  
 $E = (150 \text{ pcf} * d^2 * L) / 2 = 633$  lb.  
 $M_{RES} = (C * W/2) + (E * d/3) = 6610.9$  ft.-lb.

Factor of Safety =  $M_{RES} / M_{OT} = 1.54 > 1.5$



**Problem: Design Footing**

KIOSK.2 Shallow Depth

\* DOUBLE POLE SIGN

$F_1 = 714$  lb.  
 $S_1 = 4.5$  ft.

$L = 3.75$  ft.  
 $W = 3.75$  ft.  
 $b = 0.0$  ft.  
 $t = 2.5$  ft.  
 $d = 2.5$  ft.

SIGN WT = 193 lb.

**Overturning Moment:**

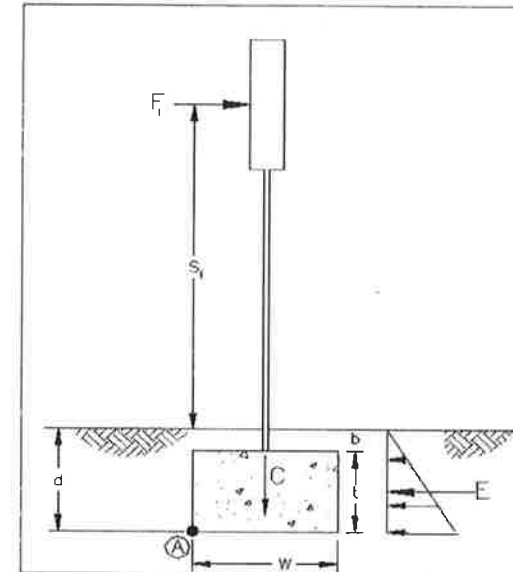
$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 4998$  ft.-lb.

**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 5466.4$  lb.  
 $E = (150 \text{ pcf} * d^2 * L) / 2 = 1758$  lb.  
 $M_{RES} = (C * W/2) + (E * d/3) = 11714$  ft.-lb.

Factor of Safety =  $M_{RES} / M_{OT} = 2.34 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: KIOSK.2

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ENVIRONMENTS & EXPERIENCES

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**SUBCONSULTANT**

DATE 18 November 2010	CLIENT / PROJECT Downtown Miami City of Miami, Florida
DRAWN BY: PR	PROJECT NO.

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REVISIONS 04/20/2012 PR	SHEET TITLE Engineering Calculations Footings
11/30/2012 GS	SHEET NO.
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05/02/2014 PR	

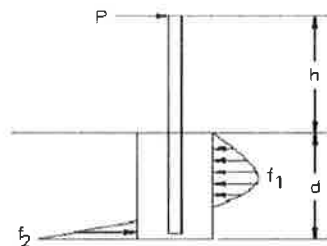
**STRUCTURAL DESIGN ONLY**

**J.43**

PROBLEM: Design Pole Footing  
KIOSK.2

P = 357 lbs  
h = 4.50 ft  
d = 4.25 ft  
b = 2.00 ft

Allowable pressure From FBC  
for soil types SW, SP, SM, SC, GM & GC  
q = 150 pcf



ACTUAL PRESSURE

$f_2 = (7.62 P (2h + d)) / (bd^2)$                       998 psf

$f_1 = (2.85 P) / (bd) + f_2/4$                       369 psf

Allowable Pressure for Pole Signs =  $2 \times q \times h$

$P2 = 2 \times 150 \text{ psf} \times d$                       1,275 psf                      ok

$P1 = 2 \times 150 \text{ psf} \times d/3$                       425 psf                      ok

Check FBC Equation

$S1 = d/3 \times q = 212.5 \text{ psf}$

$A = (2.34 \times P) / (S1 \times b) = 1.9656$

$d_{req} = 0.5A(1+(1+(4.36h)/(A)))^5 = 4.24 \text{ ft}$                       ok

**Problem: Design Footing**

INT.1      Extremely Shallow Depth

\* DOUBLE POLE SIGN

$F_1 = 179 \text{ lb.}$   
 $S_1 = 4.7 \text{ ft.}$

$L = 2.33 \text{ ft.}$   
 $W = 2.33 \text{ ft.}$   
 $b = 0.0 \text{ ft.}$   
 $t = 1.5 \text{ ft.}$   
 $d = 1.5 \text{ ft.}$

SIGN WT = 138 lb.

Overturning Moment:

$M_{OT} = \Sigma(F \cdot (S+d))$

$M_{OT} = 1104 \text{ ft.-lb.}$

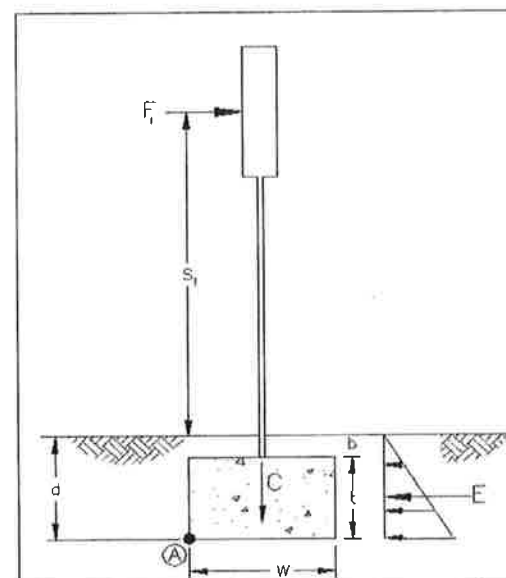
Resisting Moment:

$C = 150 \text{ pcf} \cdot L \cdot W \cdot t + \text{Sign Weight} = 1359.5 \text{ lb.}$

$E = (150 \text{ pcf} \cdot d^2 \cdot L) / 2 = 393 \text{ lb.}$

$M_{RES} = (C \cdot W/2) + (E \cdot d/3) = 1780.4 \text{ ft.-lb.}$

Factor of Safety =  $M_{RES} / M_{OT} = 1.61 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: KIOSK.2

Footing: INT.1

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

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DATE 18 November 2010	CLIENT / PROJECT <b>Downtown Miami City of Miami, Florida</b>
DRAWN BY: PR	

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REVISIONS 04/20/2012 PR	
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03/12/2014 PR	
05/02/2014 PR	

PROJECT NO.  
SHEET TITLE  
**Engineering Calculations  
Footings**

SHEET NO.

**J.44**

**STRUCTURAL DESIGN ONLY**

**Problem: Design Footing**

*DOUBLE POLE SIGN*

$F_1 = 179 \text{ lb.}$   
 $S_1 = 4.7 \text{ ft.}$

$L = 2.25 \text{ ft.}$   
 $W = 2.25 \text{ ft.}$   
 $b = 0.0 \text{ ft.}$   
 $t = 2.5 \text{ ft.}$   
 $d = 2.5 \text{ ft.}$

SIGN WT = 138 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 1283 \text{ ft.-lb.}$

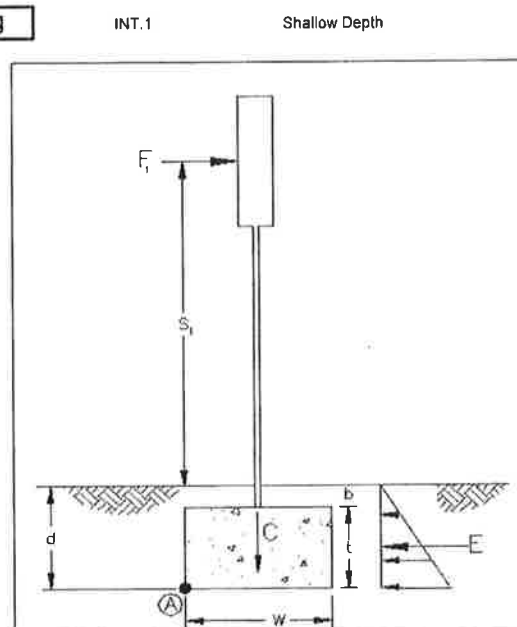
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 2036.4 \text{ lb.}$

$E = (150 \text{ pcf} * d^2 * L) / 2 = 1055 \text{ lb.}$

$M_{RES} = (C * W/2) + (E * d/3) = 3169.9 \text{ ft.-lb.}$

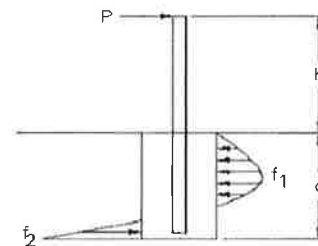
Factor of Safety =  $M_{RES} / M_{OT} = 2.47 > 1.5$



**PROBLEM: Design Pole Footing**  
INT.1

$P = 90 \text{ lbs}$   
 $h = 4.67 \text{ ft}$   
 $d = 2.83 \text{ ft}$   
 $b = 1.50 \text{ ft}$

Allowable pressure From FBC  
for soil types SW, SP, SM, SC, GM & GC  
 $q = 150 \text{ pcf}$



**ACTUAL PRESSURE**

$f_2 = (7.62 P (2h + d)) / (bd^2) = 693 \text{ psf}$

$f_1 = (2.85 P) / (bd) + f_2/4 = 234 \text{ psf}$

Allowable Pressure for Pole Signs =  $2 * q * x * h$

$P2 = 2 * 150 \text{ psf} * x * d = 850 \text{ psf} \quad \text{ok}$

$P1 = 2 * 150 \text{ psf} * x * d/3 = 283 \text{ psf} \quad \text{ok}$

**Check FBC Equation**

$S1 = d/3 * q = 141.65 \text{ psf}$

$A = (2.34 * P) / (S1 * b) = 0.9911754$

$d_{req} = 0.5A(1+(1+(4.36h)/(A))^5) = 2.80 \text{ ft} \quad \text{ok}$

**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: INT.1

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**SUBCONSULTANT**

DATE 18 November 2010	CLIENT / PROJECT  <b>Downtown Miami City of Miami, Florida</b>
DRAWN BY: PR	
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PROJECT NO.	SHEET TITLE  <b>Engineering Calculations Footings</b>
SHEET NO.	
REVISIONS 11/30/2012 GS	<b>J.45</b>
08/16/2013 GS	
03/12/2014 PR	
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**

**Problem: Design Footing**

DISTRICT.ID1

$F_1 = 6337$  lb.  
 $S_1 = 17.1$  ft.

$L = 10.00$  ft.  
 $W = 10.00$  ft.  
 $b = 0.0$  ft.  
 $t = 3.0$  ft.  
 $d = 3.0$  ft.

SIGN WT = 1370 lb

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 127532$  ft.-lb.

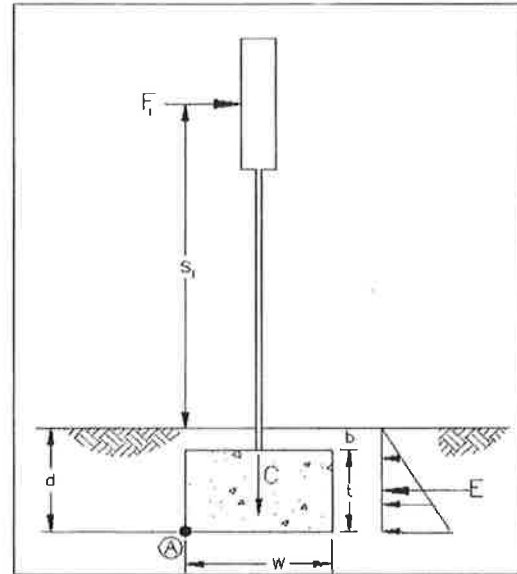
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 46370$  lb.

$E = (150 \text{ pcf} * d^2 * L) / 2 = 6750$  lb.

$M_{RES} = (C * W/2) + (E * d/3) = 238600$  ft.-lb.

Factor of Safety =  $M_{RES} / M_{OT} = 1.87 > 1.5$



**Problem: Design Footing**

DISTRICT.ID2

$F_1 = 2736$  lb.  
 $S_1 = 9.5$  ft.

$L = 6.00$  ft.  
 $W = 6.00$  ft.  
 $b = 0.0$  ft.  
 $t = 3.0$  ft.  
 $d = 3.0$  ft.

SIGN WT = 429 lb.

**Overturning Moment:**

$M_{OT} = \Sigma(F * (S+d))$

$M_{OT} = 34200$  ft.-lb.

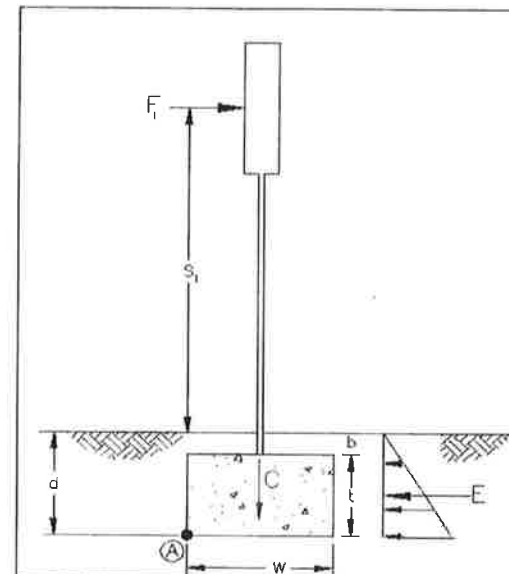
**Resisting Moment:**

$C = 150 \text{ pcf} * L * W * t + \text{Sign Weight} = 16629$  lb.

$E = (150 \text{ pcf} * d^2 * L) / 2 = 4050$  lb.

$M_{RES} = (C * W/2) + (E * d/3) = 53937$  ft.-lb.

Factor of Safety =  $M_{RES} / M_{OT} = 1.58 > 1.5$



**LEGEND**

**ENGINEERING CALCULATIONS**

Footing: DISTRICT-ID.1

Footing: DISTRICT-ID.2

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04/20/2012 PR

11/30/2012 GS

08/16/2013 GS

03/12/2014 PR

05/02/2014 PR

CLIENT / PROJECT

**Downtown Miami  
 City of Miami, Florida**

PROJECT NO.

SHEET TITLE

**Engineering Calculations  
 Footings**

SHEET NO.

**J.46**

**STRUCTURAL DESIGN ONLY**

**Footing Design:**

4/28/14

Extremely Shallow Footings

Φ = 0.9      t = 13 in      Rebar = #4 @ 10" c.c.  
 fy = 60000 psi      Bar Dia. 0.5 in      As = 0.24 in<sup>2</sup> / ft  
 fc = 4000 psi      d = 9.75 in      p = 0.0021

Φ\*Mn = 10339 lb-ft

Trib width 1 ft  
 Wind Factor 1.6

	w (psf)	Wu (plf)	L (ft)	L/2 (ft)	Mu (lb-ft)	Results
District ID.3	849	1358.4	4.5	2.250	3438	<ΦMn, OK!
VDIR.1	753	1204.8	4.5	2.250	3050	<ΦMn, OK!
VDIR.2	666	1065.6	5.833	2.917	4532	<ΦMn, OK!
VDIR.3	949	1518.4	5.833	2.917	6458	<ΦMn, OK!
VDIR.4	529	846.4	7.25	3.625	5561	<ΦMn, OK!
VDIR.5	921	1473.6	5.583	2.792	5741	<ΦMn, OK!
Park.1A	388	620.8	4.5	2.250	1571	<ΦMn, OK!
Park.2	578	924.8	5.583	2.792	3603	<ΦMn, OK!
PDIR.1	425	680	4.5	2.250	1721	<ΦMn, OK!
PDIR.2	397	635.2	4.5	2.250	1608	<ΦMn, OK!
DEST.1	581	929.6	4.5	2.250	2353	<ΦMn, OK!
DEST.2	581	929.6	4.5	2.250	2353	<ΦMn, OK!
KIOSK.1	435	696	4	2.000	1392	<ΦMn, OK!
KIOSK.2	718	1148.8	4	2.000	2298	<ΦMn, OK!
INT.1	377	603.2	4	2.000	1206	<ΦMn, OK!

**Footing Design:**

4/28/14

Shallow Footings

Φ = 0.9      t = 24 in      Rebar = #5 @ 10" c.c.  
 fy = 60000 psi      Bar Dia. 0.625 in      As = 0.372 in<sup>2</sup> / ft  
 fc = 4000 psi      d = 20.6875 in      p = 0.0015

Φ\*Mn = 34172 lb-ft

Trib width 1 ft  
 Wind Factor 1.6

	w (psf)	Wu (plf)	L (ft)	L/2 (ft)	Mu (lb-ft)	Results
District ID.3	1576	2521.6	3.833	1.917	4631	<ΦMn, OK!
VDIR.1	1378	2204.8	3.833	1.917	4049	<ΦMn, OK!
VDIR.2	1147	1835.2	5	2.500	5735	<ΦMn, OK!
VDIR.3	1696	2713.6	5	2.500	8480	<ΦMn, OK!
VDIR.4	709	1134.4	7.25	3.625	7453	<ΦMn, OK!
VDIR.5	1737	2779.2	4.75	2.375	7838	<ΦMn, OK!
Park.1A	651	1041.6	3.833	1.917	1913	<ΦMn, OK!
Park.2	1009	1614.4	4.75	2.375	4553	<ΦMn, OK!
Park.3	1728	2764.8	4	2.000	5530	<ΦMn, OK!
PDIR.1	720	1152	3.833	1.917	2116	<ΦMn, OK!
PDIR.2	668	1068.8	3.833	1.917	1963	<ΦMn, OK!
DEST.1	1018	1628.8	3.833	1.917	2991	<ΦMn, OK!
DEST.2	1018	1628.8	3.833	1.917	2991	<ΦMn, OK!
KIOSK.1	642	1027.2	4	2.000	2054	<ΦMn, OK!
KIOSK.2	874	1398.4	4	2.000	2797	<ΦMn, OK!
INT.1	583	932.8	4	2.000	1866	<ΦMn, OK!

District ID.1 & ID.2 Footings

Φ = 0.9      t = 36 in      Rebar = #5 @ 12" c.c.  
 fy = 60000 psi      Bar Dia. 0.625 in      As = 0.31 in<sup>2</sup> / ft  
 fc = 4000 psi      d = 32.6875 in      p = 0.0008

Φ\*Mn = 45280 lb-ft

Trib width 1 ft  
 Wind Factor 1.6

	w (psf)	Wu (plf)	L (ft)	L/2 (ft)	Mu (lb-ft)	Results
District ID.1	1365	2184	10	5.000	27300	<ΦMn, OK!
District ID.2	1905	3048	6	3.000	13716	<ΦMn, OK!

**LEGEND**

**ENGINEERING CALCULATIONS**

Footing Design: Extremely Shallow Footings

Footing Design: Shallow Footings

Footing Design: District ID.1 & ID.2 Footings

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**SUBCONSULTANT**

DATE 18 November 2010	CLIENT / PROJECT <b>Downtown Miami City of Miami, Florida</b>
DRAWN BY: PR	PROJECT NO.
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REVISIONS 04/20/2012 PR	SHEET NO. <b>J.47</b>
11/30/2012 GS	
08/16/2013 GS	
03/12/2014 PR	
05/02/2014 PR	

**STRUCTURAL DESIGN ONLY**

**K. Performance Specifications**

**STRUCTURAL DESIGN ONLY**

**PART 1 – GENERAL**

**1.01 WORK RELATED**

- A** Labor, materials, equipment and services necessary for the fabrication, delivery and installation of signage as described in the detail design intent 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** Signage is located in the City of Miami, Florida.
- D** 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 and/or vehicular safety.

**1.03 REGULATORY REQUIREMENTS**

Observe applicable codes, sign ordinances and ADA guidelines for handicapped and fire/life safety signing. All exterior signs located in the public right-of-way, including local city, county and state roadways, shall comply with the 2009 MUTCD standards.

**1.04 REFERENCE STANDARDS**

**Refer to current editions of the following:**

- A** MUTCD standards manual, 2009 edition.
- B** Federal ADAAG, 2010 standards.
- C** ASTM A53–Hot dipped galvanized steel pipe.
- D** ASTM B 209–Aluminum sheet and plate.
- E** ASTM B 221–Aluminum and aluminum-alloy extruded bars, rods, wire, profiles and tubes
- F** ASTM B 308–Aluminum I-beams, H-beams, channels, angles, tees, and zeos.
- G** ASTM D 822–Light and water exposure apparatus (carbon-arc type) for testing paint, varnish, lacquer and related products.
- H** ASTM E 84–Surface burning characteristics of building materials.
- I** ASTM C 143-74–Concrete slump test.
- J** FS L-P-391–Plastic sheet, rods and tubing, rigid and cast materials.
- K** FS L-P-387–Plastic sheet, laminated, thermosetting.
- L** 2010 FBC–High-Velocity Hurricane Zone (HVHZ), Miami-Dade County, Risk Category II Buildings and Structures: 175mph.

**1.05 SUBMITTALS**

**A Bid submittal requirements**

- 1 All of the inclusive bid submittals must be provided to be considered a qualified bid.
- 2 All proprietary contractual paperwork provided by the client filled out accurately, including all requested bonding and insurance information.
- 3 Submit completed spreadsheet (form and/or file provided) with all requested line item prices. Ensure that all row and column totals add up properly. Use the provided format, do NOT use a different spreadsheet format.
- 4 Submit a projected project schedule. Schedule will show major milestones such as sample submittals, fabrication, and installation. The payment schedule will be tied to reaching these milestones. Schedule will be updated regularly throughout the project.

**B Requirements**

- 1 Schedule shop drawings, product data and sample submittals for delivery at the same time.
- 2 The owner may hold shop drawings, product data and samples in cases where a partial submittal cannot be reviewed until associated items have been received.
- 3 Allocate not less than four weeks, plus mailing time, for processing by the owner.

**C Schedule**

- 1 Submit Gantt-style schedule with all pertinent dates and milestones for the project.
- 2 Include all lead times for materials, processes and third party products or components.
- 3 Include submittal delivery dates, fabrication and installation dates.
- 4 Allow several weeks in schedule for review and revision time for all submittals.
- 5 Revise schedule regularly as project details dictate.
- 6 Contractor shall pay \$1,000 a day for each day past the agreed upon project deadline, unless otherwise stated in the owner-contractor agreement.

**D Shop Drawings**

**NOTE: The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the projects location.**

- 1 Submit three (3) sets 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 If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida.

**E Sub Contractor Qualifications Information**

- 1 The total percentage of subcontracted work on this project is not to exceed 49% including installation.
- 2 Fabricator must submit credentials for any subcontractor selected to execute any portion of this contract. This must be submitted with proposal or bid. Demonstrate sub qualifications for doing specified work.

**F Samples**

- 1 Submit three (3) sets of each sample required.
- 2 Owner reserves the right to reject any samples that do not satisfy the construction, finish or color requirements. Submit additional samples as required to obtain final approval.
- 3 Samples shall be labeled on the back, designating item number, name of manufacturer, name of project.
- 4 The following sample submittals are required for this project:

**The following samples MUST be submitted and approved PRIOR to the fabrication of the signs.**

- a) 3 sets of all color samples, including paint and vinyl samples on thin aluminum plates (approx. 3" x 6").
- b) 2 sets of material samples.
- c) Sample fasteners, hardware and mounting hardware sufficient to obtain clear ideas of how signs are fabricated, made changeable and installed.
- d) Prototype: One (1) full size VDIR.1 sign type, with both bracket and sleeve assemblies, top cap, message panel, and short section of galvanized post with base. NOT to be job used.
- e) Prototype: One (1) full size DISTRICT ID.3 sign panel (Arts & Entertainment District), with DWNTWN letters, and acrylic back panel assembly. NOT to be job used.
- f) Prototype: One (1) full size PDIR.2 sign type, with bracket and sleeve assembly, top cap, double-sided message panel, and short section of galvanized post with base. NOT to be job used.

**All Prototypes to be crated/delivered to MERJE office for review and approvals.**

**LEGEND**

**PERFORMANCE SPECIFICATIONS  
PART 1 - GENERAL**

**STRUCTURAL DESIGN ONLY**

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ENVIRONMENTS & EXPERIENCES

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SUBCONSULTANT

DATE 18 November 2010	CLIENT / PROJECT <b>Downtown Miami City of Miami, Florida</b>
DRAWN BY: PR	PROJECT NO.
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**PART 1 – GENERAL** *continued*

- 5 Samples should represent extreme variations in color and texture that might occur during fabrication.

**G Maintenance Data**

- 1 Submit two (2) copies of 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.

**1.06 DELIVERY OF ATTIC STOCK (IF ANY)**

- A** For any attic stock ordered, package separately or in like groups labeled as to contents. Include installation hardware, adhesives and installation instructions; include a reasonable array of alternative adhesives, fasteners or materials to be able to respond effectively to varying field conditions.

**1.07 PROTECTION**

- A** Store and protect assemblies from injury at the shop, in transit to the job and until erected in place, completed, inspected and accepted.
- B** Take special precautions to prevent pilferage both prior to and after installation. Be prepared to provide replacements for any material so removed from the site.

**1.08 INSPECTION**

- A** Materials, colors and fabricated or partially fabricated items shall be available for inspection at the factory or elsewhere, by the owner or designer during the process of manufacture and until final delivery, installation and acceptance, to determine whether or not there is compliance with the requirements of these specifications.
- B** Approval prior to the time of final acceptance shall not preclude rejection of delivered items which do not satisfy these specifications.

**1.09 REORDERING**

All items specified herein shall be available to the owner in additional quantities for a period of 10 years after completion of all work called for in this specification.

**1.10 WARRANTY**

All warranties on fabricator's standard contract forms must be modified to match warranty criteria mentioned herewith. 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 five (5) 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** Custom color background and characters printed with 3M inks direct to 3M High Intensity Prismatic Reflective Sheeting Series 3930, with 3M ElectroCut Film 1170 overlamine (applied according to 3M specifications to aluminum sheet), must be warranted for a period of eight (8) years and shall not excessively fade, discolor, crack, craze, peel, blister or lose reflectivity such that the signs become visually unsuitable for their intended purpose.
- D** Vinyl die-cut letters shall be warranted for five (5) years against delamination from substrate.
- E** 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.
- F** Additional corrections shall include, but not be limited to, the following:
  - 1 Peeling, 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 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).
  - 3 Corrosion of the fastenings.
  - 4 The signs not remaining true or plumb on their supports.
  - 5 Fading of the colors when matched against a sample of the original color and material.
  - 6 Discoloration of metal finishes.

**1.11 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 the designer and the 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 split evenly between the contractor and owner.

**1.12 STRUCTURAL**

- A** The contractor and/or fabricator is responsible for verifying the soil bearing pressure at each sign location and for any additional design and material costs as a result of a lower actual bearing pressure than what was assumed and used in the design, as reflected on the drawings.
- B** The contractor and/or fabricator is responsible for the design and material costs of all remaining structural items not shown in these documents.

**STRUCTURAL DESIGN ONLY**

**LEGEND**

**PERFORMANCE SPECIFICATIONS**  
PART 1 - GENERAL

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SUBCONSULTANT

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**PART 2 – PRODUCTS**

**2.01 QUALITY ASSURANCE**

- A** Materials used for this project shall be new and not reconditioned or re-purposed.
- B** Fabricator shall be familiar with the site and all conditions related to the fabrication and installation of the project.
- C** Use only personnel thoroughly skilled and experienced with the products and method for fabrication and installation of signage specified.
- D** The owner shall reserve the right to reject any shop drawings, samples or other submittals, as well as any finished product or installation, than cannot meet the standard of quality established. Any such decision will be considered final and not subject to recourse.
- E** 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.
- F** Materials and hardware not specified, but necessary to the complete functioning of the sign, shall conform to the quality level established.

**2.02 PREFERRED MATERIAL SUPPLIERS**

Vendors and products listed below are specified for this product. 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.

**A Acrylic Polyurethane paint**

Matthews Paint (a division of PPG), Delaware, OH 43015  
Phone: 800-323-6593  
www.matthewspaint.com

**B All vinyl and vinyl coatings**

3M Commercial Graphics Division, St.Paul, MN 55144  
Phone: 888-364-3577  
www.solutions.3m.com

**C Acrylic sheeting**

ACRYLITE® Sheet  
Evonick Cyro LLC, Parsippany, NJ 07054  
Phone: 855-202-7467  
www.acrylite-shop.com

**D Map and Interpretive panels**

Digital High Pressure Laminate (dHPL)  
iZone, Temple, TX 76502  
Phone: 888-464-9663  
www.izoneimaging.com  
or

Fossil Industries, Deer Park, NY 11729

Phone: 631-254-9200  
www.fossilgraphics.com

**E District ID lighting**

ColorGraze Powercore - Linear LED fixture  
Philips Color Kinetics Headquarters  
3 Burlington Woods Drive, 4th Floor  
Burlington, MA 01803  
Phone: 617-423-9999  
www.colorkinetics.com

**F Solar Technology**

Solar Module, Gel Batteries, Control Board and Lighting Controller, Output Wire, and LED Tube Lights.  
AMERESCO SOLAR  
202 S. Live Oak, Suite B, Tomball, TX 77375  
Phone: 855-437-6527  
www.powerupco.com

**2.03 DESIGN REQUIREMENTS**

**A Typeface specifications**

- 1 Typeface (or fonts) are purchased from respective font websites, licensed to the designer, and will not be shared with the fabricator. Fabricators will be responsible for purchasing matching licensed fonts for project usage. See the Graphics Standards section of the design intent drawings for the specific fonts utilized within the project.
- 2 Size: all letter heights specified are based on the cap height of the capital letter.
- 3 Alignment: When setting type or installing cut letters, ensure that letters are perfectly straight and even, with no characters set crooked or "popping up."
- 4 Spacing
  - a) See the Graphics Standards section of the design intent drawings for the samples of letterspacing programs. The proper letter and word spacing is of extreme importance to the desired look of the signs.
  - b) Contractor is responsible for visual corrections to the typesetting that might be necessary. Any problems in spacing or copyfitting should be brought to the attention of the designer for solution.

**B Visual justification**

- 1 Display type may align mechanically but not optically. When flushing copy message left, a visual adjustment shall be made compensating for arrows and those letter forms that must be extended into the left hand margin to appear flush. For example, S and O must extend beyond the left margin slightly.

**C Arrow and symbol specifications**

- 1 Symbols: Symbols and pictographs shall conform to the symbol signs issued by the Department of Transportation and the American Institute of Graphic Arts. To obtain more information and digitized Macintosh (EPS) compatible AIGA symbols, contact: Society for Environmental Graphic Design (SEGD), 1000 Vermont Ave., NW, Suite 400, Washington, DC 20005, Phone: 202-638-5555.
- 2 Arrows: Arrows on all signs shall use the arrow files which will be provided by the owner to the successful bidder.
  - a) Arrow size will be dimensioned by height as shown in the design intent drawings.

**D Artwork**

- 1 The contractor shall be provided electronic Adobe InDesign and Illustrator files with the project artwork and templates. The final output quality of the artwork for finished signage shall be the responsibility of the contractor. The owner's representative reserves the right to reject artwork if it fails to meet the standard of quality established.

**2.04 MATERIALS**

**A Aluminum extrusions:** For profile I-beams, H-beams, channels, angles, tees, and zeos, shall conform to ASTM B-308, alloy 6061-T6. For aluminum and aluminum-alloy extruded bars, rods, wire, profiles and tubes, shall conform to ASTM B-221, alloy 6061-T6. Shapes, sizes and weights of members shall be as required for structural stability. All connections of aluminum members shall be heli-arc welded, continuous fillets, ground smooth on all exposed surfaces, unless specifically detailed otherwise. Aluminum finishes shall be hereinafter specified.

**B Aluminum sheet and plate:** Type 5052-H-32 alloy aluminum, thickness as indicated. For painted finish, faces shall be etched to give an even stain finish and remove oxidation, then conversion coated to improve paint adhesion and inhibit corrosion. Surface shall be belt-sanded for a smooth finish, edges filed and ground then immersed in hot alkaline cleaner to remove contamination. For anodized finish, prepare for finish AA-M31-C21-A31. Aluminum should have consistency of color and finish throughout the project.

**C Stainless Steel sheet:** Chromium stainless steel sheet. Use type 304 or type 316 austenitic stainless steel with 16% chromium and 10% nickel.

**D Steel Poles:** Galvanized steel poles, to be made from ASTM A53 Grade B Steel (Fy = 35 KSO). Hot-dipped galvanized steel pipe in NPS 1/8 to NPS 26.

**E Hangers, brackets and accessories:** Shall be of the type and size indicated. Where such items are not specifically called for, provide hangers, brackets and accessories as required for the proper execution of the work, as approved by the owner.

**LEGEND**

**PERFORMANCE SPECIFICATIONS  
PART 2 - PRODUCTS**

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**SUBCONSULTANT**

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**PART 2 – PRODUCTS** *continued*

**F Paint for aluminum:** All coating to protect aluminum by uniformly penetrating, filling, and sealing surface pores. Coating should provide an invisible barrier to weathering, airborne contaminants, graffiti, industrial air pollution, mildew, and salt air. Coating should not yellow, peel or flake. *Coating should be guaranteed in conformance with Warranty Section 1.10-E. Sign panels shall be pre-drilled in proper locations before any priming, painting or coating processes.* Aluminum should have consistency of color and finish throughout the project.

**1 Matthews Acrylic Polyurethane (PPG)**

MAP® is a superior two-component catalyzed coating system that provides a high degree of ultraviolet, chemical and weather protection for signage and architectural metals. When used as a complete system, primer through topcoat, MAP provides a high performance finish that lasts for years.

- a) Pretreatment: Mechanically clean and chemically pretreat fabricated items in accordance with coating manufacturer's requirements and AAMA requirements for finish indicated.
  - 1) Pretreatment: One coat 74-734 and 74-735 metal pre-treat at .25 mils DFT or one coat 74-793 spray bond at .15 to .25 mils DFT.
- b) Apply primer and finish coats in accordance with coating manufacturer's requirements for finish indicated.
  - 1) Finish coat: One coat Matthews Acrylic Polyurethane 2 mils DFT. As a final step, spray one coat of satin clear Matthews Acrylic Polyurethane 2 mils DFT for a protective top coat.

**G Pressure Sensitive Vinyl Legends**

**1 Use 3M High Intensity Prismatic Reflective Sheeting Series 3930, with 3M ElectroCut Film 1170 overlaminated.**

- a) Custom color background and characters printed with 3M inks directly.
- b) Series 3930 sheeting 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:
  - 1) Mechanical squeeze roll applicator – refer to 3M Information Folder (IF) 1.4 for more details.
  - 2) Hand squeeze roll applicator – refer to 3M IF 1.6 for more details.
- c) Splices: Series 3930 sheeting 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 sheet expands in extreme temperature and humidity exposure.

- d) For traffic sign use, substrates found to be most reliable and durable are properly prepared aluminum sheets and extrusions. Plastic substrates are NOT acceptable.
- e) High intensity prismatic sheeting may be processed into traffic signs by any of the imaging methods describe below:
  - 1) Screen Processing: Series 3930 sheeting may be screen processed into traffic signs before or after mounting on a sign substrate, using 3M Process Colors Series 880I or Series 880N. Refer to 3M IF 1.8 for more details.
  - 2) Thermal Transfer Printing: Series 3930 sheeting may be imaged with 3M Thermal Transfer Ribbon Series TTR2300 in conjunction with the Matan SprinG3 or Matan Spot4 thermal transfer printers. Additionally, series 3930 sheeting may be imaged by the Durst RHO 161 TS printer, by Sherine Industries: (604) 513-1887. All applications utilizing the above printers must be covered with 3M ElectroCut Film 1170 Clear UV/ Anti-Graffiti overlaminated.
  - 3) 3M ElectroCut Film Series 1170 may be used to provide transparent colored background copy for traffic control signs on high intensity prismatic sheeting. Both materials then must be covered with 3M ElectroCut Film 1170 Clear UV/Anti-Graffiti overlaminated. Refer to Product Bulletin 1170 for fabrication procedures.
  - 4) Vinyl Graphic Films: Scotchcal Vinyl Series 7720 and Series 7725 may be used to provide copy for traffic control signs on high intensity prismatic sheeting. Both materials then must be covered with 3M ElectroCut Film 1170 Clear UV/Anti-Graffiti overlaminated. Refer to Scotchcal product literature for more information.

f) All of the above methods utilizing series 3930 reflective sheeting must be warranted for a period of eight (8) years and shall not excessively fade, discolor, crack, craze, peel, blister or lose reflectivity such that the signs become visually unsuitable for their intended purpose.

- 2 Use **3M Scotchcal brand graphic film.** Material shall consist of a tough, flexible, and pigmented vinyl film and shall be processed with compatible screen printing inks and clear coatings as recommended by the film manufacturer. The film shall be precoated with pressure-sensitive adhesive. The adhesive shall be protected by a treated paper liner which shall be easily removable without soaking in water or other solvents. The sheeting shall be guaranteed against delamination for a period of 5 years.

- 3 Use **3M Scotchlite brand reflective graphic film.** Material shall consist of transparent plastic having a smooth, flat outer surface embedded with spherical lens elements. Material shall be capable to being processed with compatible screen printing inks and clear coatings as recommended by the film manufacturer. The film shall be precoated with pressure-sensitive adhesive. The adhesive shall be protected by a treated paper liner which shall be easily removable without soaking in water or other solvents. The sheeting shall be guaranteed against delamination for a period of 5 years.

**H Concrete**

- 1 All concrete footers are to be poured in place.
- 2 All concrete footers are to be poured from thoroughly mixed and agitated concrete in order to prevent unreasonable voids in the finished casting.
- 3 Concrete to meet specified "PSI testing" for strength: 4000 PSI minimum.
- 4 Concrete to meet specified "slump test" before pouring footing.
- 5 All footings to extend past the frost line.
- 6 Any footers or posts for signs will be placed in wet concrete and allowed to fully cure in place before any signage is attached or mounted to it in any way.
- 7 All exposed surfaces of concrete shall receive a finish to match existing, adjacent surfaces.
- 8 Do NOT chamfer corners or edges of concrete, unless specifically identified, or called out in the sign drawings.
- 9 Smooth-Formed Finished Concrete: Form-facing panels that will provide continuous, true, and smooth concrete surfaces. Furnish in largest practicable sizes to minimize number of joints.
  - a) Plywood, metal, or other approved panel materials.
  - b) Exterior-grade plywood panels, suitable for concrete forms, complying with DOC PS 1.

**I Breakaway post:** Manufacturer shall provide breakaway posts for the sign types and locations indicated in the documentation drawings. Final designs and shop drawings shall be supplied by the fabricator for each of the poles identified. Use of listed proprietary products are contingent on the manufacturer providing calculations and sufficient information showing that the intended products meets the design standards set forth by the FBC and FDOT, and is responsible for coordinating the submittal of this information. ***If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida.***

**STRUCTURAL DESIGN ONLY**

**LEGEND**

**PERFORMANCE SPECIFICATIONS  
PART 2 - PRODUCTS**

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**PART 2 – PRODUCTS** *continued*

The breakaway post shall meet or exceed the following criteria:

- 1 Most Current policy on Geometric Design of Highway and Streets.
- 2 Most Current Standard Specification for Structural supports for Highway Signs, Luminaries and Traffic Signals.
- 3 Most Current AASHTO Roadside Design Guide.

**J Adhesive tape:** Use closed-cell foam type tape with adhesive surfaces on both faces. Thicknesses and widths of tapes shall be as required to safely secure signs to various wall finishes, but in no case shall be less than 1/16 inch thick and 1/2 inch wide. Adhesive tape shall be equal to Norton Sealant Tape No. 1001 Series.

**K Liquid adhesive:** Use Silicone Silastic 732 RTV adhesive sealant as manufactured by Dow Corning.

**2.05 FABRICATION**

**A Report any discrepancies** between drawings, specifications and owner requirements, and request direction from owner before proceeding.

**B 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.

**C 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.

**D Do cutting, punching, drilling and tapping required** for attachment or other work coming in contact with signage work where indicated.

**E 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.

**F 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.

Allow for expansion and contraction of materials from temperature changes, especially when two materials with different coefficients of expansion are used together.

Detail signs to minimize deflection from snow, ice, water and their own weight.

**G Engineering:** The system shall be engineered to eliminate buckling of any members, failure at any points, distortions or other damage. 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. 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.

**H Connections and accessories:** Weights of connections and accessories shall be adequate to sustain and withstand stresses and strains to which they will be normally subjected.

**I Sign panels - General**

- 1 Surface finish: Provide surface finishes that are free from lines, mottling, ridges, variations in color, peeling, orange peel, bubbles, pinholes, mottling, crazing, grit and coarse particles. This applies to all methods of fabrication and finishing. Use clear coatings for durability, surface protection, appearance and maintenance.
- 2 Material: Sign panel material is stated in the schedules under "Notes" and/or "Specifications" and/or on drawings.
- 3 Opacity: All signs shall have opaque background and opaque graphics, unless specifically noted otherwise.

**J Anchors and fastenings**

- 1 Mechanical
  - a) Provide anchors and fasteners required to secure work in place.
  - b) 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.
  - c) 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.
  - d) 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.
  - e) Steel anchors and fastenings for exterior use shall be galvanized in accordance with ASTM A153.
  - f) Stability: Fabricate and install signs with fastenings to withstand all actions imposed by use; **175 mph wind** perpendicular to surfaces, water, ice, snow loads and similar forces.
  - g) 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.
  - h) Color: Secure work with fastenings of same color and finish as the components they secure where they are exposed to view, unless noted otherwise.

- i) Security: All exposed fasteners must be vandal resistant and have vandal-proof "spanner" type slots to be removed only with the special driver head.

**K Messages**

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

- 1 Layout: Typical sign panel layouts are illustrated in the design intent 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 the message layout shall be brought to the attention of the designer for a 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 must be followed exactly.
- 5 Single- or double-faces: All signs that are double-faced will be noted as such in the drawings and message schedule. For double-faced signs, the message will be indicated as "Side A" and "Side B" or "Side C" and Side D".

**L Surface-applied messages**

- 1 Reflectivity and specular gloss
  - a) Non-reflectorized message: 60 degree specular in accordance with ASTM Test D523.
- 2 Thickness: as indicated in specifications herein.
- 3 Color and color fastness
  - a) Exposed surfaces and finishes shall show no discernible color change or chalking when exposed for 1,000 hours in an Atlas Twin Arc Weathermaster Model HCDL-X, or equivalent, when tested in accordance with ASTM D822.
- 4 Inter letter spacing: Follow examples in drawings. Show sample inter-letter and inter-word spacing in sample submissions as specified.
- 5 Layout: Positions for all messages, symbols, arrows, lines, etc., for all signs are clearly indicated on the drawings and shall be complied with.
- 6 Artwork: Contractor shall be responsible for all final reproduction artwork for all messages, symbols, arrows, lines, and location plan and/or floor plan drawings.

**LEGEND**

**PERFORMANCE SPECIFICATIONS**  
PART 2 - PRODUCTS

STRUCTURAL DESIGN ONLY

GKM & Associate's design is limited to the new signs, new pole supports, new foundations and sign attachments. All other items are excluded, including, but not limited to, sign placement, electrical, architectural, mechanical and engineering checks of existing structures. The performance of manufactured items, including the breakaway system and tie straps, are based on manufacturer supplied product data.

ENVIRONMENTS & EXPERIENCES

**merje** 120 North Church Street  
Suite 208  
West Chester, PA 19380  
T 484.266.0648  
[www.merjedesign.com](http://www.merjedesign.com)

SUBCONSULTANT

DATE	18 November 2010	CLIENT / PROJECT	Downtown Miami City of Miami, Florida
DRAWN BY:	PR	PROJECT NO.	
The project fabricator is responsible for providing shop drawings prior to fabrication for review and approval by the Design Team and Project Engineer. If the fabricator's shop drawings propose means or methods that deviate from the materials, products, processes, construction details or installation methods identified in these DESIGN INTENT DRAWINGS, the fabricator shall have their Shop Drawing signed and sealed by a professional engineer licensed in the State of Florida. Use of these DESIGN INTENT DRAWINGS as a basis for design for the fabricator Shop Drawings does not relinquish the fabricator from constructing the signs to the level of quality and structural integrity necessary for the project.		SHEET TITLE	Performance Specifications
REVISIONS	04/20/2012 PR	SHEET NO.	
	11/30/2012 GS		K.5
	08/16/2013 GS		
	03/12/2014 PR		
	05/02/2014 PR		

**PART 2 – PRODUCTS** *continued*

7 Fabrication

- a) Screened messages: Execute all silk screen printing in such a manner that all edges and corners of finished letter forms are true and clean. Letter forms, color areas or lines with rounded corners, edge buildup or bleeding, sawtoothing, etc., will not be accepted. Execute all silk screening from photo-screens prepared from typesetter's reproduction of the copy specified. All above work is included in this contract. Hand cut screens will not be acceptable.
- b) Die-cut messages: Die-cut, pre-spaced, pre-aligned messages (numbers, words, phrases, and arrows) from 3.0 MIL flexible film coated with continuous adhesive pressure sensitive backing to meet characteristics specified for surface-applied messages. Execute die-cutting in such a manner that all edges and corners of finished letter forms are true and clean. Letter forms with round positive or negative corners, nicked, cut or ragged edges, etc., will not be acceptable.

**M Electrical Components, Devices, and Accessories:** Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.

**LEGEND**

**PERFORMANCE SPECIFICATIONS**  
PART 2 - PRODUCTS

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	SHEET NO.
	<b>K.6</b>

**STRUCTURAL DESIGN ONLY**

REVISIONS
04/20/2012 PR
11/30/2012 GS
08/16/2013 GS
03/12/2014 PR
05/02/2014 PR

## PART 3 – EXECUTION

### 3.01 INSPECTION

**A Examine the substrates and conditions under which the signs are to be installed and notify the owner in writing of conditions detrimental to the proper and timely completion of the work.** Do not proceed with the work until unsatisfactory conditions have been corrected.

### 3.02 INSTALLATION

**A Install sign units and components with concealed fasteners, unless otherwise shown.** Refer to detail drawings for general method. Verify each surface in field 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. Any discrepancies or apparent deviations from drawing locations because of different site conditions shall be brought to the attention of the owner for solution. The owner must be present for field placement of the sign.

It shall be the responsibility of the Contractor to determine location of underground structures and utilities by the use of test pit excavation prior to excavation operations. Test pits shall be the size, depth and location as approved by the Engineer. Each pit shall be tamp-back-filled. Test pit excavation will be measured on the basis of the volume of material actually removed from within the limits specified. Tamped backfill will not be measured but shall be included in the price bid for test pit excavation.

Price provided shall include all excavation, tamped backfill, labor, tools, equipment and incidentals necessary to complete the installation of each sign.

**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).

**D Note that this area 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.

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

**F Clean and polish, remove excess adhesive.**

#### G Fixture installation

- 1 Install lighting fixtures with seals and gaskets. Conceal all wiring in or within the construction.
- 2 Lamp installation
  - a) Do not install lamps for permanent use until operating voltage is verified and established.

- b) Install lamps in accordance with lamp and fixture manufacturer's instructions.
- 3 Ballast installation
  - a) Install ballasts at factory unless specifically indicated otherwise. Mount on rubber grommets or sound isolating details to reduce noise transmission.

### 3.03 TREE TRIMMING AND PROTECTION

**A** Include the protection and trimming of trees that interfere with, or are affected by, execution of the Work, whether temporary or new construction.

- 1 Quality Assurance
  - a) The cutting, pruning or trimming of trees shall be done in accordance with the most recent American National Standards (ANSI) A-300 Standard Practices for Tree Care Operations.
- 2 Preparation
  - a) Install temporary fencing located as indicated or outside the drip line of trees to protect remaining vegetation from construction damage.
  - b) **Protect tree root systems from damage due to noxious materials caused by runoff or spillage while mixing, placing, or storing construction materials.** Protect root systems from flooding, eroding, or excessive wetting caused by dewatering operations.
  - c) **Do NOT store construction materials, debris, or excavated material within the drip line of remaining trees. Do NOT permit vehicles or foot traffic within the drip line; prevent soil compaction over root systems.**
  - d) Do not allow fires under or adjacent to remaining trees or other plants.

- 3 Excavation
  - a) Install shoring or other protective support systems to minimize sloping or benching of excavations.
  - b) **Do not excavate within drip line of trees, unless otherwise indicated.**
  - c) Where excavation for new construction is required within drip line of trees, hand clear and excavate to minimize damage to root systems. Use narrow-tine spading forks and comb soil to expose roots.
    - 1) Relocate roots in backfill areas where possible. If encountering large, main lateral roots, expose roots beyond excavation limits as required to bend and relocate them without breaking. If encountered immediately adjacent to location of new construction and relocation is not practical, cut roots approximately 3 inches back from new construction.
    - 2) Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with peat moss and wrap with burlap. Water and maintain in a moist

condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.

- 4 Tree repair and replacement
  - a) Promptly repair trees damaged by construction operations within 24 hours. Treat damaged trunks, limbs, and roots according to written instructions of the qualified arborist.
  - b) Remove and replace dead and damaged trees that the qualified arborist determines to be incapable of restoring to a normal growth pattern.
    - 1) Provide new trees of 6-inch caliper size and of a species selected by Designer when trees more than 6 inches in caliper size, measured 12 inches above grade, are required to be replaced.
- 5 Disposal of waste materials
  - a) Burning is not permitted.
  - b) Remove excess excavated material, displaced trees, and excess chips from Owner's property.

### 3.04 CLEANUP

**A** Periodically (at least daily) and 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.

### 3.05 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.

### 3.06 SITE SPECIFIC

- A** The Contractor shall review environmental requirements of any proposed staging areas with the Project Engineer at least seventy-two (72) hours prior to use.
- B** Any material to be stockpiled for periods greater than 24 hours shall be protected by appropriate erosion control devices. Cost to be included in the related bid item.
- C No staging or other activities for this project will be allowed within or adjacent to: Southside Park, Simpson Park, Allen Morris Brickell Park, Jose Marti Park, Fort Dallas Park, Paul S Walker Park, Miami Riverwalk, Bayfront Park, Gibson Park, Museum Park, Miami City Cemetery, Biscayne Park, Watson Island Park and Margaret Pace Park.**
- D** No trees are to be within the line of sight of any sign.
- E** No geotechnical exploration has been performed to confirm the soil type assumptions. It is the responsibility of the contractor to verify all site conditions and report any discrepancies to the owner and design team.

**STRUCTURAL DESIGN ONLY**

## LEGEND

## PERFORMANCE SPECIFICATIONS PART 3 - EXECUTION

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### SUBCONSULTANT

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	03/12/2014 PR		<b>K.7</b>
	05/02/2014 PR		

**SECTION 3** | Wayfinding Signage Program

# **Downtown Miami**

## **Wayfinding Signing Program**

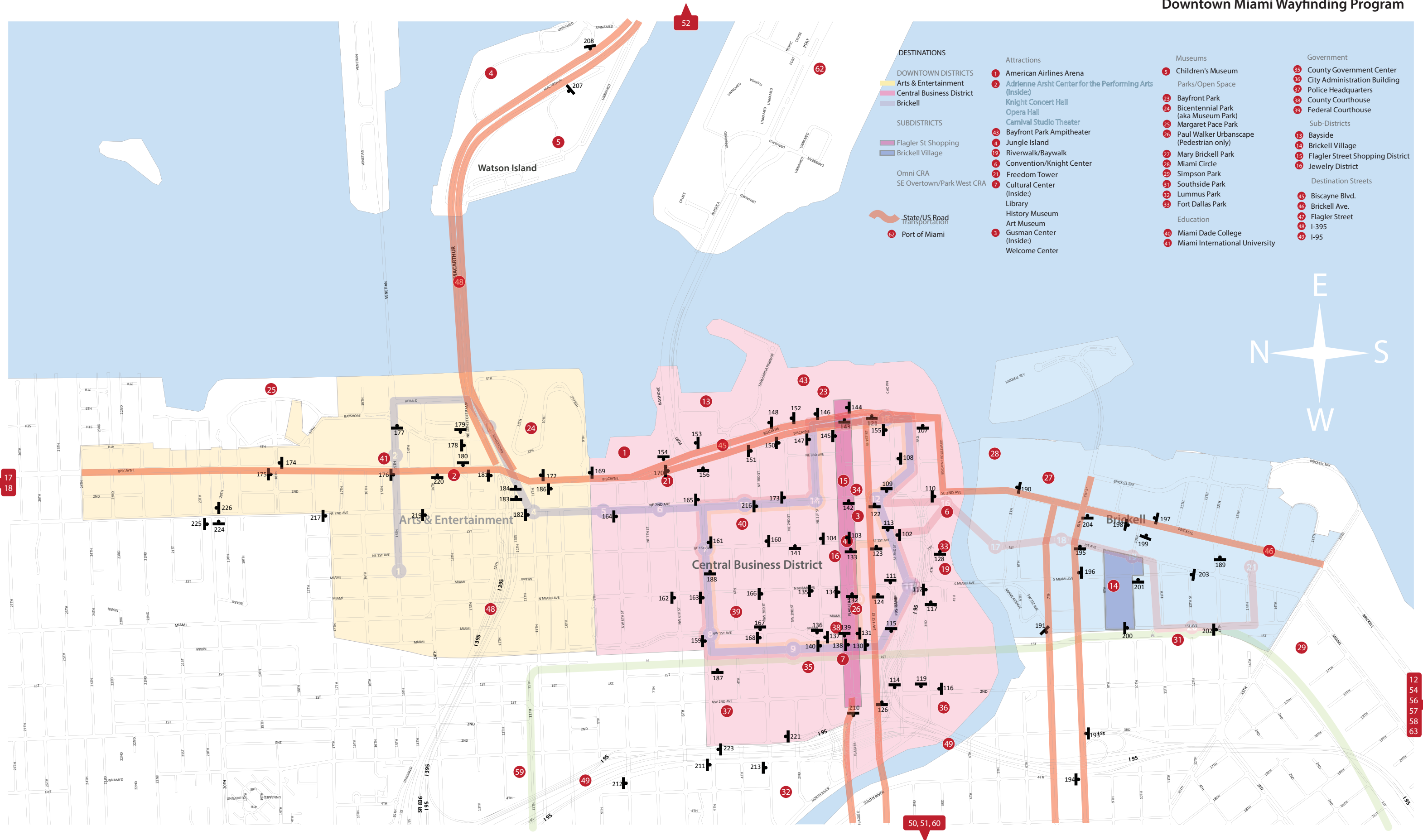
Sign Location Program and  
Message Schedule

Revised - July 1, 2015

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Message Schedule	7
Proposed Sign Location Photos	23
Existing Sign Removal Photos	44





**KEY**

- Small Pedestrian Destination
- Large Pedestrian Destination
- Kiosk
- State/US Road

1 A/B  
 2 B/A  
 3 A/A  
 4 B/A  
 5 B/A  
 6 To be determined

**DESTINATIONS**

- DOWNTOWN DISTRICTS**
- Arts & Entertainment
  - Central Business District
  - Brickell
- SUBDISTRICTS**
- Flagler St Shopping
  - Brickell Village
- Transportation**
- Port of Miami
- State/US Road

*Attractions*

- 1 American Airlines Arena
- 2 Adrienne Arsht Center for the Performing Arts (Inside)
- 4 Knight Concert Hall
- 4 Opera Hall
- 4 Carnival Studio Theater
- 43 Bayfront Park Amphitheater
- 4 Jungle Island
- 19 Riverwalk/ Baywalk /
- 6 Convention/Knight Center
- 2 Freedom Tower
- 7 Cultural Center (Inside)
- Library
- History Museum
- Art Museum
- 3 Gusman Center (Inside)
- Welcome Center

*Museums*

- 5 Children's Museum
- 23 Bayfront Park
- 24 Bicentennial Park
- 25 Margaret Pace Park
- 26 Paul Walker Urbanscape (Pedestrian only)
- 27 Brickell Park
- 28 Miami Circle
- 29 Simpson Park
- 31 Southside Park
- 32 Lummus Park
- 33 Fort Dallas Park

*Parks/Open Space*

- 40 Miami Dade College
- 41 Miami International University

*Education*

- 35 County Government Center
- 36 City Administration Building
- 37 Police Headquarters
- 38 County Courthouse
- 39 Federal Courthouse

*Government*

- 13 Bayside
- 14 Brickell Village
- 15 Flagler Street Shopping District
- 16 Jewelry District

*Sub-Districts*

- 45 Biscayne Blvd.
- 46 Brickell Ave.
- 47 Flagler Street
- 48 I-395
- 49 I-95

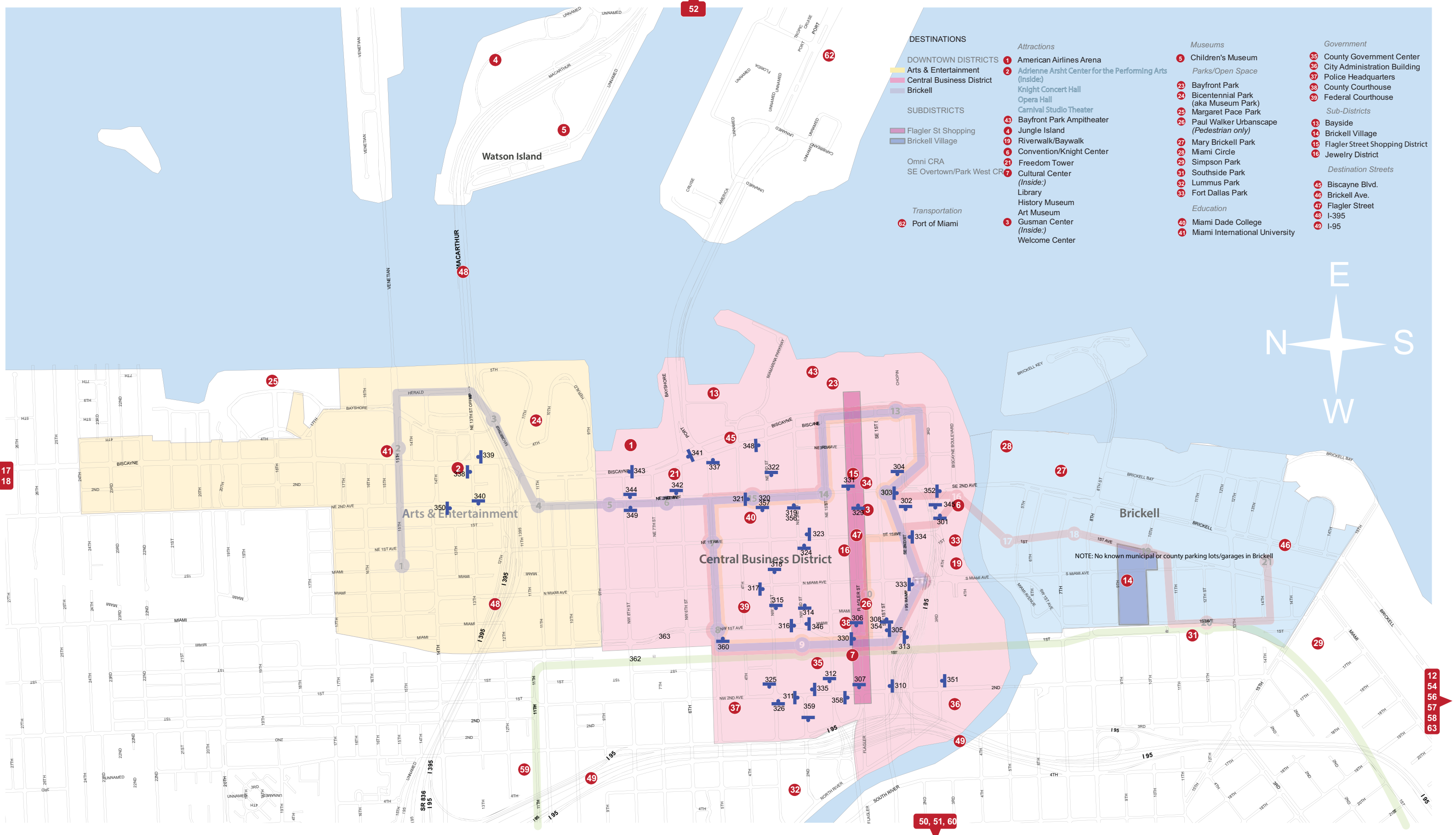
*Destination Streets*

- 12
- 54
- 56
- 57
- 58
- 63

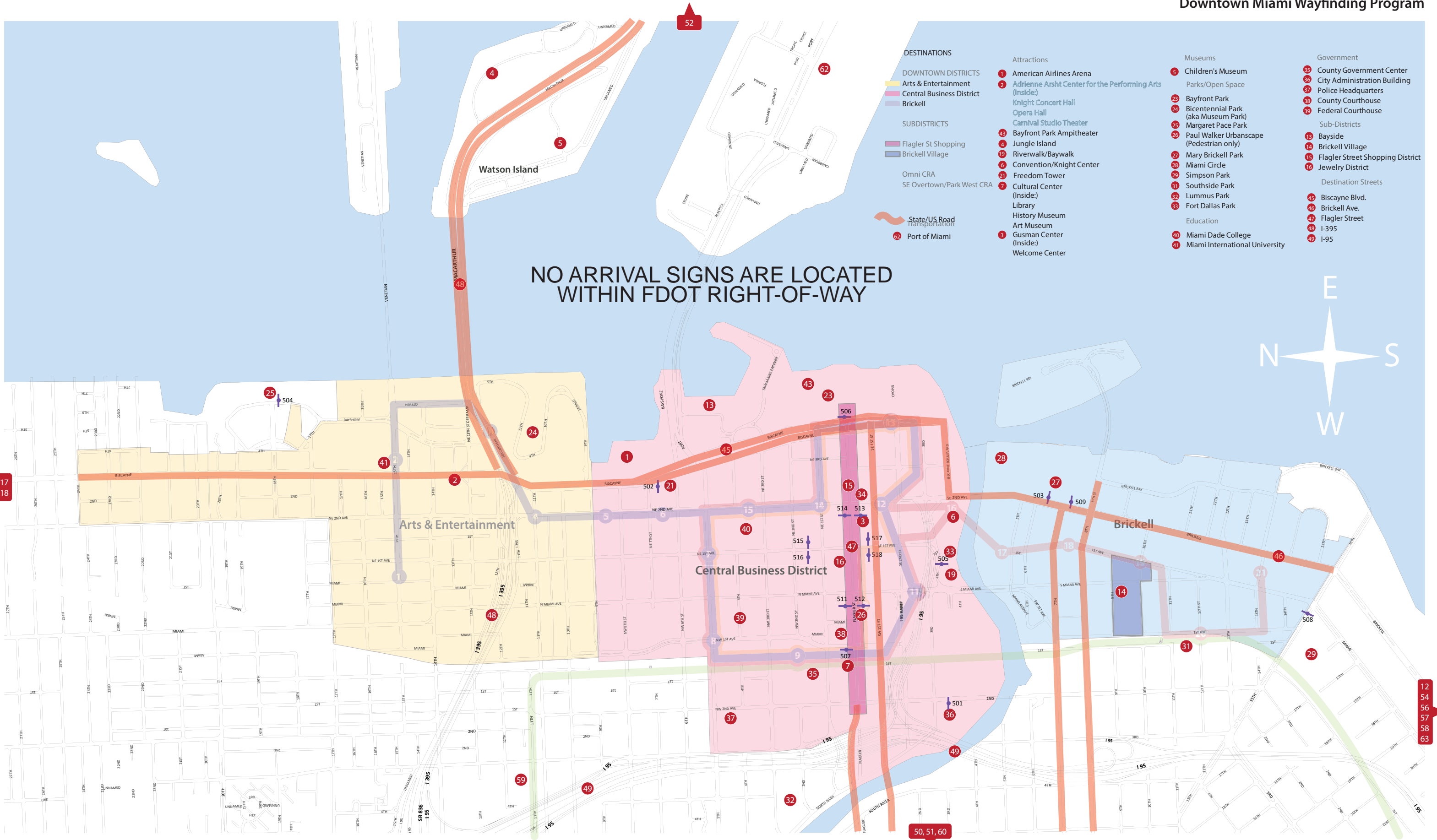


**DOWNTOWN MIAMI PEDESTRIAN PROGRAM**

October 2010

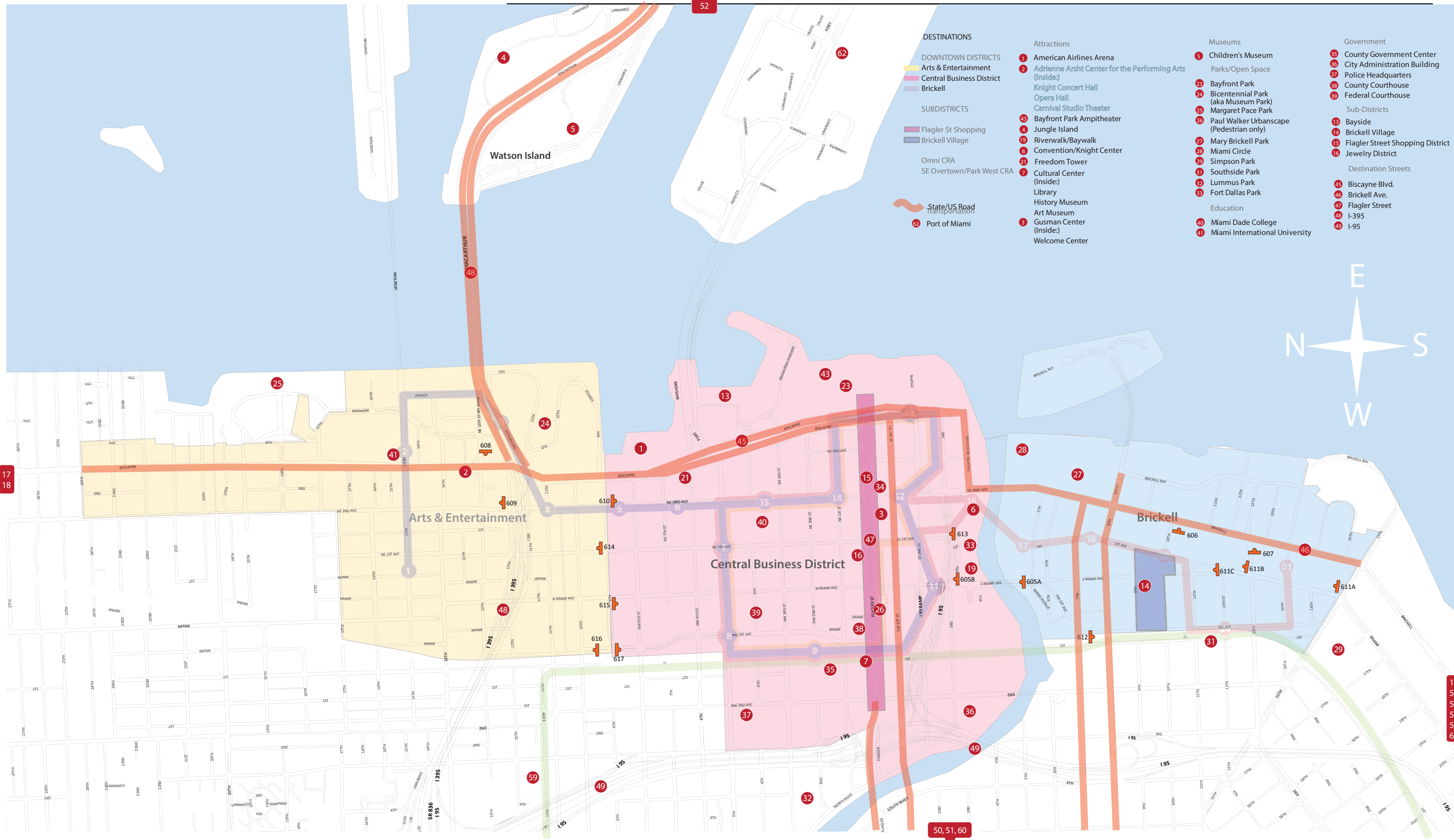


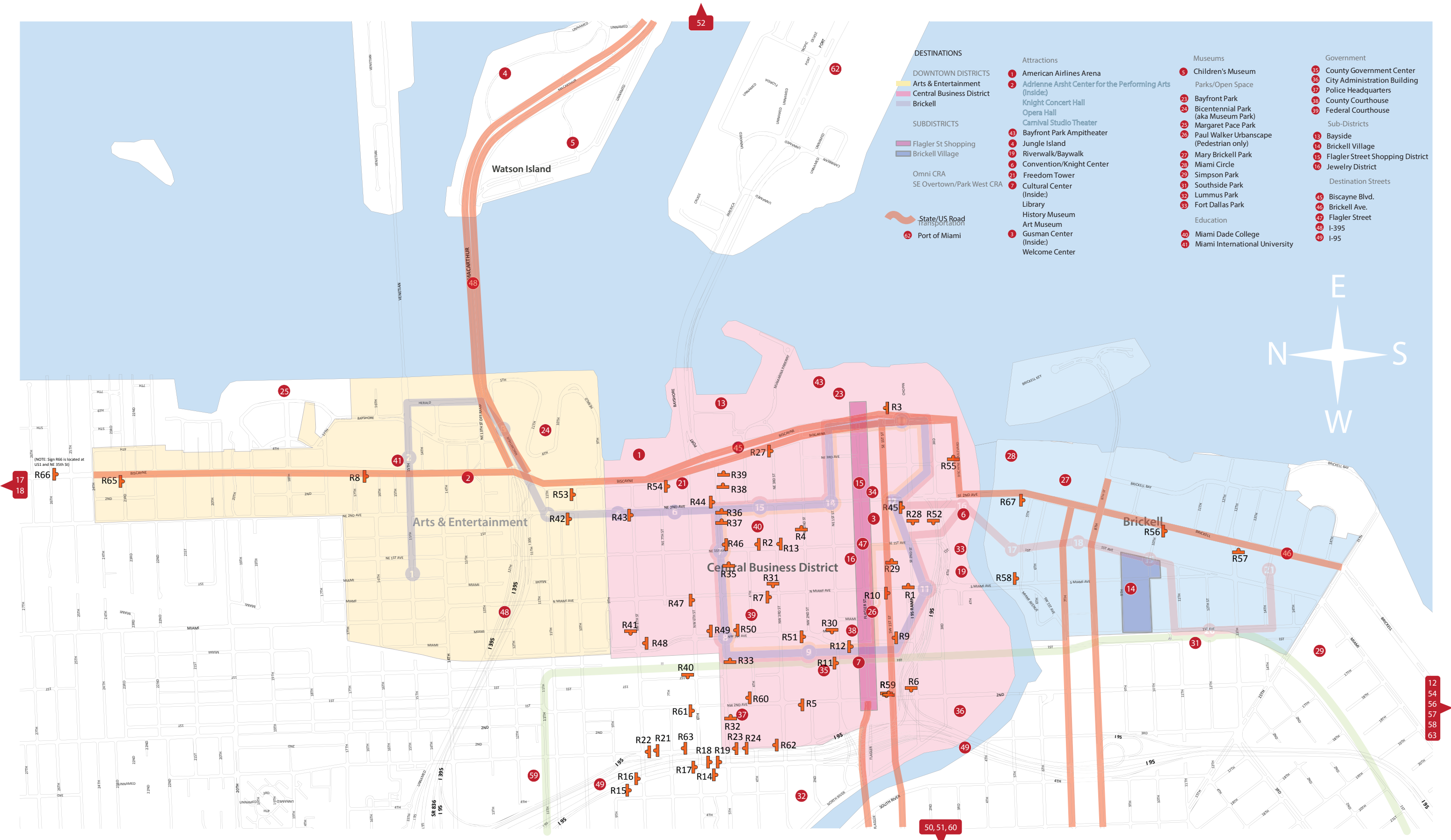
DOWNTOWN MIAMI PARKING PROGRAM



NO ARRIVAL SIGNS ARE LOCATED WITHIN FDOT RIGHT-OF-WAY

- DESTINATIONS**
- DOWNTOWN DISTRICTS
    - Arts & Entertainment
    - Central Business District
    - Brickell
  - SUBDISTRICTS
    - Flagler St Shopping
    - Brickell Village
  - Omni CRA
  - SE Overtown/Park West CRA
  - State/US Road Transportation
  - Port of Miami
- Attractions**
- American Airlines Arena
  - Adrienne Arsht Center for the Performing Arts (Inside)
  - Knight Concert Hall
  - Opera Hall
  - Carnival Studio Theater
  - Bayfront Park Amphitheater
  - Jungle Island
  - Riverwalk/Baywalk
  - Convention/Knight Center
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  - Art Museum
  - Gusman Center (Inside)
  - Welcome Center
- Museums**
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  - Paul Walker Urbanscape (Pedestrian only)
  - Mary Brickell Park
  - Miami Circle
  - Simpson Park
  - Southside Park
  - Lummus Park
  - Fort Dallas Park
- Government**
- County Government Center
  - City Administration Building
  - Police Headquarters
  - County Courthouse
  - Federal Courthouse
  - Sub-Districts
    - Bayside
    - Brickell Village
    - Flagler Street Shopping District
    - Jewelry District
  - Destination Streets
    - Biscayne Blvd.
    - Brickell Ave.
    - Flagler Street
    - I-395
    - I-95
- Education**
- Miami Dade College
  - Miami International University





- DESTINATIONS**
- DOWNTOWN DISTRICTS**
- Arts & Entertainment
  - Central Business District
  - Brickell
- SUBDISTRICTS**
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  - Brickell Village
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  - Brickell Ave.
  - Flagler Street
  - I-395
  - I-95
- Education**
- Miami Dade College
  - Miami International University

SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
101		REMOVED					
102	VDIR.3	Flagler St Shopping ↑ Olympia Theater ↑ Convention / Knight Cntr ←		NB	SE 1st Ave @ SE 2nd St	Concrete	60' south of stop bar at SE 2nd St
103	VDIR.3	Jewelry District ← County Courthouse ← Olympia Theater →		NB	SE 1st Ave @ Flagler St	Concrete	95' south of stop bar
104	VDIR.3	Miami Dade College ↑ County Courthouse ← Cultural Center ←		NB	NE 1st Ave @ NE 1st St	Concrete	20' south of Nunez fabric awning, 27 NE 1st Ave
105		REMOVED					Request FDOT supply a green and white 'Brickell District →' sign at E 2nd Ave off end of off-ramp
106		REMOVED					
107	VDIR.2	Bayfront Park ← PortMiami ← AA Arena ←		EB	SE 3rd St @ Biscayne Blvd	Concrete	16' west of lamppost in photo
108	VDIR.2	Flagler St Shopping ↑ Convention / Knight Cntr ←		NB	SE 3rd Ave @ SE 2nd St	Concrete	100' from stop bar at SE 2nd St
109	VDIR.2	Convention / Knight Cntr ↑ Brickell District ←		WB	SE 2nd St @ SE 2nd Ave	Concrete	20' east of fire hydrant. 5" copy height
110	VDIR.2_LEFT	Brickell District ↑ Convention / Knight Cntr →		SB	SE 2nd Ave @ SE 4th St	Concrete	25' north of P→ sign. 5" copy text
111	VDIR.3	City Admin Building ↑ Convention / Knight Cntr ← Brickell District ←		WB	SE 2nd St @ S Miami Ave	Concrete	65' east of lamppost in photo
112	VDIR.2	Brickell District ↑ Convention / Knight Cntr ←		SB	S Miami Ave @ SE 4th St	Concrete	20' south of lamppost #87254816309
113	VDIR.3	Flagler St Shopping → Jewelry District → Olympia Theater →		WB	SE 2nd St @ SE 1st Ave	Concrete	28' east of No Stopping or Standing sign
114	VDIR.3_LEFT	City Admin Building ← Cultural Center → County Govt Center →		WB	SW 2nd St @ SW 2nd Ave	Concrete	15' east of curb cut at Lot 33. 48" from edge of curb. Use left configuration sign style.
115	VDIR.3	Cultural Center → County Courthouse → County Govt Center →		WB	SW 2nd St @ SW 1st Ave	Concrete	80' east of beginning of fence. 12" from outer edge of sidewalk.
116	VDIR.3_LEFT	Cultural Center ↑ County Govt Center ↑ Convention / Knight Cntr →		NB	SW 2nd Ave @ SW 3rd St	Concrete	160' south of stop bar at SW 3rd St. Place on outer edge of sidewalk, minimum 48" from edge of curb
117	VDIR.2	Convention / Knight Cntr ↑ Brickell District →		EB	SW 3rd St @ S Miami Ave	Concrete	10' west of storm grate
118		REMOVED					
119	VDIR.3	City Admin Building ← Cultural Center → County Govt Center →		WB	SW 3rd St @ SW 2nd Ave	Concrete	110' east of stop bar at SW 2nd Ave
120		REMOVED					
121	VDIR.5	Bayfront Park ← Bayside ← AA Arena ←		EB	SE 1st St @ S Biscayne Blvd	Concrete	Midblock - see photo
122	VDIR.2	Convention / Knight Cntr → Brickell District →		EB	SE 1st St @ SE 2nd Ave	Concrete	5' west of lamppost 873541287
123	VDIR.2	Flagler St Shopping ← Olympia Theater ←		EB	SE 1st St @ SE 1st Ave	Concrete	125' west of SE 1st Ave
124	VDIR.2	Convention / Knight Cntr → Brickell District →		EB	SE 1st St @ S Miami Ave	Concrete	10' west of curb cut

SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
125		REMOVED					
126	VDIR.2	County Govt Center ← City Admin Building →		EB	SW 1st St @ SW 2nd Ave	Concrete	5' in advance of pole #D-1-57
127		REMOVED					
128	VDIR.2	Convention / Knight Cntr ↑ Flagler St Shopping ←		EB	SE 4th St @ SE 1st Ave	Grass	In planter. See photo
129		REMOVED					
130	VDIR.1_LEFT	Brickell District ←		SB	SW 1st Ave @ SW 1st St	Concrete	125' north of stopbar at SW 1st St. Place on outer edge of sidewalk, minimum 48" from edge of curb
131	VDIR.3	Cultural Center ← Jewelry District → Olympia Theater →		NB	SW 1st Ave @ S Flagler St	Grass	113' south of stopbar at Flagler St. In grass if in right of way. Will need city confirmation
132	VDIR.3	Jewelry District ↑ Olympia Theater ↑ Brickell District →		EB	Flagler St @ Miami Ave	Concrete	Between poles at 44 W Flagler St. 36' east of pole in photo
133	VDIR.1	Olympia Theater ↑		EB	Flagler St @ E 1st Ave	Concrete	90' west of intersection; 5' east of edge of overhang
134	VDIR.2_LEFT	Jewelry District ← Olympia Theater ←		SB	N Miami Ave @ Flagler St	Concrete	8'6" in advance of unnumbered lamppost in photo. Left configuration.
135	VDIR.3	Flagler St Shopping ↑ County Courthouse → Cultural Center →		SB	N Miami Ave @ N 1st St	Concrete	95' north of pedestrian crossings; parallel with space between awnings
136	VDIR.2	County Govt Center ↑ Cultural Center ←		WB	NW 1st St @ Miami Ct	Concrete	30' from No Right Turn sign
137	VDIR.2	Federal Courthouse ↑ County Govt Center ←		NB	NW 1st Ave @ NW 1st St	Concrete	25' south of No Stopping sign
138	VDIR.3_LEFT	Jewelry District ← Olympia Theater ← Cultural Center →		SB	NW 1st Ave @ Flagler St	Concrete	25' north of lamppost 87254658304. Place 18" from outer edge of sidewalk, minimum 48" from edge of curb.
139	VDIR.2	County Govt Center → Federal Courthouse →		WB	E Flagler St @ NW 1st Ave	Concrete	26' east of lamppost 87254727802
140	VDIR.2	Cultural Center ↑ County Govt Center →		SB	NW 1st Ave @ NW 1st St	Concrete	25' north of lamppost . North side of street. Parallel with no parking sign, minimum of 48" from edge of curb.
141	VDIR.2	Bayfront Park ↑ Miami Dade College ←		EB	NE 2nd St @ NE 1st Ave	Concrete	95' west of signal pole
142		REMOVED					
143	VDIR.5	Bayfront Park ← Bayside ← AA Arena ←		EB	E Flagler St @ Biscayne Blvd	Concrete	25' west of lamppost midblock
144	VDIR.4	Flagler St Shopping ← Olympia Theater ←		NB	S Biscayne Blvd @ E Flagler St	Concrete	30' south of sign midblock between Flagler and SE 1st St
145	VDIR.4	Flagler St Shopping → Olympia Theater →		SB	N Biscayne Blvd @ E Flagler St	Concrete	26' north of lamppost, in line with tree
146	VDIR.5	County Courthouse ← County Govt Center ← Cultural Center ←		NB	N Biscayne Blvd @ NE 1st St	Concrete	43' south of lamppost, midway between lampposts
147	VDIR.5	Welcome Center → County Govt Center → Cultural Center →		SB	N Biscayne Blvd @ NE 1st St	Concrete	115' north of stop bar, close to NE 1st St



SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
148	VDIR.5	Miami Dade College ← Federal Courthouse ← Public Parking (P) ←		NB	N Biscayne Blvd @ NE 3rd St	Concrete	Replaces Arena / PAC sign
149		REMOVED					
150	VDIR.4	Bayfront Park ← Bayside ←		SB	N Biscayne Blvd @ NE 2nd St	Concrete	Parallel to post between NE 2nd and NE 3rd St. Arrows are left U-turn
151	VDIR.5	Miami Dade College → Federal Courthouse → County Courthouse →		SB	N Biscayne Blvd @ NE 3rd St	Concrete	Co-locate with 348. 170' north of stop bar
152	VDIR.5	AA Arena ↑ Arts & Ent District ↑ Arsht Center ↑		NB	N Biscayne Blvd between 2nd & 3rd Sts	Concrete	25' south of bikeway sign
153	VDIR.1	PortMiami →		NB	N Biscayne Blvd @ Port Blvd	Concrete	40' south of lamppost 8735523100. 5" copy text
154	VDIR.5	Central Business District ← Brickell District ← Arts & Ent District →		WB	Port Blvd @ N Biscayne Blvd	Concrete	On median. See photo.
155	VDIR.4	Convention / Knight Cntr → Brickell District →		SB	S Biscayne Blvd @ SE 2nd St	Concrete	On east side of SB Biscayne Blvd. LEFT CONFIGURATION
156	VDIR.3	PortMiami ↑ AA Garage ↑ Arena Valet ←		EB	NE 5th St @ Biscayne Blvd southbound	Concrete	Recommend replacement of AA Arena Valet / Garage sign
157		REMOVED					
158		REMOVED					
159	VDIR.2	Miami Dade College ← PortMiami ← AA Arena ←		SB	NW 1st Ave @ NW 5th St	Concrete	5' ahead of pole #872556919
160	VDIR.3_LEFT	County Govt Center ← Federal Courthouse ← Childrens Courthouse ←		NB	NE 1st Ave @ NE 3rd St	Concrete	Replaces existing P sign, but sign should be placed on outer edge of sidewalk so that edge of panel is near property line, and pole is minimum 48" from curb.
161	VDIR.2	PortMiami → AA Arena →		NB	NE 1st Ave @ NE 5th St	Concrete	30' south of parking meter sign
162	VDIR.1	Flagler St Shopping ↑		SB	N Miami Ave @ N 6th St	Concrete	22' north of I-95 sign. See pic.
163	VDIR.2	Miami Dade College ← PortMiami ←		SB	N Miami Ave @ N 5th St	Concrete	30' north of speed limit sign
164	VDIR.3_LEFT	PortMiami ↑ Miami Dade College ↑ AA Arena ←		SB	NE 2nd Ave @ NE 8th St	Concrete	15' in advance of street tree in photo.
165	VDIR.2_LEFT	Bayside ← PortMiami ←		SB	NE 2nd Ave @ NE 5th St	Concrete	25' south of ped crossing sign, parallel with existing bayside/port sign.
166	VDIR.2	County Govt Center → Childrens Courthouse →		SB	N Miami Ave @ N 3rd St	Concrete	35' north of No Stopping sign
167	VDIR.2	County Govt Center ← County Courthouse ←		WB	NE 3rd St @ NE 1st Ave	Concrete	132' east of stop bar at NW 1st Ave
168	VDIR.2_LEFT	County Courthouse ↑ Childrens Courthouse ←		SB	NW 1st Ave @ NW 3rd St	Concrete	15' in advance of hydrant. 5" copy text. Place on outer edge of sidewalk, minimum 48" from edge of curb, with outer edge of panel adjacent to fence line
169	VDIR.5	Museum Park ↑ Art Museum ↑ Science Museum ↑		NB	N Biscayne Blvd @ NE 9th St	Concrete	60' south of pedestrian sidewalk.
170	VDIR.2	PortMiami ← Bayside ←		SB	N Biscayne Blvd @ Port Blvd	Concrete	Replaces existing sign. In median approaching Port Blvd

SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
171		REMOVED					
172	VDIR.5	Arsht Center ↑ Childrens Museum → Jungle Island →		NB	N Biscayne Blvd @ MacArthur Causeway	Concrete	45' south of beginning of crosswalk
173	VDIR.2	Bayside ← Bayfront Park ←		SB	NE 2nd Ave @ NE 2nd St	Concrete	30' north of lamppost / parking sign
174	VDIR.5	YoungArts Campus ↑ Wynwood ← Margaret Pace Park →		NB	N Biscayne Blvd @ NE 18th St	Concrete	Locate after construction
175	VDIR.5	AA Arena ↑ Arsht Center ↑ Margaret Pace Park ←		SB	N Biscayne Blvd @ NE 18th St	Concrete	Locate after construction
176	VDIR.4	Childrens Museum ← Jungle Island ←		SB	N Biscayne Blvd @ NE 15th St	Concrete	50' north of North A1A sign
177	VDIR.2_LEFT	Childrens Museum → Jungle Island →		EB	NE 15th St @ Bayshore Dr	Concrete	30' east of bus stop sign in front of manhole. Pole is 54" from edge of sidewalk.
178	VDIR.2_LEFT	Childrens Museum ↑ Jungle Island ↑		SB	Bayshore Dr @ NE 13th St	Concrete	5' north of lamppost in photo
179	VDIR.2_LEFT	Arsht Center ↑ Margaret Pace Park →		WB	NE 13th St off-ramp @ Bayshore Dr	Concrete	30' east of bus stop sign. Place pole 6' off curb with sign installed with left overhang. 48" off of curb.
180	VDIR.3	Central Business District ← AA Arena ← PortMiami ←		WB	NE 13th St @ Biscayne Blvd	Concrete	3' east of pole in photo.
181	VDIR.5	Central Business District ↑ AA Arena ↑ PortMiami ↑		SB	N Biscayne Blvd @ NE 12th St	Concrete	28' north of pole, 4' off curb. Pole #873551271
182	VDIR.5	AA Arena ↑ PortMiami ↑ Miami Dade College ↑		EB	NE 2nd Ave north of 11th St	Grass	150' in advance of intersection
183	VDIR.3	Arts & Ent District ← Arsht Center ← Miami Intl University ←		EB	NE 11th St approaching Biscayne Blvd	Concrete	6' west of pole in photo.
184	VDIR.3	Central Business District → PortMiami → AA Arena →		EB	NE 11th St @ Biscayne Blvd	Concrete	6' west of pole in photo.
185		REMOVED					
186	VDIR.5	Museum Park ← Art Museum ← Science Museum ←		SB	N Biscayne Blvd approaching NE 9th St	Concrete	62' south of 11th St stop bar, replacing existing no parking bus stop sign. Arrows are u-turn shaped.
187	VDIR.2	Miami Dade College ↑ PortMiami ↑ AA Arena ↑		EB	NW 5th St west of NW 1st Ave	Concrete	30' east of No Parking sign
188	VDIR.2	Miami Dade College ↑ PortMiami ↑ AA Arena ↑		EB	NE 5th St west of NE 1st Ave	Concrete	35' west of No Parking sign. Pole location 52" off of curb
189	VDIR.1	Florida Intl University ←		EB	SE 13th St @ Brickell Ave	Concrete	75' in advance of turn lane sign. 5" copy text.
190	VDIR.4	Central Business District ↑ Miami Circle →		NB	S Brickell Ave @ SE 5th St	Concrete	125' south of stop bar at SE 5th St
191	VDIR.1_LEFT	Brickell Village ↖		SB	S Miami Ave @ S 7th St	Concrete	100' north of traffic signal box. Pole 52" off of curb.
192		REMOVED					
193	VDIR.1	Brickell District →		NB	SW 3rd Ave @ SW 8th St	Concrete	36' south of right turn lane sign. 48" off curb.

SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
194		REMOVED					
195	VDIR.1_LEFT	Brickell Village →		EB	SW 8th St @ SW 1st Ave	Concrete	65' west of 8th St trolley sign. Parallel with lamppost. 5" copy text.
196	VDIR.2	Central Business District ↑ Convention / Knight Cntr ↑		NB	S Miami Ave @ S 8th St	Concrete	25' south of Truck Route sign
197	VDIR.4	Miami Circle ↑ Brickell Village ←		NB	S Brickell Ave @ SE 10th St	Grass	25' south of left turn lane
198	VDIR.2	Florida Intl University ↑ Brickell Village →		SB	S Brickell Ave @ SE 10th St	Grass	25' south of 972 sign. Consider relocating No Stopping sign. 5" copy
199	VDIR.3	Miami Circle ← Central Business District ← Florida Intl University →		EB	SE 10th St @ S Brickell Ave	Grass	20' west of end of grass median
200	VDIR.2	Simpson Park ↑ Brickell Village ←		SB	SW 1st Ave @ S 10th St	Concrete	At pole location or 35' in advance of bus stop sign.
201	VDIR.2	Central Business District ← Convention / Knight Cntr ←		EB	SE 10th St @ S Miami Ave	Concrete	45' west of stop bar at Miami Ave. Parallel with regulatory sign
202	VDIR.2	Simpson Park ↑ Florida Intl University ←		SB	SW 1st Ave @ SW 13th St	Grass	25' north of midblock school crossing sign
203	VDIR.3	Brickell Village ↖ Central Business District ↖ Convention / Knight Cntr ↖		NB	S Miami Ave @ Brickell Plaza	Concrete	In line with grass fork NE corner. See photo.
204	VDIR.1	Florida Intl University →		EB	SE 8th St @ Brickell Ave	Concrete	58' east of no parking sign; 43' west of lamppost. 5" copy
205		REMOVED					
206		REMOVED					
207	VDIR.2	Jungle Island ↑ Childrens Museum ←		SB	Service road at Museum entrance	Concrete	Locate after construction
208	VDIR.1	Downtown →		NB	Service road at turn-on to Causeway	Grass	6' off curb, 75' south of final lamppost before end of on-ramp. See photo
209		REMOVED					
210	VDIR.1	Baseball Stadium ↗		WB	W Flagler St @ NW 3rd Ave	Concrete	On corner of fork, underneath I-95
211	VDIR.3	Cultural Center ↑ PortMiami ← Miami Dade College ←		SB	NW 3rd Ct @ NW 5th St	Concrete	Use existing sign location in photo.
212	VDIR.2_LEFT	PortMiami ↑ AA Arena ←		SB	NW 3rd Ct @ NW 8th St	Grass	85' north of stop bar. Edge of sign 2' off curb
213	VDIR.3_LEFT	Cultural Center ← County Govt Center ← Federal Courthouse ←		SB	NW 3rd Ct @ NW 3rd St	Grass	25' south of No Stopping sign. Edge of sign 2' off curb
214		REMOVED					
215		REMOVED					
216	VDIR.3_LEFT	Flagler St Shopping ↑ County Govt Center → County Courthouse →		SB	NE 2nd Ave @ NE 3rd St	Concrete	25' north of location of sign 321
217	VDIR.1	Arsht Center ↑ Downtown ↑		SB	NE 2nd Ave @ NE 17th St	Concrete	10' north of tree in front of 17th Terrace
218		REMOVED					
219	VDIR.2	Central Business District ↑ Arsht Center ←		SB	NE 2nd Ave @ NE 14th St	Concrete	8' south of parking meter post location #40710
220	VDIR.1	Arsht Center →		EB	NE 14th St @ Biscayne Blvd	Concrete	5' west of pole in photo
221	VDIR.3_LEFT	Cultural Center → County Govt Center → Federal Courthouse →		NB	NW 3rd Ave north of NW 2nd St	Concrete	45' in advance of oncoming traffic use mirror sign on R side of roadway. Sign is left configuration.

SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
222		REMOVED					
223	VDIR.4	AA Arena → PortMiami →		NB	NW 3rd Ave @ NW 5th St	Grass	Replace existing AA Arena sign in photo.
224	VDIR.1	Wynwood ←		WB	NE 18 Street at NE 2 Avenue	Concrete	To be field verified during installation
225	VDIR.1	Wynwood ←		NB	NE 2 Avenue at NE 20 Street	Concrete	To be field verified during installation
226	VDIR.1	Wynwood →		SB	NE 2 Avenue at NE 20 Street	Concrete	To be field verified during installation
301	PARK.2	P Convention / Knight Center Garage ←		EB	SE 4th St @ underpass rd (name?)	Concrete	To right of existing two-post sign. Remove and replace
302	PARK.4	P	P	WB	SE 2nd St @ garage	Concrete	Arrival sign. Replace existing P sign
303	PARK.2	P Convention / Knight Center Garage →		SB	SE 2nd Ave @ SE 2nd St	Concrete	21' north of 'Right Lane' sign
304	PARK.2	P Convention / Knight Center Garage ↑		WB	SE 2nd St @ SE 2nd Ave	Concrete	25' west of overhang sign
305	PARK.1	P →		NB	SW 1st Ave @ W Flagler St	Mounted	Replace existing sign - see photo
306	PARK.1	P ↑		WB	W Flagler St @ W 1st Ave	Mounted	On pole 87254707801, underneath existing sign
307	PARK.2	P M-D Cultural Center Garage →		WB	W Flagler St @ W 2nd Ave	Concrete	2' off pole 87254607807
308	PARK.4	P	P	EB	SW 1st St @ garage entrance	Mounted	Arrival sign. Replace existing P sign
310	PARK.2	P Flagler Bldg Garage →		NB	SW 2nd Ave @ SW 1st St	Concrete	Next to 'Right Lane' pole
311	PARK.2	P Hickman Garage →		SB	NW 2nd Ave @ NW 2nd St	Concrete	18' south of lamppost 8725454970
312	PARK.2	P M-D Cultural Center Garage ←		WB	NW 1st St @ NW 2nd Ave	Concrete	25' east of 'No Stopping' sign
313	PARK.1A	P ↑		SB	NW 1st Ave @ SW 2nd St	Concrete	90' north of stop bar at SW 2nd St
314	PARK.3	P Courthouse Center Garage	P Courthouse Center Garage	EB	NW 2nd St @ garage entrance	Concrete	6' east of Large P sign, parallel with lamppost - see photo
315	PARK.3	P Courthouse Center Garage	P Courthouse Center Garage	WB	NW 3rd St @ garage entrance	Concrete	Parallel with Large P sign, 3' off curb
316	PARK.2	P Courthouse Center Garage ←		SB	NW 1st Ave @ NW 2nd St	Concrete	20' north of lamppost in photo
317	PARK.2	P Courthouse Center Garage →		SB	N Miami Ave @ N 3rd St	Concrete	100' north of white line from NW 3rd st
318	PARK.2	P Courthouse Center Garage ↑		EB	NE 3rd St @ N Miami Ave	Concrete	30' west of lamppost
319	PARK.4	P	P	EB	NE 2nd St @ garage entrance	Mounted	Arrival sign. Replace existing P sign
320	PARK.4	P	P	WB	NE 3rd St @ garage entrance	Concrete	Arrival sign. See photo
321	PARK.2	P College Station Garage →		SB	NE 2nd Ave @ NE 3rd St	Concrete	75' north of stop bar at NW 3rd St
322	PARK.2	P College Station Garage ↑		WB	NE 3rd St @ NE 2nd Ave	Concrete	On left side of street. 18' east of pole on photo.
323	PARK.2	P College Station Garage →		NB	NE 1st Ave @ NE 2nd St	Mounted	On existing lamppost. Existing sign to be moved up to share pole
324	PARK.2	P ↑		EB	NE 2nd St @ NE 1st Ave	Mounted	On existing lamppost. See photo.
325	PARK.2	P Hickman Garage ←		WB	NW 3rd St @ NW 2nd Ave	Mounted	On lamppost 725556000
326	PARK.1A	P →		EB	NW 3rd St @ NW 2nd Ave	Concrete	15' east of lamppost 87255600003
329	PARK.1	P →		EB	E Flagler St @ E 2nd Ave	Mounted	On existing pole 8735401783
330	PARK.2	P M-D Cultural Center Garage →		SB	NW 1st Ave @ W Flagler St	Concrete	10' south of pole 87254658304
331	PARK.1	P ←		WB	E Flagler St @ E 2nd Ave	Mounted	On existing pole 87354067908
332		REMOVED					
333	PARK.1	P →		SB	S Miami Ave @ S 2nd St	Mounted	On pole 87254806605, above existing sign
334	PARK.1A	P ←		NB	SE 1st Ave @ SE 2nd St	Concrete	75' south of stop bar at SE 2nd St
335	PARK.2	P Hickman Garage ←		NB	NW 2nd Ave @ NW 2nd St	Concrete	133' south of NW 2nd St
336		REMOVED					
337	PARK.1A	P →		EB	NE 5th St @ N Biscayne Blvd	Concrete	33' west of fire hydrant. See photo.
338	PARK.1	P →		SB	N Biscayne Blvd @ NE 13th St	Concrete	2' off curb, next to pole. See photo.
339	PARK.1	P ←		NB	N Biscayne Blvd @ NE 13th St	Concrete	15' south of pole 0873551369
340	PARK.1A	P ←		WB	NE 13th St @ NE 2nd Ave	Concrete	45' east of Left Lane Turn Left sign
341	PARK.1A	P ←		NB	N Biscayne Blvd @ NE 6th St	Concrete	Parallel with start of left lane
342	PARK.1A	P ←		WB	NE 6th St @ NE 2nd Ave	Concrete	Existing pole
343	PARK.1A	P ←		NB	N Biscayne Blvd @ NE 8th St	Concrete	Parallel with start of left lane
344	PARK.1	P ←		WB	NE 8th St @ NE 2nd Ave	Mounted	Existing pole in photo
345	PARK.2	P Convention / Knight Center Garage ←		WB	SE 4th St @ underpass rd (name?)	Grass	In planter, opposite side of street
346	PARK.2	P Courthouse Center Garage →		NB	NW 1st Ave @ NW 2nd St	Concrete	16' north of center pole. Pole 52" off edge of pavement

SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
347		REMOVED					
348	PARK.1A	P →		SB	N Biscayne Blvd @ NE 3rd St	Mounted	Colocate with 151
349	PARK.2	P → Public Parking		EB	NE 8th St @ NE 2nd Ave	Concrete	45' west of No Stopping or Standing sign
350	PARK.2	P ↑ Public Parking		SB	NE 2nd Ave south of NE 14th St	Concrete	18' north of pole 873550480
351	PARK.1	P ←		NB	SW 2nd Ave @ SW 3rd St	Mounted	On existing pole 87254517204, see photo
352	PARK.1A	P →		SB	SE 2nd Ave south of SE 3rd St	Concrete	Replace existing sign - see photo
353	PARK.3	P Convention / Knight Center Garage	P Convention / Knight Center Garage	WB	SE 2nd St @ garage	Concrete	3' east of No Parking sign, 3' off curb
354	PARK.3	P Cultural Center Garage	P Cultural Center Garage	EB	SW 1st St @ garage entrance	Concrete	Centered between grates on sidewalk - see photo
355	PARK.3	P Flagler Bldg Garage	P Flagler Bldg Garage	EB	SW 1st St @ garage entrance	Concrete	3' west of No Parking sign, 3' off curb
356	PARK.3	P College Station Garage	P College Station Garage	EB	NE 2nd St @ garage entrance	Concrete	8' west of street tree at garage, 3' off curb
357	PARK.3	P College Station Garage	P College Station Garage	WB	NE 3rd St @ garage entrance	Concrete	10' east of street tree at garage, 3' off curb
358	PARK.3	P M-D Cultural Center Garage	P M-D Cultural Center Garage	NB	NW 2nd Ave @ M-D Cultural Center Garage entrance	Concrete	6' south of street tree at garage, parallel with tree
359	PARK.3	P Hickman Garage	P Hickman Garage	WB	NW 2nd St @ Hickman Garage entrance	Concrete	6' east of street tree, parallel with tree
360	PARK.2	P →		EB	NW 5th St @ NW 1st Ave	Concrete	Replace existing sign - see photo
362	PARK.1	P →		EB	NW 8th St @ NW 1st Ave	Mounted	Locate on pole in photo
363	PARK.2	P →		SB	NW 1st Ave @ NW 6th St	Concrete	Replace existing sign - see photo. Sign can be moved to 48" off curb, parallel to existing sign if ADA compliance is not possible at existing pole location
401	PDIR.2	→ Margaret Pace Park	↑ Miami Intl University ↑ Arsh Center	NB	N Biscayne Blvd @ NE 18th St	Concrete	Locate after completion of construction
402	PDIR.2	← Miami Intl University ← Arsh Center	↑ Margaret Pace Park ↑ Miami Intl University	WB	N Biscayne Blvd @ NE 18th St	Concrete	Locate after completion of construction
403	PDIR.4	← Miami Intl University ← Arsh Center ← Arsh Center Station → Margaret Pace Park	← Margaret Pace Park → Miami Intl University → Arsh Center → Arsh Center Station	WB	N Biscayne Blvd @ NE 17th St	Mounted	On existing pole, confirm after completion of construction
404	PDIR.2	↑ Margaret Pace Park ← Miami Intl University ← Arsh Center ← Central Business District	→ Miami Intl University → Arsh Center → Central Business District → Arsh Center Station	NB	NE 15th St @ Bayshore Dr	Grass	End of grass at intersection
405	PDIR.2	↑ Margaret Pace Park	↑ Arsh Center ↑ Central Business District	NB	N Biscayne @ NE 15th St	Concrete	25' south of lamppost. See photo.
406	PDIR.2	← Margaret Pace Park → Arsh Center → Central Business District	← Arsh Center ← Central Business District → Margaret Pace Park	EB	N Biscayne @ NE 15th St	Concrete	20' west of pole at intersection
407	PDIR.2	↑ Miami Intl University ↑ Arsh Center ↑ Margaret Pace Park	↑ School Board Station ← Central Business District	EB	NE 1st Ave @ NE 15th St	Mounted	On lamppost in photo
408	PDIR.2	↑ Miami Intl University ↑ Arsh Center Station ↑ Margaret Pace Park	↑ Museum Park ↑ Art Museum ↑ Museum of Science ↑ Central Business District ↑ AA Arena	NB	N Biscayne Blvd @ NE 13th St	Concrete	10' south of utility box in photo
409	KIOSK.1	To be determined	To be determined		Biscayne Blvd @ Bayfront Park Metromover entrance	Concrete	20' in front of station entrance
410	PDIR.2	→ Arsh Center → Miami Intl University → Arsh Center Station	↑ Central Business District ↑ Bicentennial Park ↑ AA Arena ↑ Eleventh Street Station	NB	NE 2nd Ave @ NE 13th St	Concrete	Northeast corner. See photo.

SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
411	PDIR.2	<ul style="list-style-type: none"> <li>↑ Bicentennial Park</li> <li>← Arsh Center</li> <li>→ Central Business District</li> <li>→ AA Arena</li> <li>→ Eleventh Street Station</li> </ul>	<ul style="list-style-type: none"> <li>← Central Business District</li> <li>← AA Arena</li> <li>← Eleventh Street Station</li> </ul>	EB	NE 12th St @ NE 2nd Ave	Concrete	At the corner of intersection, as seen in photo.
412	PDIR.1	<ul style="list-style-type: none"> <li>↑ Museum Park Station</li> <li>← Arsh Center</li> <li>← Miami Intl University</li> <li>→ Central Business District</li> <li>→ AA Arena</li> <li>→ Freedom Tower</li> <li>→ Museum of Art and Design</li> </ul>	<ul style="list-style-type: none"> <li>↑ Eleventh Street Station</li> <li>← Central Business District</li> <li>← AA Arena</li> <li>← Freedom Tower</li> <li>← Museum of Art and Design</li> <li>→ Arsh Center</li> <li>→ Miami Intl University</li> </ul>	EB	NE 11th St @ N Biscayne Blvd	Concrete	4' west of traffic signal box.
413	PDIR.2	<ul style="list-style-type: none"> <li>↑ Arsh Center</li> <li>↑ Miami Intl University</li> <li>← Eleventh Street Station</li> </ul>	<ul style="list-style-type: none"> <li>↑ Central Business District</li> <li>↑ AA Arena</li> <li>↑ Freedom Tower</li> <li>↑ Museum of Art and Design</li> <li>↑ Bayside</li> <li>→ Eleventh Street Station</li> <li>↑ Baywalk</li> </ul>	NB	NE 11th St @ N Biscayne Blvd	Concrete	15' south of corner of intersection.
414	PDIR.2	<ul style="list-style-type: none"> <li>← Arsh Center</li> <li>← Miami Intl University</li> <li>→ Central Business District</li> <li>→ AA Arena</li> <li>→ Freedom Tower</li> <li>→ Museum of Art and Design</li> <li>→ Baywalk</li> </ul>	<ul style="list-style-type: none"> <li>← Central Business District</li> <li>← AA Arena</li> <li>← Freedom Tower</li> <li>← Museum of Art and Design</li> <li>→ Arsh Center</li> <li>→ Miami Intl University</li> <li>← Baywalk</li> </ul>	EB	NE 10th St @ N Biscayne Blvd	Concrete	South side of median by intersection, near crosswalk.
415	PDIR.1	<ul style="list-style-type: none"> <li>↑ Arsh Center</li> <li>↑ Miami Intl University</li> </ul>	<ul style="list-style-type: none"> <li>↑ Central Business District</li> <li>↑ AA Arena</li> <li>↑ Freedom Tower</li> <li>↑ Museum of Art and Design</li> <li>← Museum Park</li> <li>← Art Museum</li> <li>← Museum of Science</li> </ul>	NB	NE 2nd Ave @ NE 11th St	Concrete	15' south of traffic pole
416	PDIR.2	<ul style="list-style-type: none"> <li>↑ Eleventh Street Station</li> <li>↑ Museum Park</li> <li>↑ Art Museum</li> <li>↑ Museum of Science</li> <li>↑ Arsh Center</li> <li>→ Central Business District</li> </ul>	<ul style="list-style-type: none"> <li>← Central Business District</li> </ul>	EB	NE 11th St @ NE 1st Ave	Concrete	6" from grass in corner of intersection; location determined pending construction
417	PDIR.2	<ul style="list-style-type: none"> <li>↑ Museum Park</li> <li>↑ Art Museum</li> <li>↑ Museum of Science</li> <li>↑ Arts &amp; Entertainment Dist</li> <li>↑ Arsh Center</li> <li>← Park West Station</li> <li>→ Baywalk</li> </ul>	<ul style="list-style-type: none"> <li>↑ Freedom Tower</li> <li>↑ Museum of Art and Design</li> <li>↑ Bayside</li> <li>↑ Miami Dade College</li> <li>↑ Bayfront Park</li> <li>→ Park West Station</li> <li>← Baywalk</li> </ul>	NB	N Biscayne @ NE 8th St	Concrete	6' east of pole 873551037
418	PDIR.1	<ul style="list-style-type: none"> <li>← Arts &amp; Entertainment Dist</li> <li>← Arsh Center</li> <li>→ Central Business District</li> <li>→ Freedom Tower</li> <li>→ Museum of Art and Design</li> <li>→ Bayside</li> <li>→ Bayfront Park</li> <li>↑ Baywalk</li> </ul>	<ul style="list-style-type: none"> <li>↑ Park West Station</li> <li>← Bayside</li> <li>← Bayfront Park</li> <li>← Central Business District</li> <li>→ Arts &amp; Entertainment Dist</li> <li>→ Arsh Center</li> </ul>	EB	N Biscayne @ NE 8th St	Concrete	Same as 417
419	PDIR.3	<ul style="list-style-type: none"> <li>← Arts &amp; Entertainment Dist</li> <li>← Arsh Center</li> <li>→ Central Business District</li> <li>→ Freedom Tower</li> <li>→ Museum of Art and Design</li> <li>→ Bayside</li> <li>→ Bayfront Park</li> </ul>	<ul style="list-style-type: none"> <li>↑ Park West Station</li> <li>← Bayside</li> <li>← Bayfront Park</li> <li>← Central Business District</li> <li>→ Arts &amp; Entertainment Dist</li> <li>→ Arsh Center</li> </ul>	EB	N Biscayne @ NE 8th St	Mounted	On existing pole - see photo

SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
420	PDIR.2	<ul style="list-style-type: none"> <li>↑ Arts &amp; Entertainment</li> <li>↑ Arsh Center</li> <li>→ AA Arena</li> <li>→ Museum Park</li> <li>→ Art Museum</li> <li>→ Frost Museum of Science</li> </ul>	<ul style="list-style-type: none"> <li>↑ Miami Dade College</li> <li>← Bayside</li> <li>← Bayfront Park</li> <li>← AA Arena</li> <li>→ Federal Courthouse</li> </ul>	NB	NE 2nd Ave @ NE 8th St	Concrete	Located west side of Park West station. See photo
421	PDIR.1	<ul style="list-style-type: none"> <li>← Museum Park</li> <li>← Art Museum</li> <li>← Museum of Science</li> <li>→ Bayfront Park</li> <li>→ Miami Dade College</li> <li>→ Flagler Street Shopping</li> </ul>	<ul style="list-style-type: none"> <li>↑ Freedom Tower Station</li> <li>← Bayfront Park</li> <li>← Miami Dade College</li> <li>← Flagler Street Shopping</li> <li>→ Museum Park</li> <li>→ Art Museum</li> <li>→ Museum of Science</li> </ul>	EB	N Biscayne Blvd @ Port Blvd	Concrete	7' west of FDOT ground box
422	PDIR.2	<ul style="list-style-type: none"> <li>↑ Arts &amp; Entertainment</li> <li>↑ Bicentennial Park</li> <li>↑ Arsh Center</li> <li>← Freedom Tower Station</li> </ul>	<ul style="list-style-type: none"> <li>↑ Bayside</li> <li>↑ Bayfront Park</li> <li>↑ Amphitheater</li> <li>↑ Miami Dade College</li> <li>↑ Flagler Street Shopping</li> <li>→ Freedom Tower Station</li> </ul>	NB	N Biscayne Blvd @ Port Blvd	Concrete	see 421
423	PDIR.2	<ul style="list-style-type: none"> <li>← Arts &amp; Entertainment</li> <li>← Bicentennial Park</li> <li>← Arsh Center</li> <li>→ Bayfront Park</li> <li>→ Amphitheater</li> <li>→ Miami Dade College</li> </ul>	<ul style="list-style-type: none"> <li>← Bayfront Park</li> <li>← Amphitheater</li> <li>← Miami Dade College</li> <li>→ Arts &amp; Entertainment</li> <li>→ Bicentennial Park</li> <li>→ Arsh Center</li> </ul>	EB	Port Blvd @ N Biscayne (SB)	Concrete	3' west of manhole
424	PDIR.1	<ul style="list-style-type: none"> <li>↑ Arts &amp; Entertainment</li> <li>↑ Freedom Tower Station</li> <li>→ AA Arena</li> <li>→ Freedom Tower</li> </ul>	<ul style="list-style-type: none"> <li>↑ Miami Dade College</li> <li>↑ Federal Courthouse</li> <li>← Freedom Tower</li> <li>← AA Arena</li> </ul>	NB	NE 2nd Ave @ NE 6th St	Concrete	17' south of crosswalk signal light
425	PDIR.2	<ul style="list-style-type: none"> <li>↑ Freedom Tower</li> <li>↑ Museum of Art and Design</li> <li>↑ AA Arena</li> <li>↑ Bicentennial Park</li> <li>← Miami Dade College</li> <li>← College/Bayside Station</li> <li>↑ Baywalk</li> </ul>	<ul style="list-style-type: none"> <li>↑ Bayfront Park</li> <li>↑ Flagler Street Shopping District</li> <li>→ Miami Dade College</li> <li>→ College/Bayside Station</li> </ul>	NB	N Biscayne Blvd (northbound) @ NE 4th St	Concrete	At corner intersection
426	PDIR.2	<ul style="list-style-type: none"> <li>← Freedom Tower</li> <li>← AA Arena</li> <li>← Arts &amp; Entertainment</li> <li>← Bicentennial Park</li> <li>→ Amphitheater</li> <li>→ Welcome Center</li> <li>← Baywalk</li> </ul>	<ul style="list-style-type: none"> <li>↑ Miami Dade College</li> <li>↑ College/Bayside Station</li> <li>← Bayfront Park</li> <li>← Flagler Street Shopping</li> <li>→ Freedom Tower</li> <li>→ AA Arena</li> <li>→ Baywalk</li> </ul>	EB	NE 4th St @ N Biscayne Blvd	Concrete	Same as 425
427	PDIR.2	<ul style="list-style-type: none"> <li>↑ Freedom Tower</li> <li>↑ Museum of Art and Design</li> <li>↑ AA Arena</li> <li>← Miami Dade College</li> <li>← Federal Courthouse</li> <li>← College/Bayside Station</li> </ul>	<ul style="list-style-type: none"> <li>← Bayfront Park</li> <li>← Amphitheater</li> <li>→ Miami Dade College</li> <li>→ Federal Courthouse</li> <li>→ College/Bayside Station</li> </ul>	NB	N Biscayne Blvd (southbound) @ NE 4th St	Concrete	10' south of pole at intersection.
428	PDIR.2	<ul style="list-style-type: none"> <li>↑ Bayside</li> <li>↑ Bayfront Park</li> <li>← AA Arena</li> <li>← Freedom Tower</li> <li>← Museum of Art and Design</li> <li>→ Flagler Street Shopping</li> </ul>	<ul style="list-style-type: none"> <li>↑ Federal Courthouse</li> <li>← Flagler Street Shopping</li> <li>→ AA Arena</li> <li>→ Freedom Tower</li> <li>→ Museum of Art and Design</li> </ul>	EB	NE 4th St @ NE 2nd Ave	Concrete	<ul style="list-style-type: none"> <li>10' west of pedestrian crossing post</li> <li>Coordinate with Miami-Dade College</li> </ul>

SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
429	PDIR.2	<ul style="list-style-type: none"> <li>↑ Freedom Tower</li> <li>↑ Museum of Art and Design</li> <li>↑ AA Arena</li> <li>← Miami Dade College</li> <li>← College/Bayside Station</li> <li>↑ Baywalk</li> </ul>	<ul style="list-style-type: none"> <li>↑ Flagler Street Shopping</li> <li>→ Miami Dade College</li> <li>→ College/Bayside Station</li> </ul>	NB	N Biscayne Blvd (northbound) @ NE 3rd St	Concrete	6' south walking sign at crosswalk. Parallel to lampposts
430	PDIR.2	<ul style="list-style-type: none"> <li>← Freedom Tower</li> <li>← Museum of Art and Design</li> <li>← AA Arena</li> <li>→ Bayfront Park</li> <li>→ Amphitheater</li> <li>← Baywalk</li> </ul>	<ul style="list-style-type: none"> <li>↑ Miami Dade College</li> <li>← Bayfront Park</li> <li>← Amphitheater</li> <li>→ Freedom Tower</li> <li>→ Museum of Art and Design</li> <li>→ AA Arena</li> <li>→ Baywalk</li> </ul>	EB	NE 3rd St @ N Biscayne Blvd (nb)	Concrete	Same as 429, or alternate sight at intersection pending design considerations
431	PDIR.3	<ul style="list-style-type: none"> <li>↑ Freedom Tower</li> <li>↑ AA Arena</li> <li>← Courthouses</li> <li>← County Government Center</li> <li>← Cultural Center</li> <li>→ Bayfront Park</li> <li>→ Bayside</li> </ul>	<ul style="list-style-type: none"> <li>↑ Flagler Street Shopping</li> <li>↑ Olympia Theater</li> <li>← Bayfront Park</li> <li>← Bayside</li> <li>→ Courthouses</li> <li>→ County Government Center</li> <li>→ Cultural Center</li> </ul>	NB	NE 2nd Ave @ NE 3rd St	Mounted	On existing pole
432	PDIR.4	<ul style="list-style-type: none"> <li>↑ Bayside</li> <li>↑ AA Arena</li> <li>← Flagler Street Shopping</li> <li>← Olympia Theater</li> <li>← Jewelry District</li> </ul>	<ul style="list-style-type: none"> <li>↑ Bayfront Park Station</li> <li>→ Flagler Street Shopping</li> <li>→ Olympia Theater</li> <li>→ Jewelry District</li> </ul>	NB	N Biscayne Blvd (nb) @ E Flagler St	Mounted	On existing pole, move existing sign
433	PDIR.4	<ul style="list-style-type: none"> <li>↑ Bayside</li> <li>↑ AA Arena</li> <li>← Flagler Street Shopping</li> <li>← Olympia Theater</li> <li>← Jewelry District</li> </ul>	<ul style="list-style-type: none"> <li>↑ Bayfront Park Station</li> <li>→ Flagler Street Shopping</li> <li>→ Olympia Theater</li> <li>→ Jewelry District</li> </ul>	NB	N Biscayne Blvd (sb) @ E Flagler St	Mounted	On existing lamppost, remove existing sign
434	PDIR.2	<ul style="list-style-type: none"> <li>↑ Bayfront Park</li> <li>↑ Bayside</li> <li>↑ Flagler Street Shopping</li> <li>← Convention / Knight Center</li> <li>↑ Baywalk</li> </ul>	<ul style="list-style-type: none"> <li>↑ Riverwalk</li> <li>→ Convention / Knight Center</li> </ul>	NB	N Biscayne Blvd (nb) @ SE 2nd / Chopin	Concrete	At corner of Chopin Plaza, see photo Confirm Riverwalk straight arrow during field walkthrough with fabricator/installer
435	PDIR.2	<ul style="list-style-type: none"> <li>← Flagler Street Shopping</li> <li>← Olympia Theater</li> <li>← Welcome Center</li> <li>→ Bayfront Park</li> <li>→ Bayside</li> </ul>	<ul style="list-style-type: none"> <li>← Bayfront Park</li> <li>← Bayside</li> <li>→ Flagler Street Shopping</li> <li>→ Olympia Theater</li> <li>→ Welcome Center</li> </ul>	NB	NE 1st St @ 1st St Station entrance	Concrete	In front of 1st St Station entrance, see photo
436	PDIR.4	<ul style="list-style-type: none"> <li>↑ Bayfront Park</li> <li>↑ Bayside</li> <li>← AA Arena</li> <li>← Miami Dade College</li> <li>→ Convention / Knight Center</li> <li>→ Brickell District</li> </ul>	<ul style="list-style-type: none"> <li>↑ Jewelry District</li> <li>↑ Courthouses</li> <li>↑ County Government Center</li> <li>↑ Cultural Center</li> <li>← Convention / Knight Center</li> <li>← Brickell District</li> </ul>	EB	E Flagler St @ E 2nd Ave	Mounted	On pole by corner at 201 E Flagler St
437	PDIR.2	<ul style="list-style-type: none"> <li>↑ First Street Station</li> <li>↑ Bayfront Park</li> <li>↑ Bayside</li> <li>← AA Arena</li> <li>→ Flagler Street Shopping</li> <li>→ Olympia Theater</li> </ul>	<ul style="list-style-type: none"> <li>↑ Welcome Center</li> <li>↑ Courthouses</li> <li>← Flagler Street Shopping</li> <li>← Olympia Theater</li> <li>→ AA Arena</li> </ul>	EB	NE 1st St @ NE 2nd Ave	Concrete	Between manhole and fire hydrant at corner of NE 1st St & NE 2nd Ave
438	PDIR.2	<ul style="list-style-type: none"> <li>↑ Bayside</li> <li>→ Miami Dade College</li> <li>→ Welcome Center</li> <li>→ Flagler Street Shopping</li> </ul>	<ul style="list-style-type: none"> <li>↑ Federal Courthouse</li> <li>← County Government Center</li> <li>← Cultural Center</li> <li>← Flagler Street Shopping</li> <li>← Welcome Center</li> </ul>	EB	NE 5th St @ NE 1st Ave	Concrete	Intersection corner, pending construction



SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
439	PDIR.2	<ul style="list-style-type: none"> <li>↑ Bayfront Park</li> <li>↑ Bayside</li> <li>← College North Station</li> <li>→ Welcome Center</li> <li>→ Flagler Street Shopping</li> <li>→ Jewelry District</li> </ul>	<ul style="list-style-type: none"> <li>↑ Courthouses</li> <li>↑ County Government Center</li> <li>← Welcome Center</li> <li>← Flagler Street Shopping</li> <li>← Jewelry District</li> <li>→ College North Station</li> </ul>	EB	NE 3rd St @ NE 1st Ave	Concrete	11' east of lamppost on NE 1st Ave corner
440	PDIR.3	<ul style="list-style-type: none"> <li>↑ Welcome Center</li> <li>↑ Miami Dade College</li> <li>← Jewelry District</li> <li>← P Walker Urbanscape</li> <li>← County Government Center</li> <li>← Cultural Center</li> <li>→ Olympia Theater</li> </ul>	<ul style="list-style-type: none"> <li>↑ Convention / Knight Center</li> <li>← Olympia Theater</li> <li>← Bayfront Park</li> <li>→ Jewelry District</li> <li>→ P Walker Urbanscape</li> <li>→ County Government Center</li> <li>→ Cultural Center</li> </ul>	NB	E 1st Ave @ E Flagler St	Mounted	On pole #87254937904
441	PDIR.4	<ul style="list-style-type: none"> <li>↑ Olympia Theater</li> <li>↑ Bayfront Park</li> <li>← Welcome Center</li> <li>← Miami Dade College</li> <li>→ Convention / Knight Center</li> <li>→ Riverwalk</li> </ul>	<ul style="list-style-type: none"> <li>↑ P Walker Urbanscape</li> <li>↑ Cultural Center</li> <li>↑ County Government Center</li> <li>← Convention / Knight Center</li> <li>→ Welcome Center</li> <li>→ Miami Dade College</li> </ul>	EB	E Flagler St @ E 1st Ave	Mounted	On existing pole at SE corner. See photo
442	PDIR.2	<ul style="list-style-type: none"> <li>↑ Bayfront Park</li> <li>← Flagler Street Shopping</li> <li>← Olympia Theater</li> <li>→ Convention / Knight Center</li> <li>→ Riverwalk</li> <li>→ Brickell District</li> </ul>	<ul style="list-style-type: none"> <li>← Convention / Knight Center</li> <li>← Riverwalk</li> <li>← Brickell District</li> <li>→ Flagler Street Shopping</li> <li>→ Olympia Theater</li> </ul>	EB	SE 2nd St @ SE 2nd Ave	Concrete	On corner -see photo
443	PDIR.2	<ul style="list-style-type: none"> <li>↑ Flagler Street Shopping</li> <li>↑ Olympia Theater</li> <li>← Convention / Knight Center</li> <li>← Riverwalk</li> <li>← Fort Dallas Park</li> </ul>	<ul style="list-style-type: none"> <li>↑ Brickell District</li> <li>↑ Miami Circle</li> <li>→ Convention / Knight Center</li> <li>→ Riverwalk</li> <li>→ Fort Dallas Park</li> </ul>	NB	SE 2nd Ave @ SE 4th St	Grass	In grass 5' off curb; contact Hyatt for approval if needed
444	PDIR.2	<ul style="list-style-type: none"> <li>↑ Flagler Street Shopping</li> <li>↑ Olympia Theater</li> <li>↑ Miami Dade College</li> </ul>	<ul style="list-style-type: none"> <li>↑ Convention / Knight Center</li> <li>↑ Riverwalk</li> <li>↑ Fort Dallas Park</li> </ul>	NB	SE 1st Ave @ Metromover entrance	Concrete	In line with station kiosk map, just adjacent
445	PDIR.4	<ul style="list-style-type: none"> <li>↑ Brickell District</li> <li>← Flagler Street Shopping</li> <li>← Olympia Theater</li> <li>→ Riverwalk</li> <li>→ Fort Dallas Park</li> </ul>	<ul style="list-style-type: none"> <li>↑ Brickell District</li> <li>← Riverwalk</li> <li>← Fort Dallas Park</li> <li>→ Flagler Street Shopping</li> <li>→ Olympia Theater</li> </ul>	EB	SE 4th St @ Riverwalk entrance west of SE 1st Ave	Mounted	2' west of existing lamppost
446	PDIR.2	<ul style="list-style-type: none"> <li>↖ Flagler Street Shopping</li> <li>↖ Courthouses</li> <li>↖ Cultural Center</li> <li>↗ Convention / Knight Center</li> </ul>	<ul style="list-style-type: none"> <li>↑ Brickell District</li> <li>← Convention / Knight Center</li> <li>← Riverwalk</li> </ul>	NB	S Miami Ave @ S 4th St crosswalk	Concrete	5' south of crosswalk signal
447	PDIR.2	<ul style="list-style-type: none"> <li>← Cultural Center</li> <li>← County Courthouse</li> <li>→ Miami Dade College</li> <li>→ Bayside</li> </ul>	<ul style="list-style-type: none"> <li>↑ Flagler Street Shopping</li> <li>← Miami Dade College</li> <li>→ Cultural Center</li> <li>→ County Courthouse</li> </ul>	NB	N Miami Ave @ N 3rd St	Concrete	15' north of traffic pole. Pending construction Confirm with installer that there is room for sign or need to offset installation

SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
448	PDIR.2	← Federal Courthouse → Flagler Street Shopping → Third Street Station	↑ County Courthouse ↑ County Government Center ↑ Cultural Center ← Flagler Street Shopping → Federal Courthouse	EB	N 1st St @ N Miami Ave	Concrete	10' east of corner, see photo
449	PDIR.4	↑ Federal Courthouse ← County Courthouse ← P Walker Urbanscape ← Cultural Center ← County Government Center → Jewelry District	↑ Third Street Station ↑ Convention / Knight Center ← Jewelry District → County Courthouse → P Walker Urbanscape	NB	Miami Ave @ Flagler St	Mounted	On existing pole - see photo
450	PDIR.4	↑ Jewelry District ← Federal Courthouse → Third Street Station → Convention / Knight Center	↑ County Courthouse ↑ P Walker Urbanscape ↑ Cultural Center ← Third Street Station ← Convention / Knight Center → Federal Courthouse	EB	Flagler St @ Miami Ave	Mounted	Same as 449
451	PDIR.2	→ Courthouses	← Courthouses	EB	NW 8th St @ NW 1st Ave	Concrete	10' west of crosswalk - see photo
452	PDIR.2	→ Miami Dade College → Bayside → AA Arena	↑ County Government Center ↑ Cultural Center ← Miami Dade College	NB	NW 1st Ave @ NW 5th St	Concrete	15' south of One Way sign, 8' off curb
453	PDIR.2	↑ Miami Dade College ↑ Bayside	↑ Government Center Station ↑ Metrorail Station ↑ County Courthouse	EB	NW 1st Ave @ NW 3rd St	Concrete	Edge of sidewalk, adjacent to crosswalk
454	PDIR.2	↑ Federal Courthouse ← County Government Center → Flagler Street Shopping → Welcome Center	↑ Cultural Center ← Flagler Street Shopping ← Welcome Center → County Government Center	NB	NW 1st Ave @ NW 1st St	Concrete	Parallel to stop line, fence side of sidewalk
455	PDIR.4	↑ Flagler Street Shopping ↑ P Walker Urbanscape ↑ Jewelry District ↑ Welcome Center ↑ Olympia Theater	↑ Cultural Center ↑ County Government Center ↑ Federal Courthouse ↑ City Admin Building	EB	W Flagler St @ NW Miami Ct	Mounted	On existing pole 8725475. Remove existing sign
456	PDIR.2	↑ County Courthouse ↑ Flagler Street Shopping ↑ Welcome Center ← County Government Center ← Federal Courthouse	↑ City Admin Building → County Government Center → Federal Courthouse → Government Center Station → Metrorail Station	EB	W Flagler St @ NW 1st Ave	Concrete	9' from NW corner
457	PDIR.2	↑ County Government Center ↑ Metrorail Station ↑ Government Center Station → Courthouses	↑ Cultural Center ↑ Main Library ← Courthouses	NB	NW 1st St @ pedestrian midblock crosswalk	Concrete	Replace existing pedestrian sign - see photo
458	PDIR.4	↑ County Government Center ↑ Federal Courthouse ↑ Childrens Courthouse ↑ Cultural Center ← Police Headquarters	→ Police Headquarters	EB	NW 3rd St @ NW 3rd Ave	Mounted	On lamppost 8725530409
459	PDIR.2	↑ Police Headquarters → County Government Center → County Courthouse	↑ City Admin Building ↑ Cultural Center ← County Government Center ← County Courthouse	NB	NW 1st St @ NW 2nd Ave	Concrete	Centered in uncut tree planter

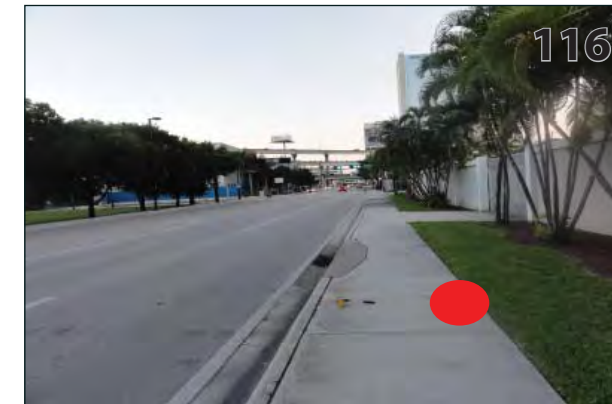
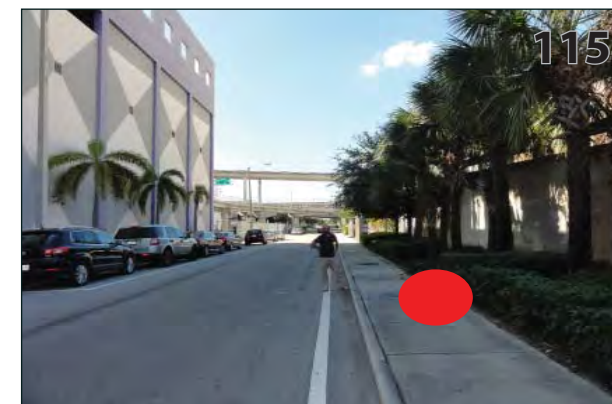
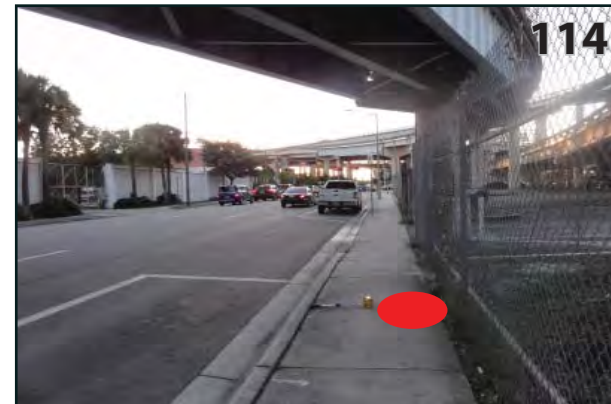
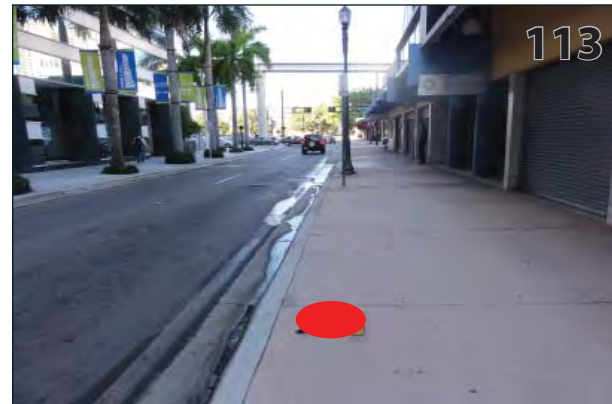
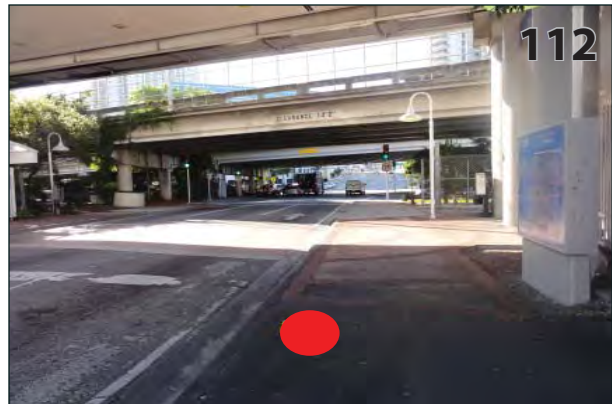
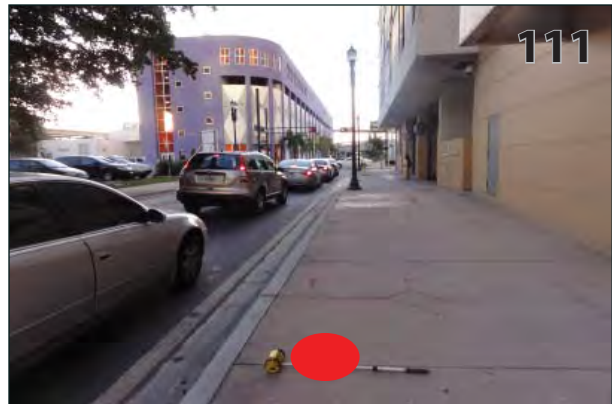
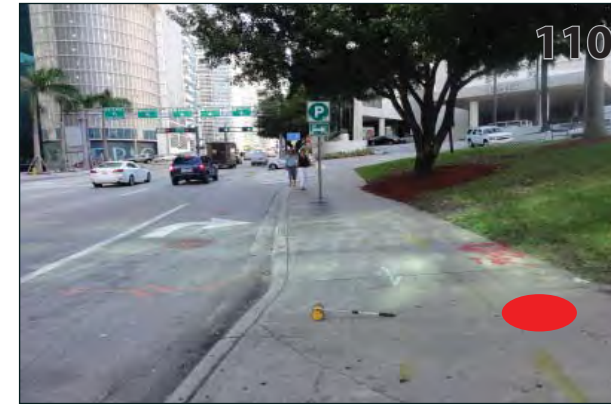
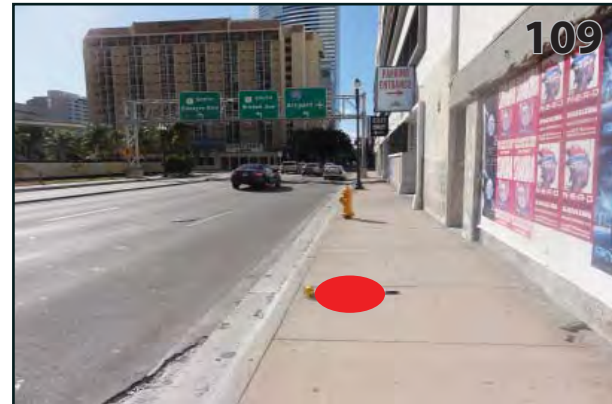
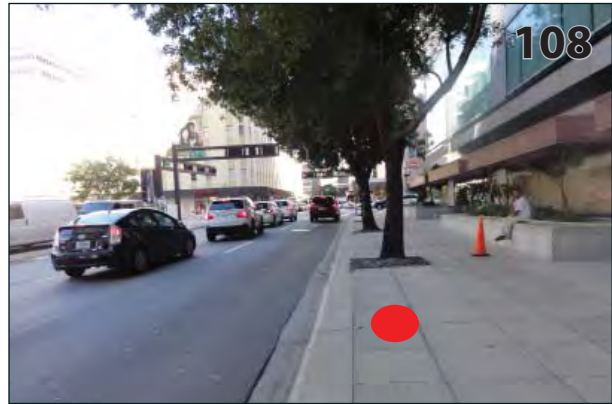
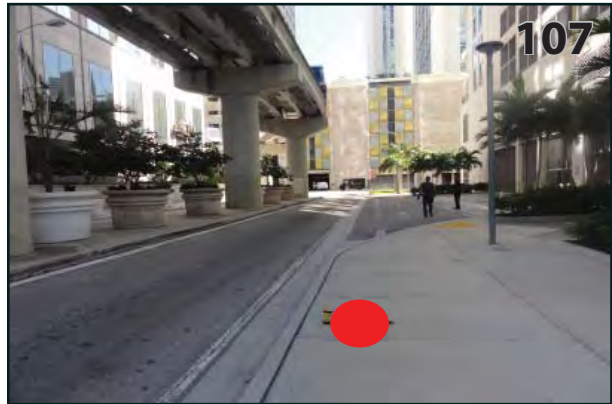
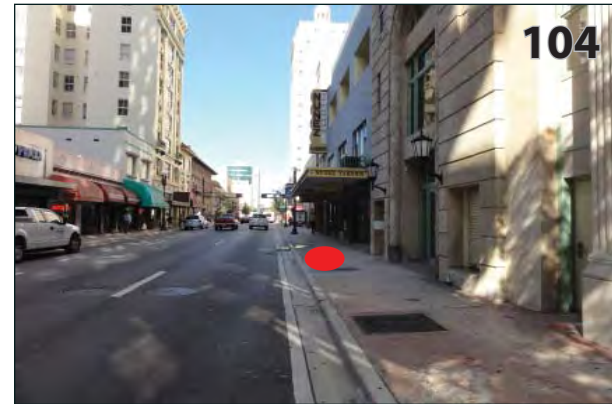
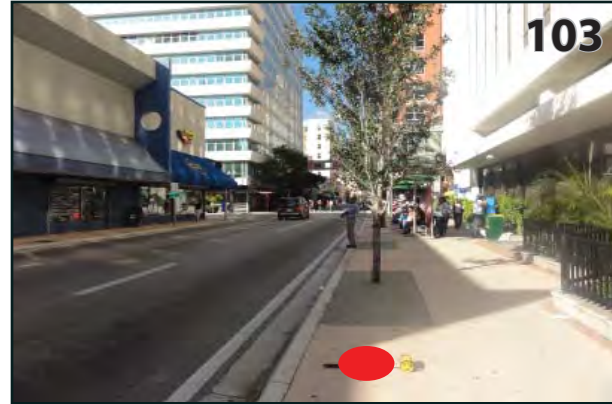
SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
460	PDIR.4	<ul style="list-style-type: none"> <li>↑ County Government Center</li> <li>→ Flagler Street Shopping</li> <li>→ Cultural Center</li> <li>→ Main Library</li> <li>→ County Courthouse</li> </ul>	<ul style="list-style-type: none"> <li>↑ City Admin Building</li> <li>← Flagler Street Shopping</li> <li>← Cultural Center</li> <li>← Main Library</li> <li>← County Courthouse</li> </ul>	NB	W Flagler St @ W 2nd Ave	Mounted	On existing lamppost
461	PDIR.4	<ul style="list-style-type: none"> <li>← Flagler Street Shopping</li> <li>← Cultural Center</li> <li>← Courthouses</li> <li>← County Government Center</li> </ul>	<ul style="list-style-type: none"> <li>→ Flagler Street Shopping</li> <li>→ Cultural Center</li> <li>→ Courthouses</li> <li>→ County Government Center</li> </ul>	EB	SW 1st St @ SW 1st Ave (bus terminal)	Mounted	On existing lamppost , east side of the street
462	PDIR.4	<ul style="list-style-type: none"> <li>← Flagler Street Shopping</li> <li>← County Government Center</li> <li>← Cultural Center</li> <li>→ County Admin Office</li> </ul>	<ul style="list-style-type: none"> <li>← County Admin Office</li> <li>→ Flagler Street Shopping</li> <li>→ County Government Center</li> <li>→ Cultural Center</li> </ul>	EB	SW 3rd St @ SW 2nd Ave	Mounted	On existing pole - see photo
463	PDIR.4	<ul style="list-style-type: none"> <li>↑ Convention / Knight Center</li> <li>↑ Bayfront Park</li> <li>← Flagler Street Shopping</li> <li>← Jewelry District</li> <li>← Federal Courthouse</li> <li>→ Brickell District</li> </ul>	<ul style="list-style-type: none"> <li>← Brickell District</li> <li>→ Flagler Street Shopping</li> <li>→ Jewelry District</li> <li>→ Federal Courthouse</li> </ul>	EB	S 1st St @ S Miami Ave	Mounted	On existing pole 87254797100, above existing sign
464	PDIR.4	<ul style="list-style-type: none"> <li>↑ Bayfront Park</li> <li>← Flagler Street Shopping</li> <li>← Miami Dade College</li> <li>→ Convention / Knight Center</li> <li>→ Riverwalk</li> </ul>	<ul style="list-style-type: none"> <li>← Convention / Knight Center</li> <li>← Riverwalk</li> <li>→ Flagler Street Shopping</li> <li>→ Miami Dade College</li> </ul>	EB	SE 1st St @ SE 1st Ave	Mounted	On existing pole - see photo
465	PDIR.2	<ul style="list-style-type: none"> <li>↑ Central Business District</li> <li>↑ Convention / Knight Center</li> </ul>	<ul style="list-style-type: none"> <li>↑ Brickell Village</li> <li>↑ Welcome Center</li> <li>← Miami Circle</li> <li>← Mary Brickell Park</li> </ul>	NB	Brickell Ave @ SE 5th St	Concrete	7' south of Brickell gateway sign
466	PDIR.2	<ul style="list-style-type: none"> <li>→ Miami Circle</li> <li>→ Mary Brickell Park</li> </ul>	<ul style="list-style-type: none"> <li>↑ Brickell Village</li> <li>↑ Welcome Center</li> <li>← Miami Circle</li> <li>← Mary Brickell Park</li> </ul>	NB	S 1st Ave @ SE 5th St	Concrete	East side of 5th St Station exit on 5th St
467	PDIR.2	<ul style="list-style-type: none"> <li>↑ Fifth Street Station</li> </ul>	<ul style="list-style-type: none"> <li>→ Brickell Village</li> <li>→ Welcome Center</li> </ul>	NB	S 1st Ave @ SE 6th St	Concrete	See photo, opposite side of the street
468	PDIR.2	<ul style="list-style-type: none"> <li>↑ Fifth Street Station</li> <li>← Central Business District</li> <li>→ Brickell Village</li> <li>→ Welcome Center</li> </ul>	<ul style="list-style-type: none"> <li>← Brickell Village</li> <li>← Welcome Center</li> <li>→ Central Business District</li> </ul>	EB	S 6th St @ S Miami Ave	Grass	On grass, SE corner of Miami Ave
469	PDIR.2	<ul style="list-style-type: none"> <li>← Central Business District</li> <li>→ Brickell Village</li> <li>→ Welcome Center</li> </ul>	<ul style="list-style-type: none"> <li>← Brickell Village</li> <li>← Welcome Center</li> <li>→ Central Business District</li> </ul>	EB	S 7th St @ S Miami Ave	Concrete	SW corner intersection
470	PDIR.2	<ul style="list-style-type: none"> <li>↑ Central Business District</li> <li>→ Eighth Street Station</li> <li>→ Mary Brickell Park</li> <li>→ Miami Circle</li> <li>→ Brickell Key</li> </ul>	<ul style="list-style-type: none"> <li>↑ Brickell Village</li> <li>← Eighth Street Station</li> <li>← Mary Brickell Park</li> <li>← Miami Circle</li> </ul>	NB	S Miami Ave @ S 8th St	Grass	Grassy area by corner. Confirm installation with new/upcoming Brickell CitiCentre
471	PDIR.2	<ul style="list-style-type: none"> <li>← Flagler Street Shopping</li> <li>→ Riverwalk</li> <li>→ Fort Dallas Park</li> <li>→ Brickell District</li> </ul>	<ul style="list-style-type: none"> <li>← Riverwalk</li> <li>← Fort Dallas Park</li> <li>← Brickell District</li> <li>→ Flagler Street Shopping</li> </ul>	EB	S Miami Ave @ 3rd St Station entrance south of SE 2nd St	Concrete	Parallel with northern side of station entrance, see photo

SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
472	PDIR.2	↑ Central Business District	↑ Brickell Village	NB	SW 1st Ave @ SW 7th St	Grass	10' NE of traffic box
473	PDIR.4	← Miami Circle ← Mary Brickell Park → Florida Intl University	↑ Brickell Village ← Florida Intl University → Mary Brickell Park → Miami Circle	EB	SE 8th St @ Brickell Ave	Mounted	On existing pole 184KSM734
474	PDIR.2	↑ Central Business District ← 10th/Promenade Station ← Brickell Village ← Welcome Center	→ 10th/Promenade Station → Brickell Village → Welcome Center	NB	Brickell Ave @ SE 10th St	Grass	Across from station kiosk
475	PDIR.2	← Brickell Village ← Welcome Center	→ Brickell Village → Welcome Center	NB	SW 10th St @ Brickell Plaza	Concrete	20' south of pole # 87254880805 . See pic.
476	PDIR.2	← Brickell Village ← Welcome Center	↑ Southside Park → Brickell Village → Welcome Center	EB	SW 11th St @ S Miami Ave	Concrete	NE corner intersection
477	PDIR.4	→ Brickell Village	↑ Southside Park ↑ Simpson Park ← Brickell Village	NB	SW 10th St @ SW 1st Ave southbound near Metrorail entrance	Mounted	Sign on pole at Metro east entrance. See photo.
478	PDIR.2	↑ Metrorail Station ← Southside Park → Brickell Village	↑ Simpson Park → Southside Park ← Brickell Village	NB	SW 11th St @ SW 1st Ave southbound	Grass	In grassy area next to bus stop, route #248
479	PDIR.2	← Florida Intl University ← Brickell Village → Simpson Park	← Simpson Park → Florida Intl University → Brickell Village	EB	SE 14th St @ Brickell Ave	Concrete	In front of Financial District station
480	PDIR.2	← Brickell Village → Simpson Park	← Simpson Park → Brickell Village	EB	SE 14th St @ SE 1st Ave	Concrete	Between MCI and Bell manhole. See photo
481	PDIR.4	↑ Brickell District ↑ Brickell Village ← Simpson Park	→ Simpson Park	NB	SE 15th St @ Brickell Ave	Mounted	On existing pole 872538459
482	PDIR.2	← Metrorail Station → 10th/Promenade Station → Allen Morris Park	← 10th/Promenade Station ← Allen Morris Park → Metrorail Station	NB	SE 10th St @ S Miami Ave	Grass	In grass, on NE corner, next to stop sign
483	PDIR.2	↑ Flagler Street Shopping ↑ Courthouses ↑ Cultural Center ↑ Olympia Theater	↑ Brickell District ↑ Brickell Village ↑ Convention / Knight Center ↑ Riverwalk	NB	S Miami Ave @ SE 2nd St	Concrete	In concrete at edge of grass, 9' south of crossing signal pole
484	KIOSK.1	To be determined	To be determined		Biscayne Blvd @ Bayfront Park	Concrete	See photo
485	KIOSK.1	To be determined	To be determined		Flagler St @ SE 2nd Ave	Concrete	Between planter and ticket booth
486	PDIR.3	↑ Jewelry District ← Federal Courthouse	↑ County Courthouse ↑ P Walker Urbanscape	EB	Flagler St @ Miami Ave	Mounted	On existing pole - see photo
487	KIOSK.1	To be determined	To be determined		NE 1st Ave @ MDC Campus	Concrete	To be determined pending construction - coordinate with MDC at time of installation

SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
488	KIOSK.1	To be determined	To be determined		N Biscayne Blvd @ Arsht Center	Concrete	7' SE existing kiosk - coordinate with Arsht at time of installation
489	KIOSK.1	To be determined	To be determined		S Miami Ave @ S 10th St	Concrete	On NW corner by street sign - coordinate with MBV at time of installation
490	PDIR.2	← Brickell Village → Mary Brickell Park → Miami Circle	← Mary Brickell Park ← Miami Circle → Brickell Village	NB	SE 7th St at 8th St Station between Miami & Brickell Aves	Concrete	Parallel with east side of station entrance
491	KIOSK.1	To be determined	To be determined	NB	NW 1st St @ pedestrian midblock crosswalk	Concrete	Parallel with western pillar of Metromover, 8' off curb. See photo.
501	Dest.1	City Administrative Building	City Administrative Building	NB	SW 2nd Ave @ SW 3rd St	Concrete	6' north of storm drain
502	Dest.1	Freedom Tower	Freedom Tower	NB	Biscayne Blvd south of NE 7th St	Concrete	6' north of unnumbered pole in photo
503	Dest.1	Miami Circle	Miami Circle	NB	Brickell Ave @ SE 8th St	Concrete	Poles are 21' apart. Place sign 10.5' ahead of pole, 14' from curb. See pic.
504	Dest.1	Margaret Pace Park	Margaret Pace Park	NB	Bayshore Dr @ NE 18th St	Concrete	25' south of sign.
505	Dest.1	Riverwalk	Riverwalk	EB	SE 4th St @ Riverwalk entrance walk	Concrete	20' west of large red M.
506	Dest.1	Bayfront Park	Bayfront Park	NB	NE Biscayne Blvd @ Bayfront Park entrance	Grass	See pic. Corner of landscaping.
507	Dest.1	Cultural Center	Cultural Center	EB	Flagler St @ NW 1st Ave	Concrete	30' west of existing Miami Dade Cultural Center Kiosk.
508	Dest.1	Simpson Park Hammock	Simpson Park Hammock	EB	S Miami Ave @ SE 15th St	Grass	in grass. 45' west of crosswalk pedestrian sign.
509	Dest.1	Mary Brickell Park	Mary Brickell Park	NB	Brickell Ave @ SE 7th St	Concrete	30' south of bus stop sign. See pic.
510	Dest.1	Museum Park	Museum Park	NB	NE Biscayne Blvd @ Bayfront Park entrance <i>Located after groundbreaking</i>		FUTURE SIGN - NOT PART OF INITIAL FABRICATION <i>Location based on future ROW design</i>
511	Banner.1	Jewelry District	Jewelry District	EB	W Flagler St between Miami & E 1st Ave	Mounted	On south side of road - locate with fabricator and JD rep in spring
512	Banner.1	Jewelry District	Jewelry District	EB	W Flagler St between Miami & E 1st Ave	Mounted	On north side of road - locate with fabricator and JD rep in spring
513	Banner.1	Jewelry District	Jewelry District	WB	E Flagler St between E 2nd Ave & E 1st Ave	Mounted	On south side of road - locate with fabricator and JD rep in spring
514	Banner.1	Jewelry District	Jewelry District	WB	E Flagler St between E 2nd Ave & E 1st Ave	Mounted	On north side of road - locate with fabricator and JD rep in spring
515	Banner.1	Jewelry District	Jewelry District	SB	NE 1st Ave between NE 2nd and NE 1st Sts	Mounted	On east side of road - locate with fabricator and JD rep in spring
516	Banner.1	Jewelry District	Jewelry District	SB	NE 1st Ave between NE 2nd and NE 1st Sts	Mounted	On west side of road - locate with fabricator and JD rep in spring
517	Banner.1	Jewelry District	Jewelry District	NB	SE 1st Ave in advance of Flagler St	Mounted	On east side of road - locate with fabricator and JD rep in spring
518	Banner.1	Jewelry District	Jewelry District	NB	SE 1st Ave in advance of Flagler St	Mounted	On west side of road - locate with fabricator and JD rep in spring
601		REMOVED					
602		REMOVED					
603		REMOVED					
604		REMOVED					
605A	DistID.3	Central Business District		NB	S Miami Ave @ S 5th St	Concrete	Replace existing district sign
605B	DistID.3	Central Business District		NB	S Miami Ave @ S 4th St	Grass	4' in advance of planter in photo
606	DistID.3	Brickell District		EB	SE 10th St @ Brickell Ave	Concrete	Replace existing district sign
607	DistID.3	Brickell District		EB	SE 13th St @ Brickell Ave	Concrete	Replace existing district sign
608	DistID.3	Arts & Entertainment		WB	NE 13th St @ Bayshore Dr	Grass	8' west of lamppost in photo
609	DistID.3	Arts & Entertainment		NB	NE 2nd Ave @ NE 1th St	Concrete	40' north of signal pole
610	DistID.3	Central Business District		SB	NE 2nd Ave south of NE 9th St	Concrete	25' north of lamppost in photo
611A	DistID.3	Brickell District		NB	S Miami Ave @ SE 15th St	Grass	8' south of crosswalk, 6' off curb
611B	DistID.3	Brickell District		NB	S Miami Ave @ SE 12th St	Grass	8' north of curb, in grass parallel with stop sign to avoid line of sight conflict

SIGN DESCRIPTION					SIGN LOCATION		
Sign #	Sign Type	Face A	Face B	Orientation	Reference Intersection	Ground Condition	Detailed Location
611C	DistID.3	Brickell District		NB	S Miami Ave @ SE 13th St	Concrete	Replace road work ahead sign
612	DistID.3	Brickell District		SB	SW 1st Ave @ SW 7th St	Concrete	Edge of concrete, where sidewalk begins to widen at turn
613	DistID.3	Central Business District		NB	SE 1st Ave @ SE 1st St	Grass	In planter area of MPA lot
614	DistID.3	Arts & Entertainment		NB	NE 1st Ave north of NE 9th St	Concrete	Along fence line where sidewalk jogs east
615	DistID.3	Central Business District		SB	NW Miami Ave @ N 9th St	Concrete	12' north of tree, parallel with tree
616	DistID.3	Arts & Entertainment		NB	NW 1st Ave @ NW 9th St	Grass	In planted median, where median becomes 8' wide
617	DistID.3	Central Business District		SB	NW 1st Ave @ NW 9th St	Grass	In planted median, 8' south of median's northern edge

# Proposed Sign Location Photos



## Downtown Miami Wayfinding Signing Program

 New Pole Location

 Existing Pole

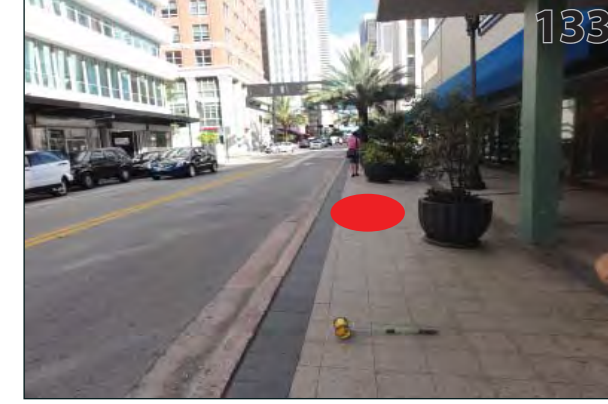
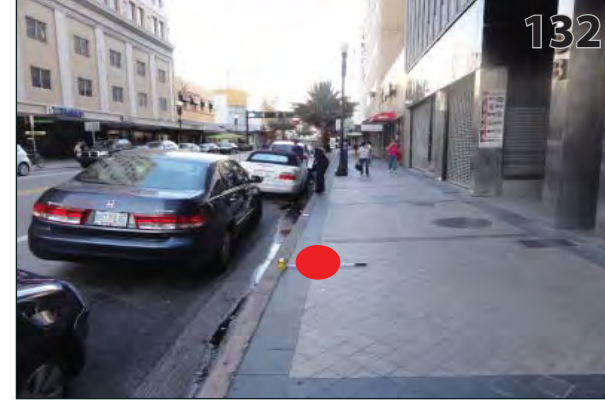
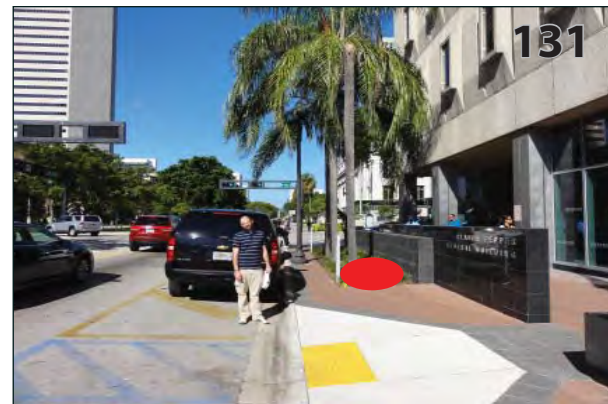
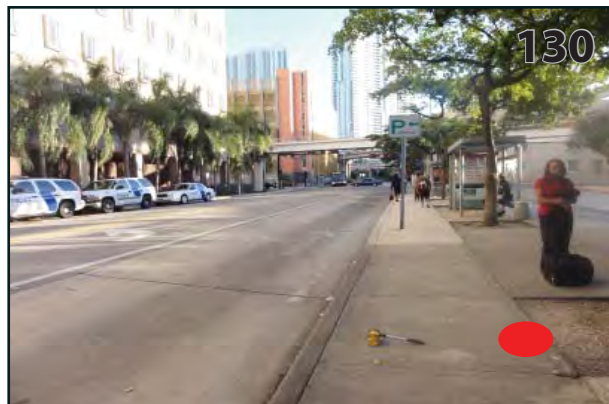
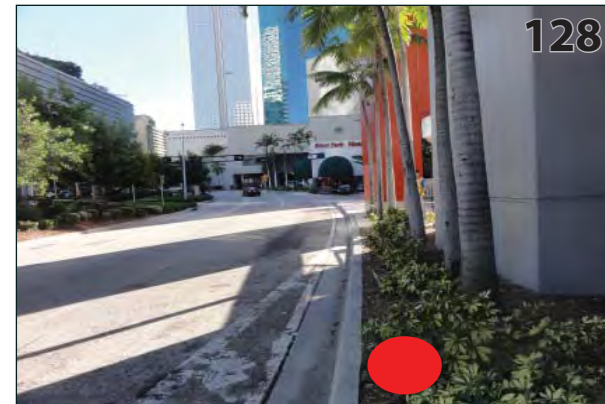
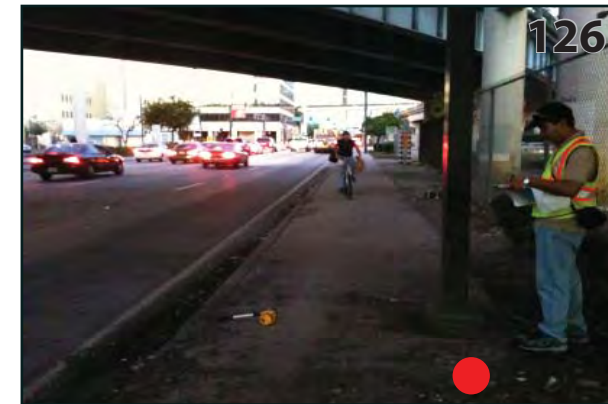
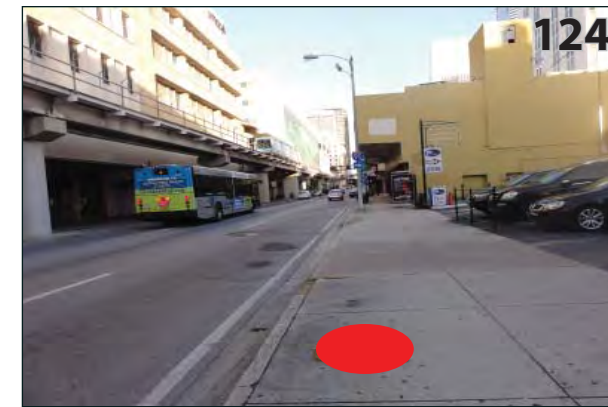
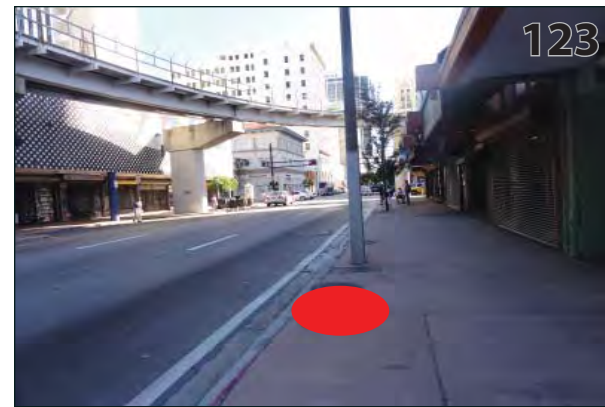
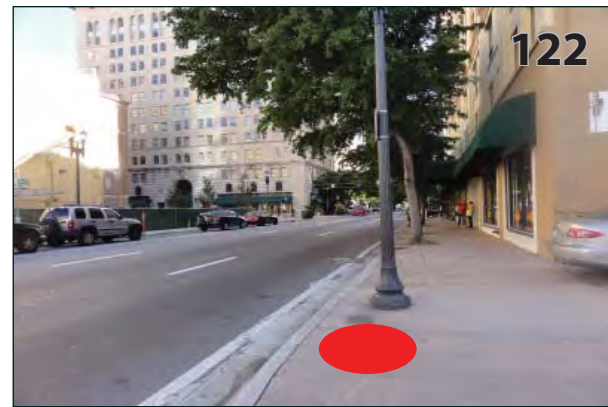
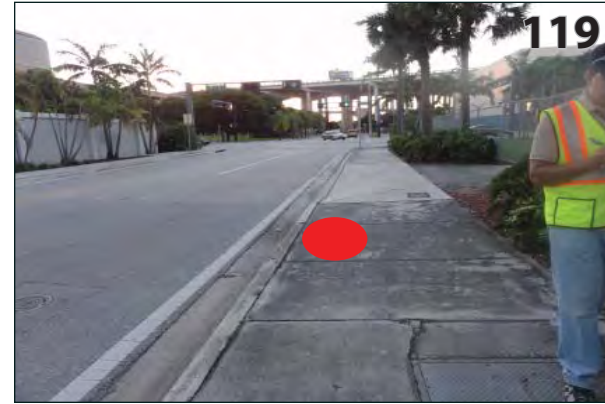
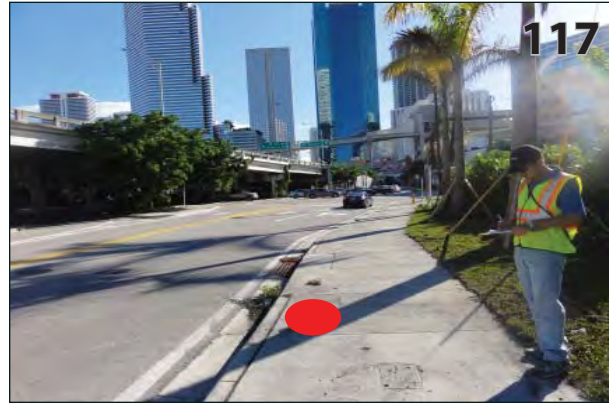
Date	Revisions
2.17.11	12.30.12 08.16.13 01.21.14 05.01.14

# Proposed Sign Location Photos

## Downtown Miami Wayfinding Signing Program

 New Pole Location

 Existing Pole

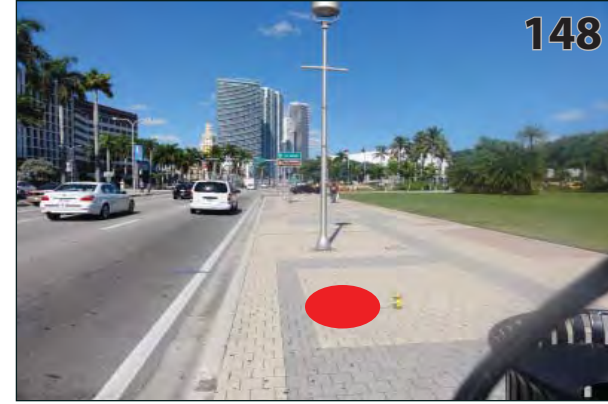
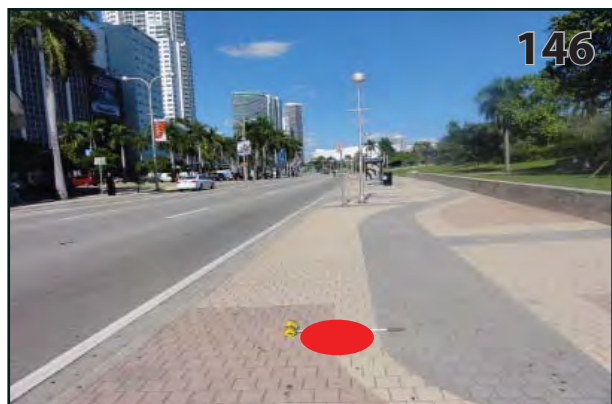
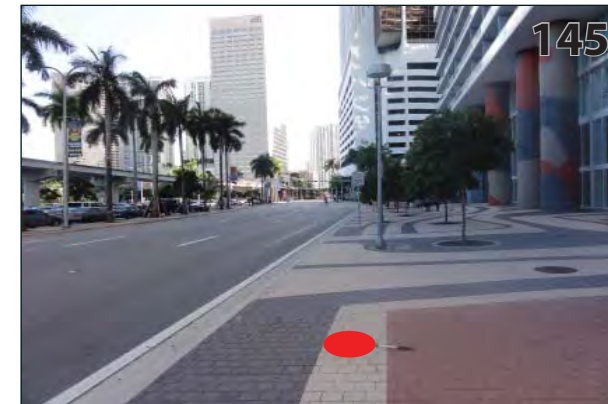
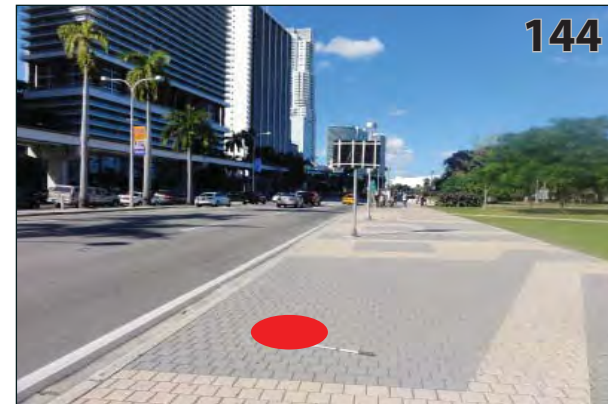
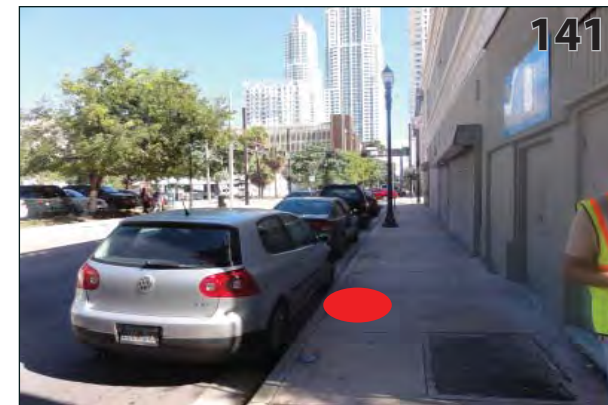
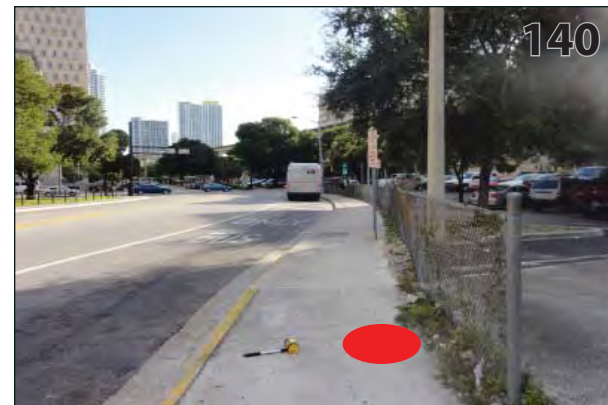
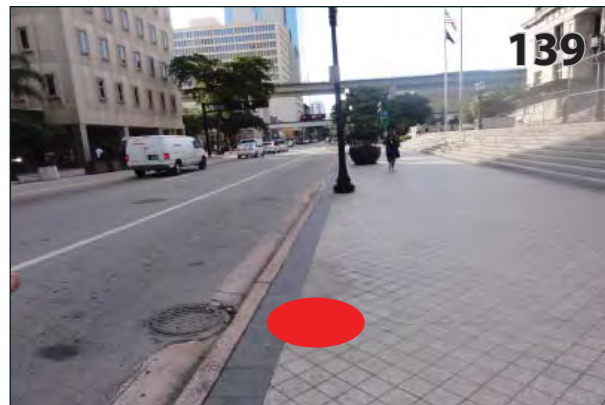
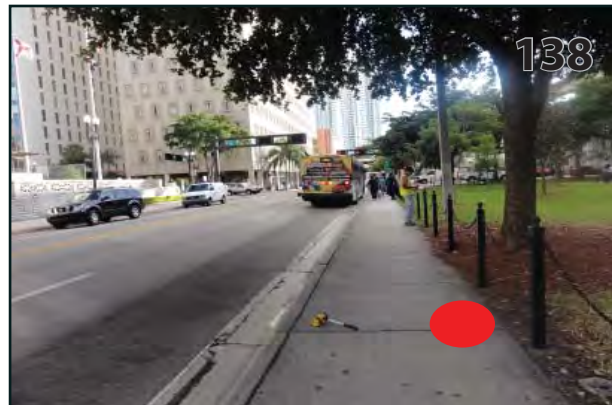
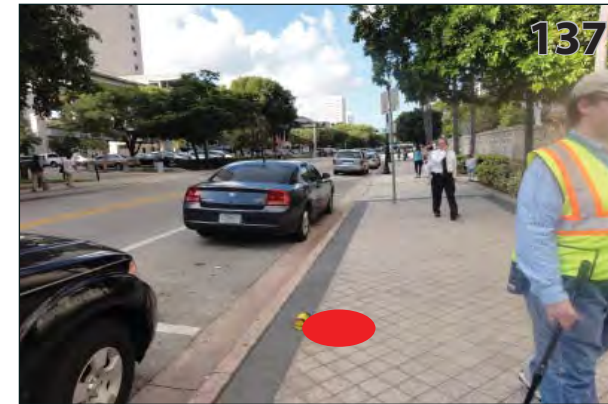
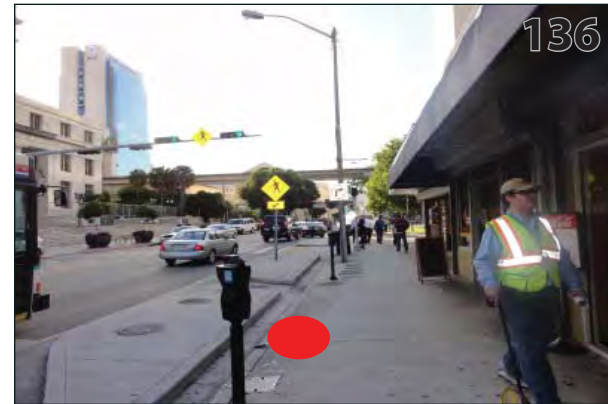
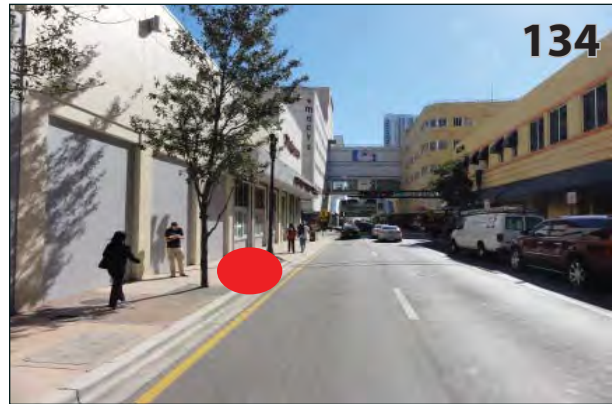




Date	Revisions
2.17.11	12.30.12 08.16.13 01.21.14 05.01.14



# Proposed Sign Location Photos

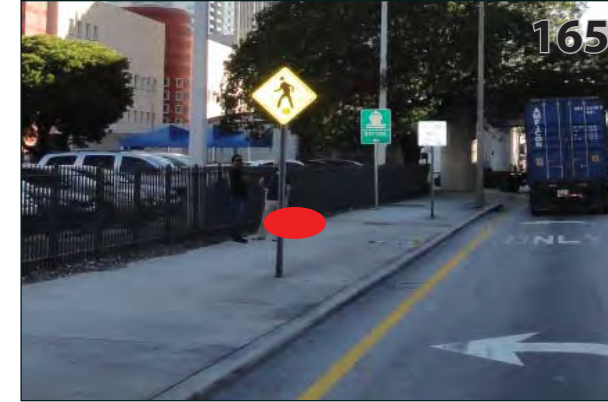
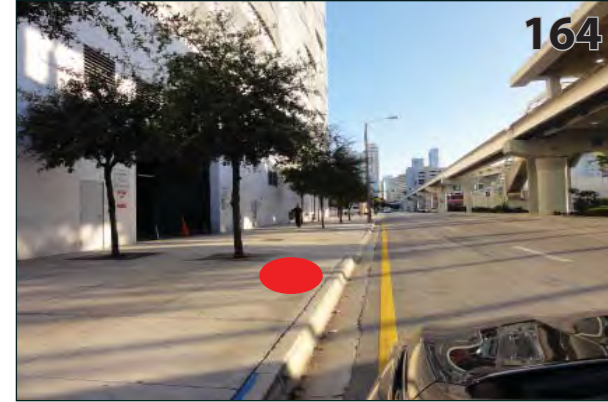
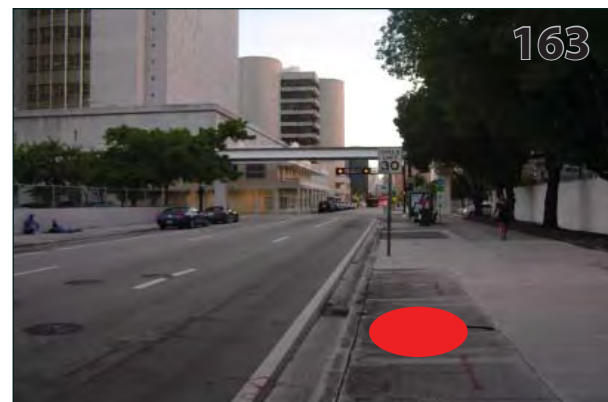
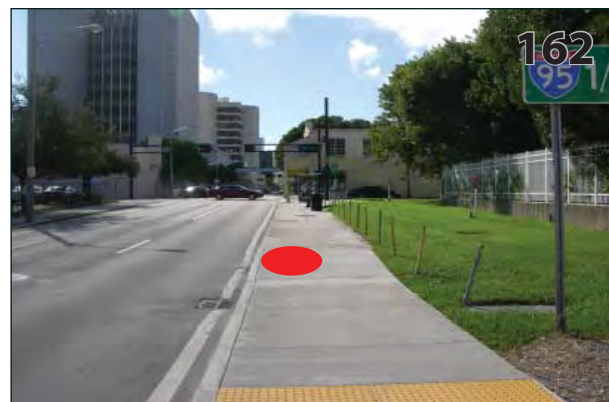
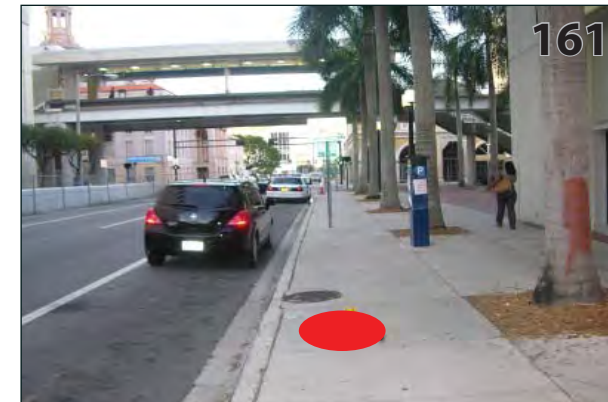
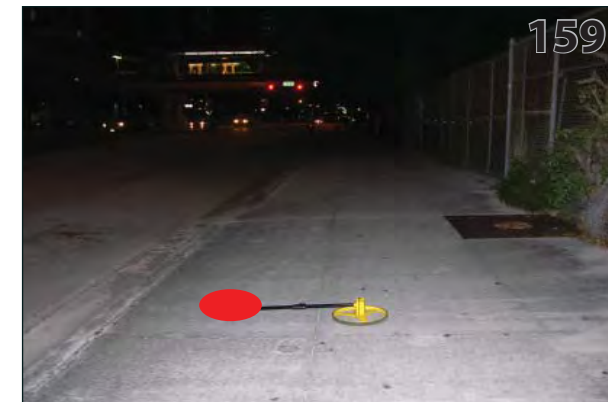
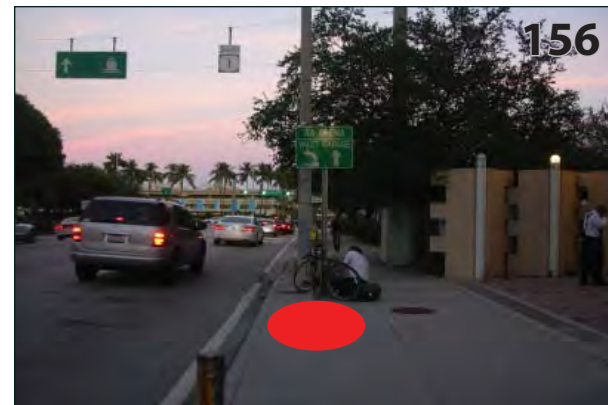
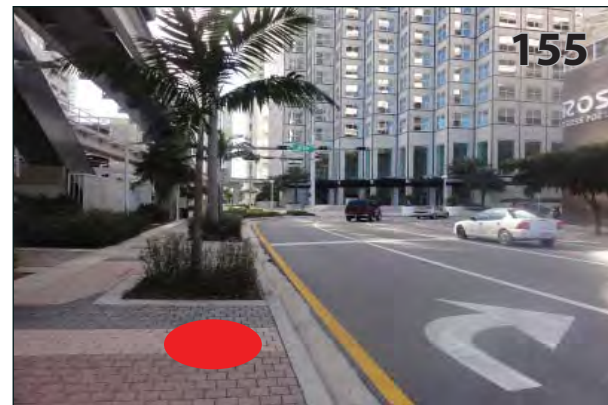
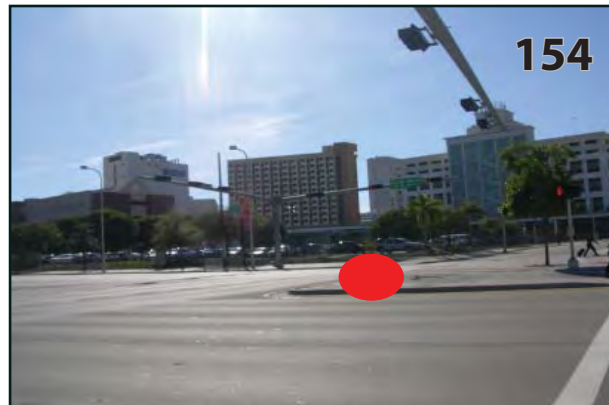
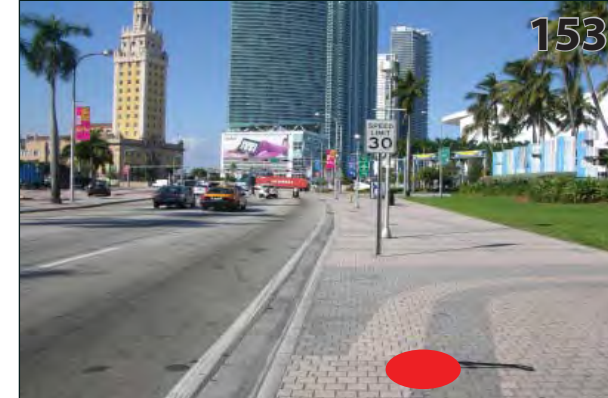
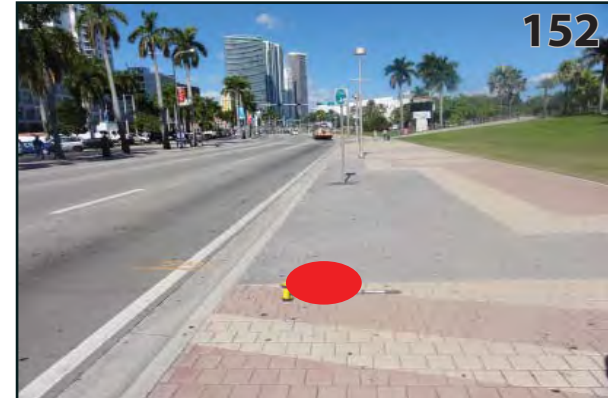
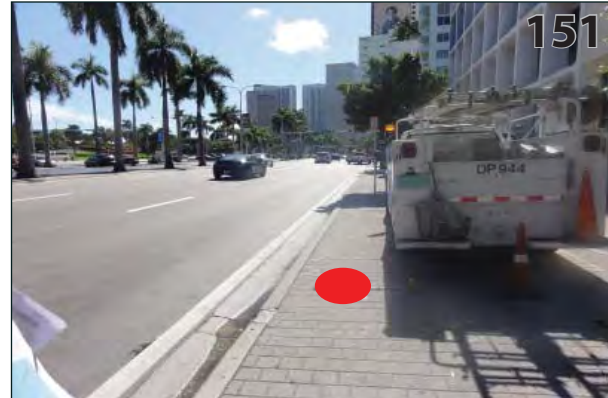
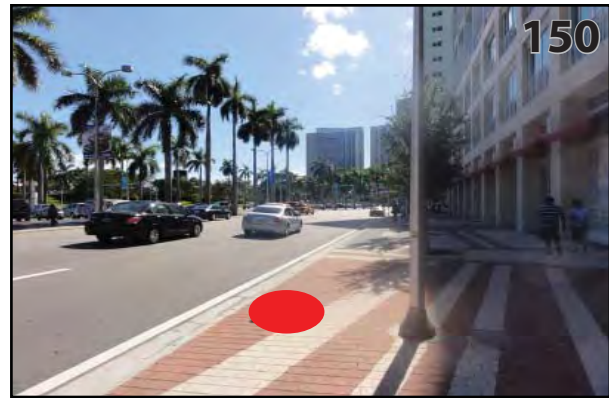
## Downtown Miami Wayfinding Signing Program





-  New Pole Location
-  Existing Pole

Date	Revisions
2.17.11	12.30.12 08.16.13 01.21.14 05.01.14

# Proposed Sign Location Photos

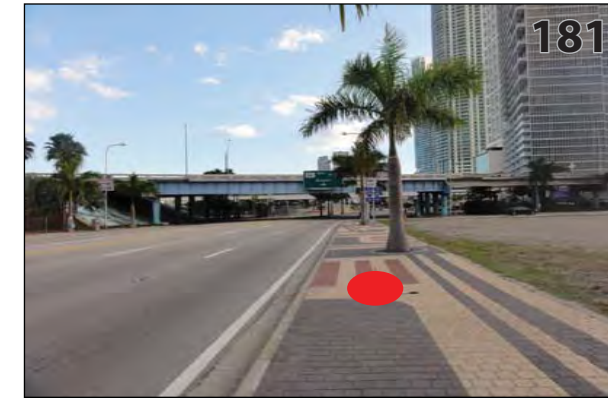
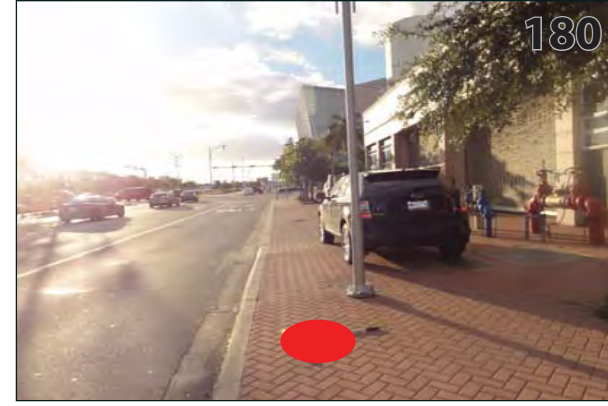
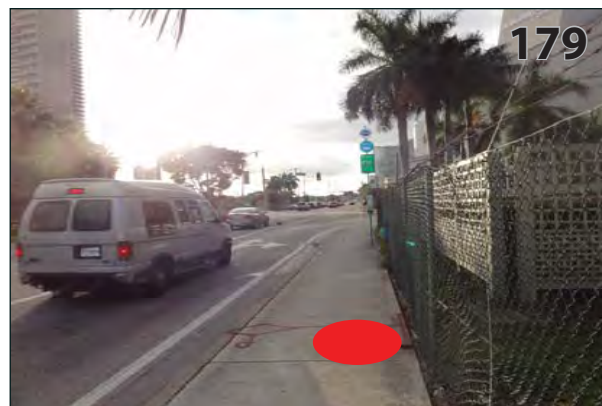
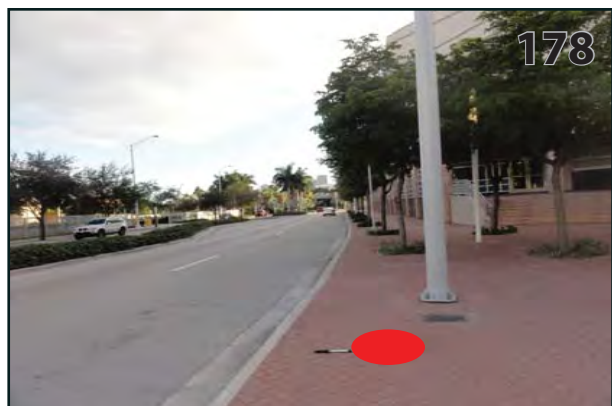
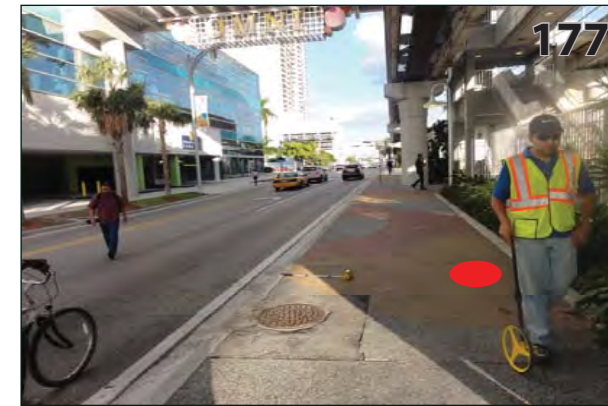
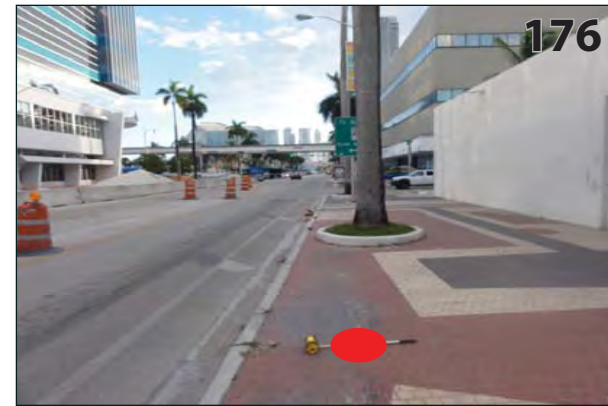
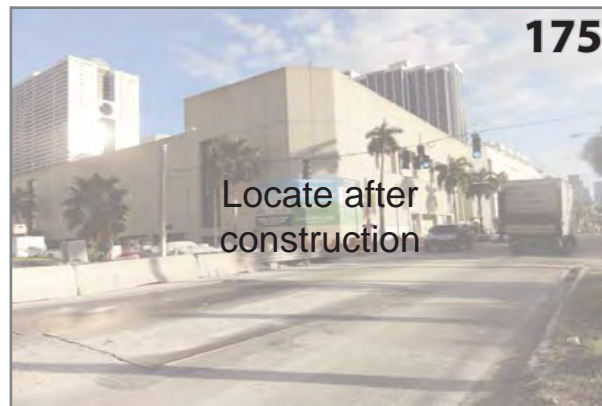
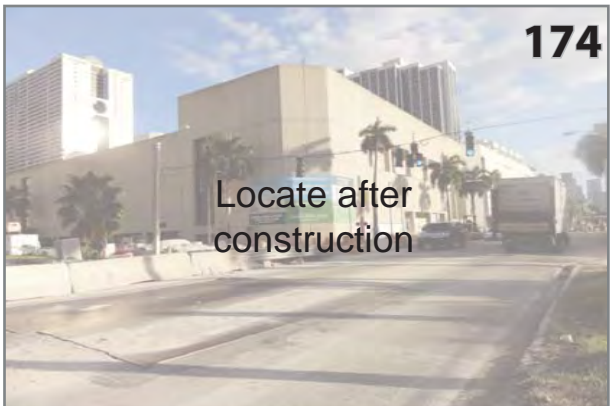
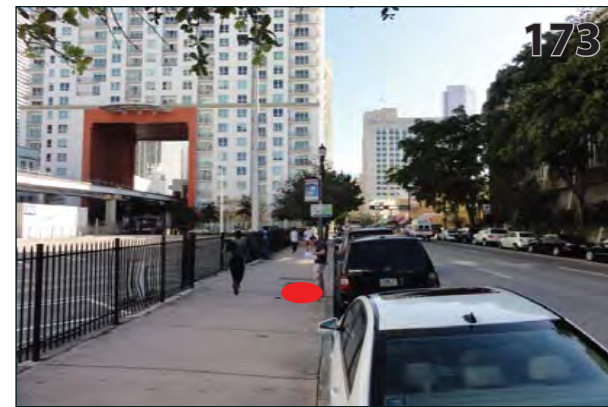
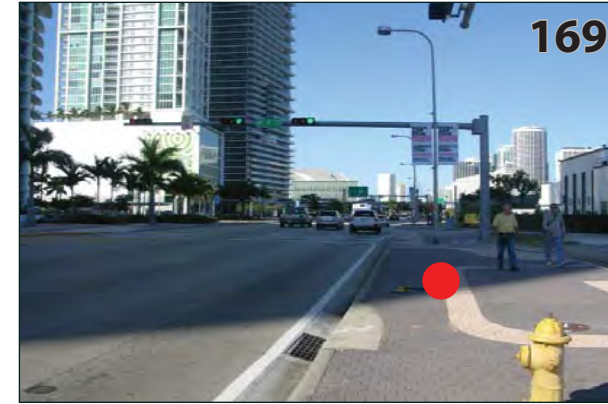
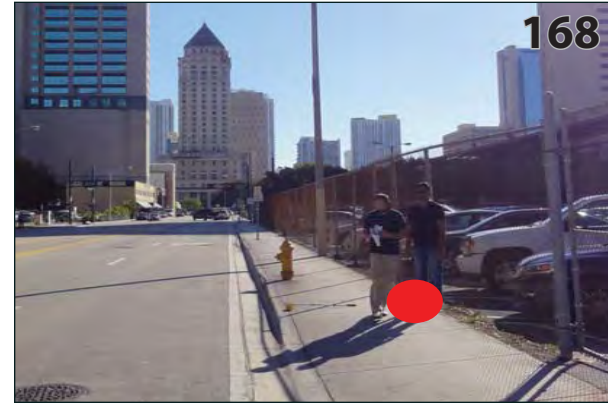
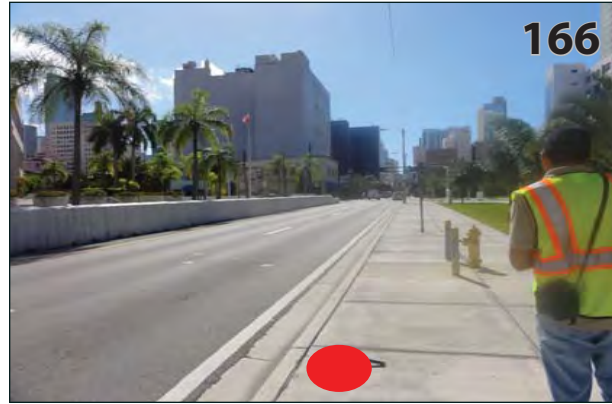


## Downtown Miami Wayfinding Signing Program



-  New Pole Location
-  Existing Pole

Date	Revisions
2.17.11	12.30.12 08.16.13 01.21.14 05.01.14

# Proposed Sign Location Photos



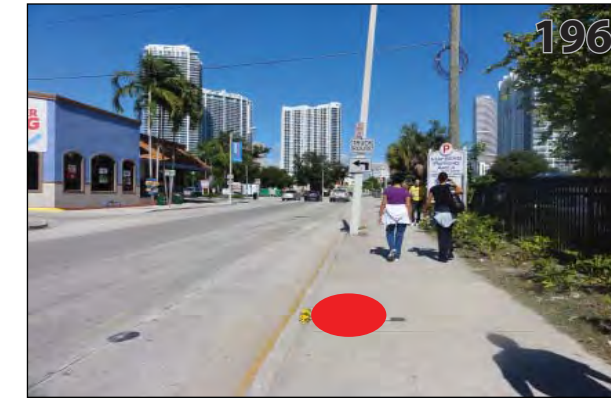
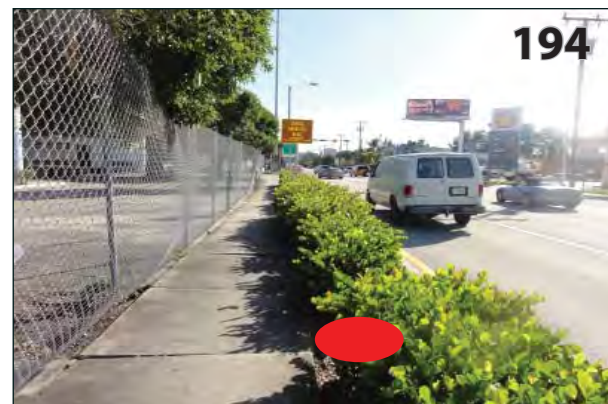
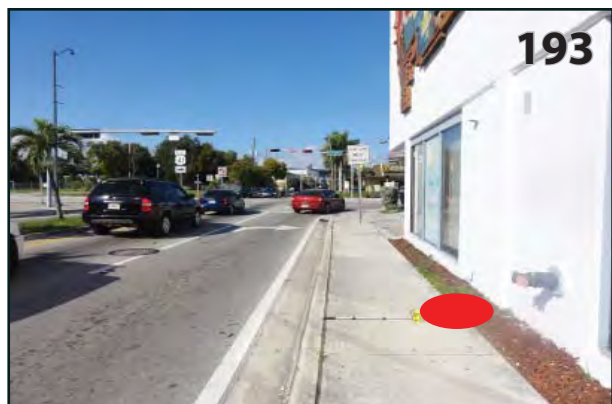
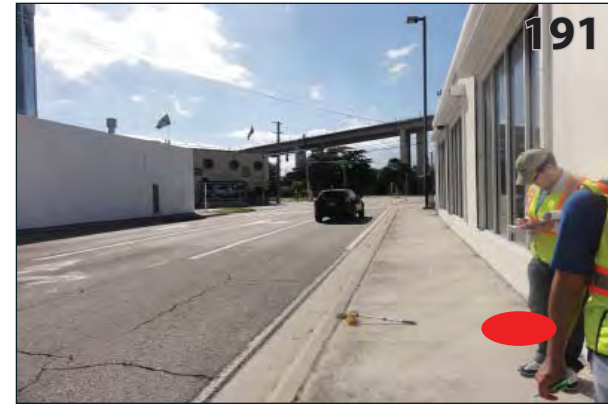
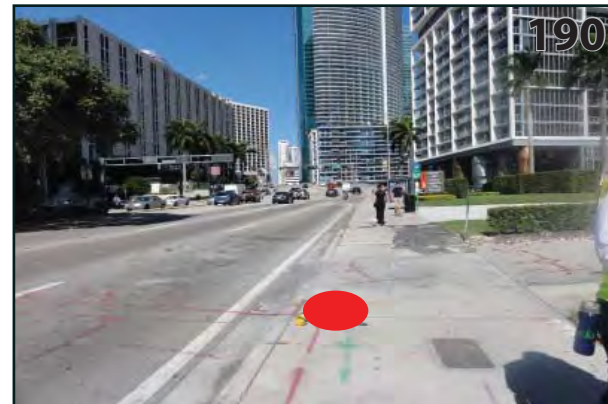
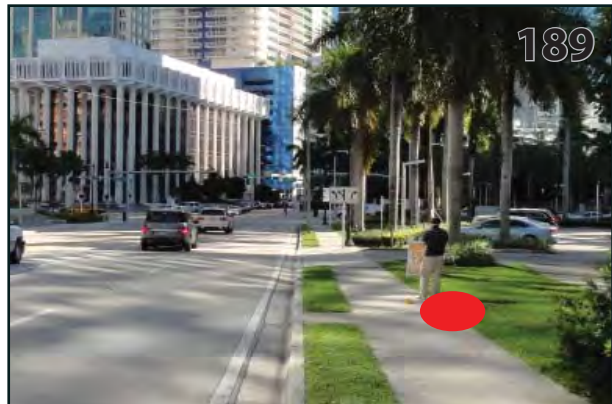
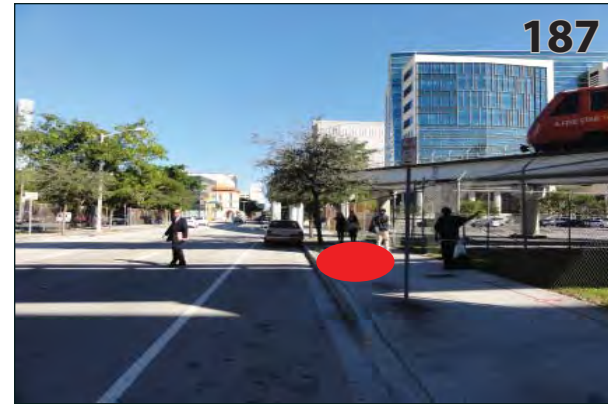
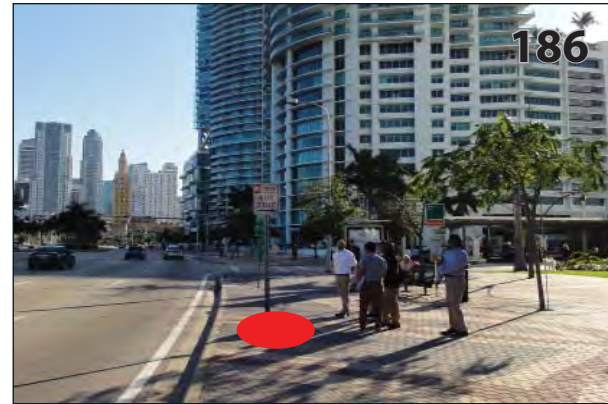
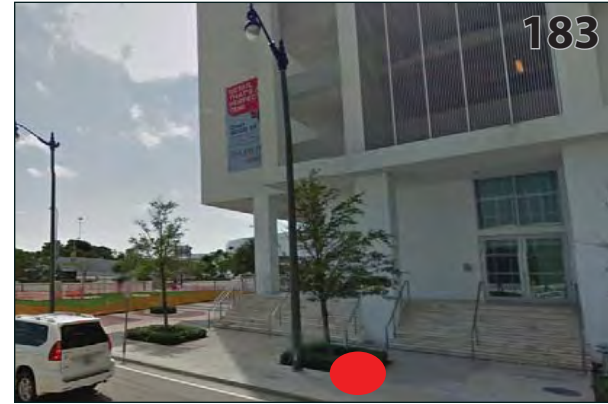
## Downtown Miami Wayfinding Signing Program

-  New Pole Location
-  Existing Pole



NOTE: Signs T65-T69 are outside Cumberland County and may require additional approval

Date	Revisions
2.17.11	12.30.12 08.16.13 01.21.14 05.01.14

# Proposed Sign Location Photos

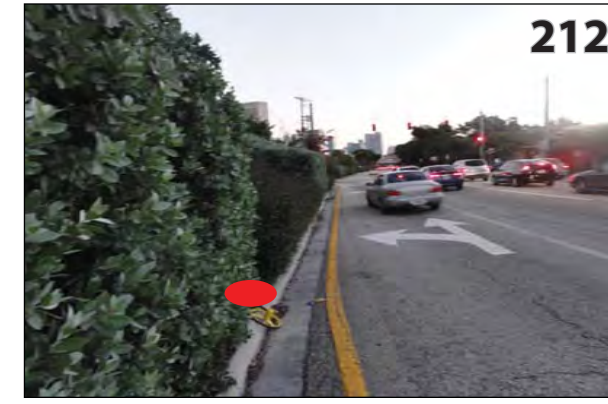
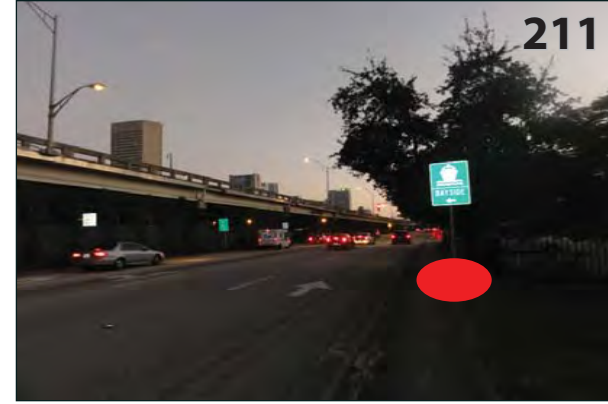
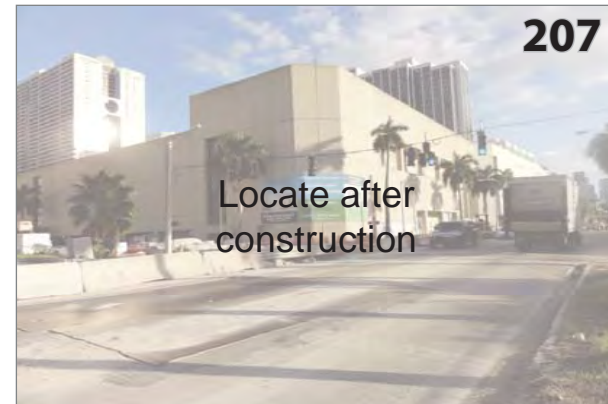
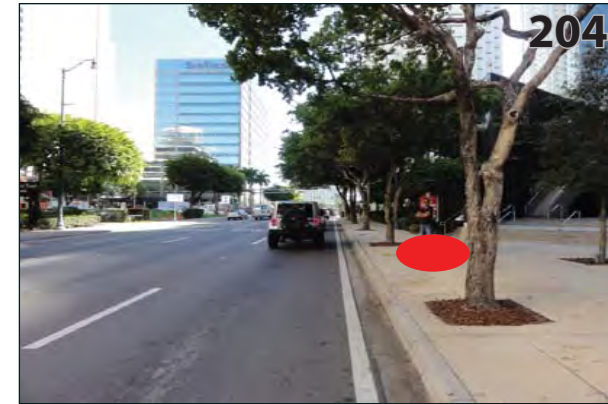
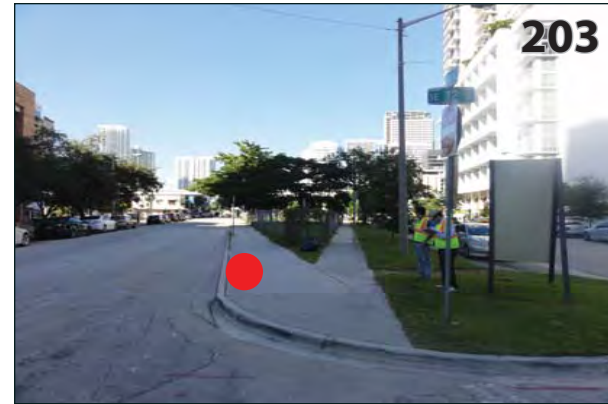
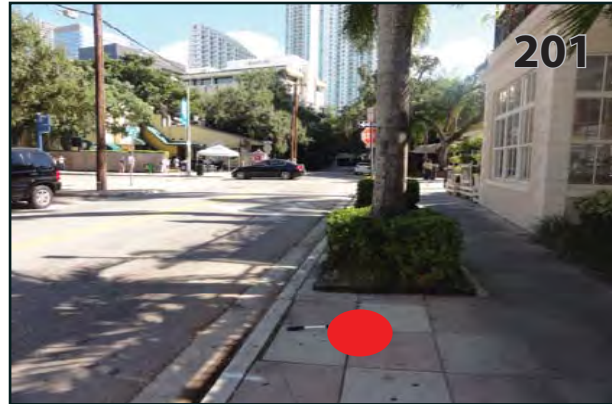
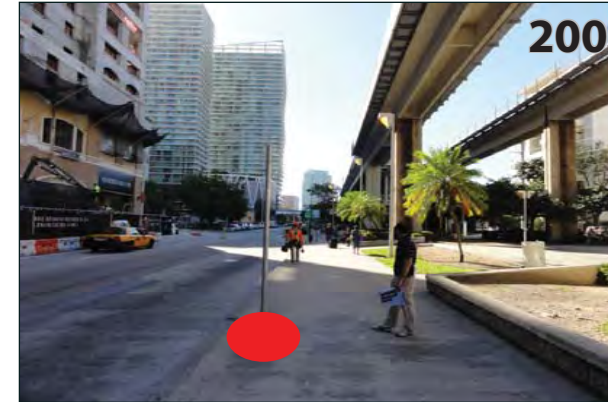
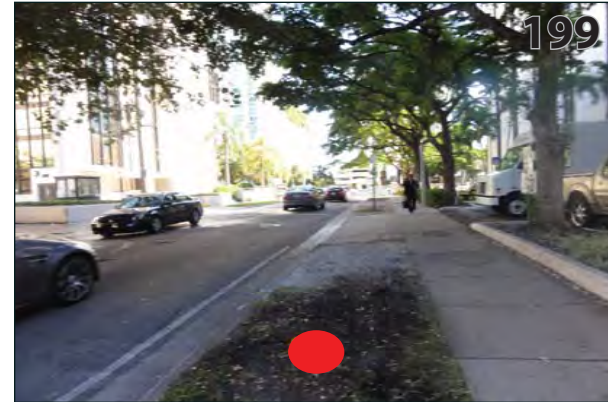
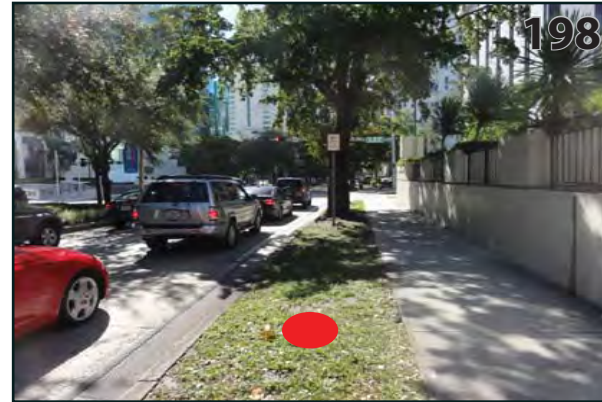


## Downtown Miami Wayfinding Signing Program



-  New Pole Location
-  Existing Pole

Date	Revisions
2.17.11	12.30.12 08.16.13 01.21.14 05.01.14

# Proposed Sign Location Photos

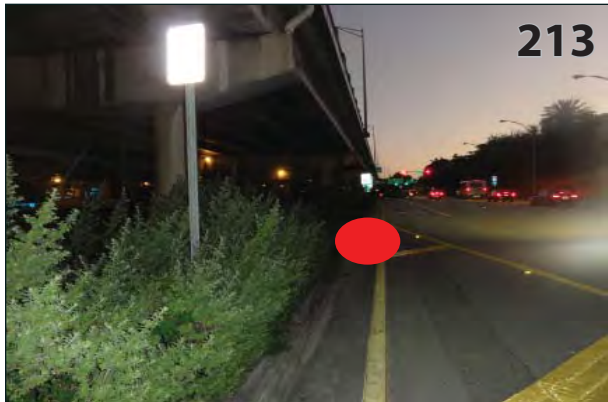


## Downtown Miami Wayfinding Signing Program

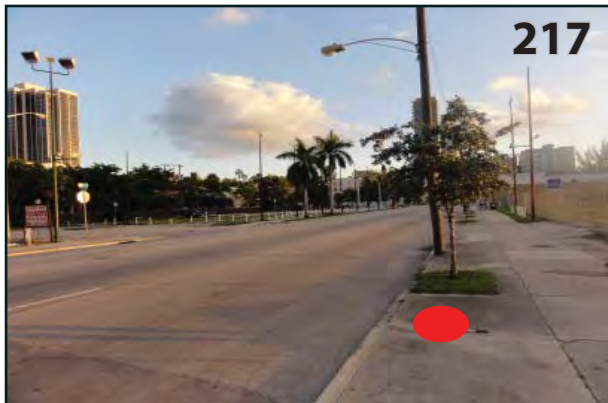
-  New Pole Location
-  Existing Pole

Date	Revisions
2.17.11	12.30.12 08.16.13 01.21.14 05.01.14

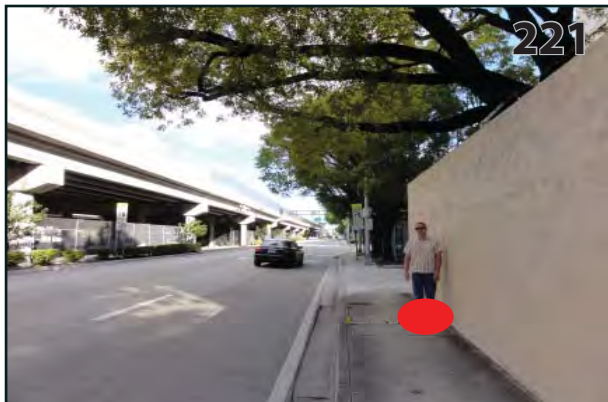
Proposed Sign Location Photos



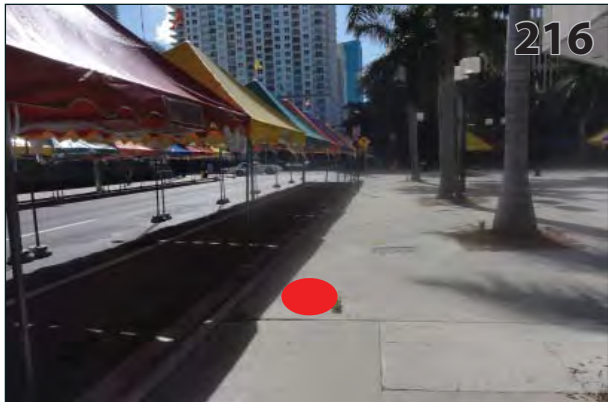
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217



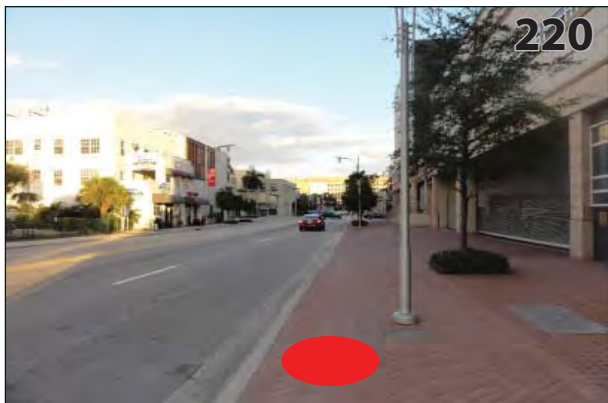
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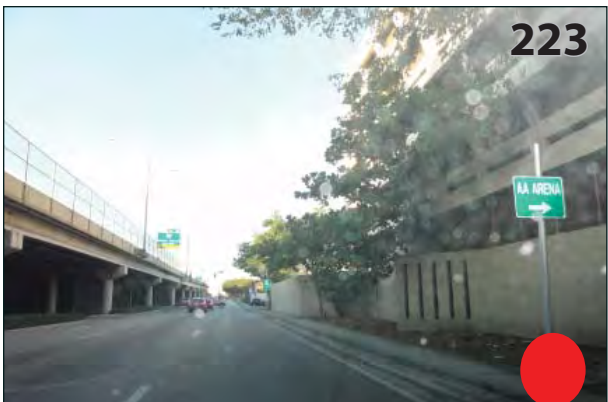
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219





220



223

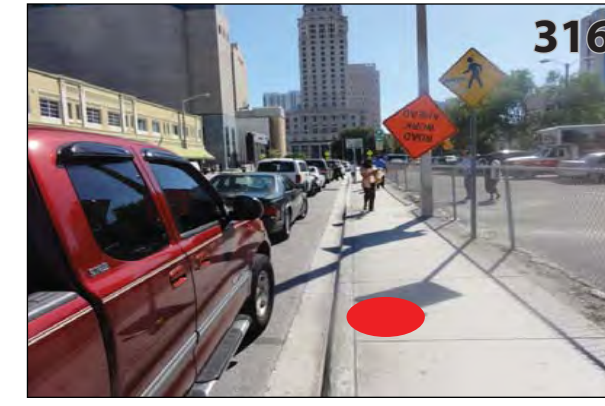
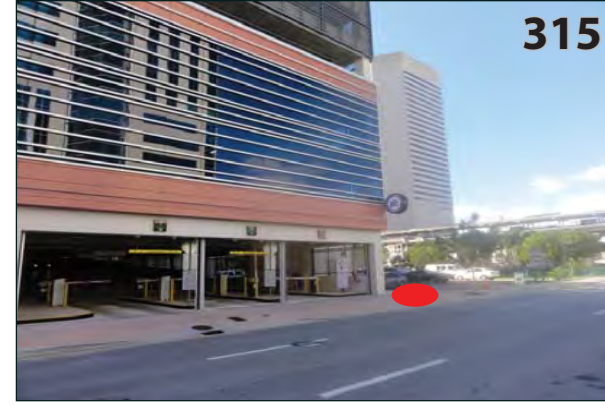
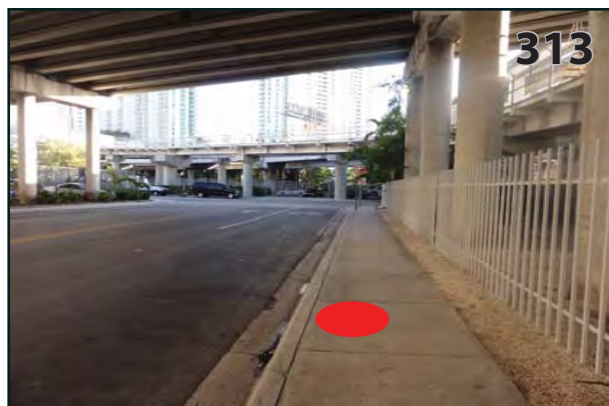
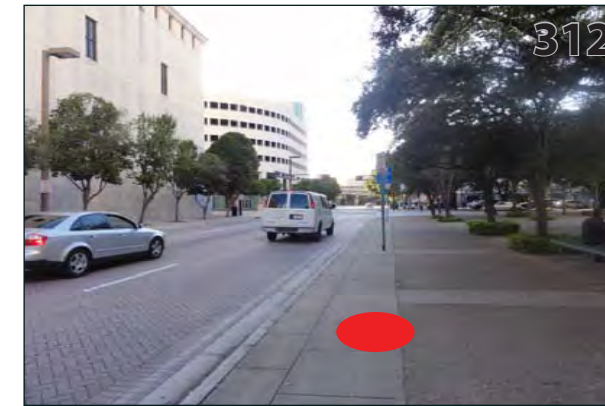
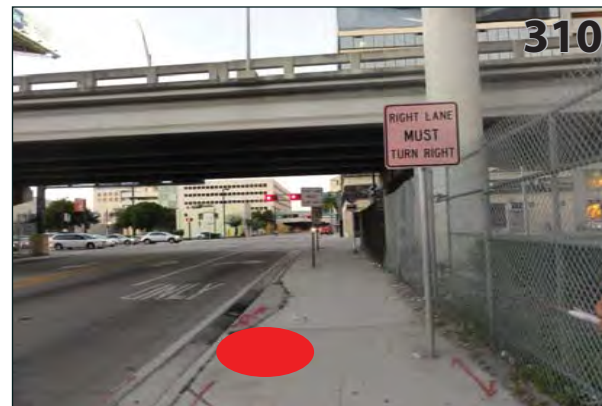
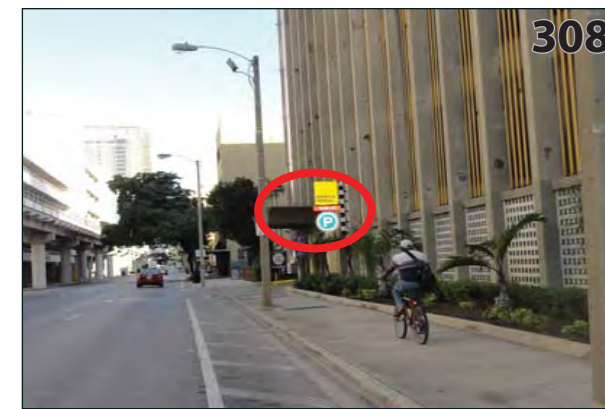
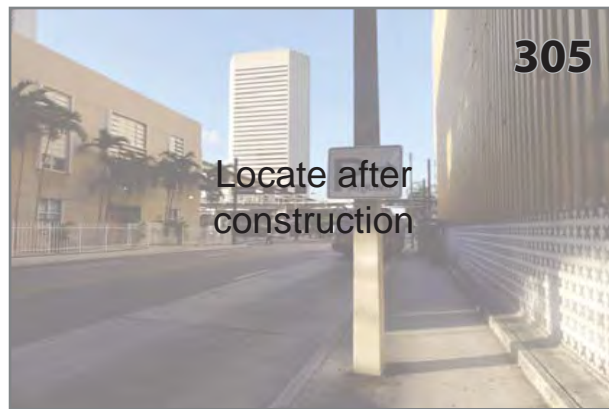
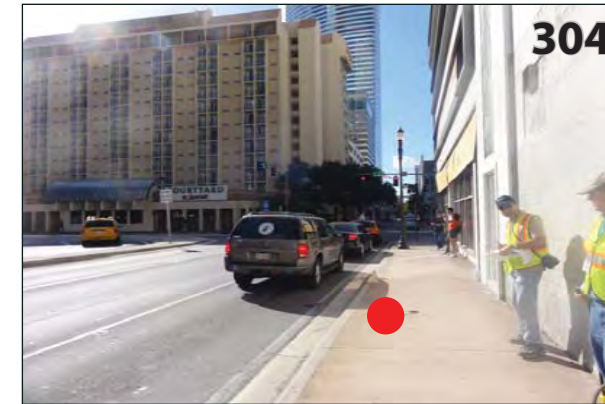
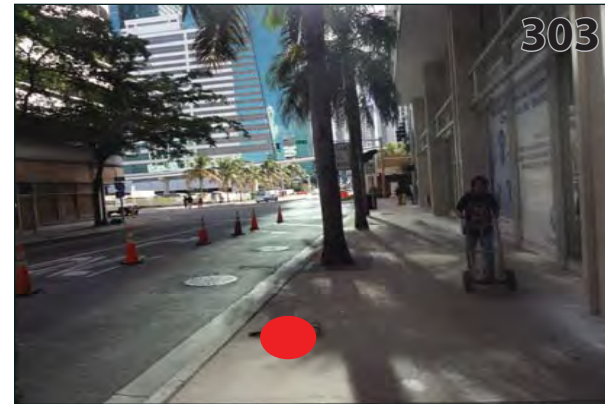
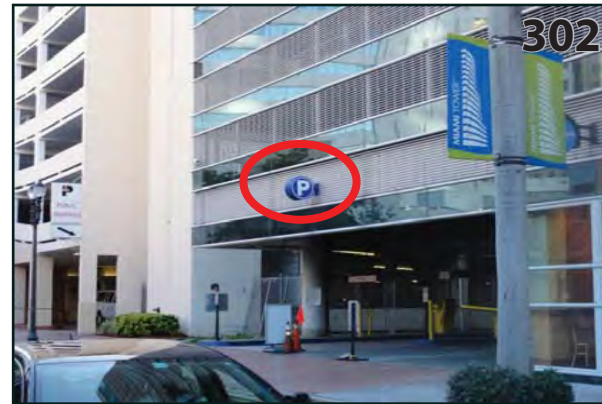
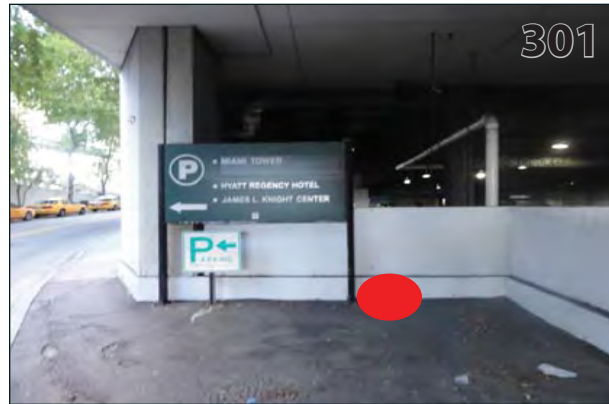
Downtown Miami  
Wayfinding Signing Program



-  New Pole Location
-  Existing Pole

Date	Revisions
2.17.11	12.30.12 08.16.13 01.21.14 05.01.14

# Proposed Sign Location Photos

## Downtown Miami Wayfinding Signing Program

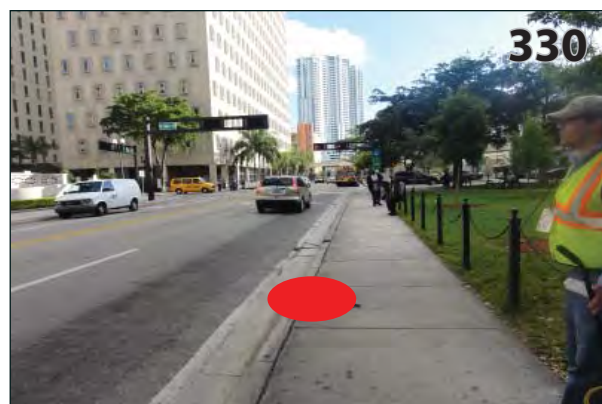
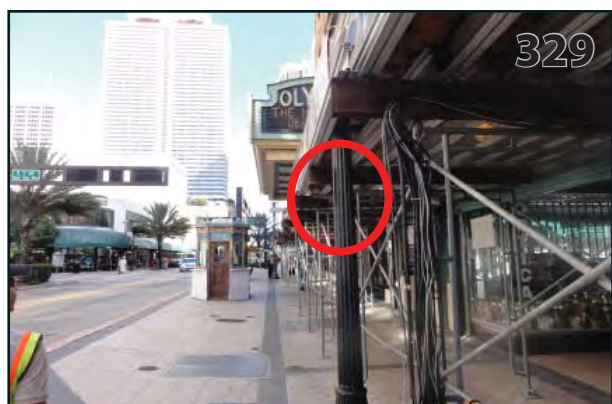
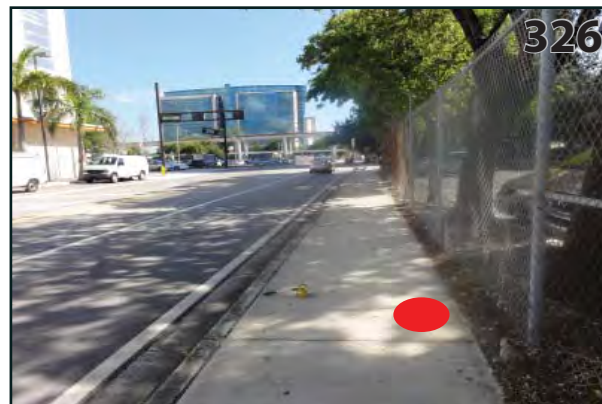
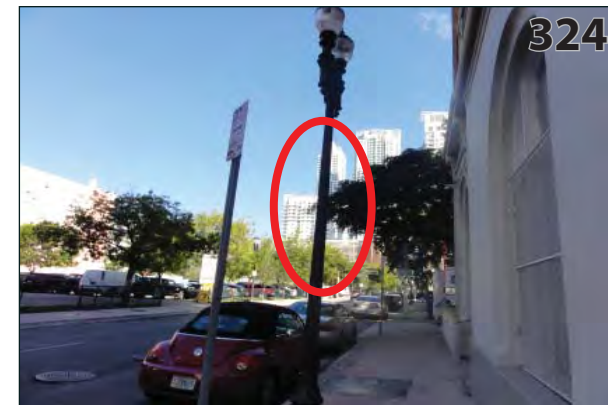
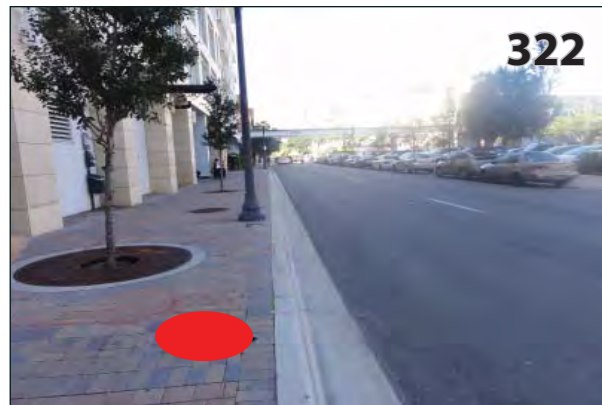
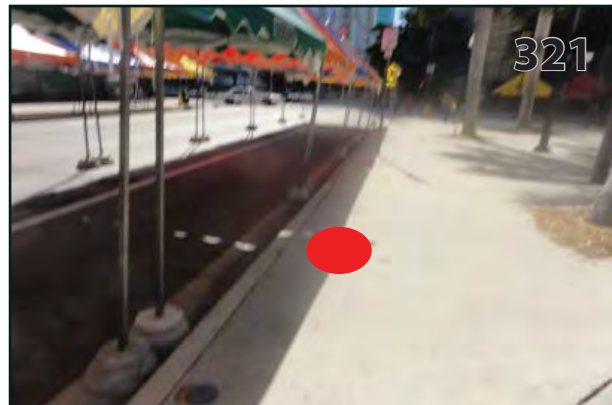
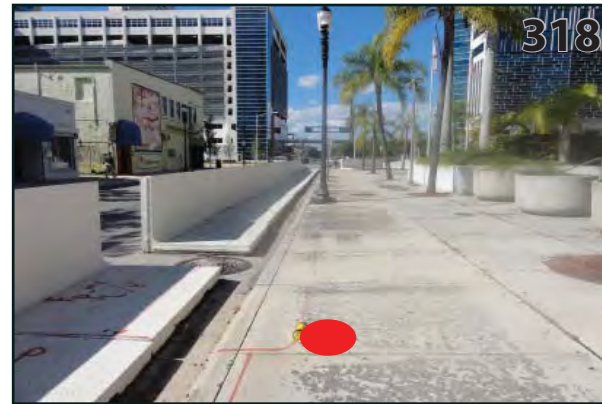
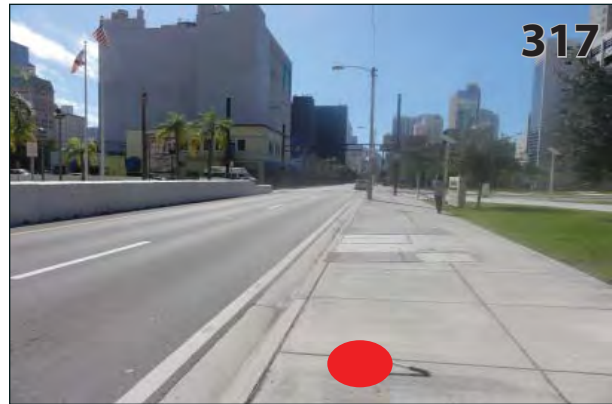


-  New Pole Location
-  Existing Pole

Date	Revisions
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# Proposed Sign Location Photos

## Downtown Miami Wayfinding Signing Program



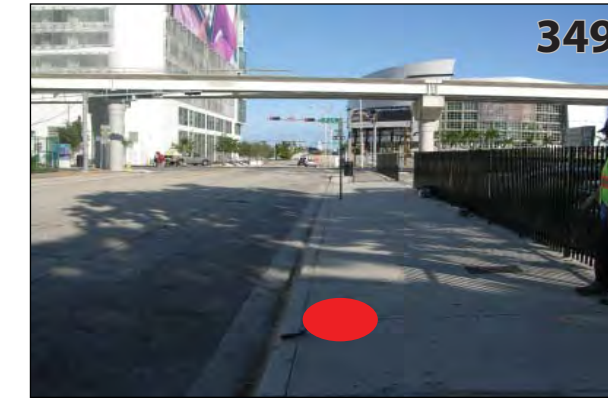
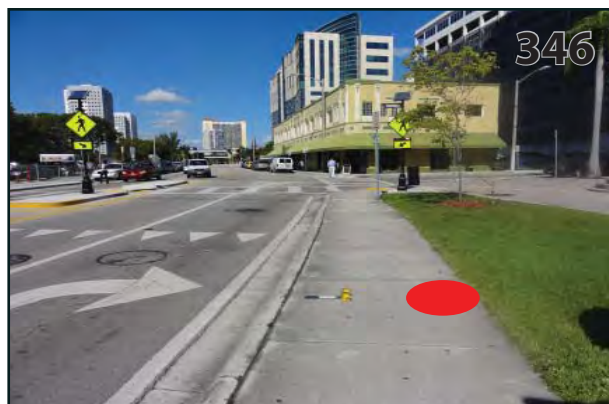
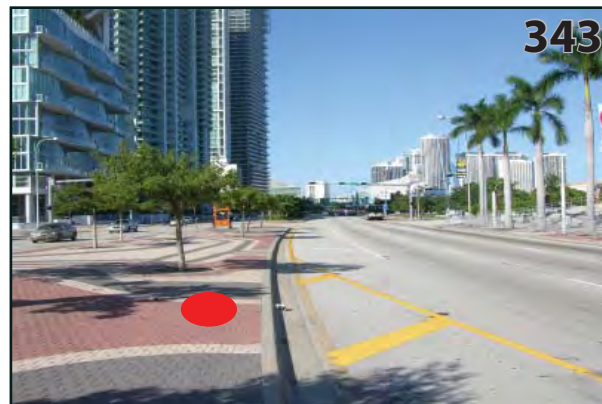
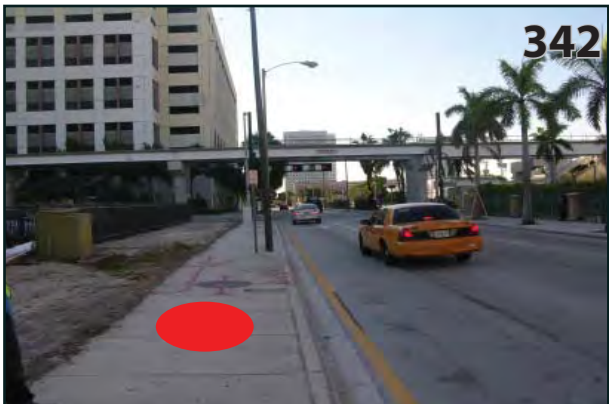
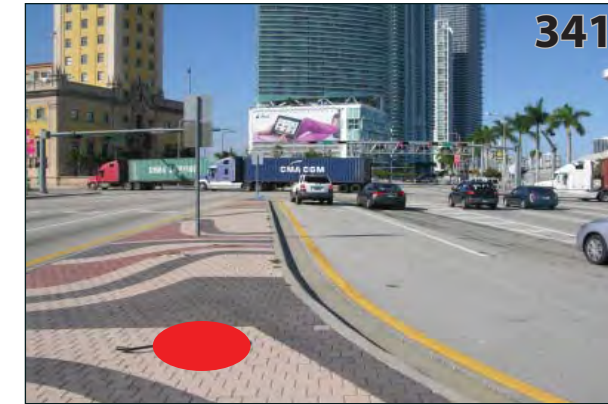
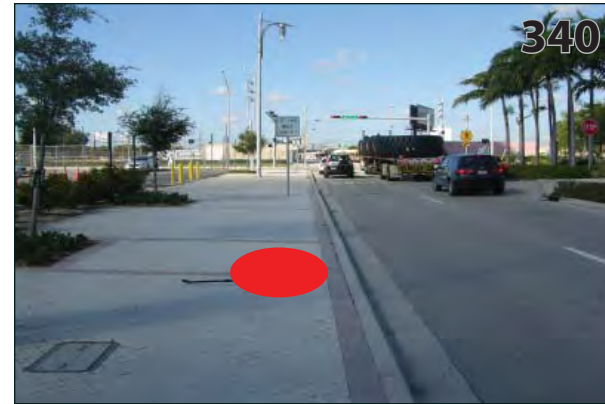
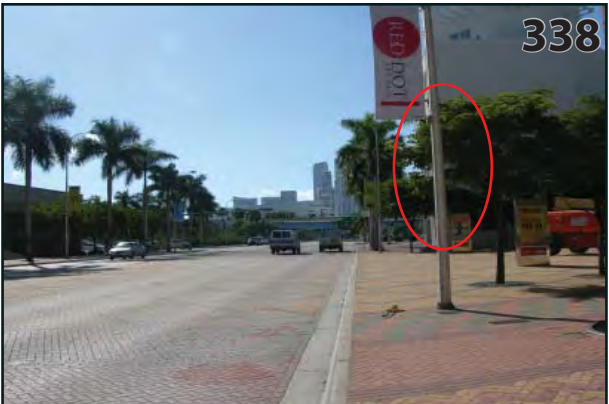
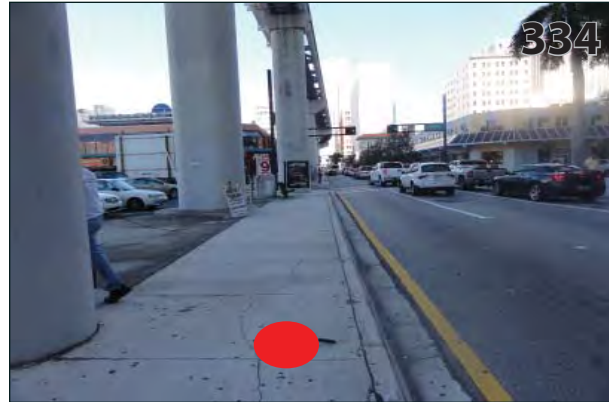
- New Pole Location
- Existing Pole

Date	Revisions
2.17.11	12.30.12 08.16.13 01.21.14 05.01.14



# Proposed Sign Location Photos

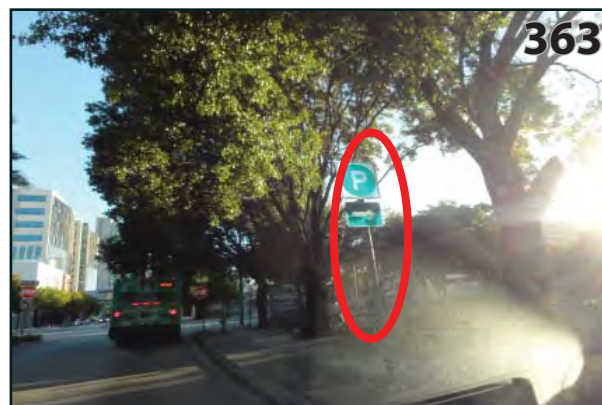
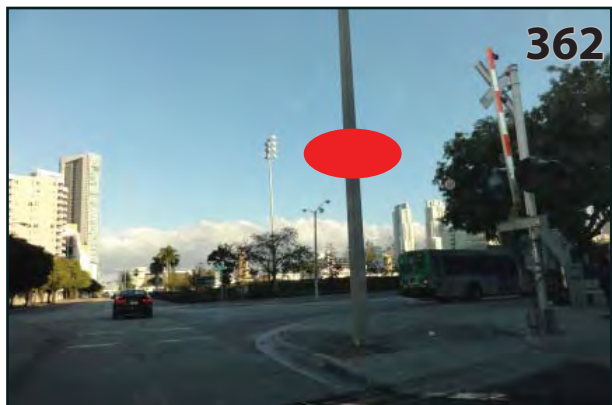
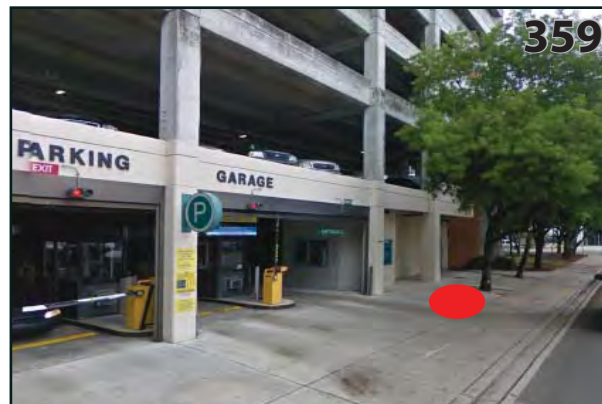
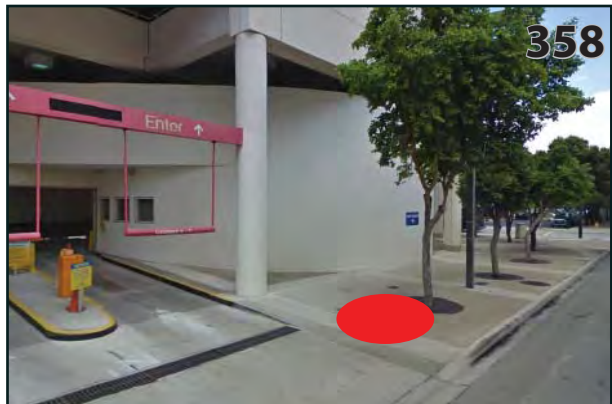
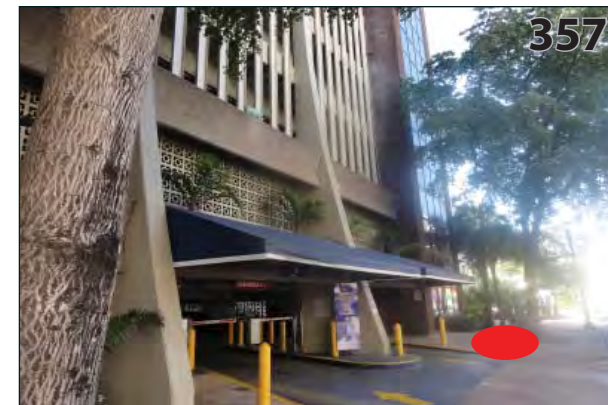
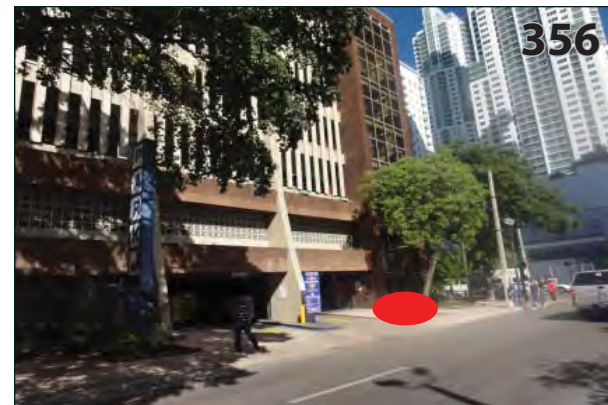
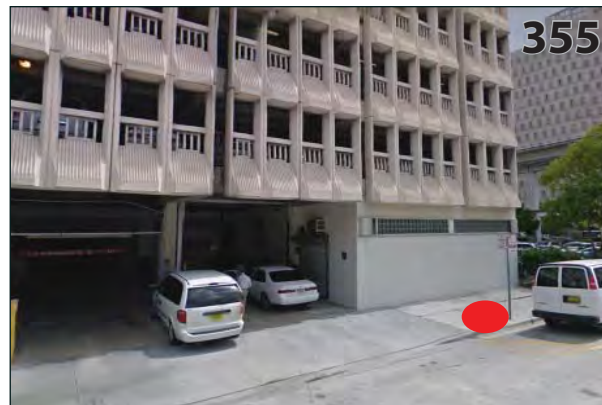
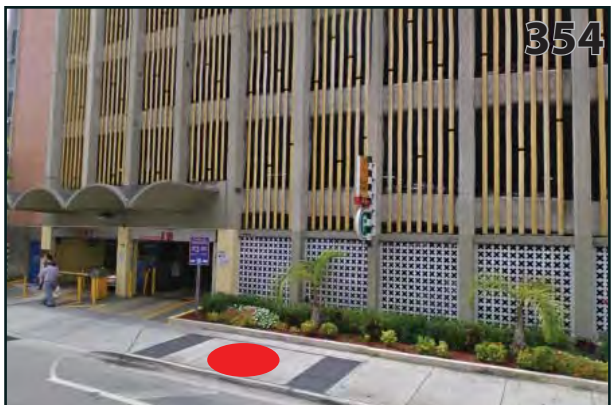
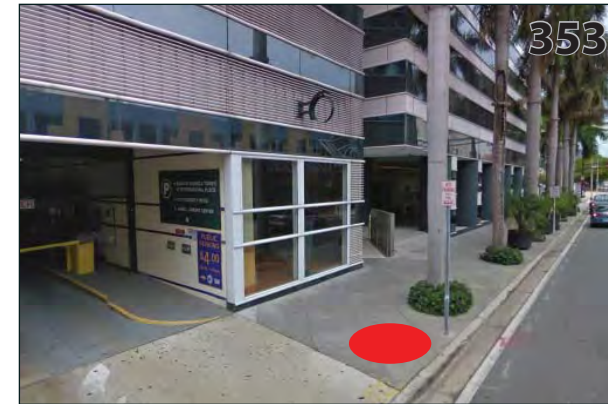
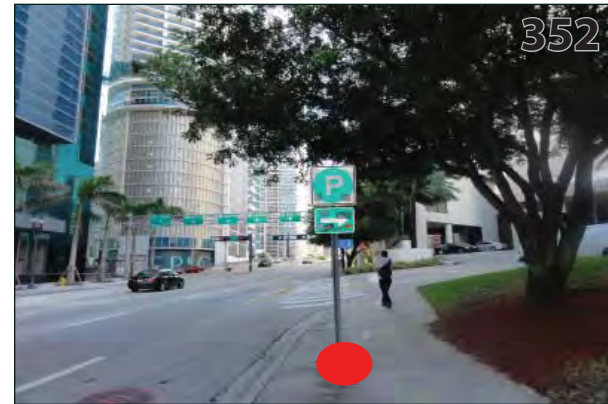
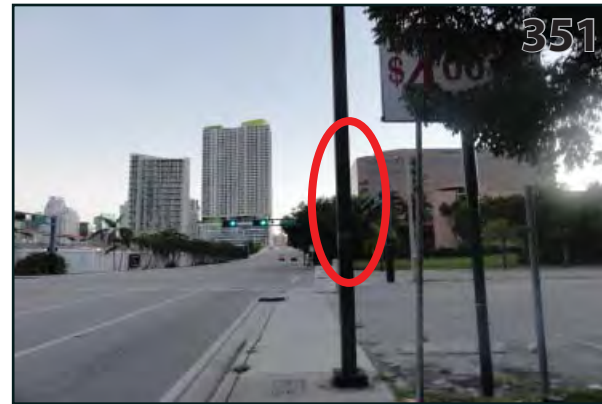
## Downtown Miami Wayfinding Signing Program





- New Pole Location
- Existing Pole

Date	Revisions
2.17.11	12.30.12 08.16.13 01.21.14 05.01.14

# Proposed Sign Location Photos



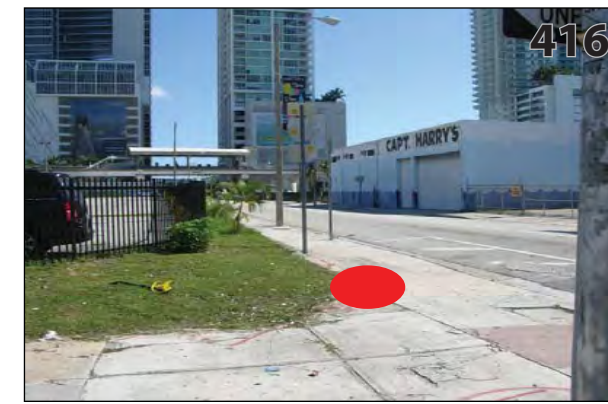
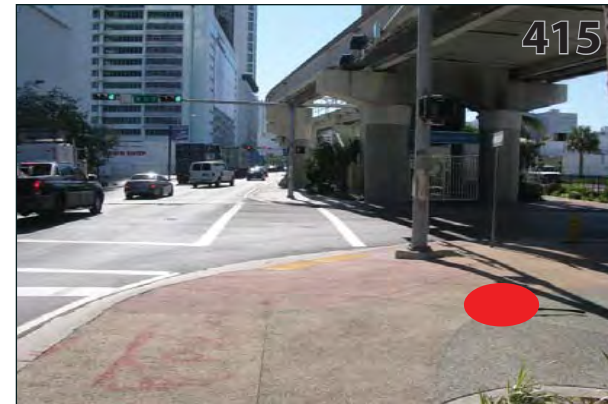
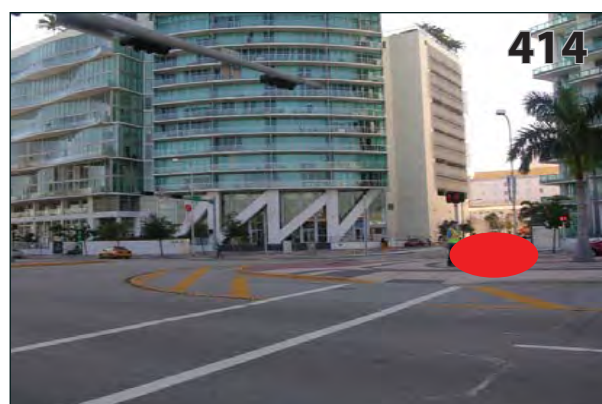
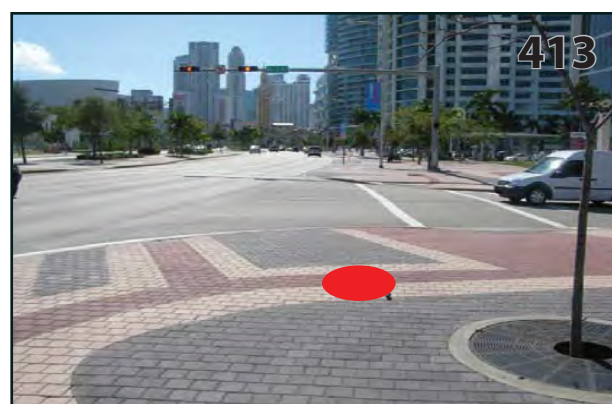
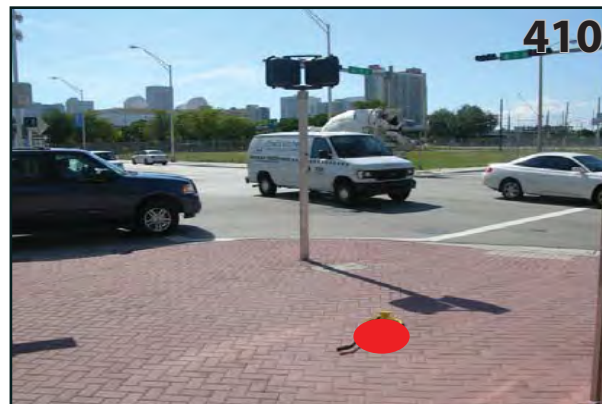
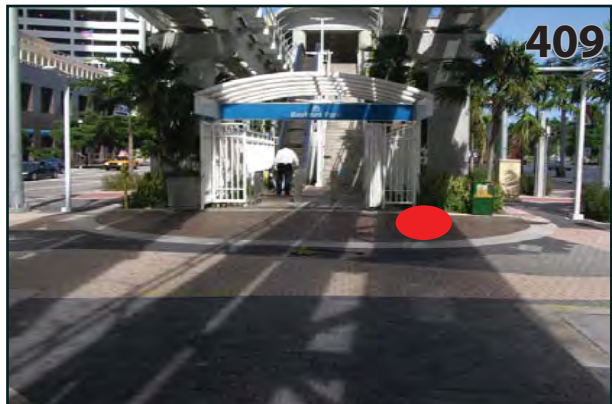
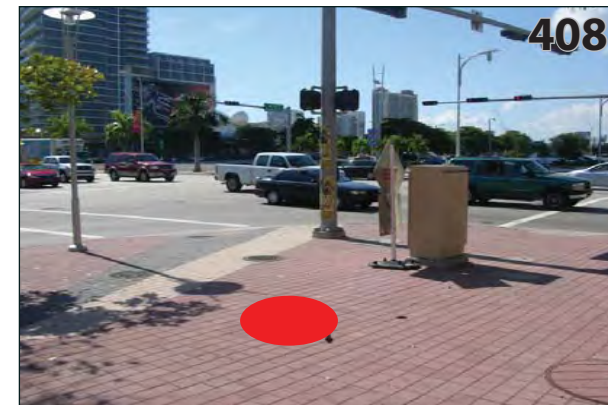
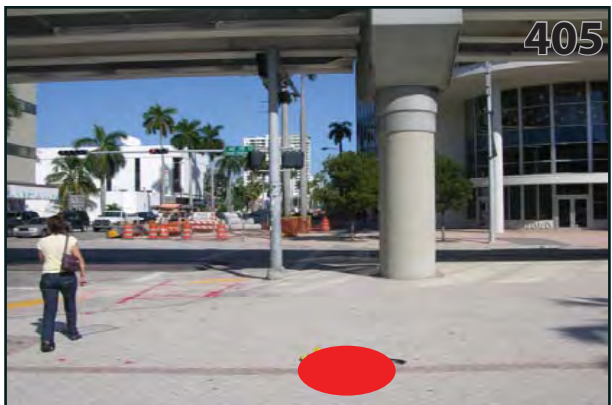
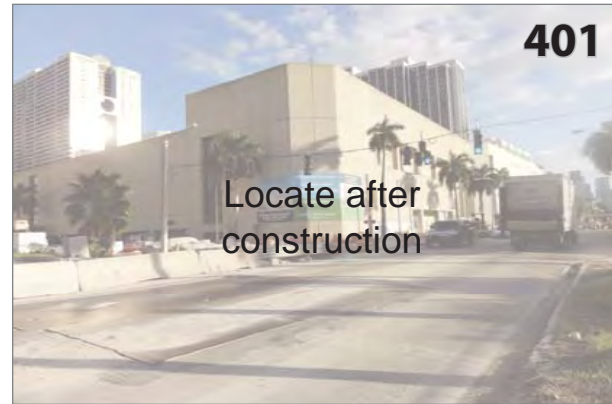
## Downtown Miami Wayfinding Signing Program



-  New Pole Location
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# Proposed Sign Location Photos

## Downtown Miami Wayfinding Signing Program

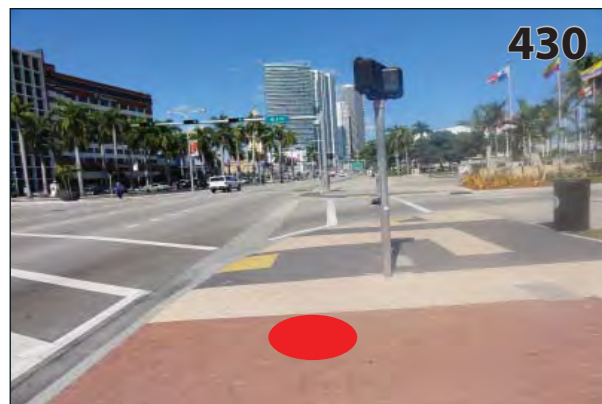
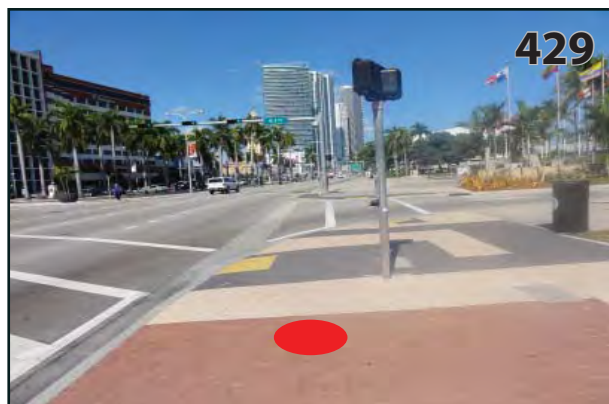
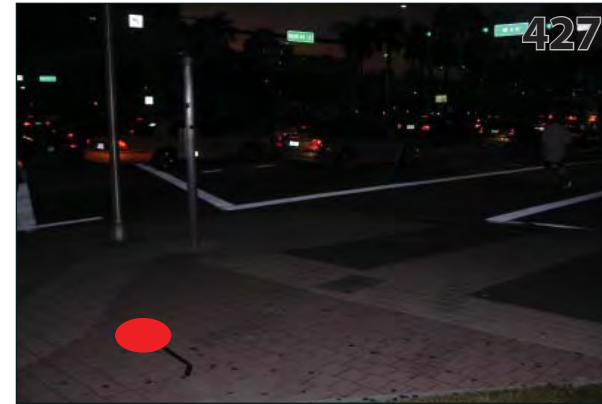
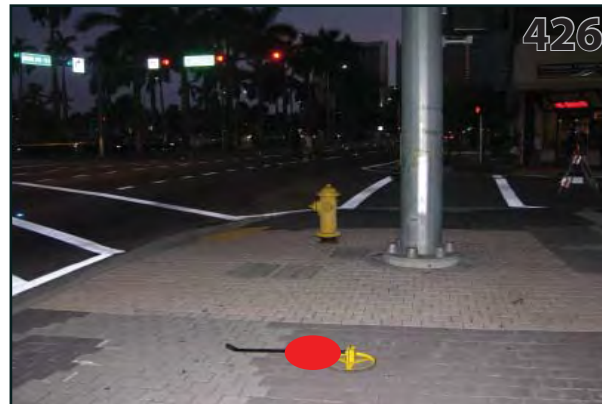
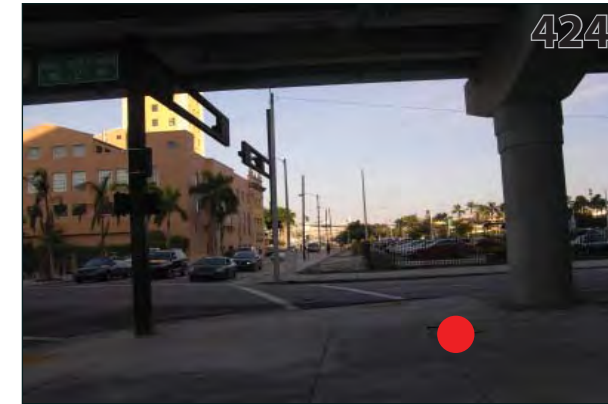
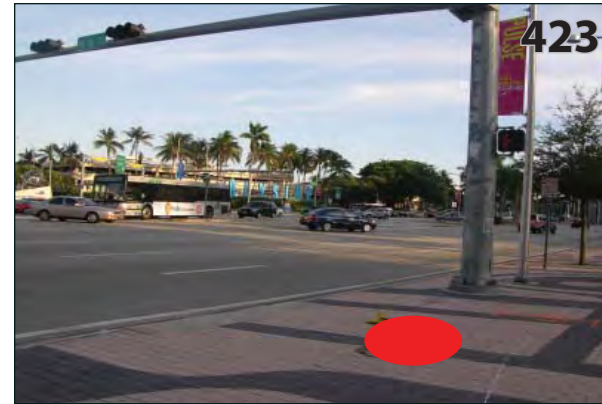
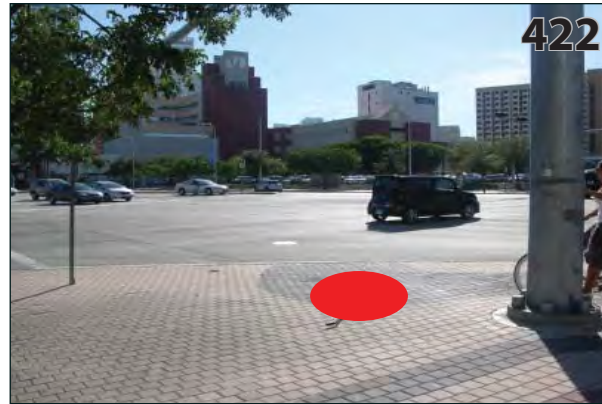
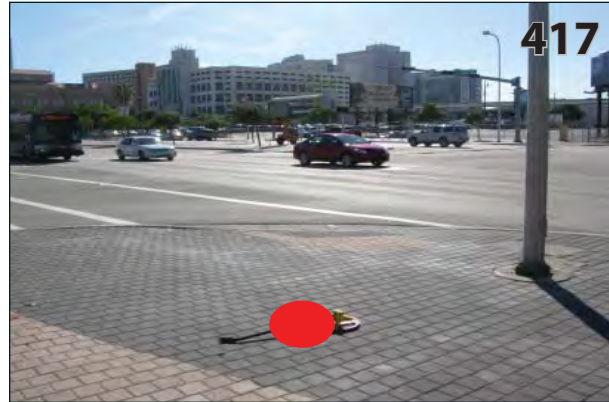




-  New Pole Location
-  Existing Pole

Date	Revisions
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# Proposed Sign Location Photos

## Downtown Miami Wayfinding Signing Program

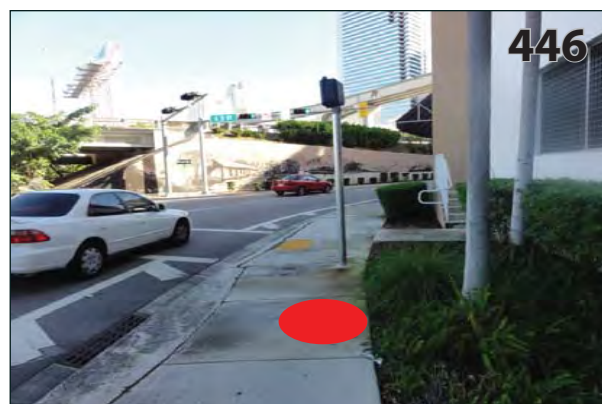
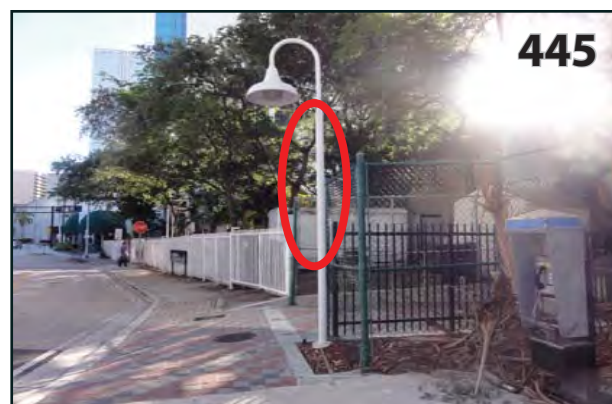
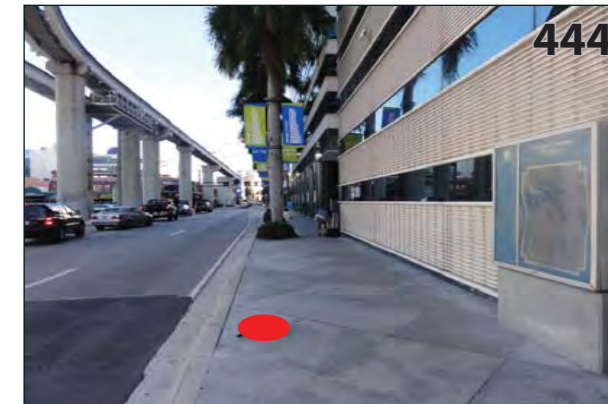
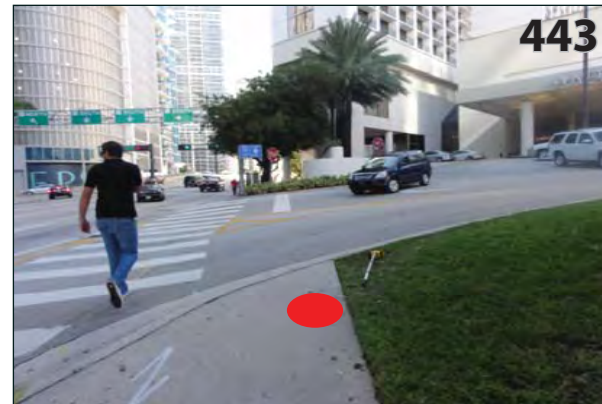
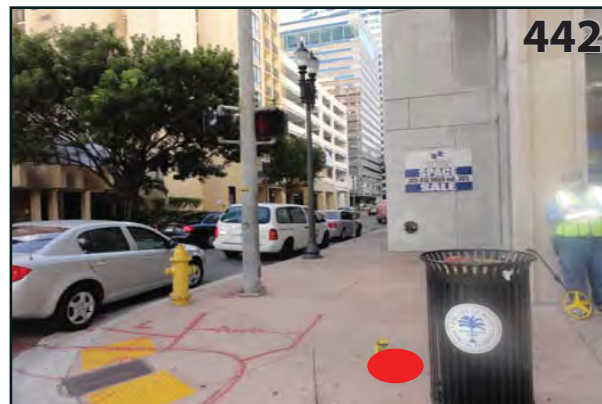
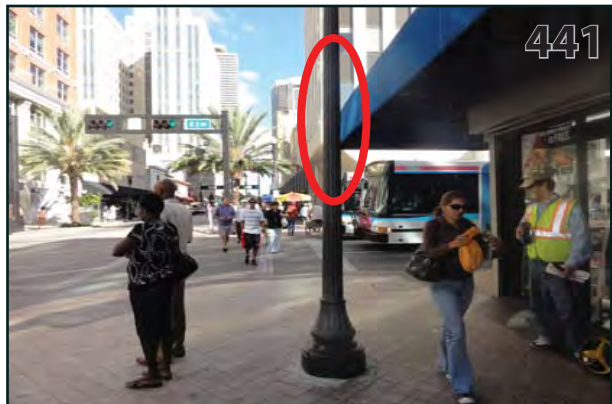
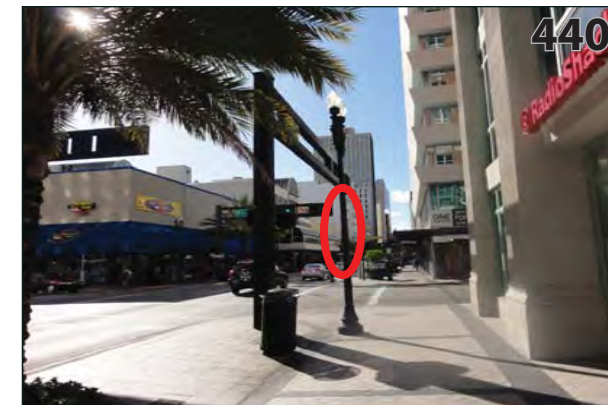
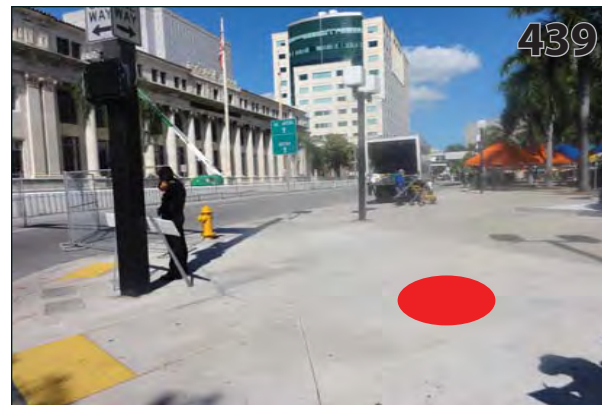
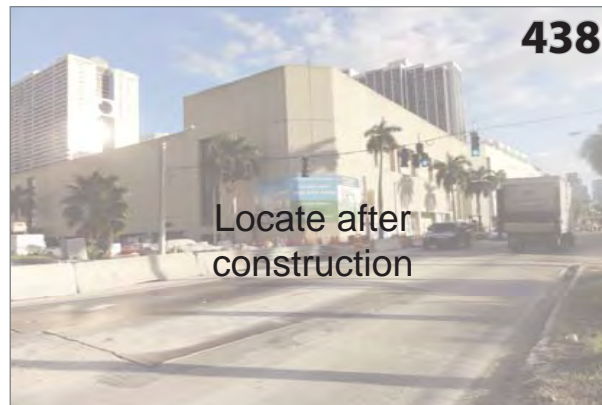
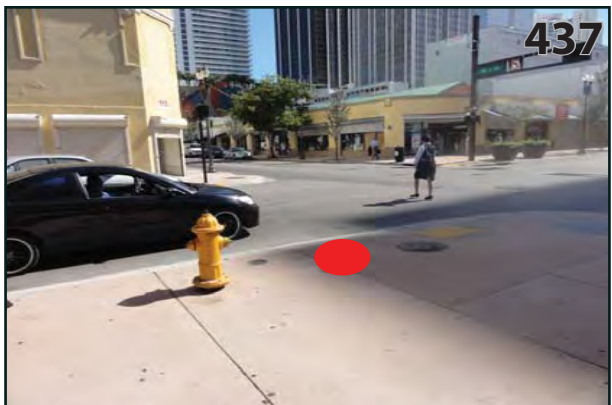
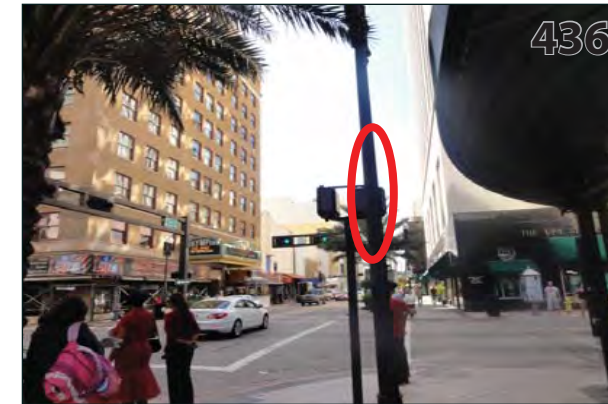
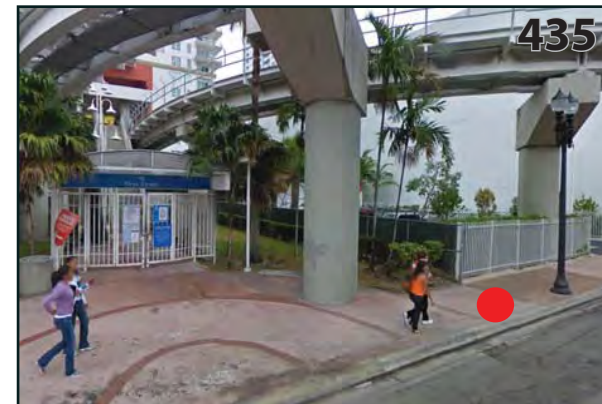
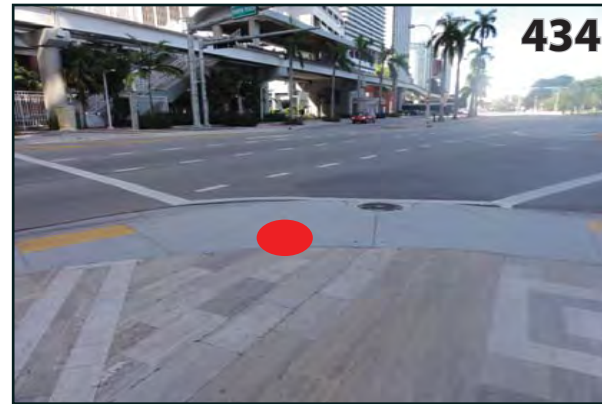


-  New Pole Location
-  Existing Pole

Date	Revisions
2.17.11	12.30.12 08.16.13 01.21.14 05.01.14

# Proposed Sign Location Photos

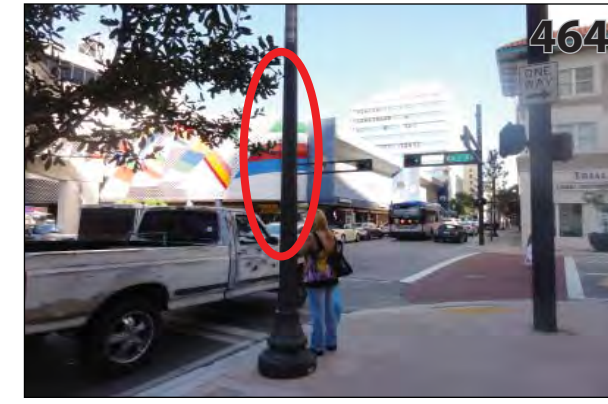
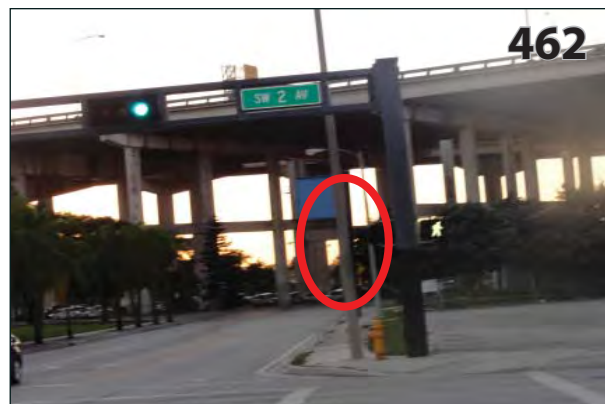
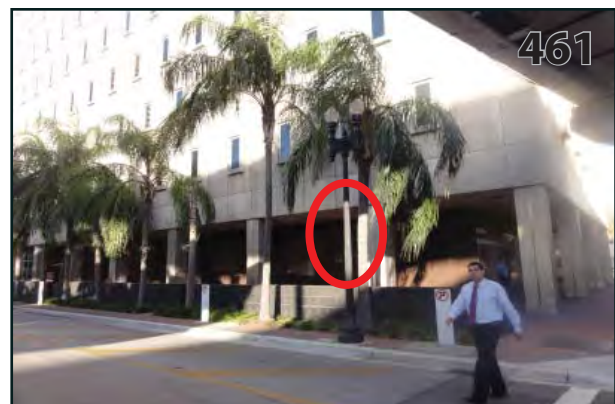
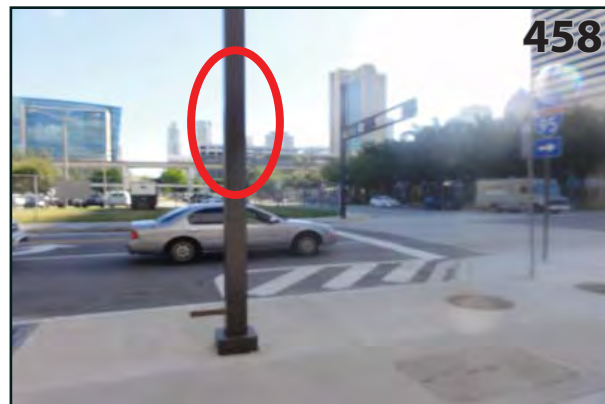
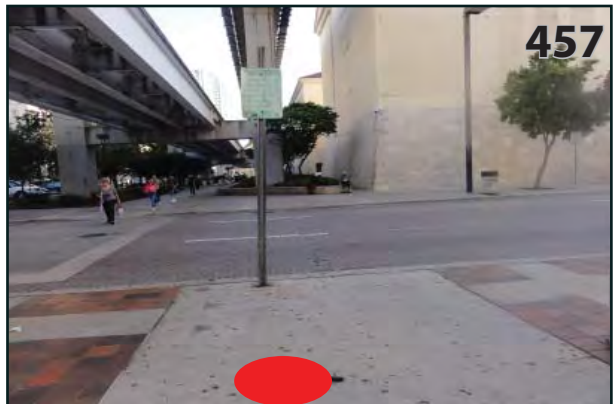
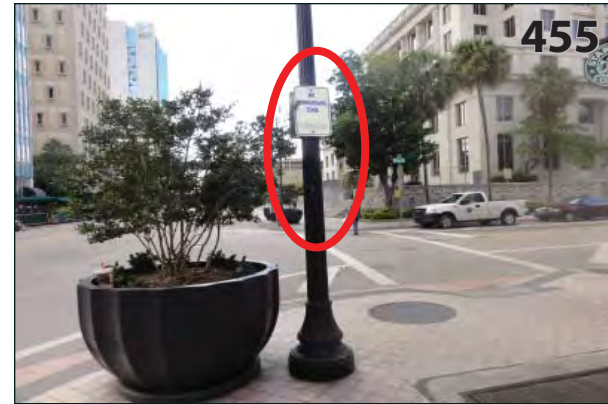
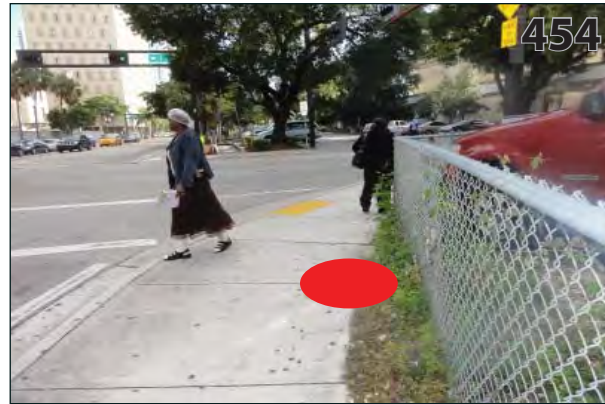
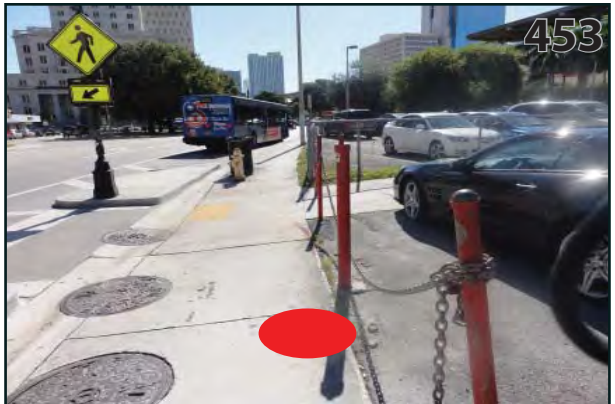
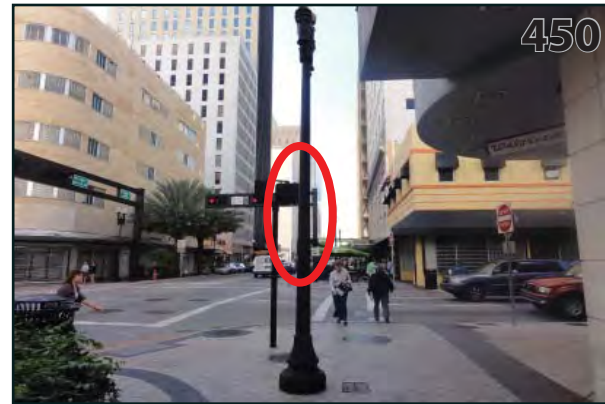
## Downtown Miami Wayfinding Signing Program



- New Pole Location
- Existing Pole

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# Proposed Sign Location Photos



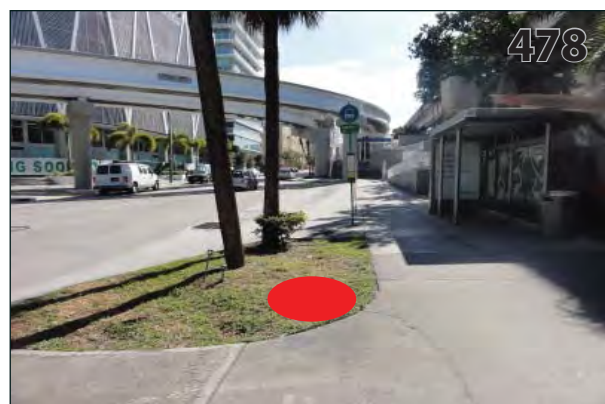
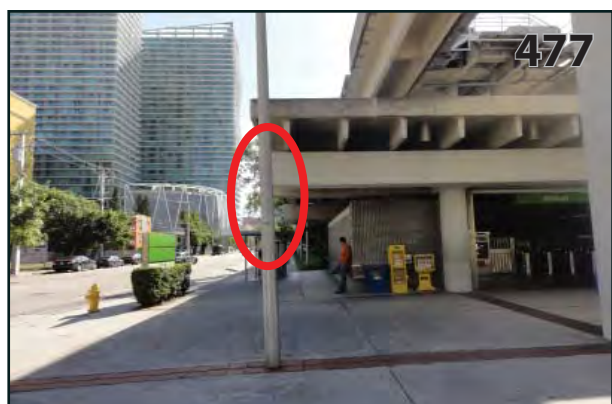
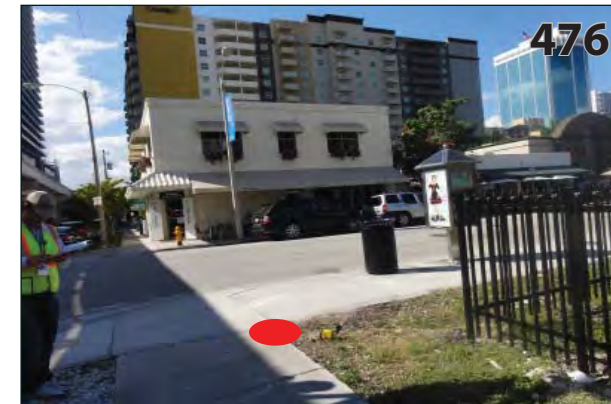
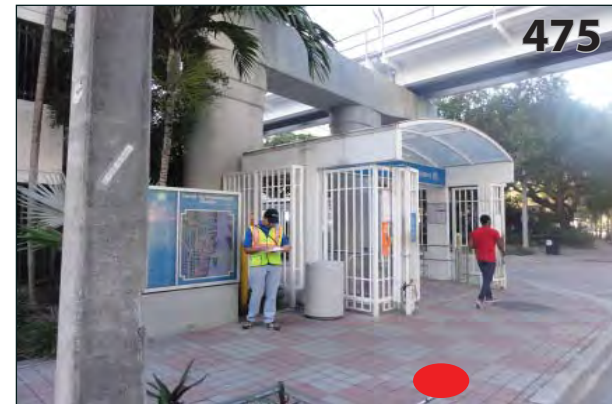
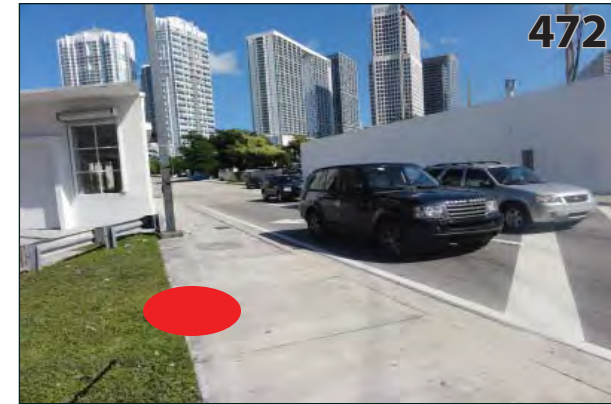
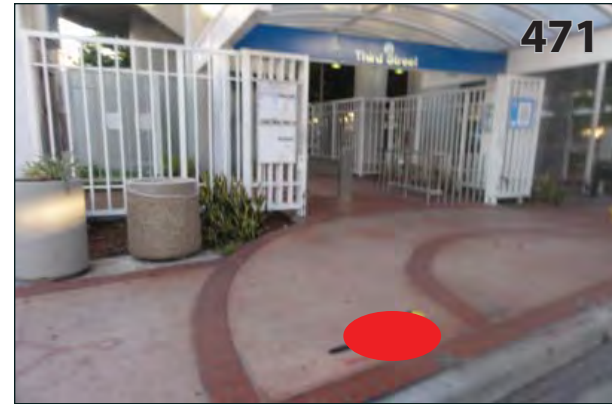
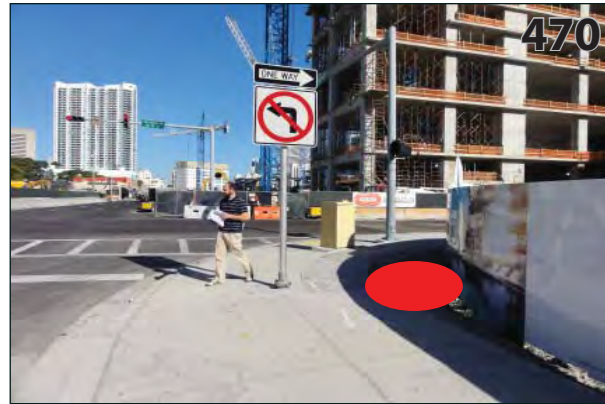
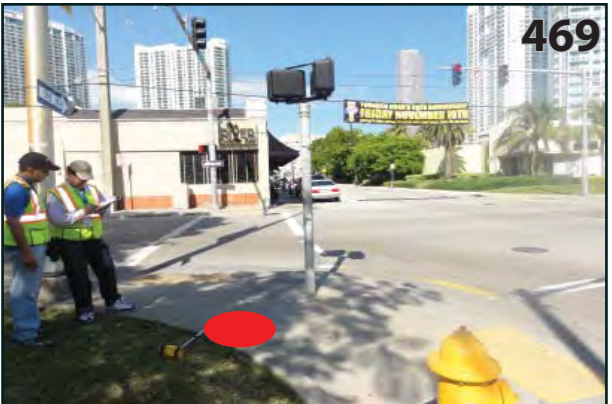
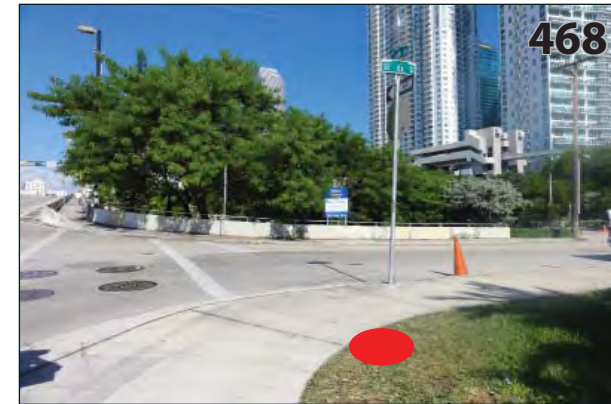
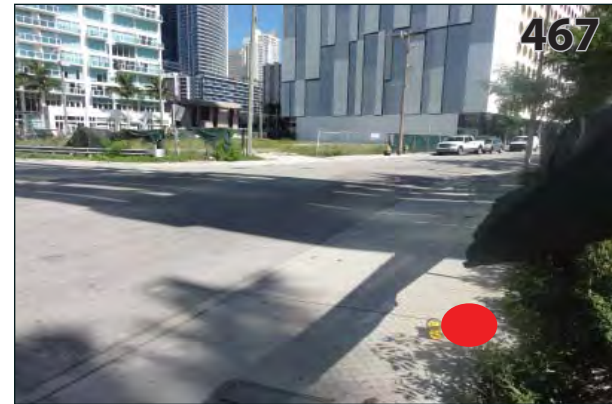
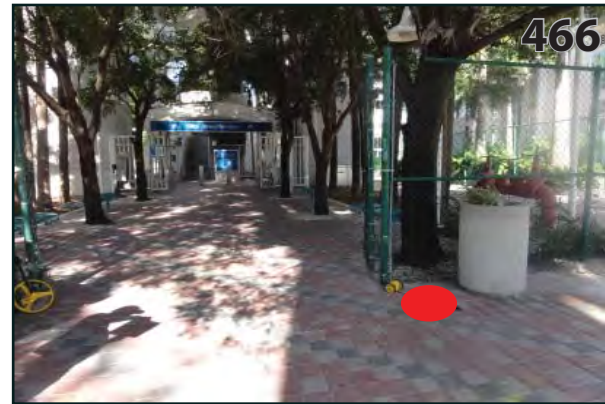
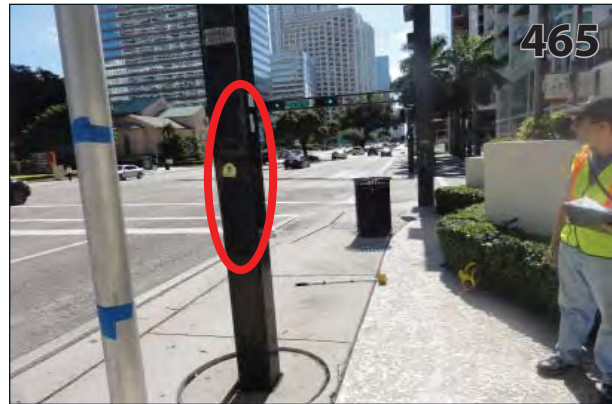
## Downtown Miami Wayfinding Signing Program

- New Pole Location
- Existing Pole

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# Proposed Sign Location Photos

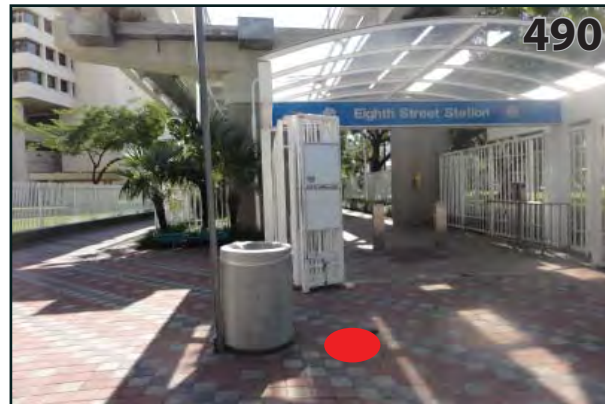
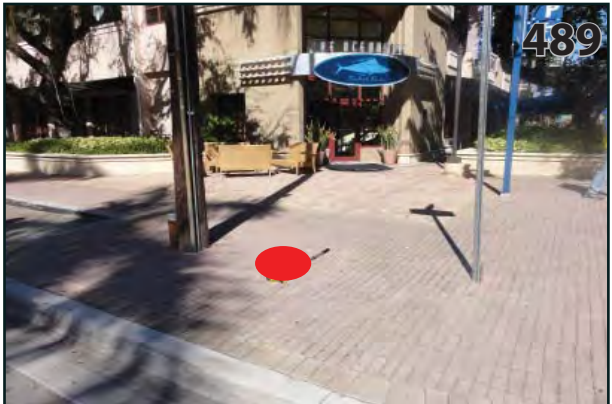
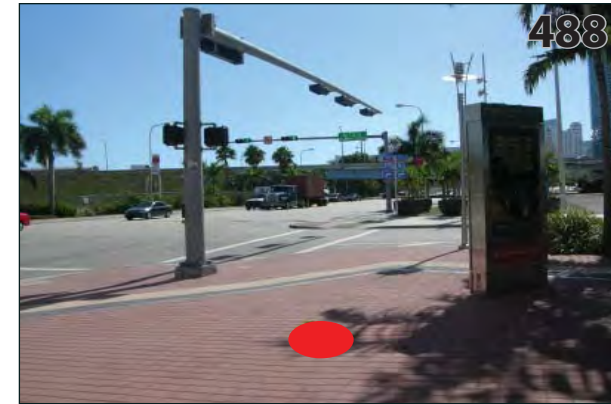
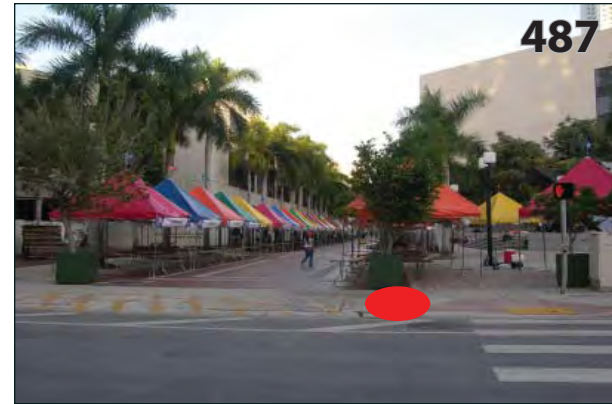
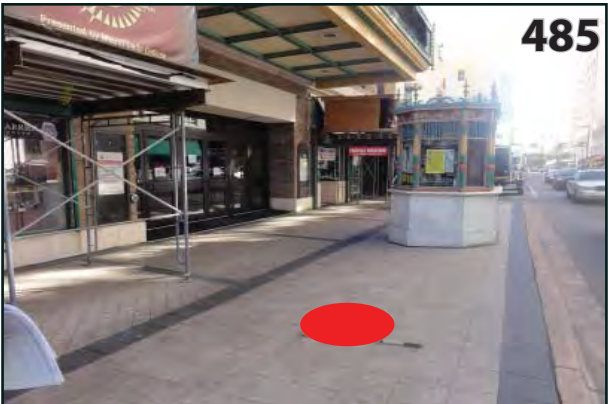
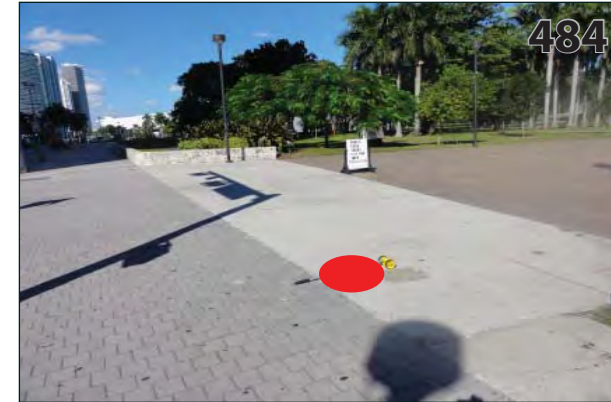
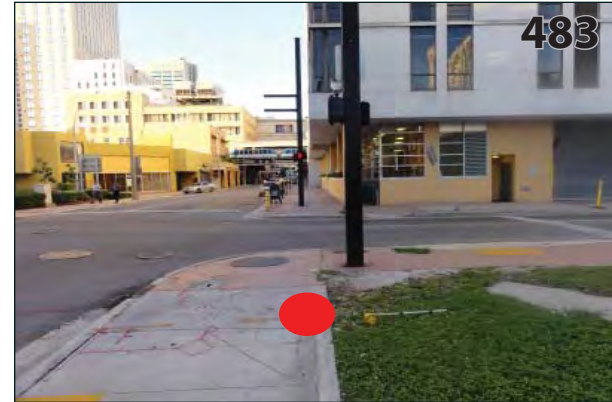
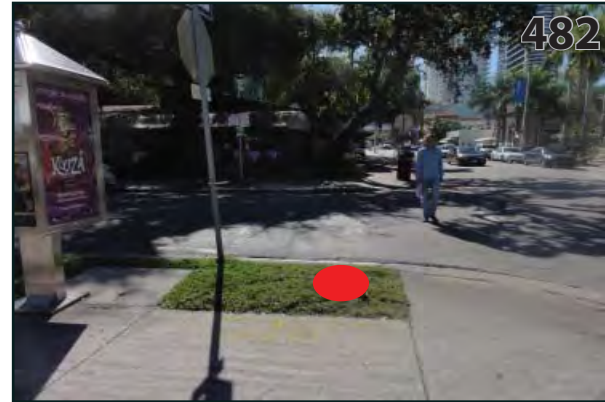
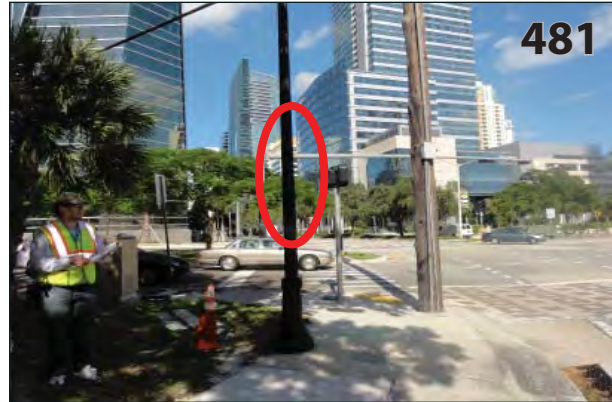
## Downtown Miami Wayfinding Signing Program



- New Pole Location
- Existing Pole

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# Proposed Sign Location Photos



## Downtown Miami Wayfinding Signing Program

 New Pole Location

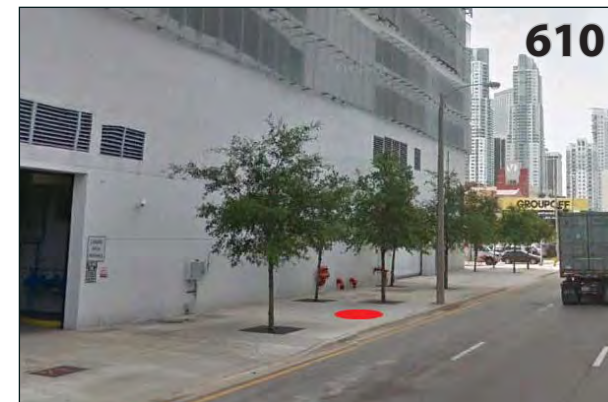
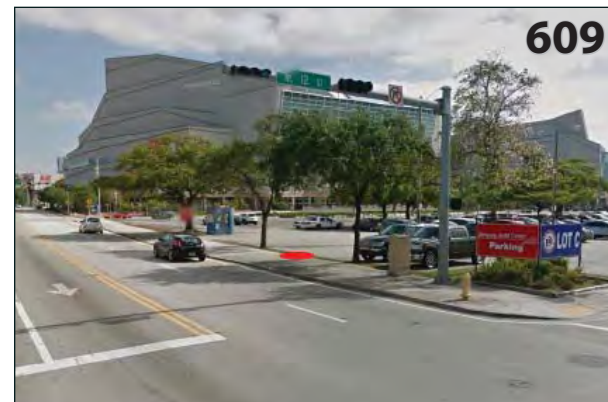
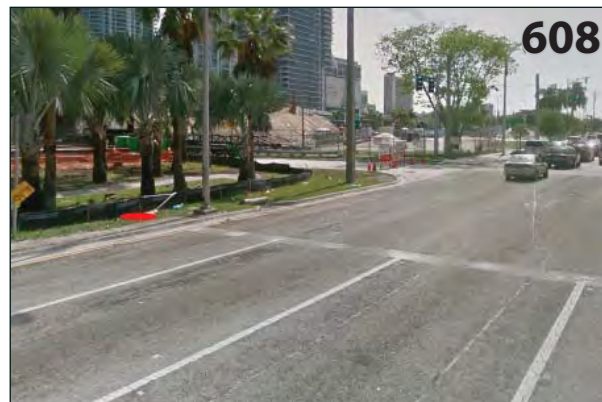
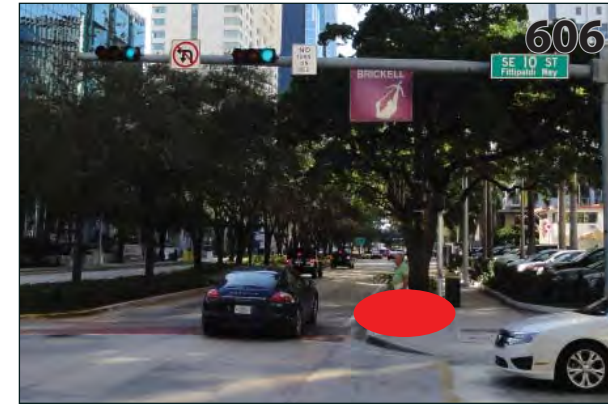
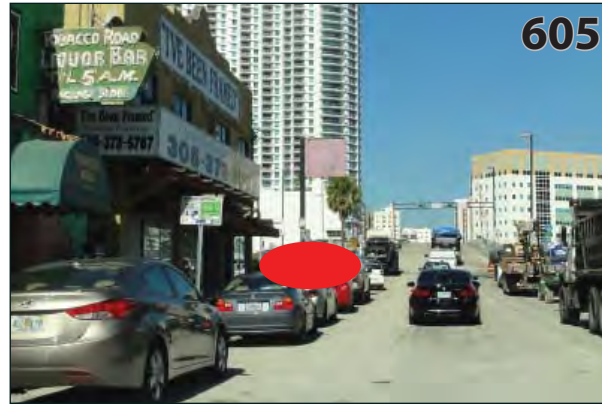
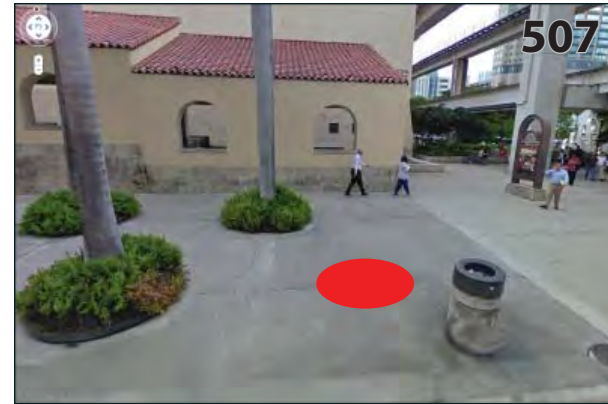
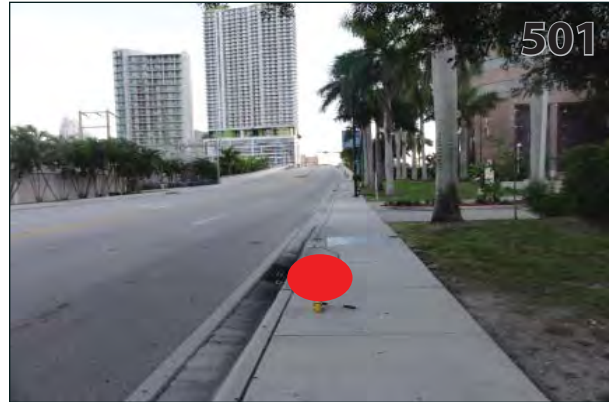
 Existing Pole



Date	Revisions
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# Proposed Sign Location Photos

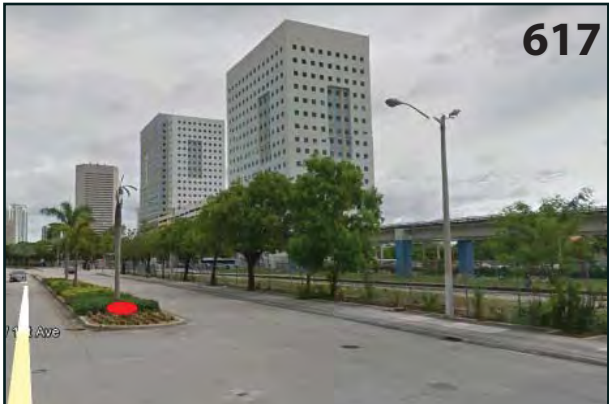
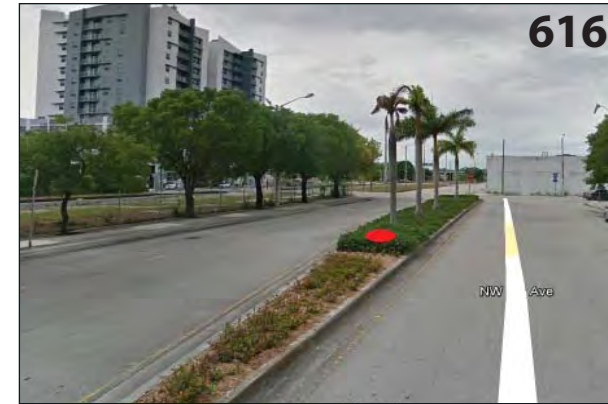
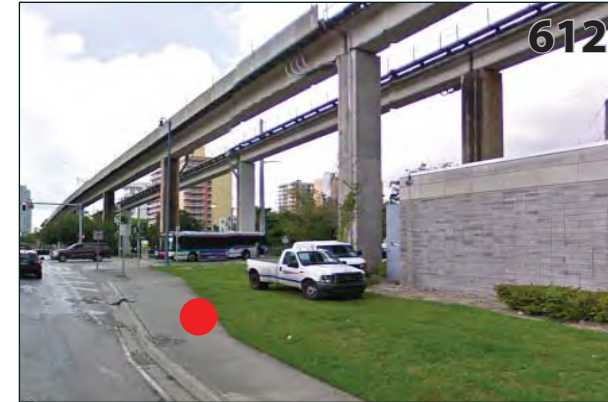
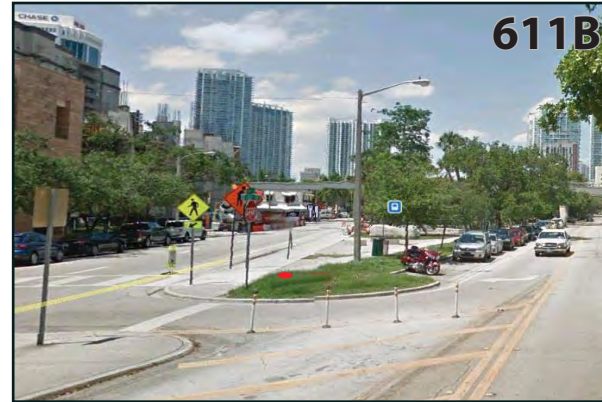
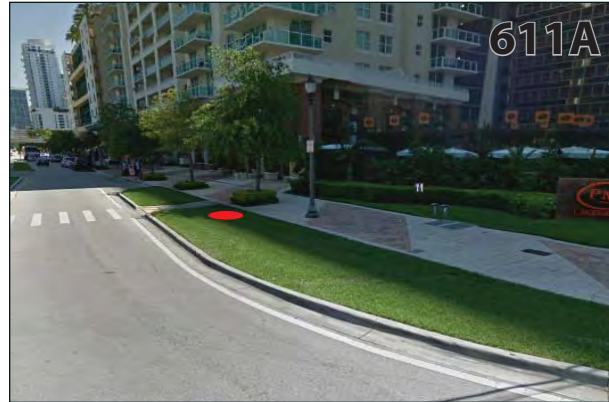
## Downtown Miami Wayfinding Signing Program





-  New Pole Location
-  Existing Pole

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# Proposed Sign Location Photos

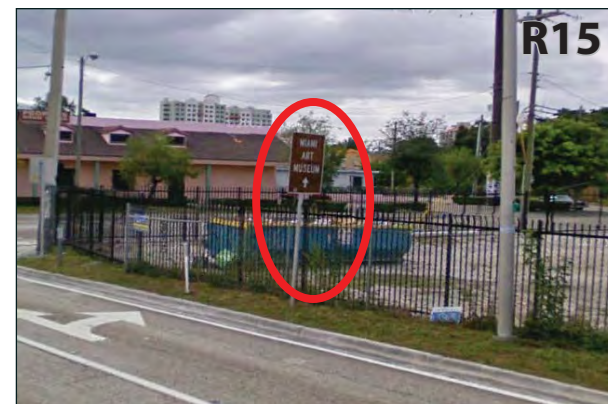
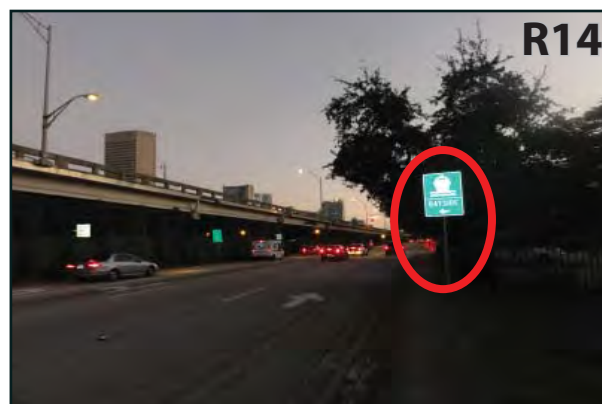
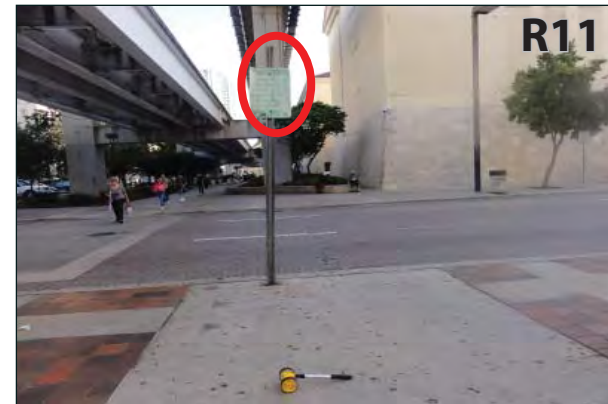
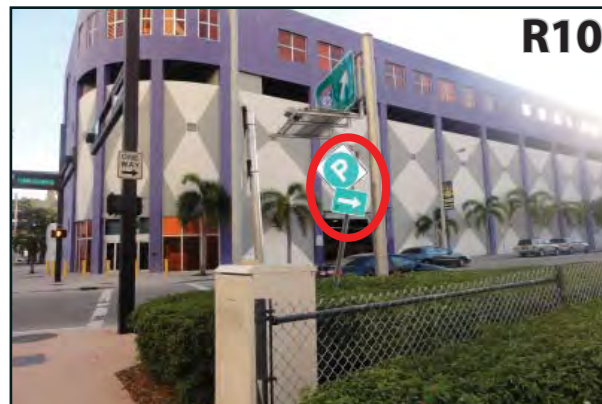
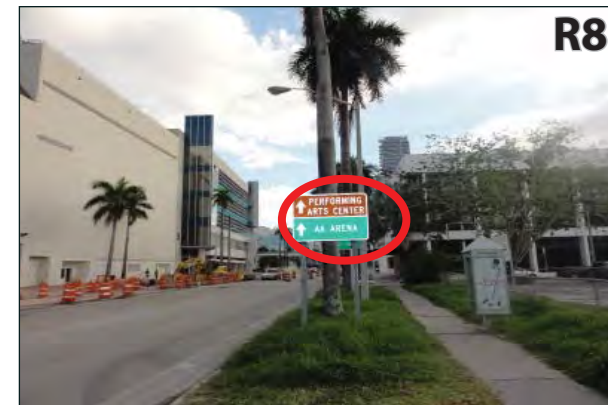
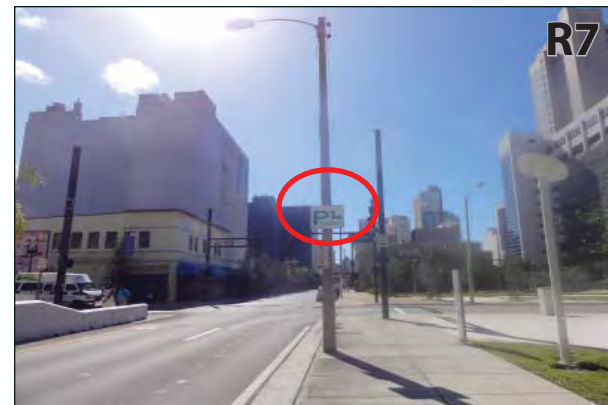
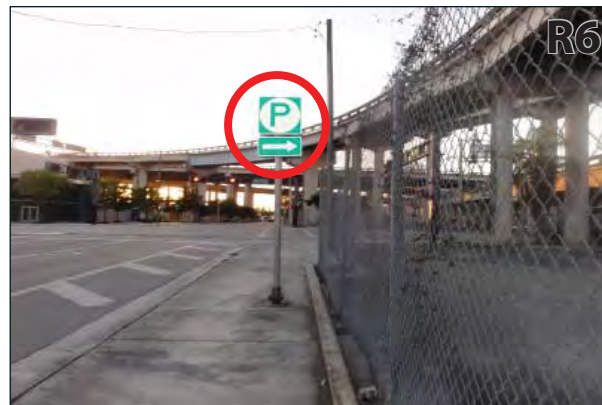
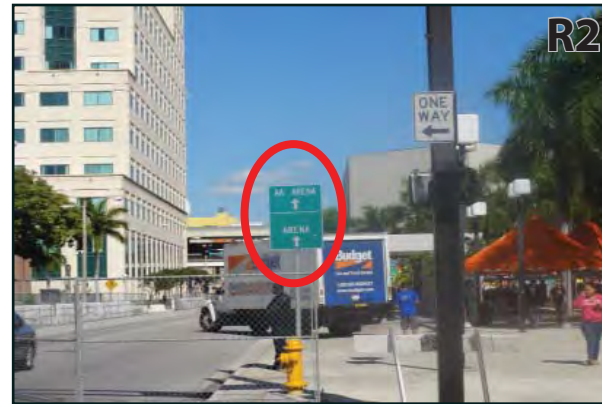


## Downtown Miami Wayfinding Signing Program

-  New Pole Location
-  Existing Pole

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2.17.11	12.30.12 08.16.13 01.21.14 05.01.14

# Proposed Sign Removals



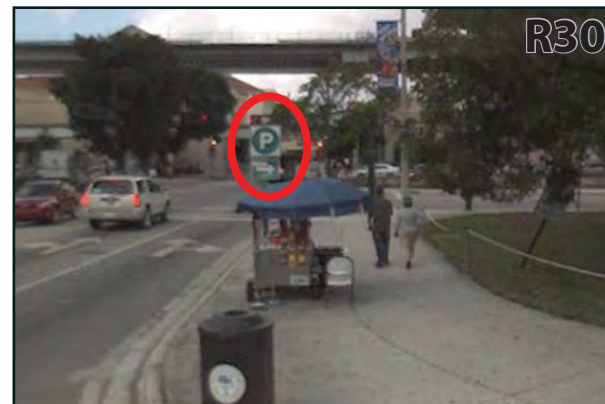
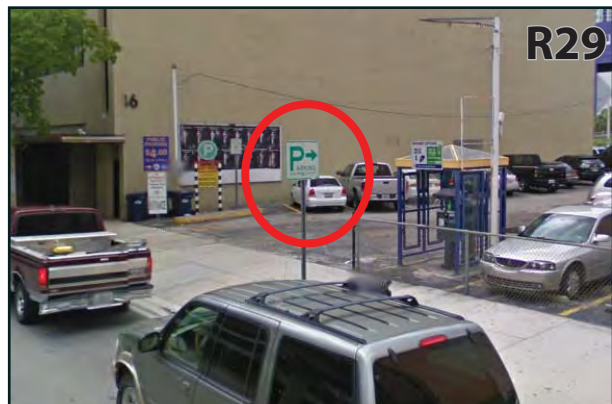
## Downtown Miami Wayfinding Signing Program

- New Pole Location
- Existing Pole

NOTE: Additional removals may be identified during fabrication and installation

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# Proposed Sign Removals



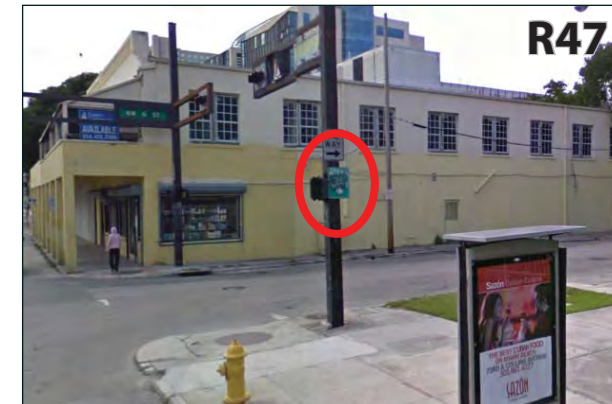
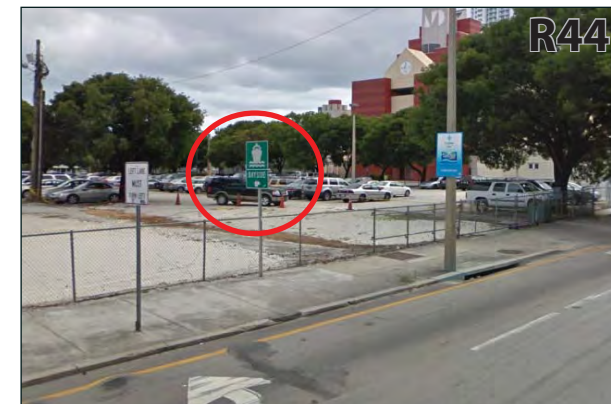
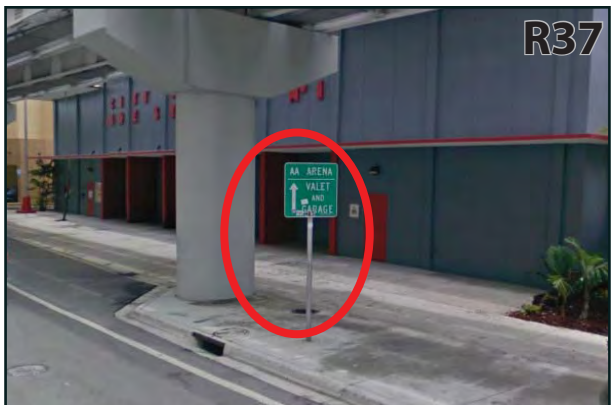
## Downtown Miami Wayfinding Signing Program



- New Pole Location
- Existing Pole

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# Proposed Sign Removals

## Downtown Miami Wayfinding Signing Program

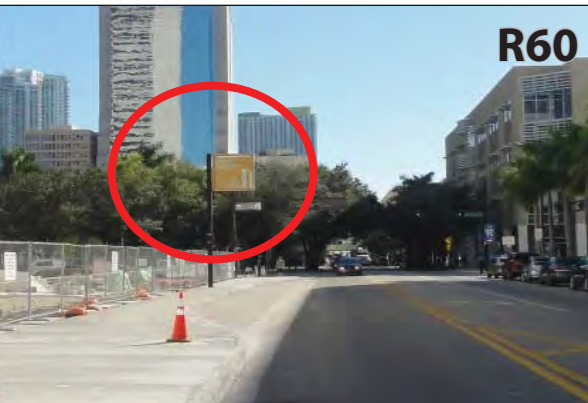
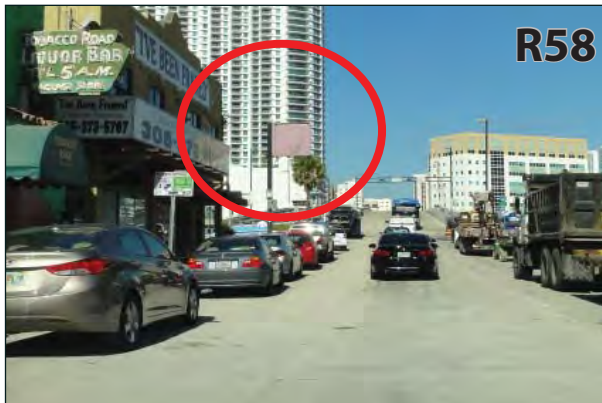
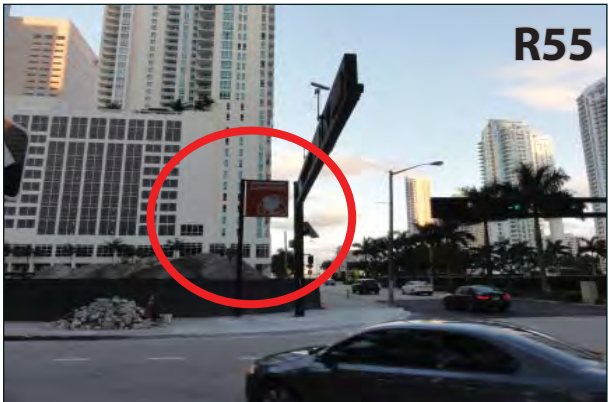
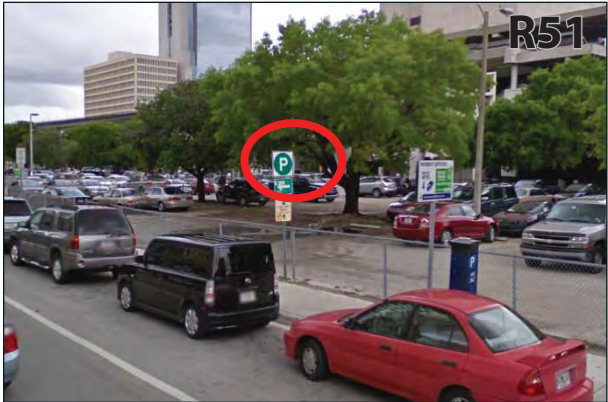
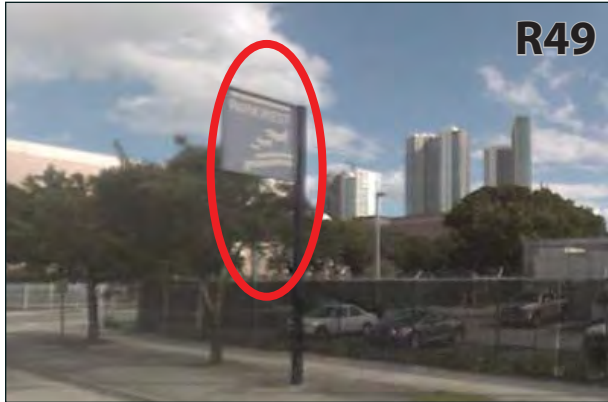




-  New Pole Location
-  Existing Pole

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Proposed Sign Removals

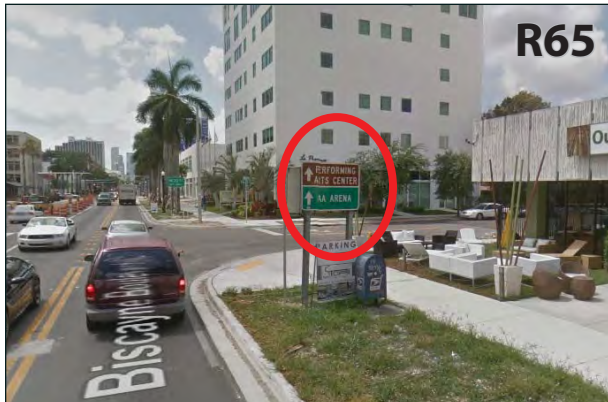
Downtown Miami  
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-  New Pole Location
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