CITY OF PORTSMOUTH
DEPARTMENT OF PUBLIC WORKS (DPW)
FLAGGING RULES AND PROCEDURES

No entity shall perform any construction or excavation, or otherwise take any action, which would hinder the free passage of vehicles or pedestrians on any street or right-of-way in the City of Portsmouth, except pursuant to a permit to be issued in advance by the Director of Public Works or a designee.

1.0 Flagging Permit Application Process:

1.1 The applicant shall apply for a permit online through the City's permitting center at: https://portsmouthnh.viewpointcloud.com

1.2 An application must be made no less than five (5) business days prior to the commencement of work (weekends and holidays excluded). The permit fee is $25.00.

1.3 An expedited application can be requested. The review time is three (3) business days. The permit fee is $50.00. The applicant must specify online that the application is to be expedited.

1.4 Applicant must upload the MUTCD Typical Application(s) to be followed at site.

1.5 The permit will be approved and printed through the City's permitting center at: https://portsmouthnh.viewpointcloud.com

1.6 Permit and MUTCD Typical Application(s) must be on the job site at all times and available for inspection.

2.0 Use of Certified Flaggers:

2.1 A list of certified flaggers, approved by the Director, will be on file at the Department of Public Works. Any person or company desiring to provide certified flagging services on projects within the City shall present certification to the Parking & Transportation Engineer, and provide periodic updates as required to maintain eligibility.

2.2 All contractors are invited to take advantage of the City's low bid for flagging services. City pricing will be honored for anyone performing work within the City.

3.0 Use of Uniformed Officers:

3.1 A uniformed officer may be required whenever the Director of Public Works and/or the Police Chief deem circumstances exist that create a public safety concern. In addition, work on the following streets require the use of a Portsmouth Police Officer:

- Borthwick Ave.
- Grafton Dr.
- Greenland Rd.
- Interstate 95 (if not covered by NH State Police)
- International Dr.
- Islington St.
- Lafayette Rd.
- Maplewood Ave.
- Market Street from Woodbury Ave. to Deer St.
- Middle St.
- New Hampshire Ave.
- Ocean Rd.
- Pease Blvd.
- Woodbury Ave.
- **Downtown compact streets:**
  between Court St., Deer St., Maplewood Ave. and the Piscataqua River boundary.

4.0 Emergency Work:

4.1 Nothing in these procedures shall be construed to prevent emergency work for the preservation of life or property, for the location of trouble in conduit or pipe, or for making repairs to said conduit or pipe. However, the contractor making such repairs shall apply to the Director of Public Works for a flagging permit on the first business day after such emergency work commences. A permit after the fact will be issued.

4.2 The contractor engaged in emergency work is solely responsible for the safety of vehicles and pedestrians in the work zone. The contractor is encouraged to use certified flaggers or a uniformed officer as the Director would recommend during a non-emergency situation. The contractor is required to proceed with caution in determining flagging requirements for emergency work. If their judgment is not sound, the contractor may lose privileges to perform future work within the City.

5.0 MUTCD Typical Application(s):

5.1 Link to Typical Applications is located on the City's web page here: https://www.cityofportsmouth.com/publicworks/permits-applications

IT IS THE SOLE RESPONSIBILITY OF THE APPLICANT TO SCHEDULE ALL FLAGGING SERVICES AND/OR POLICE DETAILS.

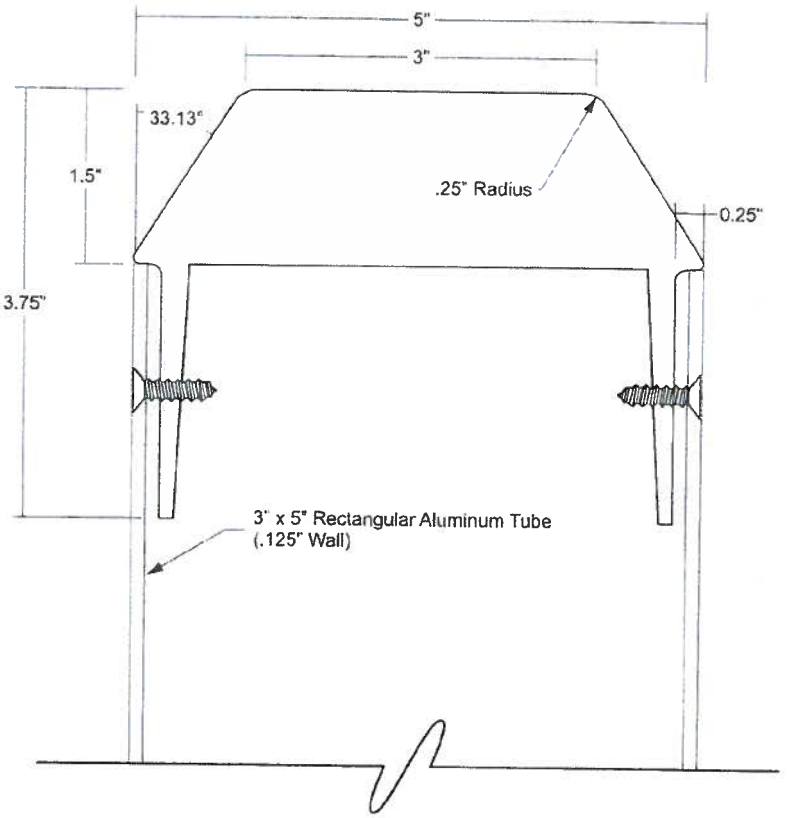
- Police Details: (603) 610-7412 or (603) 610-7413
- Project Flagging Inc: (603) 622-9302

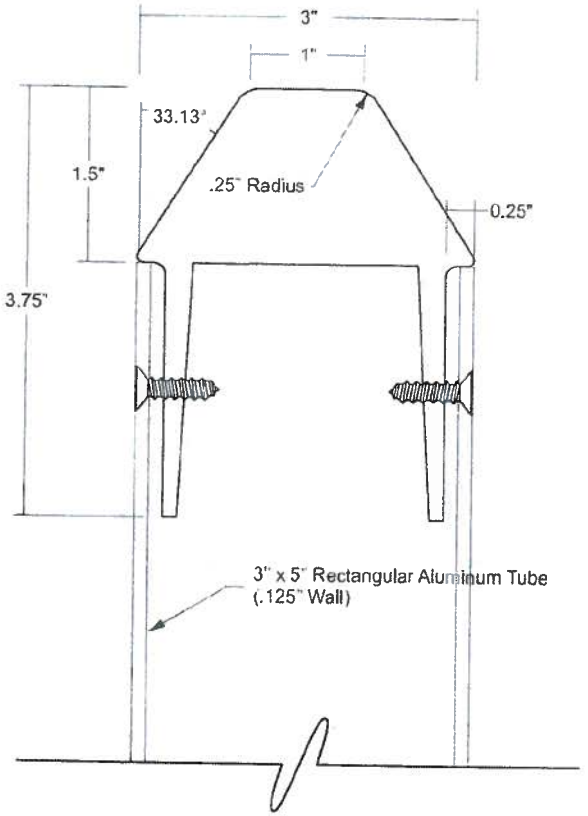
Please contact the following City staff for questions:

Michael Finn, Dispatcher
Department of Public Works
Email: mpfinn@cityofportsmouth.com
Office Phone: (603) 427-1530

updated: 02/01/2018

NOTES:
1.) ALL EXPOSED HARDWARE SHALL BE TAMPER RESISTANT FASTENERS.





3" x 5" Cast Aluminum Cap

Scale: Full Size

Architectural Graphics Incorporated
2655 International Parkway
P.O. Box 9175
Virginia Beach, VA 23450
(757)427-1900

Project Title: CITY OF PORTSMOUTH WAYFINDING

Date 09.17.14

AGI EoR D. PLANTE
Lead Drafter
Drawn By MPK/SPK
Project Mgr. D. BLANTON

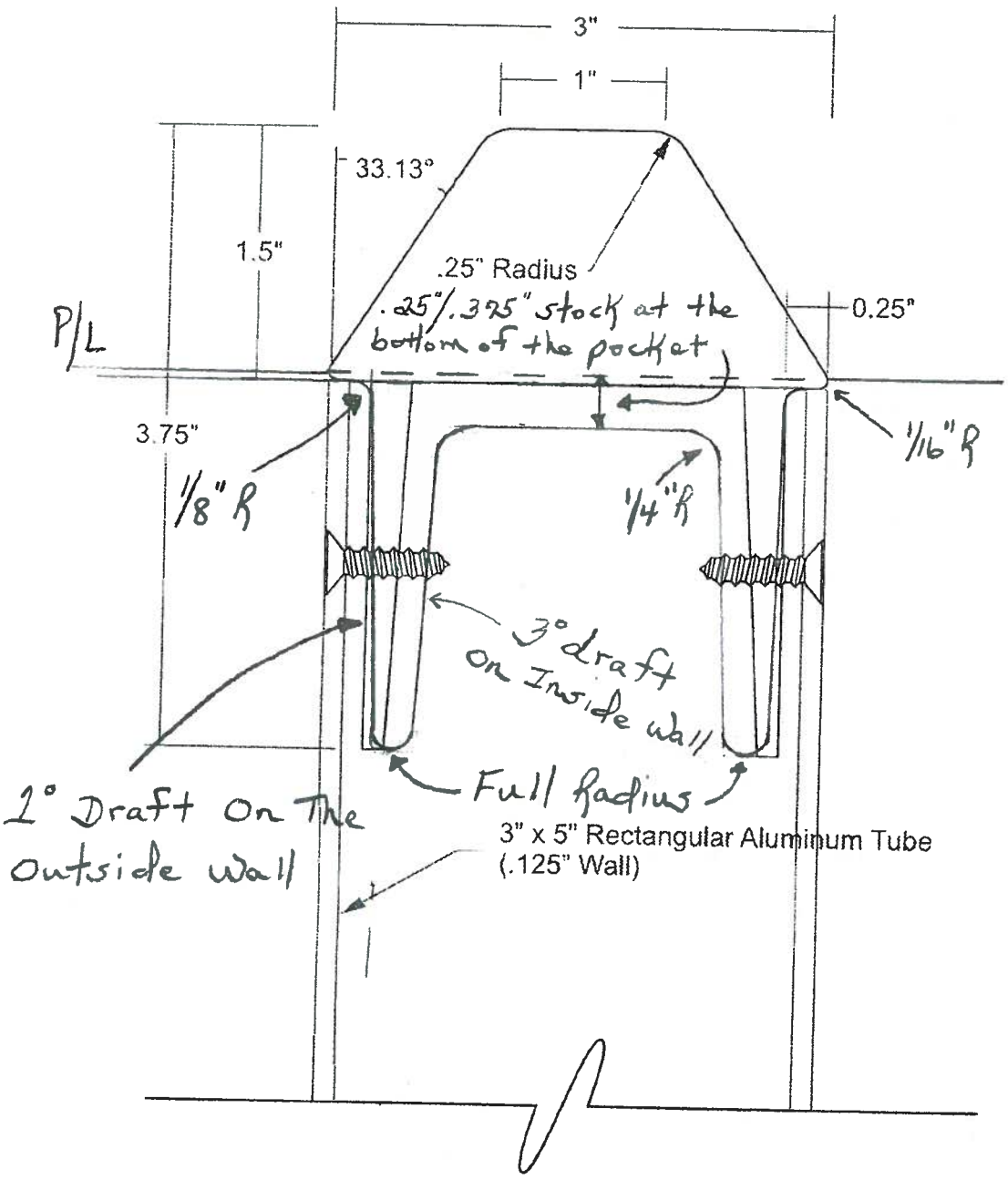
General Sign Specifications
- ☐ Interior ■ Exterior
- ☐ Single Faced ■ Double Faced
- ☐ _____
- ■ Non-Illuminated
- ☐ Illuminated
- _____ Volts _____ Amps(+/-)

Location PORTSMOUTH, NH
Windload 90 MPH

Drawing Revisions

Drawn By	Date	Change

Code	Type
14583	C
Sign Type: PARK.5 CAP	PG #: 1



Aluminum Cap

The 4 angled cap corners will have a minimum radius. The posts are rectangular extrusions - no corner radius.

WAYFINDING

Date 09.17.14

AGI EoR D. PLANTE
Lead Drafter
Drawn By MPK/SPK
Project Mgr. D. BLANTON

General Sign Specifications

- ☐ Interior ■ Exterior
- ☐ Single Faced ■ Double Faced
- ☐ _____
- ■ Non-Illuminated
- ☐ Illuminated

_____ Volts _____ Amps(+/-)

Location PORTSMOUTH, NH

Windload 90 MPH

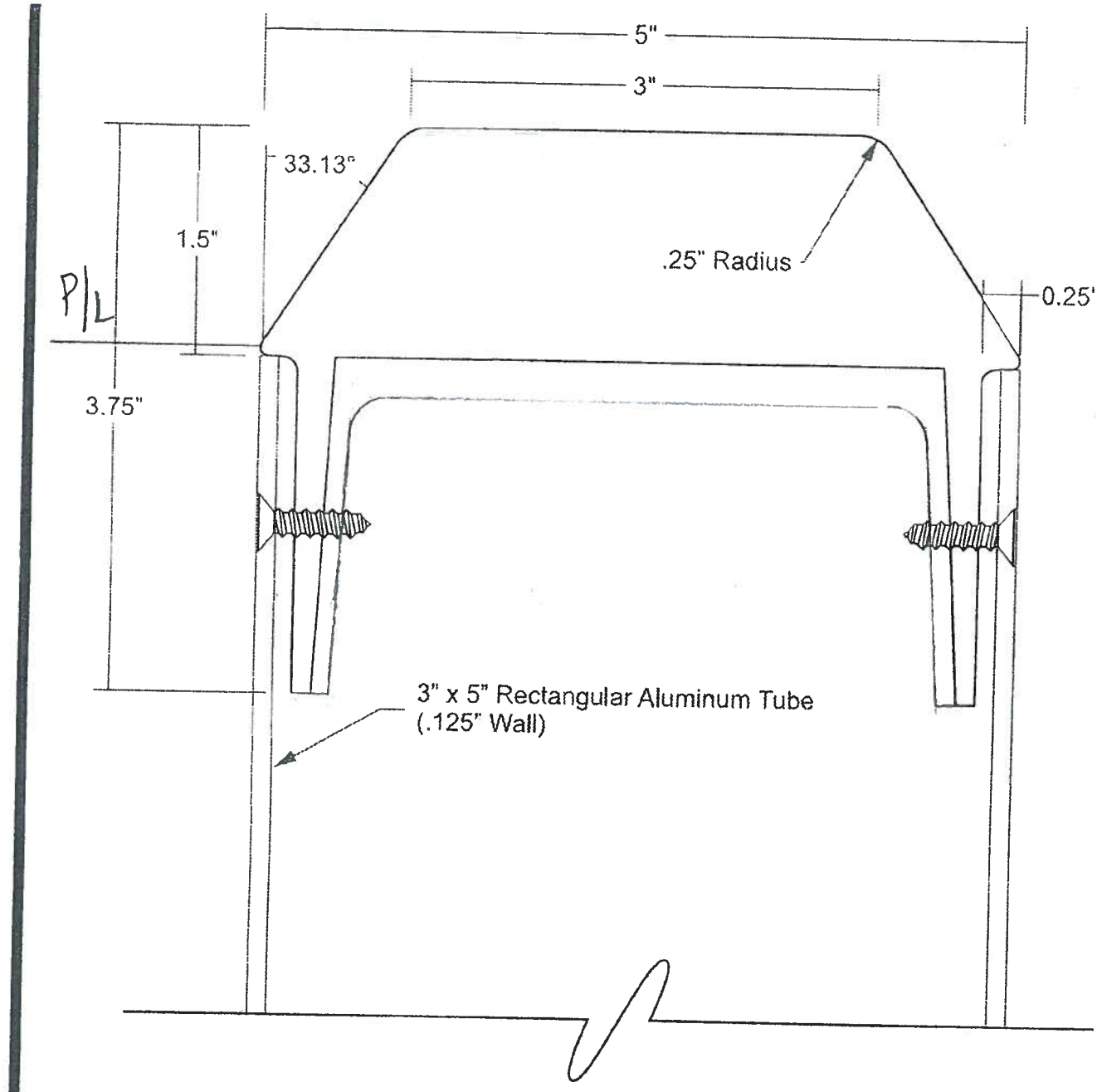
Drawing Revisions

Drawn By	Date	Change

Code	Type
14583	C

Sign Type	PG #:
PARK.5 CAP	1

Park 5 Cap

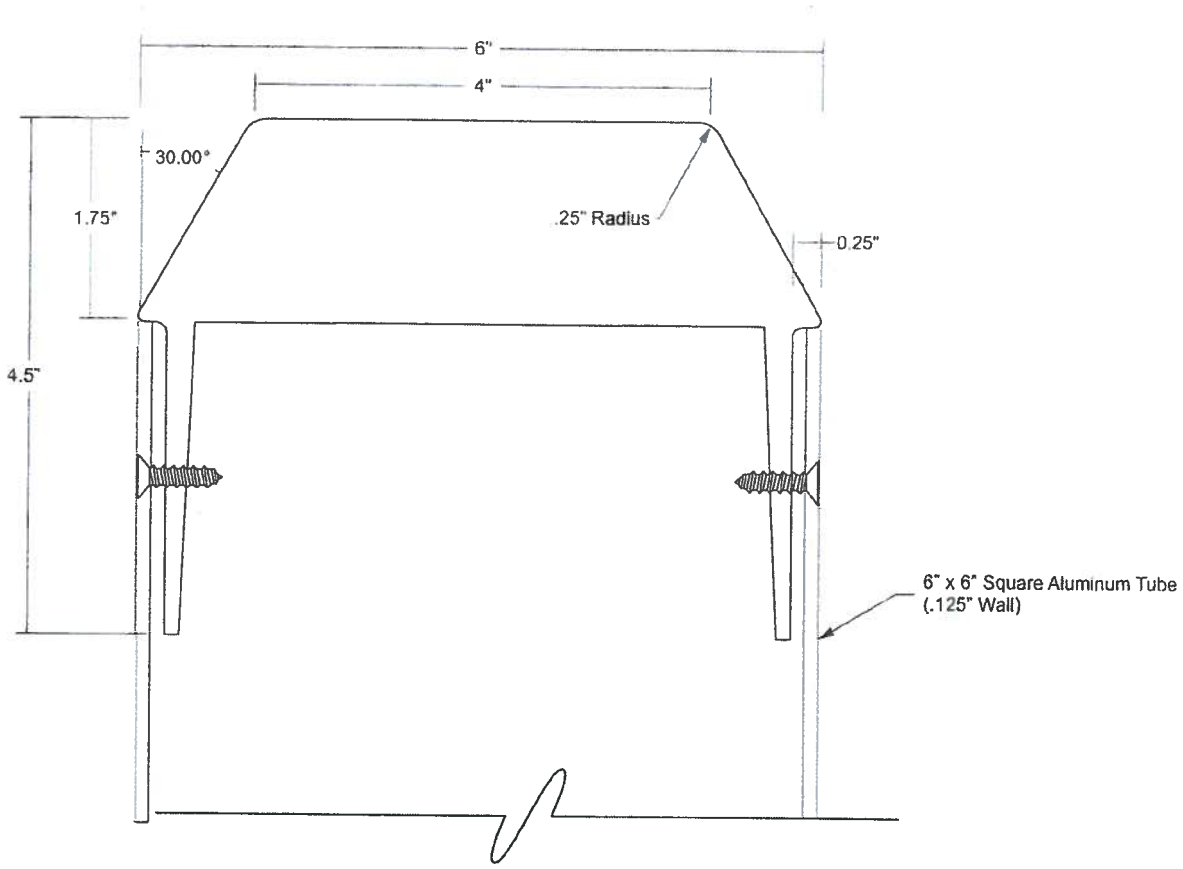


3" x 5" C

Scale: Full Size

Park 5 Cap

NOTES:
1.) ALL EXPOSED HARDWARE SHALL BE TAMPER RESISTANT FASTENERS.



6" x 6" Cast Aluminum Cap

Scale: Full Size

Architectural Graphics Incorporated
2555 International Parkway
P.O. Box 9178
Virginia Beach, VA 23450
(757)427-1900

Project Title: CITY OF PORTSMOUTH WAYFINDING

Date: 09.17.14

AGI EoR: D. PLANTE
Lead Drafter:
Drawn By: MPK/SPK
Project Mgr.: D. BLANTON

General Sign Specifications
- ☐ Interior ■ Exterior
- ☐ Single Faced ■ Double Faced
- ☐ _____
- ■ Non-Illuminated
- ☐ Illuminated

_____ Volts _____ Amps(+/-)

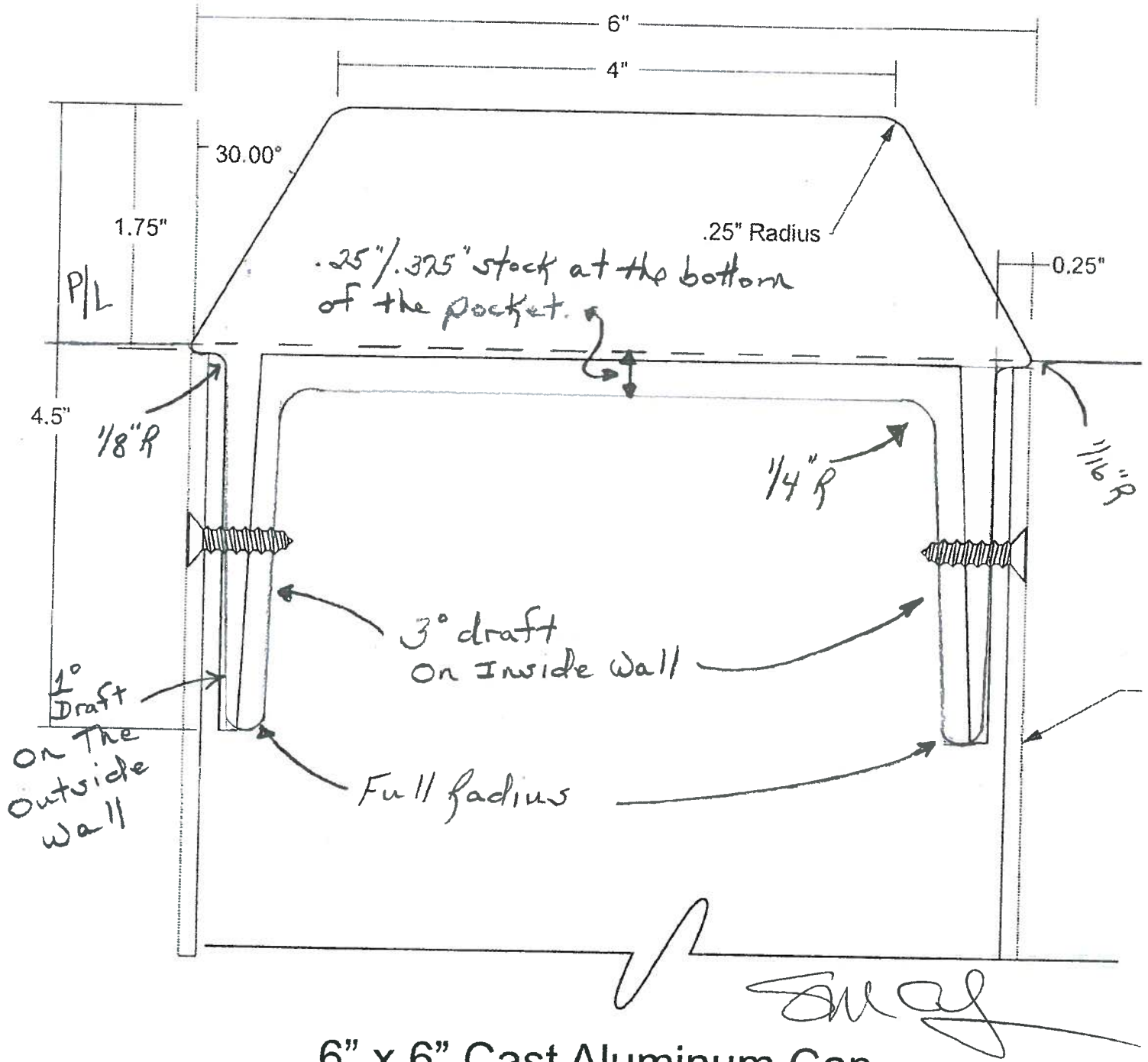
Location: PORTSMOUTH, NH
Windload: 90 MPH

Drawing Revisions

Drawn By	Date	Change

Code: 14583
Type: C
Sign Type: PARK.8 CAP
PG #: 1

The 4 angled cap corners will have a minimum radius.
The posts are square extrusions - no corner radius.

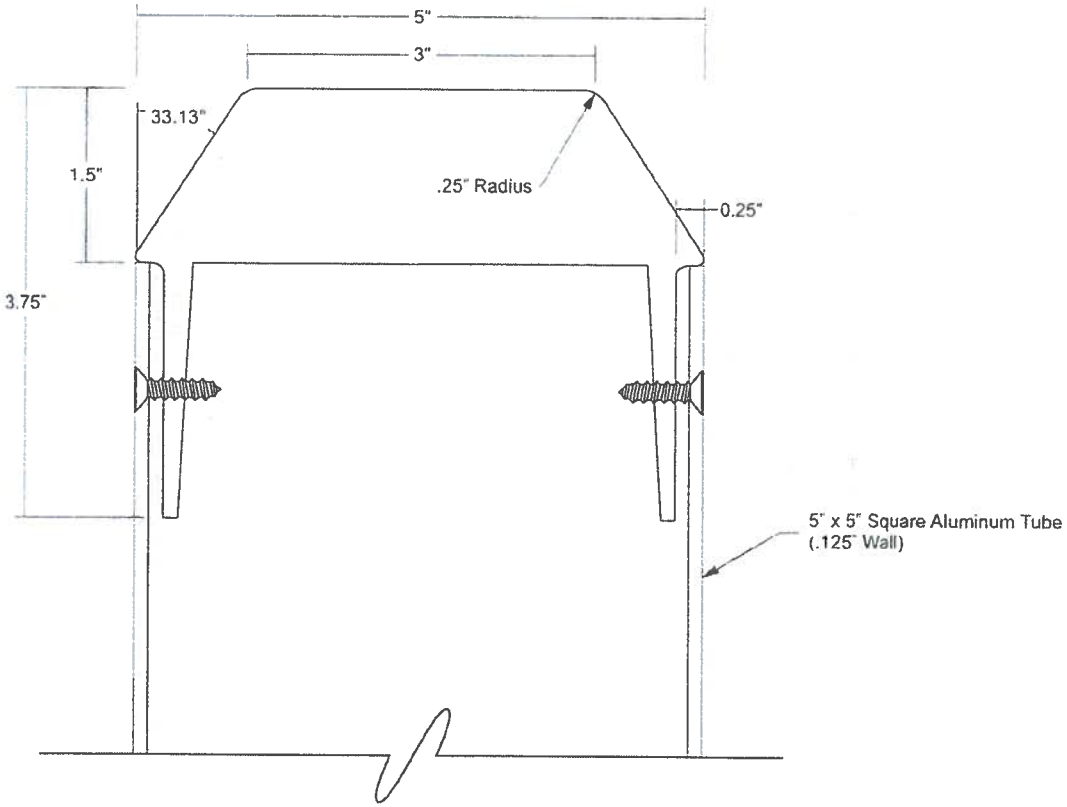


6" x 6" Cast Aluminum Cap

Scale: Full Size

Park 8 Cap

NOTES:
1.) ALL EXPOSED HARDWARE SHALL BE TAMPER RESISTANT FASTENERS.



5" x 5" Cast Aluminum Cap

Scale: Full Size

Architectural Graphics Incorporated
2655 International Parkway
P.O. Box 9175
Virginia Beach, VA 23450
(757)427-1900

Project Title
CITY OF PORTSMOUTH WAYFINDING

Date 09.17.14

AGI EoR D. PLANTE
Lead Drafter
Drawn By MPK/SPK
Project Mgr. D. BLANTON

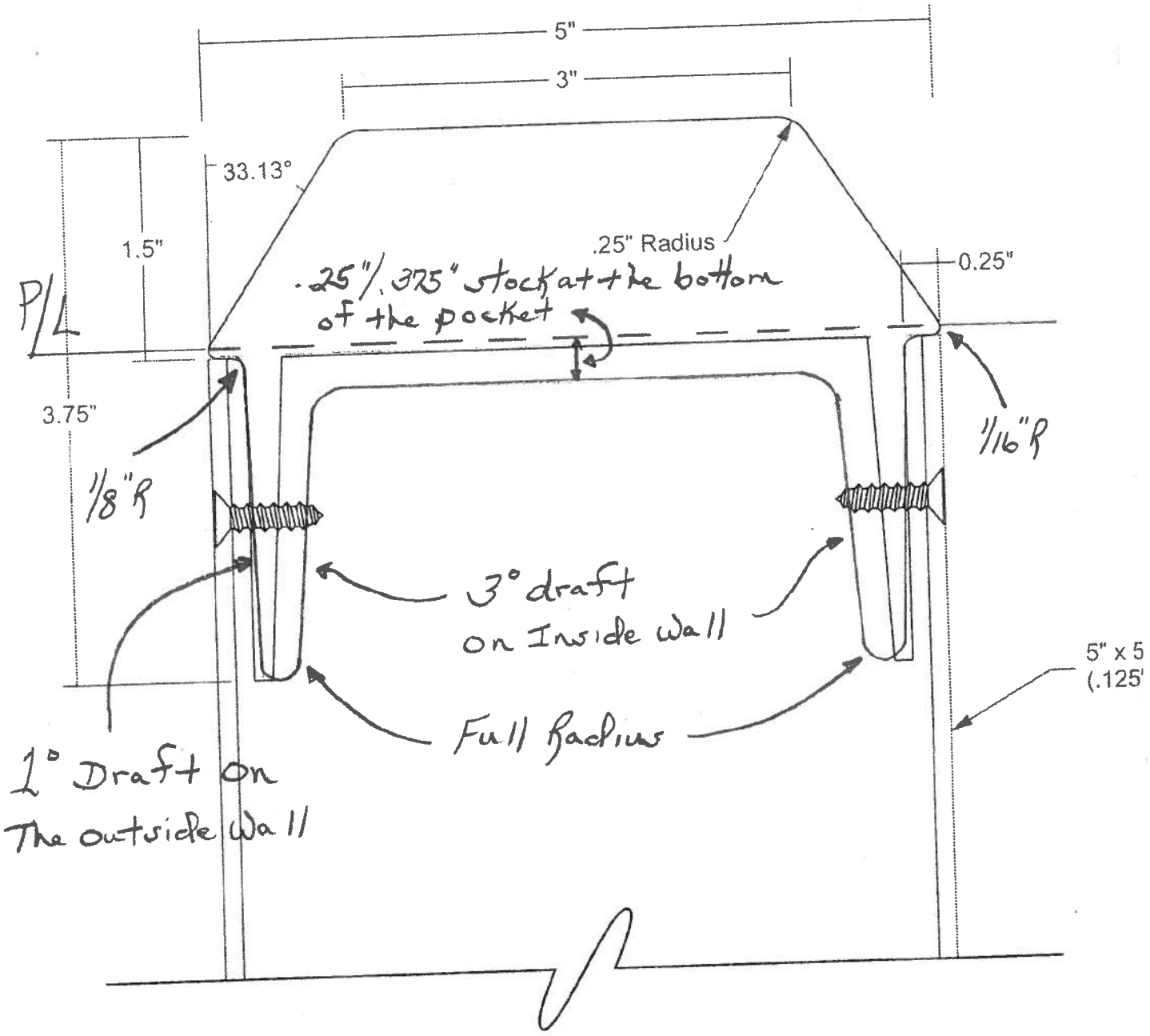
General Sign Specifications
☐ Interior ■ Exterior
☐ Single Faced ■ Double Faced
☐ _____
■ Non-Illuminated
☐ Illuminated
_____ Volts _____ Amps(+/-)
Location PORTSMOUTH NH
Windload 90 MPH

Drawing Revisions

Drawn By	Date	Change

Code	Type
14583	C
Sign Type: PARK.3 CAP	PG #: 1

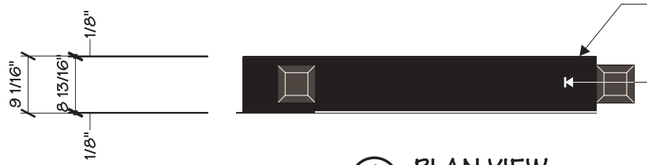
The 4 angled cap corners will have a minimum radius.
The posts are square extrusions - no corner radius.



5" x 5" Cast Aluminum Cap

Scale: Full Size

Park 3 Cap



REMOVABLE ALUM. BACKER PANEL IS **PAINTED MP#59647 'BLACK IS BACK' W/ CLEAR COAT SATIN FINISH ON ALL EXPOSED SURFACES**

ALUM. CABINET IS **PAINTED MP#59647 'BLACK IS BACK' W/ CLEAR COAT SATIN FINISH ON ALL EXPOSED SURFACES**

1/1 PLAN VIEW
1/2" = 1' - 0"

Designed per IBC - 2009 and adoptions made by the State of New Hampshire State Building Code Review Board

Snow Loads:
Ground Snow Load.....Pg-50 psf
Snow Exposure Factor...Ce=1.0
Snow Load Importance..Is=1.1
Thermal Factor.....Ct=1.0

Wind Loads:
Basic Wind Speed.....100 mph
Wind Importance Factor...I=1.15
Wind Exposure.....C
ASCE Force Coef.....1.8
Gust Factor.....0.85

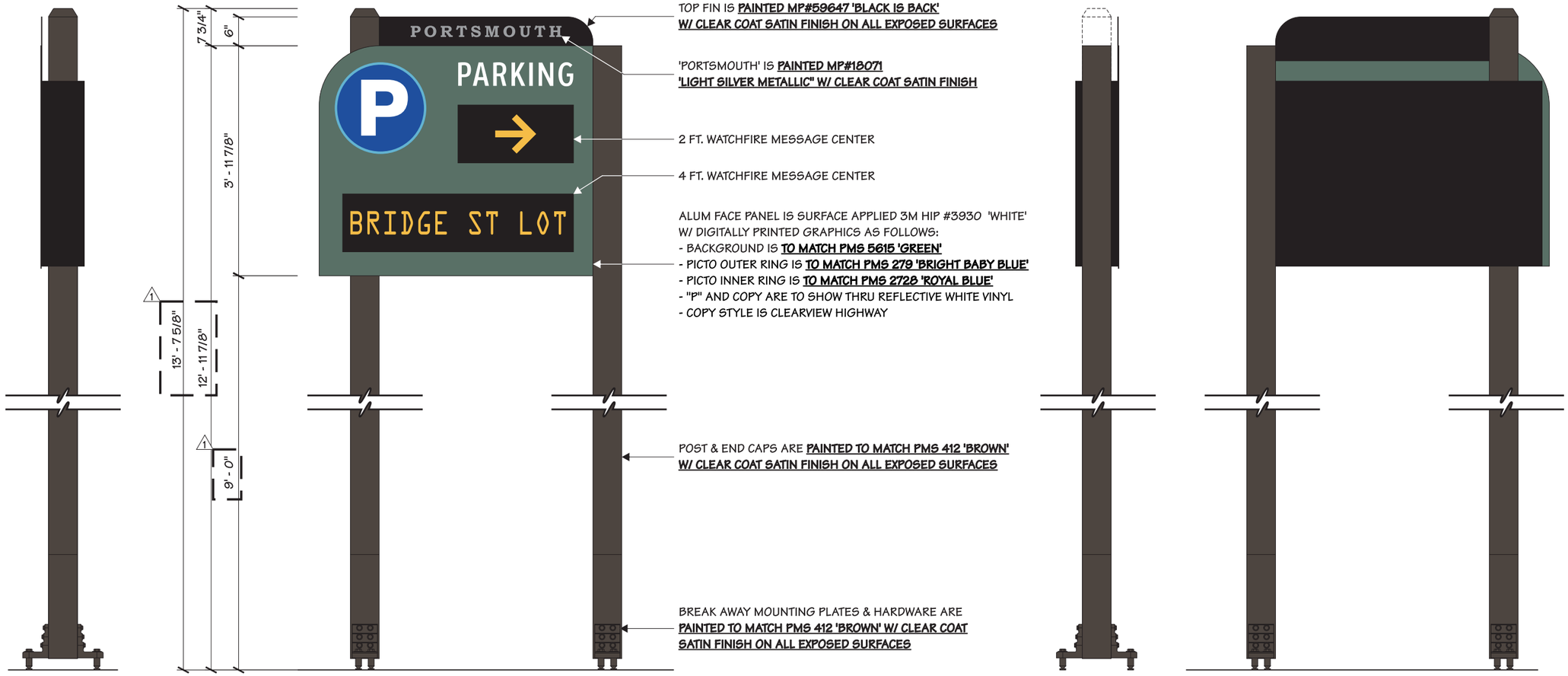
Exterior Components designed in accordance with applicable provisions of the ASCE 7-10

NOTES:
1.) ALL EXPOSED HARDWARE SHALL BE TAMPER RESISTANT FASTENERS
2.) ALL EXPOSED EDGES SHALL BE PAINTED TO MATCH ADJACENT FACE
3.) MESSAGE CONTENT FOR THIS TYPE IS AS SHOWN ON DRAWING

Murdoch Engineering
2 Hummingbird Ct
Howell, New Jersey 07731
(973)-570-8215

Jere Murdoch 12/13/14
Jere Murdoch, P.E.
Professional Engineer
NH P.E. License #13519

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – JERE MURDOCH No. 13519 LICENSED



TOP FIN IS **PAINTED MP#59647 'BLACK IS BACK' W/ CLEAR COAT SATIN FINISH ON ALL EXPOSED SURFACES**

'PORTSMOUTH' IS **PAINTED MP#18071 'LIGHT SILVER METALLIC" W/ CLEAR COAT SATIN FINISH**

2 FT. WATCHFIRE MESSAGE CENTER

4 FT. WATCHFIRE MESSAGE CENTER

ALUM FACE PANEL IS SURFACE APPLIED 3M HIP #3930 'WHITE' W/ DIGITALLY PRINTED GRAPHICS AS FOLLOWS:
- BACKGROUND IS **TO MATCH PMS 5615 'GREEN'**
- PICTO OUTER RING IS **TO MATCH PMS 279 'BRIGHT BABY BLUE'**
- PICTO INNER RING IS **TO MATCH PMS 2728 'ROYAL BLUE'**
- "P" AND COPY ARE TO SHOW THRU REFLECTIVE WHITE VINYL
- COPY STYLE IS CLEARVIEW HIGHWAY

POST & END CAPS ARE **PAINTED TO MATCH PMS 412 'BROWN' W/ CLEAR COAT SATIN FINISH ON ALL EXPOSED SURFACES**

BREAK AWAY MOUNTING PLATES & HARDWARE ARE **PAINTED TO MATCH PMS 412 'BROWN' W/ CLEAR COAT SATIN FINISH ON ALL EXPOSED SURFACES**

2/1 LEFT SIDE VIEW
1/2" = 1' - 0"

3/1 FRONT ELEVATION
1/2" = 1' - 0"

4/1 RIGHT SIDE VIEW
1/2" = 1' - 0"

5/1 REAR ELEVATION
1/2" = 1' - 0"

Architectural Graphics Incorporated
2655 International Parkway
P.O. Box 9175
Virginia Beach, VA 23450
(757)427-1900

Project Title
CITY OF PORTSMOUTH
WAYFINDING

Date 09.18.14

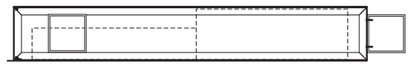
AGI EoR D. PLANTE
Lead Drafter
Drawn By MPK/SPK
Project Mgr. D. BLANTON

General Sign Specifications
☐ Interior ■ Exterior
■ Single Faced ☐ Double Faced
☐ _____
☐ Non-Illuminated
■ Illuminated
120 Volts _____ Amps(+/-)
Location PORTSMOUTH, NH
Windload 90 MPH

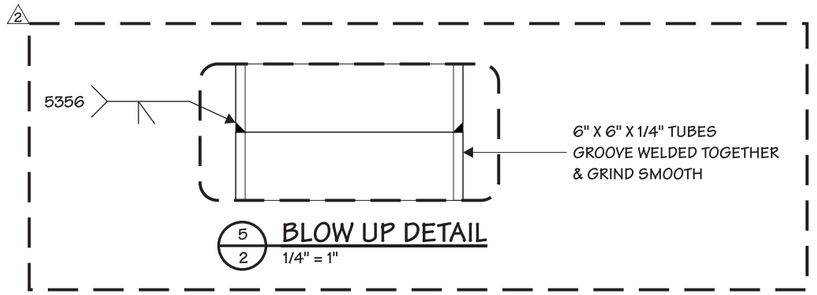
Drawing Revisions

Drawn By	Date	Change
1 JPT	11.26.14	POST DIMENSIONS
2 SPK	12.02.14	POST @ WELD DETAIL

Code 14583
Type C
Sign Type PARK.8
PG #: 1



1/2 PLAN VIEW
1/2" = 1' - 0"



5/2 BLOW UP DETAIL
1/4" = 1"

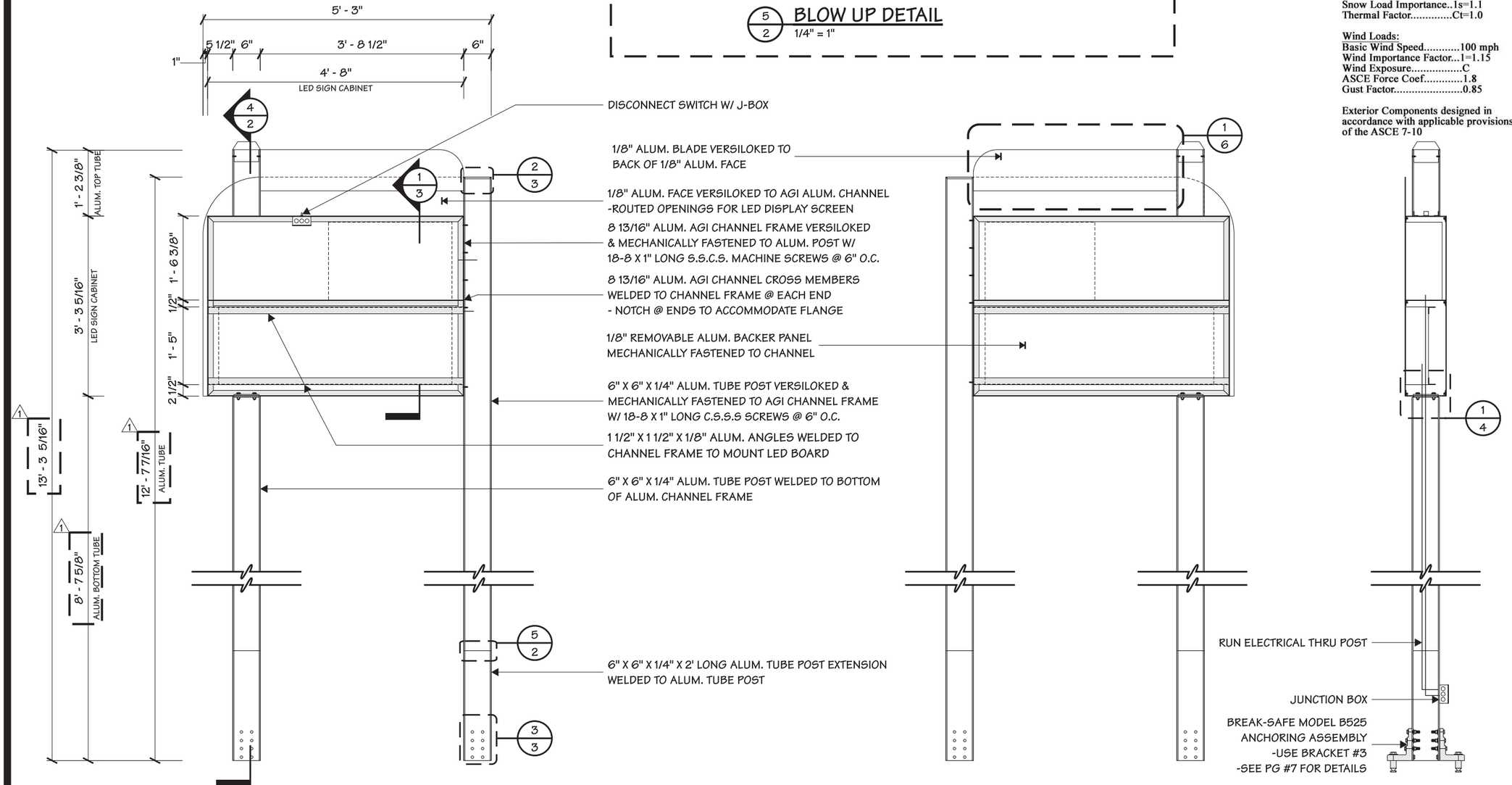
NOTES:
1.) ALL EXPOSED HARDWARE SHALL BE TAMPER RESISTANT FASTENERS.
2.) ALL EXPOSED EDGES SHALL BE PAINTED TO MATCH ADJACENT FACE.

Designed per IBC - 2009 and adoptions made by the State of New Hampshire State Building Code Review Board

Snow Loads:
Ground Snow Load.....Pg-50 psf
Snow Exposure Factor...Ce=1.0
Snow Load Importance..Is=1.1
Thermal Factor.....Ct=1.0

Wind Loads:
Basic Wind Speed.....100 mph
Wind Importance Factor...I=1.15
Wind Exposure.....C
ASCE Force Coef.....1.8
Gust Factor.....0.85

Exterior Components designed in accordance with applicable provisions of the ASCE 7-10



2/2 FRONT STRUCTURAL SECTION
1/2" = 1' - 0"

3/2 REAR STRUCTURAL SECTION
1/2" = 1' - 0"

4/2 SECTION VIEW
1/2" = 1' - 0"

Architectural Graphics Incorporated
2655 International Parkway
P.O. Box 9175
Virginia Beach, VA 23450
(757)427-1900

Project Title
CITY OF PORTSMOUTH WAYFINDING

Date 09.18.14

AGI EoR D. PLANTE
Lead Drafter
Drawn By MPK/SPK
Project Mgr. D. BLANTON

General Sign Specifications
- ☐ Interior ■ Exterior
- ■ Single Faced ☐ Double Faced
- ☐ _____
- ☐ Non-Illuminated
- ■ Illuminated

120 Volts _____ Amps(+/-)

Location PORTSMOUTH, NH
Windload 90 MPH

Murdoch Engineering
2 Hummingbird Ct.
Howell, New Jersey 07731
(973)-570-8215

Jere Murdoch 12/13/14
Jere Murdoch, P.E.
Professional Engineer
N.H.P.E. License #13519

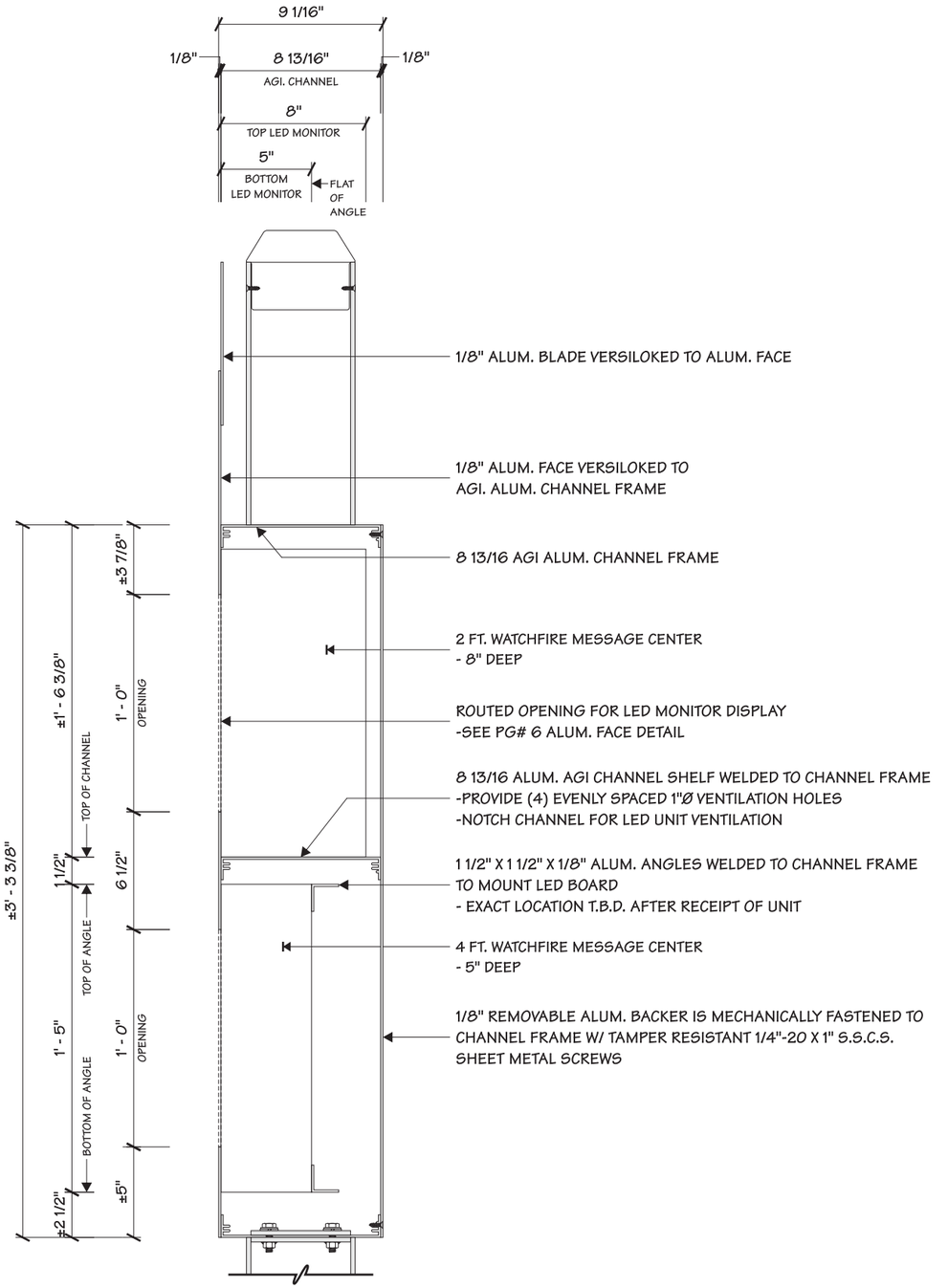
STATE OF NEW HAMPSHIRE - PROFESSIONAL ENGINEER - JERE MURDOCH No. 13519 LICENSED

Drawing Revisions

Drawn By	Date	Change
JPT	11.26.14	POST DIMENSIONS
SPK	12.02.14	POST @ WELD DETAIL

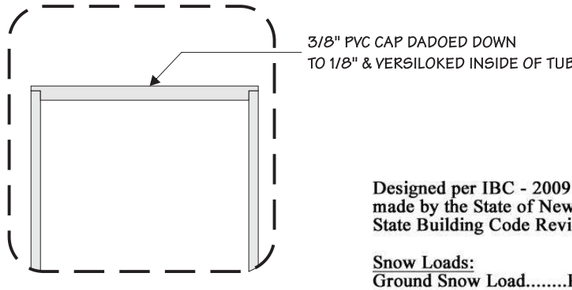
Code	Type
14583	C

Sign Type	PG #:
PARK.8	2



1 / 3 CABINET SECTION
1/8" = 1"

NOTES:
1.) ALL EXPOSED HARDWARE SHALL BE TAMPER RESISTANT FASTENERS.
2.) ALL WELDS SHALL BE GROUND SMOOTH, PAINT ALL SEAMS
3.) MOUNTING AND PLACEMENT TO BE DETERMINED UPON RECEIPT OF LED DISPLAY UNIT.



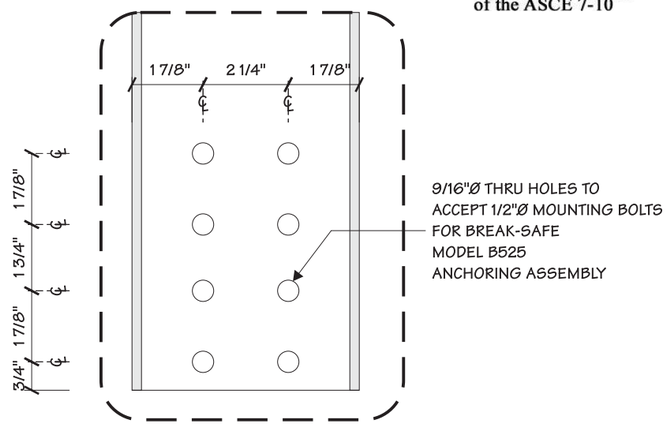
2 / 3 BLOW UP DETAIL
1/4" = 1"

Designed per IBC - 2009 and adoptions made by the State of New Hampshire State Building Code Review Board

Snow Loads:
Ground Snow Load.....Pg-50 psf
Snow Exposure Factor...Ce=1.0
Snow Load Importance..1s=1.1
Thermal Factor.....Ct=1.0

Wind Loads:
Basic Wind Speed.....100 mph
Wind Importance Factor...1=1.15
Wind Exposure.....C
ASCE Force Coef.....1.8
Gust Factor.....0.85

Exterior Components designed in accordance with applicable provisions of the ASCE 7-10



3 / 3 BLOW UP DETAIL
1/4" = 1"

Architectural Graphics Incorporated
2655 International Parkway
P.O. Box 9175
Virginia Beach, VA 23450
(757)427-1900

Project Title
CITY OF PORTSMOUTH WAYFINDING

Date 09.18.14

AGI EoR D. PLANTE
Lead Drafter
Drawn By MPK/SPK
Project Mgr. D. BLANTON

General Sign Specifications
☐ Interior ■ Exterior
■ Single Faced ☐ Double Faced
☐ _____
☐ Non-Illuminated
■ Illuminated
120 Volts _____ Amps(+/-)
Location PORTSMOUTH, NH
Windload 90 MPH

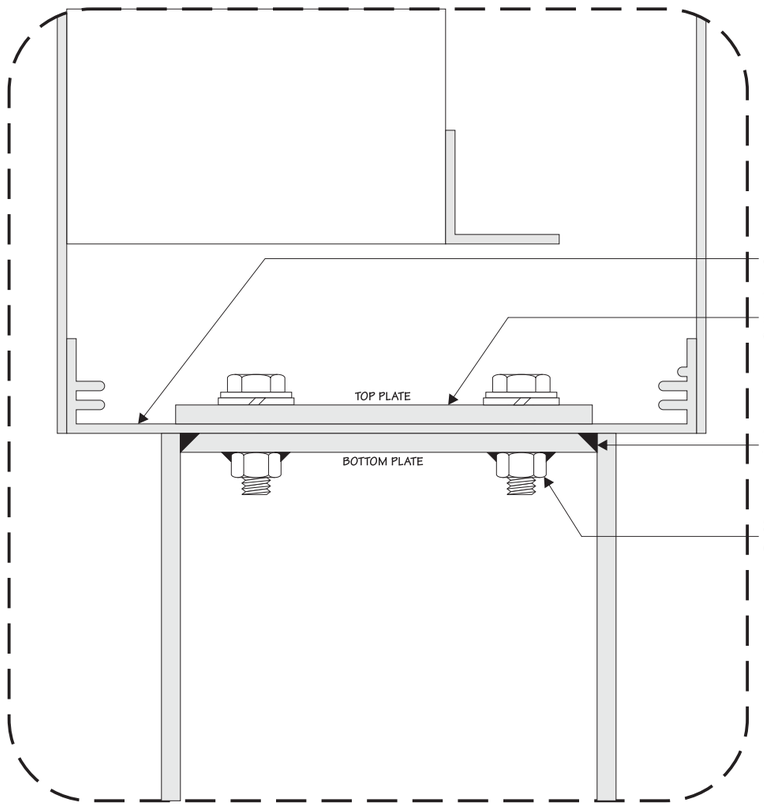
Murdoch Engineering
2 Hummingbird Ct.
Howell, New Jersey 07731
(973)-570-8215
12/13/14
Jere Murdoch, P.E.
Professional Engineer
NH P.E. License #13519

STATE OF NEW HAMPSHIRE - PROFESSIONAL ENGINEER - LICENSED JERE MURDOCH No. 13519

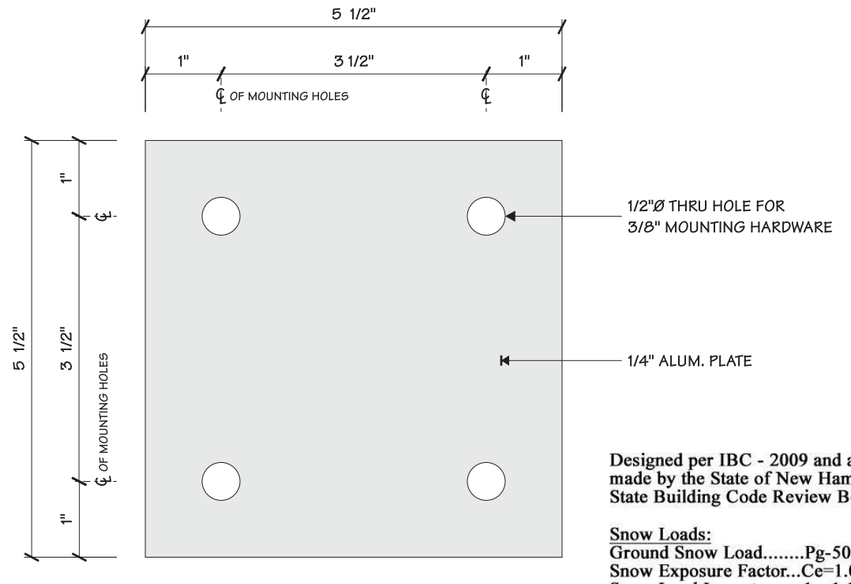
Drawing Revisions

	Drawn By	Date	Change
1	JPT	11.26.14	POST DIMENSIONS
2	SPK	12.02.14	POST @ WELD DETAIL
3			
4			
5			
6			
7			
8			
9			
10			

Code	Type
14583	C
Sign Type PARK.8	**PG #:** 3



1/4 BLOW UP DETAIL
1/2" = 1"



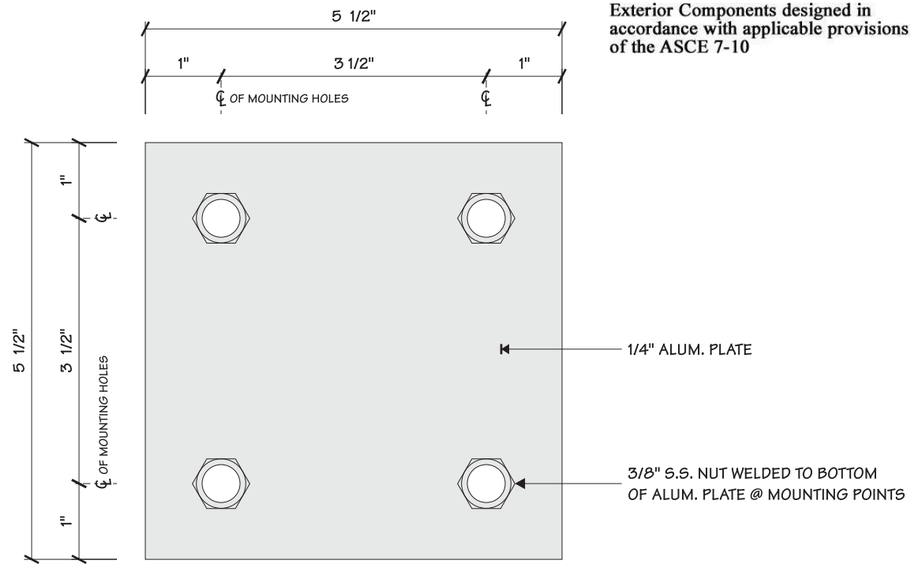
2/4 TOP PLATE DETAIL
1/2" = 1"

Designed per IBC - 2009 and adoptions made by the State of New Hampshire State Building Code Review Board

Snow Loads:
Ground Snow Load.....Pg-50 psf
Snow Exposure Factor...Ce=1.0
Snow Load Importance..Is=1.1
Thermal Factor.....Ct=1.0

Wind Loads:
Basic Wind Speed.....100 mph
Wind Importance Factor...I=1.15
Wind Exposure.....C
ASCE Force Coef.....1.8
Gust Factor.....0.85

Exterior Components designed in accordance with applicable provisions of the ASCE 7-10



3/4 BOTTOM PLATE DETAIL
1/2" = 1"

Architectural Graphics Incorporated
2655 International Parkway
P.O. Box 9175
Virginia Beach, VA 23450
(757)427-1900

Project Title
CITY OF PORTSMOUTH WAYFINDING

Date 09.18.14

AGI EoR D. PLANTE
Lead Drafter
Drawn By MPK/SPK
Project Mgr. D. BLANTON

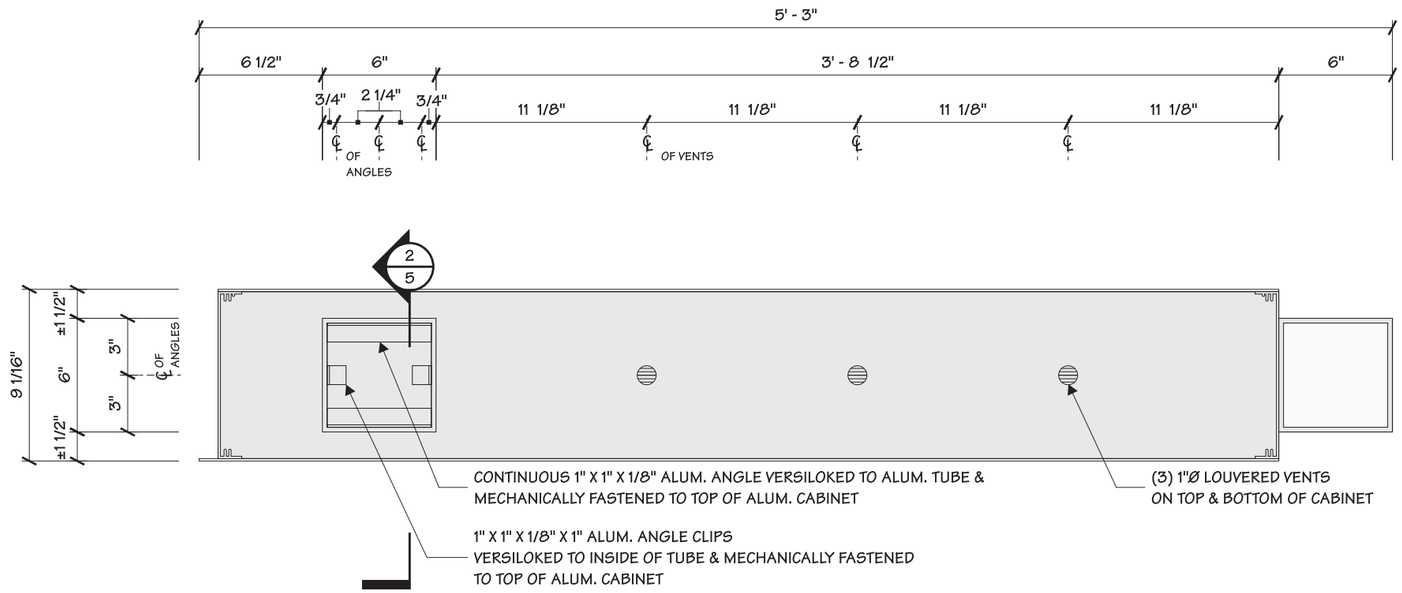
General Sign Specifications
☐ Interior ■ Exterior
■ Single Faced ☐ Double Faced
☐ _____
☐ Non-Illuminated
■ Illuminated
120 Volts _____ Amps(+/-)
Location PORTSMOUTH, NH
Windload 90 MPH

Murdoch Engineering
2 Hummingbird Ct.
Howell, New Jersey 07731
(973)-570-8215
12/13/14
Jere Murdoch, P.E.
Professional Engineer
NH P.E. License #13519
STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – JERE MURDOCH No. 13519 LICENSED

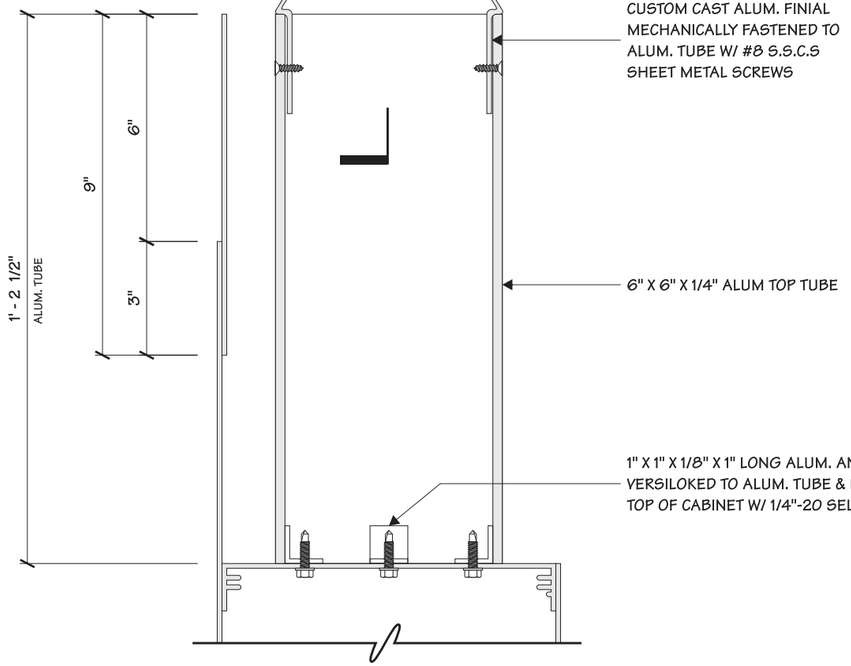
Drawing Revisions

Drawn By	Date	Change
JPT	11.26.14	POST DIMENSIONS
SPK	12.02.14	POST @ WELD DETAIL

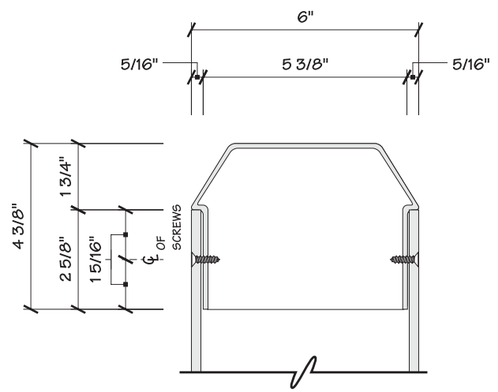
Code	Type
14583	C
Sign Type PARK.8	**PG #:** 4



1/5 SECTION
1/8" = 1"



2/5 ALUM. TOP TUBE DETAIL
1/4" = 1"



3/5 CUSTOM FINIAL SECTION
1/4" = 1"

Designed per IBC - 2009 and adoptions made by the State of New Hampshire State Building Code Review Board

Snow Loads:
Ground Snow Load.....Pg-50 psf
Snow Exposure Factor...Ce=1.0
Snow Load Importance..1s=1.1
Thermal Factor.....Ct=1.0

Wind Loads:
Basic Wind Speed.....100 mph
Wind Importance Factor...1=1.15
Wind Exposure.....C
ASCE Force Coef.....1.8
Gust Factor.....0.85

Exterior Components designed in accordance with applicable provisions of the ASCE 7-10

Architectural Graphics Incorporated
2655 International Parkway
P.O. Box 9175
Virginia Beach, VA 23450
(757)427-1900

Project Title
CITY OF PORTSMOUTH WAYFINDING

Date 09.18.14

AGI EoR D. PLANTE
Lead Drafter
Drawn By MPK/SPK
Project Mgr. D. BLANTON

General Sign Specifications
☐ Interior ■ Exterior
■ Single Faced ☐ Double Faced
☐ _____
☐ Non-Illuminated
■ Illuminated
120 Volts _____ Amps(+/-)
Location PORTSMOUTH, NH
Windload 90 MPH

Murdoch Engineering
2 Hummingbird Ct.
Howell, New Jersey 07731
(973)-570-8215
12/13/14
Jere Murdoch, P.E.
Professional Engineer
NH PE License #13519

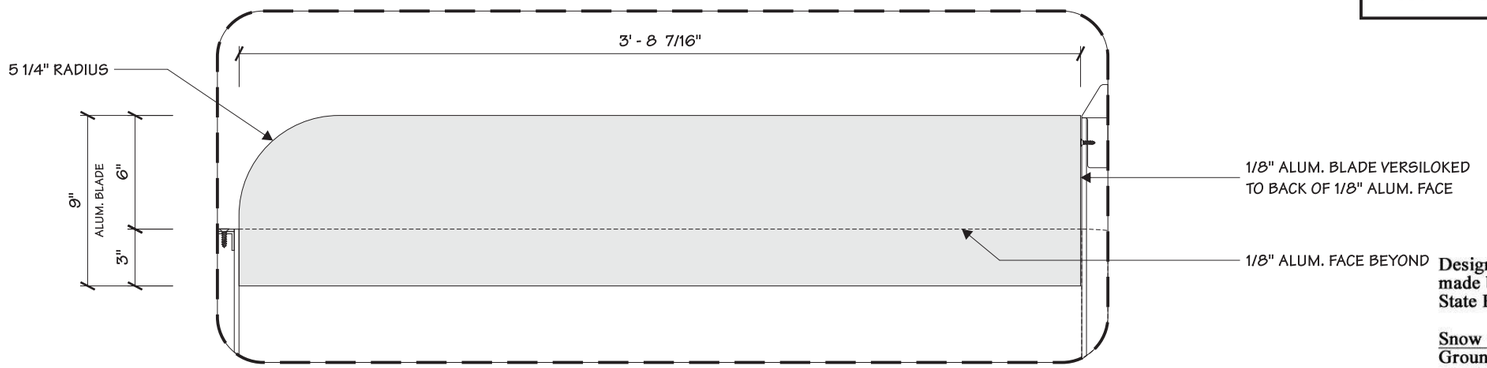
- STATE OF NEW HAMPSHIRE - JERE MURDOCH No. 13519 LICENSED PROFESSIONAL ENGINEER -

Drawing Revisions

	Drawn By	Date	Change
1	JPT	11.26.14	POST DIMENSIONS
2	SPK	12.02.14	POST @ WELD DETAIL
3			
4			
5			
6			
7			
8			
9			
10			

Code 14583
Type C
Sign Type PARK.8
PG #: 5

NOTES:
1.) PLACEMENT OF MONITORS & ROUTED OPENINGS TO BE DETERMINED UPON RECEIPT OF LED DISPLAY UNIT.



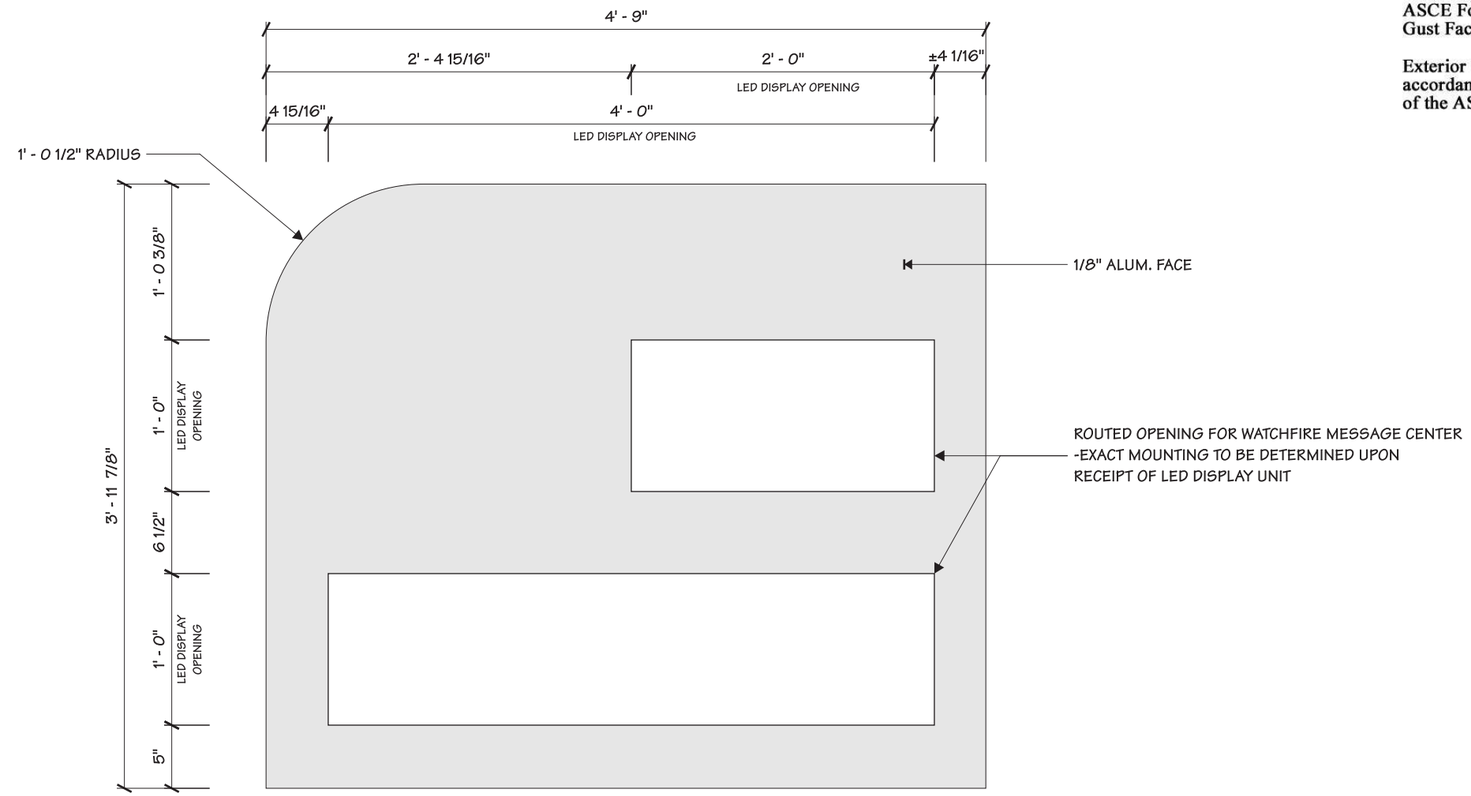
1/6 ALUM. TOP FIN DETAIL
1/8" = 1"

Designed per IBC - 2009 and adoptions made by the State of New Hampshire State Building Code Review Board

Snow Loads:
Ground Snow Load.....Pg-50 psf
Snow Exposure Factor...Ce=1.0
Snow Load Importance..1s=1.1
Thermal Factor.....Ct=1.0

Wind Loads:
Basic Wind Speed.....100 mph
Wind Importance Factor...1=1.15
Wind Exposure.....C
ASCE Force Coef.....1.8
Gust Factor.....0.85

Exterior Components designed in accordance with applicable provisions of the ASCE 7-10



2/6 ALUM. FACE DETAIL
1" = 1' - 0"

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Date 09.18.14

AGI EoR D. PLANTE
Lead Drafter
Drawn By MPK/SPK
Project Mgr. D. BLANTON

General Sign Specifications
- ☐ Interior ■ Exterior
- ■ Single Faced ☐ Double Faced
- ☐ _____
- ☐ Non-Illuminated
- ■ Illuminated

120 Volts _____ Amps(+/-)

Location PORTSMOUTH, NH
Windload 90 MPH

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STATE OF NEW HAMPSHIRE – JERE MURDOCH No. 13519 LICENSED PROFESSIONAL ENGINEER

Drawing Revisions

Drawn By	Date	Change
JPT	11.26.14	POST DIMENSIONS
SPK	12.02.14	POST @ WELD DETAIL

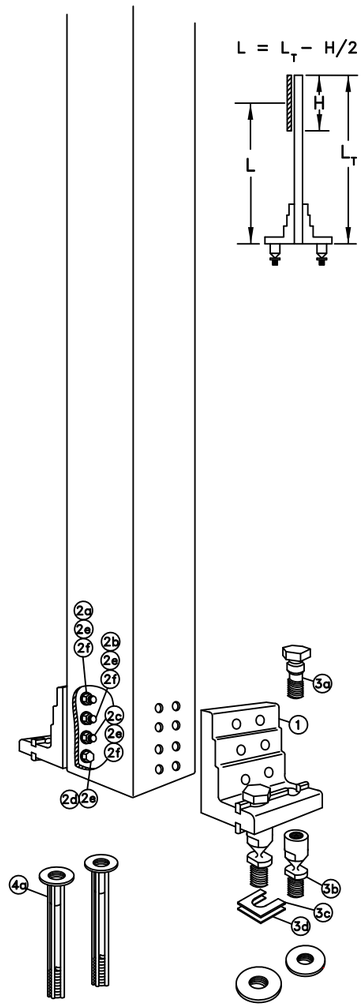
Code	Type
14583	C

Sign Type	PG #:
PARK.8	6

PARTS LIST

ITEM	DESCRIPTION	SIZE/SPECIFICATIONS	QTY/ POST	PART NUMBER
1	Bracket, Type B525	6061–T6 Aluminum (see Bracket Selection Table for –Number)	2	SBM525 –1,–2,&–3*
2	Bracket Hardware Assembly, Type B525, includes:		1	
2a	Bolt	12.7mm(1/2")–13UNCx63.5mm(2–1/2"), Hex Head, ASTM A325, Galv. ASTM A153	4	
2b	Bolt	12.7mm(1/2")–13UNCx69.8mm(2–3/4"), Hex Head, ASTM A325, Galv. ASTM A153	4	
2c	Bolt	12.7mm(1/2")–13UNCx76.2mm(3"), Hex Head, ASTM A325, Galv. ASTM A153	4	
2d	Cap Screw	12.7mm(1/2")–13UNCx31.7mm(1–1/4"), Hex Head, ASTM A307, Galv. ASTM A153	4	
2e	LockWasher	12.7mm(1/2"), ANSI B18–21–1, Galv. ASTM A153	16	
2f	Nut	12.7mm(1/2")–13UNC, Heavy Hex, ASTM A563 Gr. DH, Galv. ASTM A1531	12	
3	Coupling & Special Bolt Assembly, Type B, includes:		1	SB–CBLP
3a	Special Bolt	25.4mm(1")–8UNC, ASTM A449, Galv. ASTM A153/B695	4	
3b	Coupling	25.4mm(1")–8UNC, LP, AMS 6378D, Galv. ASTM A153, Polyester Coat	4	
3c	Shim	25.4mm(1") Horseshoe, 14 Gauge, Galv. Steel Sheet	2	
3d	Shim	25.4mm(1") Horseshoe, 18 Gauge, Galv. Steel Sheet	2	
4	Anchor Assembly, Type B, includes:		1	SBABPK
4a	Anchor	25.4mm(1")–8UNC, 304 S.S. Ferrule, AISI 1038 Rod, AISI 1008 Coil	4	

**Complete assembly includes line items 1–3*



$L = L_T - H/2$

BRACKET SELECTION TABLE

Select correct Break–Safe bracket number from table, using 'L' value from the longest post. Use figure to the left to determine 'L'.

POST SIZE	BRACKET No. 1		BRACKET No. 2		BRACKET No. 3	
	Min. 'L'	Max. 'L'	Min. 'L'	Max. 'L'	Min. 'L'	Max. 'L'
127mm (5")	3.4m(11')	8.8m(29')	2.4m(8')	3.4m(11')	0	2.4m(8')
152mm (6")	3.6m(12')	8.8m(29')	2.7m(9')	3.6m(12')	0	2.7m(9')

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 B525 is designed to fit 127mm (5") and 152mm (6") Square Tube sign posts.
3. Select proper Bracket Number by referring to Bracket Selection Table.
4. All hardware items are American Standard sizes, gavanized in accordance with ASTM A153 (hot dipped) or ASTM B695 (mechanically applied).
5. 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.
6. Square–up and level individual components, particularly Anchors to minimize the need for shimming between the Couplings and Anchors.
7. No more than two shims shall be placed under any one coupling. No more than three shims underneath any pair of couplings.
8. Refer to other side of page for complete installation instructions.

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

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

Break–Safe Model B525

Breakaway Support System for Sign Posts

5" & 6" Square Tube, Single Post

Scale: Not To Scale	Date: March 2013
Drawing No. BS–B525–STSP	Sheet: 1 of 2

Designed per IBC - 2009 and adoptions made by the State of New Hampshire State Building Code Review Board

Snow Loads:
Ground Snow Load.....Pg-50 psf
Snow Exposure Factor...Ce=1.0
Snow Load Importance..Is=1.1
Thermal Factor.....Ct=1.0

Wind Loads:
Basic Wind Speed.....100 mph
Wind Importance Factor...I=1.15
Wind Exposure.....C
ASCE Force Coef.....1.8
Gust Factor.....0.85

Exterior Components designed in accordance with applicable provisions of the ASCE 7-10

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 postion of the anchors.

1. Determine proper Break–Safe Bracket Number from the Bracket Selection Table. All posts within a sign structure shall use the same Bracket Number, determined by the length of the longest post.
2. Fabricate a flat, rigid template with four (4) 25mm (1") diameter holes located to match the specified anchor pattern of the Break–Safe Brackets attached to the signpost. See diagram below.
3. Attach four (4) Transpo Type B Female Anchors to the template using four (4) 25mm (1") diameter bolts. Ensure that each Anchor Washer is snug against the bottom of the template.
4. 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.
5. Allow concrete to cure, and then remove the bolts and template from the top of the foundation.

BRACKET ASSEMBLY:

1. Drill sixteen (16) 14.3mm (9/16") diameter holes in the front & back of the bottom end of post section as shown.
2. Place Brackets squarely on outer surface of the post, and secure with bolts, lock washers, nuts, and cap screws. Then, tighten all 1/2 turn beyond snug.

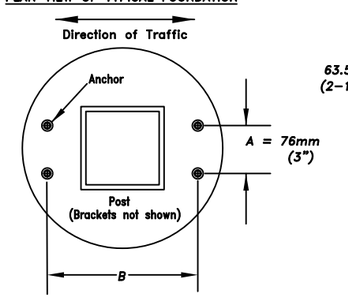
COUPLING ASSEMBLY:

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 convensional 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 convensional wrenches.

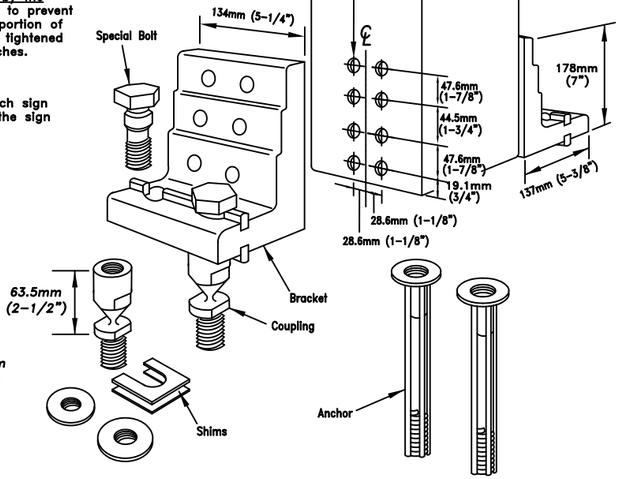
SIGN PANEL ASSEMBLY:

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



B (Bracket No. 1) = Depth of Post + 202mm (8")
B (Bracket No. 2) = Depth of Post + 205mm (8–1/8")
B (Bracket No. 3) = Depth of Post + 207mm (8–3/16")



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

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

Break–Safe Model B525

5" & 6" Square Tube, Single Post

Scale: Not To Scale	Date: March 2013
Drawing No. BS–B525–STSP	Sheet: 2 of 2

1/7 BREAK AWAY PLATE DETAILS
N.T.S.

Architectural Graphics Incorporated
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Project Title
CITY OF PORTSMOUTH WAYFINDING

Date 09.18.14

AGI EoR D. PLANTE
Lead Drafter
Drawn By MPK/SPK
Project Mgr. D. BLANTON

General Sign Specifications
- ☐ Interior ■ Exterior
- ■ Single Faced ☐ Double Faced
- ☐ _____
- ☐ Non-Illuminated
- ■ Illuminated

120 Volts _____ Amps(+/-)

Location PORTSMOUTH, NH
Windload 90 MPH

Murdoch Engineering
2 Hummingbird Ct.
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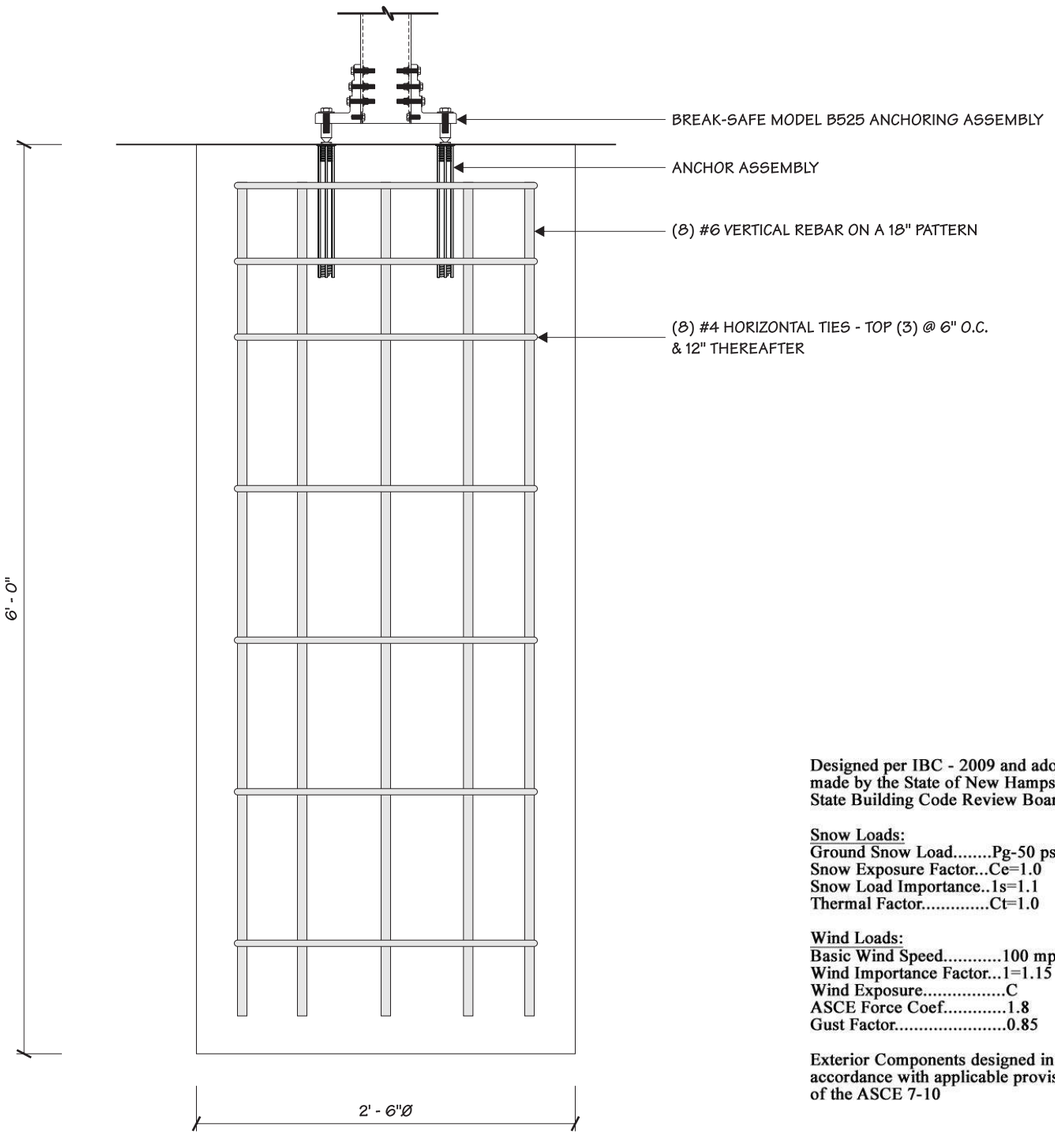
Jere Murdoch 12/13/14
Jere Murdoch, P.E.
Professional Engineer
NH P.E. License #13519

STATE OF NEW HAMPSHIRE – JERE MURDOCH No. 13519 LICENSED PROFESSIONAL ENGINEER

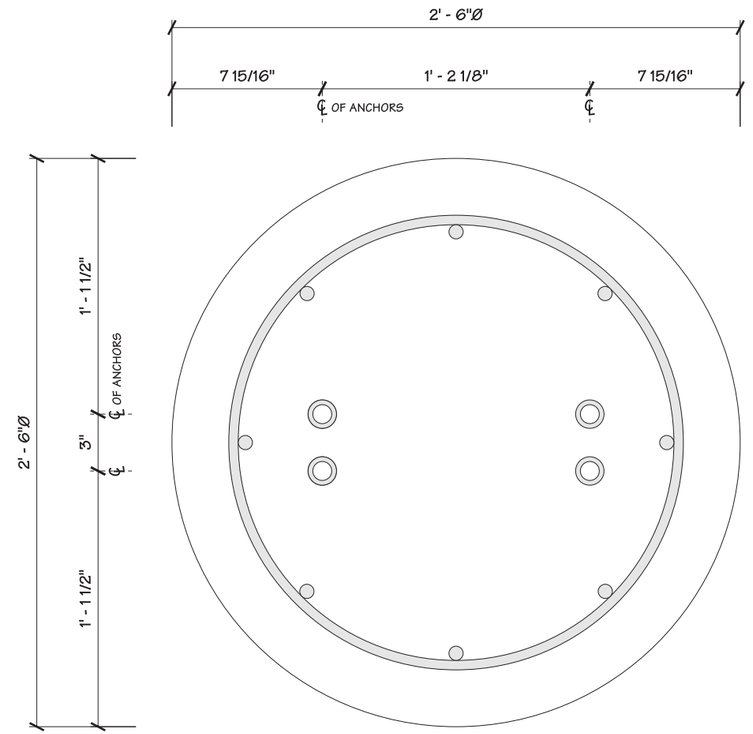
Drawing Revisions

Drawn By	Date	Change
JPT	11.26.14	POST DIMENSIONS
SPK	12.02.14	POST @ WELD DETAIL

Code	Type
14583	C
Sign Type: PARK.8	PG #: 7



1/8 FOUNDATION DETAIL
1" = 1' - 0"



2/8 FOUNDATION PLAN VIEW
1/8" = 1"

Designed per IBC - 2009 and adoptions made by the State of New Hampshire State Building Code Review Board

Snow Loads:
Ground Snow Load.....Pg-50 psf
Snow Exposure Factor...Ce=1.0
Snow Load Importance..1s=1.1
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Basic Wind Speed.....100 mph
Wind Importance Factor...1=1.15
Wind Exposure.....C
ASCE Force Coef.....1.8
Gust Factor.....0.85

Exterior Components designed in accordance with applicable provisions of the ASCE 7-10

ANALYSIS
Velocity pressure

qh = 0.00256 Kh Kzt Kd V2 I		=	18.50	psf
where:	qh = velocity pressure at mean roof height, h. (Eq. 6-15, page 27)			
	Kh = velocity pressure exposure coefficient evaluated at height, h, (Tab. 6-3, Case 1,pg 79)	=	0.85	
	Kd = wind directionality factor. (Tab. 6-4, for building, page 80)	=	0.85	
	h = height of top	=	13.66	ft

Wind Force Case A: resultant force though the geometric center (Sec. 6.5.14 & Fig. 6-20)

p = qh G Cf =	=	28	psf
F = p As	=	0.68	kips
M = F (h - 0.5s) for sign, F (0.55h) for wall	=	7.72	ft-kips
T =	=	0.00	ft-kips
where: G = gust effect factor. (Sec. 6.5.8, page 26).	=	0.85	
Cf = net force coefficient. (Fig. 6-20, page 73)		1.79	
As = B s	=	24.2	ft2

General Notes:
1.) Minimum concrete strength shall be 3,000 psi
2.) All plate, angle, channel, tee and wide flange shall be ASTM A36 grade unless otherwise specified.
3.) Square and rectangular tube shall be ASTM A500 Grade B
4.) Round pipe shall be ASTM A53 Grade B or equivalent
5.) Design and fabrication according to AISC Steel Construction Manual 14th edition
6.) Bolts to be A325 or A320 B8 Class 2 or equivalent.
- Foundation Anchor Bolts to be A36 Minimum.
7.) Concrete design & construction to be in accordance w/ ACI 318-08
8.) Concrete poured into constrained earth excavations must cure under proper conditions for 4 days prior to sign box installation. (Exception: if the overall height of the sign is less than 20 feet and the sign pole is adequately braced against wind loads for a minimum of 4 days, the box may be installed the same day as the footing is poured.
9.) For pier and caisson footings, concrete must be poured against undisturbed earth (Backfill is unacceptable).
10.) Maintain a minimum 3" cover over all embedded steel (Not applicable to direct burial footings) Rebar is not required for direct burial footings.
- Anchor Bolts without rebar shall have a minimum Welded Wire Mesh Reinforcement. Install 6x6 (WWM), 8.5 to 11 gauge, in circular pattern 4 inch offset from footing perimeter, 3" clearance from top and bottom. Anchor bolts shall be tied to the WWM.
11.) Provide a minimum of 6" cover between bottom of support pole and bottom of concrete footing on all direct burial footings, unless otherwise noted.
12.) If clay, silt or organic soil properties are present upon excavation, it is the contractor's responsibility to contact Murdoch Engineering for design modification.
13.) Galvanic protection is required where dissimilar metals contact.
14.) Galvanic protection is also required where Aluminum Contacts Concrete Coat with Bituminous material where Alum. Contacts Concrete.

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■ Single Faced ☐ Double Faced
☐ _____
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■ Illuminated
120 Volts _____ Amps(+/-)
Location PORTSMOUTH, NH
Windload 90 MPH

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STATE OF NEW HAMPSHIRE - PROFESSIONAL ENGINEER - JERE MURDOCH No. 13519 LICENSED

Drawing Revisions

Drawn By	Date	Change
1 JPT	11.26.14	POST DIMENSIONS
2 SPK	12.02.14	POST @ WELD DETAIL
3		
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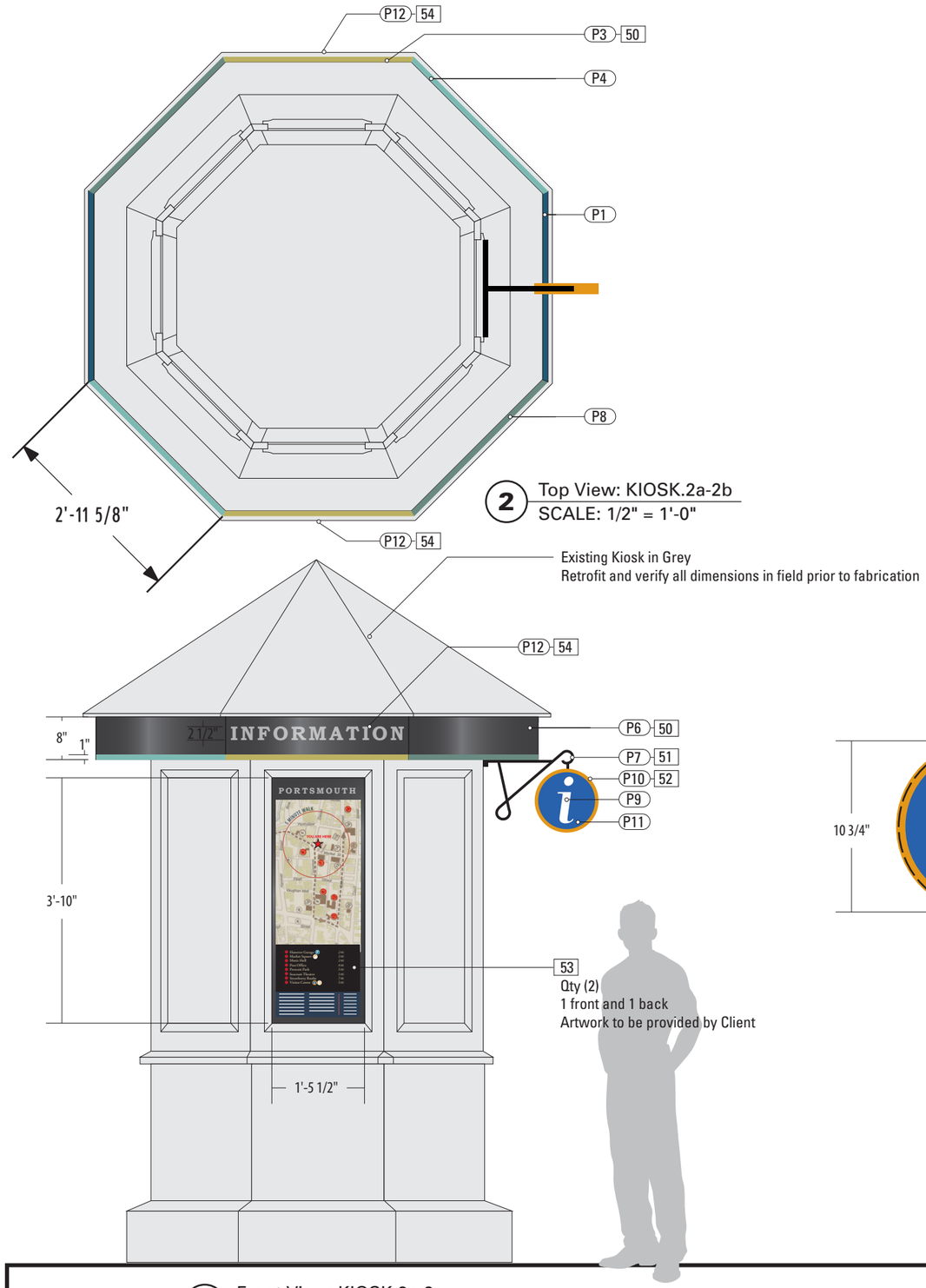
12		

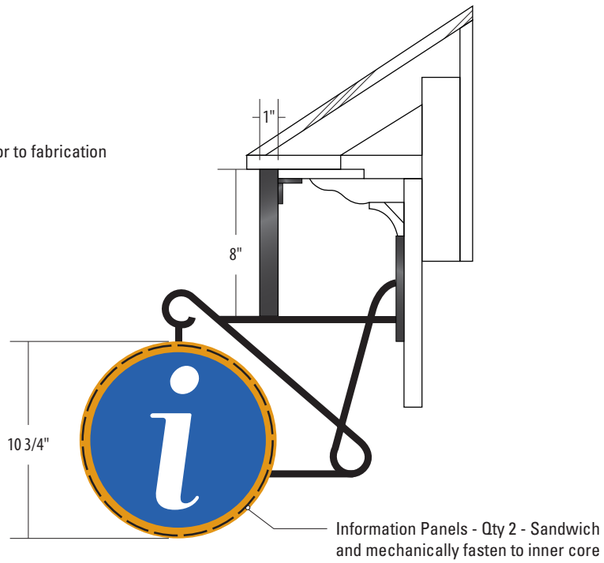
Code 14583
Type C
Sign Type PARK.8
PG #: 8



2 Top View: KIOSK.2a-2b
SCALE: 1/2" = 1'-0"

1 Front View: KIOSK.2a-2c
SCALE: 1/2" = 1'-0"

Photorendering



3 Side View: KIOSK.2a-2b
SCALE: 1 1/2" = 1'-0"

SPECIFICATIONS **SIGN TYPE:** KIOSK.2 **FUNCTION:** Market Square Kiosk

18. MAP GRAPHIC PANEL
PRODUCT NAME: iZone, 2526 Charter Oak Drive, Suite 100, Temple, Texas 76502 (888) 464-9663, www.izoneimaging.com, email: info@izoneimaging.com
PRODUCT: Digital high pressure phenolic laminate (dHPL)
GRAPHIC APPROVAL PROCESS: Submit 12x12" sample section of typical project panel for image and color quality approval.
WARRANTY PERIOD: Ten (10) years from product ship date.
THICKNESS: 1/4 inch
FINISH: Satin, including UV inhibiting top layer.
FASTENER: Tamper-resistant mechanically fastened to center panel, at 6 locations. Map panel fits within frame area, minimal double-face tape across back to stop bowing of panel.
QTY (2)

50. GRAPHIC BAND WRAP
MATERIAL: 1/8" thick Aluminum sheet, with 1" square Aluminum frame.
FABRICATION PROCESS: Router Cut, Saw Cut, Plug and stitch-weld.
EDGES: Square, Smooth
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.
FASTENER: Tamper-resistant mechanically fastened to post as required
QTY - 8 SIDES

51. DECORATIVE TOP BRACKET
MATERIAL: Aluminum bar - 1" wide x .5" wall
FABRICATION PROCESS: Router Cut, Rolled, Brake-formed
EDGES: Square, Smooth
COLOR: custom, as noted
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.
FASTENER: Weld rolled bracket to Mounting Plate. Tamper-resistant mechanically fastened to Existing Kiosk Structure, as required.
Note: Inner core sandwiched between Graphic Panels.

52. GRAPHIC PANEL
MATERIAL: 1/4" thick Aluminum sheet
FABRICATION PROCESS: Router Cut
EDGES: Square, Smooth
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.
GRAPHICS - Mask and Paint
FASTENER: Plug-weld into inner bracket.
QTY (2)

53. DIMENSIONAL LETTERFORMS
MATERIAL: 1/4" thick Aluminum
FABRICATION PROCESS: Router Cut
EDGES: Square, Smooth
MOUNT: Flush
SURFACE PROCESS: Paint all exposed surfaces with Matthews Acrylic Polyurethane, with clear coat satin finish.
FASTENER: Hidden - pin mount
QTY (2) SETS FRONT AND BACK

NOTES
1. Fabricator to verify the mounting conditions and provide a detail drawing for each mounting situation, prior to fabrication. Fabricator must 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 exposed hardware shall be tamper proof fasteners.
4. All exposed edges painted to match adjacent face.

ENVIRONMENTS & EXPERIENCES
merje
120 North Church Street
Suite 208
West Chester, PA 19380
T 484.266.0648
www.merjedesign.com

CLIENT / PROJECT
PORTSMOUTH, NH
Wayfinding and Signage System

PROJECT NO.

SUBCONSULTANT

DATE 11/18/2013

DRAWN BY: LH, PR

REVISIONS

SHEET TITLE
Sign Type KIOSK.2
Market Square Kiosk

SHEET NO.
D.26