DOT-295
(05/05)

SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION
APPLICATION FOR PERMIT TO OCCUPY RIGHT-OF-WAY

LF112807-05

Highway No. 44 County Pennington Approximately Miles N S E W

From Within Rapid City
(City or well defined point) Section Township Range

Description of occupancy: City of Rapid City requests permission to install 2" banners with hardware on the light poles on Highway 44.

Purpose of occupancy: Display Seasonal Banners for the Community

Duration of occupancy: PERMANENT X TEMPORARY _____ If temporary, give the estimated date of removal or completion: Banners to be Temporary and Hardware to be Permanent

I, the undersigned, request permission to occupy public right-of-way at the above location and as shown on the attached layout sheet. In consideration for this permission, I agree to abide by all conditions as herein stated.

1. To furnish all materials, labor, incidentals and pay all costs involved with this occupancy including restoration of any damage to the roadway and right-of-way to equal or better conditions than exited prior to the occupancy covered by this permit.

2. To provide protection to highway traffic during occupancy by the use of proper signs, barricades, flagpersons and lights as prescribed in the "Manual of Uniform Traffic Control Devices."

3. To indemnify and hold the State of South Dakota, its Department of Transportation, its officers, agents and employees, harmless from and against any and all actions, suits, damages, liability or other proceedings of any kind or nature brought because of any injuries or damage received or sustained by any person or property on account of the use or occupancy of right-of-way designated in this application.

SIGNATURE DATE

ADDRESS TELEPHONE

REPRESENTING
(Name of Individual, Company, Organization, etc.)

To be completed by Department of Transportation

Project (Const.) _____ Station _____ Milepost _____

Project (Maint) _____ Maintenance Unit _____

1. Prior to commencing occupancy and at completion of occupancy the applicant shall notify _____ at _____ Telephone _____

2. Special Conditions _____

3. Failure to accomplish the occupancy in accordance with the provisions of this permit will automatically render this permit null and void and where applicable, constitute grounds for its removal and/or full restoration of the occupancy site all at the applicant's expense.

This permit to occupy the right-of-way is granted to all conditions as herein stated on this _____ day of _____, 20____.

_____
Region Engineer

98 SERIES BANNER BRACKET INSTALLATION

IMPROPERLY INSTALLED BRACKETS/BANNERS WILL VOID YOUR WARRANTY

EACH BRACKET HAS AN ARROW CAST ON THE FACE. THE ARROWS ARE TO POINT TO THE BANNER FOR PROPER INSTALLATION. THIS CREATES A CANTILEVER, WHICH HELPS KEEP THE BANNER TAUT.

Note: Make certain that your poles are free of debris or obstructive signage that may rub on banners and cause wear.

If you are using heavy-duty banding and buckles that require a tool for installation, see the instructions accompanying the banding.

STEP #1

Install the band around the lower bracket on the pole 15 feet above ground level. Bring plain end of adjustable banding strap around the pole and put through the snap lock. Position band in top bracket channel and pull band as tight as possible by hand. Push screw portion of snap lock down so the thread of screw engages the slots of the band. Using a screwdriver or wrench, slightly tighten the band so that the bracket is held in place. The Double band channels on the lower bracket must be DOWN for proper cantilevered positioning. The arrow points UP toward the banner. Three (3) bands must be used for proper installation.

STEP #2

To determine the position of the upper bracket: the length of your banner plus seven (7) inches equals the distance from the top of the upper bracket to the bottom of the lower bracket. Please refer to the diagram on the side panel. Double band channels on the upper bracket must be UP for proper cantilevered positions. The arrow points DOWN to the banner. Three (3) bands must be used.

STEP #3

Slide rod through the top banner hem pocket with the grommet at the aluminum tip at the end of the rod. Insert the rod into the bracket and secure the rod with a pin.

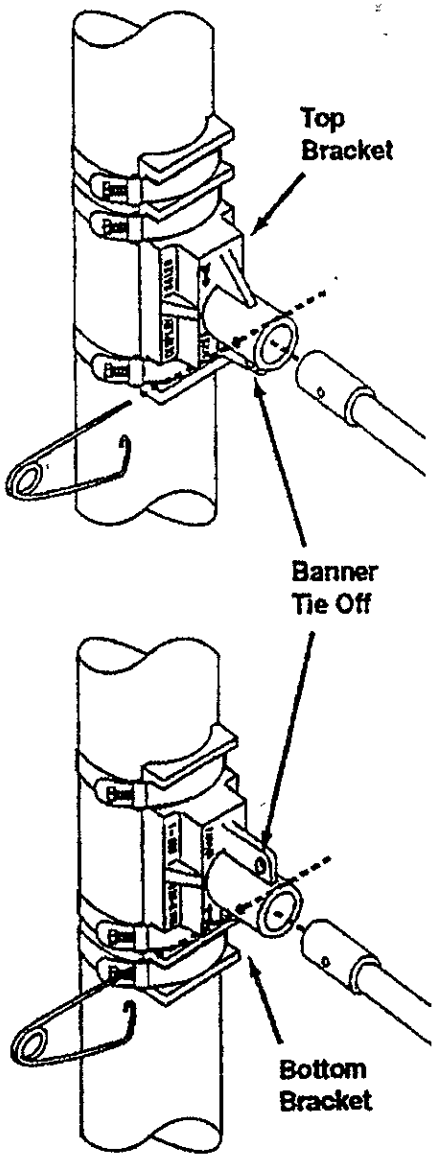
STEP #4

Slide the rod through the hem at the bottom of the banner. Apply downward pressure on rod enabling the rod to fit into the bracket. Secure the rod with a pin. Please note: THE BANNER MUST BE TAUT.

STEP #5

Loosely secure the top and bottom of the banner with the reusable tywrap through the grommet and through the tie off hole on the bracket.

NOTE: DO NOT PULL TYWRAP TIGHT. THIS CAUSES EXCESSIVE WEAR ON THE BANNER POCKET.



Display Sales
10925 Nesbitt Ave S
Bloomington, MN 55437-3125
www.displaysales.com

Toll Free: 800-328-6195
Fax: (952) 885-0099
Tel: (952) 885-0100
sales@displaysales.com

Disclaimer

Display Sales provides this data for customer convenience. Display Sales does not assume any liability associated with use of this data by anyone. It is the customer's responsibility to determine to his/her own satisfaction that the light/utility poles are able to withstand the increased wind load generated by the installation of one or more banners of a particular size on that pole using Display Sales banner brackets. Display Sales recommends that the pole manufacturer or a structural engineer be consulted in making that determination.

EPA: Effective Projected Area is a value given to outdoor pole-mounted equipment, such as lighting fixtures, signs and banners, based on the sum of the pole and attached fixture(s) surface area and shape, in square feet. For banners mounted with flexible arm brackets the EPA will change (get smaller) with increasing wind loads. A good way to envision the EPA of wind-loaded banners is as the deflected shape of the banner projected onto a flat surface.

Drag: Non-dimensional coefficient based on the banner shape's resistance to wind.

Windforce: Pressure x EPA x Drag on one arm (lbs).

% Reduction: EPA/banner area.

Deb.hadcock@RCgov.org

30 x 94" banner with a wind speed of **10** mph

¾" round rod

EPA (ft2)	19.135
Drag	1.903
Wind Force (lbs)	9.32
% Reduction	2.28

30 x 94" banner with a wind speed of **20** mph

¾" round rod

EPA (ft2)	18.68
Drag	1.77
Wind Force (lbs)	34.0008
% Reduction	4.574

30 x 94" banner with a wind speed of **30** mph

¾" round rod

EPA (ft2)	18.239
Drag	1.65
Wind Force (lbs)	69.34
% Reduction	6.86

These are calculations based on a formula. Our rods have not been through official wind tests. Our experience indicates that we have very little breakage with our customers in the field. We sell our bracket systems nation wide.

One of our largest customers, Schaumburg IL, originally purchased 96" banners about 5 years ago and since then have reduced the size to 30 x 80" because of the excessive wear that they experienced on the larger banners.We would recommend Rapid City to use an 80" banner and install them a little lower on the utility poles.

Pennington County - Rapid City GIS