EXHIBIT A

MATERIALS SPECTIFICATIONS

SIGNS: INTERSECTION

1. All signs shall be fabricated on one side of an .080 aluminum blanks, properly treated to prevent white rust. Blanks shall be punched and have radius corners as shown on EXHIBIT A-1. Facing shall be hi-intensity copy on hi-intensity background using either die cut or silk screening method. Application of facing to aluminum shall meet State of Iowa D.O.T. standards. Legend spacing shall also meet industry standards. Unsheeted plain punches blanks will also be required.

2. Sign sizes being bid are as follows: 9" height by various lengths, high-intensity green background, with silver-white high intensity 6" series "B" uppercase main legend and 3" series "C" uppercase suffix. Application and spacing of legend shall meet standard manufacturer's specifications and shall be consistent with the Board's existing 9-1-1 signs. High intensity blue background will be required for private lanes.

3. Sign lengths will be 24" or longer in 6" increments. Copy size and spacing may be reduced on signs of 48" or longer, by series or 1" height, to avoid unreasonable sign lengths. Contractor shall determine length of all signs. In the event that two back-to-back sign legends are of different lengths, the shorter legend shall be fabricated on a blank that is the same length as the longer legend.

POSTS:

1. Anchor posts shall conform to standard specifications for hot rolled carbon sheet steel, structural quality ASTM designation A570-79 bearing a yield strength minimum of 60,000 psi. Dimensions shall be 2 ¼" x 12 gauge x 4'.

2. Top post shall conform to standard specifications for hot rolled carbon sheet steel, structural quality ASTM designation A470-70 bearing a yield strength minimum of 60,000 psi. Dimensions shall be 2" x 14 gauge x various 2' increments.

3. Finish shall be an inline (after forming) zinc coating according to AASHTO M-120 standards, followed by a chromate conversion and a clear coating, heat bonded to form a durable corrosion resistant finish.

4. Holes shall be 7/16" die cut knockouts on one inch center, for the entire length of the post on all four sides, centered side to side and exactly opposite each other.

5. Posts shall be carefully formed to a square, allowing for each ¼" O.D. size variance to freely telescope into the next, for a distance at least as long as the anchor.

HARDWARE:

Hardware will consist of the following per post:

1 ea. 2" preformed Aluminum Pyramid Rain Cap
1 ea. 5/16" x 2 ¼", 90 degree Corner Bolt w/Flanged Washer Nut
1 ea. 3/8" x .6000 Drive Rivet

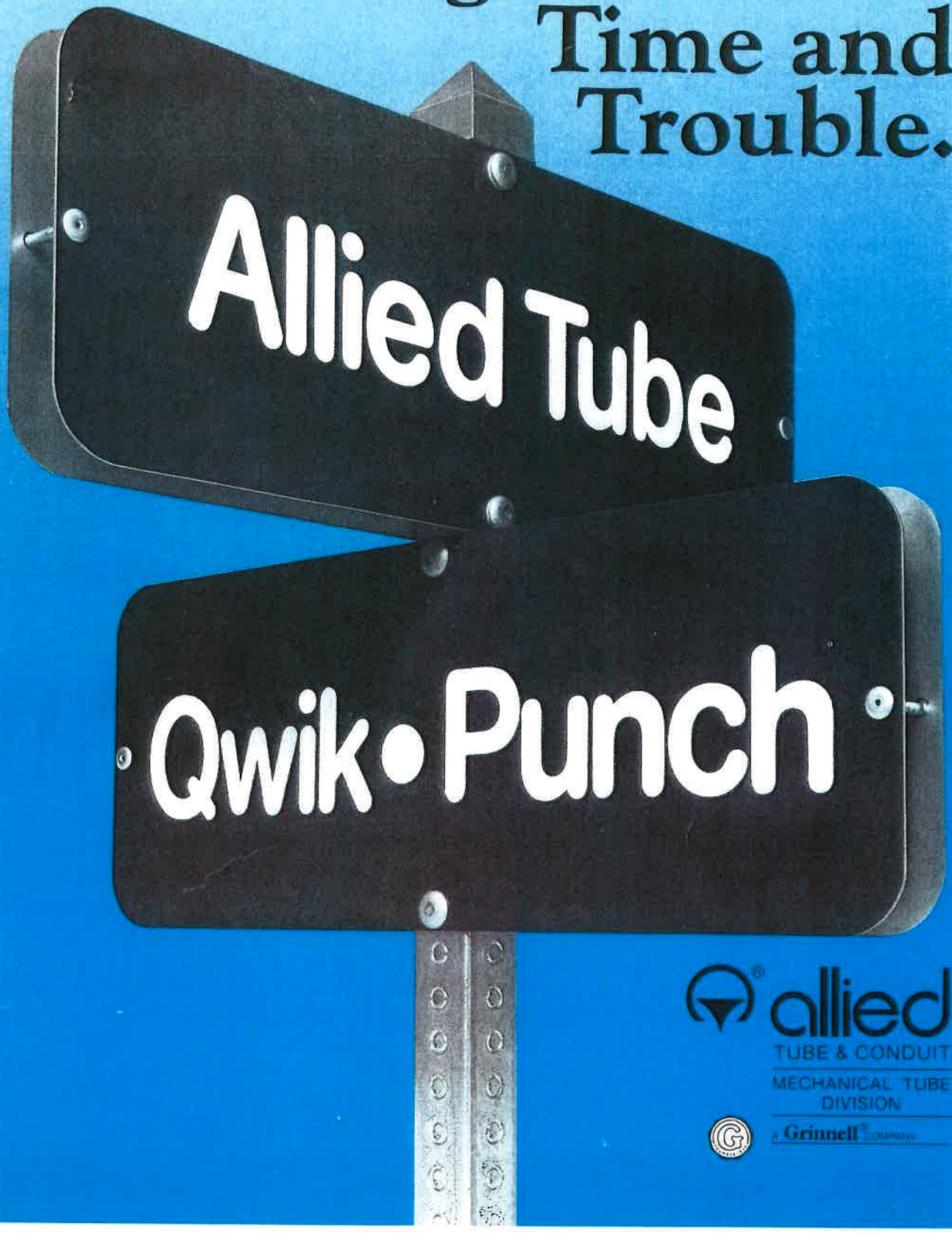
Hardware will consist of the following per sign

2 ea. 3/8" x .600 Drive Rivet
4 ea. 3/8" x .080 x 1" Nylon Washer
1 ea. ¼" #34, 2-piece Aluminum Cherry Mate Rivet
1 ea. ½" x 1 ½" Round PVC Sign Spacer

Note: All fasteners are to be of corrosion resistant material or be plated in accordance with ASTM A153 Class "D" or ASTM B633 Electro Zinc finish.

A-1

Allied Qwik-Punch® Signposts... Standing the Test of Time and Trouble.



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A-1

Allied Qwik-Punch Signposts... offer these benefits over traditional galvanized U-channel and round posts.

Signs attach securely

Sign theft is a common problem with traditional U-channel and round signposts.

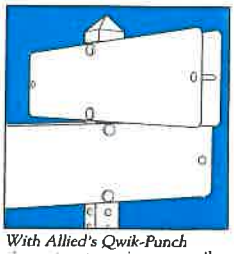
Using Allied's recommended installation method, street signs are securely fastened to posts with rivets as opposed to the small set screws commonly used with U-channel and standard round post systems. Signs hung on Qwik-Punch signposts cannot easily be knocked off or pulled from their posts—this can reduce costly sign replacement, especially in college towns and high vandalism areas.

Aesthetically Pleasing

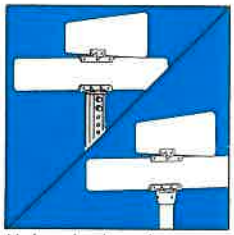
Damaged or leaning signposts are an eyesore in a city's subdivisions.

Allied's square tube signposts will not easily twist, bend or lean like galvanized U-channel or round posts with cross and cap brackets. Once properly installed, square tube signposts will stay straight and in place, withstanding strong winds. Allied's Qwik-Punch signposts are also corrosion resistant, and will retain a clean, bright finish longer than most other signposts.

Less Expensive



With Allied's Qwik-Punch signpost system, signs are easily attached using a simple rivet.



U-channel and round signposts require a cross and cap system to mount each sign, requiring two brackets for each two-way street sign.

Because Allied's signposts are square, signs can be mounted directly to all 4 sides. Signs can be simply attached using drive rivets—no special brackets are needed, unlike U-channel and round signposts which commonly use a cross and cap system. In order to mount a 2-way sign on U-channel or round signposts, 2 brackets are needed, adding extra expense to each signpost erected on every street corner.

Greater Torsional and Windload Stability

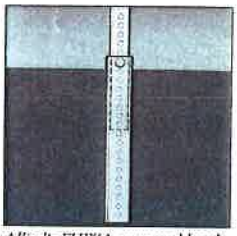
Sign damage due to wind or tearing can mean costly replacements.

Because Qwik-Punch allows for signs to be mounted directly to the post, signs stay secure, unlike cross and cap systems, which can become loose from the wind. Also, the small set screws used to hold these signs can loosen and eventually tear through, making replacement necessary.

Easy Installation

Qwik-Punch signposts need no special braces or anchors for installation. Posts can be either directly embedded or installed with a break-away system.

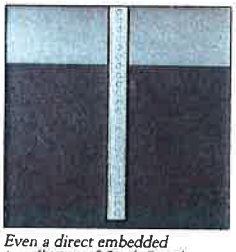
FHWA approved break-away installation:



Allied's FHWA approved break-away system needs no special brackets for installation.

A minimum 30" section of 12-ga. anchor, one size larger than the signpost is driven into the ground using a drive cap with a sledge or power equipment, leaving a maximum of 4" above the surface. Signs are then mounted to the signpost and the post is inserted into the anchor and fastened with a corner bolt.

Direct embedded installation:



Even a direct embedded installation of Qwik-Punch, when crash tested, exceeds FHWA guidelines for vehicle impact safety.

The post is directly embedded using a drive cap with a sledge or power equipment.

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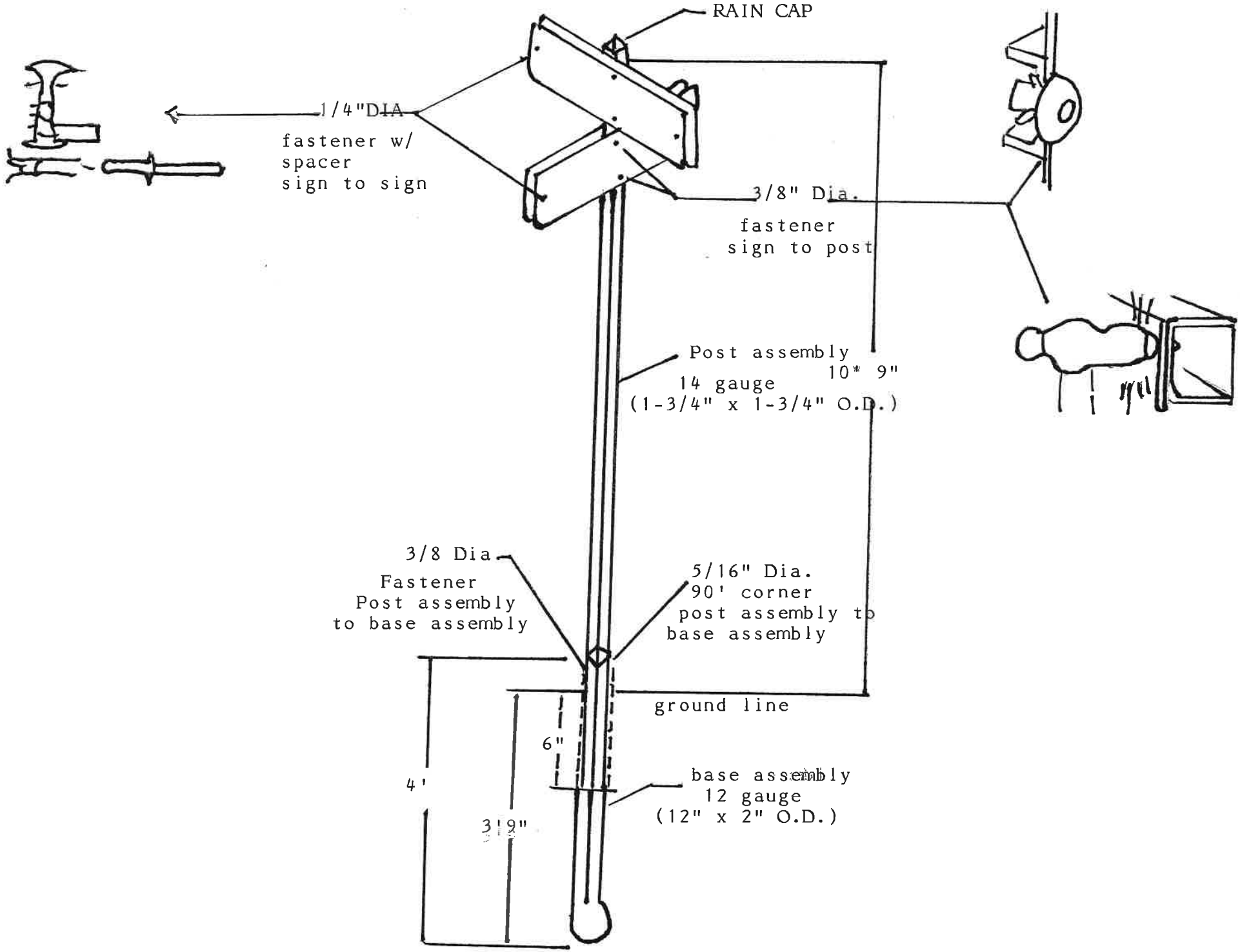
14 Gauge Section Properties

O.D. Size-in.	Ga./Nom. Wall Thickness-in.	Weight lbs./ft.	Effective Area A=in.²	Effective Section Modulus S=in.³	Effective Moment of Inertia I=in.⁴	Effective Radius of Gyration R=in.
1¾ x 1¾	14/0.083	1.882	0.392	0.230	0.201	0.716
2 x 2	14/0.083	2.164	0.474	0.296	0.296	0.790
2¼ x 2¼	14/0.083	2.446	0.558	0.417	0.469	0.917

Allied Qwik-Punch Signposts are distributed by:

EXHIBIT B


RAIN CAP
1/4"DIA
fastener w/
spacer
sign to sign
3/8" Dia.
fastener
sign to post
Post assembly
14 gauge
(1-3/4" x 1-3/4" O.D.)
10" 9"
3/8 Dia
Fastener
Post assembly
to base assembly
5/16" Dia.
90' corner
post assembly to
base assembly
ground line
6"
4'
3'9"
base assembly
12 gauge
(12" x 2" O.D.)

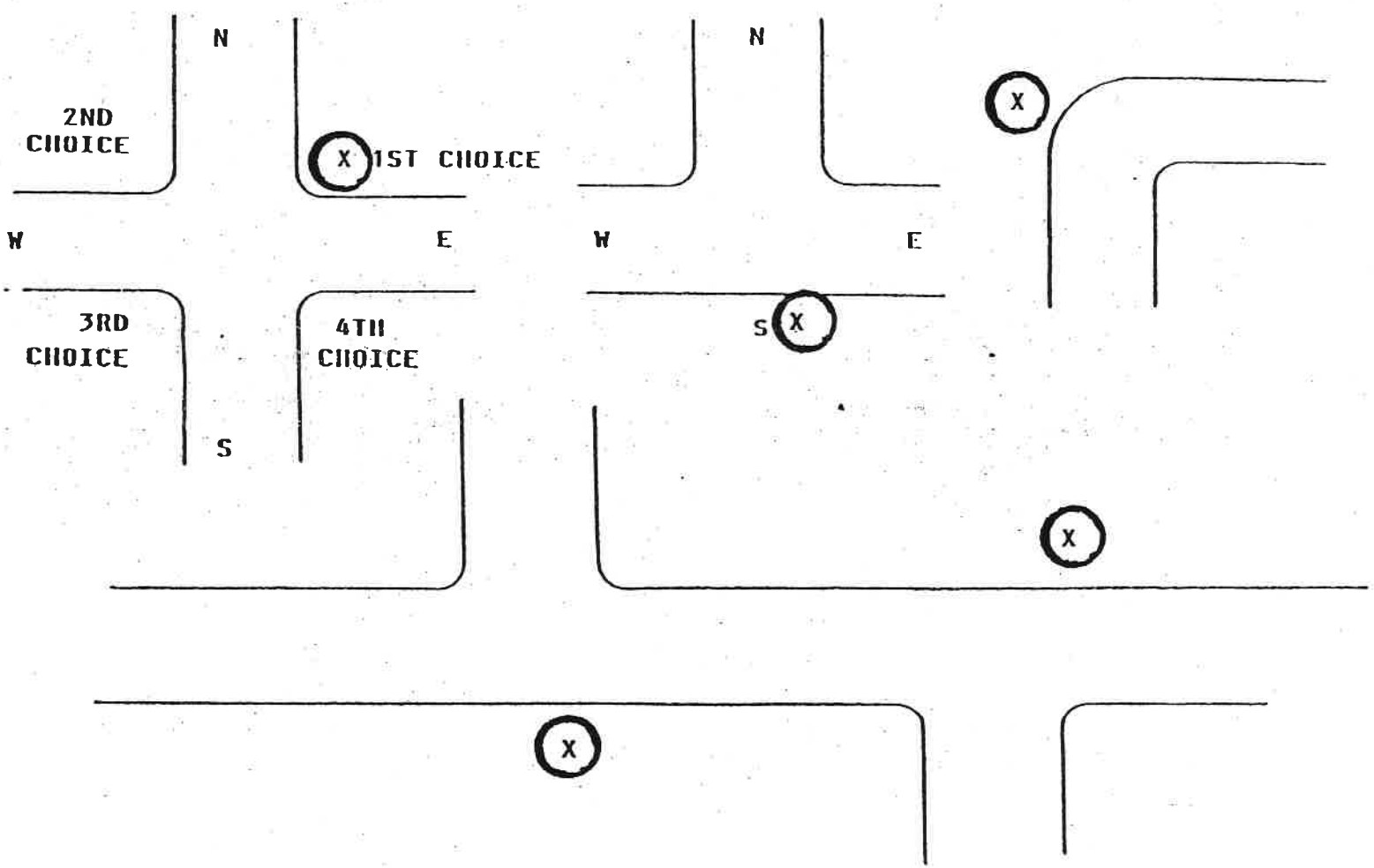


EXHIBIT C

EXHIBIT D

SPECIFICATIONS OF RURAL RESIDENTIAL MARKER SIGNS AND POSTS

HOUSE NUMBER SIGNS – POST MOUNTED (TO BE INSTALLED BY CONTRACTOR):

- POSTIONS: Legend shall be off-set horizontally so as to accommodate two to four-digit residence numbers and flag mounting on one end, and centered vertically.

- SIGNS: Signs shall be fabricated on 18" x 6" x .080 aluminum blanks, properly treated to prevent white rust or corrosion. Blanks shall be punched and have two radius corners as shown on EXHIBIT A.

- SIGN FACING: Sign facing shall be reflective engineering grade, 3-M material or approved equal.

- COLORS: Colors shall be blue background with white letters.

- NUMBERS: Numbers shall be 4" series C hi-intensity white legend, 3-M material or approved equal. Numbers shall be applied to both sides of blank at the time of installation in accordance with manufacturer's standards. Three to four-digit residence numbers will be utilized.

- NUMBER DESIGN: The charts for Standard Numbers for Highway Signs for number design and spacing are to be used.

- DOT STANDARDS: All aluminum and reflective sheeting shall meet State of Iowa D.O.T. specifications.

- POSTS: Sign posts shall be 7' long, hot-dipped galvanized U-channel shape, weighing not less than 1.12 lbs. per foot. Posts shall not have less than 6 each 5/16" holes on one inch centers starting one inch from the top and center line on back wall of post.

- HARDWARE: Each sign shall be fastened with two ¼" two-piece aluminum rivets (CM250-18).

HOUSE NUMBER SIGNS – MOUNTED ON RESIDENCE (TO BE INSTALLED BY RESIDENT ONLY):

- POSITIONS: Legend shall be centered vertically and horizontally to accommodate one to three-digit house numbers.

- SIGNS: Signs shall be fabricated on 12" x 6" x .080 aluminum blanks, properly treated to prevent white rust or corrosion. Signs shall be prepared for mounting on the residences with one 5/16" hole punched on the left side of sign and one 5/16" hole

punched on right side of sign, centered horizontally and vertically, with a distance of 1" from the edge of the aluminum to the center of the hole. All corners shall have ¾" radius.

- SIGN FACING: Sign facing shall be reflective engineering grade, 3-M material or approved equal.

- COLORS: Colors shall be blue background with white letters.

- NUMBERS: Numbers shall be 4" series C hi-intensity white legend, 3-M material or approved equal. Numbers shall be applied to blue side of sign.

- NUMBER DESIGN: The charts for Standard Numbers for Highway Signs for number design and spacing are to be used.

- DOT STANDARDS: All aluminum and reflective sheeting shall meet State of Iowa D.O.T. specifications.

LOT NUMBER SIGNS – MOUNTED ON RESIDENCE (TO BE INSTALLED BY RESIDENT ONLY):

- POSITIONS: Legend shall be centered vertically and horizontally to accommodate one to three-digit lot numbers.

- SIGNS: Signs shall be fabricated on 12" x 6" x .080 aluminum blanks, properly treated to prevent white rust or corrosion. Signs shall be prepared for mounting on the residences with one 5/16" hole punched on the left side of sign and one 5/16" hole punched on right side of sign, centered horizontally and vertically, with a distance of 1" from the edge of the aluminum to the center of the hole. All corners shall have a ¾" radius.

- SIGN FACING: Sign facing shall be reflective engineering grade, 3-M material or approved equal.

- COLORS: Colors shall be black background with white letters.

- NUMBERS: Numbers shall be 4" series C hi-intensity white legend, 3-M material or approved equal. Numbers shall be applied to black sign of sign.

- NUMBER DESIGN: The charts for Standard Numbers for Highway Signs for number design and spacing are to be used.

- DOT STANDARDS: All aluminum and reflective sheeting shall meet State of Iowa D.O.T. specifications.

EXHIBIT D

RESIDENCE MARKER SIGN

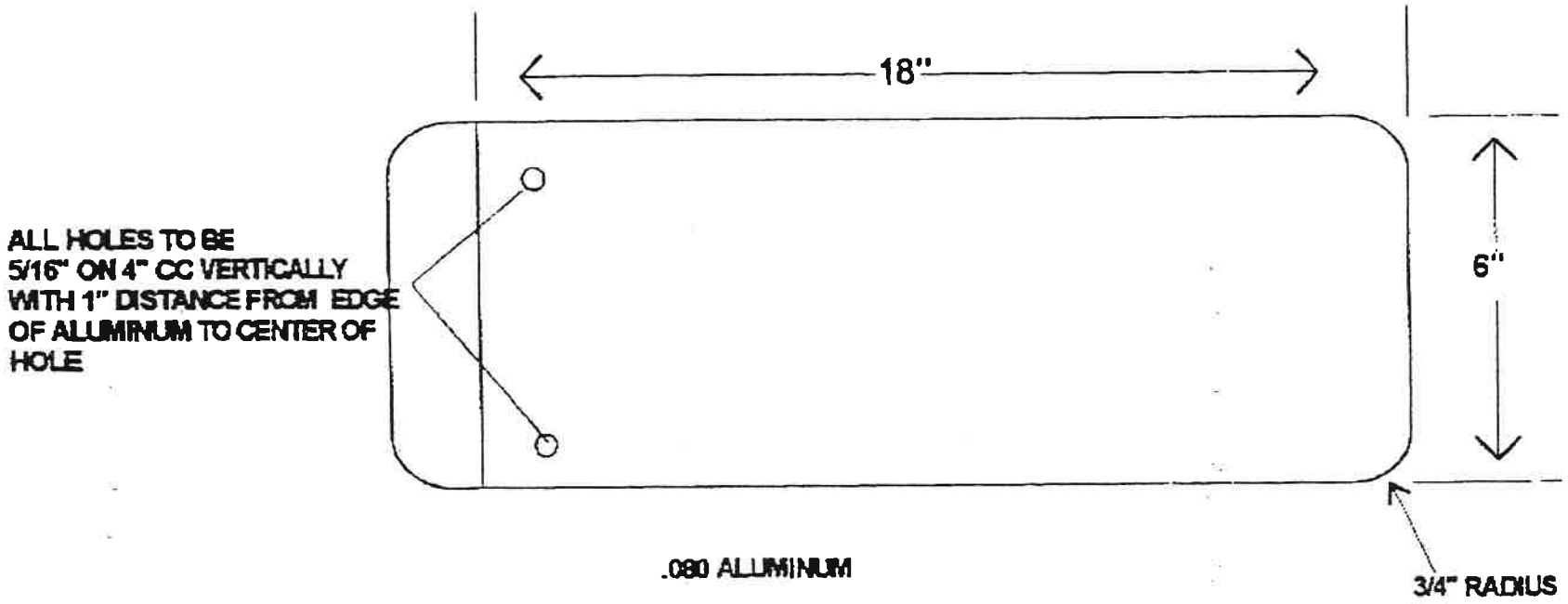


EXHIBIT E

TYPICAL RESIDENCE MARKER SIGN

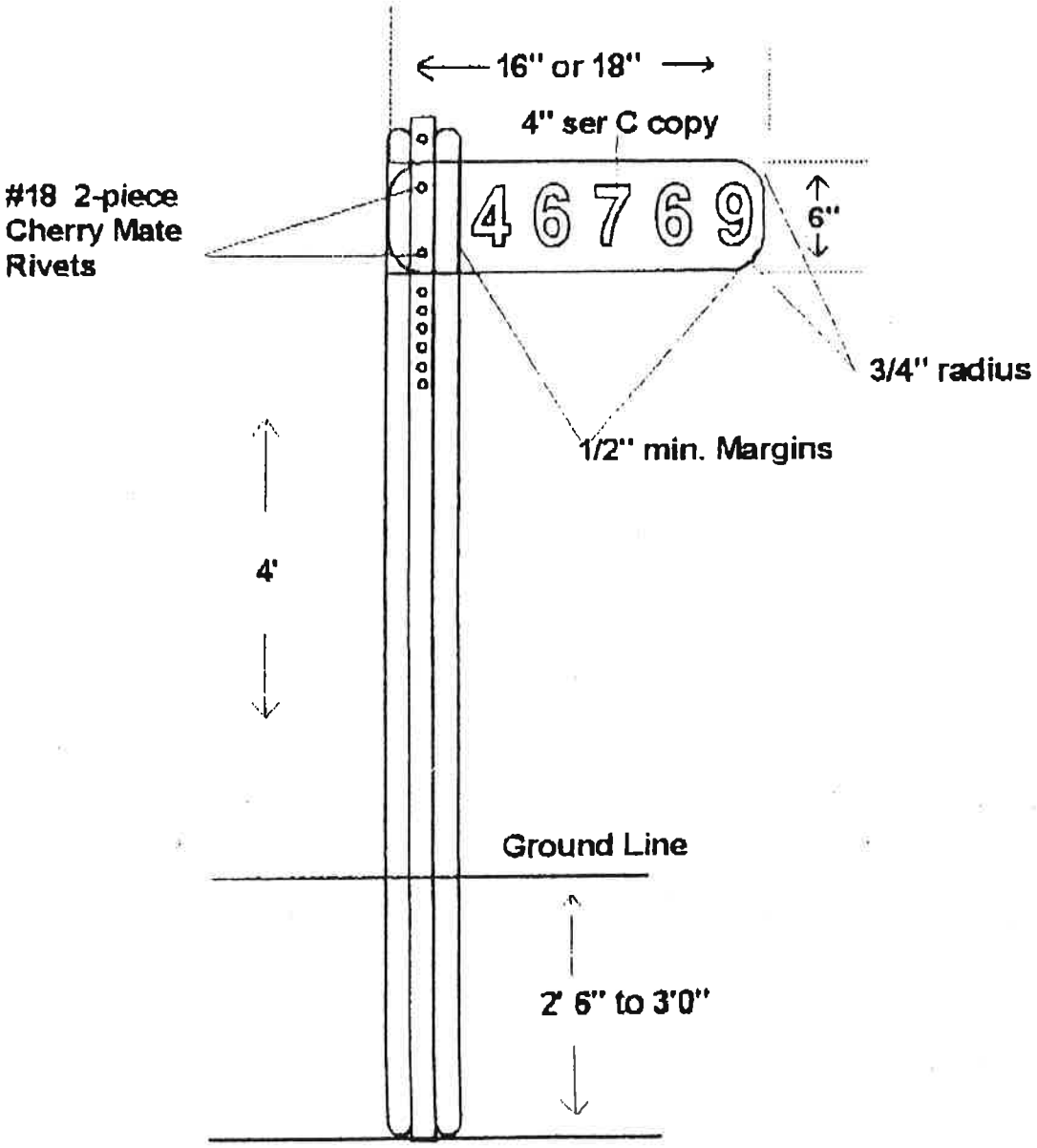
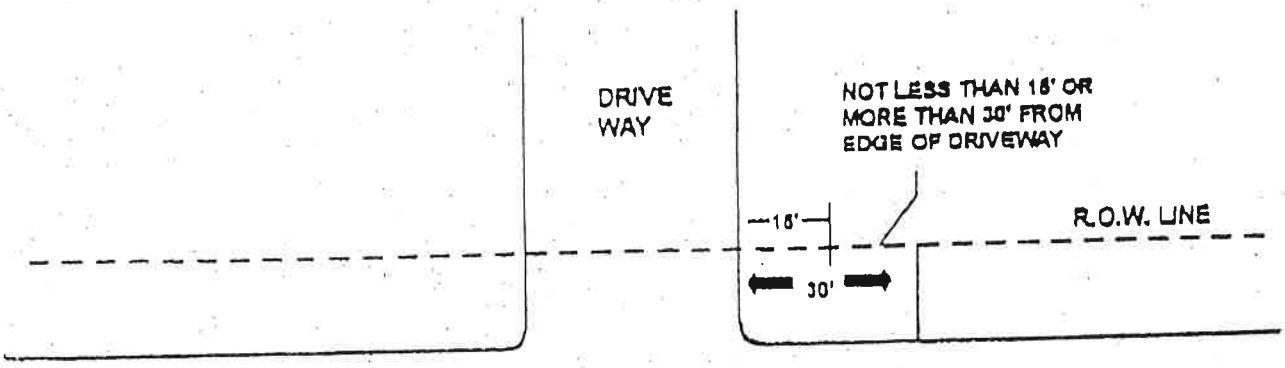


EXHIBIT F

TYPICAL FARM RESIDENCE MARKER INSTALLATION



ROAD WAY

- MARKER SIGNS CAN BE PLACED ON EITHER SIDE OF THE DRIVEWAY ON ROAD RIGHT OF WAY. FIRST PREFERENCE IS RIGHT HAND SIDE OF DRIVEWAY.
- LOCATIONS SHOULD BE FREE OF SIGHT OBSTRUCTIONS FOR MOTORISTS.
- LOCATION SHOULD BE WITHIN 1 TO 1-1/2 FT OF RIGHT OF WAY LINE OR FENCE.
- DELINEATOR POSTS SHALL BE DRIVEN 2-1/2 FT INTO GROUND.