Signage and Graphics Standardization Program For The University of Minnesota

UNIVERSITY OF MINNESOTA
TWIN CITIES

Physical Planning
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The Signage and Graphics Standardization Program for the
University of Minnesota represents the formulation of a
unified program for visual communications through signage
and graphic treatments for the Twin Cities and Coordinate
Campuses.

As a design tool, this document is intended to serve as a
guideline for architects, planners, and administrators in
the development of graphic programs for the University.
This is achieved through the establishment of consistent
graphic formats, styles, and colorations, resulting in a
collection of signage hardwares for both exterior and
interior areas on the campuses. In addition to providing
the necessary details and specifications for expediting
the basic collection of signage hardwares, the guideline
also provides the frame of reference from which all graphic
programs may be developed.

The development of a consistent program for campus
identification can be an invaluable aid in orienting people
to the University and its various facilities. At the same
time, the program also fosters the creation of a positive
image for the physical appearance of the campuses. The
presence of a standardization program of this nature will
help to insure a continued direction in this area of campus
planning.

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Signage and Graphics Standardization Program For The University of Minnesota

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Introduction

The Signage and Graphics Standardization Program for The University of Minnesota represents a first attempt at unifying certain forms of visual communications on campus. In the past, graphic identification was often left largely to chance, guided only by the purpose of satisfying individual needs. "Signs" were usually expedited in a make-do fashion utilizing the materials and manufacturing processes locally available. The systems approach to graphic design was evidenced only by this similarity in methods and materials.

The total of these efforts in providing signage and graphics for the University therefore left much to chance. As the campuses grew through the addition of new buildings and larger student populations, the proliferation of signage and graphic treatments increased proportionately - and generally without regard for any unified or consistent direction.

Paralleling the increased demand for signage and graphic programs on the campuses, a new awareness of the art of visual communication and graphic design surfaced. Beginning with this increased sensitivity to good design principles, the graphic designer now required greater resources for actually implementing his programs. The signage industry responded by developing new signage materials and manufacturing processes. Suddenly, the resources for executing good graphic design became a reality. The designer was no longer limited in his expression of graphic concepts and ideas. In fact, the solution to many design problems acted as the necessary incentive for the further development of new manufacturing processes and materials. The end result of this exchange between designer and manufacturer has helped to foster the discipline of graphic design as we know it today.

With the artform of graphic design reaching the level it has, it might appear that efforts to standardize or control those elements comprising a signage program would stifle the creative aspects of graphic delineation. On the contrary, we can begin to isolate numerous benefits resulting from a unified approach to graphic design - benefits available to both the user and the designer.

Unification of the various visual communicative elements found on campus tends to foster the concept of a positive image or identity for the physical aspects of the campus. The informational consistency from building to building can greatly simplify the ease with which a space is utilized and in turn, make the students' educational experiences a bit easier. We can therefore begin to understand the need for providing a consistent informational system, not only within the campus, but between the Twin Cities and Coordinate Campuses.

Beyond this immediate benefit of establishing a total image for the University of Minnesota, the establishment of a consistently used collection of signage hardwares will greatly simplify the task of the graphic designer. This consistency provides a readily available frame of reference for fulfilling the variety of signage and graphic needs of the campus. Much of the early decision making required of the design process can be reduced to that of the designer applying his "graphic vocabulary" to a specific need or problem. The standardization of graphic elements can, when properly enforced, provide the controls necessary for maintaining the integrity and consistency of the

overall graphic format established for the campus. This situation can often be used to the designer's advantage in successfully dealing with an indecisive user or in the initial definition of program requirements.

The standardization of certain graphic and signage items can also represent an economic savings to the University. The consistent use of signage hardwares suggests the savings of quantity purchase, both at initial installation and when maintenance is required. Taken a step further, the opportunity for annual purchase agreements through the various sources presents itself as both an economic savings and a savings in time involved in project expediting.

A consistent graphic format can also be of use to architects and design consultants retained by the University. The standardization program can insure a continued direction through their work, while also reducing the quantity of initial design time required of a project. It must be noted, however, that a program of this nature does not automatically predispose a successful project. On the contrary, the ability of the designer to interpret the program requirements and in turn balance these requirements against his design vocabulary appears to be the key to successful design programs.

Realistically, the establishment of this type of program involving the setting of certain design standards cannot be considered an all-inclusive entity. New graphic requirements will continue to develop, for which a specialized design or solution will be required. In this case, the existing standards will often provide adequate support for design development. The designer has at his disposal the successful solution to past problems. Often, similarities in design requirements can be isolated, from which appropriate solutions can be derived.

At this time it must be emphasized that the limitations imposed by the development of graphic design standards need not exist as a threat to the designer's creativity. Rather, the standards should function as the basic tools necessary for the completion of any design program. The Signage and Graphics Program for the University of Minnesota is intended to do this - to provide the necessary design background for use within the University and by its consultant designers.

The content of this design guideline is organized into two basic areas. The initial portion presents the basic content of the signage and graphics program, including the rationale for its development. The various components comprising the collection of signage and graphics hardwares are presented here, along with their individual specification and details. Application of these hardwares to actual design situations shall be reviewed through investigation of recent signage installations.

The second portion of the design guideline reviews the actual processes involved in the application of these standards for graphic design. In particular, the expediting of graphics programs shall be reviewed in detail, from initial design phase to supervision of the installation of signage items.

The preparation of specification documents is the instrument through which the designer is able to transform an idea or concept into a tangible element. The facility with which these documents are prepared ultimately reflect the success or failure of design program. This guideline, along with its support materials, will provide the specifications and detailing required for

the proper preparation of those instruments required
for the realization of any graphics program.

The Signage Program

The Signage and Graphics Standardization Program
for the University of Minnesota shall consist of a
basic collection of graphic and sign items intended
for general consumption on the Twin Cities and Coord-
inate Campuses.   These items are grouped into four
major categories according to function, and include
the following:

    I   Interior Signage Hardwares
    II   Directories and Posting Surfaces
    III   Exterior Signage Hardwares
    IV   Special Graphic Treatments

Treating each category as a separate though related
topic, we shall investigate the design and specifi-
cation of each sign type employed at the University.

Prior to the examination of the signage and graphic
hardwares, it is appropriate that the rationale for
the program's development be understood. In order to
initiate a program of signage standards for a diverse
consumer such as the University, it is first necessary
to define the requirements of such a program and ident-
ify those features common to all signage types.

A clue can be observed in the underlying function of
a single sign. Simply stated, the purpose of a sign
is to convey a bit of information in a non-verbal
manner. Such a concept is indeed basic, and begins
to suggest the many roles a simple sign must fulfill.
The information presented must be complete in thought,
totally comprehensible, and visually effective. These
conditions indicate a brevity and precision in inform-
ation, and a physical construction of utmost read-
ability.

The precision in phraseology initially requires a care-
ful assessment of the informational statement. A cert-
ain sensitivity must be developed by the designer in-
order to separate critical information from the extran-
eous, to eliminate terminology with uncertain meaning,
and to avoid unnecessary repetition of information.
This sensitivity must become a concurrent part of the
designer's vocabulary, as he is, in effect, a trans-
lator of ideas.

To aid in this translation process, the physical
appearance of the signage becomes critical to its com-
prehensibility. The clarity of information previous-
ly discussed indicates a parallel visual clarity. It
is therefore imperative that the graphics be visual-
ly distinctive, easily perceived, and an integral part
of the area it defines.

In unifying the visual characteristics of a signage
system, we begin by noting those features common to
all elements of the graphics program. Probably the
most obvious characteristic is the style of lettering
used throughout the program. The Helvetica Medium
letter style shall be used as a standard for all sign-
age and graphics at the University of Minnesota. The
simplicity of this san-serif letter form lends itself
to the need for visual clarity. The use of upper and
lower case mix is recommended for general signage con-
sumption. In the past, exclusive use of lower case
characters has been demonstrated. This configuration
can provide a distinctive visual treatment, though it
appears best suited for use in large scale decorative
graphics. As a general information media, the upper/
lower case mix will tend to eliminate the ambiguities
resulting from the non-conventional use of the alpha-
bet.

On occasion, the designer may encounter situations that

indicate the need for a variation from the standard Helvetica Medium letter style. This might apply when a sign includes a large body of copy or an enumerated listing. In such instances, the Helvetica Light letter style is most appropriate. Reflecting the same letterforms and shapes as the standard style, the Helvetica Light style creates an appearance that is less overpowering in large bodies of copy, and as a result, is easier to read. The use of Helvetica Light and Helvetica Medium typography simultaneously can create visual emphasis for listings and enumerated copy.

In considering any variation from a standard format, discretion must be used in applying such an alternative. Sound reasoning for justifying the departure from standards must initially exist and be well conceived. If such criteria can be demonstrated, the designer must then develop a consistency for the use of the variable items.

Worth mentioning at this time is the use of special letter styles in decorative graphics. While this situation may occur only infrequently at the University, it must be treated with the same consideration as any form of supergraphic treatment. Such an application might be found in a retail food service area or special public space. Again, discretion must always be used, lest the designer become vulnerable in proliferating inconsistencies in the graphics program.

The compliment to the graphic style as an underlying characterisic is the subject of coloration. In order to achieve a maximum visual contrast for the viewer, a white graphic format on a neutral dark ground shall be considered as the standard coloration for signage and graphics at the University. Selection of the background color must be such that it compliments the wide range of interior and exterior finishes and materials employed in building construction. This color must

also be compatible with existing architectural and landscape elements found on campus. A dark char-brown hue best meets these requirements and shall be considered as a standard coloration for graphic elements, unless special design requirements dictate otherwise. Any variations from standard coloration shall be approved by the Office of Physical Planning. The technical specification for this particular color shall equal "Glidden" Black-Brown Eggshell 510DL7144. Manufacturers shall provide color-match samples of alternate colorways for approval by the University Graphics Coordinator.

Working within this color fomat, the designer may, on occasion, find it necessary to reverse the standard color scheme. The use of char-brown graphics on a white round can be used effectively in areas where illumination levels are not sufficient for the proper viewing of the standard colorations. As in any departure from the standard format, design approval for such changes must be obtained through the Office of Physical Planning.

ABCDEFGHIJ
TUVWXYZ

abcdefghijklm
yz 123456

Letter Style

The Helvetica Medium letter style shall be used throughout the Signage and Graphics Standardization Program for The University Of Minnesota. Sample alphabets for both upper and lower case characters, numerals and punctuation marks are shown above.
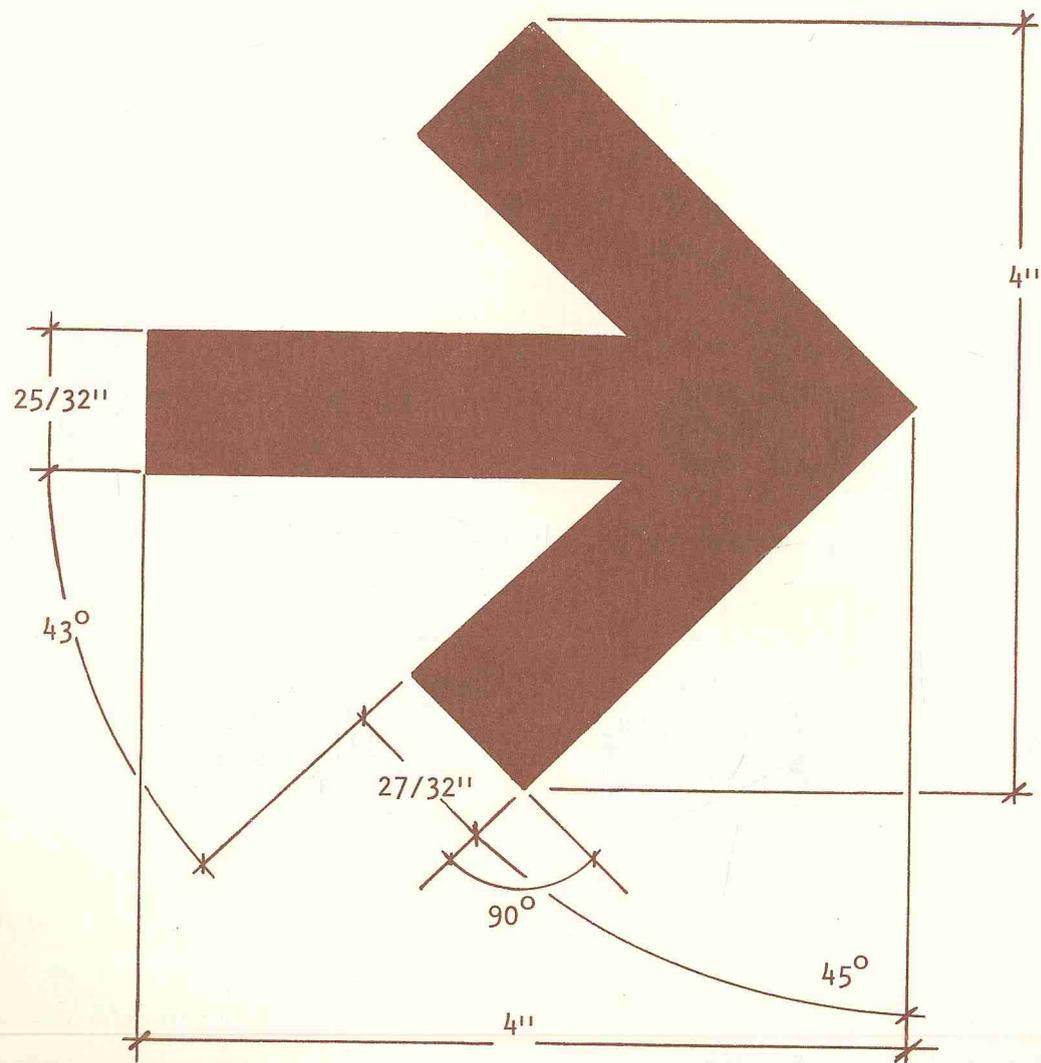
KLMNOPQRS
?!"",.()-

nopqrstuvwx
7890

AEG

Letter Size

Letter size shall be specified on the individual sign layouts, and shall be determined by the capital letter heights as illustrated above. Because of the variations in point sizes, all dimensions shall be expressed in inches or fractions thereof.

Arrow Detail

All arrows used throughout this document shall be proportional to the arrow as detailed above. Therefore, a 4" arrow refers to one that is 4" from tip to tail, and 4" in width from extreme point to extreme point.

oq

A. Two Rounded Letters

de

B. One Straight and One Rounded Letter

li

C. Two Straight Letters

Take   tsa   We

Variations - Overlapping and Special Cases

According

A typical work would appear thus

Letter Spacing

Letter spacing shall be in optical accordance with the examples shown above. When required, individual specifications may note changes in the standard spacings.

With coloration and letter style determined, consideration can be given to the actual configurations of the various hardwares comprising the standards for interior signage and graphics.

Uniformity within the system is of prime importance. The collection of signage hardwares for interior consumption is based upon an 8" module, with multiples of that dimension determining the shape of the various sign types. We shall see that a limited number of configurations can serve a wide variety of graphic needs.

On occasion, the need for signage of a non-standard dimension presents itself. Such a situation may be dictated by limited wall surfaces or other mounting conditions. Architectural features such as soffits, archways or transoms will often dictate the need for developing specialized signage proportions. Again, consistency within the system cannot be over emphasized, lest the variables result in a proliferation of the signage system. Any variations in format shall be approved by the Office of Physical Planning.

The basic construction of all interior signage shall be of 1/8" matte finish acrylic, as manufactured by Rohm and Haas - P94 series Plexiglas, or equal. All graphics shall be silk-screened on the reverse surface of the acrylic prior to the application of the background color to the reverse surface of the sign.

This method of sub-surface printing provides a permanent graphic application that cannot be damaged through normal wear or abuse. Once printed the graphics cannot be changed, therefore requiring a totally new sign should updating or modification of the text be required.

If it is anticipated that change in copy may occur

following installation, the designer may consider specifying the graphics to be surface silk-screened. While this process results in a graphic application that is vulnerable to surface damage, the graphic material may be removed from the sign's surface with the use of solvents. The sign may then be re-screened, adding whatever copy necessary for updating the sign.

In determining which screening process should be specified, the designer must consider the probability of change occurring. This must be balanced against anticipated abuse of the signage hardwares after installation. Each of these factors must be carefully considered in determing the appropriate silk screening process for the individual design problem. A complete specification for the fabrication of acrylic signage is given on page 108.

Signs may be installed using one of three processes. The most common method of installing the acrylic signage is the direct bonding of the sign panel to the wall surface using double-faced foam mounting tape. This method provides a secure mounting method on relatively smooth wall surfaces such as plaster, wood, glass, and smooth concrete. It is not suitable for use on rough masonry, brick, or in areas where a high degree of security is required. For these areas, a mechanical mounting is recommended. Here, the sign panel is drilled to accept tamper-proof mounting screws. The sign is attached to the wall mechanically, using expansion anchors embedded into the wall surface. When mechanical installation is required, the quantity and positioning of screw holes must be specified on the layout of the sign face.

Should the appearance of screw-heads on the surface of the sign be not acceptable, a third method of installation may be specified. This method employs features of both the tape and mechanical mounting techniques.

11

Here, a back-up panel is provided which is mechanically mounted on the wall surface. The actual sign face is then bonded to the back-up panel using the foam mounting tape. When this method of installation is required, the fabrication of the back-up panel must be specified in a manner similar to the sign face itself.
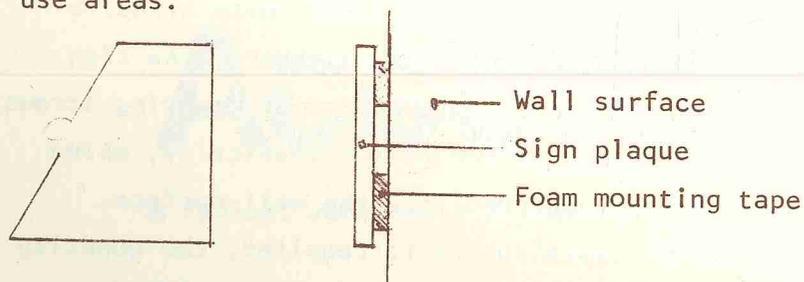
The following illustrations depict the three methods of installation.

Installation Methods

Double Sided Tape Mount

1" white foam mounting tape, as manufactured by Minnesota Mining and Manufacturing Company, shall be applied to the reverse surface of the sign plaque, surrounding its perimeter.
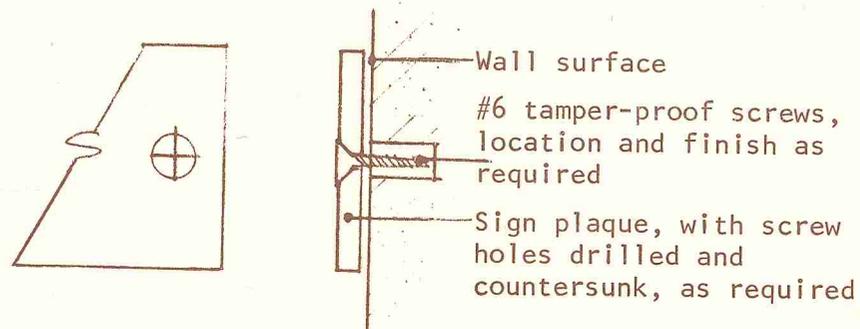
This method is recommended for use on smooth wall surfaces, such as painted plaster, gypsum board, glass, and certain types of masonry block. This method is not suitable for installation on brick, stone, or any other type of rough, uneven surface. This method offers adequate security of the sign in non-critical use areas.

- Wall surface
- Sign plaque
- Foam mounting tape

Mechanical Mount

Sign shall be drilled and countersunk to accept #6 tamper-proof screws. Quantity and location of screw holes to be indicated on detail drawings. Spacers may be required behind the sign plaque to compensate for variations in wall surface.
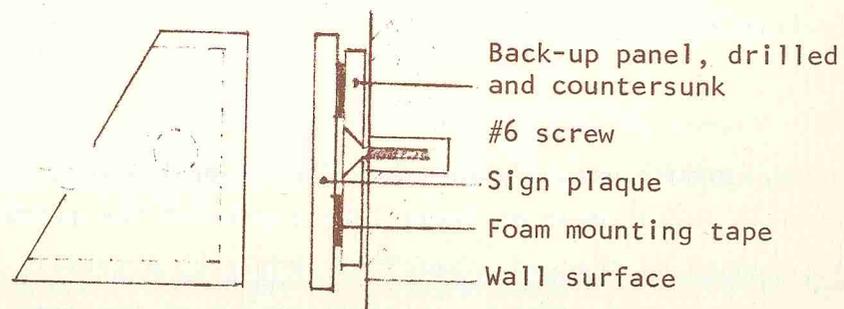
This method of installation offers a high degree of security, and is recommended for use on masonry wall surfaces, such as brick, stone, and poured concrete.
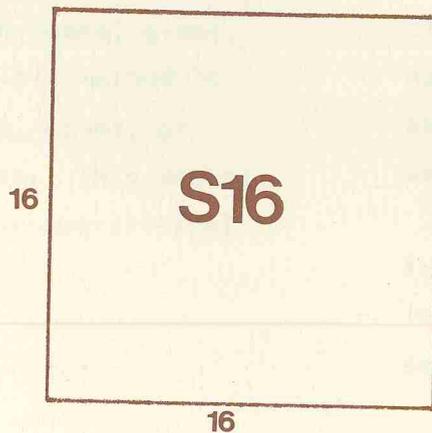

- Wall surface
- #6 tamper-proof screws, location and finish as required
- Sign plaque, with screw holes drilled and countersunk, as required
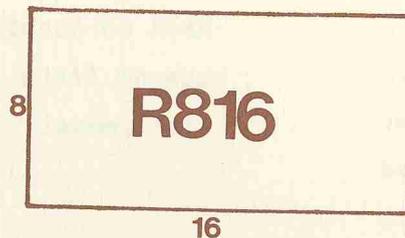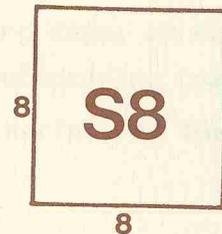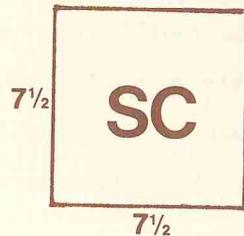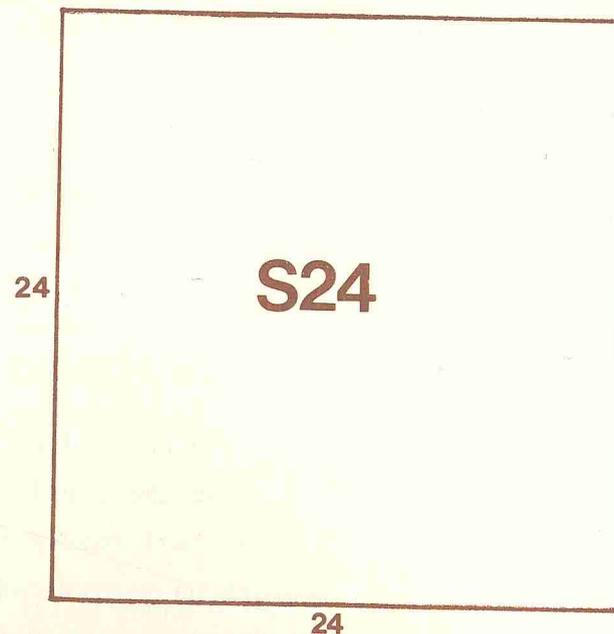
Combination Mount

This method of installation combines characteristics of both tape and mechanical mounting. A back-up panel, equal in depth to that of the sign plaque, is mounted mechanically on the wall surface. The back-up panel shall be undercut 1/2" on all sides to provide a mounting surface 1" smaller in each dimension than that of the sign plaque. Exact dimension of back-up panel and screw hole locations shall be noted on detail drawings. The sign plaque is then secured to the back-up panel using the 1" foam tape as described previously.

This method of installation is recommended where an invisible means of mounting is required on a non-smooth wall surface.

- Back-up panel, drilled and countersunk
- #6 screw
- Sign plaque
- Foam mounting tape
- Wall surface

With this brief background into the general construction
and fabrication of the interior signage hardwares, the
various sign types comprising this portion of the stand-
ardization program may be reviewed.

The detailing of the following signage items are offered
as typical examples of each basic configuration. Their
layout is indicative of the general format for a sign
of that particular size and application. Copy place-
ment, letter size, and spacing are typical and serve the
purpose of illustrating and specifying the physical
characteristics of the sign. Actual text requirements
for each signage item must therefore be translated into
the standard format for the particular sign type.
Any variations in either copy layout or letter size
should be indicated in the signage schedule in order
to clarify the intent of the designer.

CH 3¾ × 7½

R48 4 × 8

SC 7½ × 7½

S8 8 × 8

R816 8 × 16

R824 8 × 24

S16 16 × 16

S24 24 × 24

Signage Modules

Interior signage hardwares are based on an 8" module, with components derived from multiples of that increment. Variations in layout are possible within each basic configuration, as noted on subsequent detail drawings.
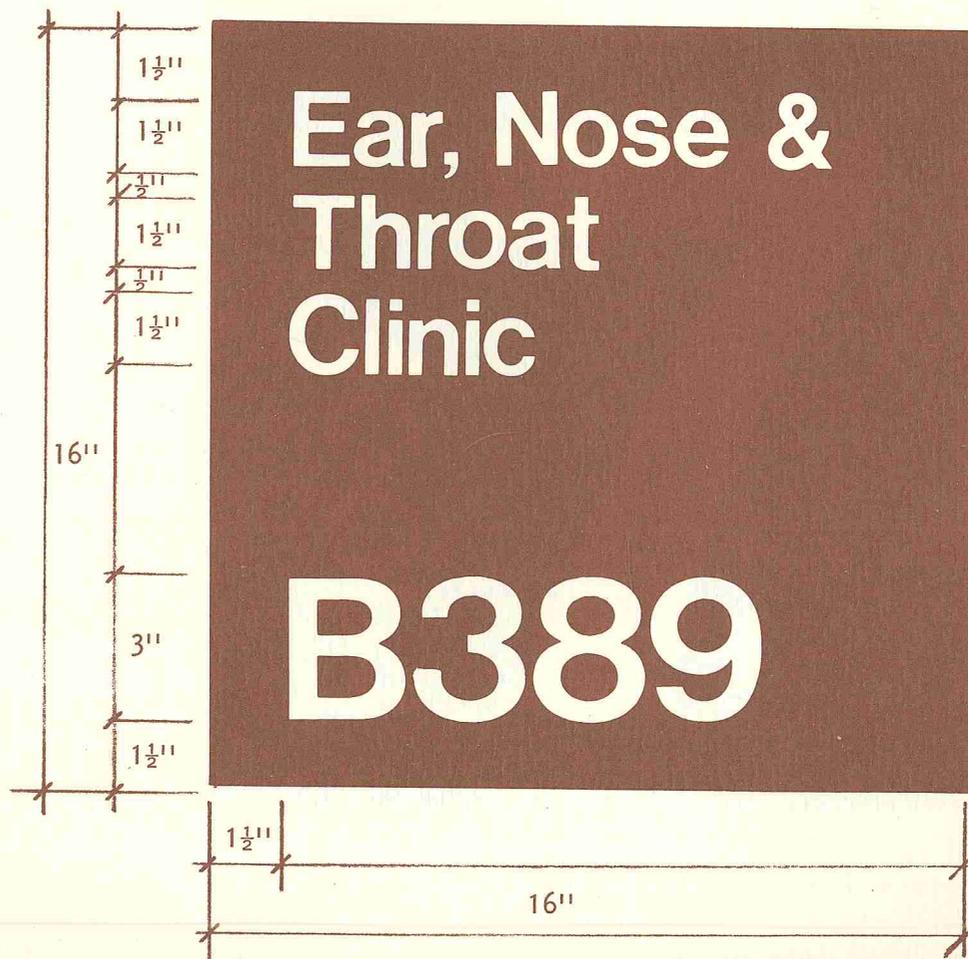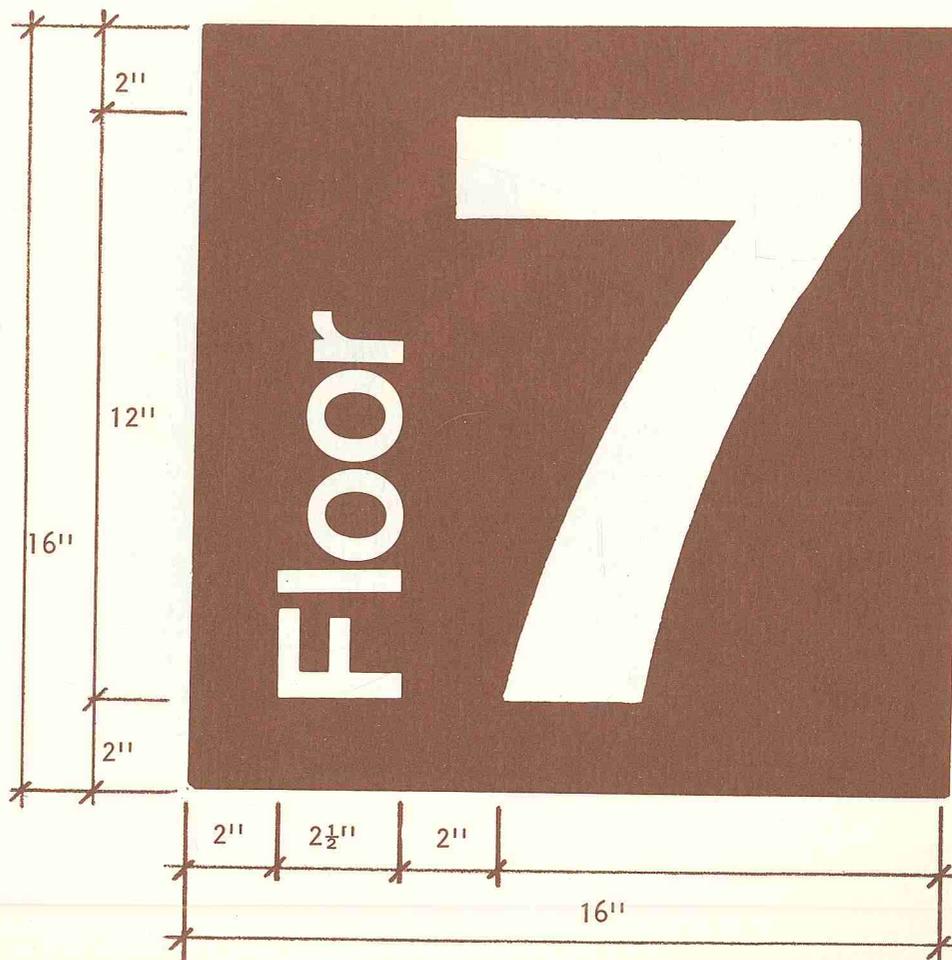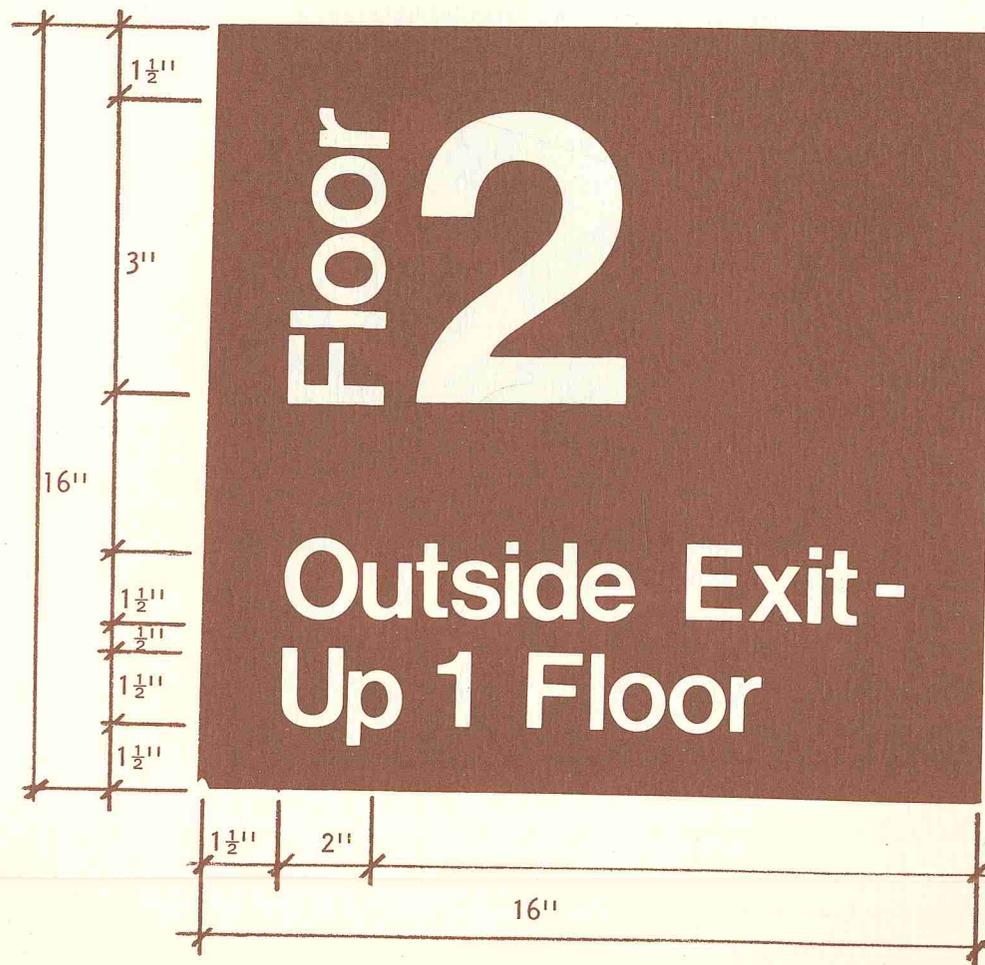
R4824

48

24

SM2016

20

16

SM616

6

16

↑

167 thru **189**

←

140 thru **165**

Elevators

Departmental Offices

16"
1"
2"
1"
1"
2"
2"
1"
1"
1"
1"
1"
1"

1½"

16"

Sign Type S16-1

S16 sign unit illustrated as a directional sign. Letter size and spacings may be adjusted to accommodate specific text requirements. Layout shown illustrates typical positioning of arrows and text.

Ear, Nose & Throat Clinic

B389

1½"
1½"
1½"
1½"
1½"
1½"
16"
3"
1½"
1½"
16"

S16 sign unit illustrated as room/area identification sign. Use of this specific sign type is recommended for identification of areas where high traffic volumes occur.

Floor 7

Dimensions: 2", 12", 2" (vertical, totaling 16"); 2", 2½", 2" ... 16" (horizontal)

S16 sign unit shown as level indicator. This sign type is appropriate for identification of floor levels in stairwells and elevator vestibules.

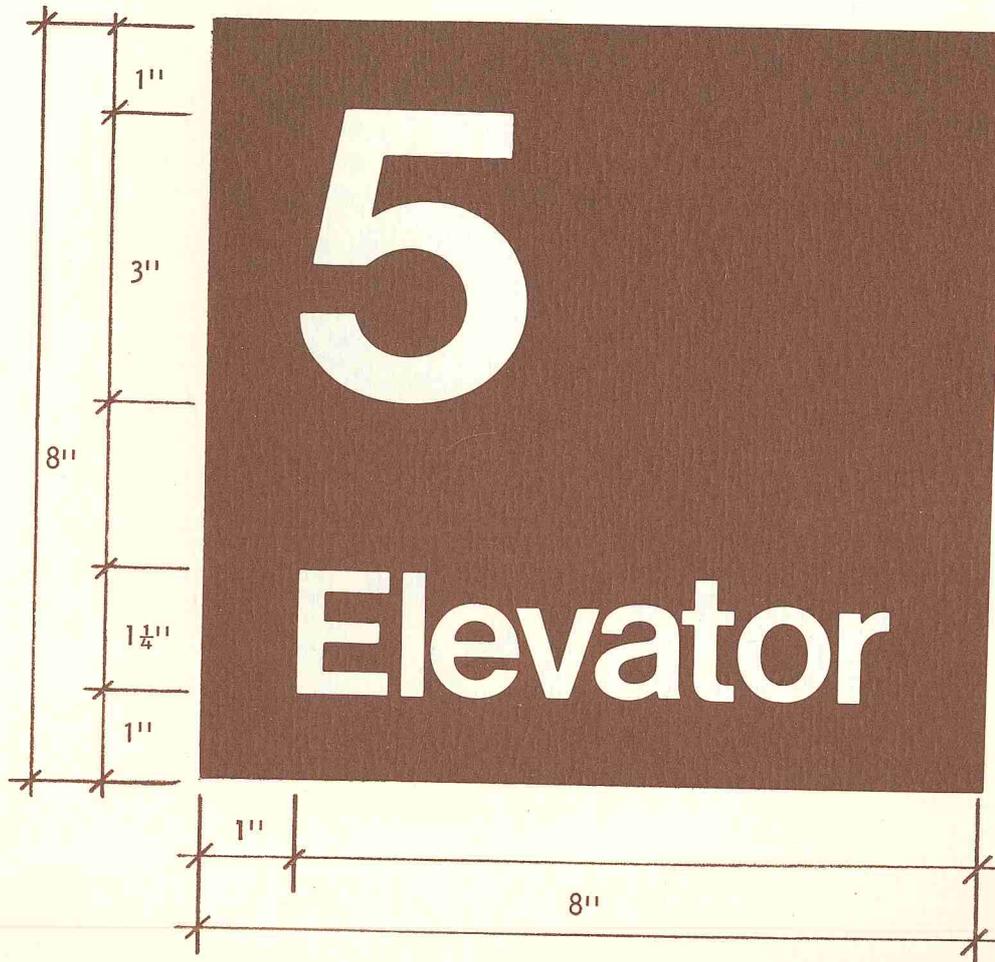**Floor 2**

**Outside Exit-
Up 1 Floor**

(Dimensions shown: $1\frac{1}{2}''$, $3''$, $16''$, $1\frac{1}{2}''$, $1\frac{1}{2}''$, $1\frac{1}{2}''$, $1\frac{1}{2}''$, $1\frac{1}{2}''$, $2''$, $16''$)

S16 sign unit illustrating level identification in combination with exit information. This sign is particularly adapted to buildings whose outside exits are not located on the first floor.

1"

3"

8"

1¼"

1"

1"

8"

Women

S8 sign unit shown as restroom identification sign. Symbol may be added to identify those facilities accessible to the handicapped.
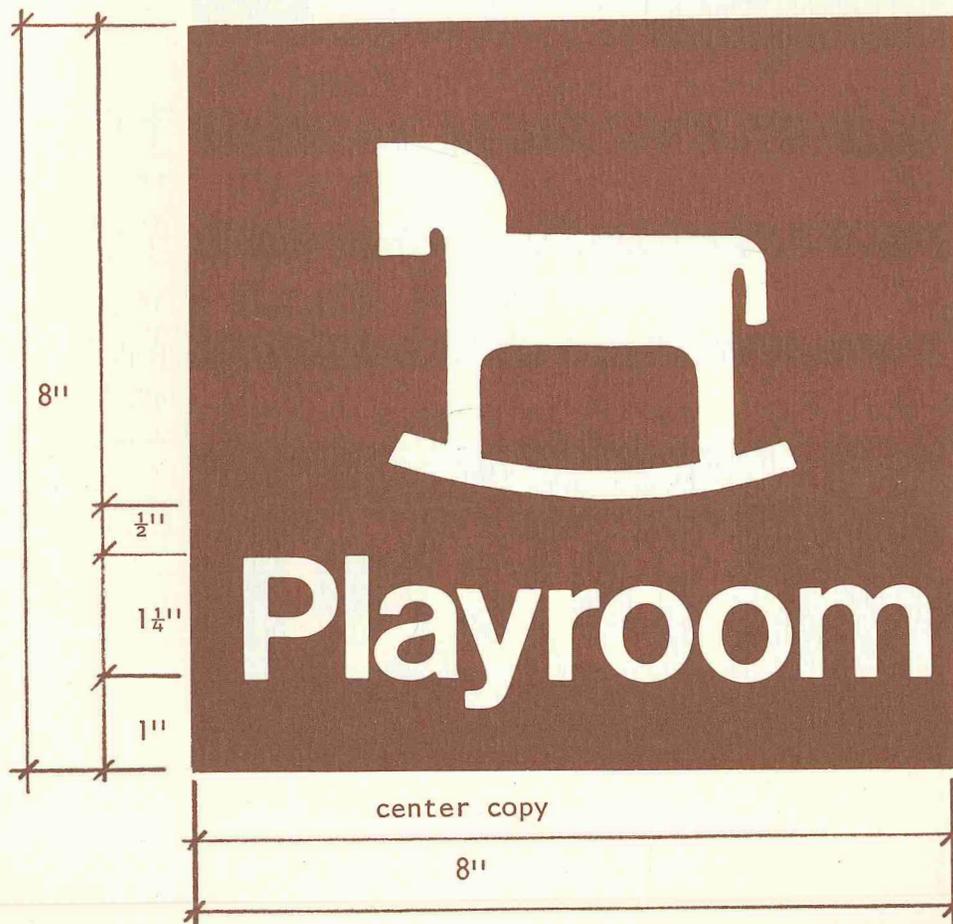
5 Elevator

Dimensions: 1", 3", 8", 1¼", 1", 1", 8"

S8 sign unit shown as an elevator identification sign. This sign type is applicable to the identification of multiple elevator systems within a single building or between a complex of buildings.
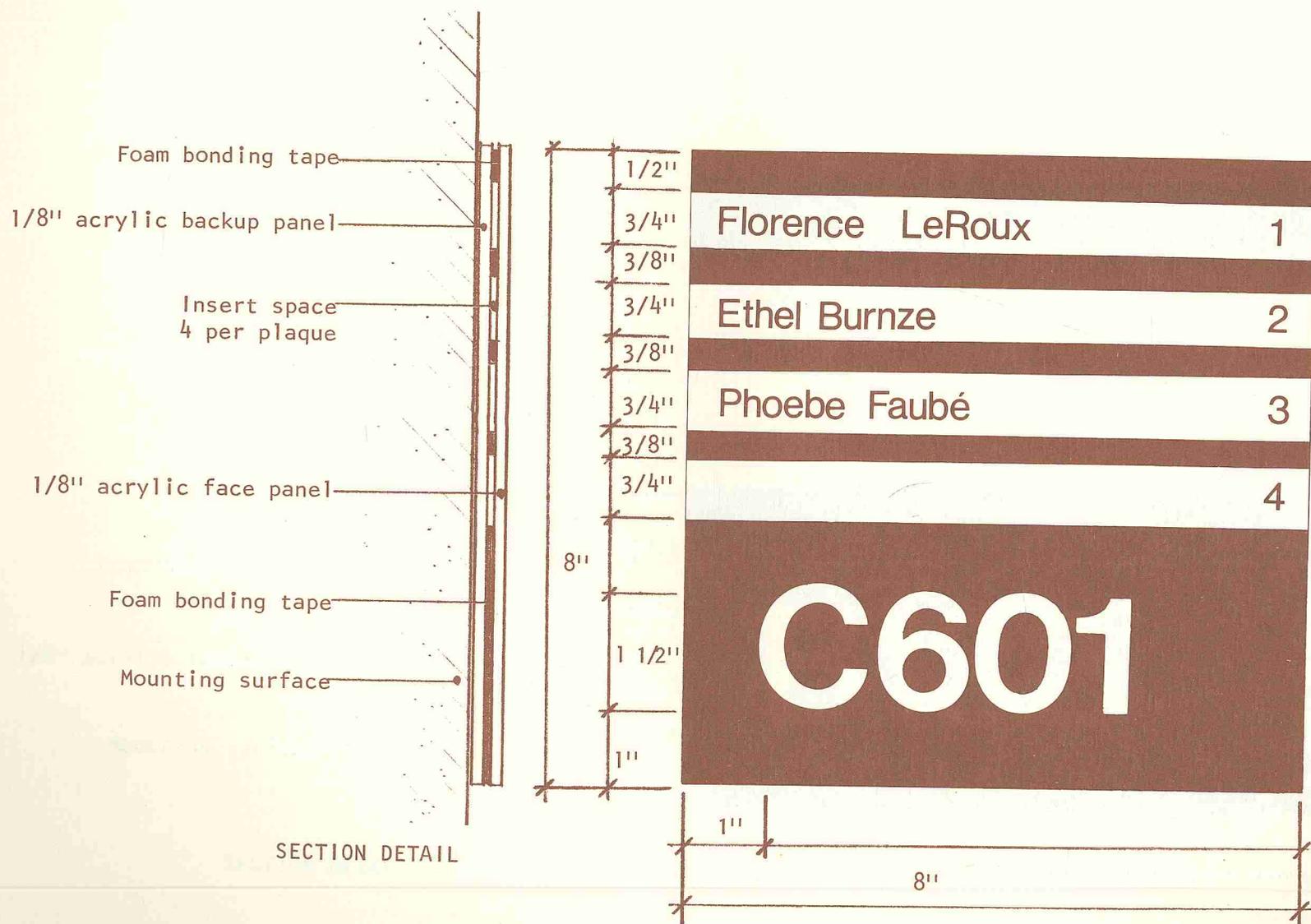
Sitz Bath

567

1"
3/4"
8"
1 1/2"
1"
1"
8"

Sign Type S8-3

S8 sign unit illustrated as a permanent room identification sign. Copy height may be adjusted to accommodate specific line lengths. Numerical size and positioning remains constant.
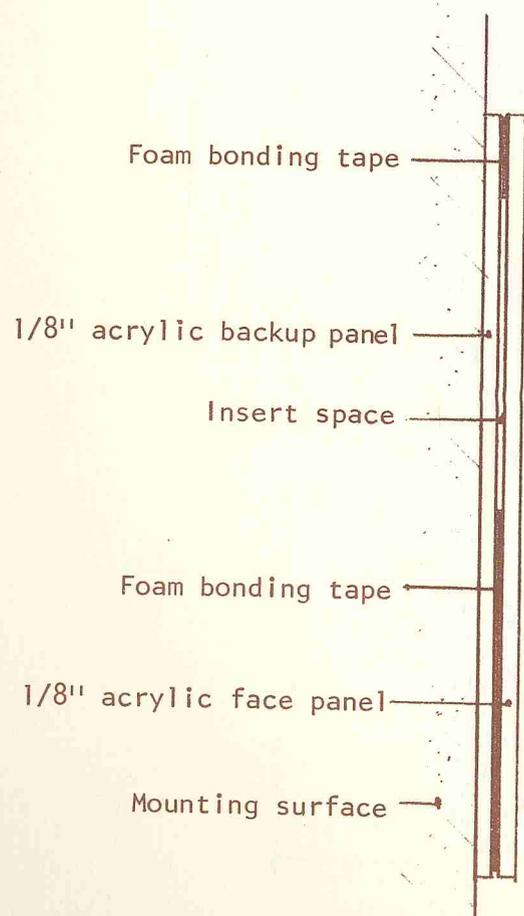
Playroom

8"

½"

1¼"

1"

center copy

8"

Sign Type S8-4

S8 sign unit shown as room identification sign, utilizing pictogram designation for non-verbal information. Refer to Symbol Sourcebook, Henry Dreyfus, McGraw-Hill Book Company, 1972, for additional symbolization.
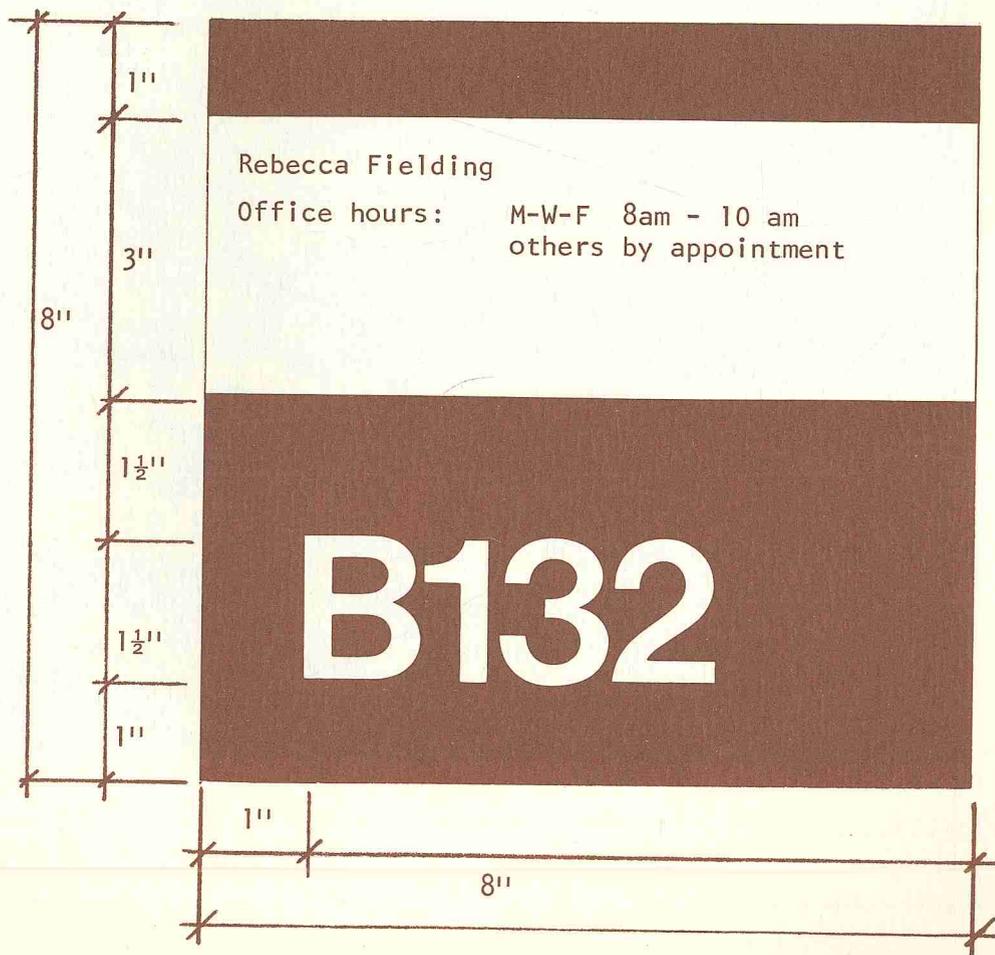
Foam bonding tape

1/8" acrylic backup panel

Insert space
4 per plaque

1/8" acrylic face panel

Foam bonding tape

Mounting surface

SECTION DETAIL

1/2"
3/4"
3/8"
3/4"
3/8"
3/4"
3/8"
3/4"

8"

1 1/2"

1"

Florence LeRoux	1
Ethel Burnze	2
Phoebe Faubé	3
	4

C601

1"

8"

Sign Type S8-5

S8 sign unit with changeable insert feature. This sign is particularly designed for room ident-
ification in hospital and clinic settings where patient identification is necessary. Inserts may
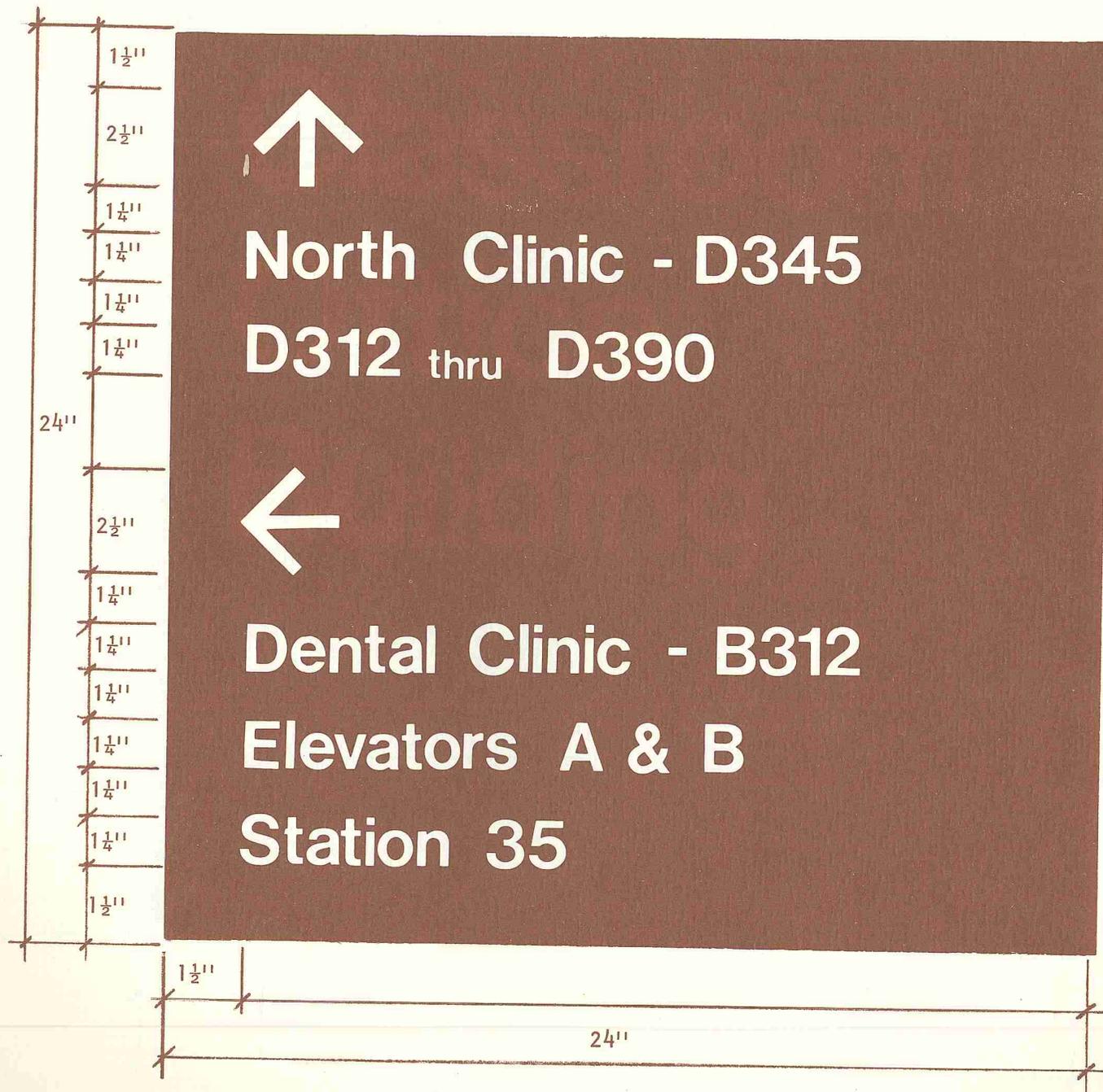be printed by station personnel or by Printing and Graphic Arts.

Foam bonding tape

1/8" acrylic backup panel

Insert space

Foam bonding tape

1/8" acrylic face panel

Mounting surface

SECTION DETAIL

1"

3"

8"

1½"

1½"

1"

Rebecca Fielding

Office hours: M-W-F 8am - 10 am
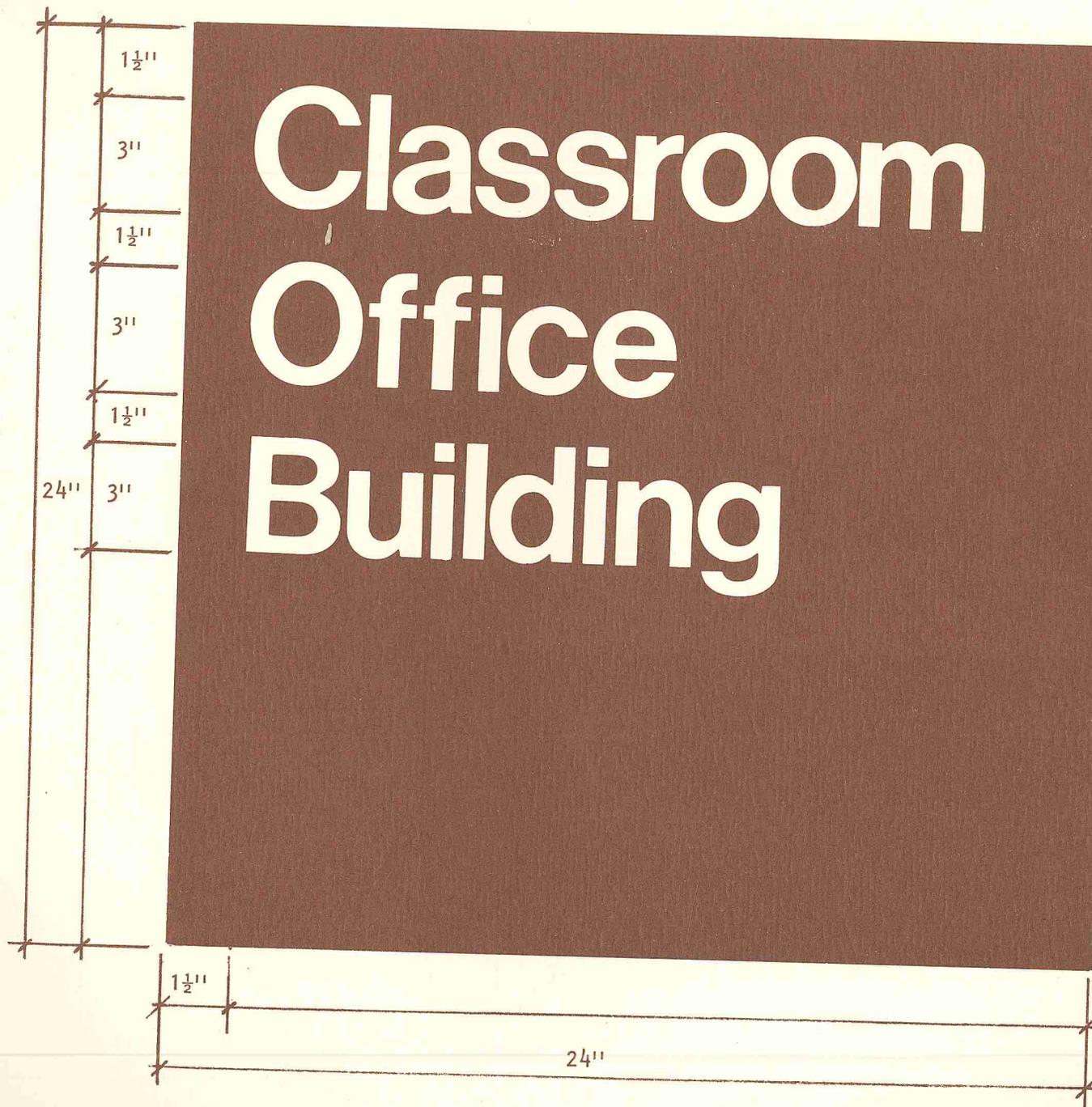   others by appointment

B132

1"

8"

Sign Type S8-6

S8 sign unit with changeable insert feature. Useful in accommodating frequently changing text, the inserts may be fabricated by the occupying department, or by Printing and Graphic Arts.
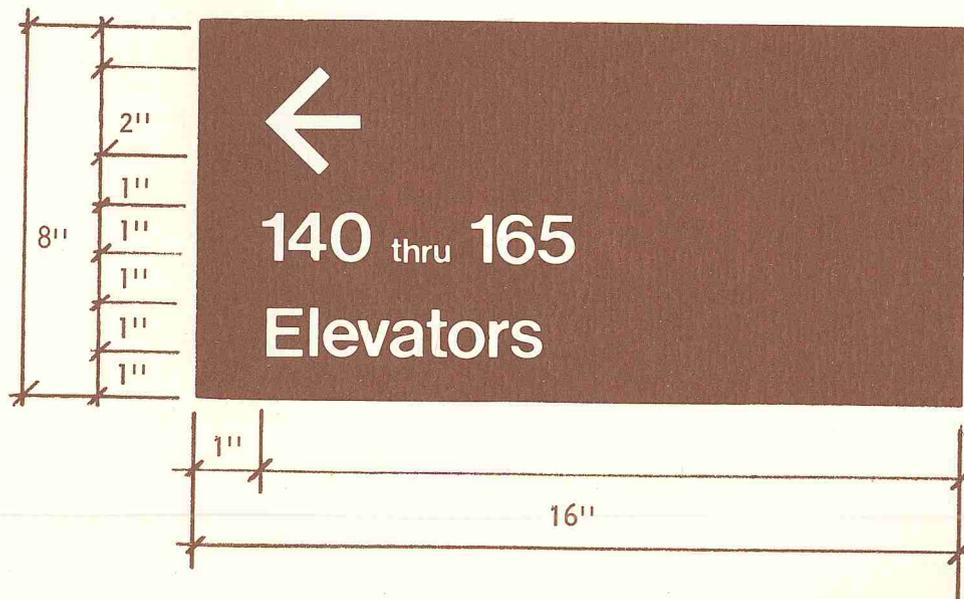
↑

North Clinic - D345
D312 thru D390

←

Dental Clinic - B312
Elevators A & B
Station 35

Measurements (top to bottom, left side): 1½", 2½", 1¼", 1¼", 1¼", 1¼", 24", 2½", 1¼", 1¼", 1¼", 1¼", 1¼", 1¼", 1½"

Bottom measurements: 1½", 24"

Sign Type S24-1

S24 sign unit as basic directional sign. Copy heights and spacings are typical, and may be adjusted to accommodate specific text requirements.
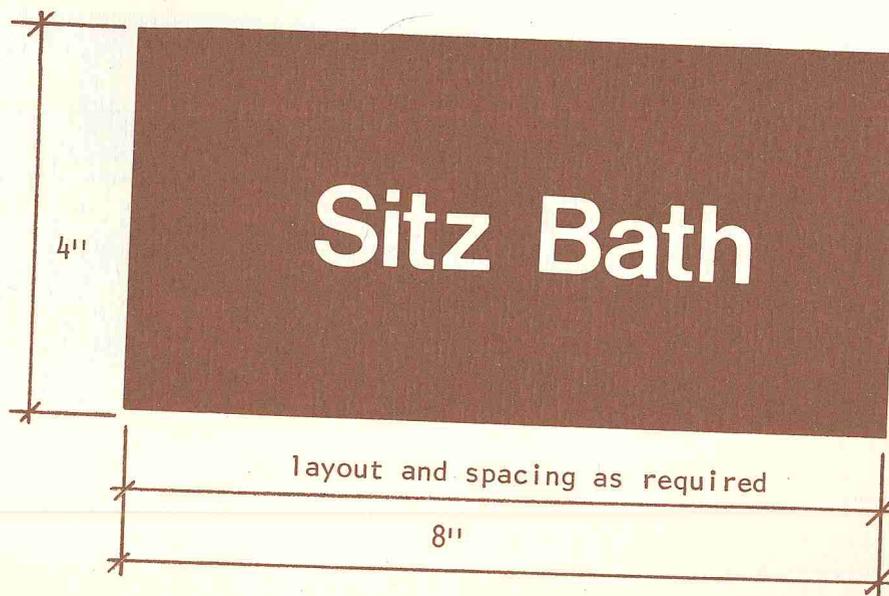
Classroom Office Building

1½"

3"

1½"

3"

1½"

24"   3"

1½"

24"

S24 sign unit shown as interior building identification sign. This sign is well adapted to the identification of buildings which are interconnected by either tunnels or walkways. Copy height may be adjusted to accommodate specific text requirements.

39

2"
1"
1"
1"
1"
1"
8"

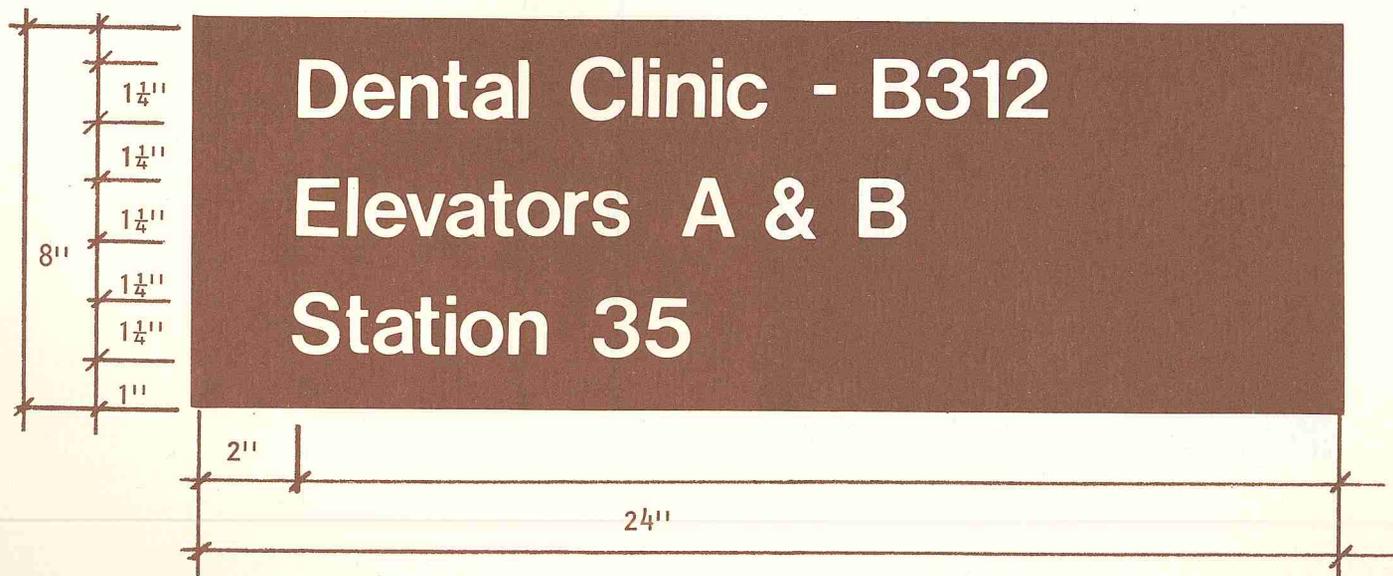1"
16"

← 140 thru 165 Elevators

Sign Type R816

Sign R816 sign unit may be used singularly for the display of miscellaneous information, or in conjunction with S16 signs as an accessory plaque. Flexibility in copy requires the coding of the letter height and spacing on the signage schedule if standard detailing in not given.

Sitz Bath

4"

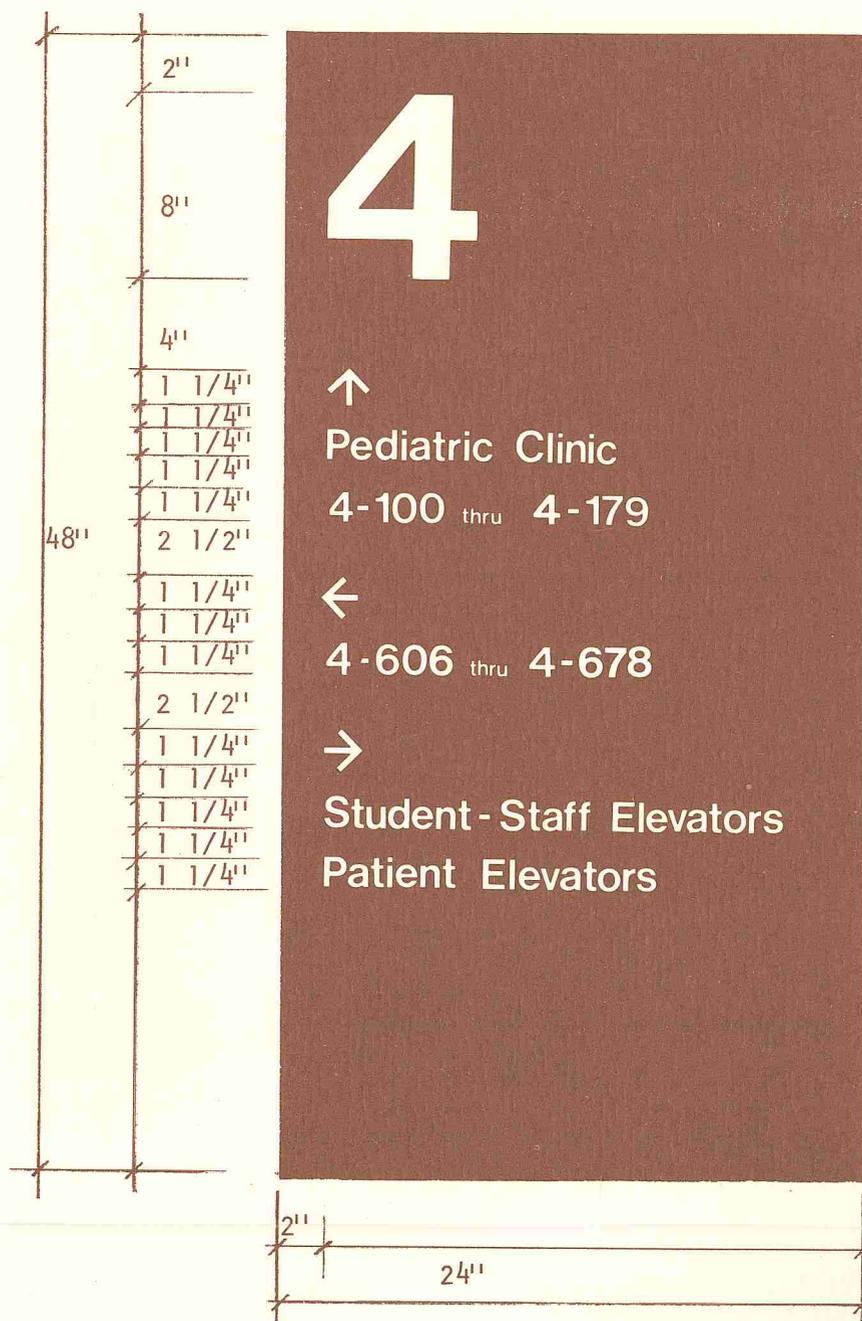layout and spacing as required

8"

Sign Type R48

Sign R48 may be used singularly for the display of miscellaneous information, or in combination with other similar sized units. Coding data must be noted on the signage schedule if standard detailing is not included in the specification drawings.

Dental Clinic - B312

Elevators A & B

Station 35

Dimensions: $1\frac{1}{4}''$, $1\frac{1}{4}''$, $1\frac{1}{4}''$, $1\frac{1}{4}''$, $1\frac{1}{4}''$, $1''$ — total $8''$; $2''$; $24''$

Sign Type R824

Sign R824 may be used singularly for the display of miscellaneous information, or in combination with additional R824 units to form directional sign units. Coding data must be included in the signage schedule if standard layouts are not detailed.

4

↑
Pediatric Clinic
4-100 thru 4-179

←

4-606 thru 4-678

→

Student-Staff Elevators
Patient Elevators

Dimensions:
2''
8''
4''
1 1/4''
1 1/4''
1 1/4''
1 1/4''
1 1/4''
2 1/2''
1 1/4''
1 1/4''
1 1/4''
2 1/2''
1 1/4''
1 1/4''
1 1/4''
1 1/4''
1 1/4''
48''
2''
24''

Sign Type R4824

R4824 sign unit is specifically designed for the display of large quantities of directional inform-
ation. Level identification may be included within the format, providing adequate frame of
reference for elevator and stair vestibules.
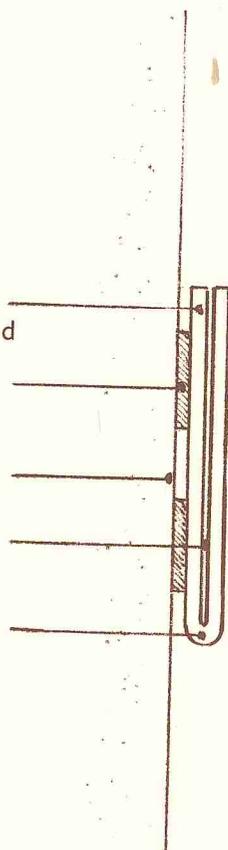
1/16" clear acrylic
all edges flame polished
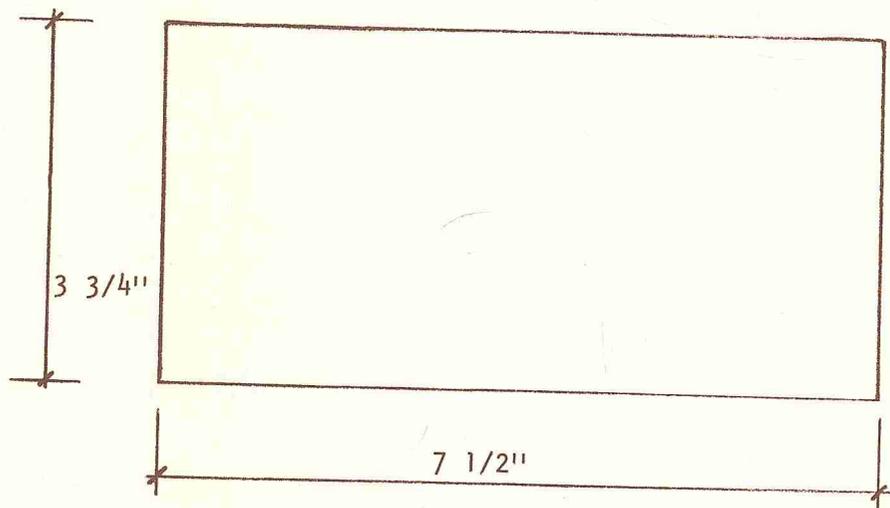
1" foam mounting tape
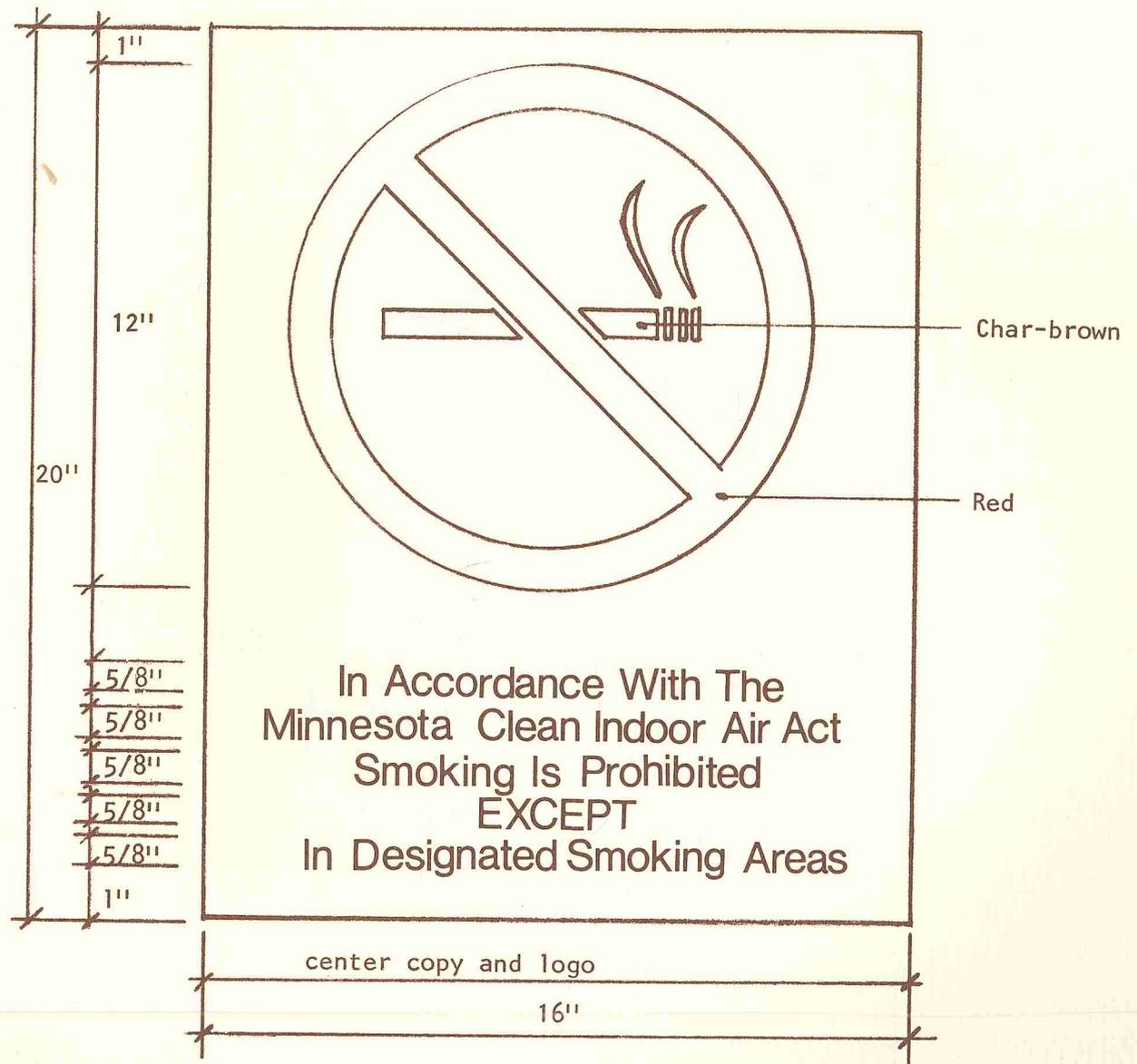
wall surface

insert space

360° heat-formed bend

3 3/4"
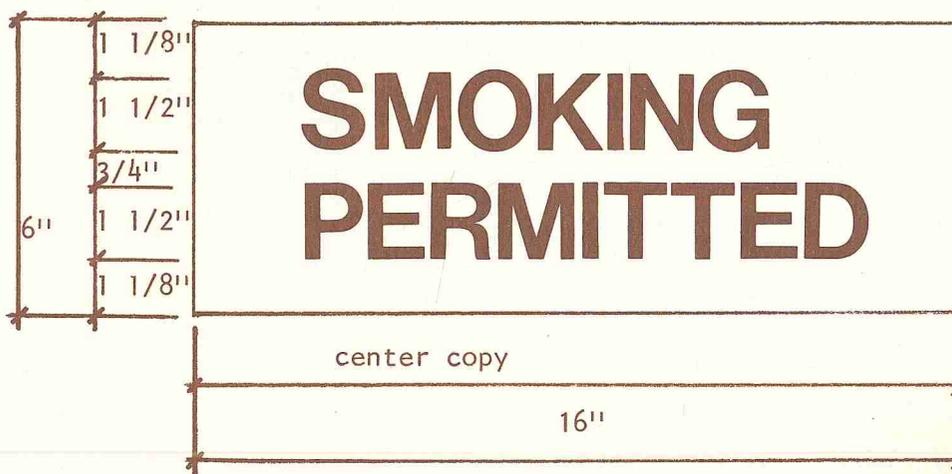
7 1/2"

Detail Section

Elevation

The acrylic card holder may be used individually, or in combination with sign type SC for the display of temporary information. Graphics are typically prepared by the occupying department.

1"

12"

20"

5/8"
5/8"
5/8"
5/8"
5/8"
1"

Note: copy spacing
to equal 3/8"

Char-brown

Red

In Accordance With The
Minnesota Clean Indoor Air Act
Smoking Is Prohibited
EXCEPT
In Designated Smoking Areas

center copy and logo

16"

Sign Type SM2016

SM2016 sign unit is specifically designed to accommodate smoking regulatory information.
Ordinance sign is typically located at major entrance points to all buildings.

NO
SMOKING

6" | 1 1/8" | 1 1/2" | 3/4" | 1 1/2" | 1 1/2"

SMOKING
PERMITTED

6" | 1 1/8" | 1 1/2" | 3/4" | 1 1/2" | 1 1/8"

center copy

16"

Sign Type SM616

SM616 is specifically designed to compliment the system of smoking regulatory signage. "No Smoking" unit shall be prominently displayed at stair and elevator vestibules, corridor inter-sections, and periodically along the length of all corridors.

Room identification graphics typically constitute the greatest portion of any graphics program. In the University setting, the quantity of change occurring with regard to space allocation has dictated the need for a room identification sign unit that may be changed as required, involving a minimum of effort and expense.

To meet this requirement, a modular sign frame capable of displaying printed graphic inserts is recommended. The hardwares for this signage requirement consist of a metal framed sign unit with acrylic face, into which specific graphic information may be displayed. The graphic inserts are printed within the University, therefore making this sign type internally sustaining following its initial installation.

The procurement of this graphic item is coordinated through the Office of Physical Planning by the Graphics Coordinator. Following initial installation, changes in graphic content should be transmitted to the Graphics Coordinator for expediting. Typically, a contact person will be designated within each building who will collect data regarding graphic changes. He will, in turn, transmit such information to the Graphics Coordinator on a periodic basis for expediting.

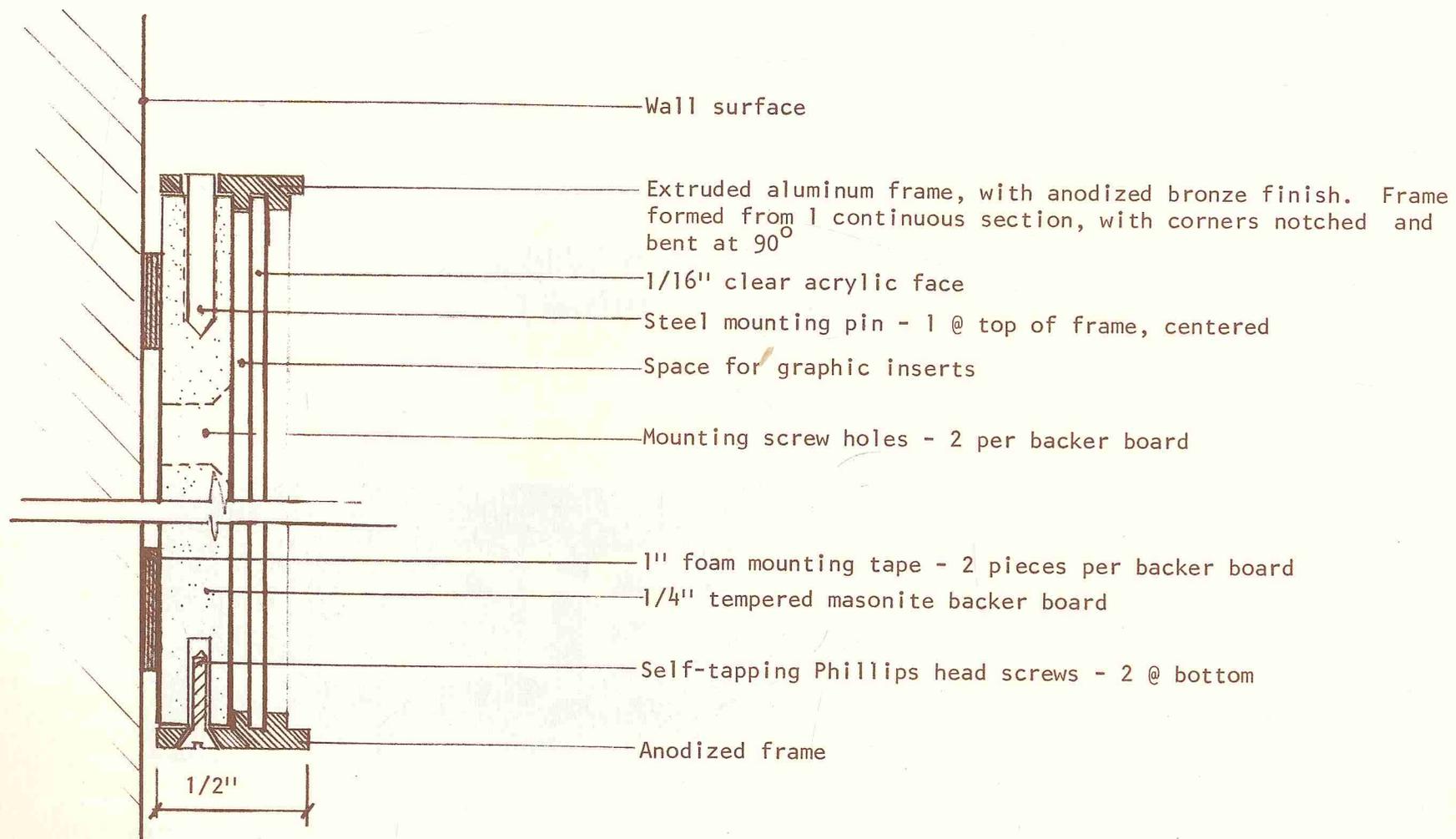Information displayed within the frame module is limited to the room number assigned to the space and any textual information required for the identification of the area. This information may include the name of the room or space, its function, or occupants. The text information should be as concise as possible, eliminating extraneous text and data. Restriction of the type of information displayed will greatly simplify the maintenance of the system following installation. Certain types of copy would typically be deleted from display. Teaching assistants, graduate students, office hours, etc., represent the type of information that is prone to frequent change, thus creating a hardship in maintaining accurate identification of the space.

The flexibility of this sign unit must not permit the individual occupant of a particular space the option to place whatever information he sees fit within the sign unit. Consequently, it must be emphasized to the occupants of the structure that any and all changes must be directed through the appropriate channels for implementing such change.

For accommodation of changeable information, the use of sign type CH - a modular acrylic card holder - is recommended. Details for this sign type are noted elsewhere in this document.
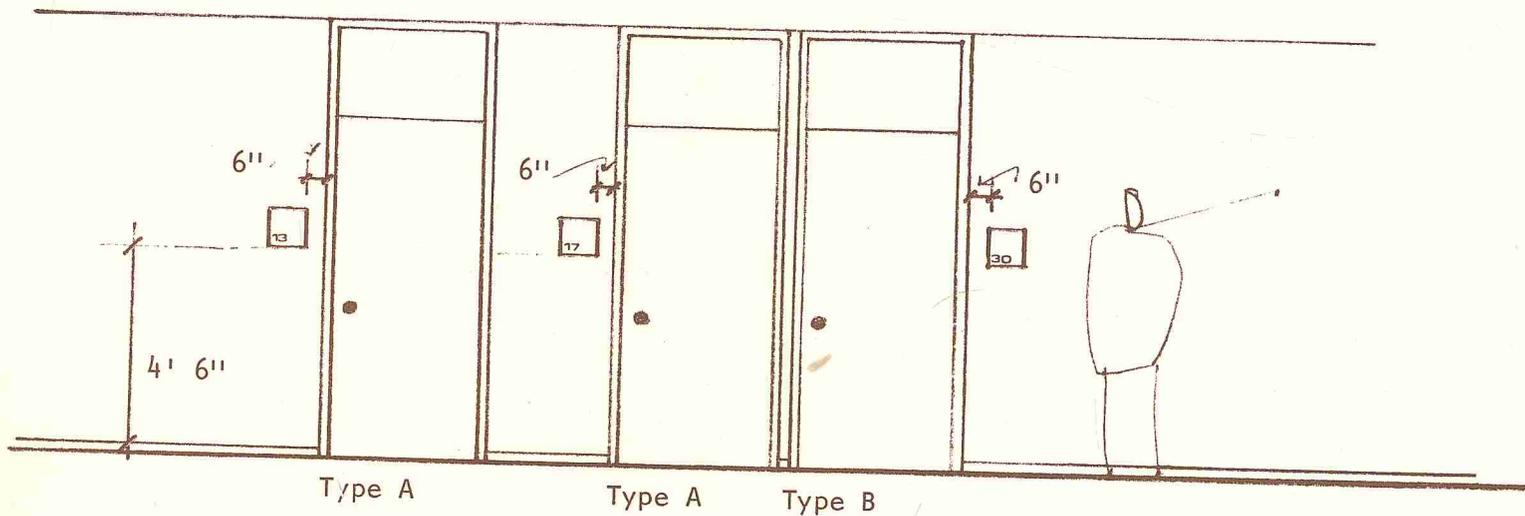
Dan Williams
Football Coach

B132

3/4"
5/16"
5/16"
7 1/2"
1 1/2"
3/4"
3/4"
7 1/2"

Sign Type SC

Wall surface

Extruded aluminum frame, with anodized bronze finish. Frame formed from 1 continuous section, with corners notched and bent at 90°

1/16" clear acrylic face

Steel mounting pin - 1 @ top of frame, centered

Space for graphic inserts

Mounting screw holes - 2 per backer board

1" foam mounting tape - 2 pieces per backer board

1/4" tempered masonite backer board

Self-tapping Phillips head screws - 2 @ bottom

Anodized frame

1/2"

SIGN FRAME SECTION - 2x Full scale

Sign SC Construction & Installation

Type A   Type A   Type B

All signs shall be consistently installed 4'-6" from the finished floor to the bottom of the sign frame
Signs shall be installed 6" from the door frame, and on the knob side of the door. (Type A installation)
When space does not permit the standard positioning, frame shall be installed on the hinge side of the
door, at the standard height. (Type B installation) Installation on the surface of the door is not
recommended. The Graphics Coordinator shall review the placement of all signage hardwares.

Occassionally, the need for a specialized sign size is demonstrated, particularly when developing signage and graphics programs for the augmentation of existing signage systems and wall configurations. While every effort must be made to utilize the standard shapes and forms, limitations in wall area or unusual architectural considerations will dictate the formulation of a new sign type.

Specification of an alternate size can be handled in one of two ways. If a single occurrance of the variable is noted, then the layout for the special item may be included within the detail drawings, with reference to the standard specifications for data regarding the manufacture of the sign type.

If there are a variety of alternate shapes and configurations required, the specification of each sign may be expressed by a general notation to the unspecified sign size. The variations in sign size, copy placement and letter height are appropriately expressed directly in the signage schedule, employing the following nomenclature:

Type Code

U - Upper case copy

HM - refers to the Helvetica medium type style

Height - Refers to the letter height in inches. If more than one copy height is required, differentiation between the two sizes must be indicated.

U - Upper case copy

LC - Lower case copy

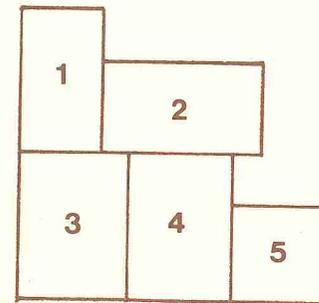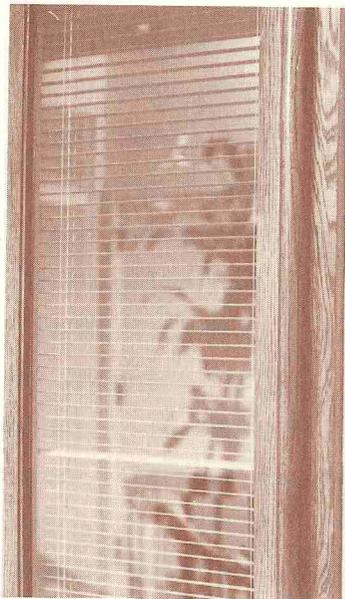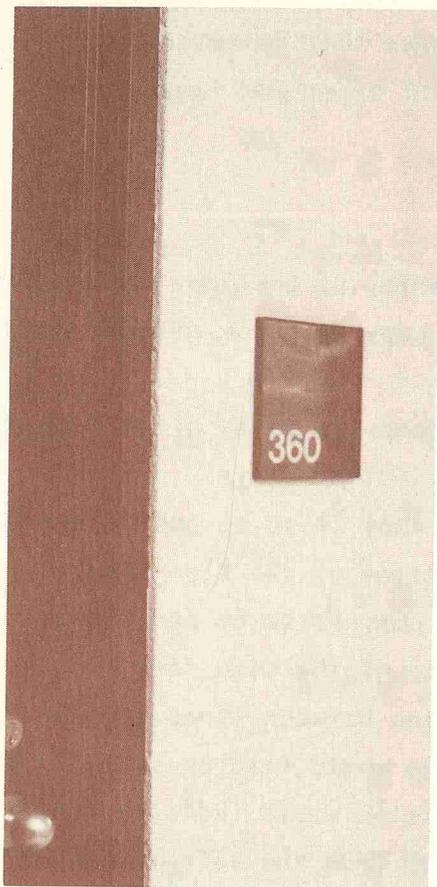ULC - Mix of upper and lower case characters

A typical type code would appear as thus: HM 1½ ULC. This designation would indicate that Helvetica Medium copy, 1½" height, and a mix of upper and lower case characters is required.
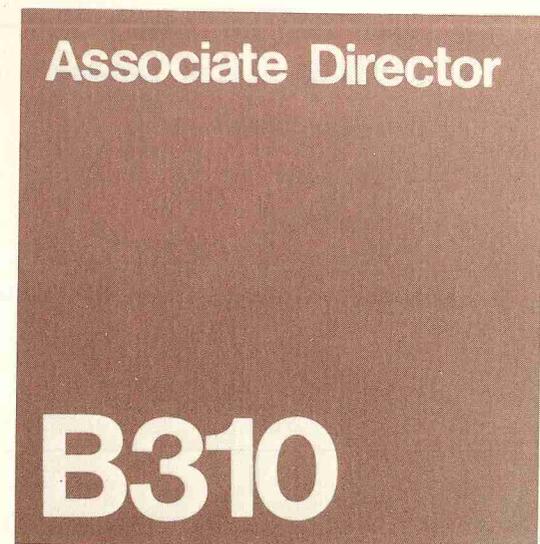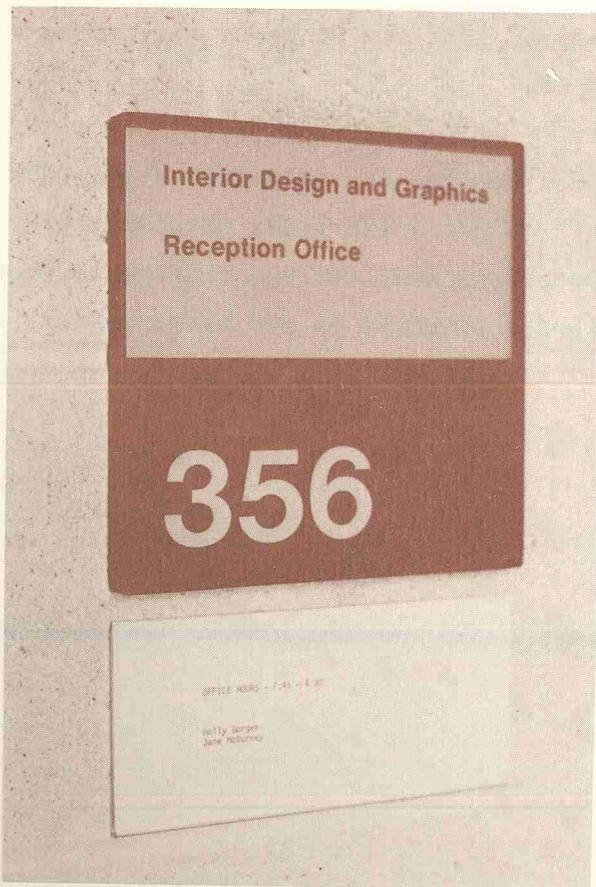
Type Placement

C - Refers to the centering of the copy on the sign

L - Indicates that the copy is to be aligned on the left margin

R - Indicates that the copy is to be aligned on the right margin

B - Indicates that the copy is to be positioned beginning at the bottom of the sign face

T - Indicates that the copy is to be positioned beginning at the top of the sign face

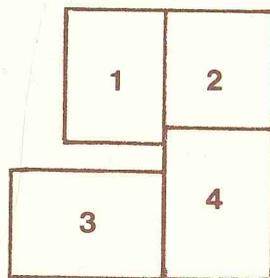SP - Indicates the spacing between lines of copy

A typical type placement code would read thus: L3/4", B3/4", SP1/2". This designation would indicate that the copy is to be spaced 3/4" from the left margin of the sign plaque, and beginning 3/4" from the bottom of the plaque. Spacing of 1/2" should be maintained between all lines of copy.

The total coded specification for a typical sign might therefore read: 9" height x 17" wide; HM 2 ULC; L1", B1", SP 1/2". Appropriate text for the sign would then be noted on the signage schedule in the usual manner.
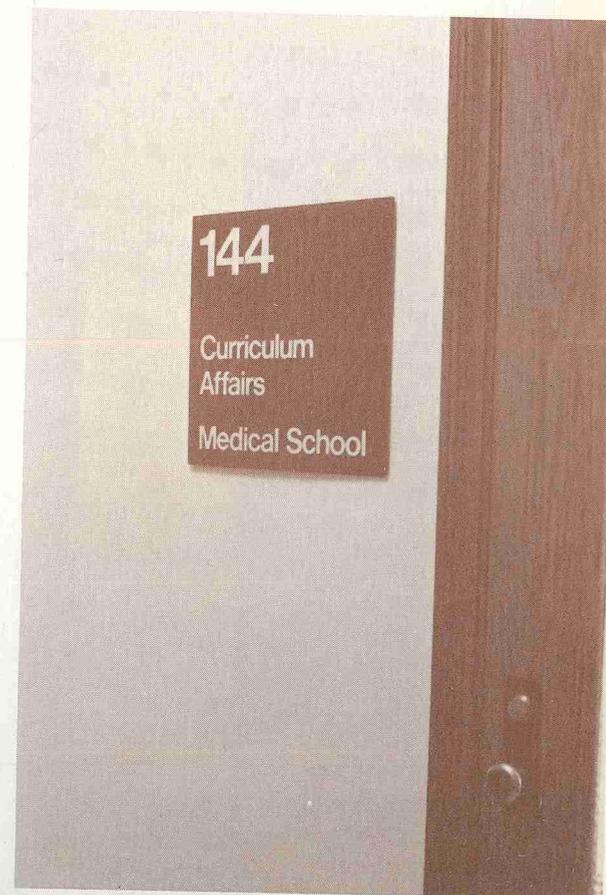
360

President's
Office

202

Dr C Peter Magrath
President

Interior Design and Graphics

Reception Office
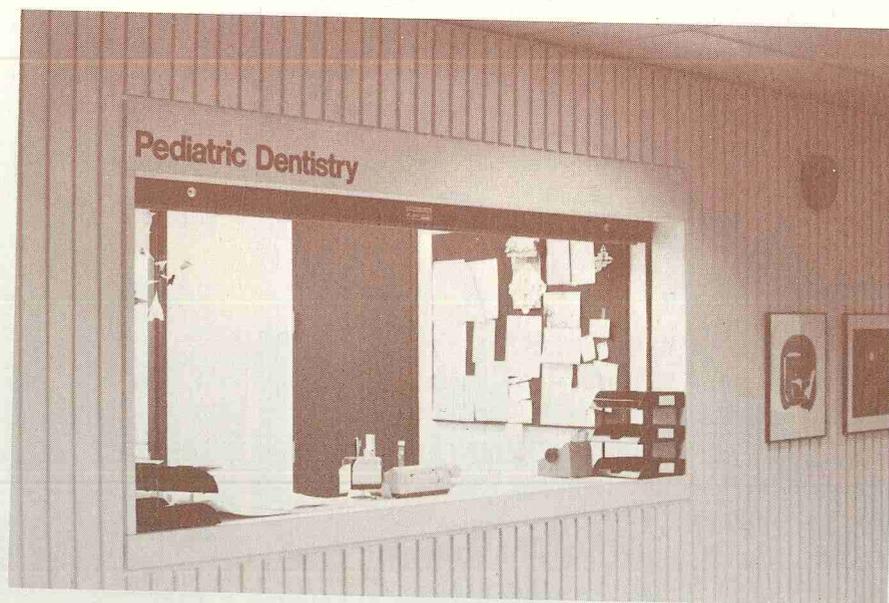
356
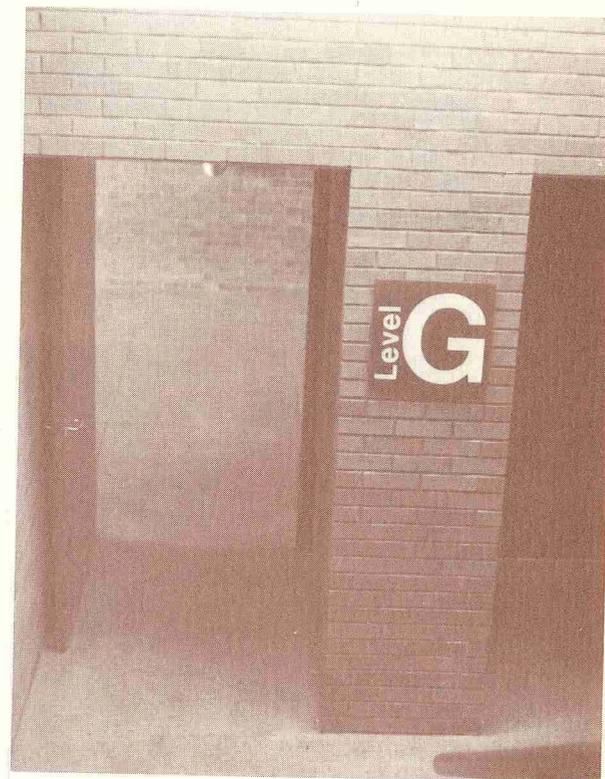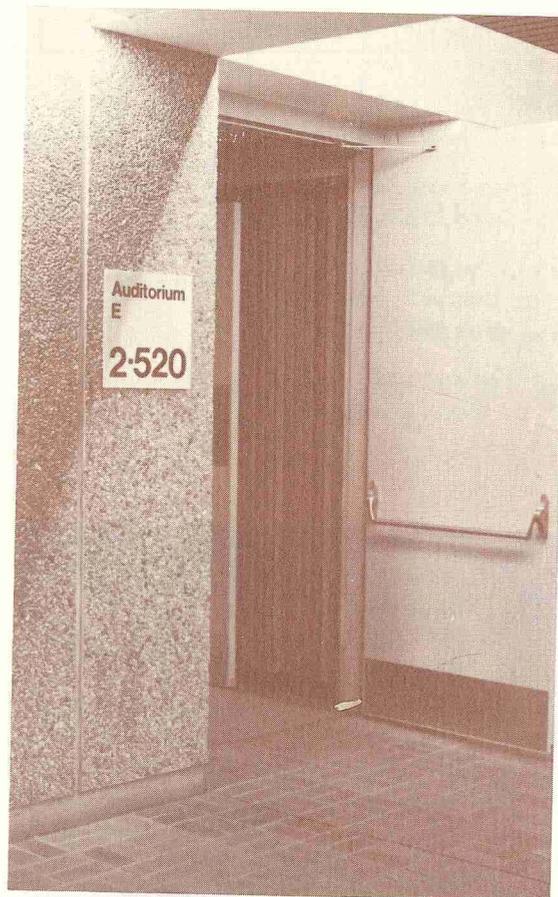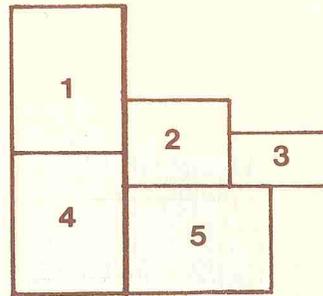
Men

Associate Director

B310

1. Sign type SC with numerical identification only

2. Sign types S16 and R816 as special room identification signage

3. Sign type SC with text identification and acrylic card holder for changeable information

4. Sign type S16 used for restroom identification in high-use area

5. Sign type S8 illustrating non-changeable room identification

1. Sign type S16 as auditorium identification

2. Sign S16 illustrating level identification in stairwell

3. Clinic reception window identified with vinyl die-cut lettering
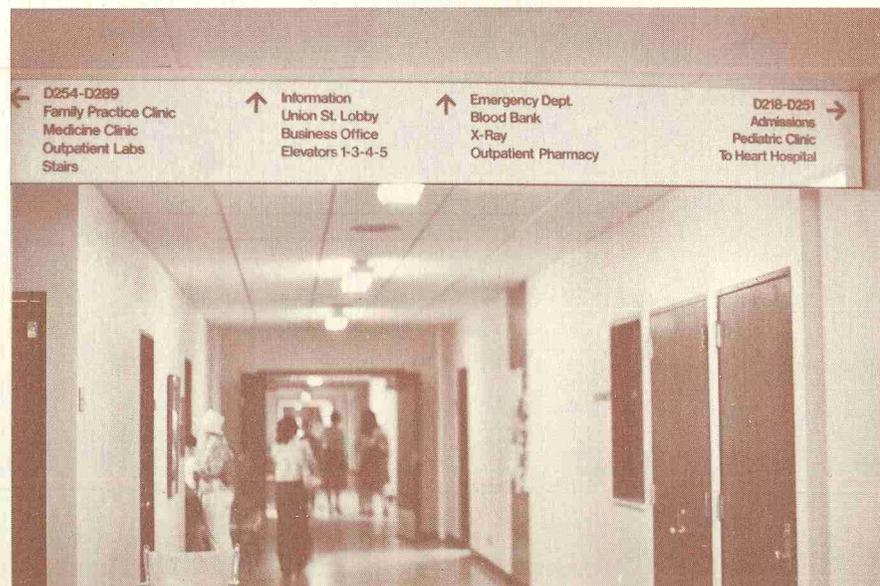
4. S16 sign as used for room identification

Auditorium E
2·520

Level G

Pediatric Dentistry

144

Curriculum Affairs

Medical School

2 Mayo Building

← Admissions
Church Street Lobby
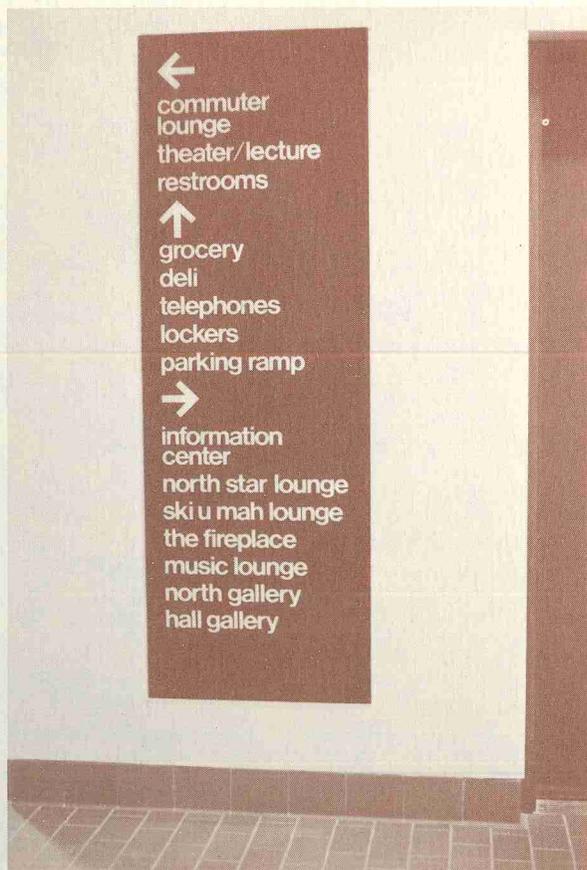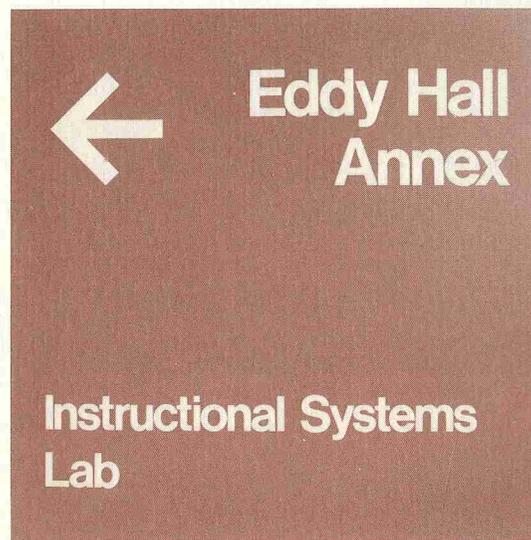Elevators 1-3-9-5

Pediatric Clinic
Heart Hospital →

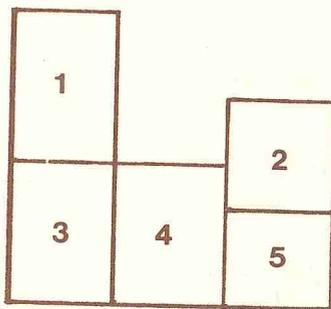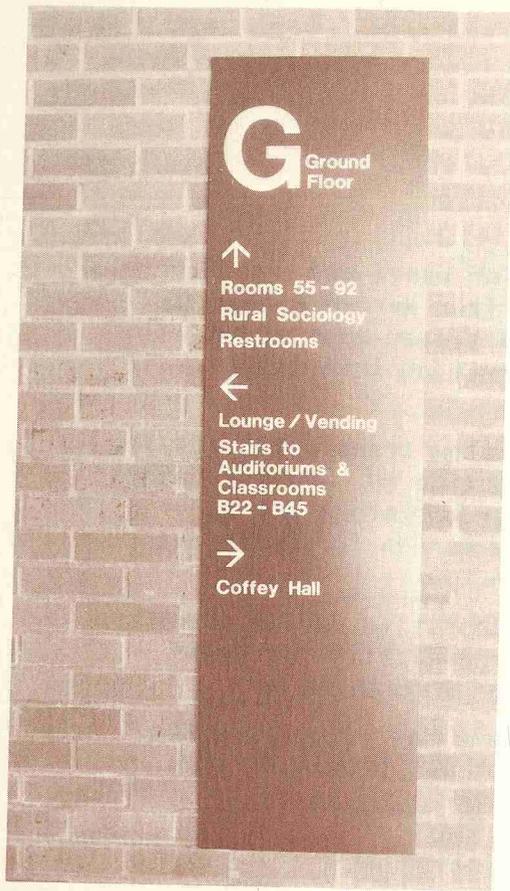1. Sign type S24 illustrating level identification and directional information

2. Sign type S24 as combination directional/building identification unit

3. S24 and S8 signs illustrating level identification, directional information, and elevator identification
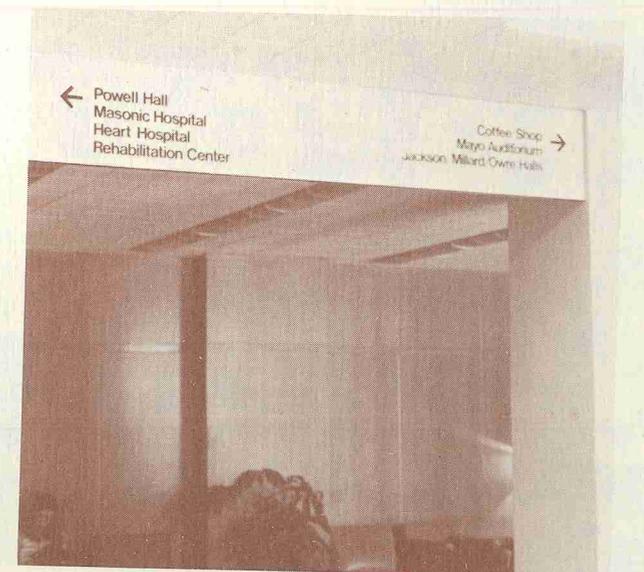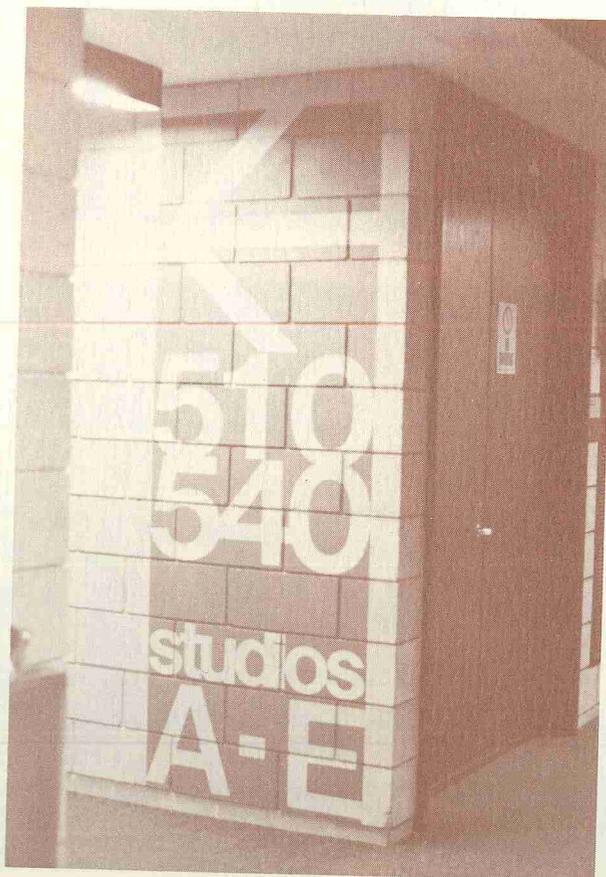
4. S7224 directional sign with graphic detailing relative to building decorative graphics
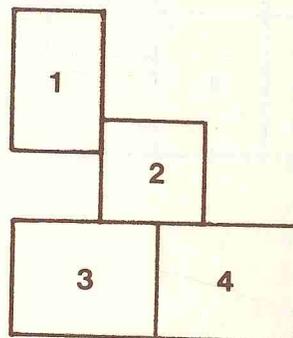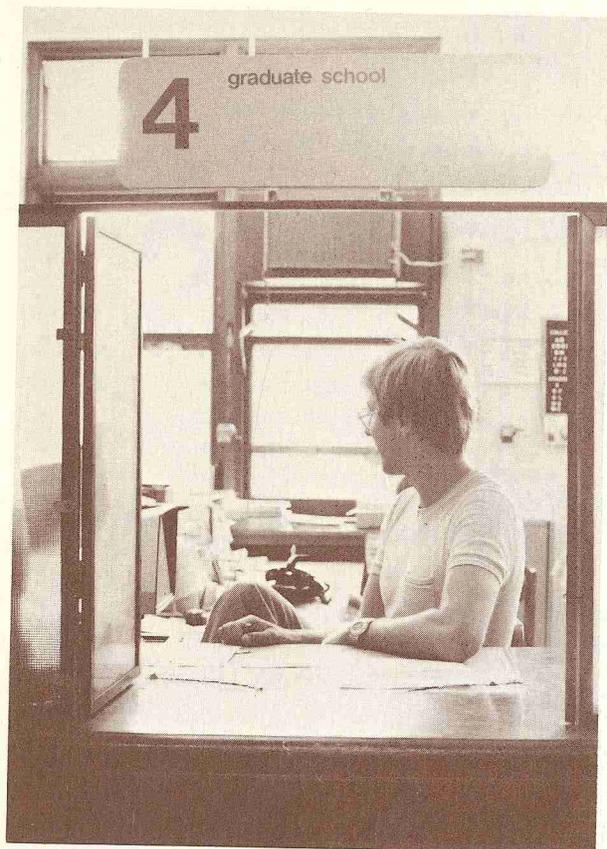
4. Custom size suspended directional sign, spanning corridor

← commuter
lounge
theater/lecture
restrooms

↑ grocery
deli
telephones
lockers
parking ramp

→ information
center
north star lounge
ski u mah lounge
the fireplace
music lounge
north gallery
hall gallery

← Eddy Hall
Annex

Instructional Systems
Lab

3 Mayo Building

Powell Hall
Masonic Hospital
- take elevators to 1

Hospital Admissions
Heart Hospital
- take elevators to 2

1 Elevator

← D254-D289
Family Practice Clinic
Medicine Clinic
Outpatient Labs
Stairs

↑ Information
Union St. Lobby
Business Office
Elevators 1-3-4-5

↑ Emergency Dept.
Blood Bank
X-Ray
Outpatient Pharmacy

D218-D251 →
Admissions
Pediatric Clinic
To Heart Hospital

G Ground Floor

↑
Rooms 55 - 92
Rural Sociology
Restrooms

←
Lounge / Vending
Stairs to
Auditoriums &
Classrooms
B22 - B45

→
Coffey Hall

1.   Sign type R5616 as level identification and directional unit located in high volume corridor

2.   Painted level identification and exit information in stairwell

3.   Sign types S24 and R824 in combination as directional sign and office identification

4.   Painted directional supergraphics, with images formed by painting the negative areas of the letter forms

5.   Suspended acrylic directional signage, custom sized to the space between columns
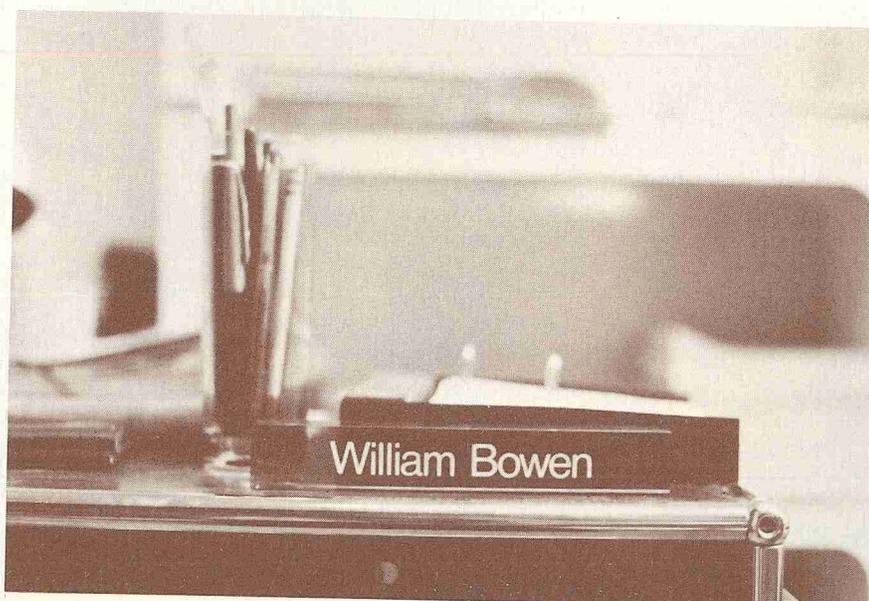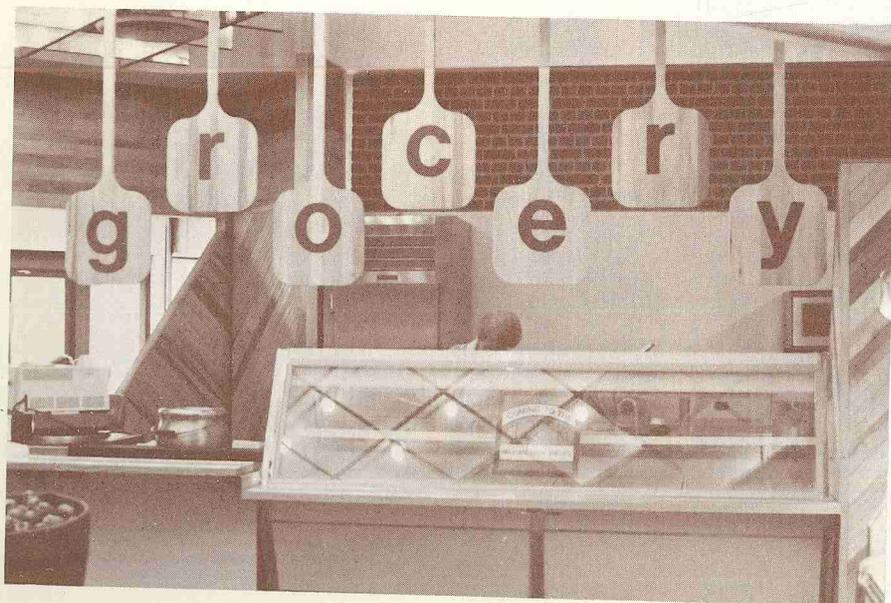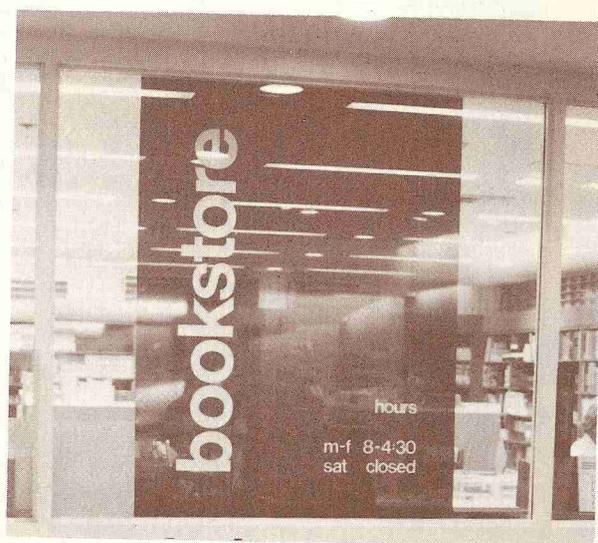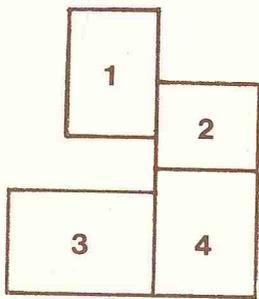
1. Sign panel and mounting device from Herman Miller AO signage system mounted on metal rail of information window

2. Custom translucent acrylic panel acting as identification unit for bookstore and as privacy screen for check-out station
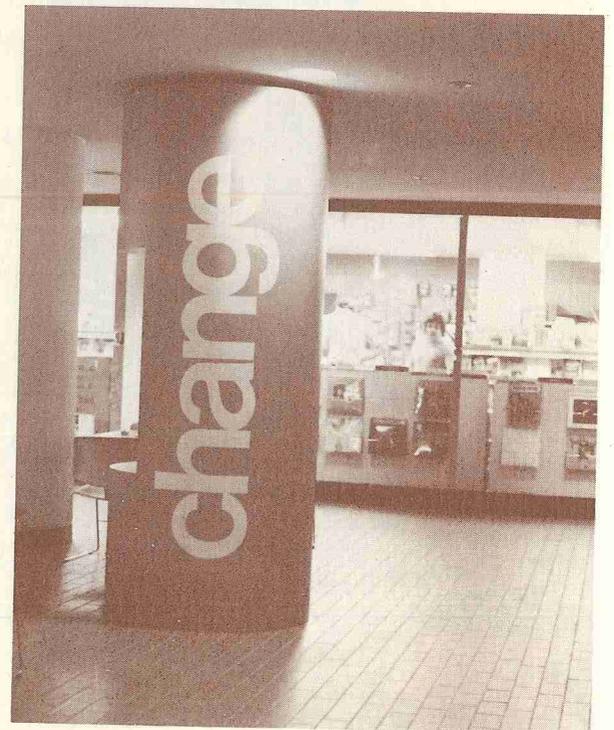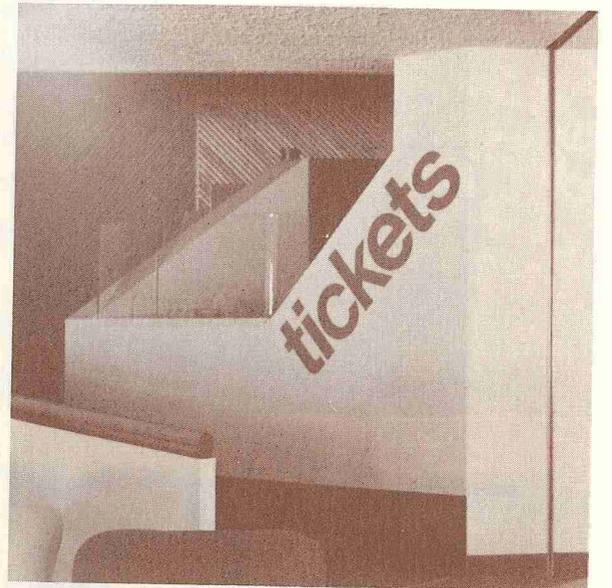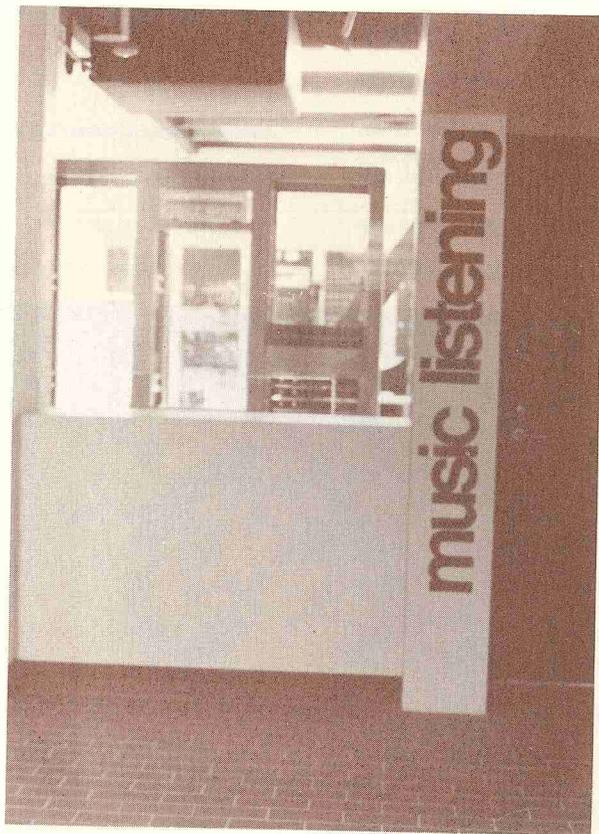
3. Decorative wooden signs for identification of delicatessen food service
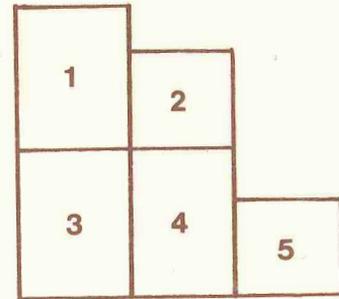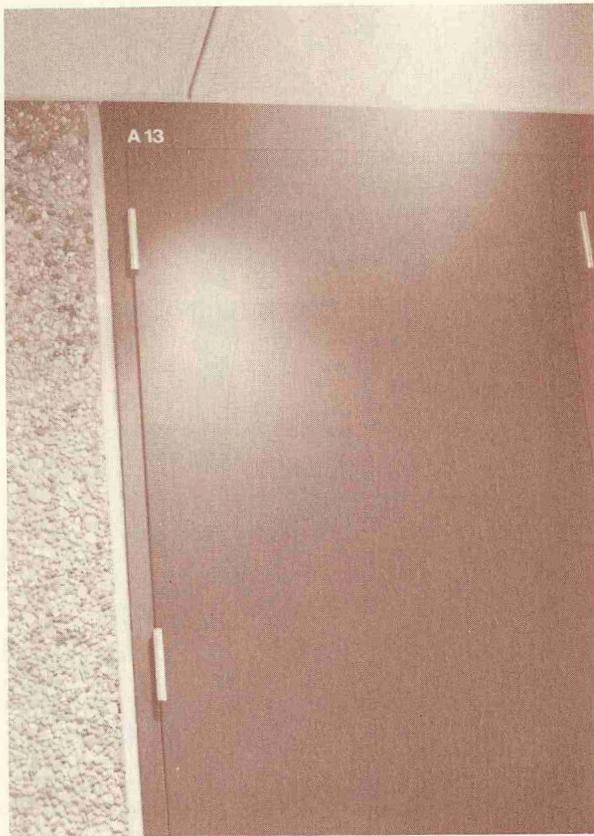
4. Name bar identification cut from $1\frac{1}{2}''$ bronze acrylic sheet stock

1, 2, 3, & 4. Painted
informational supergraphics
reflecting various arch-
tectural elements of the
areas being identified
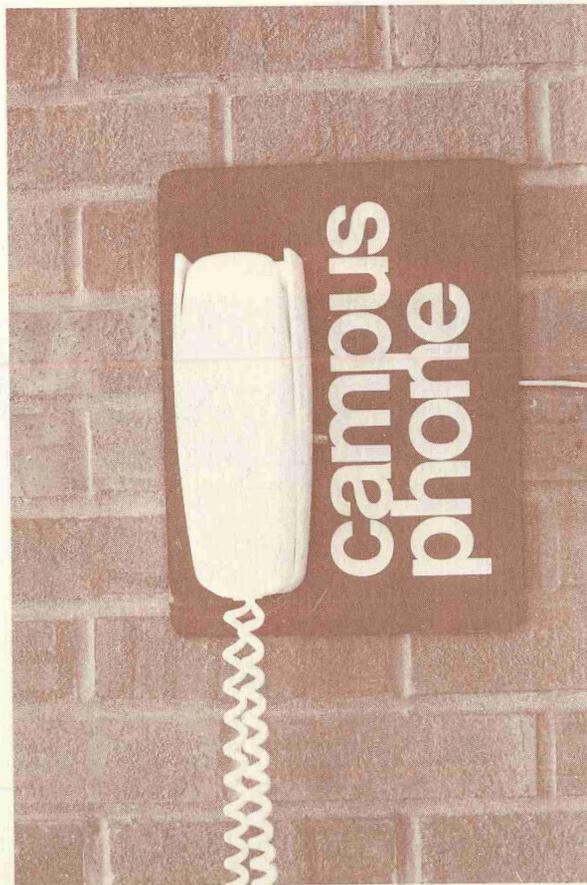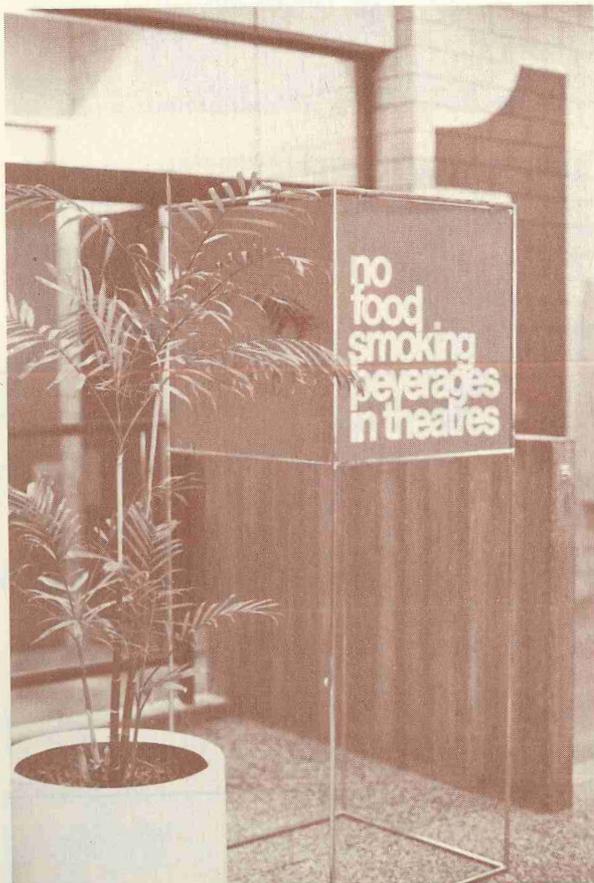
No Smoking

1. Vinyl die-cut lettering identifying mechanical cores throughout building

2. Sign type S8 as early prototype for smoking regulatory signage.

3. Freestanding information kiosk combining acrylic signage and tubular chrome framework for use in theatre lobby

4. Custom sized acrylic sign panel fabricated to accommodate campus informational phone

5. Curved sign panels, custom fabricated to column diameter, acting as light screen and identification for news stand

no food smoking beverages in theatres

campus phone

NEWS

Directories

Directories and posting surfaces compose an important segment of the total graphics system for a building. These items display the detailed information necessary for the function and use of any space. While the basic graphics program for a building will focus on the permanent or non-changing information regarding the use of the space, posting surfaces and directories must address themselves to informational display of a temporary nature. These items must readily accommodate this continual change without undue added expense.

The maintenance of building directories on campus becomes a monumental task when considering the quantity of directories requiring maintenance and the frequency of change in faculty and staff. This, coupled with the variety of directory types found on campus, renders the maintenance through a central agency on campus extremely difficult.

Placing the responsibility for maintenance of directories within the building itself by occupying departments will greatly simplify the task of keeping information of this type current. In order for changes to be incorporated by building personnel, hardwares must be essentially self-sustaining. It is therefore recommended that directories for general consumption be of the changeable letter variety, employing hardwares compatible in design with other graphic materials and formats.

While the size and shape of the directory will be dictated by the specific needs of the building, materials, colorations, and letter-styles can be standardized. All metal casework shall be anodized bronze finish aluminum, with either black or dark brown changeable letter board. All changeable letters shall be of the Helvetica

style. All lettering shall be white. Hardwares meeting these specifications are standard items offered by a variety of signage manufacturers, including A. C. Davenport & Son Company, Palatine, Illinois. Hardwares by alternate manufacturers shall be approved by the Office of Physical Planning.

A typical specification for building directories would read:

> DAVSON Changeable Letter Directory (or equal)
> Style: A0154
> Size: As required - note manufacturer's catalog for standard sizes
> Metal finish: Duranodic Bronze #313
> Backround color: Black
> Lockable
> Specify right or left-hand hinge
> Specify if exterior weatherproofing is required
>
> DAVSON Changeable Letters and Figures (or equal)
> Style: Helvetica
> Color: White
> Size and Distribution: As required
> Letters to be packed in storage cartons

The changeable letters and figures are typically available in four sizes: 5/16", 1/2" 3/4" and 1" - all upper case characters. In ordering lettering for various programs, a standard font of the required quantity of letters may be specified. Should a heavy demand for particular letters or numerals be anticipated, individual quantities of these characters may be specified.

5/16" letters and numerals are recommended for directory personnel listings. This is usually the largest segment of information displayed in the directory. Departmental and divisional listings may be illustrated in 1/2" copy, therefore creating a visual distinction with the personnel

listings. The 1" letter hieght is suitable for directory
titles and captions.

The quantity of personnel listings will generally deter-
mine the size of the directory and quantity of letters
required. Future needs and requirements should also be
anticipated when planning this portion of a graphics
program. The following table will be of use in determ-
ining quantities and sizes necessary for various install-
ations.
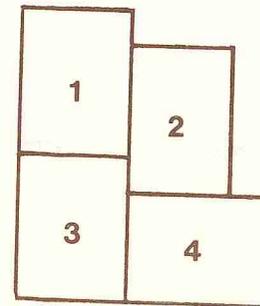
Recommended Directory Sizes & Capacities

# of Personnel Listings	Recommended Directory Size	Quantity of 5/16" Letters & Numerals
50 Entries	18" x 24"	1500 characters, in standard assortment
100 Entries	27" x 37"	3000 characters, in standard assortment
150 Entries	36" x 36"	4500 characters, in standard assortment
250 Entries	36" x 48"	7500 characters, in standard assortment

Sizes and capacities are based on an average distribution of letters and numerals within a typical list-
ing. If listings are uncommonly long or of a specific nature, capacities and letter quantities should be
adjusted accordingly. It is often beneficial to specify additional numerals based on the specific room-
numbering patterns of the building. Quantities of letters and numerals other than the 5/16" size will
depend on the types of listings to be displayed. It may be necessary to actually count the quantity of
characters required for major titles and order a multiple of that quantity.

Coffey Hall

B
Audio-Visual Aids	1
Bulletins	3
Bookstore	30
Post Office	70
Printing and Duplicating	90

1
Admissions and Records	130
Student Affairs	190
University Relations	101
Visitor Information	101

2
Institute of Agriculture, Forestry And Home Economics	201
Agricultural Extension Service	340
Agricultural Experiment Station	220
College of Agriculture	277
International Agricultural Programs	293

3
Agricultural Extension Service	
Accounting Office	332
District Directors	360
Home Economics	340

4
Information and Ag. Journalism	433
Extension TV	490
MAPS	415
Office of Special Programs	405
4-H Office	475

Morrill Hall

1. Directory consisting of 6 – R832 sign plaques, designating permanent offices and departments within the building

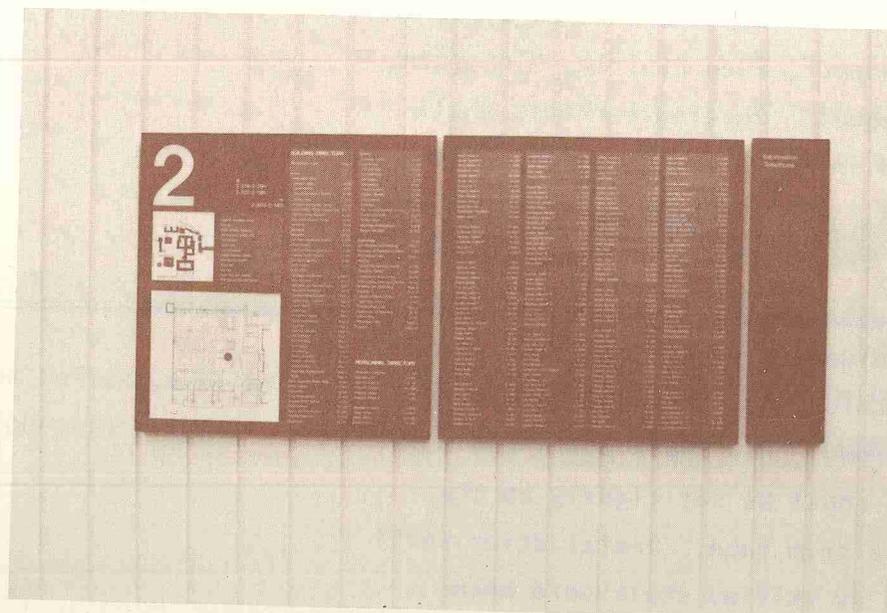2. Changeable letter directory in combination with painted directional supergraphics

3. Changeable letter directory listing offices and personnel within a single unit

4. Special directory system incorporating departmental and office listings, personnel listings, floor plan, regional map, level designation, and directional information. Companion unit for campus phone system is incorporated into the modular hardwares system

Posting Surfaces

Interior posting surfaces shall compliment the general character of the graphics program. All hardwares for posting surfaces shall be similar to those manufactured by W. E. Neal Slate Company, Eden Prairie, Minnesota, and as illustrated on the following page. The use of these hardwares offers the narrow architectural lines compatible with the directories and room identification signage. Direct-to-wall installation shall be employed. Optional accessories include map rails with cork inserts, and chalk trays. Maintaining the colorations established for building directories, all metal trims shall be a dark anodized bronze. Cork material shall be a char-brown.
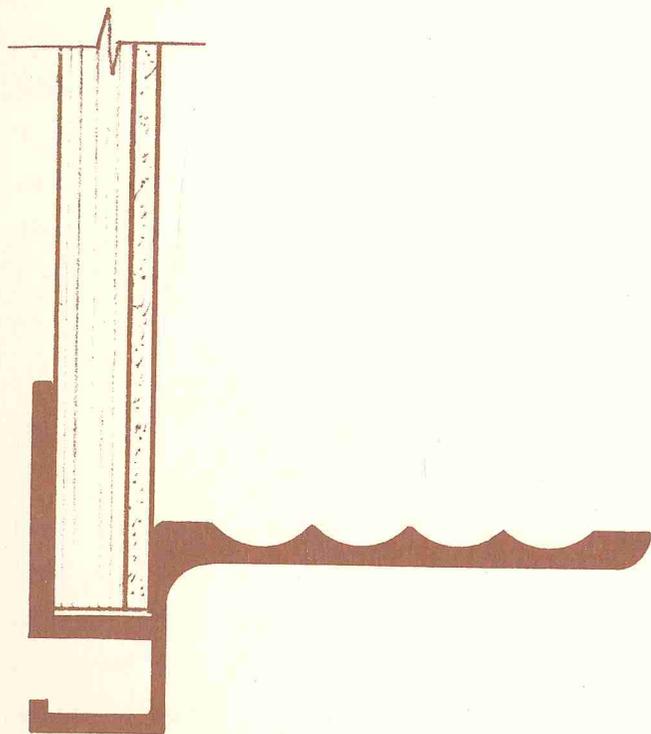
A typical specification for this type of posting surface would read:

> Chalkboard and tackboard trims shall be dull etched and anodized (AA-C22A31) extruded aluminum "Sliptrim" as manufactured by W. E. Neal Slate Company, Eden Prairie, Minnesota, or approved equal. Posting surfaces shall be fabricated in the sizes as noted on detail drawings. Minimum average metal thickness: chalk tray: 3/32"; all other sections: 1/16". All trim up to 24' in length shall be provided in single lengths. Posting surface color shall be Neal Cork color #13 - char-brown. All chalk board and tackboard panels shall be set tightly to the inside of the trim face. Installation shall be performed by skilled chalkboard mech-

anics. Trim shall be fastened to the wall with approved mechanical fasteners, 12" o.c. for chalk trays; 16" o.c. for all other trims.
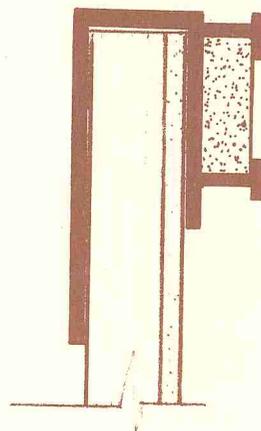
Sizes of posting surfaces may vary, depending on the usage of the subject space, available wall area, and of course, on the quantity and type of materials to be displayed. While surfaces of the 3' x 4' and 4' x 6' dimension are typically suited to corridor installations, a system of sizes should be developed in order to establish a consistency throughout the space. All surfaces of a specific type and function should be of similar dimension. In procuring posting surfaces for existing spaces, a consistency in hardwares can be maintained by duplicating the dimension of existing posting surfaces.
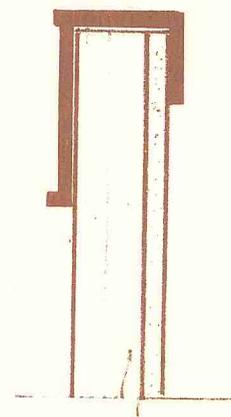
Procurement of posting surfaces shall be coordinated through the Office of Physical Planning by the Graphics Corrdinator.

Chalk Tray Section - Sliptrim J11

Map rail with cork inset
Sliptrim J2

Perimeter frame section
Sliptrim J5

POSTING SURFACE TRIM DETAILS

Posting Surface Hardwares

Hardwares for posting surfaces reflect similar architectural detailing as found in building
directories. Sizes and configurations shall be developed according to the requirements of the
specific program.

Supergraphics

All supergraphic delineation shall be coordinated through the Office of Physical Planning by the Graphics Coordinator. The specialized nature of supergraphic treatment precludes any type of standardization of format or design stylization. The following guidelines are offered for consideration in determining and executing any type of supergraphics program.

Wall Surfaces

The wall surface on which the graphic is to be applied is of primary concern. Generally, painted plaster, while providing a good surface for the application of the graphic, requires periodic painting and refinishing. Any graphic treatment must therefore be reproduced to restore the wall to its original intent. The painted wall does have the advantage over other wall surfaces in that the graphic can be changed or removed without damage to the wall itself.

Masonry wall surfaces in their natural form must be viewed cautiously as candidates for supergraphic treatment. Generally, the graphic cannot be readily removed should a change in program occur. Only supergraphics of an absolutely permanent nature and of enduring quality should be considered for unfinished masonry surfaces.

Vinyl wall converings pose a problem similar to that of masonry. The advantage of using vinyl wall coverings is that of low maintenance follow-ing installation. The application of any type of paint material automatically negates the permanence of the vinyl, and initiates a continual maintenance program for the wall surface. Should the graphic ever be changed, the wall covering must be either removed or replaced, or totally painted.

The application of supergraphics to glass surfaces must be considered with the same caution as masonry. If lettering is to be included on glass surfaces, the use of applied vinyl letters is recommended. In addition to providing excellent delineation of the letter forms, the vinyl characters may be removed at a future date should change in program occur.

Subject Matter

Supergraphic delineation is of such a nature that a standard for subject matter cannot be established. Guidelines for evaluating subject matter can be determined, and are noted below.

Informational Graphics   Level indicators, directional texts, and informational statements fall into this category.   Large stairwell numerals, supergraphic text identifying major public spaces and directional arrows are good examples of appropriate use of supergraphics to convey a message or idea. Simplicity in the graphic's final form is necessary to impart the proper impact associated with this form of graphic presentation.

Again, it must be emphasized that the graphic is only as durable as the wall surface on which it is applied. Maintaining the original intent of the graphic will require periodic restoration of the

graphic forms. Conversely, a change in the graphic information will require an automatic repainting of the wall surface and a reconstruction of the graphic in its modified form. Supergraphics are generally not suited to changeable subject matter and material.

Simplicity always appears to be the key to successful informational supergraphics. The placement of a large body of copy on a wall surface may create an element of visual confusion - thereby defeating the purpose of graphics at this scale. Similarly, the inappropriate use of scale in delineating supergraphic shapes and forms can destroy the impact of the visual statement.

Decorative Graphics   Decorative graphics may take on a variety of geometric shapes and abstracted forms, and are not subject to the updating of informational graphics. Scale, graphic content, and color must be carefully considered in determining a decorative supergraphic treatment. The shapes, forms, and patterns must lend themselves to the surroundings in which they are to be found. As a general rule, the simple solution is usually the most successful. Graphics that are over-worked or of a "busy" composition lose much of their impact at the expanded scale. Dated and trite subject matter should be avoided whenever possible. Compositions which are designed for exhibitions on University buildings or on University grounds shall be approved by the Office of Physical Planning.

Often, an architectural element within a space may be treated as a supergraphic statement through the application of an accent color. A decorative archway, spandrel beam, or pilastered wall - all may become the focal point of a decorative graphic treatment through the judicious use of color. Often the

designer will find an economy in this type of graphic treatment, as the work may be included as a part of the routine painting of the space.

Graphic Methods   Up to this point, the graphic method referred to has been the direct application of paint material to wall surfaces. This method requires the accurate layout of the graphic forms on the wall surface, to be followed by painting of two or more coats.
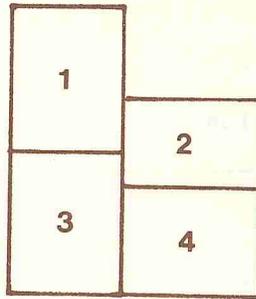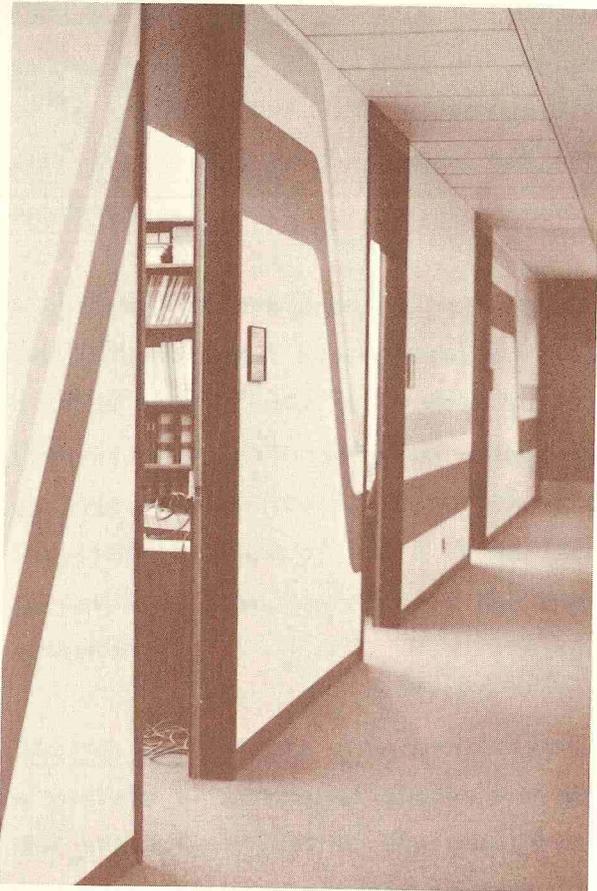
The same basic appearance may be duplicated in vinyl wall coverings, with the designs and patterns actually cut into the vinyl material. Because of the added expense of this method and the durability of the material, supergraphics of this nature must be considered a permanent wall treatment.

Whenever lettering is required in a supergraphic format, the designer may consider the use of large scale vinyl die-cut letters to creat the various layouts. Again, consideration must be given to the surface on which the lettering is to be applied. Direct application to painted plaster will create difficulties when the wall must be repainted. Covering the surface with clear acrylic sheeting prior to the application of the lettering will provide a maintenance-free surface that can be removed whenever periodic painting is necessary.

Worth mentioning are the wide variety of supergraphic wall coverings that are commercially available. Many sources offer, in addition to a standard collection of designs, the ability to reproduce the designer's original graphics on vinyls and papers. This custom service has appeared to reach a new height in the development of a process in which a photograph may be enlarged to wall-size proportions with totally accurate rendition of color and detail. These materials all possess the advantage of being removable when the graphic

is no longer needed.

When approaching any potential supergraphic application,
the designer must use circumspect caution in assessing
all aspects of the program.   Form, color, and scale
must all act harmoniously in producing a successful
supergraphic design. These elements must be carefully
conceived before proceeding with the actual application
of the graphic material. Often, the feeling imparted
by the completed graphic can be quite unlike its char-
acterization on the drawing board.
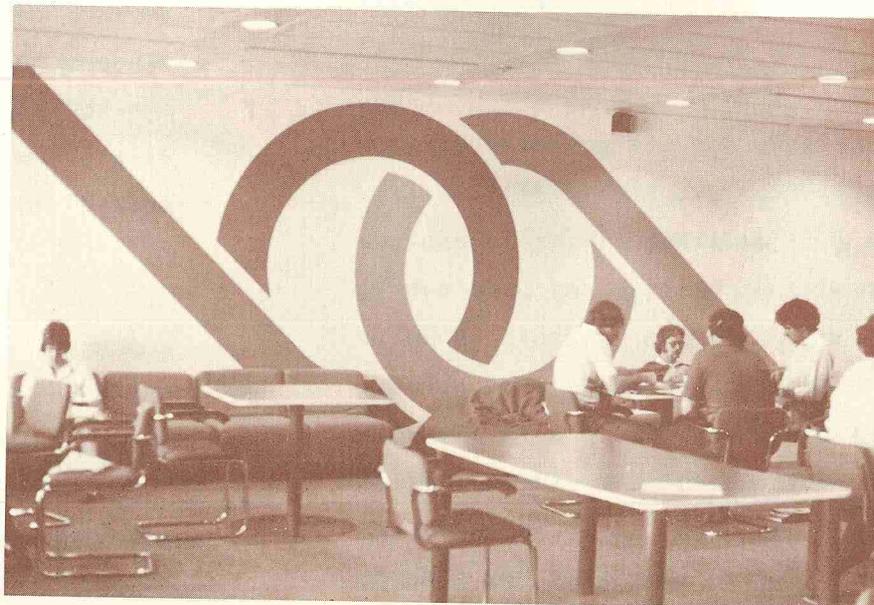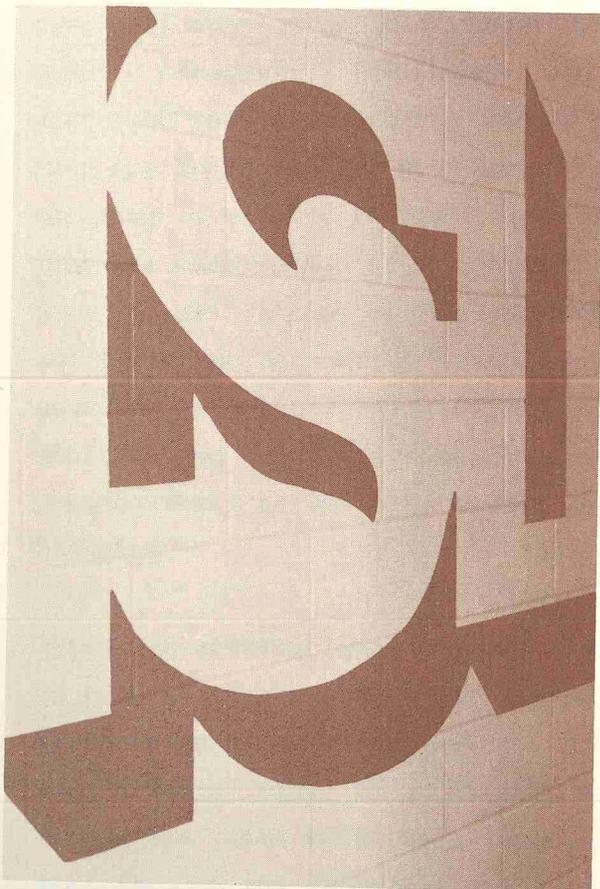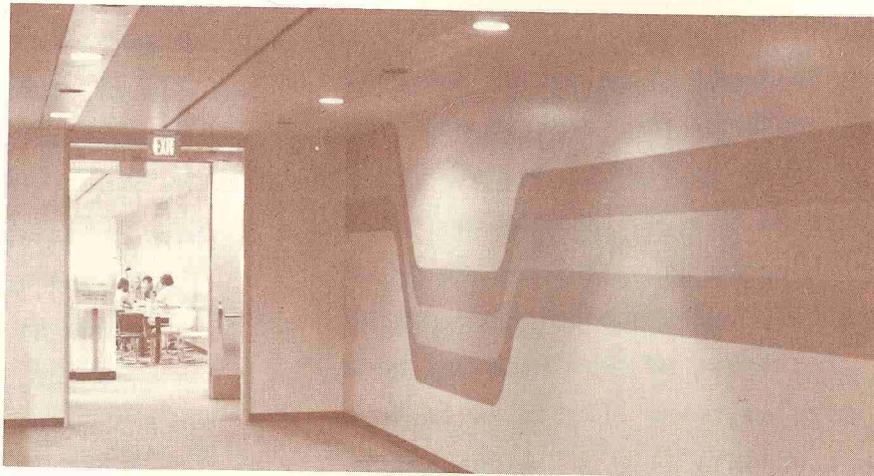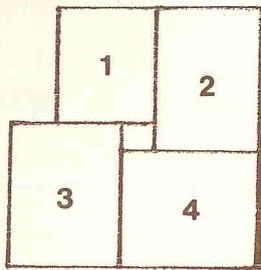
1. Stripe supergraphic applied to opposite walls of clinic space. Pattern is repeated on interior cubical patitions, executed in colored arcylic plastic.

2. Continuous stripe used to unify corridor, stairwell and cafeteria spaces.

3. Office logo is applied to vestibule wall.

4. Decorative graphic in student lounge reflects colorations of furnishings.
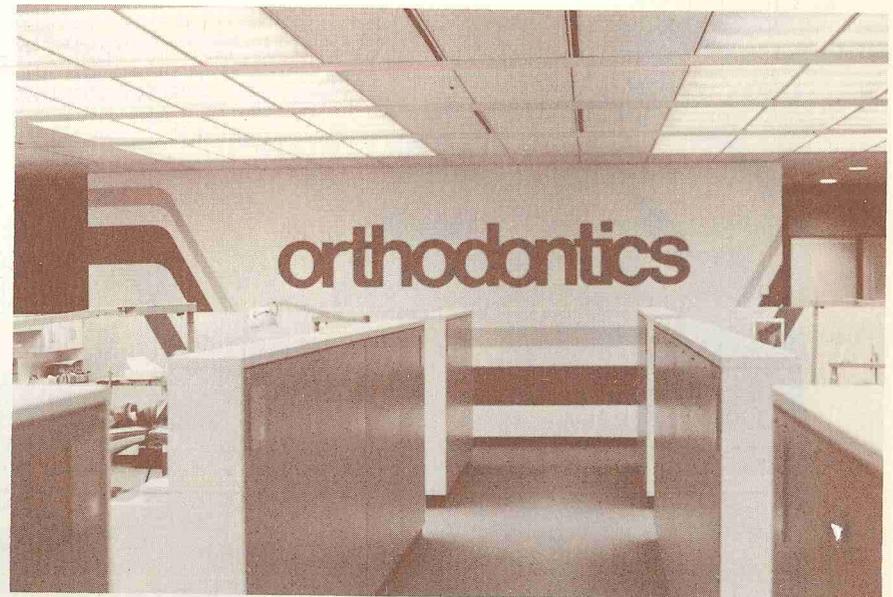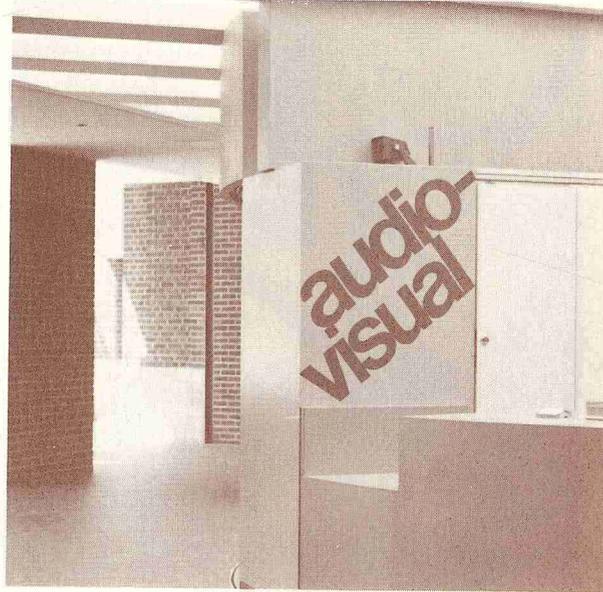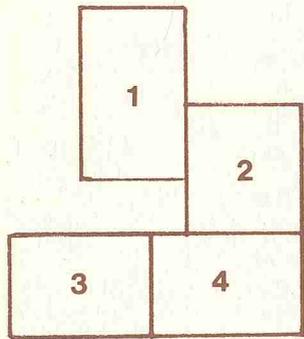
1. Painted supergraphics identifing specific function for information desk

2. Painted stairwell numeral with identification of exterior exit

3. Painted supergraphics on concrete block serving as decorative elements and theatre identification. Suspended banners identify current performances
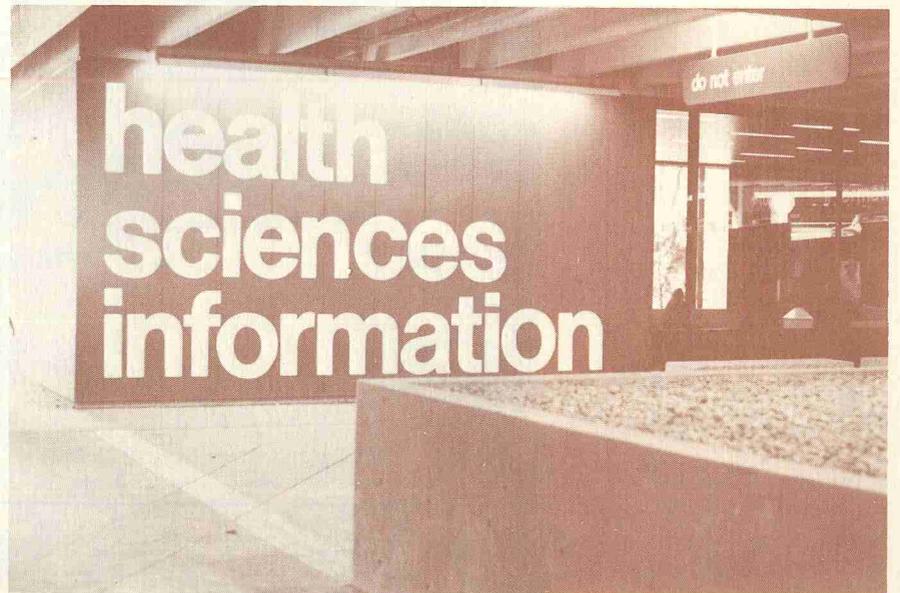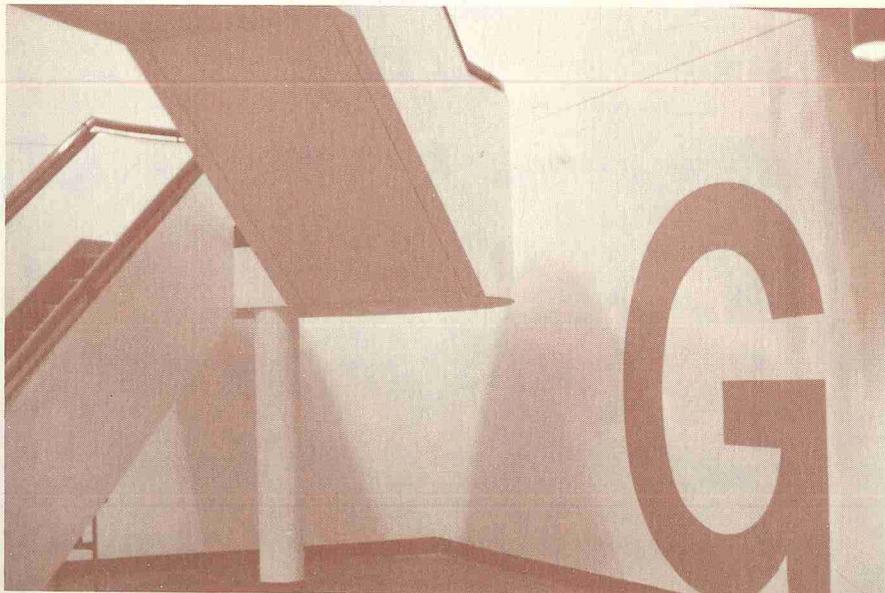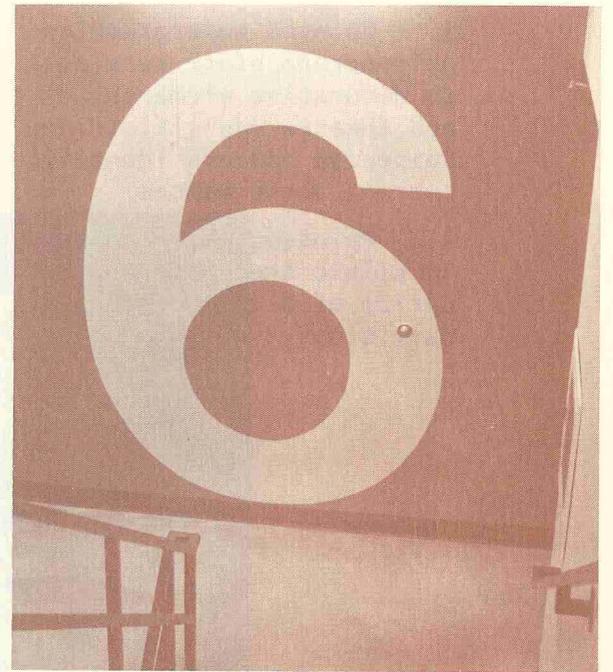
4. Painted supergraphics in clinic area with duplication of design on cubical partitions

1, 2, 3. Supergraphic stair-
well identification numeraals
painted on plaster wall sur-
faces

4. Informational graphics
painted on metal wall panels
within parking ramp

Exterior Signage

Exterior signage at the University of Minnesota can be isolated into two general categories: traffic regulatory signage and campus-oriented informational signage. Standards for traffic regulatory signage are governed largely by local, state, and federal regulations for signage of this type. Traffic regulatory signage is coordinated by the Office of Physical Planning and implemented through University Plant Services.

The latter group, which includes essentially all other types of exterior identification, represents a broad diversity in function and use. The more common elements include building identification signage, directional signage, and the large bulk of miscellaneous informational signs required throughout the campus. While developing all-inclusive signage hardwares for every graphic need may not be practical, the determination of standard colorations, graphic formats, and a limited collection of signage hardwares can certainly begin to unify the exterior informational systems.
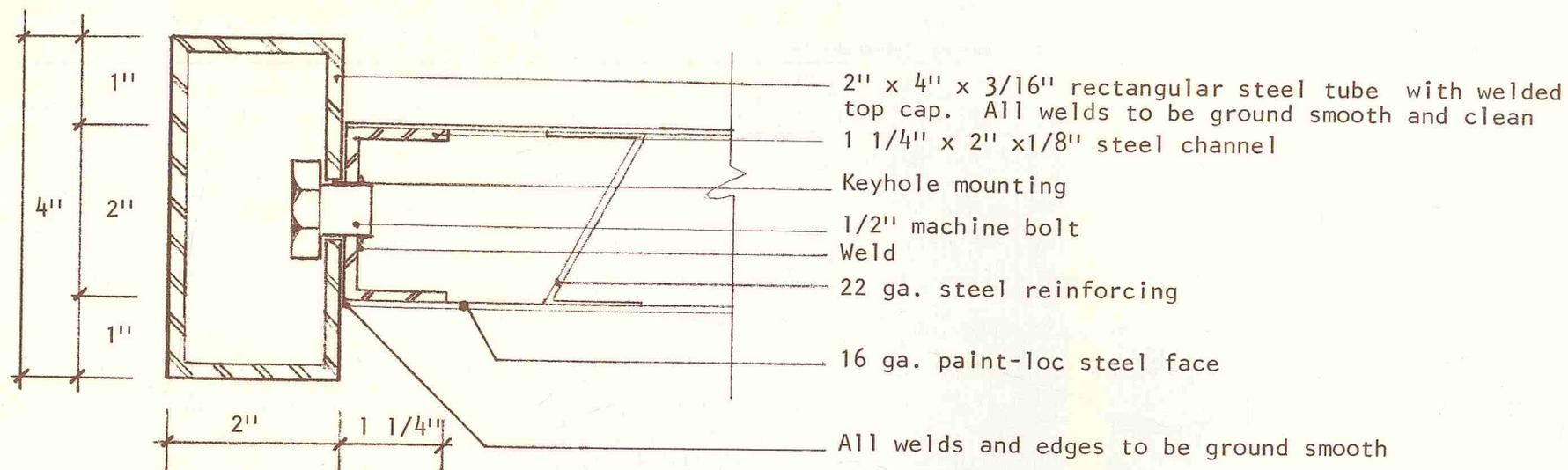
In maintaining the same color format as the interior signage program, all exterior signage hardwares shall equal the coloration of Glidden black-brown eggshell 510DL7144. Similarly, all graphics shall be white, repeating the Helvetica Medium letter style of the interior graphics program. All lettering shall be accomplished through the use of vinyl die-cut letters or by silkscreening. The use of hand painted letter forms should be used with discretion, as variations in letter form will always exist. The nature of the particular signage requirements will usually dictate the appropriate graphic method.

Examination of the signage requirements of the campus indicates the presence of a group of consistently needed signage configurations. These requirements, along with the standard colorations and formats, form the basis for a limited collection of signage hardwares capable of fulfilling a variey of graphic requirements.

The following details illustrate the use of an exterior sign panel in a variety of configurations with a standard mounting post in several heights. While the construction of these elements is similar, a great degree of flexibility is possible through the use of these components in various combinations.

This flexibility is further increased by the addition of several accessory items. An illuminated sign may be constructed through the addition of the light canopy in either single or double configuration. Units may be ganged together to form multiple surfaces by employing intermediate mounting posts with keyhole mounting devices on both sides. Finally, any of the various sign surfaces may have an enclosed display case applied to the sign surface in such a manner as to create exterior display hardwares.
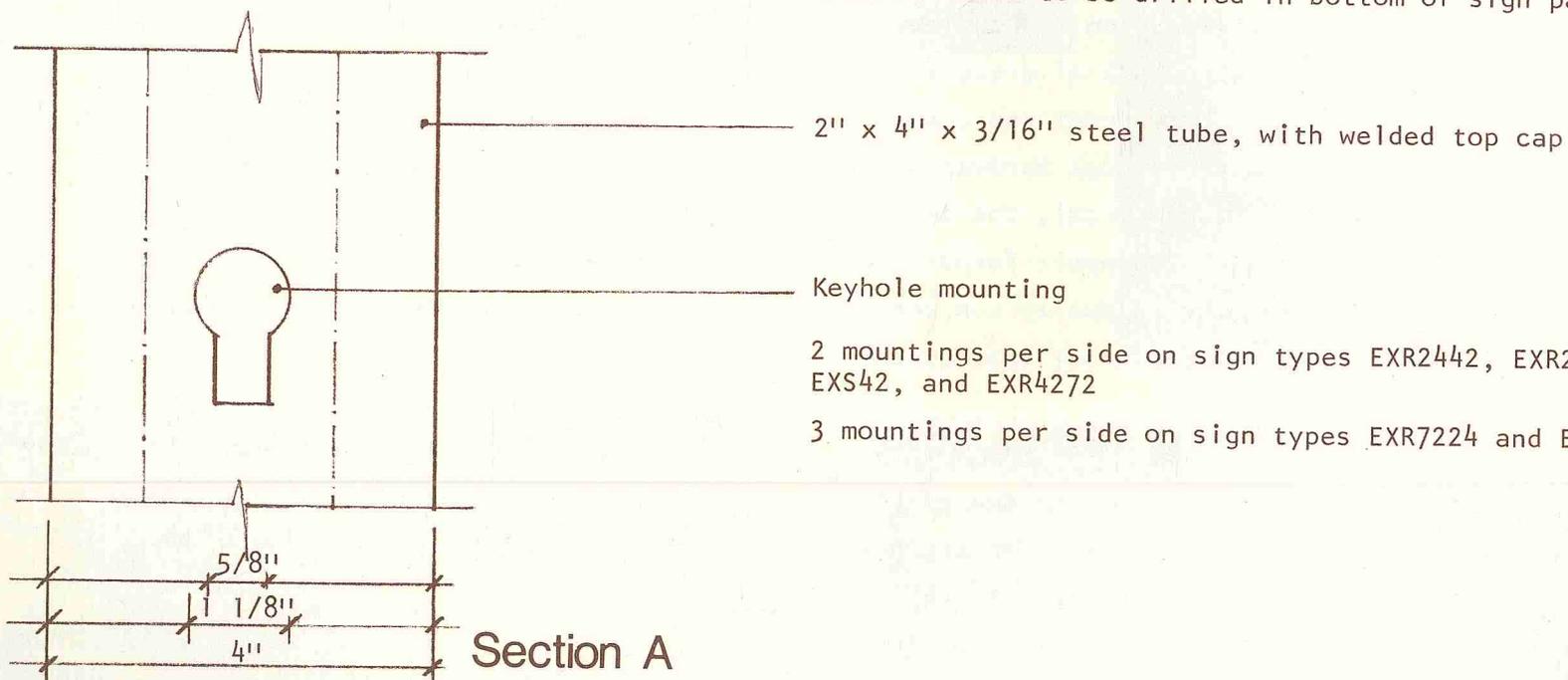
The procurement of these items shall be coordinated through the Office of Physical Planning by the Graphics Coordinator. He shall approve the location and distribution of these and other sign types.

Section B

2" x 4" x 3/16" rectangular steel tube with welded top cap. All welds to be ground smooth and clean

1 1/4" x 2" x1/8" steel channel

Keyhole mounting

1/2" machine bolt

Weld

22 ga. steel reinforcing

16 ga. paint-loc steel face

All welds and edges to be ground smooth

All metal parts to receive two coats of primer and two finish coats

2 drain holes to be drilled in bottom of sign panel

2" x 4" x 3/16" steel tube, with welded top cap

Keyhole mounting

2 mountings per side on sign types EXR2442, EXR2472, EXS42, and EXR4272

3 mountings per side on sign types EXR7224 and EXR7242

Section A

Exterior Signage Hardware Details

Exterior signage hardwares employ standard post/sign panel hardwares for the various sign modules.

Installation is accomplished by embedding the sign post into circular concrete footings.

A ——————

B ——————
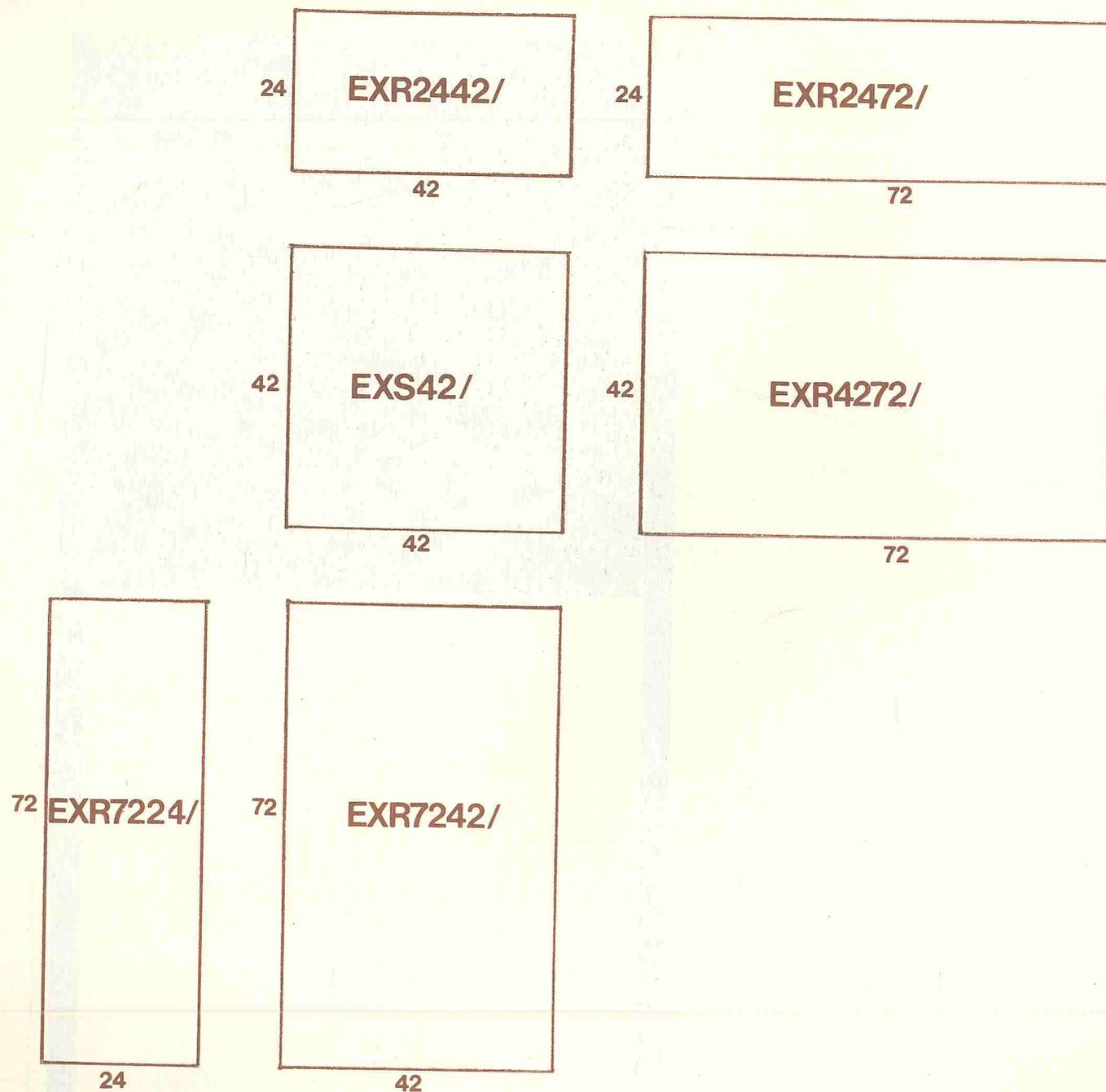
**Coffman
Memorial
Union**

300 Delaware
Avenue

Typical Elevation

```
┌─────────────────┐        ┌──────────────────────────┐
│                 │        │                          │
24│     EXR2442/    │     24 │        EXR2472/          │
│                 │        │                          │
└─────────────────┘        └──────────────────────────┘
        42                            72

┌─────────────────┐        ┌──────────────────────────┐
│                 │        │                          │
│                 │        │                          │
42│     EXS42/      │     42 │        EXR4272/          │
│                 │        │                          │
│                 │        │                          │
└─────────────────┘        └──────────────────────────┘
        42                            72

┌───────────┐    ┌─────────────────┐
│           │    │                 │
│           │    │                 │
│           │    │                 │
│           │    │                 │
72│EXR7224/   │ 72 │    EXR7242/      │
│           │    │                 │
│           │    │                 │
│           │    │                 │
│           │    │                 │
└───────────┘    └─────────────────┘
    24                  42
```

Exterior Sign Modules
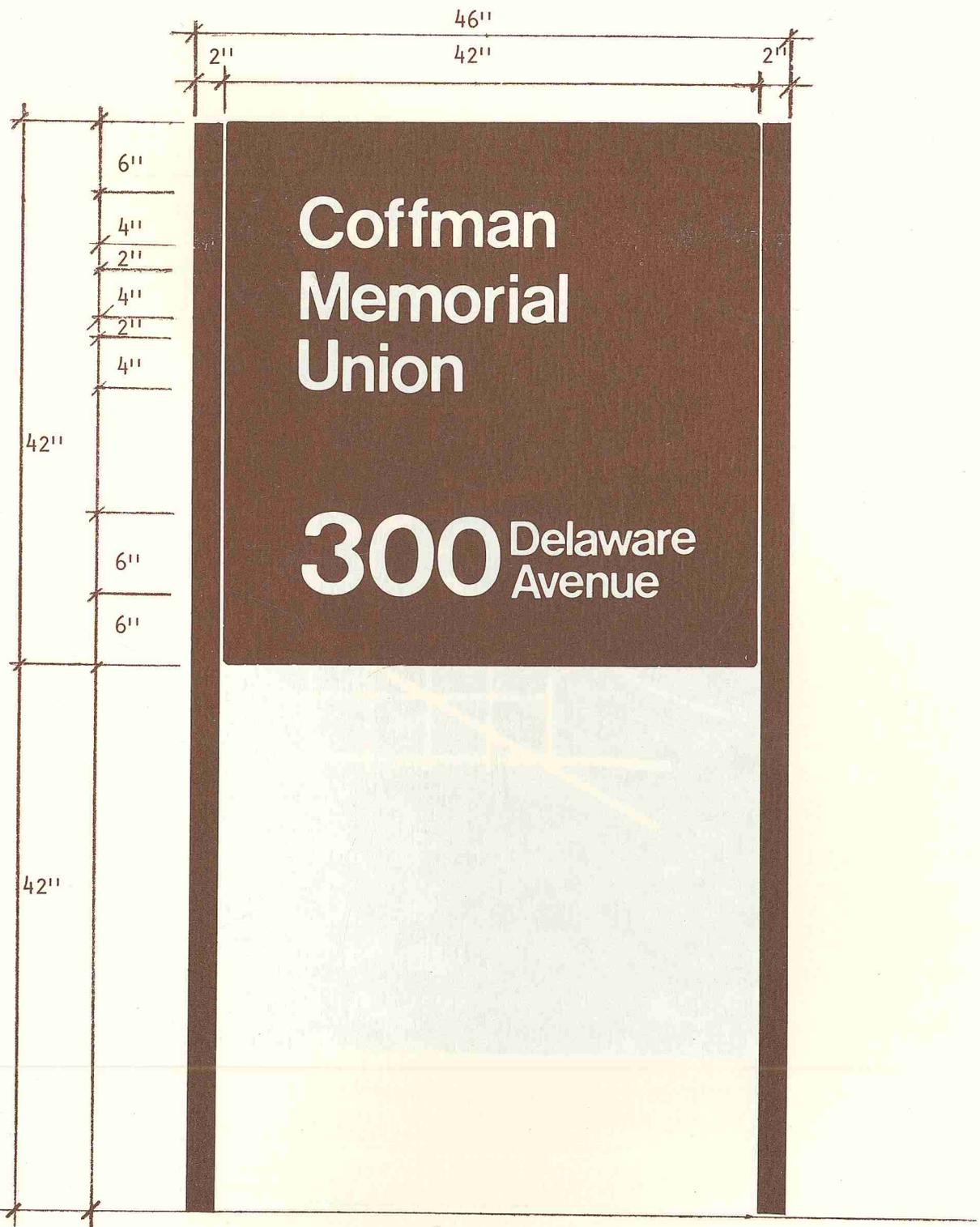
Exterior sign modules are based on the EXS42 sign unit mounted at 7' height as standard. Other modules are based on either 2' or 6' variations of the standard format. Variations in mounting height further increase the flexibility of the signage components.

Letter Legibility

LETTER HEIGHT	SUGGESTED MAXIMUM VIEWING DISTANCE
1" Letters and numerals	25 Feet
2" Letters and numerals	50 Feet
4" Letters and numerals	100 Feet
6" Letters and numerals	175 Feet
12" Letters and numerals	300 Feet
20" Letters and numerals	500 Feet
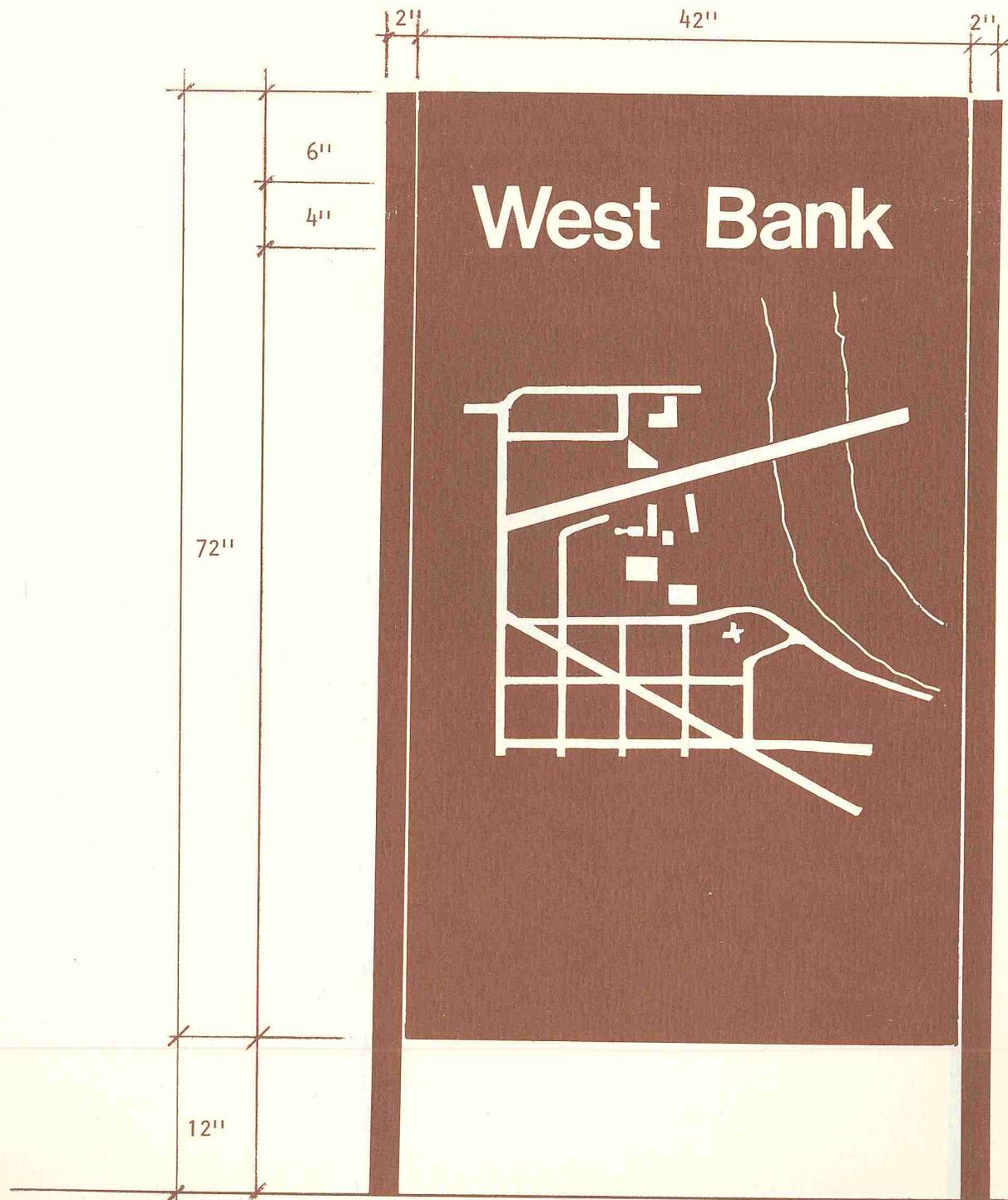
In determining text for exterior signage, the designer must continually balance the quantity of text against the amount of space available on the sign surface. With readability being of first importance, appropriate letter sizing must be initially determined according to the use of the sign. Undersized copy is difficult to comprehend, particularly at the exterior scale. An effective graphic format therefore suggests a brevity in the quantity of copy displayed on a particular sign unit.

Generally, a 4" letter height is recommended for building identification signs and directional signage that is pedestrian oriented. For sign units oriented to vehicular traffic, an increased letter size is recommended.

**Coffman
Memorial
Union**

300 Delaware
Avenue
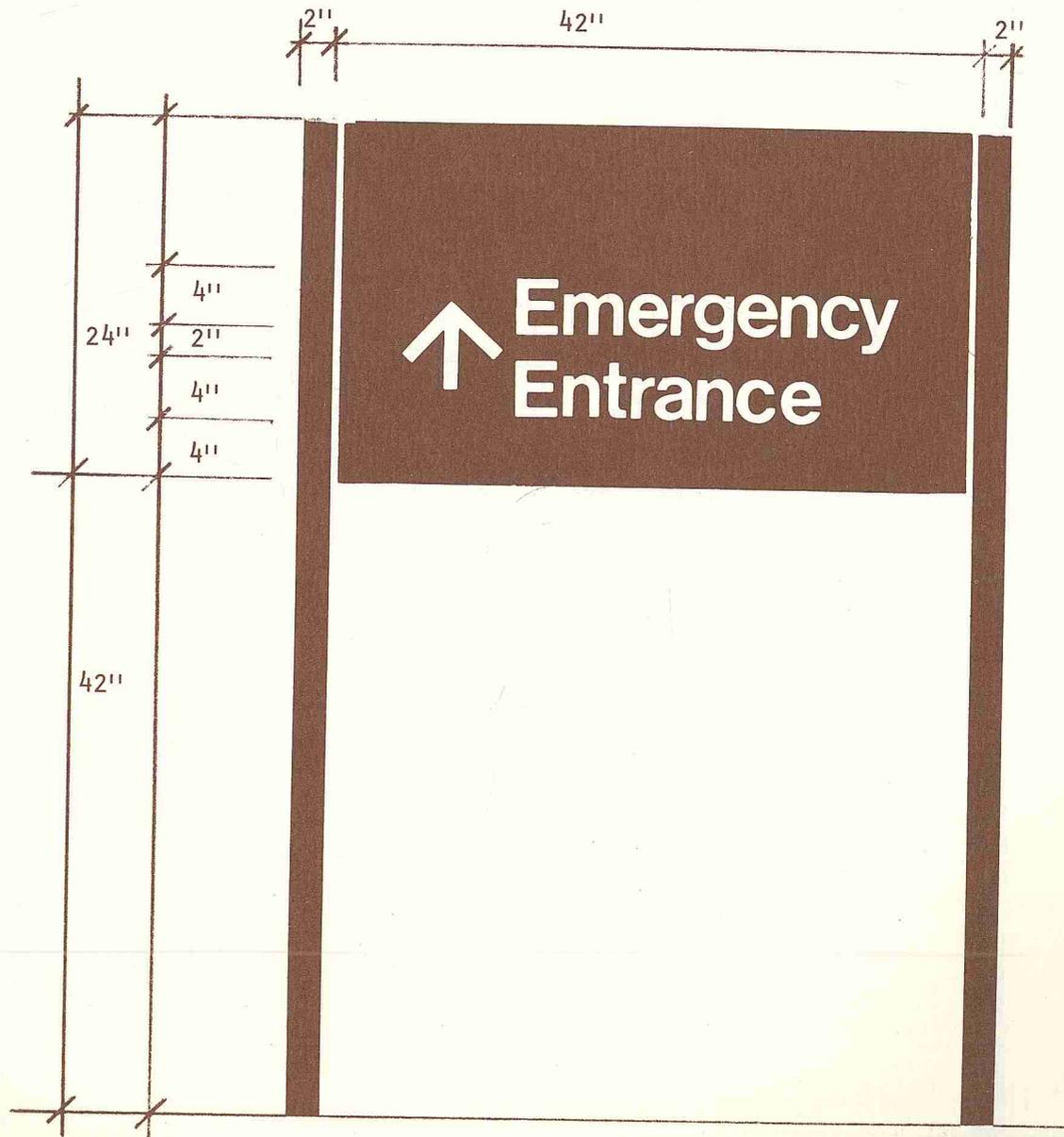
Sign Type **EXS42**

Sign EXS42 forms the basis for the various exterior signage modules, and is generally applied as a building identification sign. Layout may vary according to the quantity of copy to be displayed.

West Bank

2″ 42″ 2″

6″

4″

72″

12″
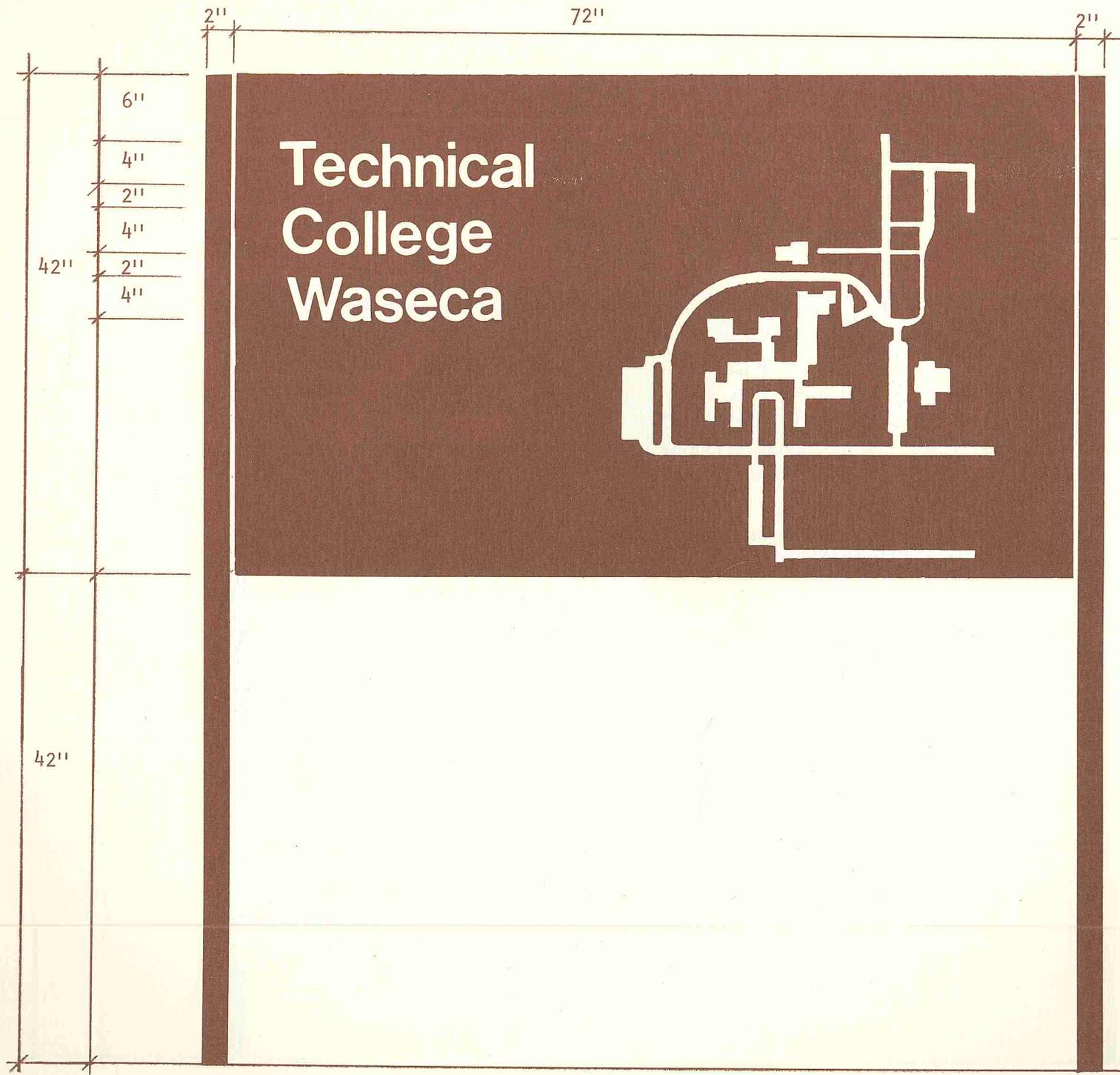
Sign Type EXR7242

Sign EXR7242 is an extended version of the building identification sign, and is suited to the display of larger bodies of copy and campus orientation maps.

↑ Emergency Entrance

2" 42" 2"

24" 4" 2" 4" 4"

42"
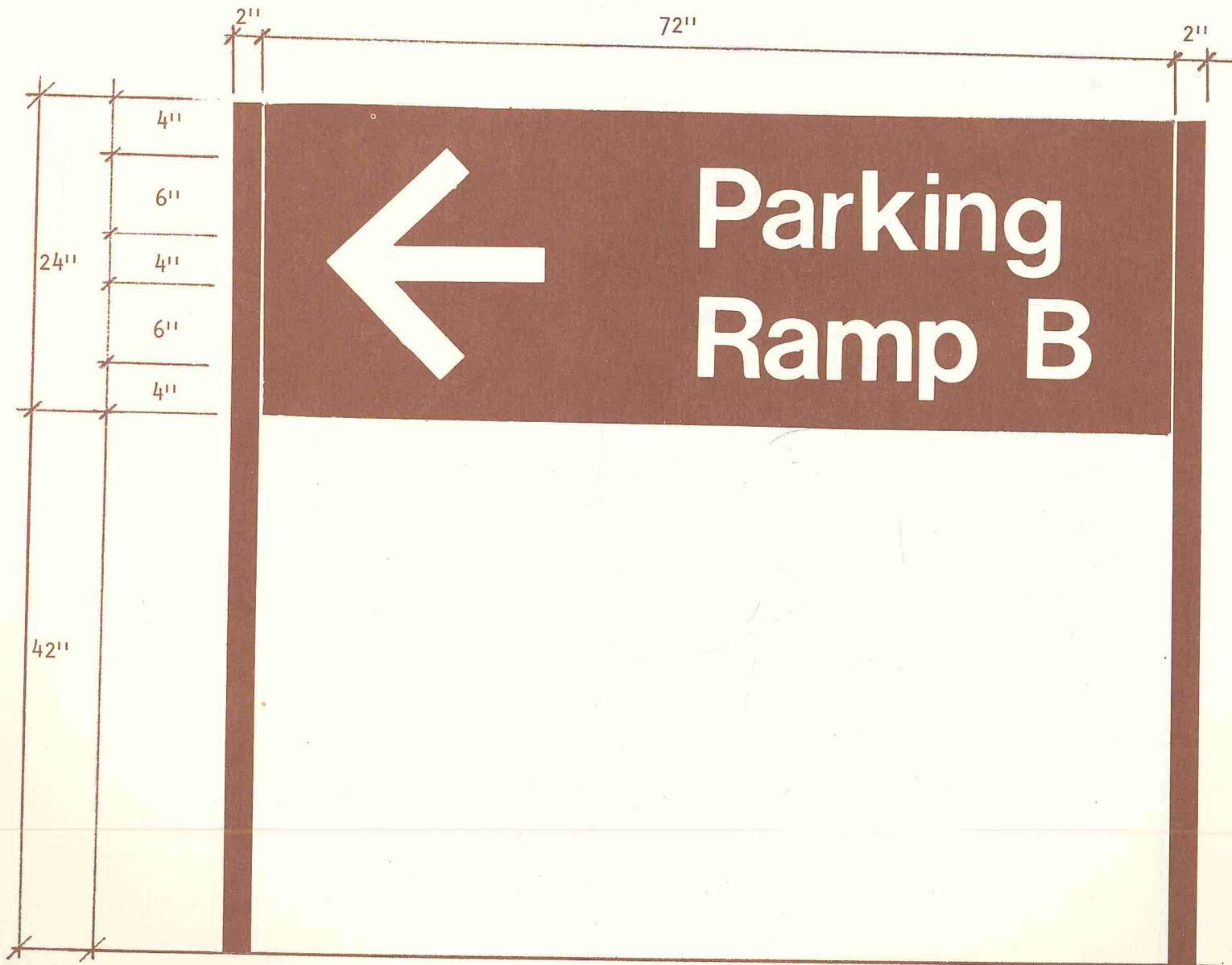
Sign Type EXR2442

Sign EXR2442 is an abbreviated version of the building identification sign, and is suited to the display of limited directional information and as a building identification unit where space limitations exist.

Technical
College
Waseca

Sign Type EXR4272

Sign EXR4272 is appropriately used in a variety of settings, including directional signing or for the display of campus orientation maps and general information.

**Parking
Ramp B**

72"

2"   2"

4"

6"

4"

6"

4"

24"

42"

Sign Type EXR2472

Sign EXR2472 is an abbreviated version of Sign Type EXR4272, and is well adapted to the display of directional information.

University Hospitals & Clinics

6"
6"
2"
6"
2"
6"

72"

4"
2"
4"
4"

4"
2"
4"

6"

↑ Emergency Entrance

← Public Parking
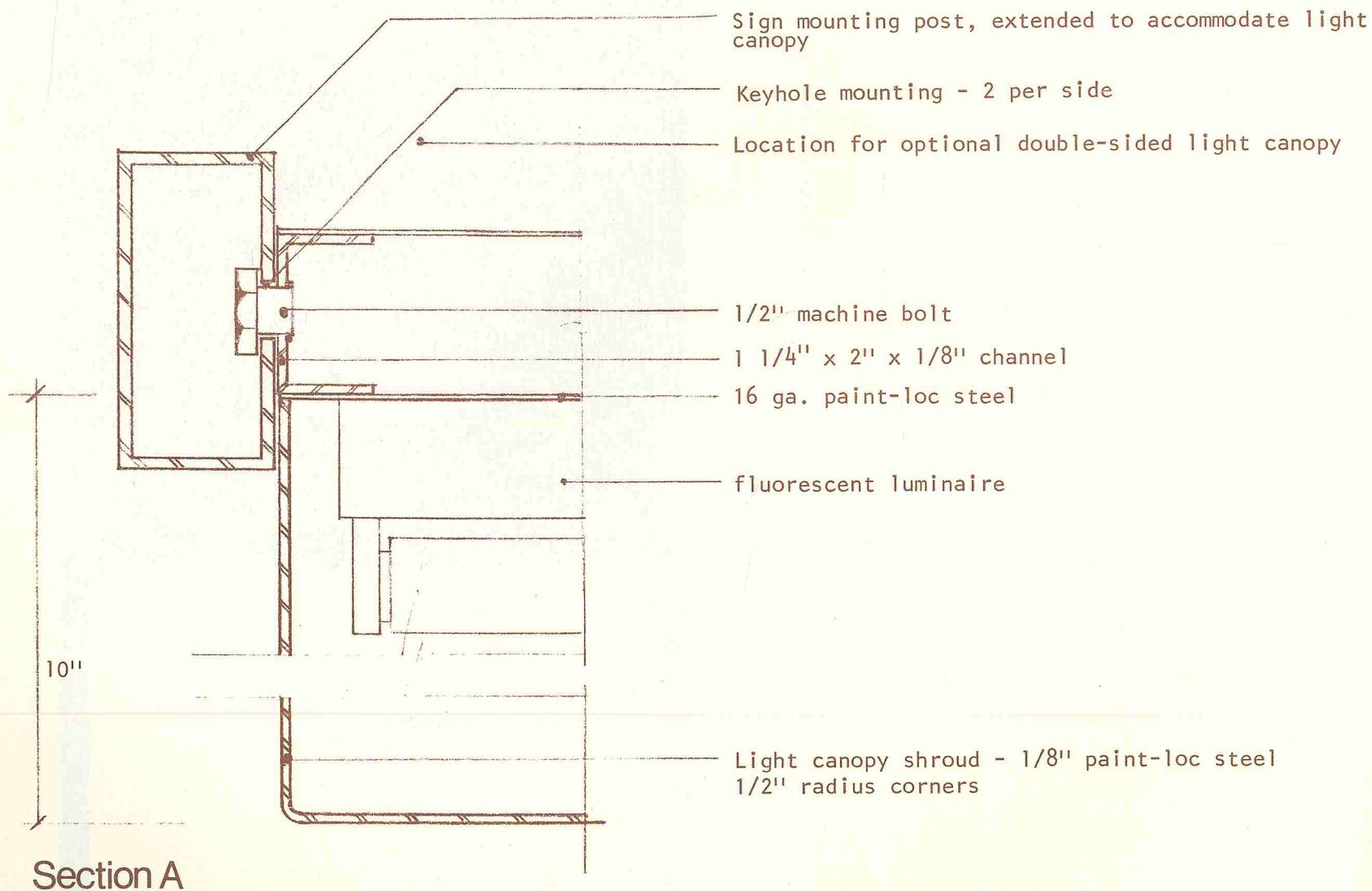
60"
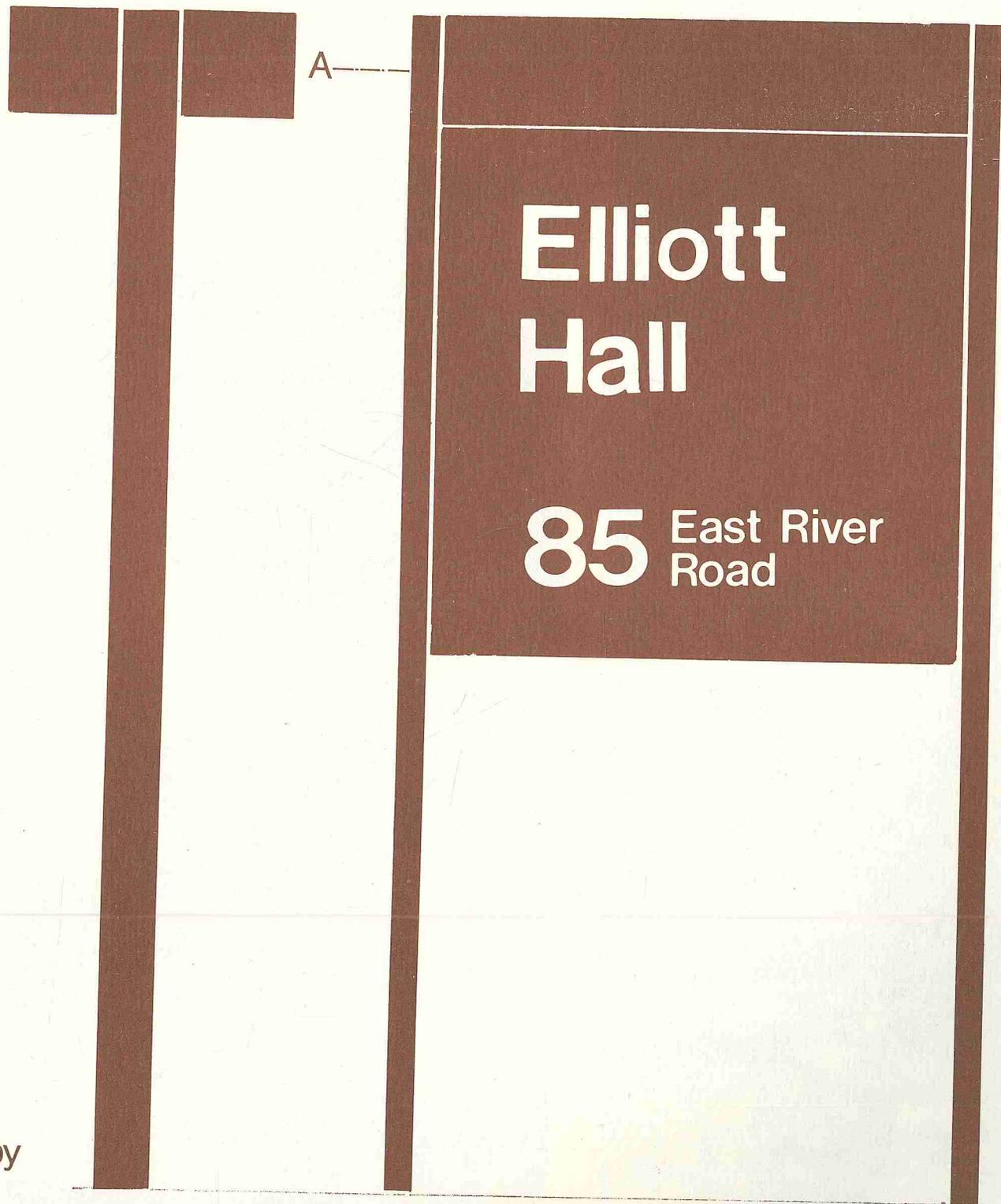
A variation on the mounting height of Sign Type EXR7242, this sign is specifically designed for the display of vehicular oriented directional information.

Sign Type EXR7242

Sign mounting post, extended to accommodate light canopy

Keyhole mounting - 2 per side

Location for optional double-sided light canopy

1/2" machine bolt

1 1/4" x 2" x 1/8" channel

16 ga. paint-loc steel

fluorescent luminaire

10"

Light canopy shroud - 1/8" paint-loc steel
1/2" radius corners

Section A
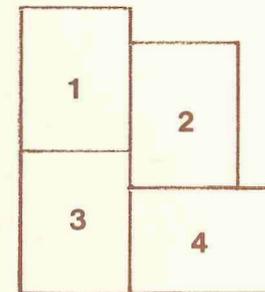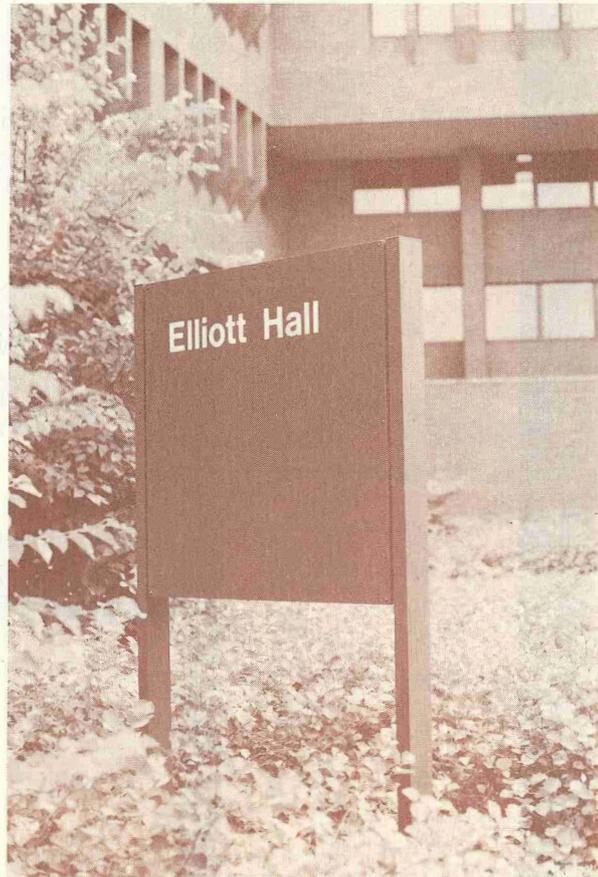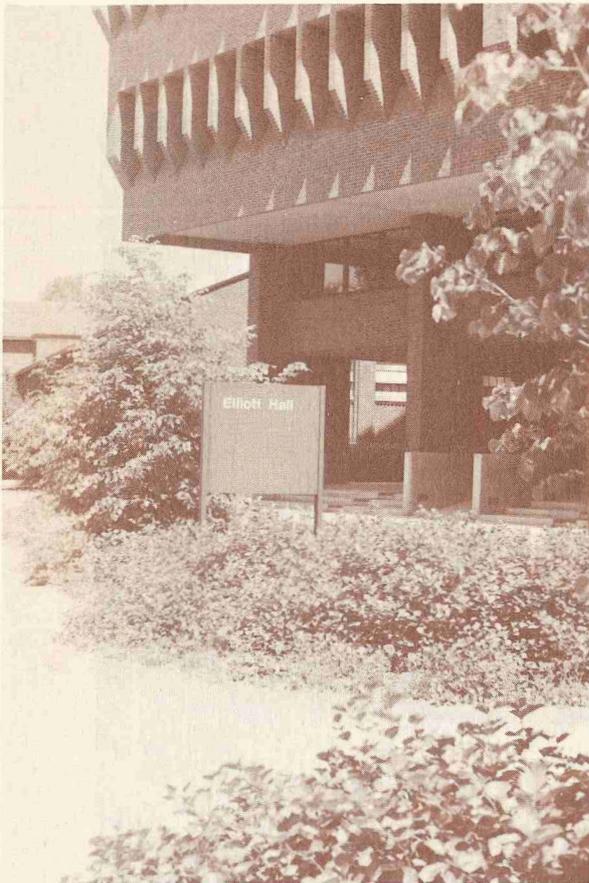
Light Canopy Hardwares

The light canopy may be added to any of the exterior sign modules, in either single or double configuration. Attachment to the mounting post is accomplished with key-hole mountings. Access plate shall be provided at base for electrical connections.

A

Elliott Hall

85 East River Road

EXS42 Sign & Light Canopy
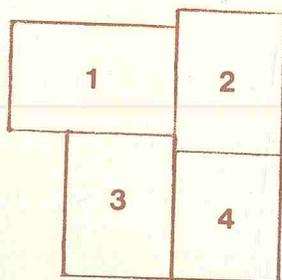
1., 2. EXS42 sign unit as build identification unit in new construction
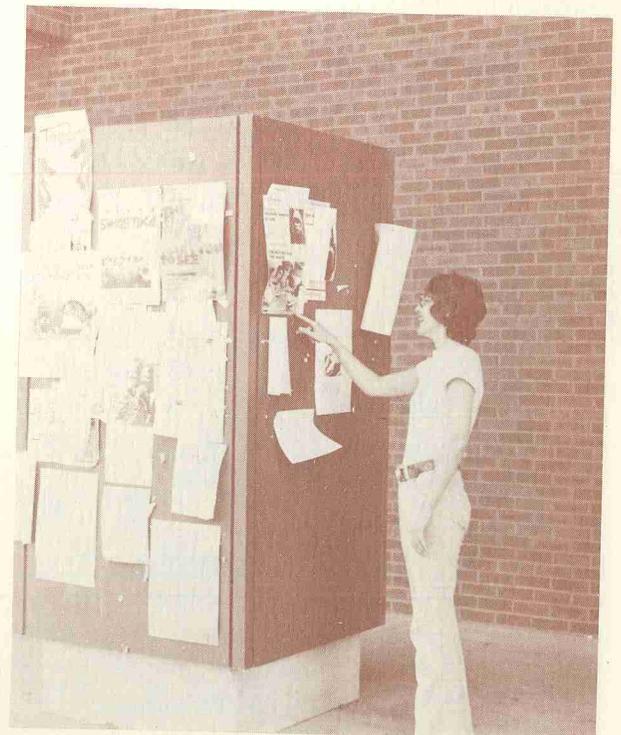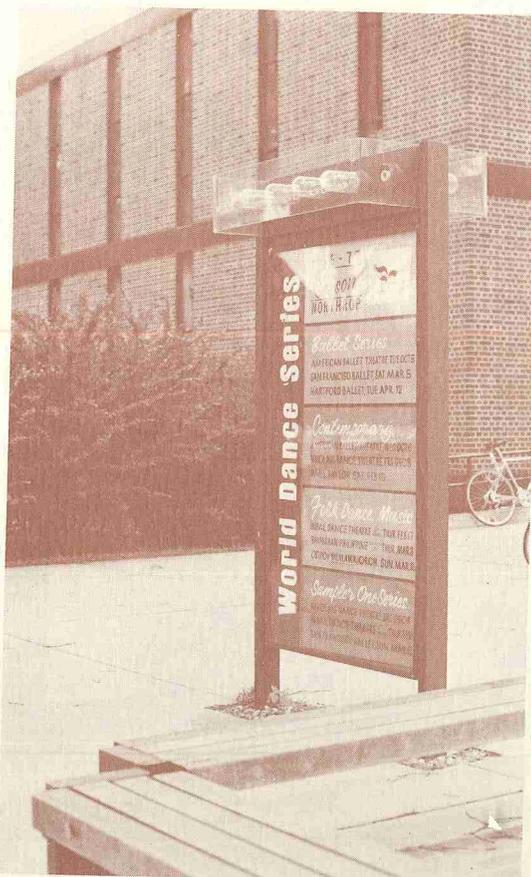
3. EXS42 sign unit as replacement building identification sign. Note multiple use of signs along walkway
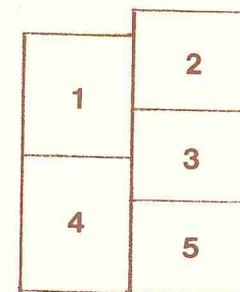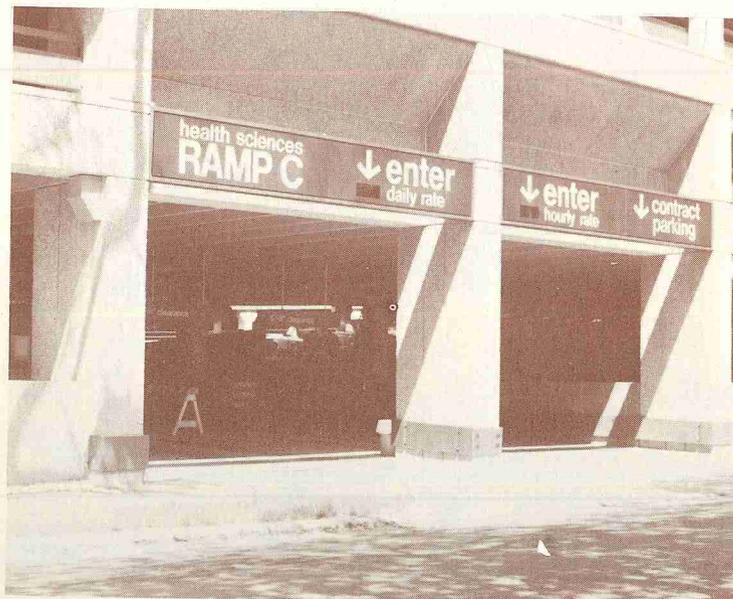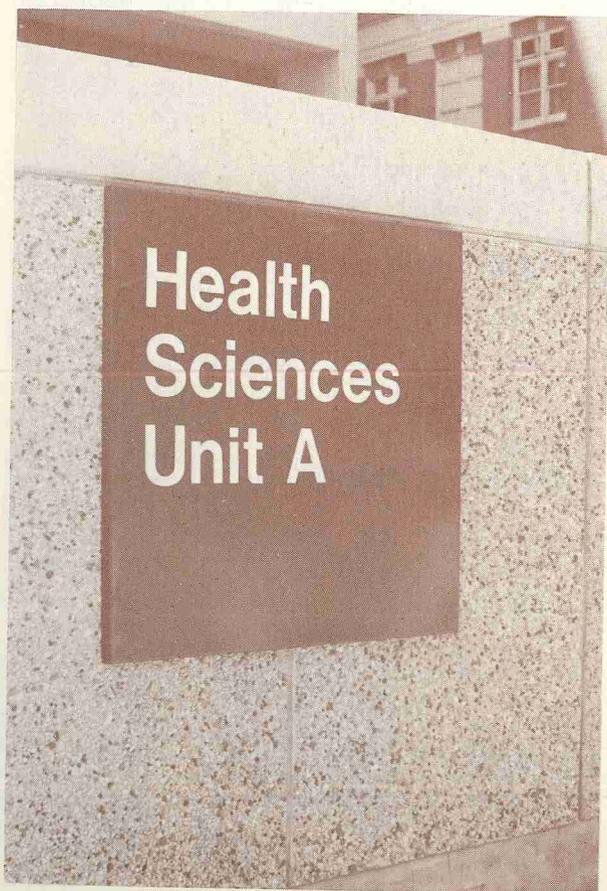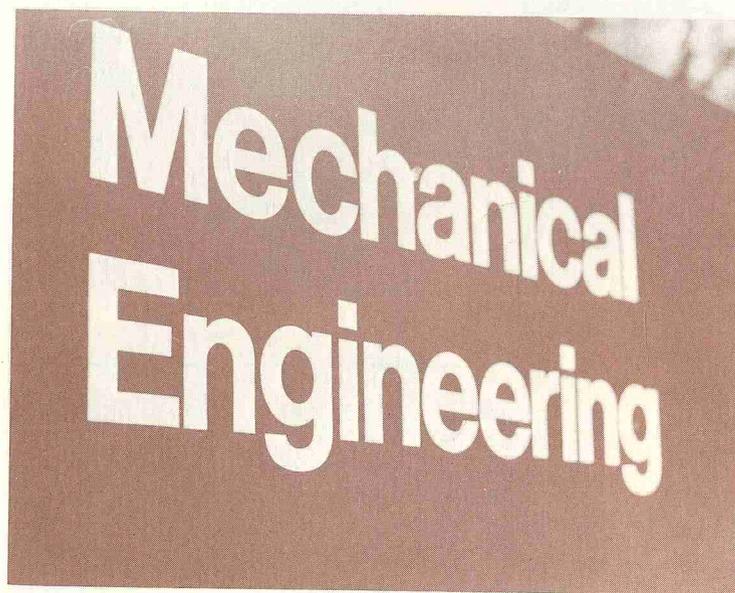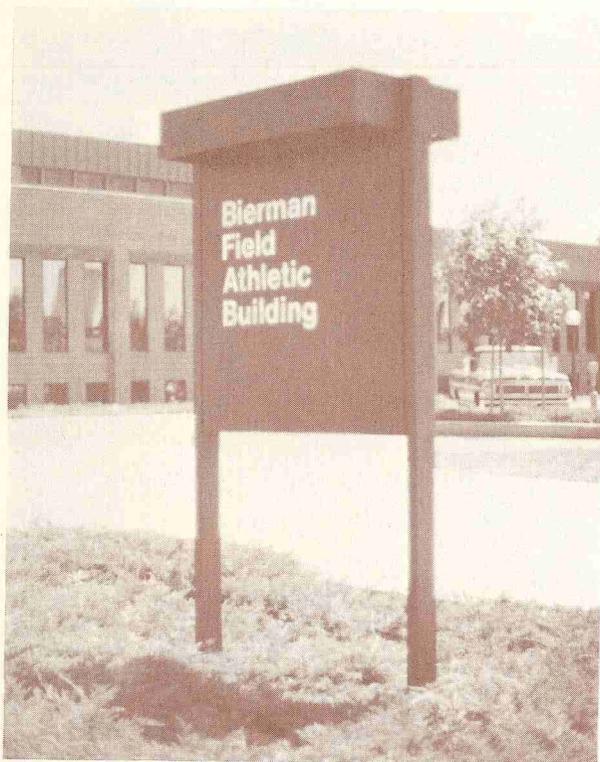
4. EXS42 sign unit incorporated into existing landscape plan of building

1. Kiosk incorporating display case and building identification

2. Exterior display case duplicating proportions of EXS42 sign unit

3. Early prototype display case with incandescent illumination

4. Free-standing kiosk as exterior posting surface

Bierman
Field
Athletic
Building

Lot 1 Entrance
50¢ / hour
No parking Midnight-6 a.m.

Mechanical
Engineering

Health
Sciences
Unit A

health sciences
RAMP C   ↓ enter   ↓ enter   ↓ contract
          daily rate   hourly rate   parking

	2
1	3
4	5
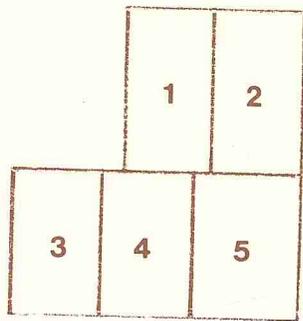
1. EXS42 building ident-
ification sign with light
canopy

2. EXR2472 sign as park-
ing lot identification
unit
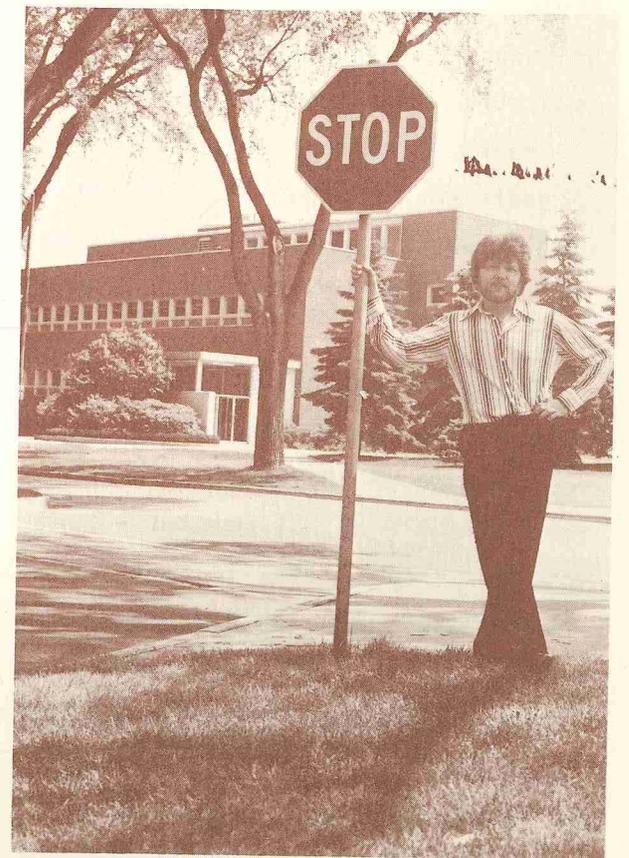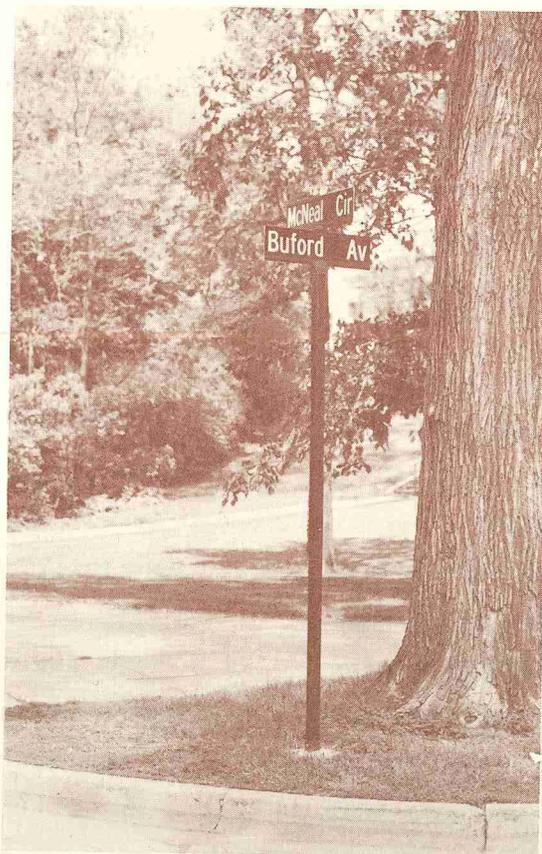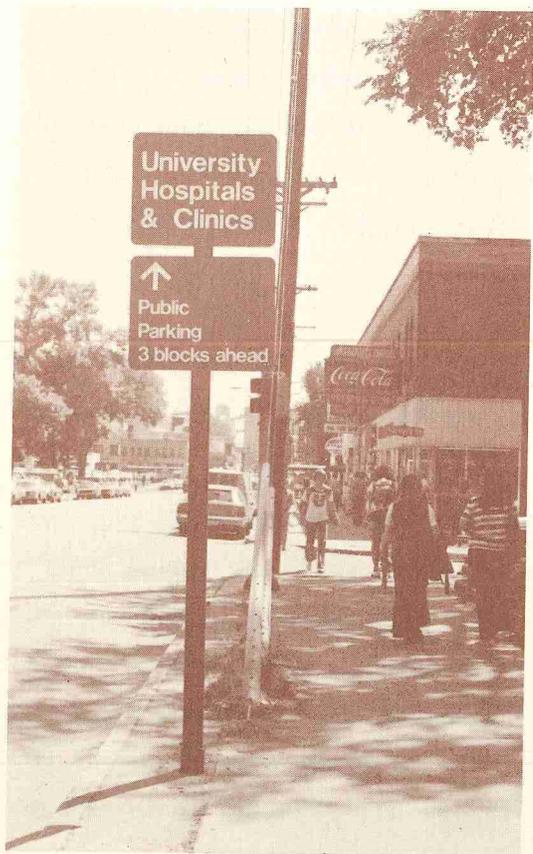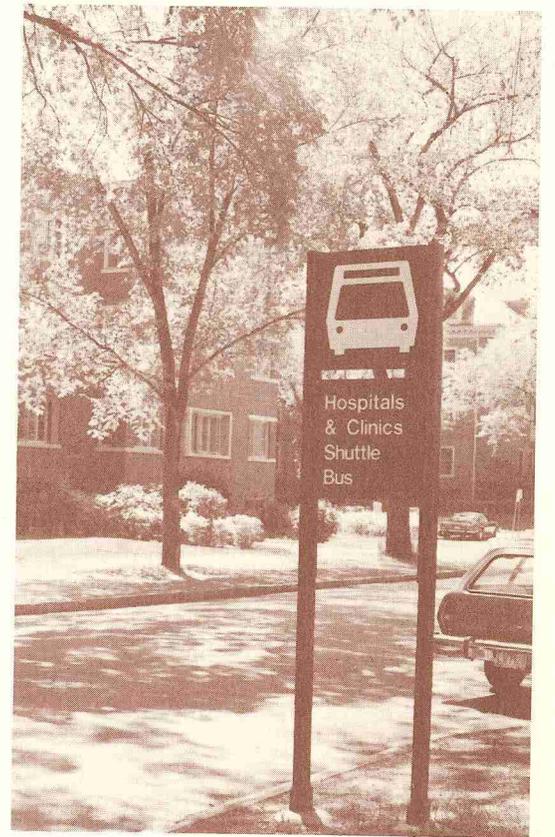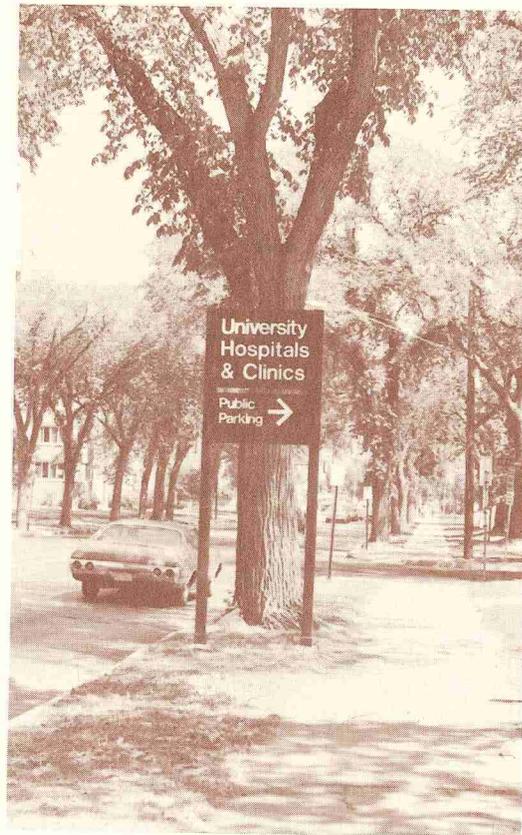
3. Detail of vinyl die-
cut lettering as applied
to building identificat-
ion sign

4. EXS42 sign face app-
lied to masonry retain-
ing wall

5. Internally illuminat-
ed sign panels sized to
the dimensions of the mas-
onry fascia

1. Custom sized exterior direct
ional signage

2. Bus stop identification in-
corporating 2 - EXS24 sign units
within a single module

3. Post mounted directional
signage reflecting the same graphic
character as other signs in system

4. Street identification signage
utilizing standard ready-made
hardwares with graphic format of
exterior signage program

5. Traffic regulatory signage
conforming to local, state, and
federal regulations

Expediting Graphics Programs

In developing graphics and signage programs for a specific use, the designer is faced with a multiple task. First, the program itself must be defined and designed, using the guidelines as established in the first portion of this document. It is at this time that the major creative effort is required of the designer - that of translating all the various project requirements and data into a complete and unified design concept.

The formulation of the design program initially requires an assessment of the graphic and signage needs of the particular space. If the basic objective is to identify and direct, the designer must determine all elements requiring notation. Here, the user must fulfill the primary role as information source when working within a framework structured by the designer. This framework would closely parallel the various sign types to be included in the program. Often, the experience of past design programs will provide the best background for determining the parameters of a current project.

Once this initial bulk of data has been collected, the designer must begin the process of sorting and organizing this material. The graphics program as outlined earlier must now be superimposed over the categorized data. At this point, we first begin to understand the totality of the graphics program. The design process then proceeds somewhat like a trade-off; project data is continually worked into the design framework, while at the same time, the framework is adjusted and modified to accommodate the specific requirements of the project.

Once the design of the signage program is reconciled, the designer must then translate the conceptual design material into a functional signage installation. This requires the preparation of proper and complete specification documents. The designer must include, within an organized format, all information required by a manufacturer to accurately bid and ultimately furnish the intended graphic and signage items.

This methodical organization appears to be the underlying factor in the successful production of any graphics program. Typically, specification data will include four related sections. These include:

I   Project Data - Information to Bidders
II   Signage Specifications
III Detail Drawings
IV   The Signage Schedule

Depending upon the nature and extent of the project, the specification documents may vary in complexity from a simple set of instructions to a fully developed signage specification organized according to the divisions listed above. Examining each of these sections and their relation to the total document will impart an understanding of project organization applicable to programs of any proportion.

Initially, it is necessary to establish a body of data that defines the content and extent of the project. This collection of information is properly titled "Project Data - Information to Bidders" includes the following types of information: general conditions relative to the project; specific information regarding materials, hardwares, and their manufacture; warranties; bonding and insurance requirements; and clarification of any terminology or input data required for the successful specification of the project.

Thorough understanding of terminology used within
specifications is necessary for accurate interpretation
of the designer's intent. The following listing of
terms, definitions, and conditions can be drawn upon
in formulation of Project Data - Information to Bidders
section.

Terminology

Owner: The Owner, as referred to throughout the specification document shall mean the Regents of the
University of Minnesota.

Graphics Coordiantor: The Graphics Coordinator shall refer to that individual responsible for the pre-
paration of all specification documents and data. This person is the authorized contact in regard to all
aspects of the project.

Bidder: The term "Bidder" shall refer to any individual, partnership, corporation, or joint venture
firm submitting a proposal for the provision of graphic and signage items and/or installation of sign-
age and graphic items as required for the project. For purposes of this contract, the terms "Bidder"
and "Vendor" shall be synonymous.

The Bidder shall comply with all requirements of the Contract Documents, and shall agree to
cooperate fully with the Owner, the Graphics Coordinator, or a designated representative in providing
all signage and graphic items on terms as specified in the Contract Documents.

Contract Documents: The Contract Documents shall consist of all written data, including detail drawings,
specifications, signage schedules, and general conditions necessary for the fabrication and/or installation
of the required signage and graphic items.

Interpretation of Documents: The Bidder shall be responsible for accurate interpretation of all data
contained within the Contract Documents. Should a Bidder note discrepancies in specifications or working
drawings or should he be in doubt as to their intent, he shall notify the Graphics Coordinator at once.
If clarification or verification of the details shall be found necessary, a written revision shall be
transmitted to all bidders. Neither the Owner or the Graphics Coordinator shall assume responsibility
for instructions not confirmed in writing.
Failure to request clarification of any discrepancy or ommission shall not relieve the Bidder of respon-
sibility. The submission of written price quotation shall be considered as implicitly denoting that the

Bidder has a thorough understanding of the scope and intent of the graphics program, including all written specifications and detail drawings.

Revisions: Any and all revisions in specifications issued by the Graphics Coordinator shall become a part of the working drawings and specifications for the particular project.

Completion Date: The Bidder shall indicate on the bid proposal a completion date for the program, or completion dates if various phases of installation are required. If a Completion Date is specified in the Contract Documents, it shall be assumed that the Bidder will provide specified services before that date.

Point of Delivery: The Point of Delivery shall be indicated within the individual specification document for the specific project. The Vendor shall have use of all loading docks and elevators required for the transportation of goods within the building. The Vendor is responsible for all parking regulations as related to the Point of Delivery. The University of Minnesota shall assume no liability for provision of parking space or for citations encumbered by the Vendor as the result of non-compliance with posted parking and regulatory signage.
The Owner shall assume no responsibility for graphic items until installation has been completed.

Bonding and Insurance Coverage: The Vendor shall furnish to the Owner all certificates of Contractor's Liability Insurance and Bonding as required for the specific project and as specified in the Contract Documents.

With this understanding of terminology common to all
programs, the General Conditions governing the Vendor's
performance in providing the specified products and
services may be stated. Responsibilities of the Vendor
shall include but not be limited to the following list
of conditional statements.

Standard Conditions

Installation: Installation, if required per the individual project, shall be executed by the Vendor
or his authorized agent. All items shall be installed as shown on the detail drawings. All mounting
conditions shall be verified with the Graphics Coordinator. Any misplaced graphic items shall be cor-
rected at no addtional expense to the Owner.

All crating, packaging materials, and debris resulting from the installation shall be removed from the
premisis by the Vendor.

The Vendor shall take all precautions to protect surfaces, adjacent areas, etc., from any form of dam-
age. Any damages resulting from the installation shall be the responsibility of the Vendor.

All items are to be cleaned following their installation and shall be in operating condition. Any in-
structions, operating manuals, or pertinent information regarding the function and use of the signage
system shall be furnished to the Owner by the Vendor.

Extra Charges: The Owner shall assume no responsibility for extra charges resulting from mis-calcu-
lation or mis-interpretation of Specification Docments by the Vendor. The Vendor shall assume all
responsibility for all shipping and freight charges incurred in completing the project as specified
in the Contract Documents.

Familiarity with Job-Site: The Vendor shall thoroughly aquaint himself with the conditions of the
job-site, noting all delivery facilities, storage areas, and means of transportation for equipment
and materials. The Vendor is encouraged to visit the job-site prior to submission of quotations for
the project.

Shop Drawings: The Vendor shall submit to the Graphics Coordinator any and all shop drawings as
indicated in the Specification Documents. The Graphics Coordinator shall approve all shop drawings
before any work is initiated by the Vendor.

Labor and Materials: The Vendor shall furnish, at his own expense, all labor and materials, tools, and expendible equipment necessary to perform and complete the work according to the drawings and specifications in the best and most expeditious manner. The Vendor shall employ only competent foremen and laborers experienced in their work, and shall discharge from the job any individual whose performance is unsatisfactory. The Vendor shall agree to pay all claims for materials and labor furnished in completing the Contract with the Owner.

Submittals and Approvals: Samples, drawings, color-matched samples, and related physical submittals shall be forewarded to the Graphics Coordinator by the Vendor as specified per the individual project, and at no additional cost to the Owner unless specifically stated otherwise in the Contract Documents.

Permits and Regulations: The Vendor shall procure and pay for all state and local permits which may be required for the proper execution of the project. He shall comply with all laws, regulations, and statutes related to the performance of his work, the protection of adjacent surfaces and properties, and the maintenance of passageways or other protective facilities.

Damages: All damages to property resulting from the installation and general completion of the signage program shall be repaired and returned to its original condition, and at no cost to the Owner.

Materials: All materials shall be new and of specified quality. Factory seconds, damaged items, etc., shall not be accepted. The Vendor shall replace all damaged items at his own expense where damage results during shipping and/or installation. The Vendor shall be responsible for final inspection of all items prior to their installation at the job-site.

Guarantees and Warranties: The Vendor shall provide a warranty for all materials and labor required for the execution of the project for a period of one (1) year following acceptance of the installation by the Owner. If, during this time of warranty, any defects or failures in performance are determined by the Graphics Coordinator, the Vendor shall replace or repair such items at the discretion of and to the satisfaction of the Owner's representative, the Graphics Coordinator.

From the preceding listings, various conditional statements may be drawn to establish the General Conditions of the Project Data - Information to Bidders section of the Contract Documents. Special program requirements may dictate the need for additional data relevant to the project. This section essentially defines the scope of the project and stipulates the performance required of the Vendor. As a legal document, all data contained therein must be absolutely concise and free of any ambiguities which could negatively influence the program or the intent of the designer.

With the program data established in the first section, all data pertaining to the specific signage and graphic items, their manufacture and installation, shall be enumerated in the second section of the specification documents.   This section is closely related to the detail drawings and actually describes the materials, fabrication processes and installation techniques relative to the program.

In any type of signage system, we observe similarities between the various items comprising the signage hardwares. These similarities suggest the formulation of a body of data describing those aspects common to the entire program. This data shall include, but not be limited to, the following specifications.

Standard Specifications

All detail drawings relating to general sign configurations, typography, graphic layout, and sign placement shall be included in this program. The location of each item shall be shown on floor plans of the individual building. These drawings shall become a part of the total signage specification.

The Signage Schedule is the total compilation of all information and data necessary for the completion of the graphics program. Information to be included in the Signage Schedule shall include enumeration of the graphic items corresponding to the floor plan locations, specification of signage type, specific copy to be found on each signage item, mounting and installation data, and special notes, if any, relative to the specific signage item that is not conducive to general categorization. A typical format for the Signage Schedule is included elsewhere in this document.

The copy shown on the detail drawings is for illustration of layout only. Actual copy for all signs shall be derived only from the Signage Schedule.

Stated dimensions shall in all instances take precedent over scale dimensions.

The graphic configuration of all signage items contained within the detail drawings is ultimately governed by original art for each sign type provided by the Graphics Coordinator.

Original art shall conform to the dimensions and general configurations as shown on sign type drawings and details. If a conflict between original art and specification drawings is apparent, the Graphics Coordinator shall be notified immediately and the conflict resolved.

All colors subject to a color-match shall be approved by the Graphics Coordinator prior to production of the graphic items.

All materials used in the fabrication and production of the signage items shall be of new stock, free from any defects that might impair service, durability, or function.

All fabrication and installation shall be in accordance with the highest standards of the trade. All graphic items shall be free of any structural or visual defects.

All interior and exterior site aspects shall be returned to their original conditon upon completion of the work. Any damages resulting from the installation shall be repaired at no cost to the Owner.

All die-cutting of letter forms shall be in accordance with the recommendations made by the manufacturer of the material specified to be die-cut. All die-cutting shall be executed in such a manner that all edges of the letterforms are true and clean. Letterforms that are nicked, cut, or having ragged edges shall not be accepted.

All silkscreening shall be executed from photographically produced screens. Hand cut screens shall not be accepted in the manufacture of the graphic and signage items. Letterforms executed by silkscreening shall be true and clean, and shall be free from any edge build-up or bleeding.

All paint materials and inks required for imprinted graphic items shall be of the type manufactured for the particular surface material on which it is to be applied. Exact identification of all inks and paint materials shall be made on shop drawings, together with data regarding their application and use.

No paint or ink that will fade or discolor due to exposure to heat or ultra-voilet light shall be used.

All inks and paints shall be evenly applied, without pinholes, sags, runs, scratches, or orange-peel application marks.

Backpainting of acrylic material shall be performed in such a manner as to create a totally opaque surface that is free of any shadowing or irregularities in color intensity.

Workmanship in connection with finishes and formation of letter forms shall conform to the standards of the trade and shall be acceptable to the Graphics Coordinator.

The Vendor shall submit to the Graphics Coordinator for his approval any specific information regarding mounting devices, materials, and processes for each sign type as required by the Graphics Coordinator.

Exterior sign placement is subject to final approval (on-site) by the Owner and the Graphics Coordinator.

All paint materials used for supergraphic delineation shall be shipped to the job-site in their original containers, with labels intact and seals unbroken. Paint material shall not be thinned except where recommended by the manufacturer.

For supergraphic delineation, paint material shall be applied evenly by brush or roller, in sufficient coats to permit complete and total coverage.

All patterns, shapes, and forms shall be duplicated on the wall surface in accordance with the details as shown on the graphic layouts. The Graphics Coordinator shall have the opportunity to inspect any and all layouts prior to application of paint material, and shall maintain the option of requiring any changes and modifications in the layout to conform to the original intent of the design.

In instances where the graphic layout must be adjusted to the available wall surface, the final layout shall be approved by the Graphics Coordinator prior to the completion of the project.

When the Signage Specification is to include information on a variety of signage types, directories, or miscellaneous hardwares, it is advantageous to group the items of similar manufacture and indicate the detailed specifications for each grouping. Variations within the groupings are then appropriately indicated within the detail drawings for the various items. This method of organization will simplify the specification by eliminating the need for repetitious data and thereby reducing the quantity of information required to accurately specify each item.

The third section of the Specification Documents are the Detail Drawings which actually depict the various items comprising the signage program. Here, all sizes, shapes, forms, and graphic layouts are illustrated with the intent of providing the Vendor with data sufficient for the production of the signage program.

The preparation of detail drawings requires graphic organization of the material to be presented. Usually it will suffice to illustrate one example of each signage item comprising the program. For identification purposes, the example graphic items are then assigned a coded identification number that will be referred to repeatedly throughout the signage schedule. Each sign type would therefore represent the format for a specific signage item. The only variations to be found within a sign-type would be in the actual copy of the subject signs.

The purpose of detailing the various sign types in this manner is to save time in the preparation of the total specification. In most signage systems, we note the repeated occurrence of a particular collection of sign hardwares. To detail the layout for every item comprising the signage system would be a waste of time and effort. Therefore, a typical example is illustrated and specified. Then, in the signage schedule, when a similar item is required, the typical sign type is referenced as the fabrication example, followed by the appropriate copy for the specific

sign.

Within the detail drawings are included the dimensions of each of the sign or graphic types, all letter heights, spacings, and margins. All letter sizes are referenced to the height of a upper case "A". Dimensions are best stated in either inches or centimeters, as designation of dimension by letter point size can vary greatly.

Stated dimensions must always take precedent over scale dimensions. While it is advantageous to prepare all details and layouts at a consistent scale, the extreme variations in sign size may dictate the need for drawings at a variety of scales. In reproducing the drawings for distribution to bidders, there may be an advantage in reducing large drawings to a more manageable size. With the possibility of these variables occurring, the scaling of drawings and details cannot be considered accurate for the purposes of fabrication.

If installation is to be included within the signage program, coded floor plans of the building are appropriately included within the detail drawings. These plans indicate the approximate location of the signage items throughout the building. The exact locations are referenced either through installation details found in the detail drawings or by special notation on the signage schedule. The floor plans also provide a reference to the quantity of items distributed throughout the building. This is of particular benefit to bidders in verifying quantities of identical graphic items.

The last section of the Specification Documents - the Signage Schedule - is a comprehensive listing of all items to be included within the specific program. It is at this point that the scope of the project comes into focus for the first time.

As a description of all items within the signage program,

a tremendous amount of data must be organized and categorized into a single format. This data includes not only a listing of all items comprising the system, but also references all information necessary for the bidding, fabrication, and installation of the required signage hardwares. The information presented must be concise, comprehensible to the various bidders, and above all, an accurate statement of the designer's intent.

To begin with, an identification code for all of the signage items must be developed. If all items are to be located within one building and on the same floor, a simple numerical progression will usually suffice. For a more complex, multi-storied structure, it is advantageous to establish some sort of area location in conjunction with the item identification. Here, a double-digit numbering system works particularly well. The numeral preceeding the decimal would indentify the particular level within the structure that the item is to be located in. The numeral following the decimal would identify the particular item on that level. Thus, an item code of "7.19" would indicate the ninteenth item of all those found on the seventh floor. Where a number of buildings are involved in a singular project, the identification code may be expanded even further to accommodate the various subject areas.

Once all items have been assigned a numerical identification, they then must be identified and described for purposes of manufacture. Since each component of the signage system is a specific example of a general sign type, it is necessary to reference the various sign type layouts and configurations as shown in the details and specifications. This reference will provide the manufacturer with all data concerning size, shape, material, fabrication technique, and general graphic layout.

At this point, the exact copy to be found on the particular item must be stated. All spellings, phraseology,

graphic symbols, and spacings must be shown exactly as they are to appear on the finished product. Accuracy is crucial, as the signage system will be produced exactly as indicated on the signage schedule.

The information included to this point is sufficient for the manufacture of the required signage items. If the program is to include installation, data regarding sign placement must be included with each item. In a typical signage system, there will be similarities in the placement of the graphic items. These similarities can also be coded and referenced, thereby simplifying the installation process. For those situations requiring special placement, such notation must be made directly on the signage schedule.

The signage schedule illustrated on the following page indicates the format for compiling and assembling all project data.

SIGNAGE SCHEDULE

Code	Sign Type	Mounting Position	Copy	Mounting Surface	Remarks

The term "CODE" refers to the numerical identification of the various components of the signage system.

The "SIGN TYPE" refers to the example included within the detail drawings and specifications. When the unspecified sign size is indicated, addtional data regarding size, type code, and copy placement must be listed in the area entitled "REMARKS."

The "MOUNTING POSITION" refers to the placement code as previously described. If special installation instructions are indicated, this information should be included within the "REMARKS."

The term "COPY" shall refer to the actual text as it is intended to appear on the sign face. All punctuation, spacings, and capitalization marks shall be shown exactly as the sign or graphic items are to appear.

The "MOUNTING SURFACE" indicates the material on which the sign is to be placed. This information is useful when a variety of mounting surfaces dictate different mounting methods.

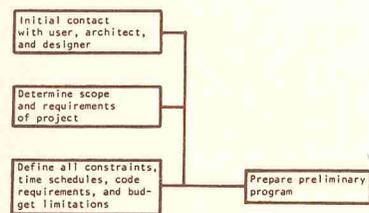"REMARKS" include all data not categorized previously.

It should now be apparent that the signage schedule represents the culmination of all design efforts and data collection into a single element. As the primary means of communication between the designer and the manufacturer, the accuracy with which this portion of the specification document is prepared is crucial to the success of the program. Errors in either omission, improper specification, recording of mis-information or errors in composition will be reflected in the actual signage hardwares and their installation.

Meticulous recording of all data relevant to sign copy and a methodical approach to writing and organizing the signage schedule will help to reduce the opportunity for error to occur. This precision must be carried throughout the entire design process, from program development through actual installation. The diagram illustrated on page 116 reflects the cumulative nature of the various phases involved in graphic design. As a project progresses, increasing quantitites of data are accumulated, all requiring accurate assessment and categorization. The reconciliation of this information finally occurs in the signage schedule.
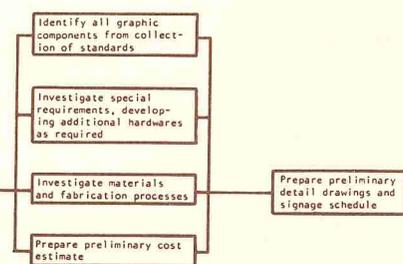
A program of limited scope resulting in few signage and graphic components may indicate the combining of design phases. It is not uncommon to proceed from initial program definition and user contact to specification writing, with the only specification document being the actual requisition prepared for the procurement of the necessary signage components. Regardless of the magnitude of the program, the same approach to design and problem solution is indicated.

Design Process

Program Definition

Initial contact with user, architect, and designer

Determine scope and requirements of project

Define all constraints, time schedules, code requirements, and budget limitations

Prepare preliminary program

Preliminary Design

Identify all graphic components from collection of standards

Investigate special requirements, developing additional hardwares as required

Investigate materials and fabrication processes

Prepare preliminary cost estimate

Prepare preliminary detail drawings and signage schedule

Presentation

Design

Finalize design of all components

Reconcile all special hardwares and manufacturing processes

Determine final locations for all components

Finalize signage schedule

Presentation

Specification Documents

Bidding Process

Program Implementation

| Prepare working drawings for all component hardwares |
| Prepare specifications for manufacture of all signage items |
| Prepare final signage schedule |
| Prepare location drawings and specifications for installation |
| Estimate final cost for fabrication and installation |

| Presentation to user for final review |

| Assemble documents for bidding process |

| Prepare requisition or special |
| Solicitation of bids |
| Evaluation of bids |
| Recommendation for award of bids |

| Award of bids |

| Supervise manufacture and production of signage components |
| Review shop drawings and submittals |
| Prepare additional drawings and details as required |

| Installation of signage systems by vendor |

| Final inspection/ acceptance by owner |

Summary

A good signage system is a necessary adjunct to the interior design/exterior landscape programs at the University. Whether to identify a project, control pedestrian and vehicular traffic, or inform and direct personnel, students, and visitiors, a signage system is vital to the function of the campus.

Considering graphics and signage as a system of communication for the campus, the components illustrated in this document represent a unified approach for fulfilling the signage needs and requirements for new construction and the updating of existing programs. These standards may not provide the obvious solution for every design consideration. On the contrary, the designer may be faced with the need for developing additional hardwares and components responsive to specific program requirements.

What this standardization program does provide, in all instances, is a frame of reference from which the designer may draw upon in the development of specific programs. Whether signage and graphic programs are generated and expedited from within the University or through consulting designers, the presence of a standardization program of this nature will help to insure the continued unified direction in this area of campus planning.