C(1) AUTOCAD

The purpose of this appendix is to document historical issues with AutoCAD for help in opening archived drawings. The primary issue is font usage and special characters. When opening old AutoCAD files, the text and dimensions may not appear correctly due to this issue. The special characters used by Staff Bridge were contained in Specl13.shx which is a bigfont.

The easiest way to be able to accurately view and print AutoCAD drawings is to put Specl13.shx in the same directory as the AutoCAD drawing. This way it should be in the search path AutoCAD uses to find supporting files.

Bigfonts are two-character structures, in which you must type 2 characters to get the intended single character. For instance, if you were looking for a center-line character, you would want to see an upper-case “L” in the middle of a lower-case “c”. If you look through the chart in Figure C-2, you will find “~E” and “~C” as options for this character. ~E creates a centerline symbol with a slant to the “L”. ~C is a centerline character with a vertical “L”. Note in the table headings the labels “PC” and “TC”. These are the two characters required in the definition of the character. PC = Protect Character; TC = Target Character. Note: Alphabetic characters are case sensitive.

In examining the text of drawings using bigfonts, if you see strange character combinations, it probably belongs to the big font, and there was an unsuccessful link of the bigfont with the font used in the text style. For instance, if within a curve table you saw _D = 28°13’, you would find the intended character to be Greek capital Delta. This would make sense for a curve table. Generally, there aren’t large numbers of these bigfont characters on any sheet, the most common being the centerline characters, and probably the Greek Phi , used to indicate diameter.

In MicroStation, these special characters are either handled by the MicroStation fonts or by using cells. See the Appendix B for MicroStation details.

SPECL/SPECL13 — bigfont

✯ (Partial) Greek Character Set

<NOTE: PC = underline key, unless otherwise indicated>

PC	TC	CHR	CH. NAME	PC	TC	CHR	CH. NAME	PC	TC	CHR	CH. NAME
_	a	α	alpha	_	f	φ	phi	_	m	μ	mu
_	b	β	beta	_	g	γ	gamma	_	n	ν	nu
_	d	δ	delta	_	h	η	eta	_	p	π	pi
_	e	ε	epsilon	_	i	ι	iota	_	q	ϑ	theta
_	c	$\in$		_	k	κ	kappa	_	r	ρ	rho
_	_	_	underline	_	l	λ	lambda	_	s	σ	sigma
_	t	τ	tau	_	D	Δ	DELTA	_	Q	Θ	THETA
_	u	υ	upsilon	~	D	Δ		~	O	Θ	
_	w	ω	omega	_	F	Φ	PHI	_	S	Σ	SIGMA
_	x	ξ	xi	~	O	$\varnothing$		_	W	Ω	OMEGA
_	y	ψ	psi	_	G	Γ	GAMMA	_	Y	Ψ	PSI
_	z	ζ	zeta	_	L	Λ	LAMBDA				

Fig. C-1 Greek Characters

SPECIAL CHARACTERS

PC	TC	EXAMPLE	PC	TC	EXAMPLE	PC	TC	EXAMPLE
DIAMONDS			LESS/GREATER THAN DEGREE SYMBOL			CIRCLED CHARACTERS		
~	a	◇ footnote	~	L	L ≦ 1.5'	~	1	Ⓝ note
~	A	◆ footnote	~	G	5 ≧ 4.99	~	2	㉓ note
INVERTED TRIANGLES			~	o	14°37'24"	~	3	(xyz) note
~	t	▽ footnote	CENTERLINES			TILDE DOUBLE TILDE		
~	T	▼ footnote	~	E	℄ Pier2	~	~	~ Note
CIRCLE LORRAINE CROSS			~	C	℄ Pier2	~	y	.5 ≈ .51
~	·	◍ footnote	RADICAL SQUARES			GAMMA INFINITY / SHIFTED INF.		
~	p	‡ footnote	~	V	$\sqrt{2X+4}$	~	g	γ
STARS			~	s	□ footnote	~	i	∞ footnote
			~	S	▦ footnote	~	I	⁰⁰ footnote
~	F	★ footnote						
~	f	☆ footnote						

Fig. C-2 Special Characters

FRACTIONS

LONG FORMS

SAMPLE INPUT									RESULTS	EXAMPLE	DESCRIPTION
^	0	3	|	–	1	6	^	1	$^{3}/_{16}$	12'–3 $^{5}/_{16}$"	SLASH fraction
^	4	3	|	2	1	6	^	5	$\frac{3}{16}$	12'–3 $\frac{5}{16}$"	MIDline fraction
^	2	3	|	2	1	6	^	3	$\frac{3}{16}$?	12'–3 $\frac{5}{16}$?"	BASEline fraction
f	^	6	c	^	7				f_c	f_c = 1,200 psi	SUBSCRIPT
3	^	8	4	.	2	^	9		$3^{4.2}$	$V = e^{3}$	SUPERSCRIPT
X	^	^	2	^	|	a	^	7	X_a^2	f'_c = 3,000 psi	SUPER–SUBscript
^	c	P	^	C	L				℄	℄ El. 8745.3'	Combine 2 letters
^	c	P	^	L					℄	℄ ½"x¾"x1'–6"	Combine with L

PC = Protect Character (or, escape code, per AutoCAD manual)
TC = Target Character (or, special character, per AutoCAD manual)

Fig. C-3 Fractions Long Forms

EIGHTHS

SHORT FORMS

SLASH			MID–LINE			BASE–LINE		
PC	TC	EXAMPLE	PC	TC	EXAMPLE	PC	TC	EXAMPLE
|	A	123 1/8	|	I	123 $\frac{1}{8}$	|	Q	123 $\frac{1}{8}$
|	B	123 1/4	|	J	123 $\frac{1}{4}$	|	R	123 $\frac{1}{4}$
|	C	123 3/8	|	K	123 $\frac{3}{8}$	|	S	123 $\frac{3}{8}$
|	D	123 1/2	|	L	123 $\frac{1}{2}$	|	T	123 $\frac{1}{2}$
|	E	123 5/8	|	M	123 $\frac{5}{8}$	|	U	123 $\frac{5}{8}$
|	F	123 3/4	|	N	123 $\frac{3}{4}$	|	V	123 $\frac{3}{4}$
|	G	123 7/8	|	O	123 $\frac{7}{8}$	|	W	123 $\frac{7}{8}$
THIRTY SECONDS								
|	H	123 3/32	|	P	123 $\frac{3}{32}$	|	X	123 $\frac{3}{32}$
SIXTEENTHS								
PC	TC	EXAMPLE	PC	TC	EXAMPLE	PC	TC	EXAMPLE
|	a	123 1/16	|	i	123 $\frac{1}{16}$	|	q	123 $\frac{1}{16}$
|	b	123 3/16	|	j	123 $\frac{3}{16}$	|	r	123 $\frac{3}{16}$
|	c	123 5/16	|	k	123 $\frac{5}{16}$	|	s	123 $\frac{5}{16}$
|	d	123 7/16	|	l	123 $\frac{7}{16}$	|	t	123 $\frac{7}{16}$
|	e	123 9/16	|	m	123 $\frac{9}{16}$	|	u	123 $\frac{9}{16}$
|	f	123 11/16	|	n	123 $\frac{11}{16}$	|	v	123 $\frac{11}{16}$
|	g	123 13/16	|	o	123 $\frac{13}{16}$	|	w	123 $\frac{13}{16}$
|	h	123 15/16	|	p	123 $\frac{15}{16}$	|	x	123 $\frac{15}{16}$
|	'	0.020'	Ft. / ft. symbol					

The Greek characters were selected / omitted based on the double criteria of 1. prospective usage, and 2. whether or not the Greek character exists in ROMANS.

Some characters have two forms. This is due to two factors: Existing characters, and again the preferences of potential users.

Fig. C-4 Fractions Short Forms