EFFECTIVE 03-28-2002

GBA GEORGE BUTLER ASSOCIATES, INC.
Engineers • Architects
Kansas • Missouri • Illinois

DATE:	APRIL, 2003
DESIGN BY:	DTS
DRAWN BY:	TMW
PROJECT NO.:	10081
SHEET NO.	4
TOTAL SHEETS	7

TRAFFIC SIGNAL MODIFICATION
T.R. HUGHES AND WIDEL LANE
O'FALLON, MISSOURI

SPAN WIRE POLES

POST NUMBER	WOOD CLASS IV	WOOD CONCRETE* EMBEDMENT	STEEL (A10 BASE REQUIRED)
TOTAL		⊠	

SPAN WIRE CABLE SPANS

SPAN NUMBER	FROM POST	TO POST	SINGLE MESSENGER ASSEMBLY (LIN. FT.)	DOUBLE MESSENGER ASSEMBLY (LIN. FT.)
		TOTAL		

LOCATION / BASES

POST NUMBER	PULL BOX NUMBER	APPROACH	STATION	OFFSET	A 8	A 10	A 13	A 8 MOD	A 10 MOD	A 13 MOD	B 8	B 10	B 13	C	CONCRETE (CU. YDS.)
			CONTROLLER	(AS REQ'D)											1.35
1		TR HUGHES BOULEVARD	99+79.2	49.8 R						1					3.93
2		TR HUGHES BOULEVARD	98+96.2	65.84 R					1						3.14
3		TR HUGHES BOULEVARD	99+61.5	64.8 R					1						3.14
4		TR HUGHES BOULEVARD	98+71.5	48.49 L						1					3.93
	1	TR HUGHES BOULEVARD	99+49.4	65.2 R											
	2	TR HUGHES BOULEVARD	98+92.6	54.4 R											
	3	TR HUGHES BOULEVARD	98+89.9	57.8 L											
	4	TR HUGHES BOULEVARD	99+49.2	70.5 R											
	5	TR HUGHES BOULEVARD	99+08.3	94.7 R											
	6	TR HUGHES BOULEVARD	97+27.8	44.0 R											
	7	TR HUGHES BOULEVARD	95+96.3	87.3 R											
	8	TR HUGHES BOULEVARD	95+16.5	87.3 R											
	9	TR HUGHES BOULEVARD	99+05.2	157.7 R											
	10	TR HUGHES BOULEVARD	99+66.7	57.8 L											
														TOTAL	15.49

PULL BOX

POST NUMBER	PULL BOX NUMBER	PREFORMED CLASS 1	PREFORMED CLASS 2	PREFORMED CLASS 3	CONC. STANDARD	CONC. DOUBLE	DRAIN TYPE* I	DRAIN TYPE* II A	II B	II C
	1					1	1			
	2		1				1			
	3		1				1			
	4	1					1			
	5	1					1			
	6	1					1			
	7	1					1			
	8	1					1			
	9	1					1			
	10		1				1			
TOTAL		6	3			1	⊠	⊠	⊠	⊠

POST

POST NUMBER	TOP MOUNT POST LENGTH (FEET) 7	10	TYPE C & CL ARM LENGTH A	A	A	A	A	A	SIGNAL SPACING B	C	D	D'	SIGN SPACING B	C	D	D'
1						45			20.5	12	12					
2				22					19.5							
3			30						29							
4					50				12	12	12	12				
TOTAL			1	1	1	1			⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠

TYPE B & BL ARM LENGTH E	K	E	K	E	K	E	K	LEFT ARM E SIGNAL F	G	H	H'	LEFT ARM E SIGN F	G	H	H'	RIGHT ARM K SIGNAL L	M	N	N'	RIGHT ARM K SIGN L	M	N	N'	INCLUDED ANGLE
								⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠	⊠

POST NUMBER	LUMINAIRE BRACKET ARM * (FEET) 4	6	8	10	12	15	CONTRACTOR FURNISHED SIGNS — CODE SIGN NUMBER FROM SIGNAL PLAN (SHEET 3) S12	S13	S3
1						1	1	1	1
2						1		1	
3						1		1	
4						1	1	1	1
TOTAL	⊠	⊠	⊠	⊠	⊠	⊠	2	4	2

SIGNAL HEADS

SPAN NUMBER	POST NUMBER	FACE NUMBER	LUMINAIRE 150W SODIUM	12" LENS CONVENTIONAL * R	Y	G	S	L	Rt	YL	YRt	W	DW	12" LENS OPTICAL LIMITING R	Y	G	S	L	Rt	YL	YRt	VISORS * 12" LENS STD 9.5	TUN 12	LOUVERS * A	B	C	D	E	F
	1	10	1	1	1	1		1		1													5						
	1	61		1	1	1																	3						
	1	62		1	1	1																	3						
	2	41	1	1	1	1																	3						
	2	42		1	1	1																	3						
	3	81	1	1	1	1																	3						
	3	82		1	1	1																	3						
	4	50	1	1	1	1		1		1													5						
	4	21		1	1	1																	3						
	4	22		1	1	1																	3						
	4	23		1	1	1																	3						
TOTAL			4																										

POST NUMBER	FACE NUMBER	BACKPLATE * LENSES 1	2	3	4	5	BRACKET * TYPE I	II	III	IV	ONE-FACE SECTION 1- T	S	C	B	2- T	S	3- T	S	C	B	4- T	S	C	B	5- T	S	C	B
1	10					1			1																			1
1	61			1			1													1								
1	62			1			1													1								
2	41			1			1													1								
2	42			1			1											1										
3	81			1			1													1								
3	82			1			1											1										
4	50					1			1																			1
4	21			1			1													1								
4	22			1			1													1								
4	23			1			1													1								
TOTAL	OPTICALLY LIMITED																											
TOTAL	CONVENTIONAL																	2		7								2
TOTAL	COMBINATION O.L. & CONV																											

TWO-FACE SECTIONS 11- T	S	B	22- T	S	33- T	S	B	34- S	B	35- S	B	44- S	B	45- S	B

REMARKS

ALL LENGTHS AND SPACINGS ARE IN FEET UNLESS OTHERWISE INDICATED.

STANDARDS AS PER SECTION 902, OF THE 2000 VERSION OF THE MISSOURI STANDARD PLANS FOR HIGHWAY CONSTRUCTION.

* ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE

** ALL INDICATORS SHALL BE LED MODULES. ALL PEDESTRIAN "DON'T WALK" INDICATIONS SHALL BE PORTLAND ORANGE LED MODULES.

STATE OF MISSOURI
DANIEL T. SHANE
NUMBER E-29833
REGISTERED PROFESSIONAL ENGINEER
4/18/05

LEGEND

B-MAST ARM MOUNT
C-SPANWIRE MOUNT
T-TOP MOUNT
S-SIDE MOUNT

T.R. HUGHES BOULEVARD AND WIDEL LANE
INTERSECTION
D-37A