

48-DR-10

Bingham Engineering Consultants, LLC

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Phoenix, Arizona 85032
(602) 971-3033

"As a company, we seek to provide our clients with quality engineering services in a timely manner and at a favorable price; and to provide our employees with opportunities for professional growth and pride in their work at favorable compensation."

CLIENT: KEN'S SIGN SERVICES, INC.
2121 W. PIMA STREET
PHOENIX, AZ 85009

PROJECT #: 11-0509
PROJECT: 30'-0" TALL FLAGPOLE (8'-0" x 5'-0" FLAG)
SUB: SANTEE OF SCOTTSDALE
17490 N. 93RD STREET
SCOTTSDALE, ARIZONA



Expires 3-31-14

F. Daniel Bingham

ELECTRONICALLY SIGNED
AND SEALED 11-16-11

INDEX TO STRUCTURAL CALCULATIONS:

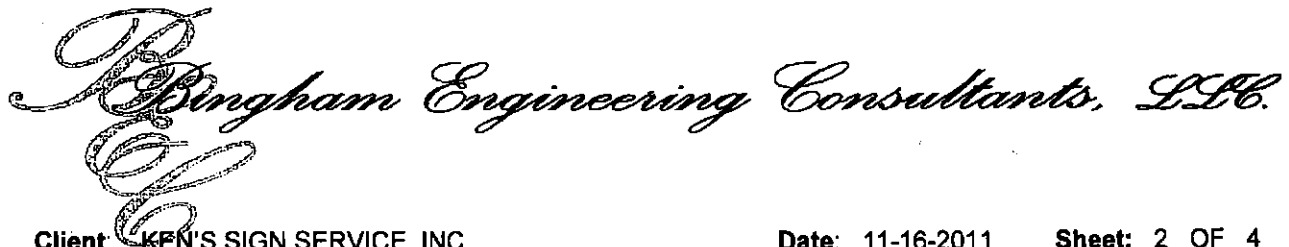
STRUCTURAL CALCULATIONS

SHEETS 1-4

CITY OF SCOTTSDALE
BUILDING PLANS
THESE PLANS HAVE BEEN REVIEWED
AND ARE READY FOR A PERMIT
THIS DOES NOT AUTHORIZE VIOLATIONS OF ANY
CODE OR ORDINANCE

CITY COPY

OWNERSHIP OF DOCUMENTS: CALCULATIONS, DRAWINGS AND SPECIFICATIONS AS INSTRUMENTS OF SERVICE ARE, AND SHALL REMAIN THE PROPERTY OF THE ENGINEER. THEY ARE NOT TO BE USED ON OTHER PROJECTS OR EXTENSIONS TO THIS PROJECT EXCEPT BY AGREEMENT IN WRITING AND WITH APPROPRIATE COMPENSATION TO BINGHAM ENGINEERING CONSULTANTS, LLC.



Client: KEN'S SIGN SERVICE, INC

Date: 11-16-2011

Sheet: 2 OF 4

Project: 30'-0" TALL FLAGPOLE FOR SANTEE OF SCOTTSDALE

By: RF

DESIGN CRITERIA

CODE: 2006 IBC

WIND: 90 MPH

EXP: C

DESIGN WIND LOAD

HEIGHT:

WIND LOAD:

0 TO 15'

$$P_1 = 13.0 \text{ PSF} \times 0.85 \times 1.2 = 13.3 \text{ PSF}$$

15' TO 20'

$$P_2 = 13.8 \text{ PSF} \times 0.85 \times 1.2 = 14.1 \text{ PSF}$$

20' TO 25'

$$P_3 = 14.4 \text{ PSF} \times 0.85 \times 1.2 = 14.7 \text{ PSF}$$

25' TO 30'

$$P_4 = 15.0 \text{ PSF} \times 0.85 \times 1.2 = 15.3 \text{ PSF}$$

WIND FORCE TO FLAG

REFERENCE: "GUIDE SPECIFICATIONS FOR DESIGN LOADS
OF METAL FLAGPOLES"
ANSI/NAAMM FP1001-90 3/90

WIND DRAG FORCE ON FLAG (POLYESTER FABRIC)

$$F_F = 0.0014(1.3V)^2 \sqrt{AC_H}$$

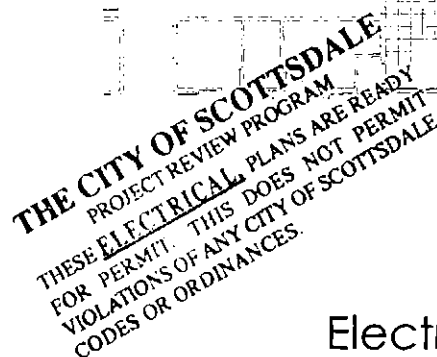
V = 90 MPH

A = 5' x 8' = 40 SQ. FT.

C_H = 1.0

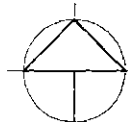
$$F_F = 0.0014(1.3 \times 90)^2 \sqrt{40}(1.0)$$

$$F_F = 121.2 \text{ LB.}$$



Electrical Site Lighting Plan

N



Professional Engineer (Electrical)
 CERTIFICATE NO.
 10807
 ANDREW C.
 PANOPIO
 Date Signed 9-27-11
 ARIZONA, U.S.A.

Asante of Scottsdale
A Transitional Rehabilitation Center
Scottsdale, Arizona

DATE 9/7/11	DRAWING NO.
DRAWN BY PH/NPE	
PROJECT NO: 10-020	
REF. TO: E1.1.1	

NP

NP ENGINEERING, INC.
4115 N. 15TH AVENUE PHOENIX, ARIZONA 85015 (602)265-1555

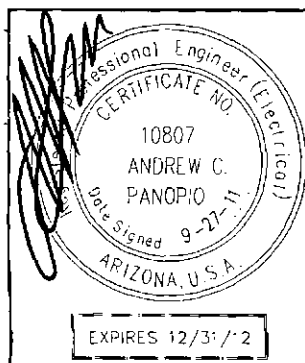
4115 N. 15TH AVENUE PHOENIX, ARIZONA 85015 (602)265-1559

PANELBOARD SCHEDULE					LCB					10,000		A.I.C. BREAKER MINIMUM			
120 / 208 VOLTS		3 PHASE		4 WIRE		SURFACE MOUNTED					225A MLO MAINS		BOLT-ON TYPE		
NOTE	WIRE SIZE	USE AND / OR AREA SERVED		C / B	CKT NO	LOADS			CKT NO	C / B	USE AND / OR AREA SERVED		WIRE SIZE	NOTE	
						Ph A	Ph B	Ph C							
	12	RECEPT - MAINTENANCE ROOM		20/1	1	540			2	20/1	RECEPT - BRK RM. (ABV CNTR)		12		
	12	RECEPT - MAINTENANCE ROOM		20/1	3	1500			4	20/1	RECEPT - BRK RM. (ABV CNTR)		12		
	12	RECEPT - MAINT. (MULTI-OUTLET)		20/1	5		360		6	20/1	RECEPT - MICROWAVE		12		
	12	RECEPT - MAINT. (MULTI-OUTLET)		20/1	7	1500		1500	8	20/1	RECEPT - DISPOSER		12		
	10	RECEPT - MAINTENANCE (208V.)		30/2	9	1000		1500	10	20/1	RECEPT - BRK RM. (ABV CNTR)		12		
	"	"		"	11			1500	12	20/1	RECEPT - BRK RM. (ABV CNTR)		12		
	12	AIR COMPRESSOR		20/2	13	1000			14	20/1	RECEPT - BRK RM. (REF)		12		
	"	"		"	15		1000		16	20/1	RECEPT - BRK RM (VENDING MACH)		12		
	12	RECEPT - MAINTENANCE (WEST WALL)		20/1	17			360	18	20/1	RECEPT - BRK RM (VENDING MACH)		12		
	12	TIME CLOCK		20/1	19	200		1000	20	20/1	RECEPT - BRK RM./OXY RM./BIO RM./EF-14 &15		12		
		SPARE		20/1	21		0		22	20/1	RECEPT - EMPLOYEE TIMECLOCK		12		
		SPARE		20/1	23		200		24		SPACE				
1,TC	10	FLAG POLE LIGHTING		20/1	25	230			26		SPACE				
		SPARE		20/1	27		0		28		SPACE				
		SPARE		20/1	29		0		30		SPACE				
1	10	DINING / PATIO - CEILING FANS		20/1	31	800			32		SPACE				
1	10	DINING / PATIO - LIGHTS		20/1	33			1594	34		SPACE				
1,2	10	SITE LIGHTS - LANDSCAPE		20/1	35			0	36		SPACE				
1,2	10	SITE LIGHTS - LANDSCAPE		20/1	37	938		1562	38		SPACE				
1,2	10	SITE LIGHTS - LANDSCAPE		20/1	39			0	40		SPACE				
1	12	LIGHTS - W/M RESTROOMS / EF-7 & 10		20/1	41		875		42		SPACE				
TOTAL LOAD PER PHASE						9428	9529	9434	9,529 VA / 120 V =						79 AMPS

TC - WIRE VIA TIMECLOCK FROM DUSK TO DAWN. PROVIDE WITH 365 DAY, 4 CIRCUIT ELECTRONIC ASTRONOMIC TIME SWITCH WITH BATTERY BACK-UP AS MANUFACTURED BY INTERMATIC, TORK OR PARAGON.

THE CITY OF SCOTTSDALE
PROJECT REVIEW PROGRAM
THESE ELECTRICAL PLANS ARE READY
FOR PERMIT. THIS DOES NOT PERMIT
VIOLATIONS OF ANY CITY OF SCOTTSDALE
CODES OR ORDINANCES.

9-27-11 FLAG POLE ADDITION



PROJECT NAME:

Asante of Scottsdale
A Transitional Rehabilitation Center
Scottsdale, Arizona

DATE:

9/27/11

DRAWING NO.

DRAWN BY:

PH/NPE

ESK
35

PROJECT NO:

10-020

REF. TO:

E9.1.2

OF

NP

NP ENGINEERING, INC.

4115 N 151st AVENUE PHOENIX, ARIZONA 85015 (602)265-1599

LIGHTING FIXTURE SCHEDULE

MARK	MANUFACTURER	CATALOG	LAMPS		VOLT	MOUNTING & HEIGHT	REMARKS	SEE NOTE
			NO	TYPE				
SITE								
SA	COOPER LIGHTING- McGRAW-EDISON	CIM AM 150 MP 277 5S BZ FF	1	150W PS ED-28	277	POLE +15' A.F.F.		
SB	COOPER LIGHTING- McGRAW-EDISON	CIM AM 150 MP 277 3S BZ FF	1	150W PS ED-17	277	POLE +15' A.F.F.		
SC	COOPER LIGHTING- McGRAW-EDISON	CIM AM 150 MP 227 3S BZ FF	1	150W PS ED-17	277	POLE +15' A.F.F.		
SD	LITHONIA LIGHTING	WSR 50M WT 227 SF QRS	1	50MH ED-17	277	WALL +10 A.F.F.		
SDE	LITHONIA LIGHTING	WSR 50M WT 227 SF QRS	1	50MH ED-17	277	WALL +10 A.F.F.	SAME AS TYPE 'SD' EXCEPT CIRCUIT TO RUN TO GENERATOR PANEL AS SHOWN ON LIGHTING PLAN.	
SE	NOT USED							
SF	LITHONIA LIGHTING	VSLC 1 32 SCE 277 DL GEB10IS	1	F32T8	277	UNDER CAR CANOPY +8.5' A.F.F.		
SG	MARK ARCHITECTURAL LIGHTING	SL6F 3 FT. DF 1 T8 EBIS PB	1	F25T8	277	SURFACE +14' A.F.F.		
SGE	MARK ARCHITECTURAL LIGHTING	SL6F 3 FT. DF 1 T8 EBIS PB	1	F25T8	277	SURFACE +14' A.F.F.	SAME AS TYPE 'SG' EXCEPT CIRCUIT TO RUN TO GENERATOR PANEL AS SHOWN ON LIGHTING PLAN.	
SH	INTENSE LIGHTING	IFS7 26 E	1	26W TRT	UNV	RECESSED +9' A.F.F.		
SHE	INTENSE LIGHTING	IFS7 26 E	1	26W TRT	UNV	RECESSED +9' A.F.F.	SAME AS TYPE 'SH' EXCEPT CIRCUIT TO RUN TO GENERATOR PANEL AS SHOWN ON LIGHTING PLAN.	
SI	COLE LIGHTING	F 2156 J W 277 EB B PM	1	13W CFL	277	+2' A.F.F.	RUN CIRCUIT TO GENERATOR PANEL AS SHOWN ON LIGHTING PLAN.	
SJ	WINONA - WINDSCAPE	WI 48 120V L0 BRS F0 SH0 C3 STD WITH WI PM-60	1	50W PAR20/FL3 0	120	GROUND		
SK	TROY LIGHTING	F435 A 20WL-JCB-20 PBZ	1	20W BI- PIN G4 QRZ	120	GROUND		
SL	INTENSE LIGHTING	IFS7 13 E	1	13W CFL	120	RECESSED +7' A.F.F.		
SM	DIVERSIFIED ARCHITECTURAL LIGHTING	1054-26-C-120-BR	1	26W CFL	120	WALL +11' A.F.F.		
SME	DIVERSIFIED ARCHITECTURAL LIGHTING	1054-26-C-120-BR	1	26W CFL	120	WALL +11' A.F.F.	SAME AS TYPE 'SM' EXCEPT CIRCUIT TO RUN TO GENERATOR PANEL AS SHOWN ON LIGHTING PLAN.	
SN	BASELITE	SBH10_51_CFSLOPL - T - 26W - 3' ST3 26CF AH3	1	26W TRT	277	PENDANT	ARCHITECTURAL BRONZE	
SNE	BASELITE	SBH10_51_CFSLOPL - T - 26W - 3' ST3 26CF AH3	1	26W TRT	277	PENDANT	SAME AS TYPE 'SN' EXCEPT CIRCUIT TO RUN TO GENERATOR PANEL AS SHOWN ON LIGHTING PLAN.	
SO	ALLSCAPE LIGHTING	SL-23-HPBB-70MHT6-120-NFLD-F- BZ-HL-CR-AHOT	1	70W MH T6	120	INGRADE	FLAG POLE LIGHTING.	

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CODES OR ORDINANCES.

9-27-11 FLAG POLE ADDITION

	PROJECT NAME:	DATE: 9/27/11	DRAWING NO.
	Asante of Scottsdale A Transitional Rehabilitation Center Scottsdale, Arizona	DRAWN BY: PH/NPE	ESK 36
		PROJECT NO: 10-020	
		REF TO: E11.1.1	
	 NP ENGINEERING, INC. 1115 N. 15TH AVENUE PHOENIX, ARIZONA 85015 (602)265-1559		