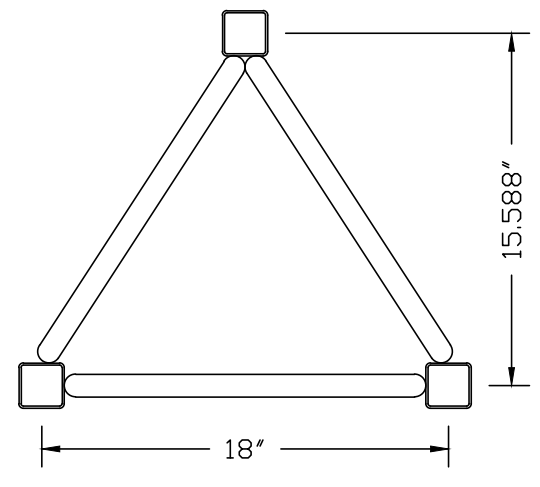


(2)-18" WIDE DELTA TRUSSES  
 CHORDS: ???  
 WEBS: ???



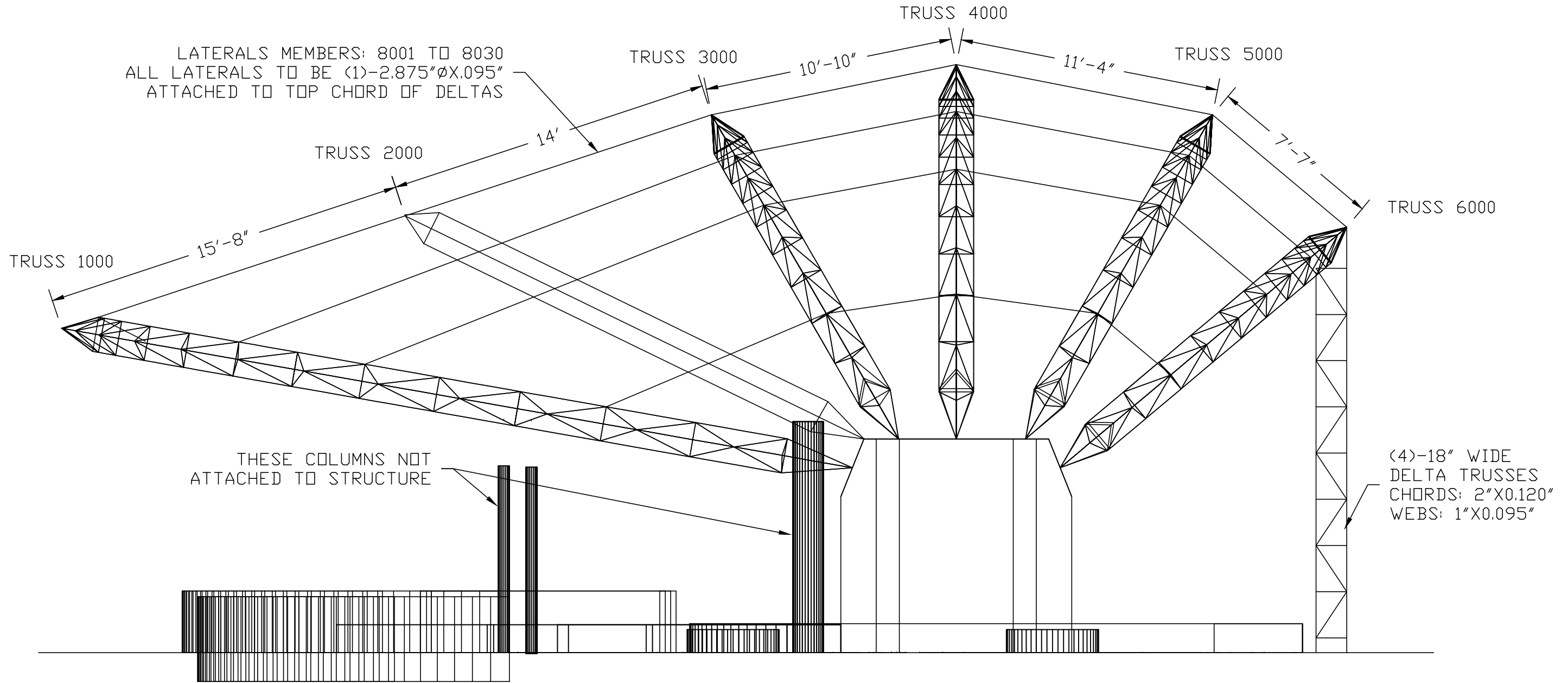
SHEET 1 OF 9	JOB NAME: <b>AMPHITHEATER</b> PALM SPRINGS, CA	SHEET TITLE: <b>TRUSS GEOMETRY</b>	Daniel F. Ardito, P.E. Professional Engineer 544 S. PLANTAIN ST. LELAND, FL 33461 CE02-461-495	DATE: 4/14/06 DRAWN BY: DA JOB NUMBER:	REVISION: 1 2 3 4	DATE:
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PALM SPRINGS, CA  
 WIND SPEED: 85 MPH (3-SEC GUST)  
 EXPOSURE: C  
 CATEGORY: II  
 IMPORTANCE FACTOR: 1.00  
 INTERNAL PRESS COEFF: 0.00  
 BASIC GROUND SNOW LOAD: 0.0 PSF  
 SEISMIC: 0.2s=215; 1.0s=114

ALL TRUSSES TO BE CONSTRUCTED  
 AS FOLLOWS:

TOP & BOT CHORDS: 2"x2"x0.095"  
 WEBS: 1"Ø X .095"

LATERALS MEMBERS: 8001 TO 8030  
 ALL LATERALS TO BE (1)-2.875"ØX.095"  
 ATTACHED TO TOP CHORD OF DELTAS



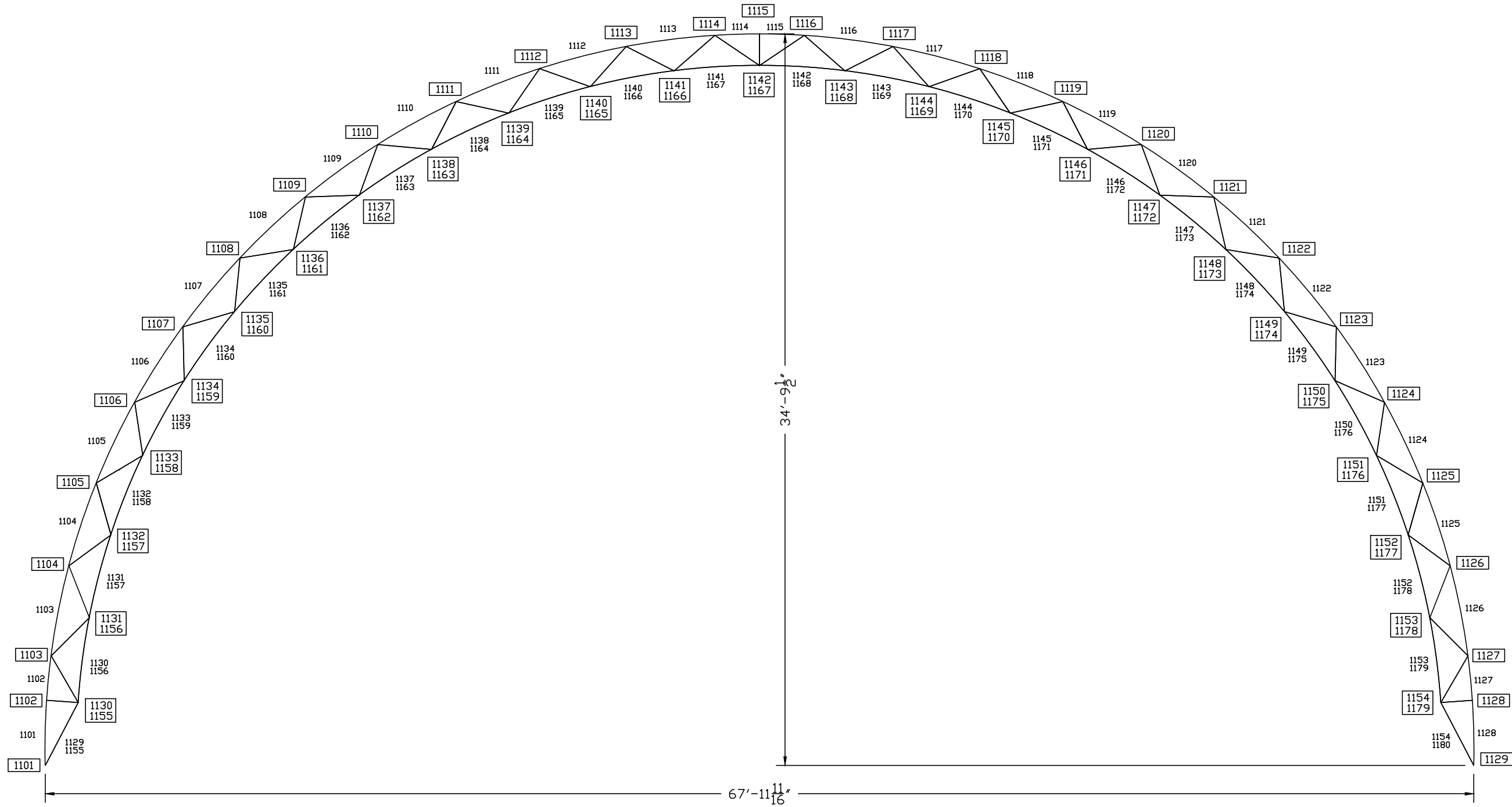
THESE COLUMNS NOT  
 ATTACHED TO STRUCTURE

(4)-18" WIDE  
 DELTA TRUSSES  
 CHORDS: 2"X0.120"  
 WEBS: 1"X0.095"

REVISION:	DATE:
4/14/06	DA
DRAWN BY:	JOB NUMBER:
Daniel F. Ardito, P.E.	
Professional Engineer	
5644 S. PLANTAIN PT.	
LELAND, FL 33461	
CEB-461-495	
SHEET TITLE: TRUSS GEOMETRY	
JOB NAME:	AMPHITHEATER
	PALM SPRINGS, CA
SHEET:	2
	OF 9

Daniel F. Ardito, P.E.  
 Florida PE#: 56694

PALM SPRINGS, CA  
 WIND SPEED: 85 MPH (3-SEC GUST)  
 EXPOSURE: C  
 CATEGORY: II  
 IMPORTANCE FACTOR: 1.00  
 INTERNAL PRESS COEFF: 0.00  
 BASIC GROUND SNOW LOAD: 0.0 PSF  
 SEIZMIC: 0.2s=215; 1.0s=114



**TRUSS 1000**  
 NTS

REVISION: 1  
 DATE: 4/14/06

DATE: 4/14/06  
 DRAWN BY: DA  
 JOB NUMBER:

Daniel F. Ardito, P.E.  
 Professional Engineer  
 544 S. PLANTAIN ST.  
 LEONARD, FL 33461  
 (888) 461-4965

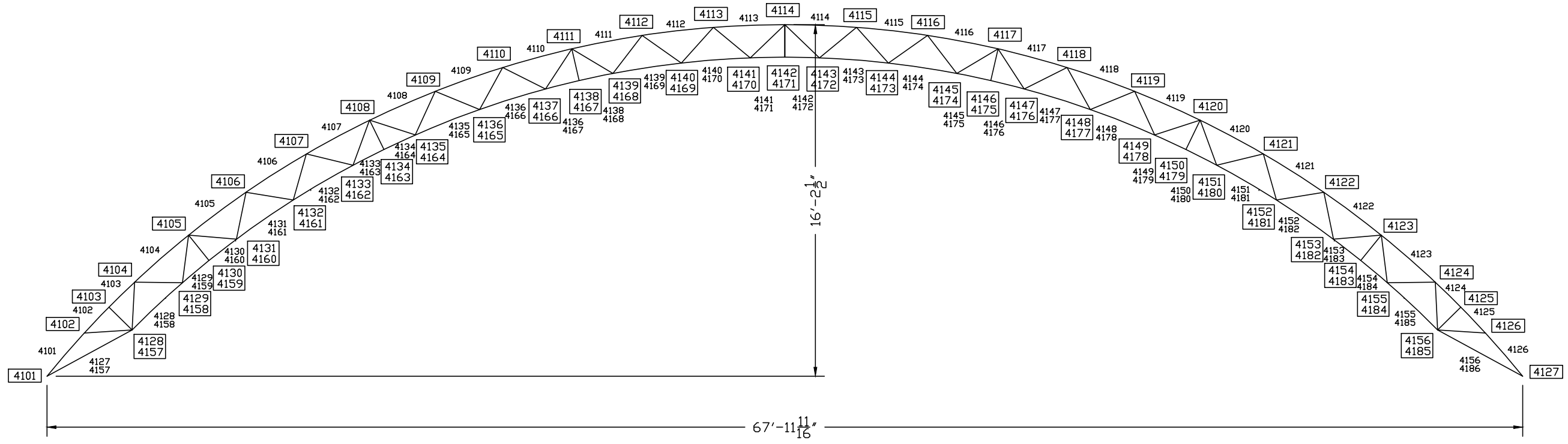
SHEET TITLE: **STAAD MODEL**

JOB NAME: **AMPHITHEATER**  
 PALM SPRINGS, CA

SHEET: **3**  
 OF 9



PALM SPRINGS, CA  
 WIND SPEED: 85 MPH (3-SEC GUST)  
 EXPOSURE: C  
 CATEGORY: II  
 IMPORTANCE FACTOR: 1.00  
 INTERNAL PRESS COEFF: 0.00  
 BASIC GROUND SNOW LOAD: 0.0 PSF  
 SEIZMIC: 0.2s=215; 1.0s=114



**TRUSS 3000, 4000, 5000, & 6000**  
 NTS

Daniel F. Ardito, P.E.  
 Florida PE#: 56694

JOB NAME:  
**AMPHITHEATER**  
 PALM SPRINGS, CA

SHEET TITLE:  
**STAAD MODEL**

Daniel F. Ardito, P.E.  
 Professional Engineer  
 5644 S. PALMVIEW ST.  
 LEONARD, FL 33446  
 (888) 461-4965

DATE: 4/14/06  
 DRAWN BY: DA  
 JOB NUMBER:

REVISION:  
 DATE:

SHEET:  
**5**  
 OF 9

WEIGHT OF CONCRETE:

(CMS) MAIN SLAB:  $(20)(13)(1.5)(150)/1000 = 58.5$  KIP  
 (CFT) FRONT TOE:  $(13)(1)(1.33)+(1.33)(1.33)(.5))(150)/1000 = 4.33$  KIP  
 (CBT) BACK TOE:  $(13)(2)(1.33)+(2)(1.33)(1.33)(.5))(150)/1000 = 8.67$  KIP  
 (CBU) BUTRUSS:  $((10)(10.75)(20/12)-(2)(1)(20/12))(150)/1000 = 26.38$  KIP  
 (CTB) TIEBACK:  $(3.33)(10.75)(.5)(2)(150)/1000 = 5.37$  KIP/EACH

TOTAL WEIGHT OF CONCRETE: = 108.62 KIP

WEIGHT OF SOIL:

(SML) MAIN LAYER:  $(20)(13)(1.5)(100)/1000 = 39.00$  KIP  
 (SBU) SUBTRACT FOR BUTRUSS:  $(10)(1.5)(20/12)(-100)/1000 = -2.5$  KIP  
 (STB) SUBTRACT FOR TIEBACK:  $(3.33)(1.5)(2)(-100)/1000 = -1.0$  KIP/EACH  
 (SFV) FRONT/REAR WEDGE:  $(13)(1.5)(1.5)(\tan 30)(.5)(100)/1000 = 0.84$  KIP/EACH  
 (SLW) LEFT/RIGHT WEDGE:  $(20)(1.5)(1.5)(\tan 30)(.5))(100)/1000 = 1.30$  KIP/EACH  
 (SCW) CORNER WEDGE:  $(1/3)(\tan 30^2)(1.5^3)(100)/1000 = 0.04$  KIP/EACH

TOTAL WEIGHT OF SOIL: = 40.00 KIP

CALCULATE RESISTING MOMENT:  
(OUTWARD KICK) (COMPRESSIVE LOAD)

(CMS)(10) = (58.5)(10) = 585.0  
 (CFT)(20) = (4.33)(20) = 86.6  
 (CBT)(2.33) = (8.67)(2.33) = 20.2  
 (CBU)(6.2) = (26.38)(6.2) = 163.6  
 (CTB)(3.67)(2) = (5.37)(3.67)(2) = 39.4

(SML)(10) = (39.0)(10) = 390.0  
 (SBU)(6.2)(-1) = (2.5)(6.2)(-1) = -15.5  
 (STB)(3.67)(2)(-1) = (3.67)(-1) = -3.67  
 (SFV)(20) = (.84)(20) = 16.8  
 (SLW)(10)(2) = (1.3)(10)(2) = 26.0  
 (SCW)(20)(2) = (.04)(20)(2) = 1.6

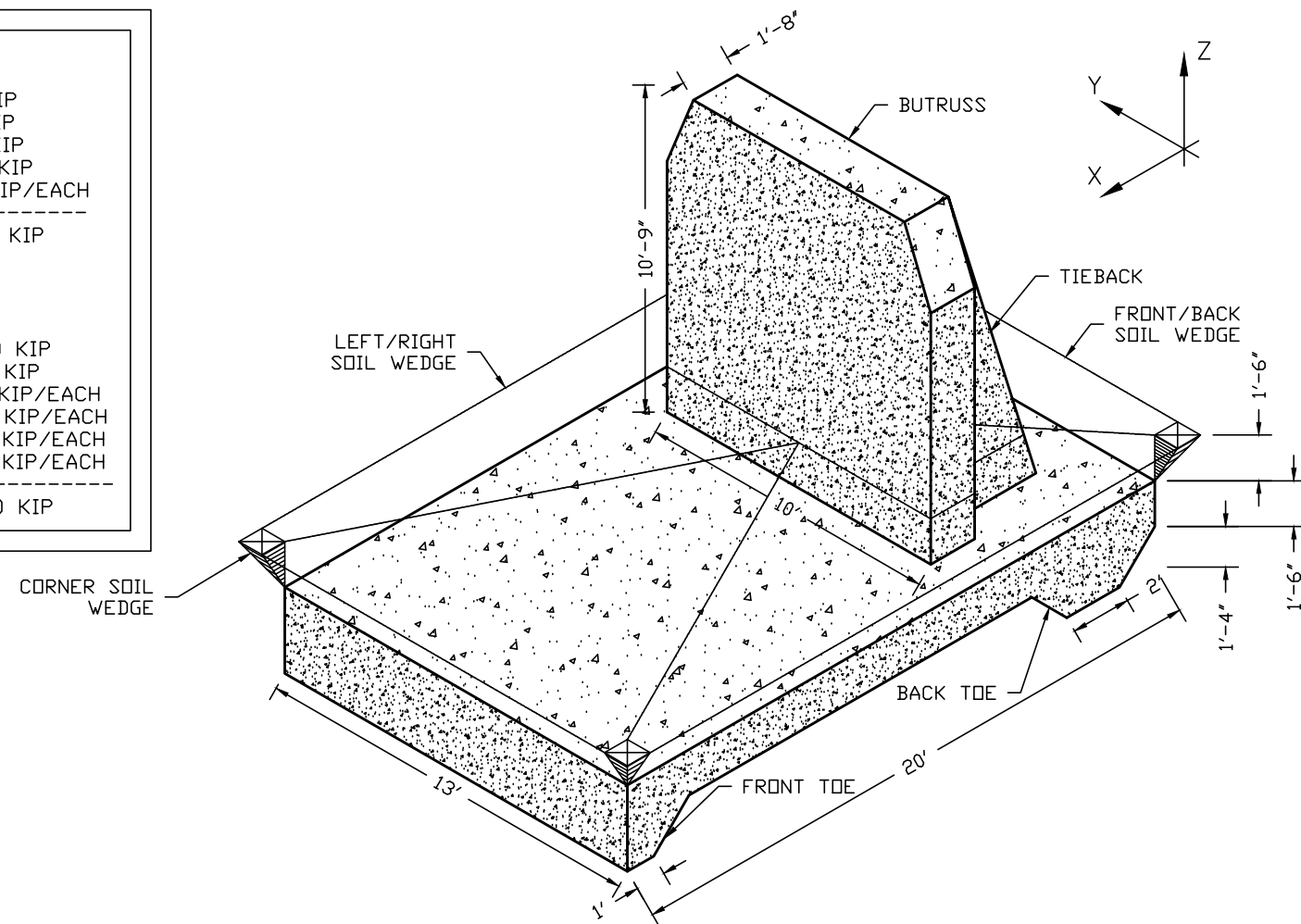
TOTAL RESISTING MOMENT: 1,310 KIP FT

CALCULATE RESISTING MOMENT:  
(INWARD KICK) (UPLIFT LOAD)

(CMS)(10) = (58.5)(10) = 585.0  
 (CFT)(5) = (4.33)(5) = 2.2  
 (CBT)(17.67) = (8.67)(17.67) = 153.2  
 (CBU)(13.8) = (26.38)(13.8) = 364.0  
 (CTB)(16.33)(2) = (5.37)(16.33)(2) = 175.4

(SML)(10) = (39.0)(10) = 390.0  
 (SBU)(13.8)(-1) = (2.5)(13.8)(-1) = -34.5  
 (STB)(16.33)(2)(-1) = (16.33)(-1) = -16.3  
 (SFV)(20) = (.84)(20) = 16.8  
 (SLW)(10)(2) = (1.3)(10)(2) = 26.0  
 (SCW)(20)(2) = (.04)(20)(2) = 1.6

TOTAL RESISTING MOMENT: 1,663 KIP FT



LOADS ON FOUNDATIONS					
LOAD #	X-DIR	Y-DIR	Z-DIR	MX (2)	MY (2)
1	7.88 KIP	-0.07 KIP	5.39 KIP	96.53 KIP FT	0.86 KIP FT
2	72.04 KIP	-0.75 KIP	46.13 KIP	882.49 KIP FT	9.19 KIP FT
3	-36.18 KIP	0.35 KIP	-23.07 KIP	473.22 KIP FT	4.65 KIP FT
4	-46.50 KIP	0.50 KIP	-29.64 KIP	569.63 KIP FT	6.13 KIP FT

- FOUNDATION LOAD NOTES:
- FOUNDATION LOADS SHOWN IN ABOVE TABLE ARE THE RESULTANT OF ALL (6)-TRUSSES ACTING ON THE ENTIRE FOUNDATION AT TOP OF WALL.
  - MOMENTS SHOWN ARE THE RESULTANT OF THE FORCES ACTING AT THE TOP OF FOUNDATION. (THESE ARE NOT IN ADDITION TO FORCES ACTING AT TOP OF FOUNDATION)
  - ALL MOMENTS WHETHER POSITIVE OR NEGATIVE ARE SHOWN AS POSITIVE.
  - REACTIONS SHOWN ARE FOR (1)-FOUNDATION ONLY. REACTIONS ON OPPOSITE FOUNDATION ARE THE SAME.

CALCULATE MAX BASE PRESSURE:

MOMENT OF INERTIA OF SLAB (I) =  $(1/12)(13)(20^3) = 8,667$  FT<sup>4</sup>  
 SLAB SECTION MODULUS (S) =  $(2)(8667)/(20) = 867$  FT<sup>3</sup>  
 INSITU PRESSURE (IP) =  $(3)(1) = 0.3$  KSF

SOIL PRESSURE =  $(W+P)/A \pm M/S = (108.62+39-2.5-1+P)/A \pm M/S = (144.12+P)/(260) \pm M/867$

COMPRESSIVE LOADS:  $(144.12+46.13)/260 \pm 882.49/867 = 0.73 \pm 1.02 = 1.75$  OR  $-0.29$  (TENSION IN SOIL)

ADJUSTED MAX SOIL PRESSURE:  $1.82$  KSF - IP =  $1.52$  KSF (SAFE)

CALCULATE FACTOR OF SAFETY FOR SLIDING:  
(P=VERT REACTION) (+ COMP) (- UPLIFT)

FRICTION:  
 $(\text{WGHT CONC} + \text{WGHT SOIL} + P)(\tan 30)$   
 $(108.62 + 39 - 2.5 - 1 + P)(0.5774)$   
 $(144.12 + P)(0.5774)$

PASSIVE RESISTANCE:  
 $(13)(2.83)(.40 \text{ KSF/FT})(2.92) = 43.0$  KIP

TOTAL SLIDING RESIST =  $43.0 + (144.12 + P)(.5774)$

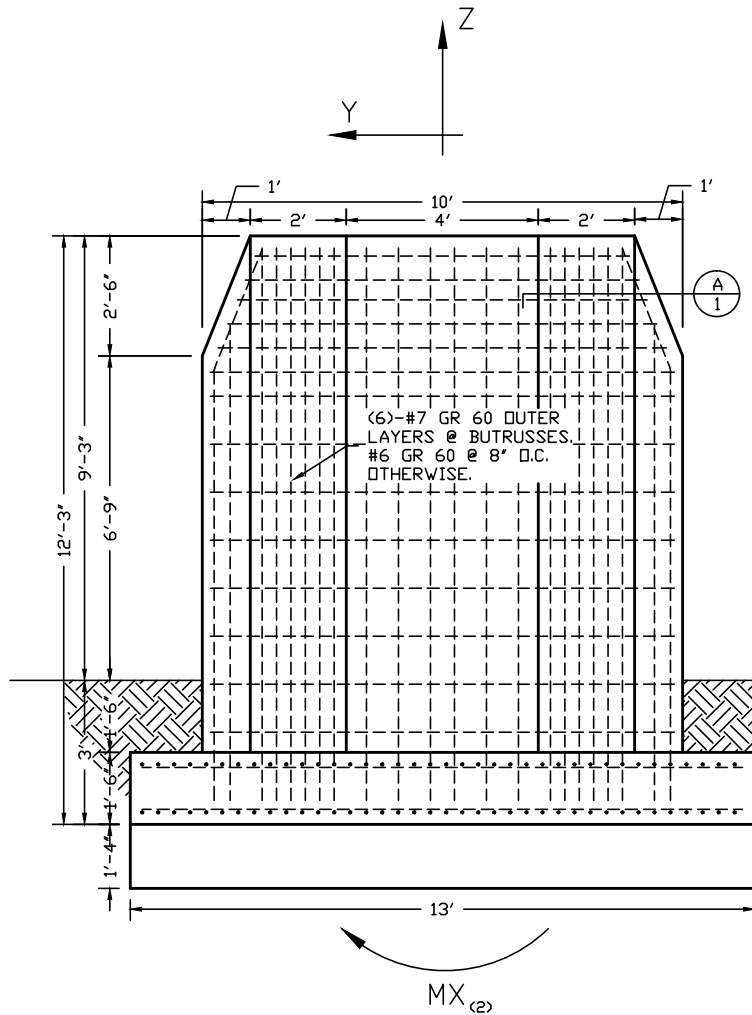
FS1 =  $(43.0 + (144.12 + 46.13)(.5774))/72.04 = 2.12$  (SAFE)

FS2 =  $(43.0 + (144.12 - 29.64)(.5774))/46.5 = 2.34$  (SAFE)

CALCULATE FACTOR OF SAFETY FOR OVER TURNING:  
(P=VERT REACTION) (+ COMP) (- UPLIFT)

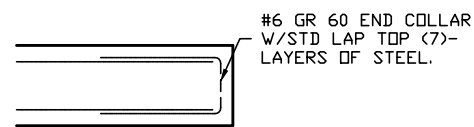
FS1 =  $((P)(6.2) + 1,310)/882.49 = ((46.13)(6.2) + 1,310)/882.49 = 1.81$  (SAFE)

FS2 =  $((P)(13.8) + 1,663)/569.63 = ((-29.63)(13.8) + 1,663)/569.63 = 2.20$  (SAFE)

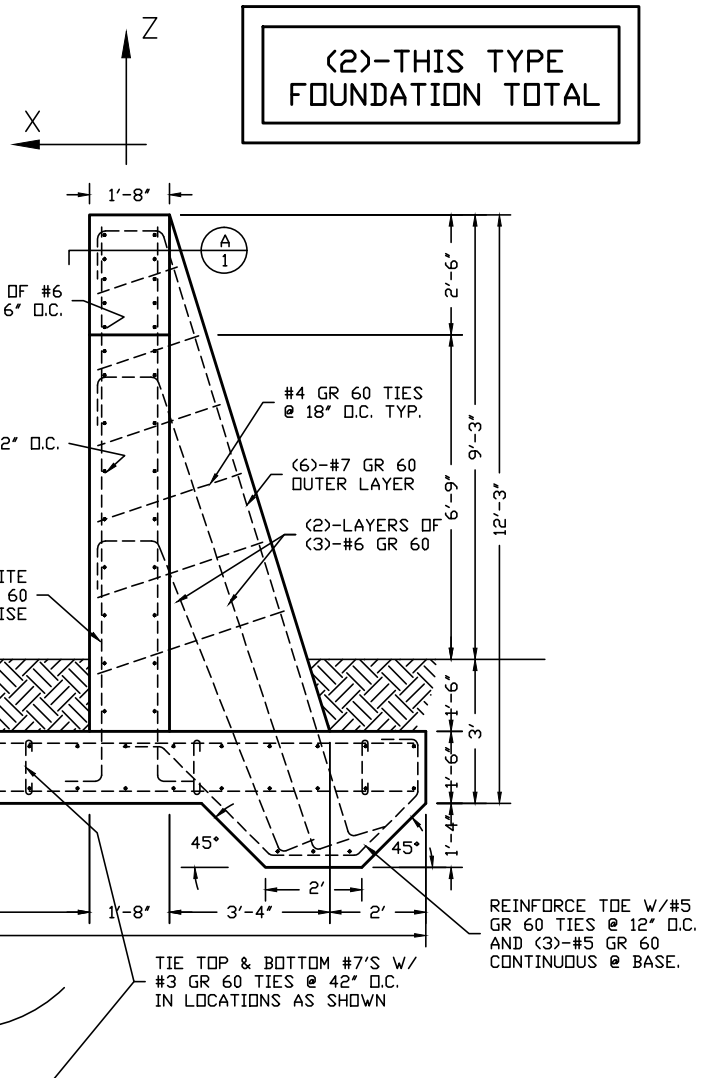


NOTE:  
FOUNDATIONS HAVE BEEN ACCURATELY SIZED FOR STRENGTH, OVERALL STABILITY, AND SOIL BEARING PRESSURES. AT THIS TIME THE SHAPE OF THE TOP MAY NOT BE EXACTLY CORRECT. THIS IS STILL BEING DESIGNED BY OUR DRAFTING DEPT. FINAL DESIGN WILL VARY SLIGHTLY FROM THAT SHOWN BUT WILL HAVE VERY LITTLE EFFECT ON THE COST OF CONSTRUCTION.

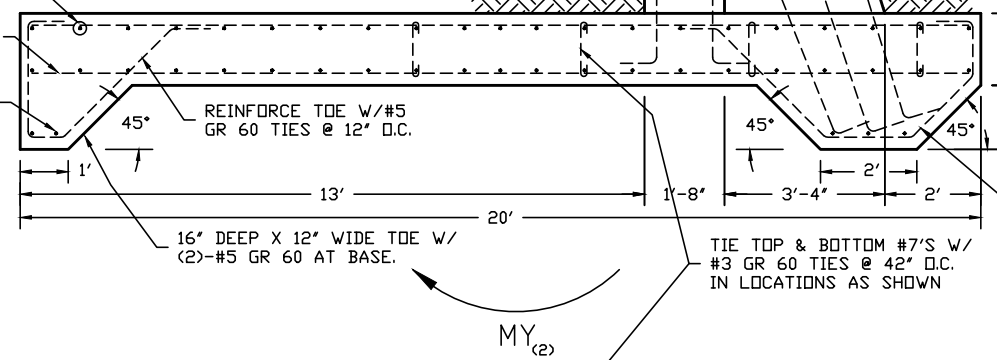
**A**  
SECTION  
1  
NTS



**(2)-THIS TYPE FOUNDATION TOTAL**



#5 GR 60 @ 12' O.C. TOP & BOTTOM. SET THIS STEEL AT INNER LAYERS  
#7 GR 60 TOP & BOTTOM SPACING VARIES. SET THIS STEEL AT OUTER LAYERS. SEE LAYOUT BELOW FOR SPACINGS.



REINFORCE TOE W/ #5 GR 60 TIES @ 12' O.C. AND (3)-#5 GR 60 CONTINUOUS @ BASE.

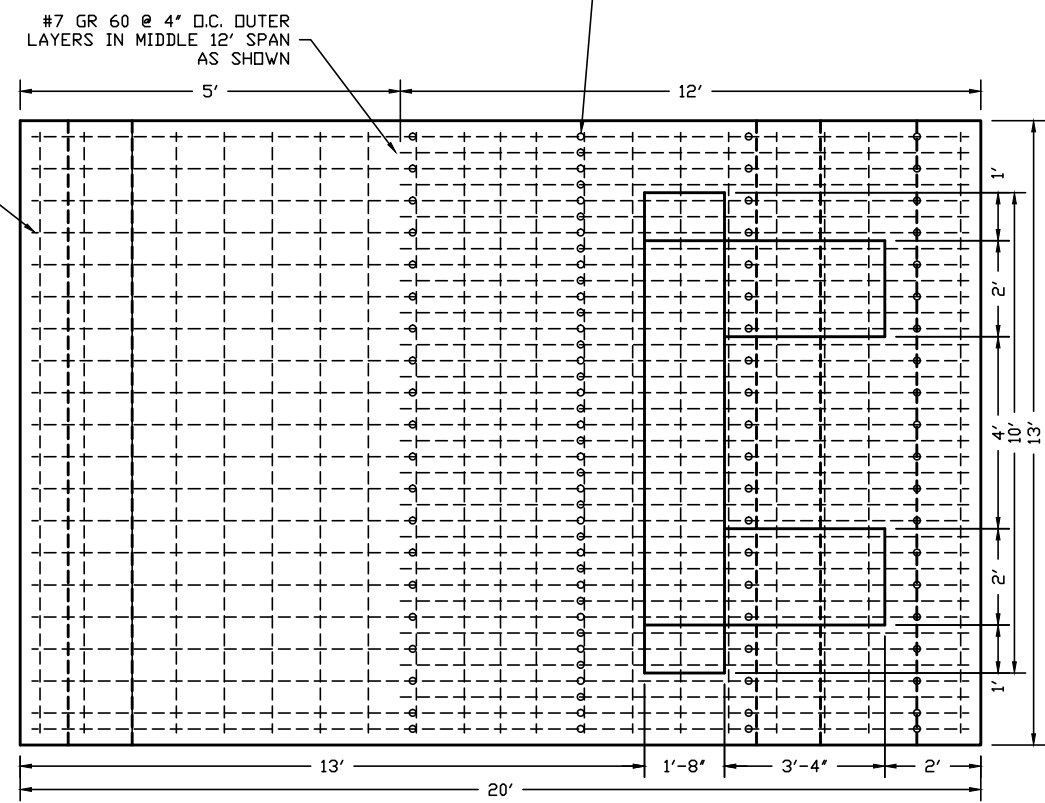
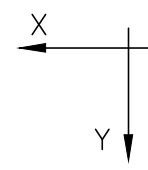
LOADS ON FOUNDATIONS					
LOAD #	X-DIR	Y-DIR	Z-DIR	MY (2)	MX (2)
1	7.88 KIP	-0.07 KIP	5.39 KIP	96.53 KIP FT	0.86 KIP FT
2	72.04 KIP	-0.75 KIP	46.13 KIP	882.49 KIP FT	9.19 KIP FT
3	-36.18 KIP	0.35 KIP	-23.07 KIP	473.22 KIP FT	4.65 KIP FT
4	-46.50 KIP	0.50 KIP	-29.64 KIP	569.63 KIP FT	6.13 KIP FT

FOUNDATION LOAD NOTES:  
1) FOUNDATION LOADS SHOWN IN ABOVE TABLE ARE THE RESULTANT OF ALL (6)-TRUSSES ACTING ON THE ENTIRE FOUNDATION AT TOP OF WALL.  
2) MOMENTS SHOWN ARE THE RESULTANT OF THE FORCES ACTING AT THE TOP OF FOUNDATION. (THESE ARE NOT IN ADDITION TO FORCES ACTING AT TOP OF FOUNDATION)  
3) ALL MOMENTS WHETHER POSITIVE OR NEGATIVE ARE SHOWN AS POSITIVE.  
4) REACTIONS SHOWN ARE FOR (1)-FOUNDATION ONLY. REACTIONS ON OPPOSITE FOUNDATION ARE THE SAME.

NOTES:  
1) ALL CONCRETE TO BE 4,000 PSI MIN.  
2) ALL REINFORCING TO BE 60 KSI MIN.  
3) ALL TIES & STIRRUPS TO BE 60 KSI MIN.  
4) ALL REINFORCING TO HAVE 3" MIN. COVER.  
5) SOILS TO HAVE 4,000 PSF MIN. BEARING CAPACITY 3-FT BELOW GRADE.

STD HOOKS AND LAPS		
BAR SIZE	STD HOOK	MIN. LAP
#3	4.5'	15'
#4	6'	20'
#5	7.5'	25'
#6	9'	30'
#7	10.5'	35'
#8	12'	40'
#9	13.5'	45'

**FOUNDATION DETAILS**  
NTS



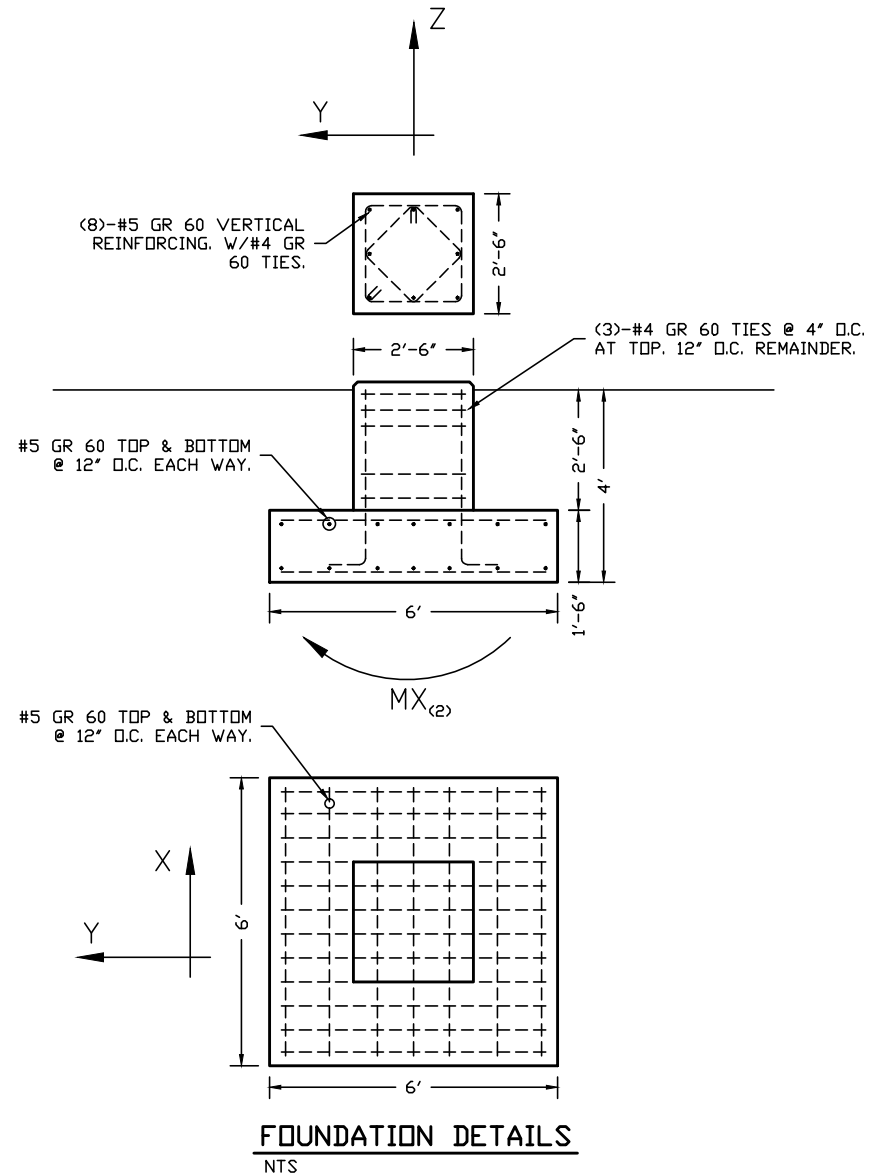
LIST OF ABBREVIATIONS	
AB	ANCHOR BOLT
ALUM	ALUMINUM
ANST	AMER NATIONAL STD INSTITUTE
APA	AMER PLYWOOD ASSOCIATION
ASCE	AMER SOC OF CIVIL ENGINEERS
ASCE-7	STRUCTURAL LOAD STANDARD
ASTM	AMER SOC FOR TESTING MATER.
BLT	BOLT
BRD	BOARD
C	C-CHANNEL
CFM	CUBIC FEET PER MINUTE
CMU	CONCRETE MASONRY UNIT
COEFF	COEFFICIENT
CONC	CONCRETE
DL	DEAD LOAD
EMB	EMBEDMENT
EMBED	EMBEDMENT
EWC	ELECTRIC WATER COOLER
EXP	EXPANSIVE OR EXPANSION
FEMA	FED EMERGENCY MANAGE AGENCY
FDDT	FL DEPT OF TRANSPORTATION
FND	FOUNDATION
FBC	FLORIDA BUILDING CODE
F'c	CONCRETE STRENGTH
FMC	FLORIDA MECHANICAL CODE
FPC	FLORIDA PLUMBING CODE
FT	FOOT OR FEET
FY	YIELD STRENGTH
GA	GAUGE
GA	GYPSUM ASSOCIATION
GAL	GALLON
GALV	GALVANIZED
GFCT	GRND FAULT CIRC INTERRUPTER
GPM	GALLONS PER MINUTE
GR	GRADE
GRND	GROUND
GYP	GYPSUM
H/C	HANDICAPPED
ID	INSIDE DIAMETER
IN	INCH
INSUL	INSULATION
JCT	JUNCTION
JNT	JOINT
K	KIP (1,000 POUND)
KSF	KIP PER SQUARE FOOT
KSI	KIP PER SQUARE INCH
L	ANGLE
LAV	LAVATORY (SINK)
LBR	LIMEROCK BEARING RATIO
LD	LOAD
LDC	LAND DEVELOPMENT CODE
LL	LIVE LOAD
MAX	MAXIMUM
MIN	MINIMUM
MIN	MINUTE
MPH	MILE PER HOUR
NEC	NATIONAL ELECTRIC CODE
NFPA	NATIONAL FIRE PROTECT ASSOC
OC	ON CENTER
OD	OUTSIDE DIAMETER
OSB	PARTICLE BRD SHEATHING TYPE
PE	PROFESSIONAL ENGINEER
PNT	PAINT
PRESS	PRESSURE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PT	PRESSURE TREATED
REIN	REINFORCING
RND	ROUND
SCHD	SCHEDULE
SF	SQUARE FEET
SH	SHEET
SIMPSON	BRAND NAME STEEL CONNECTOR
SP	SOUTHERN PINE
SPF	SPRUCE-PINE-FIR (LUMBER)
SPT	STANDARD PENETRATION TEST
SS	STAINLESS STEEL
STD	STANDARD
SYP	SOUTHERN YELLOW PINE
TB	TECHNICAL BULLETIN
TH	THICK OR THICKNESS
THRU	THROUGH
TPI	TRUSS PLATE INSTITUTE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UDN	UNLESS OTHERWISE NOTED
USP	BRAND NAME STEEL CONNECTOR
WC	WATER CLOSET (TOILET)
WL	WIND LOAD
WP	WATER OR WEATHER PROOF
WWF	WELDED WIRE FABRIC
W/	WITH

Daniel F. Ardito, P.E.  
Florida PE# 56694

DATE: 4/14/06  
DRAWN BY: DA  
JOB NUMBER:  
SHEET TITLE: FOUNDATIONS  
JOB NAME: AMPHITHEATER PALM SPRINGS, CA  
SHEET 7 OF 9

(4)-THIS TYPE FOUNDATION TOTAL

NOTE:  
FOUNDATIONS HAVE BEEN ACCURATELY SIZED FOR STRENGTH, OVERALL STABILITY, AND SOIL BEARING PRESSURES. AT THIS TIME THE SHAPE OF THE TOP MAY NOT BE EXACTLY CORRECT. THIS IS STILL BEING DESIGNED BY OUR DRAFTING DEPT. FINAL DESIGN WILL VARY SLIGHTLY FROM THAT SHOWN BUT WILL HAVE VERY LITTLE EFFECT ON THE COST OF CONSTRUCTION.



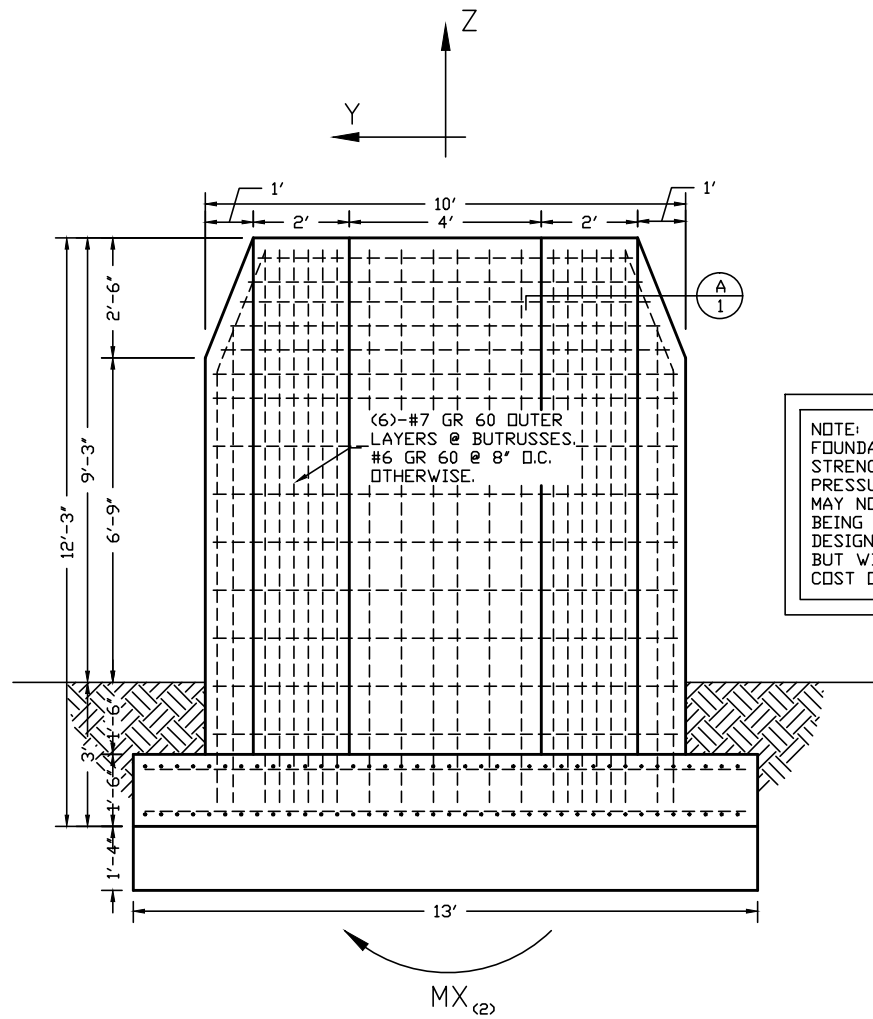
LOADS ON FOUNDATIONS					
LOAD #	X-DIR	Y-DIR	Z-DIR	MX (2)	MY (2)
1A	-0.01 KIP	0.03 KIP	-0.35 KIP	6.19 KIP INCH	1.01 KIP INCH
2A	-0.06 KIP	0.34 KIP	-8.74 KIP	63.2 KIP INCH	11.43 KIP INCH
3A	-0.15 KIP	0.15 KIP	2.83 KIP	28.01 KIP INCH	27.97 KIP INCH
4A	0.03 KIP	-0.21 KIP	6.32 KIP	39.17 KIP INCH	5.8 KIP INCH
1B	0.00 KIP	0.03 KIP	-0.36 KIP	6.84 KIP INCH	0.40 KIP INCH
2B	-0.02 KIP	0.33 KIP	-9.35 KIP	69.67 KIP INCH	4.91 KIP INCH
3B	-0.06 KIP	-0.13 KIP	7.00 KIP	27.79 KIP INCH	12.33 KIP INCH
4B	0.02 KIP	-0.24 KIP	7.56 KIP	50.57 KIP INCH	3.36 KIP INCH
1C	0.01 KIP	0.04 KIP	-0.30 KIP	7.76 KIP INCH	1.08 KIP INCH
2C	0.05 KIP	0.36 KIP	-8.80 KIP	75.86 KIP INCH	9.73 KIP INCH
3C	-0.10 KIP	-0.34 KIP	5.71 KIP	72.39 KIP INCH	20.97 KIP INCH
4C	-0.03 KIP	-0.26 KIP	7.18 KIP	55.18 KIP INCH	7.00 KIP INCH
1D	0.01 KIP	0.05 KIP	-0.46 KIP	8.62 KIP INCH	2.29 KIP INCH
2D	0.11 KIP	0.43 KIP	-9.63 KIP	81.32 KIP INCH	20.84 KIP INCH
3D	-0.16 KIP	-0.41 KIP	5.92 KIP	75.79 KIP INCH	30.39 KIP INCH
4D	-0.07 KIP	-0.28 KIP	6.93 KIP	52.12 KIP INCH	12.66 KIP INCH

FOUNDATION LOAD NOTES:  
1) FOUNDATION LOADS SHOWN IN ABOVE TABLE ARE THE RESULTANT OF ALL TRUSS LEGS ACTING ON THE ENTIRE FOUNDATION AT TOP OF PIER.  
2) MOMENTS SHOWN ACT AT TOP OF PIER.  
3) ALL MOMENTS WHETHER POSITIVE OR NEGATIVE ARE SHOWN AS POSITIVE.  
4) REACTIONS SHOWN ARE FOR (1)-FOUNDATION ONLY. REACTIONS ON SIMILAR FOUNDATIONS ARE THE SAME.

NOTES:  
1) ALL CONCRETE TO BE 4,000 PSI MIN.  
2) ALL REINFORCING TO BE 60 KSI MIN.  
3) ALL TIES & STIRRUPS TO BE 60 KSI MIN.  
4) ALL REINFORCING TO HAVE 3" MIN. COVER.  
5) SOILS TO HAVE 4,000 PSF MIN. BEARING CAPACITY 3-FT BELOW GRADE.

STD HOOKS AND LAPS		
BAR SIZE	STD HOOK	MIN. LAP
#3	4.5'	15'
#4	6'	20'
#5	7.5'	25'
#6	9'	30'
#7	10.5'	35'
#8	12'	40'
#9	13.5'	45'

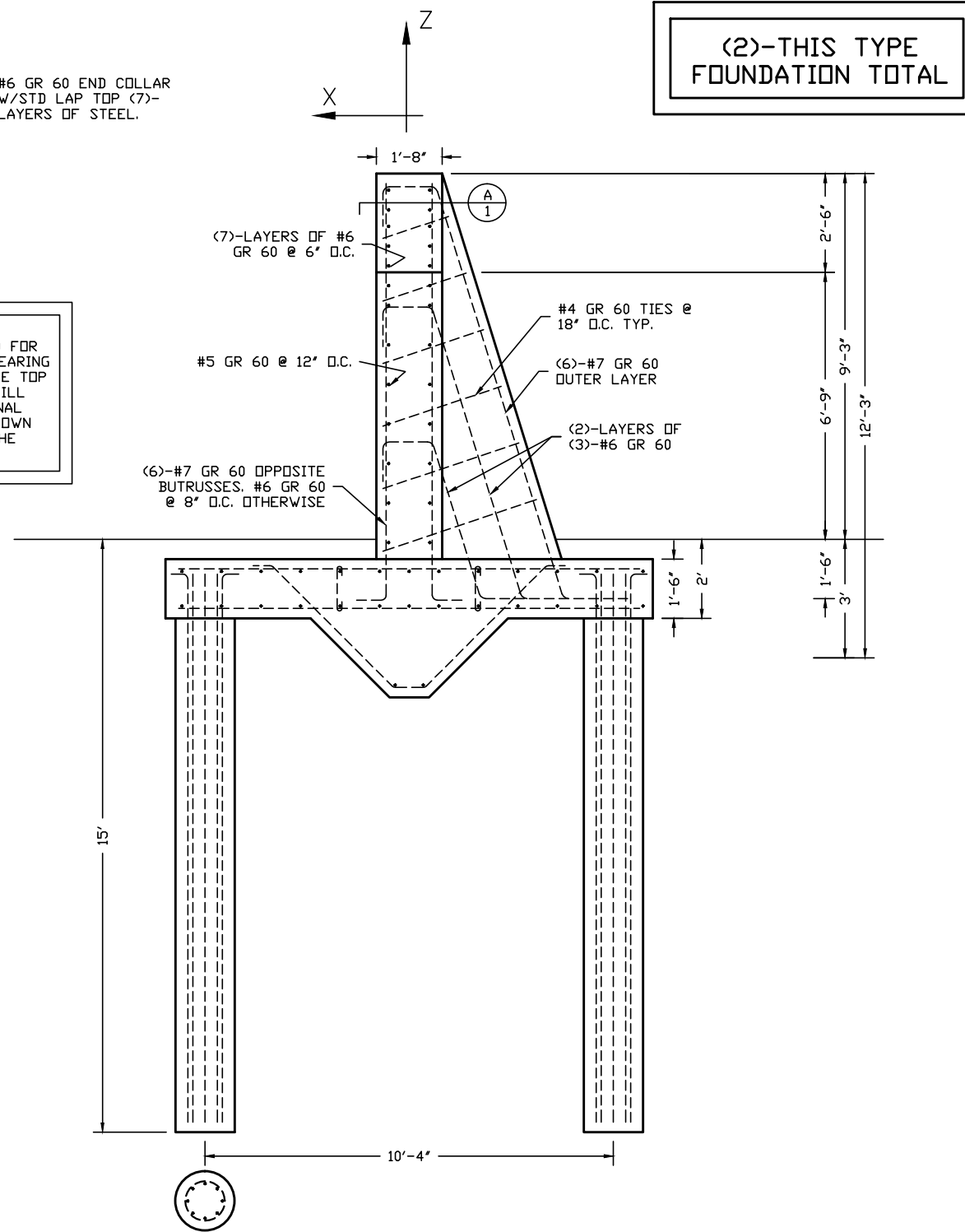




**A**  
SECTION  
1  
NTS

NOTE:  
FOUNDATIONS HAVE BEEN ACCURATELY SIZED FOR STRENGTH, OVERALL STABILITY, AND SOIL BEARING PRESSURES. AT THIS TIME THE SHAPE OF THE TOP MAY NOT BE EXACTLY CORRECT. THIS IS STILL BEING DESIGNED BY OUR DRAFTING DEPT. FINAL DESIGN WILL VARY SLIGHTLY FROM THAT SHOWN BUT WILL HAVE VERY LITTLE EFFECT ON THE COST OF CONSTRUCTION.

#6 GR 60 END COLLAR  
W/STD LAP TOP (7)-  
LAYERS OF STEEL.



(2)-THIS TYPE  
FOUNDATION TOTAL

**LOADS ON FOUNDATIONS**

LOAD #	X-DIR	Y-DIR	Z-DIR	MX (2)	MY (2)
1	7.98 KIP	-0.10 KIP	5.31 KIP	97.76 KIP FT	1.35 KIP FT
2	73.0 KIP	-1.26 KIP	44.52 KIP	894.50 KIP FT	16.54 KIP FT
3	-39.23 KIP	0.64 KIP	-17.83 KIP	480.57 KIP FT	8.70 KIP FT
4	-47.14 KIP	0.85 KIP	-28.52 KIP	577.83 KIP FT	11.39 KIP FT

**FOUNDATION LOAD NOTES:**

- 1) FOUNDATION LOADS SHOWN IN ABOVE TABLE ARE THE RESULTANT OF ALL (6)-TRUSSES ACTING ON THE ENTIRE FOUNDATION AT TOP OF WALL.
- 2) MOMENTS SHOWN ARE THE RESULTANT OF THE FORCES ACTING AT THE TOP OF FOUNDATION. (THESE ARE NOT IN ADDITION TO FORCES ACTING AT TOP OF FOUNDATION)
- 3) ALL MOMENTS WHETHER POSITIVE OR NEGATIVE ARE SHOWN AS POSITIVE.
- 4) REACTIONS SHOWN ARE FOR (1)-FOUNDATION ONLY. REACTIONS ON OPPOSITE FOUNDATION ARE THE SAME.

**NOTES:**

- 1) ALL CONCRETE TO BE 4,000 PSI MIN.
- 2) ALL REINFORCING TO BE 60 KSI MIN.
- 3) ALL TIES & STIRRUPS TO BE 60 KSI MIN.
- 4) ALL REINFORCING TO HAVE 3" MIN. COVER.
- 5) SOILS TO HAVE 4,000 PSF MIN. BEARING CAPACITY 3-FT BELOW GRADE.

**STD HOOKS AND LAPS**

BAR SIZE	STD HOOK	MIN. LAP
#3	4.5'	15'
#4	6'	20'
#5	7.5'	25'
#6	9'	30'
#7	10.5'	35'
#8	12'	40'
#9	13.5'	45'