

CERTIFIED COPY OF ORDER

STATE OF MISSOURI

} ea.

September Session of the July Adjourned

Term. 20 15

County of Boone

In the County Commission of said county, on the

29th

day of

September

20 15

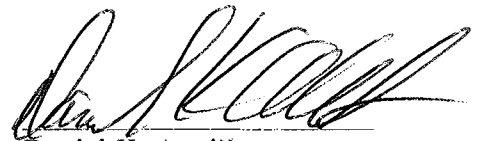
the following, among other proceedings, were had, viz:

Now on this day the County Commission of the County of Boone does hereby approve the request by Kevin R. and Carla J. Pudenz and K & C Rental Properties LLC to rezone from A-1 (Agriculture) to A-2 (Agriculture) on 34.85 acres, more or less, located at 9400 W Coyote Hill Rd., Harrisburg.

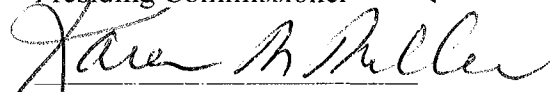
Done this 29th day of September, 2015

ATTEST:

Wendy S. Noren
Wendy S. Noren
Clerk of the County Commission



Daniel K. Atwill
Presiding Commissioner



Karen M. Miller
District I Commissioner



Janet M. Thompson
District II Commissioner

CERTIFIED COPY OF ORDER

STATE OF MISSOURI

September Session of the July Adjourned

Term. 20 15

County of Boone

} ea.

In the County Commission of said county, on the 29th day of September 20 15

the following, among other proceedings, were had, viz:

Now on this day the County Commission of the County of Boone does hereby receive and accept the following subdivision plat and authorize the Presiding Commissioner to sign it:

- Scenic Heights Plat 1. S15-T47N-R13W. A-2. Phillip and Brice Hanberry, owners. David T. Butcher, surveyor.

Done this 29th day of September, 2015.

ATTEST:

Wendy S. Noren
 Wendy S. Noren
 Clerk of the County Commission

Daniel K. Atwill
Presiding Commissioner

Karen M. Miller
District I Commissioner

Janet M. Thompson
District II Commissioner

CERTIFIED COPY OF ORDER

STATE OF MISSOURI

September Session of the July Adjourned

Term. 20 15

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In the County Commission of said county, on the

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20 15

the following, among other proceedings, were had, viz:

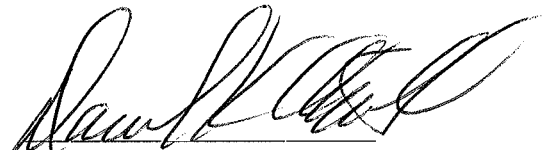
Now on this day the County Commission of the County of Boone does hereby acknowledge the following budget amendment for the 13th Judicial Circuit Court to increase revenue and expenditures for the DMC Grant to fund training and travel for the Teen Court panel.

Department	Account	Department Name	Account Name	Decrease \$	Increase \$
1243	3451	Judicial Grants	State Reimb. – Grant		1,006
1243	23050	Judicial Grants	Other Supplies		252
1243	71100	Judicial Grants	Outside Services		754

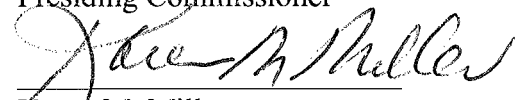
Done this 29th day of September, 2015.

ATTEST:

Wendy S. Noren
 Wendy S. Noren
 Clerk of the County Commission



Daniel K. Atwill
 Presiding Commissioner



Karen M. Miller
 District I Commissioner



Janet M. Thompson
 District II Commissioner

REQUEST FOR BUDGET AMENDMENT

BOONE COUNTY, MISSOURI

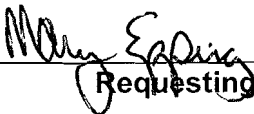
9/1/15

EFFECTIVE DATE

FOR AUDITORS USE

Department				Account					Department Name	Account Name	(Use whole \$ amounts)	
											Decrease	Increase
1	2	4	3	0	3	4	5	1	Judicial Grants	State Reimb. - Grant		\$1,006.00
1	2	4	3	2	3	0	5	0	Judicial Grants	Other Supplies		\$ 252.00
1	2	4	3	7	1	1	0	0	Judicial Grants	Outside Services		\$ 754.00

Describe the circumstances requiring this Budget Amendment. Please address any budgetary impact for the remainder of this year and subsequent years. (Use attachment if necessary): **To increase revenue and expenditures for the DMC Grant. This grant will fund training and travel for the Peer Ambassadors who make up the Teen Court panel. The implementation is to be completed by 9/30/15.**



 Requesting Official

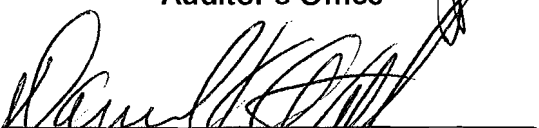
TO BE COMPLETED BY AUDITOR'S OFFICE

- A schedule of previously processed Budget Revisions/Amendments is attached.
- A fund-solvency schedule is attached.
- Comments: *DMC Grant*

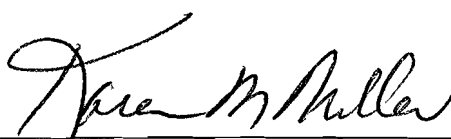
Agenda

no


 Auditor's Office



 PRESIDING COMMISSIONER



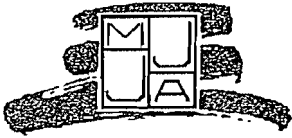
 DISTRICT I COMMISSIONER



 DISTRICT II COMMISSIONER

BUDGET AMENDMENT PROCEDURES

- County Clerk schedules the Budget Amendment for a first reading on the commission agenda. A copy of the Budget Amendment and all attachments must be made available for public inspection and review for a period of at least 10 days commencing with the first reading of the Budget Amendment.
- At the first reading, the Commission sets the Public Hearing date (at least 10 days hence) and instructs the County Clerk to provide at least 5 days public notice of the Public Hearing. **NOTE: The 10-day period may not be waived.**
- The Budget Amendment may not be approved prior to the Public Hearing.



MISSOURI JUVENILE JUSTICE ASSOCIATION

Promoting justice for children, youth and families

Board of Directors

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Beverly Newman
Harrisonville

Vice President
Jordan Land
West Plains

Secretary
Courtney Pulley
Columbia

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Frances Reddington
Warrensburg

Brian Valentine
Holtz Summit

Jim Wallis
St. Louis County

Carolyn Whitehorn
St. Louis City

Marty Yust
Neosho

Ex Officio
Tammy Walden
Camdenton

MJJA Office

Executive Director
Marcia Hazelhorst

DMC Coordinator
Seth Bauman

Administrative Assistant
Lisa M. Davis

September 1, 2015

Ruth McCluskey
Chief Juvenile Officer
13th Judicial Circuit
705 E. Walnut
Columbia, Missouri 65201

Dear Ruth:

I have reviewed your DMC contractual funding application. I am pleased to award you funds in the amount of \$1,005.86 for the Boone County Teen Court program. You may only use funds as outlined in your proposal. All changes to your proposal must be approved in advance of any expenditures, etc.

Upon completion of your expenditures for the program, please submit an invoice with all receipts and proof of payment to me by no later than September 30, 2015. All invoices should be sent to me at the following address:

Marcia Hazelhorst
Missouri Juvenile Justice Association
PO Box 1332
Jefferson City, Missouri 65102

Sincerely,

Marcia Hazelhorst
Director

Missouri Juvenile Justice Association

Disproportionate Minority Contact-*Diversions Strategies* Contractual Funding Application

State of the Problem

Description:

In a report from August 2013, completed by the Office of the State Courts Administrator, African-American youth are almost six times more likely to be referred to the Juvenile Justice System in Boone County Missouri. The Thirteenth Judicial Circuit Court is committed to reducing the Disproportionate Minority Contact of youth in our community. The Boone County Juvenile Office, Columbia Public School District, Boone County Sheriff's Department, and Columbia Police Department have signed a Memorandum of Understanding, to establish a cooperative relationship among the agencies in the handling of juveniles alleged to have committed a delinquent act in which the school may have disciplinary power. In 2014 the Columbia Public School District and the Thirteenth Judicial Circuit Court partnered in implementing Teen Court in two Columbia Public Schools. Teen Court is a diversion program that offers students that have committed an offense in their school another option to receiving a consequence for their actions without being referred to the Juvenile Justice System.

Goals/Objectives

Description of Goals/Objectives:

In the 2014-2015 academic year, eleven students participated in Teen Court, and all eleven that participated in the program were African-American. Our goal is to continue to divert youth from the Juvenile Justice System, which will reduce the over-representation of minorities being referred to the Juvenile Justice System. Along with diverting youth from the Juvenile Justice System, we want Teen Court to act as positive peer pressure to help build a stronger community within the schools, and ensure students take accountability for their actions.

Expected Outcomes:

Teen Court has been implemented to divert youth from being referred to the Juvenile Justice System. We look to continue to develop and improve the program, so we can continue to reduce the number of students being referred to the Boone County Juvenile Office.

GOALS/OBJECTIVES

Description of Goals/Objectives:
Please see attached document.

Expected Outcomes:

STRATEGY/PROGRAM

Description of Strategy/Program:
Please see attached document.

Will it specifically address DMC: Partial Mostly Entirely

PROGRAM EVALUATION

Description:
Please see attached document.

Evaluation Period: Bi-Monthly Quarterly Bi-Annually Annually

BUDGET JUSTIFICATION/AMOUNT APPLYING FOR

Description of Budget Justification:
Please see attached document.

Amount Requested:
Detailed Description of How Funds Will Be Spent:

The Missouri Juvenile Justice Association (MJJA) is a statewide, not for profit 501 (c) (3) organization whose mission is dedicated to promoting justice for children, youth and families within Missouri. Funds are made available for this project through the Missouri Department of Public Safety and the Missouri Juvenile Justice Advisory Group from funding provided by the U.S Department of Justice, Office of Juvenile Justice and Delinquency Prevention.

Description of Strategy/Program:

The Columbia Public School District and the Thirteenth Judicial Circuit Court have partnered in the implementation of Teen Court in two middle schools. We currently have Teen Court at West Middle School and Lange Middle School in Columbia, Missouri. Teen Court is offered to students who meet eligibility for the program, and that admit to committing to the offense. The student that committed the offense appears in front of a panel of students from the Peer Ambassadors class at their school. The Peer Ambassadors class is a leadership class made of students that have been chosen to represent their school. The panel assigns the student consequences for the offense committed. The student is typically assigned to complete community service work hours and apology letters. If the student successfully completes their consequences they will not be referred to the Boone County Juvenile Office.

Will it specifically address DMC: Mostly

Program Evaluation

Description:

I have developed an evaluation for the student that appears in Teen Court, and their parent to complete in regards to their experience in Teen Court. We have received positive remarks from parents whose children participated in Teen Court. One parent advised me, and the Principal of West Middle School, Dr. Connie Dewey, that she appreciated the chance for her daughter to participate in Teen Court instead of being referred to the Juvenile Office.

Evaluation Period: Annually

Budget Justification/Amount Applying For

Description of Budget Justification:

The 7 Habits of a Highly Effective Teen Workbook:40 workbooks @ \$3.43
each=\$137.20

Binders: 40 binders. 4 pack for \$10.99 x 10=\$109.90

Transportation for 2 field trips: \$450.00

Substitute teacher for 2 field trips: \$303.76

Card stock/printing for certificates for Teen Court participants and Peer Ambassadors: \$5.00

Amount Requested: \$1,005.86

Detailed Description of How Funds Will Be Spent:

The requested funds will be utilized to train and educate the Peer Ambassadors from West Middle School and Lange Middle School. The Peer Ambassadors are the individuals who make up the Teen Court panel. We plan to take one field trip to Hardin Middle School in St. Charles, Missouri, so the Peer Ambassadors can observe and talk with the students of their Teen Court. We plan to also take the Peer Ambassadors to the Boone County Courthouse to tour the Courthouse, and to speak with Judge Leslie Schneider and Commissioner Sara Miller. The teachers of the Peer Ambassadors classes will accompany the classes on the field trips, therefore they will need substitute teachers for their other classes. The binders are for the Peer Ambassadors to organize the work they do in the Peer Ambassadors class. We will print certificates for the students that successfully complete Teen Court, and for the students in the Peer Ambassadors class.

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----- Forwarded by Alison Houston/13/Courts/Judicial on 09/01/2015 01:13 PM -----

From: "Seth Bauman" <seth@mja.org>
To: <ruth.mccluskey@courts.mo.gov>
Cc: <Alison.Houston@courts.mo.gov>
Date: 09/01/2015 11:30 AM
Subject: Teen Court Program Funding Award

Hi Ruth,

Please accept the attached document as your Award Letter for your DMC contractual funding application.

Remember: All receipts need to be in before September 30, 2015 in order to receive reimbursement.

Thanks,

Seth Bauman

DMC Coordinator

MO Juvenile Justice Association

P O Box 1332

Jefferson City, MO 65102

Tel: (573) 616-1058

www.mja.org



"Promoting justice for children, youth and families"



Boone County DMC Award #2 Teen Court.pdf



Fw: Teen Court Program Funding Award
Courtney Pulley to: Diana Vaughan
Cc: Ruth McCluskey, Yvette Poindexter

09/01/2015 01:23 PM

Hey Diana,

See below. I have attached the award letter we received from the Missouri Juvenile Justice Association regarding Teen Court. Do we need to get this set on the agenda for a budget amendment for the funds to be approved for use?

Courtney Pulley
Supervisor-Boone County
Thirteenth Judicial Circuit Court
Family Court Services-Juvenile Division
705 E. Walnut Street
Columbia, Missouri 65201
(573)886-4200 office
(573)886-4030 fax
courtney.pulley@courts.mo.gov

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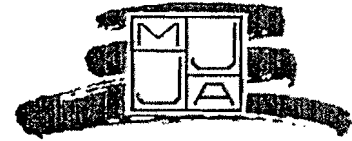
----- Forwarded by Courtney Pulley/13/Courts/Judicial on 09/01/2015 01:19 PM -----

From: Alison Houston/13/Courts/Judicial
To: Courtney Pulley/13/Courts/Judicial@Judicial
Cc: Ruth McCluskey/13/Courts/Judicial@Judicial
Date: 09/01/2015 01:14 PM
Subject: Fw: Teen Court Program Funding Award

The signed award letter is below.

If there is any way possible for this to go this week, that would be outstanding! We need to order the books asap, and everything has to be turned in by 09/30.

Thank you,
Alison Houston
Deputy Juvenile Officer II
Thirteenth Judicial Circuit Court
Family Court Services-Juvenile Division
705 East Walnut
Columbia, MO 65201
(573) 886-4200
(573) 886-4030 (fax)
alison.houston@courts.mo.gov



Missouri Juvenile Justice Association

DISPROPORTIONATE MINORITY CONTACT *DIVERSION STRATEGIES*

CONTRACTUAL FUNDING APPLICATION

SEND TO: SETH@MJJA.ORG

APPLICANT INFORMATION

Circuit/County : 13th Circuit-Boone County

Agency : Boone County Juvenile Office

Person
Submitting

Proposal: Alison Houston

Email Address: alison.houston@courts.mo.gov

Date: 7/15/15

INSTRUCTIONS/REQUIREMENTS

Please provide a brief description of the following:

1. **Statement of the Problem.** *(Over Representation of Youth of Color, Where and Why?)*
2. **Goal/Objective.** *(What do you plan to do about the current problem?)*
3. **Strategy/Program.** *(How will you achieve your goals and objectives?)*
4. **Program Evaluation.** *(How will you assess your programs accomplishments?)*
5. **Cost/Budget Justification.** *(Cost and short budget summary of expenses and income.)*

STATEMENT OF THE PROBLEM

Description:

Please see attached document.

CERTIFIED COPY OF ORDER

STATE OF MISSOURI

September Session of the July Adjourned

Term. 20 15

County of Boone

}

ea.

In the County Commission of said county, on the

29th

day of September

20 15

the following, among other proceedings, were had, viz:

Now on this day the County Commission of the County of Boone does hereby approve the following budget revision for the Sheriff's Department for the purchase and installation of an expansion tank for the existing and new water heaters.

Department	Account	Department Name	Account Name	Decrease \$	Increase \$
1123	86800	Emergency & Contingency	Emergency	3,381	
1256	92200	Sheriff/Corr Bldg HK/Maintenance	Repl. Buildings & Improv		3,381

Done this 29th day of September, 2015.

ATTEST:

Wendy S. Noren
 Wendy S. Noren
 Clerk of the County Commission

Daniel K. Atwill
 Daniel K. Atwill
 Presiding Commissioner

Karen M. Miller
 Karen M. Miller
 District I Commissioner

Janet M. Thompson
 Janet M. Thompson
 District II Commissioner

BOONE COUNTY, MISSOURI REQUEST FOR BUDGET REVISION

9/21/15

EFFECTIVE DATE

FOR AUDITORS USE

(Use whole \$ amounts)
Transfer From Transfer To
Decrease Increase

Dept	Account	Fund/Dept Name	Account Name	Transfer From Decrease	Transfer To Increase
1123	86800	Emergency & Contingency	Emergency	3,381	
1256	92200	Sheriff/Corr Bldg HK/Maint	Relp Buildings & Improv		3,381
				<u>3,381</u>	<u>3,381</u>

Describe the circumstances requiring this Budget Revision. Please address any budgetary impact for the remainder of this year and subsequent years. (Use an attachment if necessary):

Revision #2- Expansion tank needed for the water heater install.

Do you anticipate that this Budget Revision will provide sufficient funds to compete the year? YES or NO
If not, please explain (use an attachment if necessary):

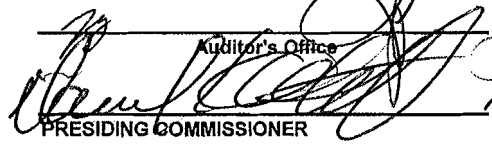



Requesting Official

TO BE COMPLETED BY AUDITOR'S OFFICE

- A schedule of previously processed Budget Revisions/Amendments is attached
- Unencumbered funds are available for this budget revision.
- Comments: Add Expansion Tank + Jail

Auditor's Office Agenda

PRESIDING COMMISSIONER DISTRICT I COMMISSIONER DISTRICT II COMMISSIONER

J. Louis Crum Corporation

Mechanical Contractor
Since 1924

1312 Creasy Springs Road
Columbia, Missouri 65202
(573) 443-2488

Heating Air Conditioning Plumbing
Commercial Refrigeration
FAX: (573) 443-3469

Boone County Commission
Boone County Jail

DATE: August 31, 2015
RE: Expansion Tank for Water Heaters
Purchase Order #20150000106

ATTN: Melinda Bobbitt

PROPOSAL

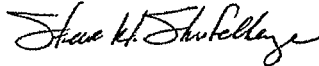
We purpose to furnish labor and material to furnish and install an expansion tank and modify the cold water supply to the water heaters (existing and new) in accordance to AO Smith Water Heater manufacturer's Warranty Notification Letter dated 8/25/2015 and attached. This will involve adding a new 3/4" tie-in domestic water pipe connecting all the water heaters together to be protected by the expansion tank.

Consisting of:

1-	Amtrol ST-30VC ASME Expansion Tank	1,644.30
40-	3/4" Copper Type L @ \$2.26/LF	90.40
10-	3/4" 90 Ell Copper @ \$1.30/ea.	13.00
2-	3/4" MIP Copper @ \$2.03/ea.	4.06
2-	3/4" 45 FTG. Copper @ \$1.80/ea.	3.60
1-	3/4" Copper coupling @0.85/ea.	0.85
2-	3/4" Unions @ \$7.40/ea.	7.40
2-	3/4" Ball Valves @\$21.65/ea.	43.30
6-	Hangers @\$5.79/ea.	34.74
2-	Reducing Tees 1 1/2" X 3/4"@\$10.89/ea.	<u>21.78</u>
	Material Subtotal	\$1,863.43
	Insulation Contractor	<u>\$200.00</u>
	Sub Total	\$2,063.43
	Operating and Profit @ 15%	<u>309.52</u>
	MATERIAL & INSULATION TOTAL	\$2,372.95
	LABOR 12.00 hours @ \$84.00/hour	<u>1,008.00</u>
	TOTAL.....	<u>\$3,380.95</u>

Please let me know of any questions.

STEVE W. SHUFELBERGER



CERTIFIED COPY OF ORDER

STATE OF MISSOURI }
County of Boone } ea.

September Session of the July Adjourned

Term. 20 15

In the County Commission of said county, on the 29th day of September 20 15

the following, among other proceedings, were had, viz:

Now on this day the County Commission of the County of Boone does hereby award bid 50-25AUG15 – Telephone Business Handsets to Synergy Telcom, Inc.

The terms of the bid award are stipulated in the attached Purchase Agreement. It is further ordered the Presiding Commissioner is hereby authorized to sign said Purchase Agreement.

Done this 29th day of September, 2015.

ATTEST:

Wendy S. Noren
Wendy S. Noren
Clerk of the County Commission

Daniel K. Atwill
Daniel K. Atwill
Presiding Commissioner

Karen M. Miller
Karen M. Miller
District I Commissioner

Janet M. Thompson
Janet M. Thompson
District II Commissioner

450-2015

Boone County Purchasing

Jacob M. Garrett
Buyer



613 E. Ash Street, Room 111
Columbia, MO 65201
Phone: (573) 886-4393
Fax: (573) 886-4390

MEMORANDUM

TO: Boone County Commission
FROM: Jacob M. Garrett, Buyer
DATE: September 2, 2015
RE: 50-25AUG15 – Telephone Business Handsets

Bid *50-25AUG15 – Telephone Business Handsets* closed on August 25, 2015. Four bids were received.

The primary phone that we will be purchasing for replacement is the Meridian 5316. We originally purchased the 5312, however, that phone is no longer being made and the 5316 is the replacement. For that reason, the bid evaluation was based on the new/refurbished pricing received for the 5316 model. Recommendation for an “all or none” award is to Synergy Telcom, Inc for offering the lowest and best bid.

This is a County-Wide Term and Supply contract that will be used on an as needed basis.

cc: Bid File

5102-054

50-25AUG15 Telephone Business Handsets													
PRICING		SYNERGY TELCOM				HELLO DIRECT, INC				LIBERTY COMMUNICATIONS, INC			
BID TABULATION		<u>Make & Model</u>	<u>New Price (each)</u>	<u>Refurbished Price (each)</u>	<u>Cost to Repair Handset not Purchased from the Awarded Vendor</u>	<u>Make & Model</u>	<u>New Price (each)</u>	<u>Refurbished Price (each)</u>	<u>Cost to Repair Handset not Purchased from the Awarded Vendor</u>	<u>Make & Model</u>	<u>New Price (each)</u>	<u>Refurbished Price (each)</u>	<u>Cost to Repair Handset not Purchased from the Awarded Vendor</u>
4.8.1.	Meridian 5316 – With Display and Hands Free Capability. 13 programmable line-feature keys	Nortel 5316 NT 4X42	\$278.20	\$69.00	\$45.00 each	Meridian 5316	\$286.13	\$79.00	No Repair	Meridian 5316	\$290.00	\$79.00	\$79.00
4.8.2.	Meridian 5312-03 – With caller ID.	Nortel 5312 NT 4X37	No Bid	No Bid	\$45.00 each	Product no longer made.	N.A.	N.A.	N.A.	Meridian 5312	N.A.	\$79.00	\$79.00
4.8.3.		Describe Any Deviations				Describe Any Deviations				Describe Any Deviations			
		As mentioned in bid specs. Best replacement for the 5312 is the 5316 for best purchase option for county.				N.A.				N.A.			
4.8.4.		Describe or Attach Warranty				Describe or Attach Warranty				Describe or Attach Warranty			
		Synergy Telcom In. offers a FREE Two Year Advance Replacement Warranty on all New/Refurbished & Repaired equipment sold. Boone County will simply contact Lisa with the models & qty's and an RMA will be issued. Upon receipt of the Advance Replacements Boone County will use the enclosed/Synergy provided UPS label to return the unwanted phones that Synergy replaced under warranty. Quick & easy procedure.				New Product - 1 Year Warranty & Refurbished Product - 18 Month Warranty				1 Year Replacement Warranty			
4.8.5.	Percent Discount From List	for any other equipment ordered that is not detailed within: <u>50+</u> %.				for any other equipment ordered that is not detailed within: <u>20</u> %.				for any other equipment ordered that is not detailed within: <u>N/A</u> %.			
4.8.6.	Maximum Percent	Increase or Decrease in Pricing for each Renewal Period: <u>CPI</u> %				Increase or Decrease in Pricing for each Renewal Period: <u>5</u> %				Increase or Decrease in Pricing for each Renewal Period: <u>0</u> %			
4.8.7.	Delivery	After Receipt of Order: <u>2-3 UPS</u> days				After Receipt of Order: <u>7 Business</u> days				After Receipt of Order: <u>10</u> days			
4.8.9.	Will you honor the submitted prices for purchase by other entities in Boone County who participate in cooperative purchasing with Boone County, Missouri?	<u>X</u> YES or <u> </u> NO				<u>X</u> YES or <u> </u> NO				<u>X</u> YES or <u> </u> NO			

50-25AUG15 Telephone Business Handsets

5102-05H

PRICING		HOLZBERG COMMUNICATIONS, INC			
BID TABULATION		Make & Model	New Price (each)	Refurbished Price (each)	Cost to Repair Handset not Purchased from the Awarded Vendor
4.8.1.	Meridian 5316 – With Display and Hands Free Capability. 13 programmable line-feature keys	Nortel Meridian M5316 NT4 4X42 - BLK	N.A.	\$69.00	\$29.00 *
4.8.2.	Meridian 5312-03 – With caller ID.	Nortel NT4X37 M5312 Phone - blk	N.A.	\$125.00	\$29.00 *
4.8.3.		Describe Any Deviations			
		* NEW Nortel Meridian M5000 Replacement Handsets (Not Repairs)			
4.8.4.		Describe or Attach Warranty			
		1 Year			
4.8.5.	Percent Discount From List	for any other equipment ordered that is not detailed within: <u> 5 </u> %.			
4.8.6.	Maximum Percent	Increase or Decrease in Pricing for each Renewal Period: <u> 15 </u> %			
4.8.7.	Delivery	After Receipt of Order: <u> 10 </u> days			
4.8.9.	Will you honor the submitted prices for purchase by other entities in Boone County who participate in cooperative purchasing with Boone County, Missouri?	<u> X </u> YES or <u> </u> NO			

450-2015

USER NAME PASSWORD

[Forgot Username?](#) [Forgot Password?](#)

[Create an Account](#)

Entity Dashboard

- [Entity Summary](#)
- [Entity Record](#)
- [Core Data](#)
- [Assertions](#)
- [Reps & Certs](#)
- [POCs](#)
- [Reports](#)
- [Service Contract Report](#)
- [BioPreferred Report](#)
- [Exclusions](#)
- [Active Exclusions](#)
- [Inactive Exclusions](#)
- [Excluded Family Members](#)

[RETURN TO SEARCH](#)

SYNERGY TELCOM, INC. 8222 INDY LN
 DUNS: 168926272 CAGE Code: 3QER5 INDIANAPOLIS, IN, 46214-2327,
 Status: Active UNITED STATES

Expiration Date: 05/19/2016
 Purpose of Registration: All Awards

Entity Overview

Entity Information

Name: SYNERGY TELCOM, INC.
Business Type: Business or Organization
POC Name: Lisa Gemmer
Registration Status: Active
Activation Date: 05/20/2015
Expiration Date: 05/19/2016

Exclusions

Active Exclusion Records? No



450-2015

Name Searched On:
SYNERGY TELCOM INC (Legal)

Current Information

Entity Legal Name:
SYNERGY TELCOM, INC.

Entity Address:
8222 INDY LN, INDIANAPOLIS, IN 46214

General Entity Information:

Control Number: **2000042700248**
Status: **Active**
Entity Type: **For-Profit Domestic Corporation**

Entity Creation Date: **4/27/2000**
Entity Date to Expire:
Entity Inactive Date:

This entity is current with Business Entity Report(s).

Other Names for this Entity:

Date	Name (Type)
5/2/2001	SYNERGY TELCOM (Assumed) / MARION County)
11/15/2012	SYNERGY DATA PRODUCTS, INC. (Assumed))
12/13/2013	SYNERGY SMART PHONE, INC. (Assumed))

Additional Services Available:

GO	View additional information for the entity , including transaction history, merger information, registered agent, principals and corporate report information (years paid and years due).
GO	Generate an official Certificate of Existence/Authorization. There is a total fee of \$20.00 for <i>IN.gov</i> subscribers and a fee of \$21.42 for credit card users. Example Certificate . Please note that when an entity has a past due business entity report, the Certificate of Existence will indicate that the entity is not current. An entity is current if no reports are past due.
GO	Generate Copies of Business Entity Documents.
GO	Request Information Printouts or Certificates. There is no fee to place an order; however, you will be billed for any statutory fees associated with your order. View fee schedule View turn around time
GO	File Supplemental Filings. Select this option to determine what filings are available online for this entity.

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NEW SEARCH

If you encounter technical difficulties while using these services, please contact the *IN.gov* [Webmaster](#).
If you are unable to find the information you need through the resources provided on this web site, please contact Secretary of State Connie Lawson's Business Services Division at 317-232-6576.

« Back to the SOS Web site

450-2015

**PURCHASE AGREEMENT
FOR
TELEPHONE BUSINESS HANDSETS - TERM AND SUPPLY**

THIS AGREEMENT dated the 29th day of September 2015 is made between Boone County, Missouri, a political subdivision of the State of Missouri through the Boone County Commission, herein "County" and **Synergy Telecom, Inc.**, herein "Contractor."

IN CONSIDERATION of the parties performance of the respective obligations contained herein, the parties agree as follows:

1. Contract Documents - This agreement shall consist of this Purchase Agreement for Telephone Business Handsets Term and Supply, County of Boone Request for Bid, bid number **50-25AUG15**, Introduction and General Conditions of Bidding, Primary Specifications, Response Presentation and Review, the un-executed Response Form, Standard Terms and Conditions, as well as the Contractor's bid response executed by Lisa Gemmer on behalf of the Contractor. All such documents shall constitute the contract documents, which are attached hereto and incorporated herein by reference. Service or product data, specification and literature submitted with bid response may be permanently maintained in the County Purchasing Office bid file for this bid if not attached. In the event of conflict between any of the foregoing documents, this Purchase Agreement, the Introduction and General Conditions of Bidding, Primary Specifications, Response Presentation and Review, the un-executed Response Form, and the Standard Terms and Conditions shall prevail and control over the Contractor's bid response.

2. Contract Duration - This agreement shall commence on **November 1, 2015 and extend through October 31, 2016** subject to the provisions for termination specified below. This agreement may be extended beyond the expiration date by order of the County for four (4) additional one year periods subject to the pricing clauses in the Contractor's bid response and thereafter on a month to month basis in the event the County is unable to re-bid and/or award a new contract prior to the expiration date after exercising diligent efforts to do so or not.

3. Purchase - The County agrees to purchase from the Contractor and the Contractor agrees to supply the County Telephone Business Handsets as identified and responded to in the Contractor's Response Form. Items will be provided as required in the bid specifications and in conformity with the contract documents for the prices set forth in the Contractor's bid response, as needed and as ordered by the County.

<u>Description</u>	<u>New Price</u>	<u>Refurbished Price</u>	<u>Cost to Repair Handset Not Purchased from Contractor</u>
Nortel 5316 NT4X42	\$278.20	\$69.00	\$45.00
Nortel 5312 NT4X37			\$45.00

4. Delivery: The Contractor agrees to deliver equipment within two days after receipt of order.

5. Billing and Payment - All billing shall be invoiced to the ordering Boone County Office / Department, and may only include the prices as identified in the Contractor's bid response. No additional fees for delivery or extra services not included in the bid response or taxes shall be included as additional charges in excess of the charges in the Contractor's bid response to the specifications. The County agrees to pay all invoices within thirty days of receipt; Contractor agrees to honor any cash or prompt payment discounts offered in its bid response if county makes payment as provided therein. In the event of a billing dispute, the County reserves the right to withhold payment on the disputed amount; in the event the billing dispute is resolved in favor of the Contractor, the County agrees to pay interest at a rate of 9% per annum on disputed amounts withheld commencing from the last date that payment was due.

6. Binding Effect - This agreement shall be binding upon the parties hereto and their successors and assigns for so long as this agreement remains in full force and effect.

7. Entire Agreement - This agreement constitutes the entire agreement between the parties and supersedes any prior negotiations, written or verbal, and any other bid or bid specification or contractual agreement. This agreement may only be amended by a signed writing executed with the same formality as this agreement.

8. Termination - This agreement may be terminated by the County upon thirty days advance written notice for any of the following reasons or under any of the following circumstances:

- a. County may terminate this agreement due to material breach of any term or condition of this agreement, or
- b. County may terminate this agreement if in the opinion of the Boone County Commission if delivery of products are delayed or products delivered are not in conformity with bidding specifications or variances authorized by County, or
- c. If appropriations are not made available and budgeted for any calendar year.

IN WITNESS WHEREOF the parties through their duly authorized representatives have executed this agreement on the day and year first above written.

SYNERGY TELCOM, INC

by Lisa K. Henner
 title National Account Manager
 address 8022 Indy Lane
Indianapolis, IN 46241

BOONE COUNTY, MISSOURI

by: Boone County Commission
[Signature]
 Daniel K. Atwill, Presiding Commissioner

APPROVED AS TO FORM:

[Signature]
 County Counselor
for AS Dykhouse

ATTEST:

[Signature]
 Wendy S. Noren, County Clerk

AUDITOR CERTIFICATION

In accordance with RSMo 50.660, I hereby certify that a sufficient unencumbered appropriation balance exists and is available to satisfy the obligation(s) arising from this contract. (Note: Certification of this contract is not required if the terms of the contract do not create a measurable county obligation at this time.)

<u>[Signature]</u>	<u>June Pitchford by HA - No Encumbrance Required</u>	<u>County-Wide Term & Supply</u>
Signature	Date	Appropriation Account

4. Response Form

4.1. Company Name:

Synergy Telecom Inc.

4.2. Address:

8222 Indy Lane

4.3. City/Zip:

Indianapolis, IN 46214

4.4. Phone Number:

(800) 201-7590 ext. 201

4.5. Fax Number:

(317) 713-1658

4.6. E-Mail Address:

lisa.gemmer@synergy-tel.com

4.7. Federal Tax ID:

35-2107051

4.7.1. Corporation

Partnership - Name _____

Individual/Proprietorship - Individual Name _____

Other (Specify) _____

4.8. PRICING					
		<u>Make & Model</u>	<u>New Price (each)</u>	<u>Refurbished Price (each)</u>	<u>Cost to Repair Handset not Purchased from the Awarded Vendor</u>
4.8.1.	Meridian 5316 – With Display and Hands Free Capability. 13 programmable line-feature keys	Nortel 5316 NT4X42	\$278.20/each	\$69.00/each	\$45.00/each
4.8.2.	Meridian 5312-03 – With caller ID.	Nortel 5312 NT4X37	No Bid	No Bid	\$45.00/each
4.8.3.	Describe Any Deviations				
	As mentioned in bid specs. best replacement for the 5312 is the 5316 for best purchase option for the County.				
4.8.4.	Describe or Attach Warranty				
	Synergy Telecom Inc. offers a FREE Two Year Advance Replacement Warranty on all New/Refurbished & Repaired equipment sold. Boone County will simply contact Lisa with the models & qty's and an RMA will be issued. Upon receipt of the Advance Replacements Boone County will use the enclosed/Synergy provided UPS label to return the unwanted phones that Synergy replaced under warranty. Quick & easy procedure.				

4.8.5. **Percent Discount From List** for any other equipment ordered that is not detailed within: 50+ %.

4.8.6. **Maximum Percent Increase or Decrease in Pricing for each Renewal Period:** CPI %

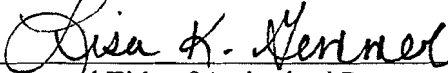
4.8.7. **Delivery After Receipt of Order:** 2-3 days Ground days

4.8.9. Will you honor the submitted prices for purchase by other entities in Boone County who participate in cooperative purchasing with Boone County, Missouri?
x Yes _____ No

PLEASE ATTACH THREE (3) COPIES OF YOUR RESPONSE INFORMATION AND ANY OTHER REQUIRED BID SUBMISSION ITEMS.

4.8.10 The undersigned offers to furnish and deliver the articles or services as specified at the prices and terms stated and in strict accordance with all requirements contained in the Request for Bid which have been read and understood, and all of which are made part of this order. By submission of this bid, the vendor certifies that they are in compliance with Section 34.353 and, if applicable, Section 34.359 ("Missouri Domestic Products Procurement Act") of the Revised Statutes of Missouri.

4.8.11 Authorized Representative (Sign By Hand):



Date: 8-14-15

4.8.12. Print Name and Title of Authorized Representative

Lisa K. Gemmer - National Account Manager

Date: 8-14-15

(Please complete and return with Bid)

Certification Regarding
Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions

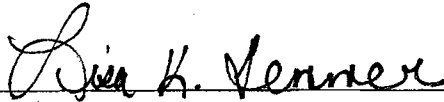
This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 29 CFR Part 98 Section 98.510, Participants' responsibilities. The regulations were published as Part VII of the May 26, 1988, Federal Register (pages 19160-19211).

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS FOR CERTIFICATION)

- (1) The prospective recipient of Federal assistance funds certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective recipient of Federal assistance funds is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Lisa K. Gemmer -National Account Manager

Name and Title of Authorized Representative



Signature

8-14-15

Date



Request for Bid (RFB)

Boone County Purchasing
613 E. Ash St. Room 111
Columbia, MO 65201

Jacob M. Garrett, Buyer

Phone: (573) 886-4393; Fax: (573) /886-4390
Email: JGarrett@boonecountymo.org

Bid Data

Bid Number: **50-25AUG15**
Commodity Title: **Telephone Business Handsets**

DIRECT BID FORMAT OR SUBMISSION QUESTIONS TO THE PURCHASING DEPARTMENT

Bid Submission Address and Deadline

Day / Date: **Tuesday, August 25, 2015**
Time: **1:30 P.M. (Bids received after this time will be returned unopened)**
Location / Mail Address: **Boone County Purchasing Department
Boone County Annex Building
613 E. Ash St. Room 111
Columbia, MO 65201**

Directions: The Annex Building is located at the corner of 7th and Ash Streets. Enter the building from the South Side. Wheel chair accessible entrance is available on the South side of the building.

Bid Opening

Day / Date: **Tuesday, August 25, 2015**
Time: **1:30 P.M. (Bids received after this time will be returned unopened)**
Location / Address: **Boone County Purchasing Department
Boone County Annex Building
613 E. Ash St. Room 111**

Bid Contents

- 1.0: **Introduction and General Conditions of Bidding**
- 2.0: **Primary Specifications**
- 3.0: **Response Presentation and Review**
- 4.0: **Response Form
Debarment Form
Standard Terms and Conditions
"No Bid" Response Form**

1. Introduction and General Conditions of Bidding

- 1.1. **INVITATION** - The County of Boone, through its Purchasing Department, invites responses, which offer to provide the goods and/or services identified on the title page, and described in greater detail in Section 2.
- 1.2. **DEFINITIONS**
 - 1.2.1. **County** - This term refers to the County of Boone, a duly organized public entity. It may also be used as a pronoun for various subsets of the County organization, including, as the context will indicate:

Purchasing - The Purchasing Department, including its Purchasing Director and staff.
Department/s or Office/s - The County Department/s or Office/s for which this Bid is prepared, and which will be the end user/s of the goods and/or services sought.
Designee - The County employee/s assigned as your primary contact/s for interaction regarding Contract performance.
 - 1.2.2. **Bidder / Contractor / Supplier** - These terms refer generally to businesses having some sort of relationship to or with us. The term may apply differently to different classes of entities, as the context will indicate.

Bidder - Any business entity submitting a response to this Bid. Suppliers, which may be invited to respond, or which express interest in this bid, but which do not submit a response, have no obligations with respect to the bid requirements.
Contractor - The Bidder whose response to this bid is found by Purchasing to meet the best interests of the County. The Contractor will be selected for award, and will enter into a Contract for provision of the goods and/or services described in the Bid.
Supplier - All business/s entities which may provide the subject goods and/or services.
 - 1.2.3. **Bid** - This entire document, including attachments. A Bid may be used to solicit various kinds of information. The kind of information this Bid seeks is indicated by the title appearing at the top of the first page. An "Invitation For Bid" is used when the need is well defined. An "Invitation For Proposal" is used when the County will consider solutions, which may vary significantly from each other or from the County's initial expectations.
 - 1.2.4. **Response** - The written, sealed document submitted according to the Bid instructions.
- 1.3. **BID CLARIFICATION** - Questions regarding this Bid should be directed in writing, preferably by fax, to the Purchasing Department. Answers, citing the question asked but not identifying the questioner, will be distributed simultaneously to all known prospective Bidders. Note: written requirements in the Bid or its Amendments are binding, but any oral communications between County and Bidder are not.
 - 1.3.1. **Bidder Responsibility** - The Bidder is expected to be thoroughly familiar with all specifications and requirements of this Bid. Bidders failure or omission to examine any relevant form, article, site or document will not relieve them from any obligation regarding this Bid. By submitting a Response, Bidder is presumed to concur with all terms, conditions and specifications of this Bid.
 - 1.3.2. **Bid Amendment** - If it becomes evident that this Bid must be amended, the Purchasing Department will issue a formal written Amendment to all known prospective Bidders. If necessary, a new due date will be established.
- 1.4. **AWARD** - Award will be made to the Bidder(s) whose offer(s) provide the greatest value to the County from the standpoint of suitability to purpose, quality, service, previous experience, price, lifecycle cost, ability to deliver, guarantee, warranty or for any other reason deemed by Purchasing to be in the best interest of the County. Thus, the result will not be determined by price alone. The County will be seeking the least costly outcome that meets the County needs as interpreted by the County. The County reserves the right to compare the lowest bid received with the current State contract pricing, and award in the best interest of the County.
- 1.5. **CONTRACT EXECUTION** - This Bid and the Contractor's Response will be made part of any resultant Contract and will be incorporated in the Contract as set forth, verbatim.
 - 1.5.1. **Precedence** - In the event of contradictions or conflicts between the provisions of the documents comprising this Contract, they will be resolved by giving precedence in the following order:

- 1) the provisions of the Contract (as it may be amended);
 - 2) the provisions of the Bid;
 - 3) the provisions of the Bidder's Response.
- 1.5.2. **CONTRACT PERIOD** - Any Term and Supply Contract period resulting from this Bid will have an initial term from date of award through **November 1, 2015 through October 31, 2016** and may be automatically **renewed for an additional four (4) one-year periods** unless canceled by Purchasing Director in writing prior to a renewal term.
- 1.6. **COMPLIANCE WITH STANDARD TERMS AND CONDITIONS** - Bidder agrees to be bound by the County's standard "boilerplate" terms and conditions for Contracts, a sample of which is attached to this Bid.

2. Primary Specifications

- 2.1. **ITEMS TO BE PROVIDED** – Boone County, hereafter referred to as “County”, proposes to contract with an individual(s) or organization(s), hereinafter referred to as “Contractor” for a contract for the furnishing and delivery of **Telephone Business Handsets** as specified below for the County of Boone Missouri.
 - 2.1.1. **Contract Documents** - The successful bidder(s) shall be obligated to enter into a written contract with the County within 30 days of award on contract forms provided by the County. If bidders desire to contract under their own written agreement, any such proposed agreement shall be submitted in blank with their bid. County reserves the right to modify any proposed form agreement or withdraw its award to a successful bidder if any proposed agreement contains terms and conditions inconsistent with its bid or are unacceptable to county legal counsel.
- 2.2. **History:** Most of the offices/departments at Boone County are on CenturyLink’s centranet system. Replacement phones must be compatible with our existing phone infrastructure: Centrex, DMS 100 located in the CenturyLink building in Columbia, Missouri.

Our original Meridian phones were purchased new from Centurytel in 1995. Most of the phones purchased were Meridian 5312. Since that time, the County has been purchasing refurbished phones with lifetime warranties from TRCA. We understand the Meridian 5312 handsets have been discontinued, and the best replacement for that handset phone is the Meridian 5316.

The County is seeking a vendor to replace or repair non-functioning handsets on an “as needed” basis. Offices/departments placing orders for replacement phones are located in the Columbia, MO area. There are approximately 400 phones lines at the County.

2.3. SPECIFICATIONS

- 2.3.1. **Quantity:** Replacement phones will be ordered on an “as needed” basis. Quantity is not guaranteed. In 2014, \$11,260.00 dollars were spent with TRCA. The County purchased 30 M5312 Sets, 45 M5316 sets, 2 M522 add-on mods at \$95.00 each and TRCA did 3 repairs at \$65.00. This usage is provided for informational purpose and is not a guarantee of total dollars spent per year.
- 2.3.2. The County will accept bid pricing for both new and refurbished phone sets. During evaluation, the County will determine if award will be for new, refurbished or both. The County reserves the right to award to multiple vendors if in the best interest of the County. In addition, if you offer repair of existing phones, please provide a repair price on the Response Form.
- 2.3.3. The County has listed some telephone handsets (Single and Two Line Phones) on the Response Form. Please provide pricing and include with your Bid Response descriptive literature with pictures of each phone bid.
- 2.3.4. **Billing and Payment:** Invoices /Monthly Statement shall be submitted to each individual County Office/Department that orders from the contract. Monthly Statement must be submitted to the respective Office/Department for payment which will be made 30 days after receipt of a correct and valid statement.
- 2.3.5. **Inspection:** All items delivered shall be subject to inspection after delivery. If deficient in any respect, the items shall be rejected and returned at bidder’s expense for full credit or replacement at no additional cost to the County.
- 2.3.6. **Descriptive Literature:** Bidders proposing to furnish items other than specified must submit Complete Descriptive Literature with bid. Bids received without descriptive literature are subject to rejection.
- 2.3.7. **Or Equal:** Bidders are to bid as specified herein or bid an approved equal. Determination of equality is solely Boone County’s responsibility.
- 2.3.8. **Guarantee:** Bidder agrees at a minimum to unconditionally guarantee all equipment against defect in material, workmanship and performance for a period of one year from the date of acceptance by the County, unless otherwise specified.

- 2.3.9. **Warranty:** Bidder shall submit with their bid a complete description of any and all warranties offered as part of this contract.
- 2.3.10. **Contact** – Jacob M. Garrett, Boone County Purchasing Department 613 E. Ash St. Room 111, Columbia, MO 65201. Telephone: (573) 886-4393; Facsimile: (573) 886-4390. E-mail: JGarrett@boonecountymo.org.
- 2.3.11. **Delivery Terms:** FOB Destination – Inside Delivery - Delivery shall be made FOB Destination with freight charges fully included and prepaid. The seller pays and bears the freight charges.
- 2.3.11.1. Delivery shall be to the Boone County ordering office/department.

3. Response Presentation and Review

- 3.1. **RESPONSE CONTENT** - In order to enable direct comparison of competing Responses, Bidder must submit Response in strict conformity to the requirements stated herein. Failure to adhere to all requirements may result in Bidder's Response being disqualified as non-responsive. All Responses must be submitted using the provided Response Sheet. Every question must be answered and if not applicable, the section must contain "N/A." Manufacturer's published specifications for the items requested shall be included with the response.
- 3.2. **SUBMITTAL OF RESPONSES** - Responses MUST be received by the date and time noted on the title page under "Bid Submission Information and Deadline". NO EXCEPTIONS. The County is not responsible for late or incorrect deliveries from the US Postal Service or any other mail carrier.
 - 3.2.1. **Advice of Award** - If you wish to be advised of the outcome of this Bid, the results may also be viewed on our web page www.showmeboone.com.
- 3.3. **BID OPENING** - On the date and time and at the location specified on the title page, all Responses will be opened in public. Brief summary information from each will be read aloud, and any person present will be allowed, under supervision, to scan any Response.
 - 3.3.1. **Removal from Vendor Database** - If any prospective Bidder currently in our Vendor Database to whom the Bid was sent elects not to submit a Response and fails to reply in writing stating reasons for not bidding, that Bidder's name may be removed from our database. Other reasons for removal include unwillingness or inability to show financial responsibility, reported poor performance, unsatisfactory service, or repeated inability to meet delivery requirements.
- 3.4. **RESPONSE CLARIFICATION** – The County reserves the right to request additional written or oral information from Bidders in order to obtain clarification of their Responses.
 - 3.4.1. **Rejection or Correction of Responses** – The County reserves the right to reject any or all Responses. Minor irregularities or informalities in any Response which are immaterial or inconsequential in nature, and are neither affected by law nor at substantial variance with Bid conditions, may be waived at our discretion whenever it is determined to be in the County's best interest.
- 3.5. **EVALUATION PROCESS** – The County's sole purpose in the evaluation process is to determine from among the Responses received which one is best suited to meet the County's needs at the lowest possible cost. Any final analysis or weighted point score does not imply that one Bidder is superior to another, but simply that in our judgment the Contractor selected appears to offer the best overall solution for our current and anticipated needs at the lowest possible cost.
 - 3.5.1. **Method of Evaluation** – The County will evaluate submitted Responses in relation to all aspects of this Bid.
 - 3.5.2. **Acceptability** – The County reserves the sole right to determine whether goods and/or services offered are acceptable for County use.
 - 3.5.3. **Endurance of Pricing** – Bidder's pricing must be held until contract execution or 60 days, whichever comes first.

4. Response Form

4.1. Company Name: _____

4.2. Address: _____

4.3. City/Zip: _____

4.4. Phone Number: _____

4.5. Fax Number: _____

4.6. E-Mail Address: _____

4.7. Federal Tax ID: _____

4.7.1. Corporation

Partnership - Name _____

Individual/Proprietorship - Individual Name _____

Other (Specify) _____

4.8.	PRICING				
		Make & Model	New Price (each)	Refurbished Price (each)	Cost to Repair Handset not Purchased from the Awarded Vendor
4.8.1.	Meridian 5316 – With Display and Hands Free Capability. 13 programmable line-feature keys				
4.8.2.	Meridian 5312-03 – With caller ID.				
4.8.3.	Describe Any Deviations				
4.8.4.	Describe or Attach Warranty				

- 4.8.5. **Percent Discount From List** for any other equipment ordered that is not detailed within: _____%.
- 4.8.6. **Maximum Percent Increase or Decrease in Pricing for each Renewal Period:** _____%
- 4.8.7. **Delivery** After Receipt of Order: _____ days
- 4.8.9. Will you honor the submitted prices for purchase by other entities in Boone County who participate in cooperative purchasing with Boone County, Missouri?
 _____ Yes _____ No

PLEASE ATTACH THREE (3) COPIES OF YOUR RESPONSE INFORMATION AND ANY OTHER REQUIRED BID SUBMISSION ITEMS.

4.8.10 **The undersigned offers to furnish and deliver the articles or services as specified at the prices and terms stated and in strict accordance with all requirements contained in the Request for Bid which have been read and understood, and all of which are made part of this order. By submission of this bid, the vendor certifies that they are in compliance with Section 34.353 and, if applicable, Section 34.359 (“Missouri Domestic Products Procurement Act”) of the Revised Statutes of Missouri.**

4.8.11 Authorized Representative (Sign By Hand):

_____ Date: _____
 4.8.12. Print Name and Title of Authorized Representative

_____ Date: _____



Standard Terms and Conditions

Boone County Purchasing
613 E. Ash St. Room 111
Columbia, MO 65201

Jacob M. Garrett, Buyer

Phone: (573) 886-4393; Fax: (573) /886-4390

Email: JGarrett@boonecountymo.org

-
1. Contractor shall comply with all applicable federal, state, and local laws and failure to do so, in County's sole discretion, shall give County the right to terminate this Contract.
 2. Responses shall include all charges for packing, delivery, installation, etc., (unless otherwise specified) to the Boone County Department identified in the Request for Bid and/or Proposal.
 3. The Boone County Commission has the right to accept or reject any part or parts of all bids, to waive technicalities, and to accept the offer the County Commission considers the most advantageous to the County. Boone County reserves the right to award this bid on an item-by-item basis, or an "all or none" basis, whichever is in the best interest of the County.
 4. Bidders must use the bid forms provided for the purpose of submitting bids, must return the bid and bid sheets comprised in this bid, give the unit price, extended totals, and sign the bid. The Purchasing Director reserves the right, when only one bid has been received by the bid closing date, to delay the opening of bids to another date and time in order to revise specifications and/or establish further competition for the commodity or service required. The one (1) bid received will be retained unopened until the new Closing date, or at request of bidder, returned unopened for re-submittal at the new date and time of bid closing.
 5. When products or materials of any particular producer or manufacturer are mentioned in our specifications, such products or materials are intended to be descriptive of type or quality and not restricted to those mentioned.
 6. Do not include Federal Excise Tax or Sales and Use Taxes in bid process, as law exempts the County from them.
 7. The delivery date shall be stated in definite terms, as it will be taken into consideration in awarding the bid.
 8. The County Commission reserves the right to cancel all or any part of orders if delivery is not made or work is not started as guaranteed. In case of delay, the Contractor must notify the Purchasing Department.
 9. In case of default by the Contractor, the County of Boone will procure the articles or services from other sources and hold the Bidder responsible for any excess cost occasioned thereby.
 10. Failure to deliver as guaranteed may disqualify Bidder from future bidding.
 11. Prices must be as stated in units of quantity specified, and must be firm. Bids qualified by escalator clauses may not be considered unless specified in the bid specifications.
 12. No bid transmitted by fax machine or e-mail will be accepted.
 13. The County of Boone, Missouri expressly denies responsibility for, or ownership of any item purchased until same is delivered to the County and is accepted by the County.
 14. The County reserves the right to award to one or multiple respondents. The County also reserves the right to not award any item or group of items if the services can be obtained from a state or other governmental entities contract under more favorable terms. The resulting contract will be considered "Non-Exclusive". The County reserves the right to purchase from other vendors.
 15. The County, from time to time, uses federal grant funds for the procurement of goods and services. Accordingly, the provider of goods and/or services shall comply with federal laws, rules and regulations

applicable to the funds used by the County for said procurement, and contract clauses required by the federal government in such circumstances are incorporated herein by reference. These clauses can generally be found in the Federal Transit Administration's Best Practices Procurement Manual – Appendix A. Any questions regarding the applicability of federal clauses to a particular bid should be directed to the Purchasing Department prior to bid opening.

16. In the event of a discrepancy between a unit price and an extended line item price, the unit price shall govern.

17. Should an audit of Contractor's invoices during the term of the Agreement, and any renewals thereof, indicate that the County has remitted payment on invoices that constitute an over-charging to the County above the pricing terms agreed to herein, the Contractor shall issue a refund check to the County for any over-charges within 30-days of being notified of the same.

18. **For all titled vehicles and equipment the dealer must use the actual delivery date to the County on all transfer documents** including the Certificate of Origin (COO,) Manufacturer's Statement of Origin (MSO,) Bill of Sale (BOS,) and Application for Title.

19. **Equipment and serial and model numbers** - The contractor is strongly encouraged to include equipment serial and model numbers for all amounts invoiced to the County. If equipment serial and model numbers are not provided on the face of the invoice, such information may be required by the County before issuing payment.

(Please complete and return with Bid)

Certification Regarding
Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 29 CFR Part 98 Section 98.510, Participants' responsibilities. The regulations were published as Part VII of the May 26, 1988, Federal Register (pages 19160-19211).

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS FOR CERTIFICATION)

- (1) The prospective recipient of Federal assistance funds certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective recipient of Federal assistance funds is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Name and Title of Authorized Representative

Signature

Date

Boone County Purchasing
Jacob M. Garrett
Buyer



613 E. Ash St. Room 111
Columbia, MO 65201
Phone: (573) 886-4393
Fax: (573) 886-4390

“NO BID” RESPONSE FORM

NOTE: COMPLETE AND RETURN THIS FORM ONLY IF YOU DO NOT WISH TO SUBMIT A BID

If you do not wish to respond to this bid request, but would like to remain on the Boone County vendor list **for this service/commodity**, please remove form and return to the Purchasing Department. The reverse side of the form is pre-addressed, so that it can be folded in thirds, sealed with tape, and mailed. *If you would like to FAX this “No Bid” Response Form to our office, the FAX number is (573) 886-4390.*

If you have questions, please call the Purchasing Office at (573) 886-4392. Thank you for your cooperation.

Bid Number: **50-25AUG15 – Telephone Business Handsets**

(Business Name)

(Date)

(Address/P.O. Box)

(Telephone)

(City, State, Zip)

(Contact)

REASON(S) FOR NOT SUBMITTING A BID:

CERTIFIED COPY OF ORDER

STATE OF MISSOURI

September Session of the July Adjourned

Term. 20 15

County of Boone

} ea.

In the County Commission of said county, on the

29th

day of

September

20

15

the following, among other proceedings, were had, viz:

Now on this day the County Commission of the County of Boone does hereby approve the attached Contract Amendment Number Two to 36-22JUN15 – Water Heaters for the Boone County Sheriff.

The terms of this amendment are stipulated in the attached Contract Amendment. It is further ordered the Presiding Commissioner is hereby authorized to sign said Contract Amendment Number Two.

Done this 29th day of September, 2015.

ATTEST:

Wendy S. Noren
Wendy S. Noren
Clerk of the County Commission

Daniel K. Atwill
Daniel K. Atwill
Presiding Commissioner

Karen M. Miller
Karen M. Miller
District I Commissioner

Janet M. Thompson
Janet M. Thompson
District II Commissioner

451-2015

Boone County Purchasing

Melinda Bobbitt, CPPO
Director of Purchasing



613 E. Ash St., Room 110
Columbia, MO 65201
Phone: (573) 886-4391
Fax: (573) 886-4390

MEMORANDUM

TO: Boone County Commission
FROM: Melinda Bobbitt, CPPB, CPPO
DATE: June 2, 2015
RE: Amendment Number Two – 36-22JUN15 – *Water Heater(s) for the Boone County Sheriff*

Contract 36-22JUN15 – *Water Heaters for the Boone County Sheriff* was approved by commission for award to J. Louis Crum Corporation of Columbia, Missouri for \$29,420.00 on July 16, 2015, commission order 301-2015. This amendment adds an ASME expansion tank for \$3,380.95.

J. Louis Crum has one of the two new water heaters installed, hooked up and ready to start up, which with the required warranty has to be performed by the AO Smith. AO Smith questioned that the system never had an expansion tank installed at the jail.

This change order includes all the work associated, including adding a new water line that ties the system together to install an expansion tank that will serve all the water heaters, new and old.

Invoices will be paid from department 1256 – Sheriff/Corrections Building HK/Maintenance, account 92200 – Replacement Buildings / Improvements. \$29,420 remains in the account at this time.

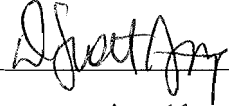
cc: Chad Martin, Sheriff Dept.
Contract File

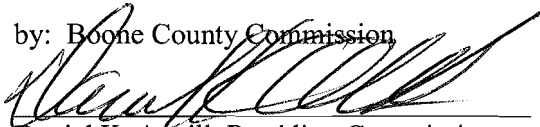
**CONTRACT AMENDMENT NUMBER TWO
PURCHASE AGREEMENT FOR
WATER HEATER(S) FOR THE BOONE COUNTY SHERIFF**

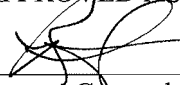
The Agreement **36-22JUN15** dated July 16, 2015 made by and between Boone County, Missouri and **J. Louis Crum Corporation**, for and in consideration of the performance of the respective obligations of the parties set forth herein, is amended as follows:

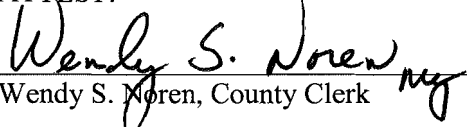
1. ADDITION of an ASME expansion tank for \$3,380.95.
2. Except as specifically amended hereunder, all other terms, conditions and provisions of the original agreement and Amendment Number One shall remain in full force and effect.

IN WITNESS WHEREOF the parties through their duly authorized representatives have executed this agreement on the day and year first above written.


J. LOUIS CRUM CORPORATION
 by 
 title manager

BOONE COUNTY, MISSOURI
 by: Boone County Commission

 Daniel K. Atwill, Presiding Commissioner

APPROVED AS TO FORM:
 For Ct Dykhouse.
 County Counselor

ATTEST:

 Wendy S. Noren, County Clerk

AUDITOR CERTIFICATION
 In accordance with RSMo 50.660, I hereby certify that a sufficient unencumbered appropriation balance exists and is available to satisfy the obligation(s) arising from this contract. (Note: Certification of this contract is not required if the terms of this contract do not create a measurable county obligation at this time.)

 by gg 09/29/15 1256 / 92200 / \$3,380.95
 Signature Date Appropriation Account

J. Louis Crum Corporation

Mechanical Contractor
Since 1924

1312 Creasy Springs Road
Columbia, Missouri 65202
(573) 443-2488
Boone County Commission
Boone County Jail

Heating Air Conditioning Plumbing
Commercial Refrigeration
FAX: (573) 443-3469

DATE: August 31, 2015
RE: Expansion Tank for Water Heaters
Purchase Order #20150000106

ATTN: Melinda Bobbitt

PROPOSAL


We purpose to furnish labor and material to furnish and install an expansion tank and modify the cold water supply to the water heaters (existing and new) in accordance to AO Smith Water Heater manufacturer's Warranty Notification Letter dated 8/25/2015 and attached. This will involve adding a new 3/4" tie-in domestic water pipe connecting all the water heaters together to be protected by the expansion tank.

Consisting of:

1-	Amtrol ST-30VC ASME Expansion Tank	1,644.30
40-	3/4" Copper Type L @ \$2.26/LF	90.40
10-	3/4" 90 Ell Copper @ \$1.30/ea.	13.00
2-	3/4" MIP Copper @ \$2.03/ea.	4.06
2-	3/4" 45 FTG. Copper @ \$1.80/ea.	3.60
1-	3/4" Copper coupling @0.85/ea.	0.85
2-	3/4" Unions @ \$7.40/ea.	7.40
2-	3/4" Ball Valves @\$21.65/ea.	43.30
6-	Hangers @\$5.79/ea.	34.74
2-	Reducing Tees 1 1/2" X 3/4"@\$10.89/ea.	<u>21.78</u>
	Material Subtotal	\$1,863.43
	Insulation Contractor	<u>\$200.00</u>
	Sub Total	\$2,063.43
	Operating and Profit @ 15%	<u>309.52</u>
	MATERIAL & INSULATION TOTAL	\$2,372.95
	LABOR 12.00 hours @ \$84.00/hour	<u>1,008.00</u>
	TOTAL.....	\$3,380.95

Please let me know of any questions.

STEVE W. SHUFELBERGER





Warranty Notification Letter

Date: 8/25/2015

Address: Boone County Jail
2121 County dr
Columbia MO 65202

Model Number(s): BTP 740

Serial number(s): 1530M000009

Dear valued A.O. Smith customer:

Thank you for choosing A.O. Smith, we sincerely appreciate your business. We have received a completed startup form from our service representative for the above referenced job. During the startup procedure, our service representative noted the following discrepancies.

- **No thermal expansion protection, a properly sized, charged, and installed thermal expansion tank is required.**

The above discrepancies are preventing the heater's warranty from being activated. An approved startup must be completed/received to activate the heater's warranty. Any operational issues or damages to the heater as a result of operating without an approved startup may result in a no warranty situation. Once the above discrepancies have been clarified or corrected please provide documentation of corrections to the Startup Department. The documentation may be faxed to 615-792-2121 or emailed to bmoma@hotwater.com. Please provide any required documentation of corrections within a 30 day period from the receipt of this letter in order to activate warranty.

We appreciate your help ensuring the product purchased from our company provides many years of satisfactory service. If you have any questions you may call our Startup Department at 800-527-1953 ext. 5134 or 615 510 5134.

Sincerely,
The Startup Department

CERTIFIED COPY OF ORDER

STATE OF MISSOURI }
County of Boone } ea.

September Session of the July Adjourned

Term. 20 15

In the County Commission of said county, on the 29th day of September 20 15

the following, among other proceedings, were had, viz:

Now on this day the County Commission of the County of Boone does hereby award bid 55-03SEP15 – Radio Tower Design, Engineering and Fabrication Services for Battle School Project to Sabre Communications Corporation of Sioux City, Iowa.

The terms of the bid award are stipulated in the attached Purchase Agreement. It is further ordered the Presiding Commissioner is hereby authorized to sign said Purchase Agreement.

Done this 29th day of September, 2015.

ATTEST:

Wendy S. Noren
Wendy S. Noren
Clerk of the County Commission

Daniel K. Atwill

Daniel K. Atwill
Presiding Commissioner

Karen M. Miller

Karen M. Miller
District I Commissioner

Janet M. Thompson

Janet M. Thompson
District II Commissioner

452-2015

Boone County Purchasing

Melinda Bobbitt, CPPO, CPPB
Director of Purchasing



613 E. Ash St., Room 110
Columbia, MO 65201
Phone: (573) 886-4391
Fax: (573) 886-4390

MEMORANDUM

TO: Boone County Commission
FROM: Melinda Bobbitt, CPPO, CPPB
DATE: September 18, 2015
RE: Bid Award Recommendation: *55-03SEP15 – Radio Tower Design, Engineering and Fabrication Services for Battle School Project*

Request for Bid *55-03SEP15 – Radio Tower Design, Engineering and Fabrication Services for Battle School* closed on September 3, 2015. Three bids were received. Dave Dunford, our Radio Consultant, recommends award to Sabre Communications Corporation of Sioux City, Iowa for offering the best bid for Boone County. The low bid offered by EEI was non-responsive due to their bid submittal missing the performance calculations, technical drawings and any foundation plan or design criteria required in the bid specifications.

Contract award is \$56,106 and will be paid from department 2704 – Joint Communications Radio Network, account 91300 – Machinery & Equipment. \$321,000 was budgeted for the entire Battle School radio project.

ATT: Bid Tab

cc: Bid File
Karen Miller, Commission
Dave Dunford, Radio Consultant
Patricia Schreiner, Joint Communications

452-2015

**RFB 55-03SEP15 - RADIO TOWER DESIGN, ENGINEERING,
AND FABRICATION**

BID TABULATION		Sabre Industries, Inc.	Wilbur L. Anderson dba Western Towers	EEI Acquisition Corporation, dba Engineered Endeavors
SECTION 4.00 - PRICING				
Item #	DESCRIPTION	Lump Sum	Lump Sum	Lump Sum
4.01	Radio tower- designed, engineered, and fabricated per bid specifications	\$56,106.00	\$81,169.00	\$50,995.00
	Shipping	included	included	\$3,480.00
	Sub-Total	\$56,106.00	\$86,149.00	\$54,475.00
4.02	Proposed cost for additional low profile platform as described in section 5.06. (will not be awarded)	\$2,852.00	\$4,000.00	\$4,680.00
	Delivery	6-8 weeks	8 weeks	45 days
	Sub-Contractors	n/a	Keystone-CHM Industries	none
				bid submittal missing the performance calculations, technical drawings and any foundation plan or design criteria required in the bid specifications.

NO BIDS

BT SERVICES

STI TECHNOLOGY SOLUTIONS

**PURCHASE AGREEMENT
FOR
Radio Tower Design, Engineering and Fabrication Services**

THIS AGREEMENT dated the 29th day of September 2015 is made between Boone County, Missouri, a political subdivision of the State of Missouri through the Boone County Commission, herein "County" and **Sabre Communications Corporation**, herein "Vendor."

IN CONSIDERATION of the parties performance of the respective obligations contained herein, the parties agree as follows:

1. **Contract Documents** - This agreement shall consist of this Purchase Agreement for one (1) Radio Tower designed, engineered and fabricated per Request for Bid number **55-03SEP15**, including Addenda #1 and #2; and the Contractor's bid response dated September 1, 2015, executed by Mark E. Gothier on behalf of the Contractor. All such documents shall constitute the contract documents which are incorporated herein by reference. Service or product data, specification and literature submitted with bid response may be permanently maintained in the County Purchasing Office contract file for this bid if not attached. In the event of conflict between any of the foregoing documents this Purchase Agreement, the Request for Bid and any applicable addenda shall prevail and control over the Contractor's bid response.

2. **Purchase** - The County agrees to purchase from the Vendor and the Vendor agrees to supply the County with one (1) Radio Tower designed, engineered and fabricated to RFB 55-03SEP15 specifications for a total cost of **Fifty Six Thousand, One Hundred Six Dollars and Zero Cents (\$56,106.00)**.

4. **Delivery** - Vendor agrees to deliver within eight (8) weeks after receipt of order and *notification from Boone County*, one complete Radio Tower referenced herein, pre-packaged and shipped on flatbed truck to erection site at rear of 2600 Battle Avenue, Columbia, Missouri 65202, following notification by County of completion of foundation construction. Vendor shall deliver anchor bolts and anchor bolt templates in advance of tower steel to the erection site at rear of 2600 Battle Avenue, Columbia, MO 65202.

5. **Billing and Payment** – Invoice shall be addressed to Boone County Joint Communications, Attn: Patricia Schreiner, and shall reference RFB 55-03SEP15. Invoice may only include the price listed in the vendor's bid response. No additional fees for paper work processing, labor, or taxes shall be included as additional charges in excess of the charges in the Vendor's bid response to the specifications. The County agrees to pay all invoices within thirty days of receipt. In the event of a billing dispute, the County reserves the right to withhold payment on the disputed amount; in the event the billing dispute is resolved in favor of the Vendor, the County agrees to pay interest at a rate of 9% per annum on disputed amounts withheld commencing from the last date that payment was due.

6. **Binding Effect** - This agreement shall be binding upon the parties hereto and their successors and assigns for so long as this agreement remains in full force and effect.

7. **Entire Agreement** - This agreement constitutes the entire agreement between the parties and supersedes any prior negotiations, written or verbal, and any other bid or bid specification or contractual agreement. This agreement may only be amended by a signed writing executed with the same formality as this agreement.

8. **Termination** - This agreement may be terminated by the County upon thirty days advance written notice for any of the following reasons or under any of the following circumstances:

- a. County may terminate this agreement due to material breach of any term or condition of this agreement, or
- b. County may terminate this agreement if in the opinion of the Boone County Commission if delivery of products are delayed or products delivered are not in conformity with bidding specifications or variances authorized by County, or
- c. If appropriations are not made available and budgeted for any calendar year.

452-2015

IN WITNESS WHEREOF the parties through their duly authorized representatives have executed this agreement on the day and year first above written.

SABRE COMMUNICATION CORPORATION

BOONE COUNTY, MISSOURI

by MC
Mike Coghlan
title V.P. Sales & Marketing

by: Boone County Commission
[Signature]
Daniel K. Atwill, Presiding Commissioner

APPROVED AS TO FORM:

ATTEST:

[Signature] For CT Dykhouse
County Counselor

Wendy S. Noren
Wendy S. Noren, County Clerk

In accordance with RSMo 50.660, I hereby certify that a sufficient unencumbered appropriation balance exists and is available to satisfy the obligation(s) arising from this contract. (Note: Certification of this contract is not required if the terms of this contract do not create a measurable county obligation at this time.)

Jane Pitchford by jjs 09/22/2015 2704-91300 / \$56,106
Signature Date Appropriation Account

STANDARD TERMS AND CONDITIONS - BOONE COUNTY, MISSOURI

1. Contractor shall comply with all applicable federal, state, and local laws and failure to do so, in County's sole discretion, shall give County the right to terminate this Contract.
2. Responses shall include all charges for packing, delivery, installation, etc., (unless otherwise specified) to the Boone County Department identified in the Request for Bid and/or Proposal.
3. The Boone County Commission has the right to accept or reject any part or parts of all bids, to waive technicalities, and to accept the offer the County Commission considers the most advantageous to the County. Boone County reserves the right to award this bid on an item-by-item basis, or an "all or none" basis, whichever is in the best interest of the County.
4. Bidders must use the bid forms provided for the purpose of submitting bids, must return the bid and bid sheets comprised in this bid, give the unit price, extended totals, and sign the bid. The Purchasing Director reserves the right, when only one bid has been received by the bid closing date, to delay the opening of bids to another date and time in order to revise specifications and/or establish further competition for the commodity or service required. The one (1) bid received will be retained unopened until the new Closing date, or at request of bidder, returned unopened for re-submittal at the new date and time of bid closing.
5. When products or materials of any particular producer or manufacturer are mentioned in our specifications, such products or materials are intended to be descriptive of type or quality and not restricted to those mentioned.
6. Do not include Federal Excise Tax or Sales and Use Taxes in bid process, as law exempts the County from them.
7. The delivery date shall be stated in definite terms, as it will be taken into consideration in awarding the bid.
8. The County Commission reserves the right to cancel all or any part of orders if delivery is not made or work is not started as guaranteed. In case of delay, the Contractor must notify the Purchasing Department.
9. In case of default by the Contractor, the County of Boone will procure the articles or services from other sources and hold the Bidder responsible for any excess cost occasioned thereby.
10. Failure to deliver as guaranteed may disqualify Bidder from future bidding.
11. Prices must be as stated in units of quantity specified, and must be firm. Bids qualified by escalator clauses may not be considered unless specified in the bid specifications.
12. No bid transmitted by fax machine or e-mail will be accepted.
13. The County of Boone, Missouri expressly denies responsibility for, or ownership of any item purchased until same is delivered to the County and is accepted by the County.
14. The County reserves the right to award to one or multiple respondents. The County also reserves the right to not award any item or group of items if the services can be obtained from a state or other governmental entities contract under more favorable terms.
15. The County, from time to time, uses federal grant funds for the procurement of goods and services. Accordingly, the provider of goods and/or services shall comply with federal laws, rules and regulations applicable to the funds used by the County for said procurement, and contract clauses required by the federal government in such circumstances are incorporated herein by reference. These clauses can generally be found in the Federal Transit Administration's Best Practices Procurement Manual – Appendix A. Any questions regarding the applicability of federal clauses to a particular bid should be directed to the Purchasing Department prior to bid opening.

16. In the event of a discrepancy between a unit price and an extended line item price, the unit price shall govern.
17. Should an audit of Contractor's invoices during the term of the Agreement, and any renewals thereof, indicate that the County has remitted payment on invoices that constitute an over-charging to the County above the pricing terms agreed to herein, the Contractor shall issue a refund check to the County for any over-charges within 30-days of being notified of the same.
18. **For all titled vehicles and equipment the dealer must use the actual delivery date to the County on all transfer documents** including the Certificate of Origin (COO,) Manufacturer's Statement of Origin (MSO,) Bill of Sale (BOS,) and Application for Title.
19. **Equipment and serial and model numbers** - The contractor is strongly encouraged to include equipment serial and model numbers for all amounts invoiced to the County. If equipment serial and model numbers are not provided on the face of the invoice, such information may be required by the County before issuing payment.

4. Response Form

Company Name: Sabre Communications Corporation
 Address: 7101 Southbridge Drive
 City/Zip: Sioux City, IA 51111
 Phone Number: (712) 224-1550
 E-Mail: megothier@sabreindustries.com
 Fax Number: (712) 279-0814

Federal Tax I.D. 42-1078988
 Corporation
 Partnership – Name _____
 Individual/Proprietorship – Individual Name _____
 Other (Specify) _____

4.00 PRICING

To furnish all resources, materials, and labor to completely design, engineer, fabricate and deliver FOB Destination to Columbia, MO a radio tower in accordance with these bid specifications and all applicable EIA and manufacturer-recommended specifications. Refer to Primary Specifications. Quoted cost below shall include key erection drawings, fabrication and design drawings, all certified by a registered professional engineer, state of registry: Missouri. State pricing as listed below:

4.01. Radio tower, designed, engineered, and fabricated (lump sum) \$ 56,106.00

4.02. Proposed cost for additional low profile platform \$ 2,852.00 (ea)
as described in section 5.06. For informational purpose
only - will not be awarded.

4.03. Delivery of all items specified in this bid: 6-8 weeks ARO (after receipt of order)

4.04. Subcontracting: If Vendor proposes to use subcontractors for this work, list the names of the firms and the work to be assigned in spaces below.

<u>Subcontractor Name/Address</u>	<u>Work Assigned</u>
n/a	

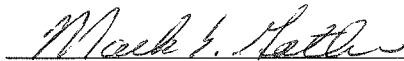
4.05. **Debarment and Suspension:** By submission of its Bid Response, Vendor agrees to comply with the provisions of Executive Order 12549, regarding Debarment and Suspension. Specifically, the Vendor certifies that neither he/she nor their principals are 1.) presently debarred, suspended, proposed for debarment, declared ineligible or voluntary excluded from covered transactions by a Federal department or agency, 2) have not with a three year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain or performing a public transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property; 3.) are not presently indicted for or otherwise criminal or civilly charged by a government entity with commission of any of the offenses stated above and 4.) have not within a three year period preceding this bid had one or more public transactions terminated for cause or default.

4.06. **Certification of Non-Resident/Foreign Contractors:** If the Contractor is a foreign corporation or nonresident Contractor, it is agreed that the Contractor shall procure and maintain during the life of this contract:

- A. A certificate of authority to transact business in the State of Missouri from the Secretary of State, unless exempt pursuant to the provisions of Section 351.572 RSMo.
- B. A certificate from the Missouri Director of Revenue evidencing compliance with transient employer financial assurance law, unless exempt pursuant to the provisions of Section 285.230 RSMo.

4.07. The undersigned offers to furnish and deliver the articles or services as specified at the prices and terms stated and in strict accordance with all requirements contained in the Request for Bid which have been read and understood, and all of which are made part of this order. By submission of this bid, the vendor certifies that they are in compliance with Section 34.353 and, if applicable, Section 34.359 (Missouri Domestic Products Procurement Act) of the Revised Statutes of Missouri.

Authorized Representative (Sign By Hand):



Date: 9/1/2015

Print Name and Title of Authorized Representative:

Mark E. Gothier, Government Projects Manager

STATEMENT OF BIDDER'S QUALIFICATIONS

Each bidder for the work included in the specifications and plans and the Contract Documents shall submit with their bid the data requested in the following schedule of information. This data must be included in and made a part of each bid document and be contained in the sealed envelope. Failure to comply with this instruction may be regarded as justification for rejecting the Contractor's proposal.

1. Name of Bidder: Sabre Communications Corporation
2. Business Address: 7101 Southbridge Drive, Sioux City, IA 51111
3. When Organized: _____
4. When Incorporated: 5/27/1977
If not incorporated, state type of business (sole proprietor, partnership, or other) _____
5. List federal tax identification number: 42-1078988
6. Number of years engaged in business under present firm name: 38 years
7. If you have done business under a different name, please give name and business location under that name: n/a
8. Percent of work done by own staff: 100%
9. Have you ever failed to complete any work awarded to your company? If so, where and why? No
10. Have you ever defaulted on a contract? No If so, give _____
11. List of contracts completed within the last three years for work similar in scope to that described in this bid, including value of each. **See Attached**
12. List of projects currently in progress: **See Attached**

*** Attach additional sheets as necessary ***

Boone County Purchasing



Sabre Communications Corporation™

QUALIFICATIONS-ITEM #11

Customer Address	Alabama Power 600 North 18 th Street Birmingham, AL 35203
Site	Clark Mountain
Project Description	Furnish and Install 185' Self-Supporting Tower
Performance Period	March 2012 to July 2012
Contract Amount	\$143,416.00
Customer Address	Beaver County 351 14th Street Ambridge, PA 15009
Site	Hanover Township
Project Description	Furnish and Install 150' Self-Supporting Tower
Performance Period	February 2011 to January 2012
Contract Amount	\$36,301.00
Customer Address	Blanco County 101 East Peach Street Johnson City, TX 78636
Site	Church Tank, Round Mountain
Project Description	Furnish and Install (2) 300' Self-Supporting Towers
Performance Period	November 2011 to April 2012
Contract Amount	\$283,751.00
Customer Address	Burke County 200 Avery Avenue Morganton, NC 28656
Site	New Emergency Communications Center
Project Description	Furnish and Install 150' Extendable to 200' Self-Supporting Tower
Performance Period	September 2013 to February 2014
Contract Amount	\$205,405.00
Customer Address	Chesapeake Operating, Inc. 6100 North Western Oklahoma City, OK 73118
Site	Various, Texas, Oklahoma
Project Description	Furnish and Install (73) Self-Supporting Towers, (5) Guyed Towers
Performance Period	March 2007 to July 2014
Contract Amount	\$3,582,119.00



QUALIFICATIONS-ITEM #11

Customer Address	City of Arvada 8101 Ralston Road Arvada, CO 80002
Site	Dover Way & W. 58th
Project Description	Furnish and Install 100' Ext 120' Self-Supporting Tower, Site Work, A&L Installation, Tower Demolition
Performance Period	June 2013 to March 2014
Contract Amount	\$138,912.00
Customer Address	City of San Antonio 114 W. Commerce Street San Antonio, TX 78205
Site	South Frio Street
Project Description	Furnish and Install 500' Self-Supporting Tower, Equipment Shelter, Compound, Fence, Electrical, Generator, Antennas & Lines and Tower Demolition
Performance Period	July 2011 to June 2014
Contract Amount	\$1,438,411.00
Customer Address	Clinton County 100 East State Street St. Johns, MI 48879
Site	Southwest Tower
Project Description	Furnish and Install 300' Self-Supporting Tower
Performance Period	June 2011 to February 2012
Contract Amount	\$335,218.00
Customer Address	CN Rail Montreal 17641 S. Ashland Avenue Homewood, IL 60430
Site	Various
Project Description	Furnish and Install (45) Self-Supporting Towers, (3) Monopoles
Performance Period	June 2009 to April 2014
Contract Amount	\$3,736,223.00
Customer Address	Fallon County 10 Fallon Avenue West Baker, MT 59313
Site	Big Sheep Mtn., Beaver Hill, N. Repeater, Dispatch, S. Repeater, Markuson
Project Description	Furnish and Install (6) Self-Supporting Towers
Performance Period	September 2012 to May 2013
Contract Amount	\$742,740.00



Sabre CommunicationsTM Corporation

QUALIFICATIONS-ITEM #11

Customer Address	Forest County 526 Elm Street Tionesta, PA 16353
Site	Forest County
Project Description	Furnish and Install 280' Self-Supporting Tower
Performance Period	October 2012 to November 2013
Contract Amount	\$228,681.00
Customer Address	Floresville Electric Light and Power 1400 Fourth Street Floresville, TX 78114
Site	Sutherland Springs, Floresville, Eagle Creek Substation, TX
Project Description	Furnish and Install (2) 300' Self-Supporting Towers, (2) Equipment Shelters with Generators
Performance Period	June 2009 to September 2009 November 2013 to April 2014
Contract Amount	\$732,249.00
Customer Address	Geauga County 12518 Merritt Road Chardon, OH 44024
Site	Troy, Chargin
Project Description	Furnish and Install (2) 300' Self-Supporting Towers, (2) Equipment Shelters
Performance Period	October 2010 to March 2012
Contract Amount	\$710,627.00
Customer Address	Grand River Dam Authority 226 W. Dwain Willis Avenue Vinita, OK 74301
Site	Saline Creek Substation
Project Description	Furnish and Install 220' Self-Supporting Tower
Performance Period	July 2014 to August 2014
Contract Amount	\$74,776.00
Customer Address	Jefferson Parish Emergency Operations 910 3 rd Street Gretna, LA 70054
Site	West Bank, LA
Project Description	Furnish and Install 300' Self-Supporting Tower, Equipment Shelter, Compound, Electrical, Tower Dismantle
Performance Period	February 2013 to April 2014
Contract Amount	\$1,208,954.00



Sabre CommunicationsTM Corporation

QUALIFICATIONS-ITEM #11

Customer Address	Jefferson County 911 301 Market Street Steubenville, OH 43952
Site	Dillonvale
Project Description	Furnish and Install 300' Self-Supporting Tower
Performance Period	May 2014 to October 2014
Contract Amount	\$201,799.00
Customer Address	Johnston County Public Utilities PO Box 2263 Smithfield, NC
Site	Huntley Drive
Project Description	Furnish and Install 120' Self-Supporting Tower, A&L Installation
Performance Period	March 2013 to June 2013
Contract Amount	\$48,313.00
Customer Address	Lincoln Electric 2620 Fairfield Street Lincoln, NE 68501
Site	Lincoln
Project Description	Furnish and Install 400' Self-Supporting Tower
Performance Period	February 2013 to June 2013
Contract Amount	\$339,968.00
Customer Address	Management and Engineering Technologies Int'l, Inc. 8600 Boeing Drive El Paso, TX 79925
Sites	Texas, Oregon, Idaho, Georgia, New Mexico, Arizona, Illinois
Project Description	Furnish and Install (22) Self-Supporting Towers and (25) Guyed Towers
Performance Period	May 2008 to September 2013
Contract Amount	\$2,960,881.00
Customer Address	Northern Natural Gas 8101 Birchwood Court Johnston, IA 50131
Site	Homer, NE
Project Description	Furnish and Install 50' Free-Standing Tower
Performance Period	July 2014 to December 2014
Contract Amount	\$18,913.00



Sabre CommunicationsTM Corporation

QUALIFICATIONS-ITEM #11

Customer Address	Pipestone County P.O. Box 220 Pipestone, MN 56164
Site	Pipestone Tower
Project Description	Furnish and Install 180' Self-Supporting Tower
Performance Period	October 2012 to January 2013
Contract Amount	\$81,511.00
Customer Address	Southside Electric Services 2000 West Virginia Avenue Crewe, VA 23930
Sites	Brunswick, Sycamore, Wellville Sub, Martin, Briery, Lake Chesdin
Project Description	Furnish and Install (6) Self-Supporting Towers
Performance Period	July 2014 to December 2014
Contract Amount	\$268,791.00
Customer Address	South Texas Electric Cooperative 2849 FM 447 Nursery, TX 77976
Sites	San Miguel, Lenz, Berclair, Beeville, Sam Rayburn, Goliad, Peggy, Midway
Project Description	Furnish and Install (2) Self-Supporting Towers, Antenna and Line Installation @ (6) Sites
Performance Period	March 2014 to September 2014
Contract Amount	\$609,993.00
Customer Address	State of Missouri 3525 North Belt Highway St. Joseph, MO 65102
Site	MSHP Troop H
Project Description	Furnish and Install 320' Self-Supporting Tower, Site Work, Antennas and Lines, Tower Demolition
Performance Period	April 2012 to October 2012
Contract Amount	\$253,590.00
Customer Address	Sweetgrass County 115 W. 5 th Avenue Big Timber, MT 59011
Site	County Court House
Project Description	Furnish and Install 100' Self-Supporting Tower
Performance Period	August 2011 to February 2012
Contract Amount	\$81,487.00



Sabre CommunicationsTM Corporation

QUALIFICATIONS-ITEM #11

Customer Address	Tioga County 118 Main Street Wellsboro, PA 16901
Site	Wellsboro
Project Description	Furnish and Offload 180' Self-Supporting Tower, Furnish and Offload Equipment Shelter
Performance Period	March 2014 to October 2014
Contract Amount	\$114,876.00
Customer Address	Wapello County 101 West 4 th Street Ottumwa, IA 52501
Site	Wapello County
Project Description	Supply and Install 250' Self-Supporting Tower
Performance Period	November 2012 to November 2013
Contract Amount	\$300,838.00
Customer Address	Western Farmers Electric Cooperative 701 N.E. 7 th Street Anadarko, OK 73005
Site	Beckham County, OK
Project Description	Furnish and Install 80' Self-Supporting Tower
Performance Period	August 2014 to December 2014
Contract Amount	\$39,227.00



Bidder's Qualifications

Item #12 (Current Projects)

Sabre Communications has been designing, manufacturing and installing communications towers since 1977. We manufacture approximately 3,000 towers per year, making Sabre the largest tower manufacturer in the United States. We currently have 109 self-supporting towers on our production schedule.

Company ID Number: 128253

THE E-VERIFY PROGRAM FOR EMPLOYMENT VERIFICATION

MEMORANDUM OF UNDERSTANDING

ARTICLE I

PURPOSE AND AUTHORITY

This Memorandum of Understanding (MOU) sets forth the points of agreement between the Social Security Administration (SSA), the Department of Homeland Security (DHS) and **Sabre Towers and Poles** (Employer) regarding the Employer's participation in the Employment Eligibility Verification Program (E-Verify). E-Verify is a program in which the employment eligibility of all newly hired employees will be confirmed after the Employment Eligibility Verification Form (Form I-9) has been completed.

Authority for the E-Verify program is found in Title IV, Subtitle A, of the Illegal Immigration Reform and Immigrant Responsibility Act of 1996 (IIRIRA), Pub. L. 104-208, 110 Stat. 3009, as amended (8 U.S.C. § 1324a note).

ARTICLE II

FUNCTIONS TO BE PERFORMED

A. RESPONSIBILITIES OF THE SSA

1. Upon completion of the Form I-9 by the employee and the Employer, and provided the Employer complies with the requirements of this MOU, SSA agrees to provide the Employer with available information that allows the Employer to confirm the accuracy of Social Security Numbers provided by all newly hired employees and the employment authorization of U.S. citizens.
2. The SSA agrees to provide to the Employer appropriate assistance with operational problems that may arise during the Employer's participation in the E-Verify program. The SSA agrees to provide the Employer with names, titles, addresses, and telephone numbers of SSA representatives to be contacted during the E-Verify process.
3. The SSA agrees to safeguard the information provided by the Employer through the E-Verify program procedures, and to limit access to such information, as is appropriate by law, to individuals responsible for the verification of Social Security Numbers and for evaluation of the E-Verify program or such other persons or entities who may be authorized by the SSA as governed by the Privacy Act (5 U.S.C. § 552a), the Social Security Act (42 U.S.C. 1306(a)), and SSA regulations (20 CFR Part 401).
4. SSA agrees to establish a means of automated verification that is designed (in conjunction with DHS's automated system if necessary) to provide confirmation or tentative nonconfirmation of U.S. citizens' employment eligibility and accuracy of SSA records for both citizens and aliens within 3 Federal Government work days of the initial inquiry.

Company ID Number: 128253

**INFORMATION REQUIRED
FOR THE E-VERIFY PROGRAM**

Information relating to your Company:

Company Name: Sabre Towers and Poles

Company Facility Address: 2101 Murray Street
Sioux City, IA 51111

Company Alternate Address: _____

County or Parish: WOODBURY

Employer Identification Number: 421078988

North American Industry Classification Systems Code: 332

Parent Company: Sabre Industries, Inc.

Number of Employees: 100 to 499 Number of Sites Verified for: 2

Are you verifying for more than 1 site? If yes, please provide the number of sites verified for in each State.

- IOWA 2 site(s)

Information relating to the Program Administrator(s) for your Company on policy questions or operational problems:

Name:	Janet Fuller	Fax Number:	(712) 277 - 4134
Telephone Number:	(712) 224 - 1588		
E-mail Address:	jfuller@sabrecom.com		
Name:	Paula Peterson	Fax Number:	(712) 277 - 4134
Telephone Number:	(712) 224 - 1520		
E-mail Address:	ppeterson@sabrecom.com		
Name:	Erin Baird	Fax Number:	(712) 277 - 4134
Telephone Number:	(712) 224 - 1584		
E-mail Address:	ebaird@sabrecom.com		

(Please complete and return with Bid)

Certification Regarding
Debarment, Suspension, Ineligibility and Voluntary Exclusion
Lower Tier Covered Transactions

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 29 CFR Part 98 Section 98.510, Participants' responsibilities. The regulations were published as Part VII of the May 26, 1988, Federal Register (pages 19160-19211).

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS FOR CERTIFICATION)

- (1) The prospective recipient of Federal assistance funds certifies, by submission of this proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective recipient of Federal assistance funds is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

Mark E. Gothier, Government Projects Manager

Name and Title of Authorized Representative

Mark E. Gothier

Signature

9/1/2015

Date



BOONE COUNTY, MISSOURI
Request for Bid #: 55-03SEP15 – Radio Tower Design, Engineering and Fabrication
Services for Battle School Project

ADDENDUM #1 - Issued August 21, 2015

This addendum is issued and is hereby incorporated into and made a part of the Request for Bid Documents. Bidders are reminded that receipt of this addendum should be acknowledged and submitted with Bidder's response.

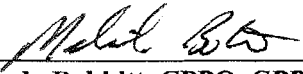
Specifications for the above noted Request for Bid and the work covered thereby are herein modified as follows, and except as set forth herein, otherwise remain unchanged and in full force and effect.

The County received the following question and is providing a response below:

1) **Who is proving installation of the tower?**

Response: Tower foundation construction and installation will be provided by others on later bids.

By:


Melinda Bobbitt, CPPO, CPPB
Director of Boone County Purchasing

BIDDER has examined **Addendum #1** to Request for Bid# 55-03SEP05 – *Radio Tower Design, Engineering and Fabrication Services for Battle School Project*, for Boone County Purchasing, receipt of which is hereby acknowledged:

Company Name: Sabre Communications Corporation

Address: 7101 Southbridge Drive, Sioux City, IA 51111

Phone Number: (712) 224-1550 Fax Number: (712) 279-0814

E-mail: megothier@sabreindustries.com

Authorized Representative Signature:  Date: 9/1/2015

Authorized Representative Printed Name: Mark E. Gothier



BOONE COUNTY, MISSOURI
Request for Bid #: 55-03SEP15 – Radio Tower Design, Engineering and Fabrication
Services for Battle School Project

ADDENDUM #2 - Issued August 27, 2015

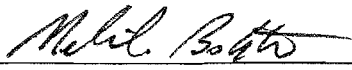
This addendum is issued and is hereby incorporated into and made a part of the Request for Bid Documents. Bidders are reminded that receipt of this addendum should be acknowledged and submitted with Bidder's response.

Specifications for the above noted Request for Bid and the work covered thereby are herein modified as follows, and except as set forth herein, otherwise remain unchanged and in full force and effect.

Clarification and change to bid:

CHANGE line items 11 and 16 to part number 5960110

By:


Melinda Bobbitt, CPPO, CPPB
Director of Boone County Purchasing

BIDDER has examined **Addendum #2** to Request for Bid# 55-03SEP05 – *Radio Tower Design, Engineering and Fabrication Services for Battle School Project*, for Boone County Purchasing, receipt of which is hereby acknowledged:

Company Name: Sabre Communications Corporation

Address: 7101 Southbridge Drive, Sioux City, IA 51111

Phone Number: (712) 224-1550 Fax Number: (712) 279-0814

E-mail: megothier@sabreindustries.com

Authorized Representative Signature:  Date: 9/1/2015

Authorized Representative Printed Name: Mark E. Gothier



September 1, 2015

BOONE COUNTY
613 E. Ash Street
Columbia, MO 65201

Attn: Melinda Bobbitt, CPPO, CPPB
Director of Purchasing

Dear Ms. Bobbitt:

As per the Request for Bid (RFB) #55-03SEP15, please find following our quotation for the Radio Tower Design, Engineering and Fabrications Services for Battle School project as specified.

Sabre Industries, Inc. is the parent company of Sabre Communications Corporation, CellXion, LLC and Midwest Underground Technology, Inc. (MUTI). Their combined operations include: Sabre Towers and Poles, Sabre Site Solutions, Sabre Tubular Structures, Sabre Government Systems, Sabre Building Systems by CellXion and Midwest Underground Technology. Sabre provides infrastructure products and services throughout the United States and Internationally. Sabre is capable of offering a single, turnkey infrastructure solution with both products and services. Established in 1977, Sabre builds approximately 3,000 towers per year – making Sabre the largest tower manufacturer in the United States.

We use a number of professional management tools which enable us to view any program adjustments that may arise and how it will affect the overall schedule. This project schedule will be shared with all parties involved with the project via weekly project status report submittals.

Our engineering design personnel at our Sioux City facility have the responsibility for fulfilling/accomplishing the tower requirements as defined by the design documents including engineering drawings, specifications, basis of design criteria and drawing clarifications. Accreditation and certifications for our Engineering department includes Professional Engineers licensed in all 50 states, Puerto Rico, District of Columbia and Guam. Professional tools include AutoCAD design and drafting software, Microsoft Project and Primavera scheduling software and Guymast tower design and analysis software.


Engineering and manufacturing personnel perform the manufacturing activities for the tower which will be manufactured to customer designated requirements. Our Quality Control, receiving inspection, and production and management teams collaborate to ensure each structure is manufactured exactly to our drawings, on time and within budget. Sabre also requires a structured and detailed QA through monitored and schedules inspections to verify the work is completed in accordance with design and assure that both the quality and contractual requirements are met.

We at Sabre Communications Corporation feel that with our vast experience and with the assembled team of highly qualified employees and suppliers, we can provide Boone County with quality products that will meet your high expectations.

If you have any questions or require further information, please feel free to contact me at (800) 369-6690, ext. 11550.

Sincerely,

SABRE COMMUNICATIONS CORPORATION

A handwritten signature in cursive script that reads "Mark E. Gothier".

Mark E. Gothier

Government Projects Manager

Enclosure: Per Above

MEG: rr



DESCRIPTIVE OUTLINE

Prepared for: **BOONE COUNTY**
 613 E. Ash Street
 Columbia, MO 65201
 Attn: Melinda Bobbitt

Proposal No.: **16-2545-MEG-GOV**
 Date: **9/1/2015** Page **1** of **3**
 Reference: **170' Monopole/Battle School, MO**
 Freight: **Destination**

SABRE MONOPOLE

Quantity of one (1) Sabre Monopole. The monopole has a steel height of 169' plus a 1' rotatable top hub mount for an overall height of 170'. The total height of this monopole includes the foundation projection.

The monopole will be eighteen-sided and tapered in design with a top diameter of 16" and a base diameter of 59.69".

The monopole will be designed for a basic wind speed of 90 mph with 0" of radial ice, and 40 mph with 1" of radial ice, in accordance with ANSI/TIA-222-G.

Revision G Parameters:

- Structure Class III
- Exposure Category C
- Topographic Category 1

***Refer to Notes section for definitions of Revision G parameters.*

The monopole will be designed to support the following equipment:

	ANTENNA MODEL NUMBER (QTY)	RADOME		ELEVATION C.O.R.	TX. LINE SIZE & TYPE	FREQUENCY	AZIMUTH TO NORTH	ANTENNA MOUNT	MOUNT PROVIDED	
		YES	NO						YES	NO
1	(6) 20" x 20" x 5" Panels		X	170'	(6) 1/2"	N/A	Unknown	12' LP Platform with Handrail with Rotatable Top Hub Mount	X	
2	(1) ATC-GD1V40 Antenna		X	170' At Base	(2) 7/8"	N/A	Unknown	Same as above	X	
3	(3) DB222 Decibel Antenna's		X	170' At Base	(3) 7/8"	N/A	Unknown	Same as above	X	
6	(1) SP3-5.2 Antenna		X	170'	(1) 5/8"	6 GHz	0°	One (1) Pipe Mount (up to 6' Dish) with Collar Mount		X
7	(12) 5960110 Antenna's		X	155'	(12) 1 5/8"	N/A	Unknown	12' Low Profile Platform with Collar Mount		X
8	(3) Tower Top Amplifiers		X	155'	(3) 1 5/8"	N/A	Unknown	Same as above		X
9	(12) 5960110 Antenna's		X	140'	(12) 1 5/8"	N/A	Unknown	12' Low Profile Platform with Collar Mount		X
10	(3) Tower Top Amplifiers		X	140'	(3) 1 5/8"	N/A	Unknown	Same as above		X
11	(12) 5960110 Antenna's		X	125'	(12) 1 5/8"	N/A	Unknown	12' Low Profile Platform with Collar Mount		X
12	(3) Tower Top Amplifiers		X	125'	(3) 1 5/8"	N/A	Unknown	Same as above		X
13	(1) ATC-GD1V40 Antenna		X	100' At Base	(2) 7/8"	N/A	Unknown	One (1) 3' Sidearm with Collar Mount	X	
14	(1) ATC-GD1V40 Antenna		X	75' At Base	(2) 7/8"	N/A	Unknown	One (1) 3' Sidearm with Collar Mount	X	
15	(3) DB224 Decibel Antenna's		X	20' At Base	(3) 1/2"	N/A	Unknown	Three (3) 3' Sidearms with Collar Mount	X	



DESCRIPTIVE OUTLINE

Prepared for: BOONE COUNTY
613 E. Ash Street
Columbia, MO 65201
Attn: Melinda Bobbitt

Proposal No.: 16-2545-MEG-GOV
Date: 9/1/2015 Page 2 of 3
Reference: 170' Monopole/Battle School, MO
Freight: Destination

ITEM I MONOPOLE MATERIALS

Materials to be provided include:

- Complete monopole steel and hardware
Anchor bolts and templates, (18) bolts 84" long
Step Bolts
12' LP Platform with handrail with rotatable top hub Mount at the 170' elevation
One (1) 3' sidearm with collar mount at the 100' elevation
One (1) 3' sidearm with collar mount at the 75' elevation
Three (3) 3' sidearms with collar mount at the 20' elevation
Eight (8) 6" x 12" access ports with J hooks (see notes)
Nine (9) 8" x 20" access ports with J hooks (see notes)
Four (4) 10.5" x 25.5" access ports (see notes)
200' safety climb without harness
P.E. certified profile drawings (see notes)
P.E. certified foundation design (see notes)
Final erection drawings

MONOPOLE FREIGHT TO BOONE COUNTY, MISSOURI

ANCHOR BOLT FREIGHT TO BOONE COUNTY, MISSOURI

NOTES: Terms are Net 30 days after invoice.

Classification of Structure:

- Class Three
Structures used primarily for essential communications such as: civil or national defense, emergency, rescue or other disaster operations, military and navigation facilities.

Exposure Category:

- Exposure C
Open terrain with scattered obstructions having heights generally less than 30 feet. This category includes flat, open country, grasslands and shorelines in hurricane prone regions. Exposure C is the standard default for exposure categories.

Topographic Category:

- Category 1
No abrupt changes in general topography, e.g. flat or rolling, no wind speed-up consideration shall be required. Category one is the standard default for the topographic categories.

This quotation is based on ANSI/TIA-222-G and Customer provided specifications. Any information not provided by ANSI/TIA-222-G or the Customer has not been considered.

Foundation and anchor bolt designs are based strictly on ANSI/TIA-222-G.



DESCRIPTIVE OUTLINE

Prepared for: **BOONE COUNTY**
613 E. Ash Street
Columbia, MO 65201
Attn: Melinda Bobbitt

Proposal No.: **16-2545-MEG-GOV**
Date: **9/1/2015** Page 3 of 3
Reference: **170' Monopole/Battle School, MO**
Freight: **Destination**

Dimensional information is preliminary only; it may change based on final engineering without altering the basic tower configuration.

All Sabre mounts are designed in accordance with antenna specifications.

Grounding is to be provided by others.

Cable type safety climbing device provided does not include harness.

Sabre's standard access port size is 6" x 12".

Four (4) access ports will be provided. Elevations and azimuths must be specified at the time of order.

Freight charges quoted are for provided materials only. Additional freight charges may be incurred with the order of additional items.

All antennas, transmission lines, jumpers, ground kits, hangers, and hardware are to be provided and installed by others.

All monopole materials will be hot dip galvanized as outlined in ASTM A-123.

The permit package includes a profile drawing of the structure with member sizes; descriptive notes; structural calculations; a table of supported antennas, mounts and feedlines; and a foundation sketch and calculations (if applicable).

Title, ownership, risk of loss, risk of material obsolescence and risk of material market value decline shall pass to the Customer upon invoicing or shipment to Customer, whichever occurs earlier in time.

Delivery will be approximately 6 to 8 weeks after receipt of approved order.

The logo for Sabre Communications Corporation features the company name in a bold, sans-serif font. The word "Sabre" is on the top line, and "Communications Corporation" is on the bottom line. A stylized, curved graphic element, resembling a swoosh or a signal wave, arches over the text from the left side, ending under the "n" in "Corporation".

Sabre CommunicationsTM Corporation

ONE (1) YEAR LIMITED WARRANTY

Sabre Communications Corporation (Sabre) warrants to Buyer that the products from a period of one (1) year will be free from defects of material and workmanship. This Warranty covers design, fabrication, foundations, erection and all other goods supplied with the original tower by Sabre, which are not specifically excluded in this Warranty. Certain items are not covered under this Warranty. These items include, but are not limited to: antennas, lines, and related ancillary equipment, lighting equipment, light bulbs, or other materials. In addition, Sabre does not warrant defects or failure caused by any of the following items, which include, but are not limited to: normal wear and tear, vandalism, faulty installation by Buyer or its employees or agents, failure due to winds and/or ice that exceed the Buyer's design requirements, anchor failure caused by electrolytic corrosion, flying objects, improper modifications or repair, lightning, flood, earthquake, vehicles, or animals. This Warranty will remain valid for the period set forth only if you do the following:

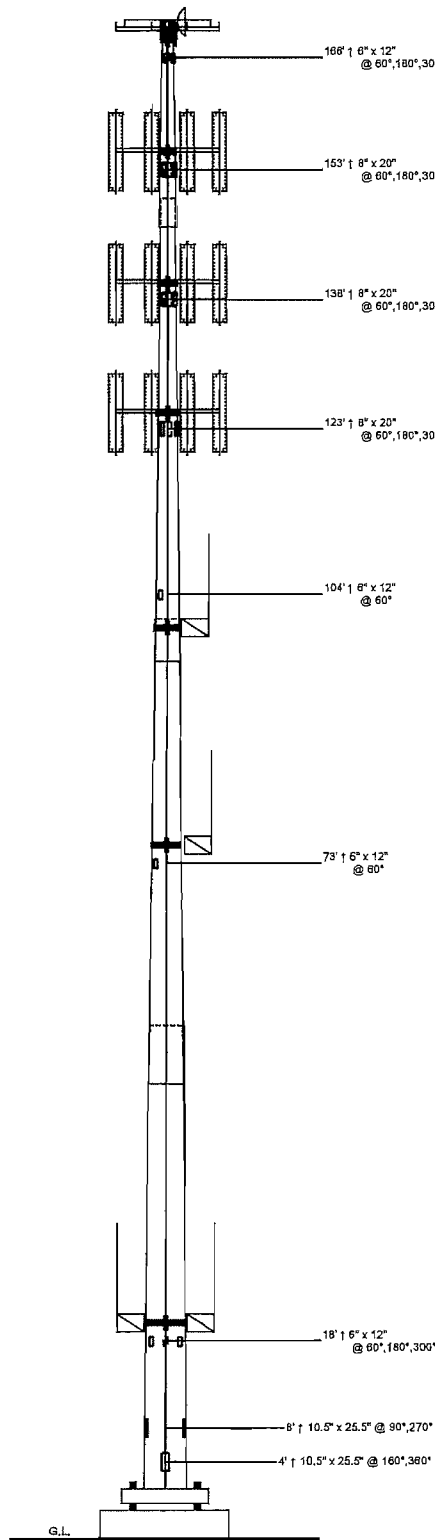
- a. Make adequate tower and site inspections at six-month intervals;
- b. Perform proper maintenance of the tower pursuant to industry standards;
- c. Maintain inspection/maintenance reports; and,
- d. Maintain load levels at or under design parameters.

If the tower is loaded with antennas, lines or appurtenances, which overstress the tower beyond its original design parameters, or if you fail to do required inspections and/or maintenance, then this Warranty shall be null and void, not merely voidable. In addition, Sabre retains the right, in the event of a claim under this Warranty, to inspect the tower and fully investigate all claims. In the event of a claim under this Warranty, which, after inspection and full investigation by Sabre, Sabre determines, in its sole discretion, to be covered by the Warranty, then Sabre's sole obligation under these Warranties will be limited to either, at Sabre's option and expense, repairing, furnishing and installing replacement of failed components at this site, first point of shipment for the products or parts thereof which Sabre reasonably determines do not conform with these warranties, and Buyer's exclusive remedy for breach of any such warranties will be enforcement of such obligation of Sabre. IN NO EVENT SHALL SABRE BE LIABLE FOR CONSEQUENTIAL DAMAGES, NOR SHALL SABRE'S LIABILITY ON ANY CLAIMS FOR DAMAGES ARISING OUT OF OR CONNECTED WITH THE SALES CONTRACT OR THE MANUFACTURE, SALE, DELIVERY OR USE OF PRODUCTS EXCEED THE PURCHASE PRICE OF THE PRODUCTS. ANY ACTION FOR BREACH OF WARRANTY MUST BE COMMENCED WITHIN ONE (1) YEAR AFTER THE CAUSE OF ACTION ACCRUES.

DISCLAIMER OF OTHER WARRANTIES

THIS DOCUMENT IS A COMPLETE AND EXCLUSIVE STATEMENT OF THE WARRANTIES OFFERED BY THE SELLER. THERE ARE NO WARRANTIES BEYOND THOSE EXPRESSLY STATED IN THIS WRITING. THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR PURPOSE AND OF ANY OTHER TYPE, WHETHER EXPRESSED OR IMPLIED.

Section	1	2	3	4
Length (ft)	22'-9"	53'-6"	53'-6"	53'-3"
Number Of Sides	18	18	18	18
Thickness (in)	1/4"	5/16"	3/8"	7/16"
Lap Splice (ft)	A	5'-0"	6'-9"	
Top Diameter (in)	16"	20.79"	33.32"	45.25"
Bottom Diameter (in)	22.17"	35.3"	47.83"	59.69"
Taper (in/ft)			0.2712	
Grade		A572-65	A572-65	
Weight (lbs)	1470	5650	9266	15797
Overall Steel Height (ft)			168	



Designed Appurtenance Loading

Elev	Description	Tx-Line
170	(1) ATC-GD1V40	(2) 7/8"
170	(3) DB222e	(3) 7/8"
170	(1) SP3-5.2	(1) 5/8"
170	(6) 20" x 20" x 5" Junction Boxes	(6) 1/2"
169	L.P. Platform (Monopole Only) - 12' w/ Handrail	
168	(1) Dish Mount (Monopole Only) - Pipe Mount (up to 6' Dish)	
155	L.P. Platform (Monopole Only) - 12'	
155	(3) Tower Top Amplifiers	(3) 1 5/8"
155	(12) 5960110s	(12) 1 5/8"
140	L.P. Platform (Monopole Only) - 12'	
140	(3) Tower Top Amplifiers	(3) 1 5/8"
140	(12) 5960110s	(12) 1 5/8"
125	L.P. Platform (Monopole Only) - 12'	
125	(3) Tower Top Amplifiers	(3) 1 5/8"
125	(12) 5960110s	(12) 1 5/8"
111	(1) ATC-GD1V40	(2) 7/8"
100	3ft Sidearm	
86	(1) ATC-GD1V40	(2) 7/8"
75	3ft Sidearm	
31.62	(3) DB224s	(3) 1/2"
20	(3) 3ft Sidearms	

Load Case Reactions

Description	Axial (kips)	Shear (kips)	Moment (ft-k)	Deflection (ft)	Sway (deg)
3s Gusted Wind	61.07	48.2	5977.96	15.67	10.74
3s Gusted Wind 0.9 Dead	45.77	48.21	5879.85	15.29	10.44
3s Gusted Wind&Ice	104.09	12.63	1711.22	4.87	3.44
Service Loads	50.9	10.42	1289.93	3.46	2.34

Base Plate Dimensions

Shape	Diameter	Thickness	Bolt Circle	Bolt Qty	Bolt Diameter
Round	72.5"	2.25"	66.75"	18	2.25"

Anchor Bolt Dimensions

Length	Diameter	Hole Diameter	Weight	Type	Finish
84"	2.25"	2.625"	2179.8	A615-75	Galv-18"

Material List

Display	Value
A	3' - 3"

Notes

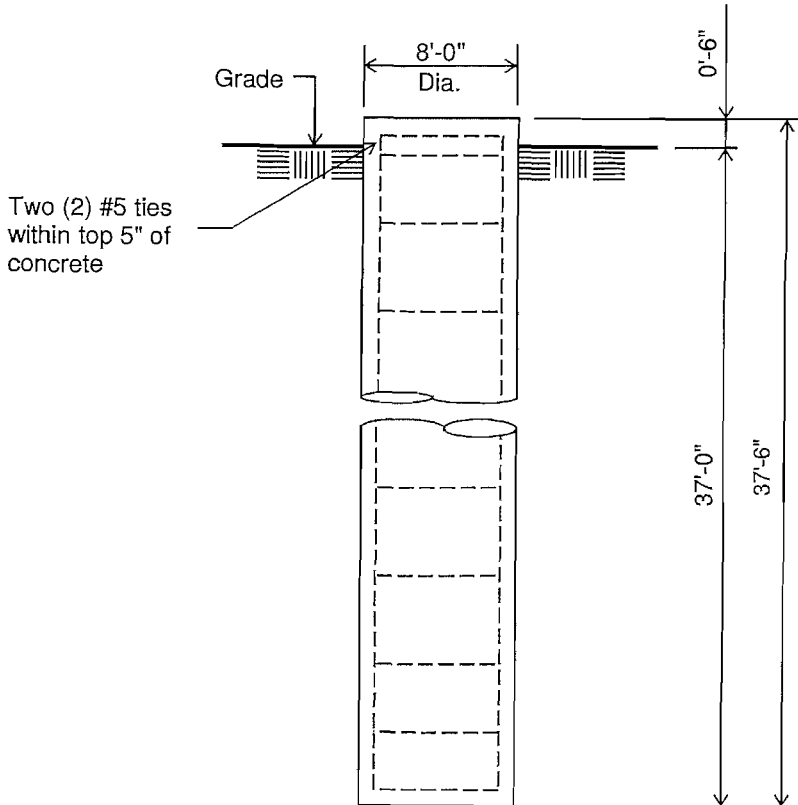
- 1) Antenna Feed Lines Run Inside Pole
- 2) All dimensions are above ground level, unless otherwise specified.
- 3) Weights shown are estimates. Final weights may vary.
- 4) The Monopole was designed for a basic wind speed of 90 mph with 0" of radial ice, and 40 mph with 1" of radial ice, in accordance with ANSI/TIA-222-G, Structure Class III, Exposure Category C, Topographic Category 1.
- 5) Full Height Step Bolts

	Sabre Communications Corporation 7101 Southbridge Drive P.O. Box 658 Sioux City, IA 51102-0658 Phone: (712) 256-6990 Fax: (712) 279-8514	Job: 16-2545-MEG Customer: BOONE COUNTY Site Name: Battle School, MO Description: 170' Monopole Date: 9/1/2015 By: REB
	<small>Information contained herein is the sole property of Sabre Communications Corporation, constitutes a trade secret as defined by Iowa Code Ch. 550 and shall not be reproduced, copied or used in whole or part for any purpose whatsoever without the prior written consent of Sabre Communications Corporation.</small>	

Customer: BOONE COUNTY

Site: Battle School, MO

170' Monopole at
90 mph Wind with no ice and 40 mph Wind with 1 in. Ice per ANSI/TIA-222-G.
Antenna Loading per Page 1



ELEVATION VIEW
(69.81 Cu. Yds. each)
(1 REQUIRED; NOT TO SCALE)

Notes:

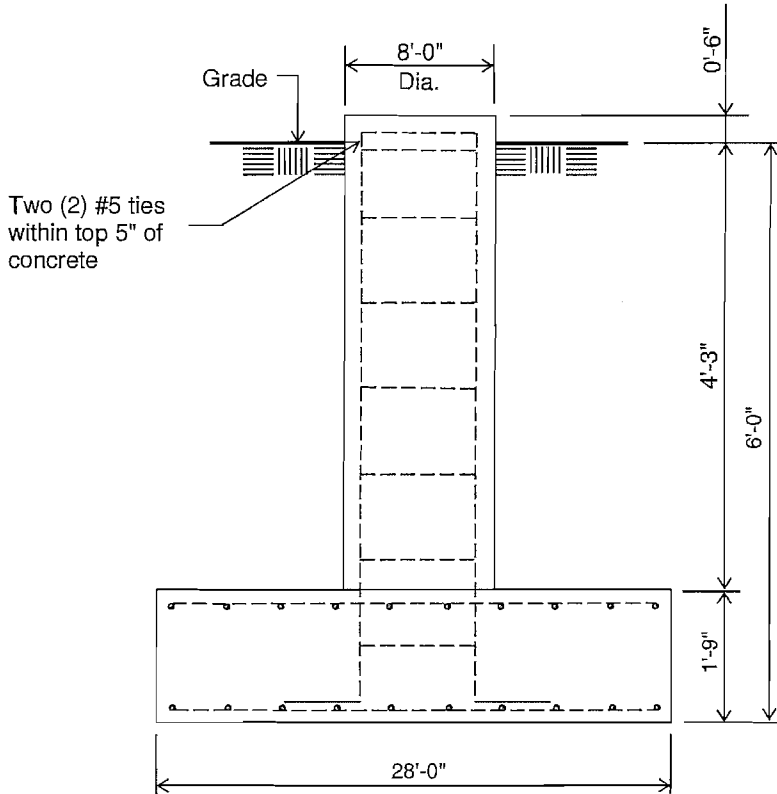
- 1). Concrete shall have a minimum 28-day compressive strength of 4000 PSI, in accordance with ACI 318-05.
- 2). Rebars to conform to ASTM specification A615 Grade 60.
- 3). All rebar to have a minimum of 3" concrete cover.
- 4). All exposed concrete corners to be chamfered 3/4".
- 5). The foundation design is based on the geotechnical report by Crockett GTL, Project No. G15046, dated July 20, 2015
- 6). See the geotechnical report for drilled pier installation requirements, if specified.
- 7). The foundation is based on the following factored loads:
Moment (kip-ft) = 5977.96
Axial (kips) = 61.07
Shear (kips) = 48.2

Rebar Schedule per Pier	
Pier	(36) #10 vertical rebar w/#5 ties, two within top 5" of pier then 7" C/C

8). This is a design drawing only. Please see final construction drawings for all installation details.

Customer: BOONE COUNTY
Site: Battle School, MO

170' Monopole at
90 mph Wind with no ice and 40 mph Wind with 1 in. Ice per ANSI/TIA-222-G.
Antenna Loading per Page 1



ELEVATION VIEW
(59.66 Cu. Yds.)
(1 REQUIRED; NOT TO SCALE)

Notes:

- 1). Concrete shall have a minimum 28-day compressive strength of 4500 PSI, in accordance with ACI 318-05
- 2). Rebar to conform to ASTM specification A615 Grade 60.
- 3). All rebar to have a minimum of 3" concrete cover.
- 4). All exposed concrete corners to be chamfered 3/4".
- 5). The foundation design is based on the geotechnical report by Crockett GTL, Project No. G15046, dated July 20, 2015
- 6). See the geotechnical report for compaction requirements, if specified.
- 7). The foundation is based on the following factored loads:
Moment (kip-ft) = 5977.96
Axial (kips) = 61.07
Shear (kips) = 48.2

Rebar Schedule per Pad and Pier	
Pier	(38) #9 vertical rebar w/ hooks at bottom w/ #5 ties, two within top 5" of top of pier then 12" C/C
Pad	(44) #9 horizontal rebar evenly spaced each way top and bottom (176 total)

- 8). This is a design drawing only. Please see final construction drawings for all installation details.
- 9). 4.25 ft of soil cover is required over the entire area of the foundation slab.

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170' Monopole / Battle School, MO

* All pole diameters shown on the following pages are across corners.
 See profile drawing for widths across flats.

=====

POLE GEOMETRY

=====

ELEV	SECTION	No.of	OUTSIDE	THICK	RESISTANCES	SPLICE	...OVERLAP...	
ft	NAME	SIDES	DIAM	-NESS	♦*Pn ♦*Mn	TYPE	LENGTH	RATIO
			in	in	kip ft-kip		ft	ft
169.0	A	18	16.25	0.250	928.5 298.5			
			21.61	0.250	1239.8 534.2			
149.5	A/B	18	21.61	0.250	1239.8 534.2	SLIP	3.25	1.80
			22.01	0.312	1574.4 687.4			
146.2	B	18	22.01	0.312	1574.4 687.4			
			34.46	0.312	2429.6 1677.8			
101.0	B/C	18	34.46	0.312	2429.6 1677.8	SLIP	5.00	1.73
			35.22	0.375	3033.7 2134.4			
96.0	C	18	35.22	0.375	3033.7 2134.4			
			46.69	0.375	3812.9 3575.8			
54.2	C/D	18	46.69	0.375	3812.9 3575.8	SLIP	6.75	1.72
			47.81	0.438	4731.3 4533.1			
47.5	D	18	47.81	0.438	4731.3 4533.1			
			60.61	0.438	5566.9 6787.5			
1.0								

=====

POLE ASSEMBLY

=====

SECTION	BASE	.....BOLTS AT			BASE	OF SECTION.....	CALC
NAME	ELEV	NUMBER	TYPE	DIAM	STRENGTH	THREADS IN	BASE
	ft			in	ksi	SHEAR PLANE	ELEV
							ft
A	146.250	0	A325	0.00	92.0	0	146.250
B	96.000	0	A325	0.00	92.0	0	96.000
C	47.500	0	A325	0.00	92.0	0	47.500
D	1.000	0	A325	0.00	92.0	0	1.000

=====

POLE SECTIONS

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SECTION	No.of	LENGTH	OUTSIDE.DIAMETER		THICK-	MAT-	FLANGE.ID		FLANGE.WELD	
NAME	SIDES		BOT	TOP	NESS	ERIAL	BOT	TOP	..GROUP.ID..	TOP
		ft	* in	* in	in	ID			BOT	
A	18	22.75	22.51	16.25	0.250	1	0	0	0	0
B	18	53.50	35.84	21.11	0.312	2	0	0	0	0
C	18	53.50	48.56	33.83	0.375	3	0	0	0	0
D	18	53.25	60.61	45.94	0.438	4	0	0	0	0

* - Diameter of circumscribed circle

MATERIAL TYPES

TYPE OF SHAPE	TYPE NO	NO OF ELEM.	ORIENT	HEIGHT	WIDTH	.THICKNESS.		IRREGULARITY .PROJECTION.	
			& deg	in	in	WEB	FLANGE	% OF AREA	ORIENT deg
PL	1	1	0.0	22.51	0.25	0.250	0.250	0.00	0.0
PL	2	1	0.0	35.84	0.31	0.312	0.312	0.00	0.0
PL	3	1	0.0	48.56	0.38	0.375	0.375	0.00	0.0
PL	4	1	0.0	60.61	0.44	0.438	0.438	0.00	0.0

& - with respect to vertical

MATERIAL PROPERTIES

MATERIAL TYPE NO.	ELASTIC MODULUS ksi	UNIT WEIGHT pcf	.. STRENGTH ..		THERMAL COEFFICIENT /deg
			Fu ksi	Fy ksi	
1	29000.0	490.0	80.0	65.0	0.00001170
2	29000.0	490.0	80.0	65.0	0.00001170
3	29000.0	490.0	80.0	65.0	0.00001170
4	29000.0	490.0	80.0	65.0	0.00001170

* Only 3 condition(s) shown in full

* Some concentrated wind loads may have been derived from full-scale wind tunnel testing

LOADING CONDITION A

90 mph wind with no ice. Wind Azimuth: 0°

LOADS ON POLE

LOAD TYPE	ELEV ft	APPLY. RADIUS ft	LOAD .AT AZI	LOAD AZI	.....FORCES.....		.....MOMENTS.....	
					HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	169.000	0.00	0.0	0.0	0.0000	0.1860	0.0000	0.0000
C	169.000	0.00	0.0	0.0	2.9043	0.8912	0.0000	0.0000
C	168.000	0.00	0.0	0.0	0.0000	1.0282	0.0000	0.0000
C	168.000	0.00	0.0	0.0	1.4483	2.1973	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.0000	0.1303	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.0056	0.2904	0.0000	0.0000
C	154.000	0.00	0.0	0.0	0.0000	2.8829	0.0000	0.0000
C	154.000	0.00	0.0	0.0	8.5458	3.9504	0.0000	0.0000
C	139.000	0.00	0.0	0.0	0.0000	2.6021	0.0000	0.0000
C	139.000	0.00	0.0	0.0	8.3646	3.9504	0.0000	0.0000
C	124.000	0.00	0.0	0.0	0.0000	2.3213	0.0000	0.0000
C	124.000	0.00	0.0	0.0	8.1674	3.9504	0.0000	0.0000
C	110.000	0.00	0.0	0.0	0.0000	0.1426	0.0000	0.0000
C	110.000	0.00	0.0	0.0	0.5590	0.2966	0.0000	0.0000
C	99.000	0.00	0.0	0.0	0.2718	0.4116	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0000	0.1102	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.5298	0.2966	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.2558	0.5760	0.0000	0.0000
C	30.620	0.00	0.0	0.0	0.0000	0.0441	0.0000	0.0000
C	30.620	0.00	0.0	0.0	0.5805	0.2383	0.0000	0.0000
C	19.000	0.00	0.0	0.0	0.3079	0.9360	0.0000	0.0000
D	169.000	0.00	180.0	0.0	0.0522	0.0540	0.0000	0.0000
D	149.500	0.00	180.0	0.0	0.0620	0.0653	0.0000	0.0000
D	149.500	0.00	180.0	0.0	0.0656	0.1545	0.0000	0.0000
D	146.250	0.00	180.0	0.0	0.0656	0.1545	0.0000	0.0000
D	146.250	0.00	180.0	0.0	0.0706	0.0950	0.0000	0.0000
D	131.167	0.00	180.0	0.0	0.0706	0.0950	0.0000	0.0000
D	131.167	0.00	180.0	0.0	0.0808	0.1114	0.0000	0.0000
D	116.083	0.00	180.0	0.0	0.0808	0.1114	0.0000	0.0000
D	116.083	0.00	180.0	0.0	0.0902	0.1278	0.0000	0.0000
D	101.000	0.00	180.0	0.0	0.0902	0.1278	0.0000	0.0000
D	101.000	0.00	180.0	0.0	0.0960	0.3024	0.0000	0.0000
D	96.000	0.00	180.0	0.0	0.0960	0.3024	0.0000	0.0000
D	96.000	0.00	180.0	0.0	0.0993	0.1761	0.0000	0.0000
D	82.083	0.00	180.0	0.0	0.0993	0.1761	0.0000	0.0000
D	82.083	0.00	180.0	0.0	0.1057	0.1942	0.0000	0.0000

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D	68.167	0.00	180.0	0.0	0.1057	0.1942	0.0000	0.0000
D	68.167	0.00	180.0	0.0	0.1108	0.2124	0.0000	0.0000
D	54.250	0.00	180.0	0.0	0.1108	0.2124	0.0000	0.0000
D	54.250	0.00	180.0	0.0	0.1134	0.4855	0.0000	0.0000
D	47.500	0.00	180.0	0.0	0.1134	0.4855	0.0000	0.0000
D	47.500	0.00	180.0	0.0	0.1129	0.2736	0.0000	0.0000
D	35.875	0.00	180.0	0.0	0.1129	0.2736	0.0000	0.0000
D	35.875	0.00	180.0	0.0	0.1124	0.2913	0.0000	0.0000
D	24.250	0.00	180.0	0.0	0.1124	0.2913	0.0000	0.0000
D	24.250	0.00	180.0	0.0	0.1080	0.3091	0.0000	0.0000
D	12.625	0.00	180.0	0.0	0.1080	0.3091	0.0000	0.0000
D	12.625	0.00	180.0	0.0	0.1083	0.3268	0.0000	0.0000
D	1.000	0.00	180.0	0.0	0.1083	0.3268	0.0000	0.0000

ANTENNA LOADING

=====

.....ANTENNA.....	ATTACHMENT		.....ANTENNA FORCES.....					
TYPE	ELEV	AZI	RAD	AZI	AXIAL	SHEAR	GRAVITY	TORSION
	ft		ft		kip	kip	kip	ft-kip
STD	169.0	0.0	1.4	0.0	0.62	0.00	0.08	0.00

=====

LOADING CONDITION M

90 mph wind with no ice. Wind Azimuth: 0°

LOADS ON POLE

=====

LOAD TYPE	ELEV ft	APPLY.. RADIUS ft	LOAD.. AT AZI	LOAD AZI	.....FORCES.....		.....MOMENTS.....	
					HORIZ kip	DOWN kip	VERTICAL ft-kip	TORSNAL ft-kip
C	169.000	0.00	0.0	0.0	0.0000	0.1395	0.0000	0.0000
C	169.000	0.00	0.0	0.0	2.9043	0.6684	0.0000	0.0000
C	168.000	0.00	0.0	0.0	0.0000	0.7711	0.0000	0.0000
C	168.000	0.00	0.0	0.0	1.4483	1.6480	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.0000	0.0977	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.0056	0.2178	0.0000	0.0000
C	154.000	0.00	0.0	0.0	0.0000	2.1622	0.0000	0.0000
C	154.000	0.00	0.0	0.0	8.5458	2.9628	0.0000	0.0000
C	139.000	0.00	0.0	0.0	0.0000	1.9516	0.0000	0.0000
C	139.000	0.00	0.0	0.0	8.3646	2.9628	0.0000	0.0000
C	124.000	0.00	0.0	0.0	0.0000	1.7410	0.0000	0.0000
C	124.000	0.00	0.0	0.0	8.1674	2.9628	0.0000	0.0000
C	110.000	0.00	0.0	0.0	0.0000	0.1069	0.0000	0.0000
C	110.000	0.00	0.0	0.0	0.5590	0.2225	0.0000	0.0000
C	99.000	0.00	0.0	0.0	0.2718	0.3087	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0000	0.0826	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.5298	0.2225	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.2558	0.4320	0.0000	0.0000
C	30.620	0.00	0.0	0.0	0.0000	0.0331	0.0000	0.0000
C	30.620	0.00	0.0	0.0	0.5805	0.1787	0.0000	0.0000
C	19.000	0.00	0.0	0.0	0.3079	0.7020	0.0000	0.0000
D	169.000	0.00	180.0	0.0	0.0522	0.0405	0.0000	0.0000
D	149.500	0.00	180.0	0.0	0.0620	0.0489	0.0000	0.0000
D	149.500	0.00	180.0	0.0	0.0656	0.1159	0.0000	0.0000
D	146.250	0.00	180.0	0.0	0.0656	0.1159	0.0000	0.0000
D	146.250	0.00	180.0	0.0	0.0706	0.0712	0.0000	0.0000
D	131.167	0.00	180.0	0.0	0.0706	0.0712	0.0000	0.0000
D	131.167	0.00	180.0	0.0	0.0808	0.0835	0.0000	0.0000
D	116.083	0.00	180.0	0.0	0.0808	0.0835	0.0000	0.0000
D	116.083	0.00	180.0	0.0	0.0902	0.0958	0.0000	0.0000
D	101.000	0.00	180.0	0.0	0.0902	0.0958	0.0000	0.0000
D	101.000	0.00	180.0	0.0	0.0960	0.2268	0.0000	0.0000
D	96.000	0.00	180.0	0.0	0.0960	0.2268	0.0000	0.0000
D	96.000	0.00	180.0	0.0	0.0993	0.1320	0.0000	0.0000
D	82.083	0.00	180.0	0.0	0.0993	0.1320	0.0000	0.0000
D	82.083	0.00	180.0	0.0	0.1057	0.1457	0.0000	0.0000
D	68.167	0.00	180.0	0.0	0.1057	0.1457	0.0000	0.0000
D	68.167	0.00	180.0	0.0	0.1108	0.1593	0.0000	0.0000
D	54.250	0.00	180.0	0.0	0.1108	0.1593	0.0000	0.0000
D	54.250	0.00	180.0	0.0	0.1134	0.3641	0.0000	0.0000
D	47.500	0.00	180.0	0.0	0.1134	0.3641	0.0000	0.0000
D	47.500	0.00	180.0	0.0	0.1129	0.2052	0.0000	0.0000
D	35.875	0.00	180.0	0.0	0.1129	0.2052	0.0000	0.0000
D	35.875	0.00	180.0	0.0	0.1124	0.2185	0.0000	0.0000
D	24.250	0.00	180.0	0.0	0.1124	0.2185	0.0000	0.0000
D	24.250	0.00	180.0	0.0	0.1080	0.2318	0.0000	0.0000

	ELEV	RAZ	RAZ	RAZ	AXIAL	SHEAR	GRAVITY	TORSION
D	12.625	0.00	180.0	0.0	0.1080	0.2318	0.0000	0.0000
D	12.625	0.00	180.0	0.0	0.1083	0.2451	0.0000	0.0000
D	1.000	0.00	180.0	0.0	0.1083	0.2451	0.0000	0.0000

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ANTENNA LOADING

.....ANTENNA.....ATTACHMENT.....ANTENNA FORCES.....						
TYPE	ELEV	RAZ	RAZ	RAZ	AXIAL	SHEAR	GRAVITY	TORSION
	ft		ft	ft	kip	kip	kip	ft-kip
STD	169.0	0.0	1.4	0.0	0.62	0.00	0.06	0.00

LOADING CONDITION Y

40 mph wind with 1 ice. Wind Azimuth: 0°

LOADS ON POLE

LOAD TYPE	ELEV	APPLY..	LOAD..	AT	LOAD	.....FORCES.....		.....MOMENTS.....	
	ft	RADIUS	AT	AZI	AZI	HORIZ	DOWN	VERTICAL	TORSNAL
		ft	ft			kip	kip	ft-kip	ft-kip
C	169.000	0.00	0.0	0.0	0.0000	0.0000	0.6567	0.0000	0.0000
C	169.000	0.00	0.0	0.0	1.3841	2.3816	0.0000	0.0000	0.0000
C	168.000	0.00	0.0	0.0	0.0000	1.0282	0.0000	0.0000	0.0000
C	168.000	0.00	0.0	0.0	0.6909	3.0750	0.0000	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.0000	0.1303	0.0000	0.0000	0.0000
C	167.000	0.00	0.0	0.0	0.0006	0.3139	0.0000	0.0000	0.0000
C	154.000	0.00	0.0	0.0	0.0000	2.8829	0.0000	0.0000	0.0000
C	154.000	0.00	0.0	0.0	1.8751	8.8764	0.0000	0.0000	0.0000
C	139.000	0.00	0.0	0.0	0.0000	2.6021	0.0000	0.0000	0.0000
C	139.000	0.00	0.0	0.0	1.8258	8.8265	0.0000	0.0000	0.0000
C	124.000	0.00	0.0	0.0	0.0000	2.3213	0.0000	0.0000	0.0000
C	124.000	0.00	0.0	0.0	1.7726	8.7716	0.0000	0.0000	0.0000
C	110.000	0.00	0.0	0.0	0.0000	0.1426	0.0000	0.0000	0.0000
C	110.000	0.00	0.0	0.0	0.4388	0.8611	0.0000	0.0000	0.0000
C	99.000	0.00	0.0	0.0	0.0721	0.6909	0.0000	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.0000	0.1102	0.0000	0.0000	0.0000
C	85.000	0.00	0.0	0.0	0.4068	0.8469	0.0000	0.0000	0.0000
C	74.000	0.00	0.0	0.0	0.0663	0.8474	0.0000	0.0000	0.0000
C	30.620	0.00	0.0	0.0	0.0000	0.0441	0.0000	0.0000	0.0000
C	30.620	0.00	0.0	0.0	0.3239	1.0001	0.0000	0.0000	0.0000
C	19.000	0.00	0.0	0.0	0.0716	1.6494	0.0000	0.0000	0.0000
D	169.000	0.00	180.0	0.0	0.0139	0.1261	0.0000	0.0000	0.0000
D	162.500	0.00	180.0	0.0	0.0139	0.1261	0.0000	0.0000	0.0000
D	162.500	0.00	180.0	0.0	0.0148	0.1378	0.0000	0.0000	0.0000
D	156.000	0.00	180.0	0.0	0.0148	0.1378	0.0000	0.0000	0.0000
D	156.000	0.00	180.0	0.0	0.0157	0.1495	0.0000	0.0000	0.0000
D	149.500	0.00	180.0	0.0	0.0157	0.1495	0.0000	0.0000	0.0000
D	149.500	0.00	180.0	0.0	0.0164	0.2432	0.0000	0.0000	0.0000
D	146.250	0.00	180.0	0.0	0.0164	0.2432	0.0000	0.0000	0.0000
D	146.250	0.00	180.0	0.0	0.0174	0.1902	0.0000	0.0000	0.0000
D	131.167	0.00	180.0	0.0	0.0174	0.1902	0.0000	0.0000	0.0000
D	131.167	0.00	180.0	0.0	0.0193	0.2198	0.0000	0.0000	0.0000
D	116.083	0.00	180.0	0.0	0.0193	0.2198	0.0000	0.0000	0.0000
D	116.083	0.00	180.0	0.0	0.0210	0.2490	0.0000	0.0000	0.0000
D	101.000	0.00	180.0	0.0	0.0210	0.2490	0.0000	0.0000	0.0000
D	101.000	0.00	180.0	0.0	0.0220	0.4318	0.0000	0.0000	0.0000
D	96.000	0.00	180.0	0.0	0.0220	0.4318	0.0000	0.0000	0.0000
D	96.000	0.00	180.0	0.0	0.0226	0.3108	0.0000	0.0000	0.0000
D	82.083	0.00	180.0	0.0	0.0226	0.3108	0.0000	0.0000	0.0000
D	82.083	0.00	180.0	0.0	0.0237	0.3393	0.0000	0.0000	0.0000
D	68.167	0.00	180.0	0.0	0.0237	0.3393	0.0000	0.0000	0.0000
D	68.167	0.00	180.0	0.0	0.0246	0.3668	0.0000	0.0000	0.0000
D	54.250	0.00	180.0	0.0	0.0246	0.3668	0.0000	0.0000	0.0000
D	54.250	0.00	180.0	0.0	0.0249	0.6461	0.0000	0.0000	0.0000
D	47.500	0.00	180.0	0.0	0.0249	0.6461	0.0000	0.0000	0.0000
D	47.500	0.00	180.0	0.0	0.0247	0.4391	0.0000	0.0000	0.0000
D	1.000	0.00	180.0	0.0	0.0230	0.4915	0.0000	0.0000	0.0000

ANTENNA LOADING

.....ANTENNA.....	.....ATTACHMENT.....	.....ANTENNA FORCES.....						
TYPE	ELEV	RAZ	RAZ	RAZ	AXIAL	SHEAR	GRAVITY	TORSION
	ft		ft	ft	kip	kip	kip	ft-kip
STD	169.0	0.0	1.4	0.0	0.09	0.00	0.31	0.00

=====
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 =====

170' Monopole / Battle School, MO

=====
 MAXIMUM POLE DEFORMATIONS CALCULATED(w.r.t. wind direction)
 =====

MAST ELEV ft	DEFLECTIONS (ft)			ROTATIONS (deg)		
	HORIZONTAL ALONG	ACROSS	DOWN	TILT ALONG	ACROSS	TWIST
169.0	15.67A	-0.39K	2.09A	10.74A	-0.33K	-0.02K
162.5	14.49A	-0.36K	1.87A	10.68A	-0.32K	-0.02K
156.0	13.33A	-0.32K	1.66A	10.52A	-0.31K	-0.02K
149.5	12.19A	-0.29K	1.45A	10.27A	-0.29K	-0.01K
146.2	11.63A	-0.27K	1.35A	10.13A	-0.28K	-0.01K
131.2	9.15A	-0.21K	0.93A	9.20A	-0.23K	-0.01K
116.1	6.93A	-0.15K	0.60A	7.95A	-0.19K	-0.01K
101.0	5.06A	-0.11K	0.37A	6.54A	-0.15K	0.00K
96.0	4.51A	-0.10K	0.31A	6.14A	-0.14K	0.00K
82.1	3.17A	-0.07K	0.18A	4.99A	-0.11K	0.00K
68.2	2.10A	-0.04K	0.09A	3.90A	-0.08K	0.00K
54.2	1.28A	-0.03K	0.04A	2.89A	-0.06K	0.00K
47.5	0.96A	-0.02K	0.03A	2.49A	-0.05K	0.00K
35.9	0.53A	-0.01K	0.01A	1.80A	-0.04K	0.00K
24.2	0.23A	0.00K	0.00B	1.16A	-0.02K	0.00K
12.6	0.06A	0.00K	0.00B	0.56A	-0.01K	0.00K
1.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

=====
 MAXIMUM ANTENNA ROTATIONS
 =====

ELEV ft	ANT AZI deg	ANT TYPE	BEAM DEFLECTIONS (deg)			
			ROLL	YAW	PITCH	TOTAL
169.0	0.0	STD	10.480 D	0.906 K	10.740 A	10.740 A

=====
 MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)
 =====

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR		MOMENT.w.r.t.WIND.DIR		TORSION ft-kip
		ALONG kip	ACROSS kip	ALONG ft-kip	ACROSS ft-kip	
169.0	3.35 Z	3.53 M	0.52 C	0.43 Y	0.43 b	-0.42 I
162.5	8.72 Z	5.32 M	0.52 C	-35.88 A	-3.33 C	-0.49 K

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	8.72 g	5.32 A	-0.53 K	-35.92 A	-3.33 C	-0.49 K
156.0	9.61 g	5.68 A	-0.53 K	-76.64 A	6.83 K	-0.94 K
	9.62 g	5.70 A	-0.54 K	-76.69 A	6.80 K	-0.94 K
149.5	22.35 g	14.64 A	-0.54 K	-162.86 A	10.49 K	-1.23 K
	22.35 Y	14.67 A	-0.52 K	-163.03 A	10.56 K	-1.25 K
146.2	23.14 Y	14.88 A	-0.52 K	-216.72 A	12.38 K	-1.35 K
	23.15 i	14.87 A	-0.63 W	-216.52 A	12.37 K	-1.35 K
131.2	37.44 i	24.29 A	-0.63 W	-548.75 A	22.22 K	-1.76 K
	37.44 j	24.29 A	-0.64 W	-548.76 A	22.22 K	-1.75 K
116.1	51.84 j	33.66 A	-0.64 W	-1034.89 A	32.58 W	-1.79 K
	51.84 j	33.66 A	-0.66 K	-1034.91 A	32.57 W	-1.79 K
101.0	56.60 j	35.57 A	-0.66 K	-1606.36 A	43.14 K	-1.82 K
	56.60 j	35.59 A	-0.70 K	-1606.35 A	43.08 K	-1.81 K
96.0	59.45 j	36.34 A	-0.70 K	-1801.97 A	46.84 K	-1.84 K
	59.45 j	36.25 M	-0.73 K	-1801.85 A	46.81 K	-1.84 K
82.1	64.73 j	38.15 M	-0.73 K	-2357.74 A	57.62 K	-1.95 K
	64.73 j	38.18 B	-0.71 K	-2357.71 A	57.61 K	-1.95 K
68.2	70.29 j	39.90 B	-0.71 K	-2936.61 A	68.05 K	-2.01 K
	70.29 z	39.90 B	-0.71 K	-2936.61 A	68.06 K	-2.01 K
54.2	75.40 z	41.44 B	-0.71 K	-3532.80 A	78.50 K	-2.06 K
	75.40 z	41.44 B	-0.72 K	-3532.80 A	78.48 K	-2.06 K
47.5	79.76 z	42.21 B	-0.72 K	-3827.86 A	83.53 K	-2.08 K
	79.76 z	42.19 M	-0.72 K	-3827.82 A	83.57 K	-2.08 K
35.9	84.94 z	43.51 M	-0.72 K	-4345.11 A	92.23 K	-2.11 K
	84.94 z	43.50 B	-0.73 K	-4345.12 A	92.22 K	-2.11 K
24.2	91.32 z	45.39 B	-0.73 K	-4876.44 A	100.89 K	-2.12 K
	91.32 z	45.38 B	-0.73 K	-4876.43 A	100.89 K	-2.12 K
12.6	98.45 z	46.94 B	-0.73 K	-5422.17 A	109.49 K	-2.13 K
	98.45 z	46.95 M	-0.73 K	-5422.16 A	109.48 K	-2.13 K
1.0	104.09 z	48.21 M	-0.73 K	-5977.96 A	118.00 K	-2.13 K
base reaction	104.09 z	-48.21 M	0.73 K	5977.96 A	-118.00 K	2.13 K

COMPLIANCE WITH 4.8.2 & 4.5.4

ELEV ft	AXIAL	BENDING	SHEAR + TORSIONAL	TOTAL SATISFIED	D/t(w/t)	MAX ALLOWED	
169.00	0.00Z	0.00Y	0.01M	0.01a	YES	9.52A	45.2
	0.01Z	0.10A	0.01M	0.10A	YES	10.77A	45.2
162.50	0.01g	0.10A	0.01A	0.10A	YES	10.77A	45.2
	0.01g	0.17A	0.01A	0.18A	YES	12.01A	45.2
156.00	0.01g	0.17A	0.01A	0.18A	YES	12.01A	45.2
	0.02g	0.30A	0.02A	0.32A	YES	13.25A	45.2

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149.50	0.01Y	0.25A	0.02A	0.25A	YES	10.25A	45.2
	0.01Y	0.30A	0.02A	0.31A	YES	10.75A	45.2
146.25	0.01i	0.32A	0.02A	0.32A	YES	10.46A	45.2
	0.02i	0.56A	0.03A	0.57A	YES	12.77A	45.2
131.17	0.02j	0.56A	0.03A	0.57A	YES	12.77A	45.2
	0.02j	0.78A	0.03A	0.80A	YES	15.08A	45.2
116.08	0.02j	0.78A	0.03A	0.80A	YES	15.08A	45.2
	0.02j	0.96A	0.03A	0.97A	YES	17.39A	45.2
101.00	0.02j	0.79A	0.02A	0.80A	YES	14.20A	45.2
	0.02j	0.81A	0.02A	0.83A	YES	14.83A	45.2
96.00	0.02j	0.84A	0.02M	0.86A	YES	14.54A	45.2
	0.02j	0.90A	0.02M	0.91A	YES	16.32A	45.2
82.08	0.02j	0.90A	0.02B	0.91A	YES	16.32A	45.2
	0.02j	0.95A	0.02B	0.96A	YES	18.09A	45.2
68.17	0.02Z	0.95A	0.02B	0.96A	YES	18.09A	45.2
	0.02Z	0.99A	0.02B	1.00A	YES	19.86A	45.2
54.25	0.02Z	0.81A	0.02B	0.82A	YES	16.77A	45.2
	0.02Z	0.82A	0.02B	0.83A	YES	17.51A	45.2
47.50	0.02Z	0.84A	0.02K	0.85A	YES	17.21A	45.2
	0.02Z	0.86A	0.02K	0.87A	YES	18.48A	45.2
35.87	0.02Z	0.86A	0.02K	0.87A	YES	18.48A	45.2
	0.02Z	0.87A	0.02K	0.88A	YES	19.75A	45.2
24.25	0.02Z	0.87A	0.02K	0.88A	YES	19.75A	45.2
	0.02Z	0.87A	0.02K	0.89A	YES	21.02A	45.2
12.62	0.02Z	0.87A	0.02K	0.89A	YES	21.02A	45.2
	0.02Z	0.88A	0.02K	0.89A	YES	22.29A	45.2
1.00							

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)

DOWN	SHEAR.w.r.t.WIND.DIR	MOMENT.w.r.t.WIND.DIR	TORSION
kip	ALONG kip	ACROSS kip	ft-kip
	ALONG	ACROSS	
104.09	48.21	-0.73	-2.13
Z	M	K	K

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170' Monopole / Battle School, MO

 ***** service load condition *****

 16-2545-MEG.TXT

* only 1 condition(s) shown in full
 * some concentrated wind loads may have been derived from full-scale wind tunnel testing

LOADING CONDITION A

60 mph wind with no ice, wind azimuth: 0°

LOADS ON POLE

LOADS ON POLE									
LOAD	ELEV	APPLY..LOAD..AT	LOAD	AXIAL	HORIZ	DOWN	VERTICAL	TORSIONAL	MOMENTS
TYPE	ft	RADIUS	AZI	AZI	ktp	ktp	ft-ktp	ft-ktp	ft-ktp
C	169,000	0.00	0.0	0.0	0.0000	0.1550	0.0000	0.0000	0.0000
C	169,000	0.00	0.0	0.0	0.6277	0.7427	0.0000	0.0000	0.0000
C	168,000	0.00	0.0	0.0	0.0000	0.8568	0.0000	0.0000	0.0000
C	168,000	0.00	0.0	0.0	0.3130	1.8311	0.0000	0.0000	0.0000
C	167,000	0.00	0.0	0.0	0.0000	1.1085	0.0000	0.0000	0.0000
C	167,000	0.00	0.0	0.0	0.0012	0.2420	0.0000	0.0000	0.0000
C	167,000	0.00	0.0	0.0	0.0000	2.4024	0.0000	0.0000	0.0000
C	154,000	0.00	0.0	0.0	0.0000	3.2920	0.0000	0.0000	0.0000
C	154,000	0.00	0.0	0.0	1.8469	3.2920	0.0000	0.0000	0.0000
C	139,000	0.00	0.0	0.0	0.0000	2.1684	0.0000	0.0000	0.0000
C	139,000	0.00	0.0	0.0	1.8078	3.2920	0.0000	0.0000	0.0000
C	124,000	0.00	0.0	0.0	0.0000	1.9344	0.0000	0.0000	0.0000
C	124,000	0.00	0.0	0.0	1.7651	3.2920	0.0000	0.0000	0.0000
C	110,000	0.00	0.0	0.0	0.0000	0.1188	0.0000	0.0000	0.0000
C	110,000	0.00	0.0	0.0	0.1208	0.2472	0.0000	0.0000	0.0000
C	99,000	0.00	0.0	0.0	0.0587	0.3430	0.0000	0.0000	0.0000
C	99,000	0.00	0.0	0.0	0.0000	0.0918	0.0000	0.0000	0.0000
C	85,000	0.00	0.0	0.0	0.1145	0.2472	0.0000	0.0000	0.0000
C	85,000	0.00	0.0	0.0	0.0553	0.4800	0.0000	0.0000	0.0000
C	74,000	0.00	0.0	0.0	0.0000	0.0367	0.0000	0.0000	0.0000
C	30,620	0.00	0.0	0.0	0.0000	0.1986	0.0000	0.0000	0.0000
C	30,620	0.00	0.0	0.0	0.1254	0.7800	0.0000	0.0000	0.0000
D	169,000	180.0	0.00	0.0	0.0113	0.0450	0.0000	0.0000	0.0000
D	149,500	180.0	0.00	0.0	0.0134	0.0544	0.0000	0.0000	0.0000
D	149,500	180.0	0.00	0.0	0.0142	0.1288	0.0000	0.0000	0.0000
D	146,250	180.0	0.00	0.0	0.0153	0.0792	0.0000	0.0000	0.0000
D	146,250	180.0	0.00	0.0	0.0153	0.0792	0.0000	0.0000	0.0000
D	131,167	180.0	0.00	0.0	0.0175	0.0928	0.0000	0.0000	0.0000
D	131,167	180.0	0.00	0.0	0.0175	0.0928	0.0000	0.0000	0.0000
D	116,083	180.0	0.00	0.0	0.0175	0.0928	0.0000	0.0000	0.0000
D	116,083	180.0	0.00	0.0	0.0195	0.1065	0.0000	0.0000	0.0000
D	101,000	180.0	0.00	0.0	0.0195	0.1065	0.0000	0.0000	0.0000
D	101,000	180.0	0.00	0.0	0.0207	0.2520	0.0000	0.0000	0.0000
D	96,000	180.0	0.00	0.0	0.0215	0.1467	0.0000	0.0000	0.0000
D	82,083	180.0	0.00	0.0	0.0215	0.1467	0.0000	0.0000	0.0000
D	82,083	180.0	0.00	0.0	0.0228	0.1619	0.0000	0.0000	0.0000
D	68,167	180.0	0.00	0.0	0.0228	0.1619	0.0000	0.0000	0.0000
D	68,167	180.0	0.00	0.0	0.0239	0.1770	0.0000	0.0000	0.0000
D	54,250	180.0	0.00	0.0	0.0239	0.1770	0.0000	0.0000	0.0000
D	54,250	180.0	0.00	0.0	0.0245	0.4046	0.0000	0.0000	0.0000
D	47,500	180.0	0.00	0.0	0.0245	0.4046	0.0000	0.0000	0.0000
D	47,500	180.0	0.00	0.0	0.0244	0.2280	0.0000	0.0000	0.0000
D	35,875	180.0	0.00	0.0	0.0244	0.2280	0.0000	0.0000	0.0000
D	35,875	180.0	0.00	0.0	0.0243	0.2428	0.0000	0.0000	0.0000
D	24,250	180.0	0.00	0.0	0.0243	0.2428	0.0000	0.0000	0.0000
D	24,250	180.0	0.00	0.0	0.0234	0.2575	0.0000	0.0000	0.0000
D	12,625	180.0	0.00	0.0	0.0234	0.2575	0.0000	0.0000	0.0000
D	12,625	180.0	0.00	0.0	0.0234	0.2723	0.0000	0.0000	0.0000

ANTENNA LOADING

ANTENNA FORCES	AXIAL	SHEAR	GRAVITY	TORSION
ft-ktp	ktp	ktp	ktp	ft-ktp
169.0	0.13	0.00	0.06	0.00
1.4	0.0	0.00	0.00	0.00
0.0	0.0	0.00	0.00	0.00

MAXIMUM POLE DEFORMATIONS CALCULATED (w.r.t. wind direction)

MASTDEFLECTIONS (ft).....
ROTATIONS (deg).....

ELEV ft	HORIZONTAL		DOWN	16-2545-MEG.txt TILT		TWIST
	ALONG	ACROSS		ALONG	ACROSS	
169.0	3.46A	0.08C	0.10A	2.34A	0.07C	0.00E
162.5	3.20A	0.07C	0.09A	2.32A	0.06C	0.00E
156.0	2.94B	0.06C	0.08A	2.29A	0.06C	0.00E
149.5	2.68B	0.06C	0.07A	2.23A	0.06C	0.00E
146.2	2.55B	0.05C	0.07A	2.20A	0.06C	0.00E
131.2	2.00B	0.04C	0.05A	2.00A	0.05C	0.00E
116.1	1.51B	0.03C	0.03A	1.72B	0.04C	0.00E
101.0	1.10B	0.02C	0.02A	1.41B	0.03C	0.00E
96.0	0.98B	0.02C	0.02A	1.33B	0.03C	0.00E
82.1	0.69B	0.01C	0.01A	1.08B	0.02C	0.00E
68.2	0.45B	0.01C	0.01A	0.84B	0.02C	0.00E
54.2	0.28B	0.01C	0.00A	0.62B	0.01C	0.00E
47.5	0.21B	0.00C	0.00A	0.54B	0.01C	0.00E
35.9	0.11B	0.00C	0.00A	0.39B	0.01C	0.00E
24.2	0.05B	0.00C	0.00A	0.25B	0.00C	0.00E
12.6	0.01B	0.00C	0.00A	0.12B	0.00C	0.00E
1.0	0.00A	0.00A	0.00A	0.00A	0.00A	0.00A

MAXIMUM ANTENNA ROTATIONS

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ELEV ft	ANT AZI deg	ANT TYPE	BEAM DEFLECTIONS (deg)			TOTAL
			ROLL	YAW	PITCH	
169.0	0.0	STD	-2.282 J	0.042 K	2.336 A	2.336 A

MAXIMUM POLE FORCES CALCULATED(w.r.t. to wind direction)

=====

MAST ELEV ft	TOTAL AXIAL kip	SHEAR.w.r.t.WIND.DIR		MOMENT.w.r.t.WIND.DIR		TORSION ft-kip
		ALONG kip	ACROSS kip	ALONG ft-kip	ACROSS ft-kip	
169.0	0.96 F	0.76 A	-0.11 K	0.08 A	-0.09 J	-0.09 I
162.5	4.30 F	1.15 A	-0.11 K	-7.78 A	-0.68 C	-0.09 I
156.0	4.63 H	1.23 A	0.12 C	-16.67 A	-1.46 C	-0.09 I
149.5	4.63 I	1.23 A	0.12 C	-16.67 A	1.46 K	-0.09 I
146.2	10.66 I	3.16 A	0.12 C	-35.44 A	-2.26 C	-0.09 I
131.2	10.66 I	3.18 A	-0.12 K	-35.40 A	2.26 K	-0.09 I
116.1	11.08 I	3.23 A	-0.12 K	-47.19 A	2.67 K	0.09 E
101.0	11.09 D	3.20 B	-0.12 K	-47.20 A	-2.67 C	0.09 E
82.1	17.75 D	5.24 B	-0.12 K	-119.20 A	4.60 K	0.09 E
68.2	17.74 I	5.24 B	0.12 C	-119.20 A	4.60 K	0.09 E
54.2	24.37 I	7.27 B	0.12 C	-224.39 A	6.60 K	0.10 E
47.5	24.37 I	7.27 B	0.12 C	-224.39 A	6.60 K	0.10 E

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101.0	26.34 I	7.69 B	0.12 C	-347.63 A	8.58 K	0.11 E
	26.34 I	7.70 B	-0.13 K	-347.64 A	8.58 K	0.11 E
96.0	27.94 I	7.87 B	-0.13 K	-389.74 B	9.29 K	0.11 E
	27.94 I	7.84 B	0.13 C	-389.71 A	9.30 K	0.11 E
82.1	30.32 I	8.25 B	0.13 C	-509.56 A	-11.15 C	0.12 E
	30.32 I	8.25 L	0.14 C	-509.56 A	-11.15 C	0.12 E
68.2	33.06 I	8.63 L	0.14 C	-634.20 B	-13.20 C	0.13 E
	33.06 I	8.63 L	0.14 C	-634.21 B	-13.20 C	0.13 E
54.2	35.52 I	8.96 L	0.14 C	-762.53 B	-15.26 C	0.13 E
	35.52 I	8.96 L	0.14 C	-762.55 B	-15.26 C	0.13 E
47.5	38.25 I	9.12 L	0.14 C	-826.07 B	-16.24 C	0.13 E
	38.25 I	9.12 L	0.14 C	-826.06 B	-16.23 C	0.13 E
35.9	40.90 I	9.41 L	0.14 C	-937.43 B	-17.89 C	0.13 E
	40.90 I	9.41 L	0.13 C	-937.43 B	-17.89 C	0.13 E
24.2	43.96 I	9.81 L	0.13 C	-1051.94 B	-19.48 C	0.14 E
	43.96 I	9.81 B	0.13 C	-1051.94 B	-19.48 C	0.14 E
12.6	47.73 I	10.15 B	0.13 C	-1169.74 B	-21.06 C	0.14 E
	47.73 I	10.15 L	0.13 C	-1169.74 B	-21.06 C	0.14 E
1.0	50.90 I	10.42 L	0.13 C	-1289.93 B	-22.62 C	0.14 E
base reaction	50.90 I	-10.42 L	-0.13 C	1289.93 B	22.62 C	-0.14 E

COMPLIANCE WITH 4.8.2 & 4.5.4

ELEV ft	AXIAL	BENDING	SHEAR + TORSIONAL	TOTAL SATISFIED	D/t(w/t)	MAX ALLOWED	
169.00	0.00F	0.00H	0.00A	0.00H	YES	9.52A	45.2
162.50	0.00F	0.02A	0.00A	0.03A	YES	10.77A	45.2
	0.00H	0.02A	0.00A	0.03A	YES	10.77A	45.2
156.00	0.00H	0.04A	0.00A	0.04A	YES	12.01A	45.2
	0.00I	0.04A	0.00A	0.04A	YES	12.01A	45.2
149.50	0.01I	0.07A	0.01A	0.07A	YES	13.25A	45.2
	0.01I	0.05A	0.00A	0.06A	YES	10.25A	45.2
146.25	0.01I	0.07A	0.00A	0.07A	YES	10.75A	45.2
	0.01D	0.07A	0.00B	0.08A	YES	10.46A	45.2
131.17	0.01D	0.12A	0.01B	0.13A	YES	12.77A	45.2
	0.01I	0.12A	0.01B	0.13A	YES	12.77A	45.2
116.08	0.01I	0.17A	0.01B	0.18A	YES	15.08A	45.2
	0.01I	0.17A	0.01B	0.18A	YES	15.08A	45.2
101.00	0.01I	0.21B	0.01B	0.22B	YES	17.39A	45.2
	0.01I	0.17A	0.01B	0.18A	YES	14.20A	45.2
96.00	0.01I	0.18B	0.01B	0.19B	YES	14.83A	45.2

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	0.01I	0.18B	0.01B	0.19B	YES	14.54A	45.2
82.08	0.01I	0.19B	0.00B	0.20B	YES	16.32A	45.2
	0.01I	0.19B	0.00L	0.20B	YES	16.32A	45.2
68.17	0.01I	0.21B	0.00L	0.21B	YES	18.09A	45.2
	0.01I	0.21B	0.00L	0.21B	YES	18.09A	45.2
54.25	0.01I	0.21B	0.00L	0.22B	YES	19.86A	45.2
	0.01I	0.18B	0.00B	0.18B	YES	16.77A	45.2
47.50	0.01I	0.18B	0.00B	0.19B	YES	17.51A	45.2
	0.01I	0.18B	0.00L	0.19B	YES	17.21A	45.2
35.87	0.01I	0.18B	0.00L	0.19B	YES	18.48A	45.2
	0.01I	0.18B	0.00B	0.19B	YES	18.48A	45.2
24.25	0.01I	0.19B	0.00B	0.20B	YES	19.75A	45.2
	0.01I	0.19B	0.00B	0.20B	YES	19.75A	45.2
12.62	0.01I	0.19B	0.00B	0.20B	YES	21.02A	45.2
	0.01I	0.19B	0.00B	0.20B	YES	21.02A	45.2
1.00	0.01I	0.19B	0.00B	0.20B	YES	22.29A	45.2

MAXIMUM LOADS ONTO FOUNDATION(w.r.t. wind direction)

DOWN	SHEAR.w.r.t.WIND.DIR	MOMENT.w.r.t.WIND.DIR	TORSION
kip	ALONG kip	ALONG ft-kip	ft-kip
	ACROSS kip	ACROSS ft-kip	
50.90	10.42	-1289.93	0.14
I	L	B	E
	C	C	



SO#: 16-2545-MEG
 Site Name: Battle School, MO
 Date: 9/1/2015

Round Base Plate and Anchor Rods, per ANSI/TIA 222-G

Pole Data

Diameter: 59.690 in (flat to flat)
 Thickness: 0.4375 in
 Yield (Fy): 65 ksi
 # of Sides: 18 "0" IF Round
 Strength (Fu): 80 ksi

Reactions

Moment, Mu: 5977.96 ft-kips
 Axial, Pu: 61.07 kips
 Shear, Vu: 48.2 kips

Anchor Rod Data

Quantity: 18
 Diameter: 2.25 in
 Rod Material: A615
 Strength (Fu): 100 ksi
 Yield (Fy): 75 ksi
 BC Diam. (in): 66.75 BC Override:

Anchor Rod Results

Maximum Rod (Pu+ Vu/η): 247.6 Kips
 Allowable Φ^*R_{nt} : 260.0 Kips (per 4.9.9)
 Anchor Rod Interaction Ratio: **95.2% Pass**

Plate Data

Diameter (in): 72.5 Dia. Override:
 Thickness: 2.25 in
 Yield (Fy): 50 ksi
 Eff Width/Rod: 10.52 in
 Drain Hole: 2.625 in. diameter
 Drain Location: 27.75 in. center of pole to center of drain hole
 Center Hole: 47.5 in. diameter

Base Plate Results

Base Plate (Mu/Z): 40.9 ksi
 Allowable Φ^*F_y : 45.0 ksi (per AISC)
 Base Plate Interaction Ratio: **90.9% Pass**

LPile Plus for windows, Version 2013-07.005

Analysis of Individual Piles and Drilled Shafts
Subjected to Lateral Loading Using the p-y Method

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Files Used for Analysis

Path to file locations: C:\Progra~2\Ensoft\LPile2013\
Name of input data file: 16-2545-MEG.lp7d
Name of output report file: 16-2545-MEG.lp7o
Name of plot output file: 16-2545-MEG.lp7p
Name of runtime message file: 16-2545-MEG.lp7r

Date and Time of Analysis

Date: September 1, 2015 Time: 9:38:12

Problem Title

170' Monopole BOONE COUNTY Battle School, MO (16-2545-MEG) 9-1-15 BD

Job Number:

Client:

Engineer:

Description:

Program options and Settings

Engineering Units of Input Data and Computations:
- Engineering units are US Customary Units (pounds, feet, inches)

Analysis Control Options:
- Maximum number of iterations allowed = 300
- Deflection tolerance for convergence = 1.0000E-05 in
- Maximum allowable deflection = 100.0000 in
- Number of pile increments = 100

Loading Type and Number of Cycles of Loading:
- Static loading specified

Computational Options:
- Use unfactored loads in computations (conventional analysis)
- compute pile response under loading and nonlinear bending properties of pile
(only if nonlinear pile properties are input)
- Use of p-y modification factors for p-y curves not selected
- Loading by lateral soil movements acting on pile not selected

- Input of shear resistance at the pile tip not selected
- Computation of pile-head foundation stiffness matrix not selected
- Push-over analysis of pile not selected
- Buckling analysis of pile not selected

Output Options:

- No p-y curves to be computed and reported for user-specified depths
- Values of pile-head deflection, bending moment, shear force, and soil reaction are printed for full length of pile.
- Printing Increment (nodal spacing of output points) = 3

Pile Structural Properties and Geometry

Total number of pile sections = 1
Total length of pile = 37.50 ft
Depth of ground surface below top of pile = 0.50 ft
Pile diameter values used for p-y curve computations are defined using 2 points.
p-y curves are computed using pile diameter values interpolated with depth over the length of the pile.

Point	Depth X ft	Pile Diameter in
1	0.00000	96.0000000
2	37.50000	96.0000000

Input Structural Properties:

Pile Section No. 1:

Section Type = Drilled Shaft (Bored Pile)
Section Length = 37.50000 ft
Section Diameter = 96.00000 in

Ground Slope and Pile Batter Angles

Ground Slope Angle = 0.000 degrees
= 0.000 radians
Pile Batter Angle = 0.000 degrees
= 0.000 radians

Soil and Rock Layering Information

The soil profile is modelled using 5 layers

Layer 1 is soft clay, p-y criteria by Matlock, 1970

Distance from top of pile to top of layer = 0.50000 ft
Distance from top of pile to bottom of layer = 3.50000 ft
Effective unit weight at top of layer = 124.93440 pcf
Effective unit weight at bottom of layer = 124.93440 pcf
Undrained cohesion at top of layer = 14.40000 psf
Undrained cohesion at bottom of layer = 14.40000 psf
Epsilon-50 at top of layer = 0.10000
Epsilon-50 at bottom of layer = 0.10000

Layer 2 is stiff clay without free water

Distance from top of pile to top of layer = 3.50000 ft
Distance from top of pile to bottom of layer = 13.50000 ft
Effective unit weight at top of layer = 124.93440 pcf
Effective unit weight at bottom of layer = 124.93440 pcf
Undrained cohesion at top of layer = 1249.92000 psf
Undrained cohesion at bottom of layer = 1249.92000 psf
Epsilon-50 at top of layer = 0.00900
Epsilon-50 at bottom of layer = 0.00900

Layer 3 is stiff clay without free water

Distance from top of pile to top of layer = 13.50000 ft
 Distance from top of pile to bottom of layer = 28.50000 ft
 Effective unit weight at top of layer = 124.93440 pcf
 Effective unit weight at bottom of layer = 124.93440 pcf
 Undrained cohesion at top of layer = 2999.52000 psf
 Undrained cohesion at bottom of layer = 2999.52000 psf
 Epsilon-50 at top of layer = 0.00500
 Epsilon-50 at bottom of layer = 0.00500

Layer 4 is stiff clay without free water

Distance from top of pile to top of layer = 28.50000 ft
 Distance from top of pile to bottom of layer = 30.50000 ft
 Effective unit weight at top of layer = 62.55360 pcf
 Effective unit weight at bottom of layer = 62.55360 pcf
 Undrained cohesion at top of layer = 2999.52000 psf
 Undrained cohesion at bottom of layer = 2999.52000 psf
 Epsilon-50 at top of layer = 0.00500
 Epsilon-50 at bottom of layer = 0.00500

Layer 5 is stiff clay without free water

Distance from top of pile to top of layer = 30.50000 ft
 Distance from top of pile to bottom of layer = 50.50000 ft
 Effective unit weight at top of layer = 62.55360 pcf
 Effective unit weight at bottom of layer = 62.55360 pcf
 Undrained cohesion at top of layer = 2499.84000 psf
 Undrained cohesion at bottom of layer = 2499.84000 psf
 Epsilon-50 at top of layer = 0.00600
 Epsilon-50 at bottom of layer = 0.00600

(Depth of lowest soil layer extends 13.00 ft below pile tip)

 Summary of Soil Properties

Layer Num.	Layer Soil Type (p-y curve Criteria)	Layer Depth ft	Effective Unit wt. pcf	Undrained Cohesion psf	Strain Factor Epsilon 50
1	Soft Clay	0.500	124.934	14.400	0.10000
		3.500	124.934	14.400	0.10000
2	Stiff Clay w/o Free Water	3.500	124.934	1249.920	0.00900
		13.500	124.934	1249.920	0.00900
3	Stiff Clay w/o Free Water	13.500	124.934	2999.520	0.00500
		28.500	124.934	2999.520	0.00500
4	Stiff Clay w/o Free Water	28.500	62.554	2999.520	0.00500
		30.500	62.554	2999.520	0.00500
5	Stiff Clay w/o Free Water	30.500	62.554	2499.840	0.00600
		50.500	62.554	2499.840	0.00600

 Loading Type

Static loading criteria were used when computing p-y curves for all analyses.

 Pile-head Loading and Pile-head Fixity Conditions

Number of loads specified = 1

Load No.	Load Type	Condition 1	Condition 2	Axial Thrust Force, lbs	Compute Top y vs. Pile Length
1	1	V = 64267. lbs	M = 95647360. in-lbs	81427.	No

V = perpendicular shear force applied to pile head
 M = bending moment applied to pile head
 y = lateral deflection relative to pile axis
 s = pile slope relative to original pile batter angle

R = rotational stiffness applied to pile head
 Axial thrust is assumed to be acting axially for all pile batter angles.

 Computations of Nominal Moment Capacity and Nonlinear Bending Stiffness

Axial thrust force values were determined from pile-head loading conditions

Number of Pile Sections Analyzed = 1

Pile Section No. 1:

Dimensions and Properties of Drilled Shaft (Bored Pile):

Length of Section	=	37.50000	ft
Shaft Diameter	=	96.00000	in
Concrete Cover Thickness	=	3.62419	in
Number of Reinforcing Bars	=	36	bars
Yield Stress of Reinforcing Bars	=	60000.	psi
Modulus of Elasticity of Reinforcing Bars	=	29000000.	psi
Gross Area of Shaft	=	7238.22947	sq. in.
Total Area of Reinforcing Steel	=	45.72000	sq. in.
Area Ratio of Steel Reinforcement	=	0.63	percent
Edge-to-Edge Bar Spacing	=	6.35453	in
Maximum Concrete Aggregate Size	=	0.75000	in
Ratio of Bar Spacing to Aggregate Size	=	8.47	
Offset of Center of Rebar Cage from Center of Pile	=	0.0000	in

Axial Structural Capacities:

Nom. Axial Structural Capacity = $0.85 F_c A_c + F_y A_s$	=	27197.733	kips
Tensile Load for Cracking of Concrete	=	-3144.401	kips
Nominal Axial Tensile Capacity	=	-2743.200	kips

Reinforcing Bar Dimensions and Positions Used in Computations:

Bar Number	Bar Diam. inches	Bar Area sq. in.	X inches	Y inches
1	1.27000	1.27000	43.74081	0.00000
2	1.27000	1.27000	43.07629	7.59551
3	1.27000	1.27000	41.10292	14.96024
4	1.27000	1.27000	37.88065	21.87040
5	1.27000	1.27000	33.50740	28.11605
6	1.27000	1.27000	28.11605	33.50740
7	1.27000	1.27000	21.87040	37.88065
8	1.27000	1.27000	14.96024	41.10292
9	1.27000	1.27000	7.59551	43.07629
10	1.27000	1.27000	0.00000	43.74081
11	1.27000	1.27000	-7.59551	43.07629
12	1.27000	1.27000	-14.96024	41.10292
13	1.27000	1.27000	-21.87040	37.88065
14	1.27000	1.27000	-28.11605	33.50740
15	1.27000	1.27000	-33.50740	28.11605
16	1.27000	1.27000	-37.88065	21.87040
17	1.27000	1.27000	-41.10292	14.96024
18	1.27000	1.27000	-43.07629	7.59551
19	1.27000	1.27000	-43.74081	0.00000
20	1.27000	1.27000	-43.07629	-7.59551
21	1.27000	1.27000	-41.10292	-14.96024
22	1.27000	1.27000	-37.88065	-21.87040
23	1.27000	1.27000	-33.50740	-28.11605
24	1.27000	1.27000	-28.11605	-33.50740
25	1.27000	1.27000	-21.87040	-37.88065
26	1.27000	1.27000	-14.96024	-41.10292
27	1.27000	1.27000	-7.59551	-43.07629
28	1.27000	1.27000	0.00000	-43.74081
29	1.27000	1.27000	7.59551	-43.07629
30	1.27000	1.27000	14.96024	-41.10292
31	1.27000	1.27000	21.87040	-37.88065
32	1.27000	1.27000	28.11605	-33.50740
33	1.27000	1.27000	33.50740	-28.11605
34	1.27000	1.27000	37.88065	-21.87040
35	1.27000	1.27000	41.10292	-14.96024
36	1.27000	1.27000	43.07629	-7.59551

NOTE: The positions of the above rebars were computed by LPile

Minimum spacing between any two bars not equal to zero = 6.35453 inches between Bars 22 and 23

Spacing to aggregate size ratio = 8.47270

Concrete Properties:

Compressive Strength of Concrete = 4000.00000 psi
 Modulus of Elasticity of Concrete = 3604997. psi
 Modulus of Rupture of Concrete = -474.34164 psi
 Compression Strain at Peak Stress = 0.00189
 Tensile Strain at Fracture of Concrete = -0.0001154
 Maximum Coarse Aggregate Size = 0.75000 in

Number of Axial Thrust Force Values Determined from Pile-head Loadings = 1

Number	Axial Thrust Force kips
1	81.427

Definitions of Run Messages and Notes:

- C = concrete in section has cracked in tension.
- Y = stress in reinforcing steel has reached yield stress.
- T = ACI 318-08 criteria for tension-controlled section met, tensile strain in reinforcement exceeds 0.005 while simultaneously compressive strain in concrete more than than 0.003. See ACI 318-08, Section 10.3.4.
- Z = depth of tensile zone in concrete section is less than 10 percent of section depth.

Bending Stiffness (EI) = Computed Bending Moment / Curvature.
 Position of neutral axis is measured from edge of compression side of pile.
 Compressive stresses and strains are positive in sign.
 Tensile stresses and strains are negative in sign.

Axial Thrust Force = 81.427 kips

Bending Steel Run Curvature Stress ksi	Bending Moment in-kip	Bending Stiffness kip-in ²	Depth to N Axis in	Max Comp Strain in/in	Max Tens Strain in/in	Max Concrete Stress ksi	Max
0.000000313	5849.1044616	18717134277.	56.2129356	0.0000176	-0.0000124	0.0735255	
0.5050797							
0.000000625	11670.	18671654557.	52.1197234	0.0000326	-0.0000274	0.1357120	
0.9359700							
0.000000938	17461.	18625044848.	50.7554201	0.0000476	-0.0000424	0.1974025	
1.3668630							
0.000001250	23223.	18578149400.	50.0733207	0.0000626	-0.0000574	0.2585969	
1.7977579							
0.000001563	28955.	18531139297.	49.6640988	0.0000776	-0.0000724	0.3192952	
2.2286545							
0.000001875	34658.	18484071836.	49.3913155	0.0000926	-0.0000874	0.3794972	
2.6595528							
0.000002188	40331.	18436971564.	49.1964967	0.0001076	-0.0001024	0.4392031	
3.0904527							
0.000002500	40331.	16132350119.	24.9029214	0.0000623	-0.0001777	0.2547634	
-5.1197382	C						
0.000002813	40331.	14339866772.	24.4292505	0.0000687	-0.0002013	0.2805732	
-5.7983393	C						
0.000003125	40331.	12905880095.	24.0353618	0.0000751	-0.0002249	0.3061032	
-6.4782953	C						
0.000003438	40331.	11732618268.	23.7140831	0.0000815	-0.0002485	0.3315592	
-7.1581523	C						
0.000003750	40331.	10754900079.	23.4436798	0.0000879	-0.0002721	0.3568867	
-7.8382998	C						
0.000004063	40331.	9927600073.	23.2076537	0.0000943	-0.0002957	0.3820081	
-8.5192983	C						
0.000004375	40331.	9218485782.	23.0061465	0.0001007	-0.0003193	0.4070566	
-9.2001951	C						
0.000004688	40331.	8603920063.	22.8322567	0.0001070	-0.0003430	0.4320322	
-9.8809901	C						
0.000005000	40331.	8066175059.	22.6808079	0.0001134	-0.0003666	0.4569347	
-10.5616828	C						
0.000005313	40331.	7591694174.	22.5472179	0.0001198	-0.0003902	0.4817509	
-11.2423692	C						
0.000005625	40331.	7169933386.	22.4236159	0.0001261	-0.0004139	0.5063717	

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-11.9238476 C						
0.000005938	40331.	6792568471.	22.3136405	0.0001325	-0.0004375	0.5309204
-12.6052200 C						
0.000006250	40331.	6452940048.	22.2152493	0.0001388	-0.0004612	0.5553970
-13.2864860 C						
0.000006563	40331.	6145657188.	22.1267892	0.0001452	-0.0004848	0.5798014
-13.9676454 C						
0.000006875	40331.	5866309134.	22.0469075	0.0001516	-0.0005084	0.6041335
-14.6486978 C						
0.000007188	40331.	5611252215.	21.9744869	0.0001579	-0.0005321	0.6283931
-15.3296429 C						
0.000007500	40331.	5377450040.	21.9085961	0.0001643	-0.0005557	0.6525801
-16.0104803 C						
0.000007813	40331.	5162352038.	21.8484530	0.0001707	-0.0005793	0.6766944
-16.6912099 C						
0.000008125	40331.	4963800037.	21.7933957	0.0001771	-0.0006029	0.7007360
-17.3718311 C						
0.000008438	40331.	4779955591.	21.7428606	0.0001835	-0.0006265	0.7247046
-18.0523438 C						
0.000008750	40331.	4609242891.	21.6963644	0.0001898	-0.0006502	0.7486003
-18.7327475 C						
0.000009063	40331.	4450303481.	21.6534906	0.0001962	-0.0006738	0.7724228
-19.4130420 C						
0.000009375	40331.	4301960032.	21.6138780	0.0002026	-0.0006974	0.7961720
-20.0932269 C						
0.000009688	40331.	4163187127.	21.5759815	0.0002090	-0.0007210	0.8198028
-20.7736477 C						
0.0000100	40331.	4033087530.	21.5401479	0.0002154	-0.0007446	0.8433346
-21.4541571 C						
0.0000103	40331.	3910872756.	21.5068715	0.0002218	-0.0007682	0.8667939
-22.1345512 C						
0.0000106	40331.	3795847087.	21.4759280	0.0002282	-0.0007918	0.8901807
-22.8148297 C						
0.0000109	40331.	3687394313.	21.4471186	0.0002346	-0.0008154	0.9134947
-23.4949921 C						
0.0000113	40331.	3584966693.	21.4202665	0.0002410	-0.0008390	0.9367360
-24.1750380 C						
0.0000116	40331.	3488075701.	21.3952142	0.0002474	-0.0008626	0.9599043
-24.8549672 C						
0.0000119	40331.	3396284236.	21.3718208	0.0002538	-0.0008862	0.9829995
-25.5347792 C						
0.0000122	40331.	3309200024.	21.3499597	0.0002602	-0.0009098	1.0060215
-26.2144736 C						
0.0000128	40331.	3147775633.	21.3103901	0.0002730	-0.0009570	1.0518456
-27.5735081 C						
0.0000134	40331.	3001367464.	21.2757202	0.0002859	-0.0010041	1.0973754
-28.9320677 C						
0.0000141	40431.	2875079791.	21.2453046	0.0002988	-0.0010512	1.1426101
-30.2901492 C						
0.0000147	42111.	2867136445.	21.2186075	0.0003116	-0.0010984	1.1875485
-31.6477493 C						
0.0000153	43790.	2859751750.	21.1951811	0.0003246	-0.0011454	1.2321896
-33.0048649 C						
0.0000159	45467.	2852859479.	21.1746475	0.0003375	-0.0011925	1.2765326
-34.3614926 C						
0.0000166	47144.	2846403399.	21.1566863	0.0003504	-0.0012396	1.3205762
-35.7176291 C						
0.0000172	48818.	2840335297.	21.1410235	0.0003634	-0.0012866	1.3643194
-37.0732715 C						
0.0000178	50492.	2834614188.	21.1274238	0.0003763	-0.0013337	1.4077614
-38.4284155 C						
0.0000184	52163.	2829204158.	21.1156838	0.0003893	-0.0013807	1.4509008
-39.7830580 C						
0.0000191	53834.	2824074166.	21.1056270	0.0004023	-0.0014277	1.4937368
-41.1371957 C						
0.0000197	55503.	2819197106.	21.0970992	0.0004153	-0.0014747	1.5362681
-42.4908250 C						
0.0000203	57171.	2814549204.	21.0899654	0.0004284	-0.0015216	1.5784937
-43.8439423 C						
0.0000209	58837.	2810109519.	21.0841067	0.0004414	-0.0015686	1.6204125
-45.1965440 C						
0.0000216	60501.	2805859535.	21.0794181	0.0004545	-0.0016155	1.6620233
-46.5486264 C						
0.0000222	62165.	2801782815.	21.0758065	0.0004676	-0.0016624	1.7033251
-47.9001857 C						
0.0000228	63826.	2797864720.	21.0731891	0.0004807	-0.0017093	1.7443166
-49.2512183 C						
0.0000234	65487.	2794092167.	21.0714920	0.0004939	-0.0017561	1.7849968
-50.6017202 C						
0.0000241	67145.	2790453428.	21.0706489	0.0005070	-0.0018030	1.8253645
-51.9516877 C						
0.0000247	68803.	2786937959.	21.0706006	0.0005202	-0.0018498	1.8654184
-53.3011168 C						
0.0000253	70458.	2783536251.	21.0712936	0.0005334	-0.0018966	1.9051574
-54.6500035 C						

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0.0000259	72112.	2780239709.	21.0726796	0.0005466	-0.0019434	1.9445804
-55.9983437 C						
0.0000266	73765.	2777040539.	21.0747150	0.0005598	-0.0019902	1.9836860
-57.3461335 C						
0.0000272	75416.	2773931664.	21.0773603	0.0005730	-0.0020370	2.0224730
-58.6933687 C						
0.0000278	77066.	2770906635.	21.0805795	0.0005863	-0.0020837	2.0609403
-60.0000000 CY						
0.0000284	78714.	2767959566.	21.0843400	0.0005996	-0.0021304	2.0990865
-60.0000000 CY						
0.0000291	80357.	2764977123.	21.0883428	0.0006129	-0.0021771	2.1368877
-60.0000000 CY						
0.0000297	81876.	2757945155.	21.0824000	0.0006259	-0.0022241	2.1734775
-60.0000000 CY						
0.0000303	83158.	2743343521.	21.0572334	0.0006383	-0.0022717	2.2080297
-60.0000000 CY						
0.0000309	84286.	2724382630.	21.0206302	0.0006503	-0.0023197	2.2411684
-60.0000000 CY						
0.0000316	85356.	2704358518.	20.9811864	0.0006622	-0.0023678	2.2736207
-60.0000000 CY						
0.0000322	86323.	2681872254.	20.9347888	0.0006738	-0.0024162	2.3050168
-60.0000000 CY						
0.0000328	87190.	2657213578.	20.8821674	0.0006852	-0.0024648	2.3354074
-60.0000000 CY						
0.0000334	88052.	2633337486.	20.8315496	0.0006966	-0.0025134	2.3655264
-60.0000000 CY						
0.0000341	88877.	2609238965.	20.7799569	0.0007078	-0.0025622	2.3951113
-60.0000000 CY						
0.0000347	89589.	2582742709.	20.7208301	0.0007188	-0.0026112	2.4235585
-60.0000000 CY						
0.0000353	90262.	2556093105.	20.6608649	0.0007296	-0.0026604	2.4514782
-60.0000000 CY						
0.0000359	90933.	2530312000.	20.6008757	0.0007403	-0.0027097	2.4789502
-60.0000000 CY						
0.0000366	91603.	2505373353.	20.5419159	0.0007511	-0.0027589	2.5060795
-60.0000000 CY						
0.0000372	92247.	2480583889.	20.4828833	0.0007617	-0.0028083	2.5327684
-60.0000000 CY						
0.0000397	94297.	2375989801.	20.2218498	0.0008026	-0.0030074	2.6328417
-60.0000000 CY						
0.0000422	96168.	2279527063.	19.9795361	0.0008429	-0.0032071	2.7281483
-60.0000000 CY						
0.0000447	97640.	2184943026.	19.7327508	0.0008818	-0.0034082	2.8167584
-60.0000000 CY						
0.0000472	99085.	2099804529.	19.5021037	0.0009203	-0.0036097	2.9011193
-60.0000000 CY						
0.0000497	100179.	2016181307.	19.2602432	0.0009570	-0.0038130	2.9786986
-60.0000000 CY						
0.0000522	101197.	1939098953.	19.0370885	0.0009935	-0.0040165	3.0529572
-60.0000000 CY						
0.0000547	102210.	1868979689.	18.8365875	0.0010301	-0.0042199	3.1246576
-60.0000000 CY						
0.0000572	103076.	1802422311.	18.6355209	0.0010657	-0.0044243	3.1915639
-60.0000000 CY						
0.0000597	103749.	1738195129.	18.4252788	0.0010998	-0.0046302	3.2529670
-60.0000000 CY						
0.0000622	104418.	1679078050.	18.2337034	0.0011339	-0.0048361	3.3121380
-60.0000000 CY						
0.0000647	105083.	1624477817.	18.0586510	0.0011682	-0.0050418	3.3690548
-60.0000000 CY						
0.0000672	105746.	1573889394.	17.8982976	0.0012025	-0.0052475	3.4236949
-60.0000000 CY						
0.0000697	106301.	1525391812.	17.7377913	0.0012361	-0.0054539	3.4746127
-60.0000000 CY						
0.0000722	106719.	1478361294.	17.5637891	0.0012679	-0.0056621	3.5205706
-60.0000000 CY						
0.0000747	107135.	1434446556.	17.4027703	0.0012998	-0.0058702	3.5645650
-60.0000000 CY						
0.0000772	107549.	1393344348.	17.2534877	0.0013318	-0.0060782	3.6065766
-60.0000000 CY						
0.0000797	107960.	1354789453.	17.1148512	0.0013638	-0.0062862	3.6465859
-60.0000000 CY						
0.0000822	108368.	1318548914.	16.9859039	0.0013960	-0.0064940	3.6845732
-60.0000000 CY						
0.0000847	108774.	1284417274.	16.8658021	0.0014283	-0.0067017	3.7205182
-60.0000000 CY						
0.0000872	109138.	1251758848.	16.7443073	0.0014599	-0.0069101	3.7535299
-60.0000000 CY						
0.0000897	109428.	1220102055.	16.6156608	0.0014902	-0.0071198	3.7832364
-60.0000000 CY						
0.0000922	109669.	1189629916.	16.4885708	0.0015200	-0.0073300	3.8105749
-60.0000000 CY						
0.0000947	109908.	1160747544.	16.3691824	0.0015500	-0.0075400	3.8361518
-60.0000000 CY						
0.0000972	110146.	1133331945.	16.2569118	0.0015800	-0.0077500	3.8599497

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-60.000000	CY						
0.000997		110381.	1107272460.	16.1512343	0.0016101	-0.0079599	3.8819511
-60.000000	CY						
0.0001022		110615.	1082469249.	16.0516766	0.0016403	-0.0081697	3.9021380
-60.000000	CY						
0.0001047		110846.	1058832007.	15.9578111	0.0016706	-0.0083794	3.9204919
-60.000000	CY						
0.0001072		111076.	1036278846.	15.8692503	0.0017010	-0.0085890	3.9369944
-60.000000	CY						
0.0001097		111297.	1014671414.	15.7792361	0.0017308	-0.0087992	3.9512981
-60.000000	CY						
0.0001122		111512.	993978087.	15.6908390	0.0017603	-0.0090097	3.9636541
-60.000000	CY						
0.0001147		111723.	974153839.	15.6068436	0.0017899	-0.0092201	3.9742269
-60.000000	CY						
0.0001172		111933.	955157879.	15.5272534	0.0018196	-0.0094304	3.9830135
-60.000000	CY						
0.0001197		112078.	936421413.	15.4417250	0.0018482	-0.0096418	3.9897383
-60.000000	CY						
0.0001222		112212.	918358057.	15.3588836	0.0018767	-0.0098533	3.9947622
-60.000000	CY						
0.0001247		112337.	900951068.	15.2789709	0.0019051	-0.0100649	3.9981079
-60.000000	CY						
0.0001272		112458.	884192082.	15.2024373	0.0019336	-0.0102764	3.9997871
-60.000000	CY						
0.0001297		112577.	868063445.	15.1297589	0.0019621	-0.0104879	3.9957299
-60.000000	CY						
0.0001322		112694.	852530371.	15.0606799	0.0019908	-0.0106992	3.9917263
-60.000000	CY						
0.0001347		112809.	837564039.	14.9948301	0.0020196	-0.0109104	3.9958708
-60.000000	CY						
0.0001372		112924.	823133305.	14.9320405	0.0020485	-0.0111215	3.9985966
-60.000000	CY						
0.0001522		113534.	746013670.	14.5745368	0.0022181	-0.0123919	3.9987415
60.000000	CY						
0.0001672		114094.	682429986.	14.2953430	0.0023900	-0.0136600	3.9962157
60.000000	CY						
0.0001822		114478.	628355122.	14.0500337	0.0025597	-0.0149303	3.9854969
60.000000	CY						
0.0001972		114729.	581825171.	13.8183189	0.0027248	-0.0162052	3.9998005
60.000000	CY						
0.0002122		114939.	541684017.	13.6113603	0.0028882	-0.0174818	3.9842239
60.000000	CY						
0.0002272		115138.	506799212.	13.4388478	0.0030531	-0.0187569	3.9987992
60.000000	CYT						
0.0002422		115285.	476013898.	13.3138907	0.0032245	-0.0200255	3.9813651
60.000000	CYT						
0.0002572		115422.	448783648.	13.2097220	0.0033974	-0.0212926	3.9901201
60.000000	CYT						
0.0002722		115531.	424454150.	13.1313029	0.0035742	-0.0225558	3.9998750
60.000000	CYT						
0.0002872		115603.	402534122.	13.0676164	0.0037529	-0.0238171	3.9766314
60.000000	CYT						
0.0003022		115603.	382553111.	13.1375898	0.0039700	-0.0250400	3.9904834
60.000000	CYT						

 Summary of Results for Nominal (Unfactored) Moment Capacity for Section 1

Moment values interpolated at maximum compressive strain = 0.003
 or maximum developed moment if pile fails at smaller strains.

Load No.	Axial Thrust kips	Nominal Mom. Cap. in-kip	Max. Comp. Strain
1	81.427	115074.070	0.00300000

Note note that the values of moment capacity in the table above are not factored by a strength reduction factor (ϕ -factor).

In ACI 318-08, the value of the strength reduction factor depends on whether the transverse reinforcing steel bars are tied hoops (0.65) or spirals (0.70).

The above values should be multiplied by the appropriate strength reduction factor to compute ultimate moment capacity according to ACI 318-08, section 9.3.2.2 or the value required by the design standard being followed.

The following table presents factored moment capacities and corresponding bending stiffnesses computed for common resistance factor values used for reinforced concrete sections.

Axial Stiffness	Resistance	Nominal	Ultimate (Factored)	Ultimate (Factored)	Bending
-----------------	------------	---------	---------------------	---------------------	---------

Load Mom. Cap. No. kip-in ²	Factor for Moment	Moment Capacity in-kip	16-2545-MEG.1po Axial Thrust kips	Moment Capacity in-kip	at Ult.
1 2775095518.469	0.65	115074.070	52.927	74798.142	
1 2764075998.771	0.70	115074.070	56.999	80551.847	
1 2682272700.698	0.75	115074.070	61.070	86305.552	

 Computed Values of Pile Loading and Deflection
 for Lateral Loading for Load Case Number 1

Pile-head conditions are Shear and Moment (Loading Type 1)

Shear force at pile head = 64266.7 lbs
 Applied moment at pile head = 95647360.0 in-lbs
 Axial thrust load on pile head = 81426.7 lbs

Depth Distrib. X Load feet lb/inch	Deflect. y inches	Bending Moment in-lbs	Shear Force lbs	Slope S radians	Total Stress psi*	Bending Stiffness lb-in ²	Soil Res. p lb/in	Soil Spr. Es*h lb/inch	Lat.
0.000	0.00	95647360.	64267.	-0.0180	0.000	2.305E+12	0.000	0.000	
0.000	1.125	96534141.	64162.	-0.0174	0.000	2.255E+12	-20.7616	29.1446	
0.000	2.250	97417179.	63871.	-0.0168	0.000	2.199E+12	-21.5391	32.5836	
0.000	3.375	98295634.	63584.	-0.0162	0.000	2.145E+12	-20.9871	34.3200	
0.000	4.500	99088892.	48269.	-0.0156	0.000	2.099E+12	-1377.8478	2443.6782	
0.000	5.625	99630388.	29335.	-0.0149	0.000	2.057E+12	-1426.6115	2753.6413	
0.000	6.750	99911221.	9769.3073	-0.0143	0.000	2.036E+12	-1471.3708	3102.3140	
0.000	7.875	99923224.	-10373.	-0.0136	0.000	2.035E+12	-1511.9956	3496.2077	
0.000	9.000	99658996.	-31034.	-0.0129	0.000	2.055E+12	-1548.3286	3943.3826	
0.000	10.125	99111927.	-52156.	-0.0123	0.000	2.098E+12	-1580.1707	4454.0155	
0.000	11.250	98276234.	-73676.	-0.0117	0.000	2.146E+12	-1607.2627	5041.2368	
0.000	12.375	97147008.	-95528.	-0.0111	0.000	2.215E+12	-1629.2736	5722.2770	
0.000	13.500	95720270.	-119419.	-0.0105	0.000	2.302E+12	-2436.0413	9651.4794	
0.000	14.625	93824832.	-165727.	-0.009944	0.000	2.399E+12	-3626.5259	16353.	
0.000	15.750	91268059.	-214584.	-0.009436	0.000	2.518E+12	-3609.4126	18730.	
0.000	16.875	88053146.	-263107.	-0.008965	0.000	2.633E+12	-3576.5588	21661.	
0.000	18.000	84186164.	-311061.	-0.008532	0.000	2.726E+12	-3524.6599	25380.	
0.000	19.125	79676674.	-358159.	-0.008129	0.000	2.766E+12	-3448.8748	30281.	
0.000	20.250	74538620.	-404032.	-0.007753	0.000	2.776E+12	-3341.7313	37098.	
0.000	21.375	68791724.	-448178.	-0.007405	0.000	2.787E+12	-3190.4622	47372.	
0.000	22.500	62463914.	-489849.	-0.007088	0.000	2.801E+12	-2969.7256	65099.	
0.000	23.625	55596258.	-527739.	-0.006804	0.000	2.819E+12	-2614.4677	105462.	
0.000	24.750	48256843.	-558405.	-0.006556	0.000	2.842E+12	-1773.5690	372504.	
0.000	25.875	40769838.	-541427.	-0.006346	0.000	2.874E+12	2402.9121	164799.	

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0.000	27.000	-0.1507	33705567.	-504448.	-0.006292	0.000	1.849E+13	3028.0103	90399.
0.000	28.125	-0.2355	27190826.	-460526.	-0.006270	0.000	1.854E+13	3463.3828	66175.
0.000	29.250	-0.3200	21300892.	-412319.	-0.006252	0.000	1.859E+13	3724.2199	52366.
0.000	30.375	-0.4043	16089133.	-359985.	-0.006239	0.000	1.863E+13	4024.3143	44787.
0.000	31.500	-0.4885	11578447.	-309779.	-0.006229	0.000	1.867E+13	3750.3545	34548.
0.000	32.625	-0.5725	7751042.	-257655.	-0.006222	0.000	1.869E+13	3969.7717	31202.
0.000	33.750	-0.6565	4646968.	-202649.	-0.006217	0.000	1.872E+13	4177.7044	28637.
0.000	34.875	-0.7404	2304160.	-144898.	-0.006215	0.000	1.872E+13	4376.9913	26602.
0.000	36.000	-0.8243	758967.	-84502.	-0.006214	0.000	1.872E+13	4569.5793	24946.
0.000	37.125	-0.9082	46508.	-21544.	-0.006214	0.000	1.872E+13	4756.8591	23570.

* This analysis computed pile response using nonlinear moment-curvature relationships. Values of total stress due to combined axial and bending stresses are computed only for elastic sections only and do not equal the actual stresses in concrete and steel. Stresses in concrete and steel may be interpolated from the output for nonlinear bending properties relative to the magnitude of bending moment developed in the pile.

Output Summary for Load Case No. 1:

Pile-head deflection = 3.4443856 inches
 Computed slope at pile head = -0.0179668 radians
 Maximum bending moment = 99949566. inch-lbs
 Maximum shear force = -559260. lbs
 Depth of maximum bending moment = 7.5000000 feet below pile head
 Depth of maximum shear force = 25.1250000 feet below pile head
 Number of iterations = 170
 Number of zero deflection points = 1

 Summary of Pile Response(s)

Definitions of Pile-head Loading Conditions:

Load Type 1: Load 1 = Shear, lbs, and Load 2 = Moment, in-lbs
 Load Type 2: Load 1 = Shear, lbs, and Load 2 = Slope, radians
 Load Type 3: Load 1 = Shear, lbs, and Load 2 = Rotational Stiffness, in-lbs/radian
 Load Type 4: Load 1 = Top Deflection, inches, and Load 2 = Moment, in-lbs
 Load Type 5: Load 1 = Top Deflection, inches, and Load 2 = Slope, radians

Load Case	Load Type	Pile-head Condition 1	Pile-head Condition 2	Axial Loading	Pile-head Deflection	Maximum Moment in Pile	Maximum Shear in Pile
		V(lbs) or y(inches)	in-lb, rad., or in-lb/rad.	lbs	inches	in-lbs	lbs
1	1	V = 64267.	M = 95647360.	81427.	3.44438557	99949566.	-559260.
		-0.01796675					

The analysis ended normally.

1805.7.2.1 (2006 IBC) & 1807.3.2.1 (2009 IBC & 2012 IBC)

$$d = A/2*(1+(1+(4.36*h/A))^0.5)$$

Monopole

Moment (ft-k)	5977.96
Shear (k)	48.2
Caisson Diameter, b (ft)	8
Caisson Height Above Ground (ft)	0.5
Caisson Height Below Ground (ft)	29
Lateral soil pressure per foot (lb/ft ³)	300
Applied lateral force, P (lbs)	48200
Dist. from ground to application of P, h (ft)	124.52
A = 2.34*P/(S1*b)	4.86
Min. Depth of Embedment Required, d (ft)	28.23

MAT FOUNDATION DESIGN BY SABRE TOWERS & POLES

170' Monopole BOONE COUNTY Battle School, MO (16-2545-MEG) 9-1-15 BD

Overall Loads:

Factored Moment (ft-kips)	5977.96		
Factored Axial (kips)	61.07		
Factored Shear (kips)	48.2		
Bearing Design Strength (ksf)	4.5	Max. Net Bearing Press. (ksf)	4.01
Water Table Below Grade (ft)	28	Allowable Bearing Pressure (ksf)	3.00
Width of Mat (ft)	28	Safety Factor	2.00
Thickness of Mat (ft)	1.75	Ultimate Bearing Pressure (ksf)	6.00
Depth to Bottom of Slab (ft)	6	Bearing ϕ_s	0.75
Quantity of Bolts in Bolt Circle	18		
Bolt Circle Diameter (in)	66.75		
Top of Concrete to Top of Bottom Threads (in)	60		
Diameter of Pier (ft)	8	Minimum Pier Diameter (ft)	7.06
Ht. of Pier Above Ground (ft)	0.5	Equivalent Square b (ft)	7.09
Ht. of Pier Below Ground (ft)	4.25		
Quantity of Bars in Mat	44		
Bar Diameter in Mat (in)	1.128		
Area of Bars in Mat (in ²)	43.97		
Spacing of Bars in Mat (in)	7.65	Recommended Spacing (in)	6 to 12
Quantity of Bars Pier	38		
Bar Diameter in Pier (in)	1.128		
Tie Bar Diameter in Pier (in)	0.625		
Spacing of Ties (in)	12		
Area of Bars in Pier (in ²)	37.97	Minimum Pier A _s (in ²)	36.19
Spacing of Bars in Pier (in)	7.24	Recommended Spacing (in)	6 to 12
f'c (ksi)	4.5		
fy (ksi)	60		
Unit Wt. of Soil (kcf)	0.12		
Unit Wt. of Concrete (kcf)	0.15		

Volume of Concrete (yd³) 59.66

Two-Way Shear Action:

Average d (in)	16.872		
ϕV_c (kips)	1331.5	V_u (kips)	103.2
$\phi V_c = \phi(2 + 4/\beta_c)f'_c{}^{1/2}b_o d$	2046.8		
$\phi V_c = \phi(\alpha_s d/b_o + 2)f'_c{}^{1/2}b_o d$	1331.5		
$\phi V_c = \phi 4f'_c{}^{1/2}b_o d$	1364.5		
Shear perimeter, b _o (in)	354.60		
β_c	1		

One-Way Shear:

ϕV_c (kips)	646.5	V_u (kips)	401.5
Stability:			
Overtuning Design Strength (ft-k)	8400.6	Total Applied M (ft-k)	6291.3

Pier Design:

ϕV_n (kips)	844.3	V_u (kips)	48.2
$\phi V_c = \phi 2(1 + N_u / (2000 A_g)) f'_c{}^{1/2} b_w d$	844.3		
V_s (kips)	0.0	*** $V_s \text{ max} = 4 f'_c{}^{1/2} b_w d$ (kips)	1978.3
Maximum Spacing (in)	7.62	(Only if Shear Ties are Required)	
Actual Hook Development (in)	15.74	Req'd Hook Development l_{dh} (in)	14.12
		*** Ref. To Spacing Requirements ACI 11.5.4.3	

Flexure in Slab:

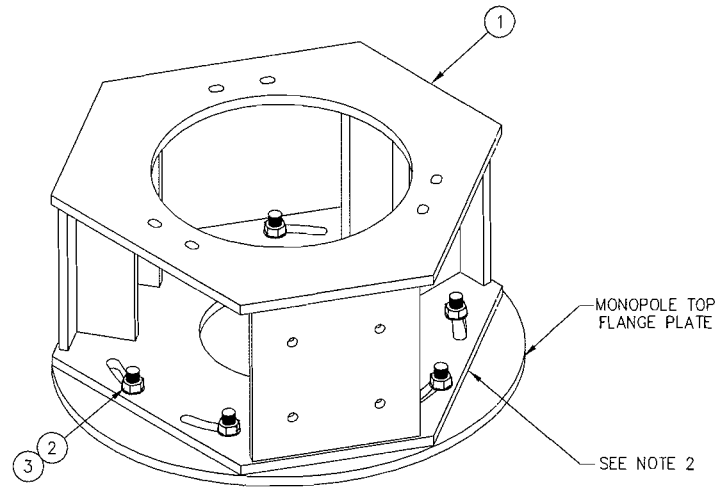
ϕM_n (ft-kips)	3135.3	M_u (ft-kips)	2984.7
a (in)	2.05		
Steel Ratio	0.00776		
β_1	0.825		
Maximum Steel Ratio (ρ_t)	0.0197		
Minimum Steel Ratio	0.0018		
Rebar Development in Pad (in)	122.46	Required Development in Pad (in)	28.68

Condition	1 is OK, 0 Fails
Maximum Soil Bearing Pressure	1
Pier Area of Steel	1
Pier Shear	1
Interaction Diagram Visual Check	1
Two-Way Shear Action	1
One-Way Shear Action	1
Overturning	1
Flexure	1
Steel Ratio	1
Length of Development in Pad	1
Hook Development	1



C10001001 LIST OF MATERIAL

ITEM	QTY.	PART NO.	DESCRIPTION	WEIGHT
1.	1	CW00222	WELDMENT, HUB ASSEMBLY	320.1#
2.	9	C40026047	BOLT ASSEMBLY, 3/4" ϕ X 3"	7.2#
3.	9	C40031004	FLATWASHER, 3/4 ϕ HARDENED ASTM F436	0.4#
TOTAL WEIGHT BLACK				327.4#
TOTAL WEIGHT GALV.				340.1#



ISO VIEW

NOTES:

- DO NOT REMOVE MORE THAN FOUR BOLTS AT ONE TIME WHEN ROTATING HUB ASSEMBLY. ROTATE HUB ASSEMBLY UNDER A NO WIND CONDITION ONLY.
- COAT MATCHING SIDES OF PLATES WITH ONE COAT OF GRAPHITE DRY LUBRICANT.
- FLATWASHERS TO BE USED OVER ALL SLOTTED HOLES.

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS INCLUDE FINISHES AND ARE IN INCHES		MATERIAL:	
TOLERANCES: FRACTIONS \pm 1/16" ANGLES \pm 1/2 DEG. DECIMALS \pm .010"		TOLERANCES DO NOT APPLY TO RAW MATERIAL	
REV	DATE	DRW/CHK	DESCRIPTION
1	8/3/05	KLE/ELK	ADDED ITEM #3 (3/4 ϕ FLATWASHERS)



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HUB ASSEMBLY INSTALLATION

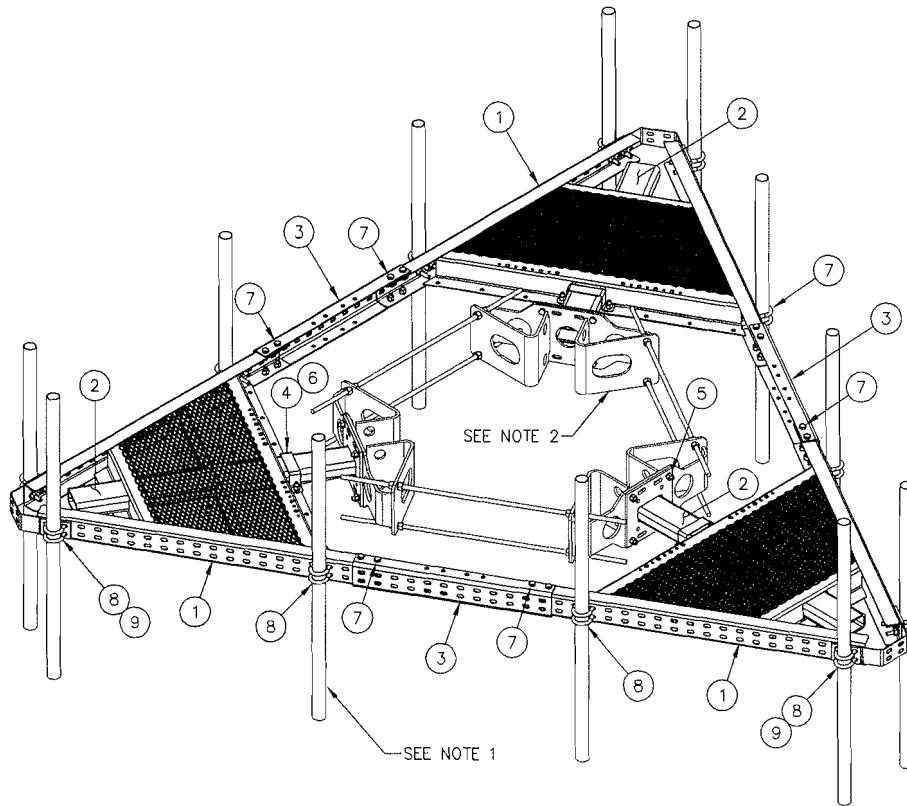
DATE	5/06/04	SIZE	B	DRAWING NO.	C10001001	REV	1
DRAWN BY	MLC	SCALE	None	PAGE		1 OF 1	
CHECKED BY	MC						



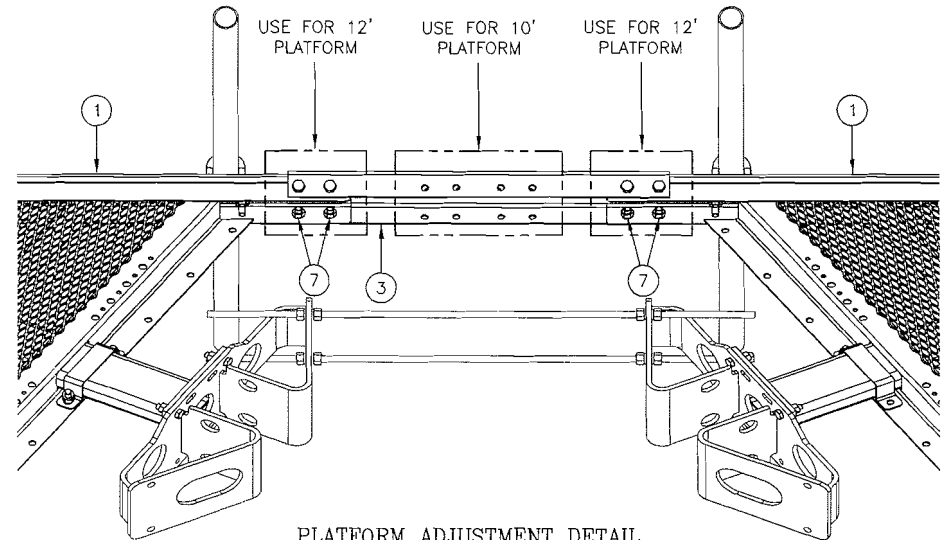
C10851001 10'-12' PLATFORM W/MOUNTING PIPE HARDWARE

ITEM	QTY.	PART NO.	DESCRIPTION	WEIGHT
1.	3	CW00885	WELDMENT, CORNER PLATFORM	413
2.	3	CW00886	WELDMENT, PLATFORM ARM	309
3.	3	CS03276	CHANNEL, PLATFORM SPLICE	77
4.	3	CS02248	SADDLE CLAMP, PLATFORM	5
5.	12	C40026024	BOLT ASSEMBLY, 5/8 ϕ X 2 1/4 A325	6
6.	6	C40026023	BOLT ASSEMBLY, 5/8 ϕ X 2 A325	3
7.	24	C40026022	BOLT ASSEMBLY, 5/8 ϕ X 1 3/4 A325	11
8.	24	C40034023	U-BOLT ASSEMBLY, 5/8 ϕ X 3 1/16 C-C	40
9.	6	CS02317	PLATE, U-BOLT SPACER	14
TOTAL WEIGHT				878

NOTE:
HARDWARE KIT CK00378 CONSISTS
OF ITEMS 4 THRU 9 LISTED ABOVE



ISOMETRIC VIEW
12' PLATFORM SHOWN



PLATFORM ADJUSTMENT DETAIL
TO ADJUST THE PLATFORM FACE WIDTH, SLIDE THE CORNER WELDMENTS IN
OR OUT TO THE CORRESPONDING HOLES ON THE PLATFORM CHANNEL SPLICE

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS INCLUDE FINISHES AND ARE IN INCHES		MATERIAL:	
TOLERANCES: FRACTIONS \pm 1/16" ANGLES \pm 1/2 DEG. DECIMALS \pm .010"		TOLERANCES DO NOT APPLY TO RAW MATERIAL	
4	07/21/15	WRFL	ITEM 3 WAS CS02247
3	9/7/11	DLWDEL	REVISED ALL BOLT QUANTITIES AND NOTE 2
2	12/9/10	LJKW	WJ REVISED PART NUMBERS ON HANDRAIL KIT NOTE 3
1	2/3/10	MLC	MC REDRAWN IN AUTOCAD
REV	DATE	DRW	CHK
			DESCRIPTION

Sabre Industries
Towers and Poles

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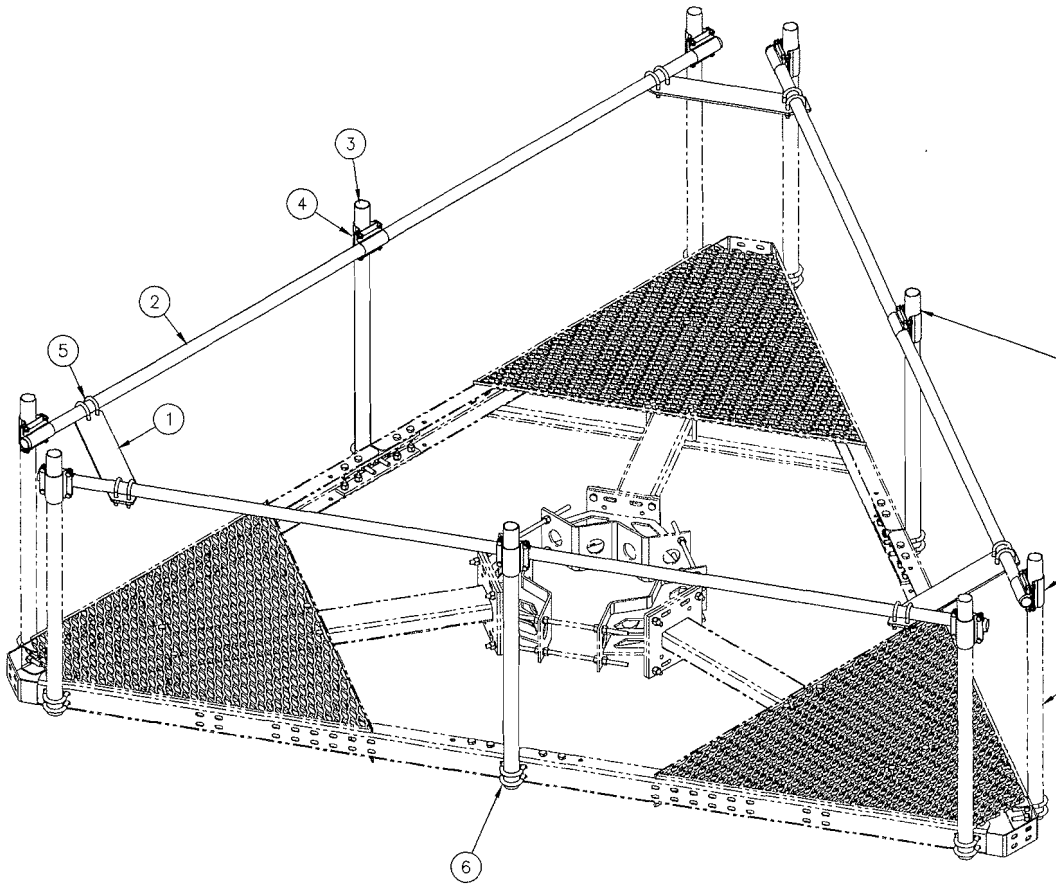
10'-12' LOW PROFILE PLATFORM
W/ANTENNA MOUNTING PIPE HARDWARE
NO ANTENNA MOUNTING PIPES

DATE	10/22/09	SIZE	B	DRAWING NO.	C10851001	REV	4
DRAWN BY	JV	SCALE	None	PAGE	1	OF	1
CHECKED BY	WMN						



C10116813 12' LOW PROFILE PLATFORM HANDRAIL KIT

ITEM	QTY.	PART NO.	DESCRIPTION	WEIGHT
1.	3	CS01533	PLATE, HANDRAIL SUPPORT	38#
2.	3	CS02229	PIPE, 1.90" O.D. (.145" WALL) X 12'-6"	106#
3.	3	C10981204	PIPE, 2 3/8" O.D. (.134" WALL) X 4'-0"	38#
4.	12	C40204100	CROSSOVER CLAMP (1.90" O.D. TO 2 3/8" O.D.)	48#
5.	12	C40034060	U-BOLT ASSEMBLY, 1/2 ϕ X 2 9/16" C/C	9#
6.	6	C40034023	U-BOLT ASSEMBLY, 5/8 ϕ X 3 1/16" C/C	10#
TOTAL WEIGHT				249#



THIS PIPE MAY BE REPLACED WITH A LONGER PIPE IF NEEDED FOR ANTENNA MOUNTING (NOT REQ'D WITH 3 OR MORE MOUNTING PIPES PER FACE)

THERE ARE ENOUGH CLAMPS SUPPLIED TO ACCOMMODATE (12) ANTENNA MOUNTING PIPES - (4) PER FACE

ANTENNA MOUNTING PIPES TO BE PURCHASED SEPARATELY

ISOMETRIC VIEW

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS INCLUDE FINISHES AND ARE IN INCHES		MATERIAL:	
TOLERANCES: FRACTIONS $\pm 1/16"$ ANGLES $\pm 1/2$ DEG. DECIMALS $\pm .010"$		TOLERANCES DO NOT APPLY TO RAW MATERIAL	
REV	DATE	DRW/CHK	DESCRIPTION
5	6/27/11	DLW/DEL	ITEM 2 WAS C10819150 (CHG PER REQUEST)
4	3/4/09	MLC/MC	REVISED QUANTITY OR ITEM 4
3	1/15/09	MLC/MC	REVISED PIPE (ITEM 3)
2	6/5/08	MLC/MC	REVISED ITEM 4
1	10/11/07	MLC/MC	REVISED PLATFORM DESIGN



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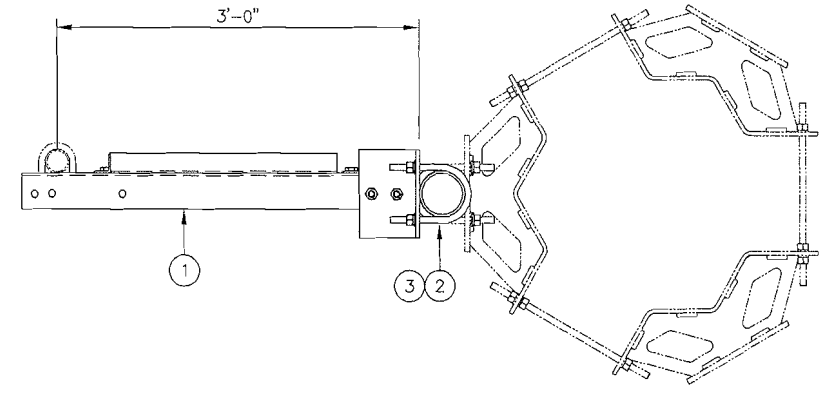
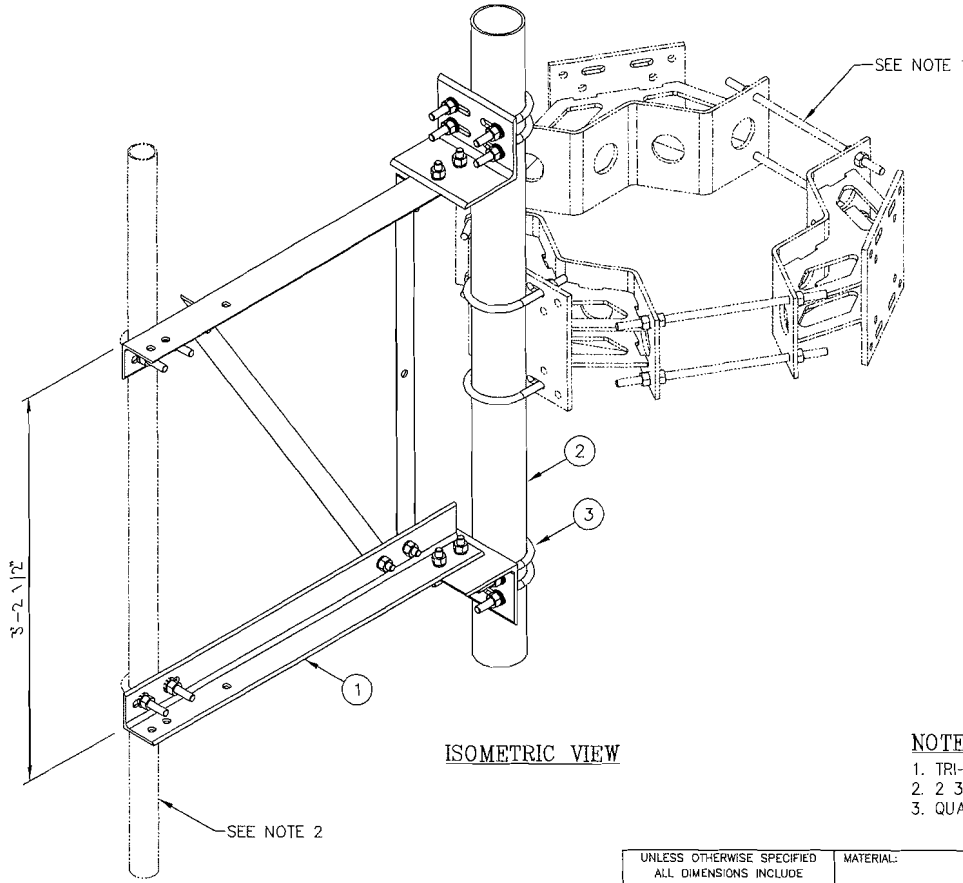
12' LOW PROFILE PLATFORM HANDRAIL KIT
(12'-0" MAXIMUM ANTENNA SEPARATION)

DATE	7/31/07	SIZE	B	DRAWING NO.	C10116813	REV	5
DRAWN BY	MLC	SCALE	None	PAGE		1 OF 1	
CHECKED BY	MC						



C10119103 3 FT. SIDEARM FOR MONOPOLE

ITEM	QTY.	PART NO.	DESCRIPTION	WEIGHT
1.	1	C10151103	3 FT. SIDEARM KIT	82
2.	1	C10981405	PIPE, 4 1/2 Ø X .180 X 5'-3	44
3.	6	C40034032	U-BOLT ASSEMBLY, 5/8 Ø X 5 3/16 C-C	17
TOTAL WEIGHT				143



PLAN VIEW

ISOMETRIC VIEW

NOTES:

1. TRI-COLLAR MOUNTS ARE SHOWN TYPICAL AND MUST BE ORDERED SEPARATELY.
2. 2 3/8" THRU 4" O.D. MOUNTING PIPE & U-BOLTS MUST BE PURCHASED SEPARATELY.
3. QUANTITIES SHOWN ARE FOR ONE (1) SIDEARM ONLY.

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS INCLUDE FINISHES AND ARE IN INCHES		MATERIAL:	
TOLERANCES: FRACTIONS ± 1/16" ANGLES ± 1/2 DEG. DECIMALS ± .010"		TOLERANCES DO NOT APPLY TO RAW MATERIAL	
REV	DATE	DRW/CHK	DESCRIPTION
3	1/14/09	MLC/MC	REVISED PIPE (ITEM 2)
2	11/7/06	WRF/MLN	ADDED ISOMETRIC VIEW
1	01/12/06	MLC/MC	UPDATED DRAWING

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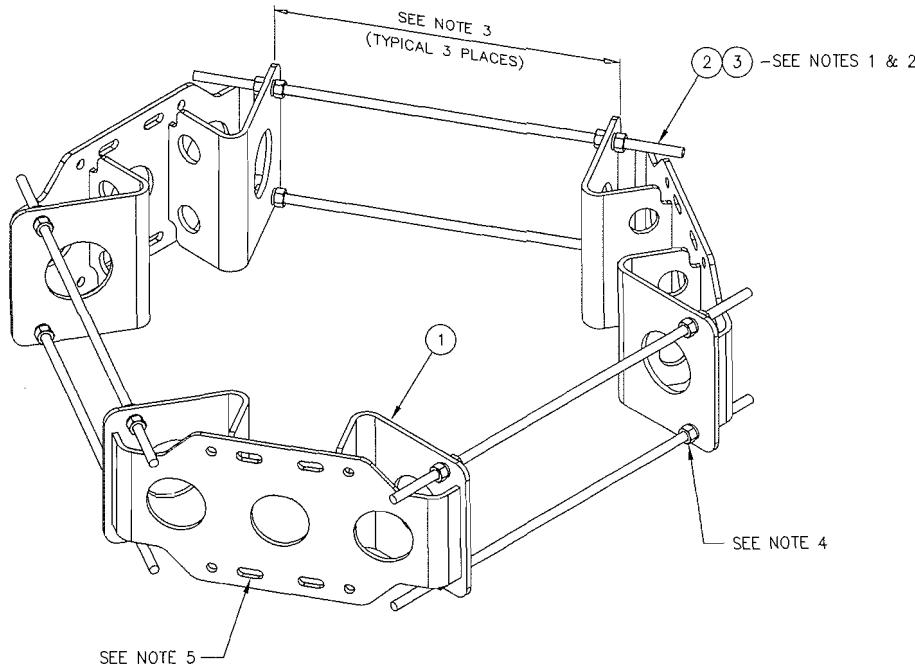
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3 FT. SIDEARM FOR MONOPOLE (FOR MTG. PIPES 2 3/8" O.D. THRU 4" O.D.)			
DATE	01/05/06	SIZE	B
DRAWN BY	JKW	DRAWING NO.	C10119103
CHECKED BY	WJ	SCALE	None
		REV	3
		PAGE	1 OF 1



C10112300 TRI-COLLAR ASSEMBLY (10"-40" MONOPOLE)

ITEM	QTY.	PART. NO.	DESCRIPTION	WEIGHT
1.	3	CW00835	WELDMENT, TRI-COLLAR (10"-40" MONOPOLE)	151
2.	6	C40094012	THREADED ROD ASSEMBLY 5/8 X 2'-9"	25
3.	6	C40094002	THREADED ROD ASSEMBLY 5/8 X 1'-6"	17
TOTAL WEIGHT				193



NOTES:

1. THERE ARE (2) LENGTHS OF THREADED ROD SUPPLIED TO ACCOMMODATE DIAMETERS LISTED BELOW
 USE 5/8 X 1'-6" THREADED ROD ASSEMBLY FOR 10"-24" MONOPOLE DIAMETERS
 USE 5/8 X 2'-9" THREADED ROD ASSEMBLY FOR 24"-40" MONOPOLE DIAMETERS (SEE NOTE 2)
2. THREADED ROD MAY BE SHORTENED IF REQUIRED, FIELD CUT AND COLD GALV SPRAY TO SUIT.
3. THIS DISTANCE MUST BE EQUAL IN ALL (3) THREE LOCATIONS TO ENSURE THE STRUCTURAL INTEGRITY OF THE THREADED RODS AS WELL AS 120° SEPARATION.
4. FOR MONOPOLES 13" DIA. OR SMALLER, ONLY (1) ONE NUT AND (1) ONE LOCKWASHER ARE REQUIRED BETWEEN THE TRI-COLLAR BRACKETS.
 FOR MONOPOLES LARGER THAN 13" DIA., (2) TWO NUTS AND (2) TWO LOCKWASHERS ARE REQUIRED BETWEEN THE TRI-COLLAR BRACKETS.
5. THE MOUNTING SLOTS NOTED WILL ACCOMMODATE 2 3/8"-4 1/2" O.D. MOUNTING PIPES.

ISOMETRIC VIEW

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS INCLUDE FINISHES AND ARE IN INCHES		MATERIAL:	
TOLERANCES: FRACTIONS ± 1/16" ANGLES ± 1/2 DEG. DECIMALS ± .010"		TOLERANCES DO NOT APPLY TO RAW MATERIAL	
REV	DATE	DRW/CHK	DESCRIPTION
2	8/11/10	DLW/DEL	ADDED 5/8 X 1'-6" THREADED ROD
1	1/6/10	MLC/MC	REDRAWN IN AUTOCAD



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TRI-COLLAR BRACKET ASSEMBLY
 FOR MONOPOLES (10"-40" DIA.)
 (CIRCUMFERENCE 31.4" TO 125.7")

DATE	8/21/09	SIZE	B	DRAWING NO.	C10112300	REV	2
DRAWN BY	JV	SCALE	None	PAGE		1 OF 1	
CHECKED BY	MLC						

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Sabre Communications Corporation
 DUNS: 084621382 CAGE Code: 60348
 Status: Active

2101 Murray St
 Sioux City, IA, S1111-1149,
 UNITED STATES

Expiration Date: 06/09/2016
 Purpose of Registration: All Awards

Entity Overview

Entity Information

Name: Sabre Communications Corporation
Business Type: Business or Organization
POC Name: Phillip Haigler
Registration Status: Active
Activation Date: 06/10/2015
Expiration Date: 06/09/2016

Exclusions

Active Exclusion Records? No

SAM | System for Award Management 1.0

IBM v1.P.34.20150710-1415

WWW6

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STATE OF MISSOURI

September Session of the July Adjourned

Term. 20 15

County of Boone

} ea.

In the County Commission of said county, on the

29th

day of

September

20

15

the following, among other proceedings, were had, viz:

Now on this day the County Commission of the County of Boone does hereby set the fees associated with Small On-Site Wastewater Systems as contemplated in Section 4.11 of Boone County's Code of Health Regulations as follows:

- Construction permits for existing systems: \$335.00
- New construction permits: \$335.00
- Existing system evaluation \$ 30.00

The Commission notes that the fees as set out above are anticipated to cover 49% of the County's costs in administering the County's Small On-Site Wastewater program per the attached estimate prepared by the City/County Health Department, which is incorporated herein by reference. These fees shall have an effective date of January 1, 2016.

Done this 29th day of September, 2015.

ATTEST:

Wendy S. Noren
Wendy S. Noren
Clerk of the County Commission

Daniel K. Atwill
Daniel K. Atwill
Presiding Commissioner

Karen M. Miller
Karen M. Miller
District I Commissioner

Janet M. Thompson
Janet M. Thompson
District II Commissioner

FY 16 County Sewage Fee Increase Proposal and Cost Recovery

	Number of Permits Issued	Existing Fee	New Fee	Fee Increase	Total Revenue
Construction Permits on New or Existing systems	152	225	335	110	50920

(10% Fee increase)

Total Cost = ~~105,260~~

Additional projected revenue due to evaluations of existing systems =

we only did 20 existing evaluations in 2014

Percent of costs covered including fee increase =

49

of permits based on average of new and existing permits in 2011, 2012, 2013 and 2014

CERTIFIED COPY OF ORDER

STATE OF MISSOURI

September Session of the July Adjourned

Term. 20 15

County of Boone

} ea.

In the County Commission of said county, on the 29th day of September 20 15

the following, among other proceedings, were had, viz:

Now on this day the County Commission of the County of Boone does hereby approve the Organizational Use of the Government Center Conference Room 301 by the Department of Mental Health for December 2, 2015 from 9:00 a.m. to 2:00 p.m.

Done this 29th day of September, 2015.

ATTEST:

Wendy S. Noren
Wendy S. Noren
Clerk of the County Commission

Daniel K. Atwill
Daniel K. Atwill
Presiding Commissioner

Karen M. Miller
Karen M. Miller
District I Commissioner

Janet M. Thompson
Janet M. Thompson
District II Commissioner



Boone County Commission

APPLICATION FOR ORGANIZATIONAL USE OF BOONE COUNTY CONFERENCE ROOMS

The undersigned organization hereby applies for a use permit to use Boone County Government conference rooms as follows:

Organization: Department of Mental Health (DMH)

Address: 1706 E. Elm St.

City: Jefferson City State: MO ZIP Code 65101

Phone: 573-751-7249 Website: _____

Individual Requesting Use: Melanie Bullard, RD, LD Position in Organization: Dietetic Services Coordinator

Facility requested: Chambers Room 301 Room 311 Room 332 Centralia Clinic

Event: DMH Dietetic Services Quarterly Meeting

Description of Use (ex. Speaker, meeting, reception): Business Meeting

Date(s) of Use: 12/02/2015 - Wednesday

Start Time of Setup: 9:00 a.m. AM/PM Start Time of Event: 10:00 a.m.

End Time of Event: 2:00 p.m. AM/PM End Time of Cleanup: 2:00 p.m.

The undersigned organization agrees to abide by the following terms and conditions in the event this application is approved:

1. To abide by all applicable laws, ordinances and county policies in using Boone County Government conference rooms.
2. To remove all trash or other debris that may be deposited (by participants) in rooms by the organizational use.
3. To repair, replace, or pay for the repair or replacement of damaged property including carpet and furnishings in rooms.
4. To conduct its use in such a manner as to not unreasonably interfere with Boone County Government building functions.
5. To indemnify and hold the County of Boone, its officers, agents and employees, harmless from any and all claims, demands, damages, actions, causes of action or suits of any kind or nature including costs, litigation expenses, attorney fees, judgments, settlements on account of bodily injury or property damage incurred by anyone participating in or attending the organizational use of rooms as specified in this application.

Organization Representative/Title: Melanie Bullard, RD, LD, DMH Dietetic Services Coordinator

Phone Number: 573-751-7249 Date of Application: 09/24/2015

Email Address: melanie.bullard@dmh.mo.gov

Applications may be submitted in person or by mail to the Boone County Commission, 801 E. Walnut, Room 333, Columbia, MO 65201 or by email to commission@boonecountymo.org.

PERMIT FOR ORGANIZATIONAL USE OF BOONE COUNTY GOVERNMENT CONFERENCE ROOMS

The County of Boone hereby grants the above application for permit in accordance with the terms and conditions above written. The above permit is subject to termination for any reason by duly entered order of the Boone County Commission.

ATTEST:

Wendy S. Noren
County Clerk

BOONE COUNTY, MISSOURI

[Signature]
County Commissioner

DATE: 9-29-15