

**U.S. Department of Labor  
Occupational Safety and Health Administration  
Case File Activity Diary**



**Employer:** TOWER CONSULTANTS INC.

**Activity #:** 1327540

**POC Name & Phone Number :** Thomas Buchanan, Attorney - 816-753-5400

DATE	ACTION TO BE TAKEN/INSTRUCTIONS	INITIALS	
4/19/2018	KCAO notified by Webster Co 911 of a Tower Collapse Accident resulting in 1 fatality and 3 injured. CSHO Ray dispatched to Fordland, MO. Contact with MSU Officials to gain entry to remote accident area. Opening conference with MSU Emergency Mgt Rep; AD also conducted opening conference with Tower Consultants by phone. Initial photos and videos taken.	CER	
4/20/2018	CSHO on site with Scott Maloney. Meet with MSU Officials and Steve Lemay Crew members. Lemay Mgt Rep Aly Powers came down from Seattle to assist with travel logistics for crew. Wade Lawyer arrived from Texas and provided some info. Was advised by Lawyers not to engage in formal interviews with OSHA until further notice. Interviews conducted with Crew.	CER	
4/23/2018	CSHO's return to site for further investigation	CER	
4/24/2018	CSHO's return to site. OSHA Engineer Bryan Ewing joins investigation on site.	CER	
4/25/2018	CSHO and Engineer remain in area for continued investigation. Interviewed MSU Engineer and reviewed Camera Footage at MSU	CER	
4/26/2018	CSHO and Engineer on site for further photos and evaluations. Picked up Victims Tool Belt from Local Funeral Home.	CER	
6/7/2018	Telephone Conference with OSHA Eng, TCI Engineers and Attorney	CER	
6/18/2018	Coordination for Evidence Preservation	CER	
6/22/2018	Lemay Documents received from Attorney	CER	
8/1/2018	Site revisit with OSHA Engineer to re-exam tower elements requested	CER	
10/9/2018	OSHA Engineer Draft Report Received	CER	
10/10/2018	ARA Fatality Briefing	CER	
10/16/2018	Closing with TOWER CONSULTANTS INC's Legal Rep	CER	
Click here to enter a date.			



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## Establishment Search Results

Establishment	Date Range	Office	Zipcode	State
tower consultants inc	10/22/2013 to 10/22/2018	all	all	all

Please note that inspections which are known to be incomplete will have the identifying Activity Nr shown in *italic*. Information for these open cases is especially dynamic, e.g., violations may be added or deleted.

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By Date

Results 1 - 1 of 1

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	#	Activity	Opened	RID	St	Type	Sc	SIC	NAICS	Vio	Establishment Name
<input type="checkbox"/>	1	<i>1327540.015</i>	04/19/2018	0728500	MO	Unprog Rel	Partial		237130		Tower Consultants Inc

UNITED STATES  
DEPARTMENT OF LABOR

Occupational Safety and Health Administration  
200 Constitution Ave NW  
Washington, DC 20210  
☎ 800-321-6742 (OSHA)  
TTY  
[www.OSHA.gov](http://www.OSHA.gov)

## FEDERAL GOVERNMENT

White House  
Disaster Recovery Assistance  
USA.gov  
No Fear Act Data  
U.S. Office of Special Counsel

## OCCUPATIONAL SAFETY AND HEALTH

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Accessibility Statement

# U.S. Department of Labor - Occupational Safety and Health Administration

## Inspection Report

Mon Oct 22, 2018 10:29:30 AM

RID	CSHO ID	Supervisor ID	Inspection Number	Optional Report Number	Case Closed Date
0728500	W3063	X0522	1327540		22-OCT-2018

Establishment Name		Tower Consultants Inc		Doing Business As (DBA)			TCI	
Establishment Owner Name	Private Sector		Type of Business	Corporation	Primary NAICS			237130
Site Address	905 State Hwy FF FORDLAND, MO, 65652		Site Phone	(214)-679-4278	Extn		Site FAX	
Business Address	15 Surrey Court COLUMBIA, SC, 29212		Business Phone	(214)-679-4278			Business FAX	
Mailing Address	15 Surrey Court COLUMBIA, SC, 29212		E-mail				Mobile Phone	
Site Activity	Communications Tower Consultants		NAICS Inspected	237130			Days on Site	5
Federal EIN	202458839		DUNs		Temporary or Fixed Site?			Fixed Site
State Estab Id			DUNS plus4		CAGE Code			
Construction Type	Commercial Construction							

Entry	19-APR-2018		First Closing Conference	16-OCT-2018	
Opening Conference	19-APR-2018		Second Closing Conference		
Walkaround	20-APR-2018		Exit		

Inspection Initiating Type	Unprogrammed Related		Secondary Type		
Other Initiating Type			Inspection Category		Safety
Scope of Inspection	Partial		Reason No Inspection		
Sampling Performed?	N	SVEP	N	Expln. for No Insp.	
Federal Strategic Initiatives					
National Emphasis					
Local Emphasis					
Primary Emphasis					

Employed in Establishment	11	Walkaround?	N	Advance Notice?	N
Covered By Inspection	11	Interviewed?	Y	Flag for Follow-up	N
Controlled By Employer	11	Union?	N	Reason for Follow-up	
Is this Company a current federal contractor?	U				

Parent Company Legal Name			Parent Comp Trade Name/DBA		
Parent Company Address		Phone Number		Extn	
TIN / EIN			DUNS		
CAGE Code			DUNS plus4		

Related Activity			
Activity Number	Activity Type	Satisfied	Establishment Name
1329556	FAT/CAT	Safety	STEVE LEMAY LLC

Related Inspections		
Inspection Number	Establishment Name	Related Inspection Type
1309996	STEVE LEMAY LLC	MULTI-EMPLOYER
1314913	Missouri State University	MULTI-EMPLOYER

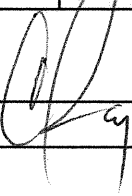
Additional Codes			
Type	ID	Value	Description
N	16	COMTOWER	Inspection of Construction Work Site Where Communication Tower Construction Occurring

Employer Representatives Contacted							
Name	Greg Kelish	Job Title	CEO	Occupation	Tower Consultants		
Address				Interviewed?	Y		
Home		Work	214-679-4278	Mobile		Fax	
Email				Participation			
Name	Jean Lecorder	Job Title	President/ Engineer	Occupation	Consultant/Engineer		
Address				Interviewed?	Y		
Home		Work	214-679-4278	Mobile		Fax	
Email				Participation			
Name	Thomas R. Buchanan	Job Title	Attorney	Occupation	Attorney		
Address				Interviewed?	N		
Home		Work	816-753-5400	Mobile		Fax	
Email				Participation	Walk Around, Opening Conference		

Other Persons Contacted						
Name	Thomas Buchanan	Role	Attorney	Relationship to Employer	Legal Rep	
Address	605 W 47th St # 350 KANSAS CITY, MO, 64112			Interviewed?	N	
Home		Work	816-753-5400	Mobile	816-729-5832	Fax
Email				Participation		



Penalty Adjustment Factors					
Size Reduction	60%	Good Faith Reduction	0%	History Reduction	0%
Size Justification	System, set it to 60% Number of Employees was changed	Good Faith Justification		History Justification	

CSHO Signature		Date	10/22/18
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## SAFETY NARRATIVE

Inspection Number

TOWER CONSULTANTS INC. - 1327540

### COVERAGE INFORMATION - NATURE AND SCOPE

This company is not exempt from coverage of the Occupational Safety and Health Act in that they are engaged in work that involves the use of equipment, tools and materials made throughout the US, thereby affecting commerce.

### Check Applicable Boxes and Explain Findings

☒ **Un-programmed Related Inspection:** An inspection was conducted with Tower Consultant Inc. as an Un-programmed Related Inspection as a result of a fatality involving a contractor that was working on a TV Tower. Tower Consultants Inc. had been contacted by the Tower owner, Missouri State University to assist them with Design and Development Plans to carry out Repairs and Modifications that was needed to bring their TV Tower up to the programming specification requirements of upcoming FCC changes. Tower Consultants Inc. developed the plans and instructions Steve Lemay LLC would later use to perform the work on the actual TV Tower. Included in this narrative are specific details relating to Steve Lemay LLC.

**ITEM 1** – On April 19, 2018, Mr. Steve Lemay (Owner) of Steve Lemay, LLC was fatally injured while working from elevation on the KOZK Radio/TV Tower, when the Tower collapsed and fell to the ground.

☒ **Initial Accident Notification Information:**

On April 19, 2018, at approx. 11:00am, the KCAO was informed by the Webster /County 911 Officials, who stated that there had been a tower collapse at 905 State Highway FF – Fordland, MO., which is the KOZK Radio/TV Tower. She stated that there were 1 dead and others injured and taken to a nearby hospital. She provided the Incident Commander's name and phone number, who is with Webster Co Fire Department, (417-464-4042).

The IC (Incident Commander) was contacted and he stated that the company working on the tower had 7 EEs on site. One died, who was the company owner, and one was taken to hospital with broken collar bone.

He stated the Tower was approx. 2000 foot tall with 1 permanent employee (MSU) who works there on a daily basis and who was onsite at time of accident.

Webster County Sheriff responded to the scene as well as Webster County Coroner.

### **Accident Synopsis**

On April 19, 2018, @ approx. 1000 am, Mr. Steve Lemay (Owner) was fatally injured while doing work on the 1891 ft. Tower in Fordland, MO. MR. Lemay and three other workers were engaged in Diagonal Cross Member change out work, when they noticed the tower beginning to moan and twist. The tower rapidly began to collapse, trapping and killing Mr. Lemay in the process. Just before falling, the other three workers had been instructed by Mr. Lemay to immediately exit the structure and all made it to the ground safely while the tower was falling. Three workers received minor injuries and were treated and released by a local medical facility.

### **Site Layout / Dimensional Information**

The tower, which is owned by MSU, sat on approx. one acre of land and was 1891 ft. tall. The tower and operations shack, was enclosed by a security fence with security cameras located on the facility. The camera did capture limited footage of the tower collapse, which has been provided to OSHA and is contained in this report. The tower property sat in the middle of several privately owned acres of cow pasture, located to the north of the town of Fordland, MO.

### **Causal Factors**

**Un-Determined:** The OSHA National Office has provided a Structural Engineer to assist in the investigation of the collapse. There was no immediate evidence of any OSHA Standards violations involving worker safety or un-safe work practices up to the point of the incident. Fall Protection Systems and PPE use did not appear to play a part. During the Diagonal Cross Bracing change out, the plans, procedures and guidelines were very specific as to how those elements were to be handled. The bay they were working on at the 105ft level was the first set of change outs that had been done before the incident. Five of the six rods had been replaced and they were in the process of installing the 6<sup>th</sup> rod when the structure fell. The plans called for a come along device (Tirfur Unit) to be use alongside and parallel with the rod/brace being replaced. This was so that the compression forces on the tower legs could be lessened during the change out process. That procedure had been done 5 times up to the time of the incident. It is undetermined whether or not that compression/decompression action was a contributor. At this time, the OSHA Engineer has been testing and calculating to see if this was an Unforeseeable Structural Steel Failure Event.

**Equipment Condition:** This was a 50 year tower structure that had endured years of severe weather which involved Cold, Freezing, Heat and Winds. There was no evidence of conditions that warranted any concerns preventing the work that had been scheduled.

**Weather:** Weather at the time of the incident did not play a role in the accident. The National Weather Service provided information to support weather conditions days prior and the day of the incident.

☒ LEP

**REP - Powered Industrial Trucks**

☐ Planned Inspection

☐ Follow-up Inspection

**NATURE AND SCOPE – UNUSUAL CIRCUMSTANCES**

Check Applicable Boxes and Explain Findings

☒ None

☐ Denial of entry (see denial memo)

☐ Delays in conducting the inspection

☐ Strikes

☐ Jurisdictional Issues

☐ Trade Secrets

☐ Other

Comments:

**OPENING CONFERENCE NOTES:**

Not a Union Company..

Initial Opening Conference on the telephone by Area Office Director with CEO Greg Kelish. A second conference was conducted later by phone with Thomas Buchanan, Attorney, Jean Lecorder President, Bryan Ewing, OSHA Engineer, Chet Ray and Kimberly Robinson. We further discussed the plans and procedures identified for the work needed on Tower. OSHA Engineer Bryan Ewing was the primary driver for this conference.

**RECORDKEEPING PROGRAMS (Other than 29 CFR 1904 requirements)**

Does the employer have a record keeping program relating to any occupational health issues such as monitoring, medical, training, respirator fit tests, ventilation measurements, et cetera?

☐ Yes ☒ No

Are any programs required by OSHA health standards?

☐ Yes ☒ No

**COMPLIANCE PROGRAMS** – Includes engineering controls, personal protective equipment (PPE), regulated areas, emergency procedures, compliance plans, et cetera.

Address any relevant compliance efforts regarding potential health hazards covered by the scope of inspection.

**PERSONAL HYGIENE FACILITIES AND PRACTICES** – Includes showers, lockers, change rooms, et cetera.

Are any required by OSHA health standards?

☐ Yes ☒ No

If yes, list the standards that require their use:

#### HAZARD COMMUNICATION PROGRAM

Comments: N/A

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#### OTHER PROGRAM AREA EVALUATIONS

**ACCESS TO EXPOSURE & MEDICAL RECORDS:** Program element not evaluated.

**FIRE PROTECTION AND EVACUATION PROCEDURES:** No significant issues were noted during the inspection.

**SYSTEMS SAFETY AND EMERGENCY RESPONSE:** Program element not evaluated.

**RESPIRATOR PROGRAM:** Program area not required at this workplace.

**LOCKOUT TAGOUT / ELECTRICAL SAFE WORKPRACTICES:** No significant issues were noted during the inspection.

**FIRST AID:** No significant issues were noted during the inspection.

**ELECTRICAL SAFE WORKPRACTICES:** No significant issues were noted during the inspection.

**EXPOSURE CONTROL PLAN:** Program area not required at this workplace.

**LABORATORY STANDARD:** Program area not required at this workplace.

**ERGONOMIC PROBLEMS:**

☐ Yes ☒ No

If there are ergonomic problems, complete items 1 and 2 below.

ITEM 1. Lifting (10% or more similarly exposed employees injured)

a. Total number of employees exposed to job:

b. Total number of cases for job:

ITEM 2. CTD's (10% or more similarly exposed employees have CTD's; 5% or more CTS cases)

a. Total number of employees exposed to job:

b. Total number# of cases for job:

Do other significant injury / illness trends exist at the facility / workplace?

☐ Yes ☒ No

If yes, explain:

**EVALUATION OF EMPLOYER'S OVERALL SAFETY AND HEALTH PROGRAM**

**Construction Industry:**

☒ Yes ☐ No Employer has an Accident Prevention Program  
☒ Yes ☐ No Employer has a written Accident Prevention Program

**CLOSING CONFERENCE NOTES:**

The Closing Conference was conducted with Thomas Buchanan, Attorney. The CSHO discussed when the report would be available for FOIA.

Were any unusual circumstances encountered such as, but not necessarily limited to, abatement problems, expected contest and/or negative employer attitude? If yes, explain below:

☐ Yes ☒ No

Closing Conference Checklist ("x" as appropriate)

☒ No Violations Observed

- ☐ Gave Copy Employer Rights
- ☐ Reviewed Hazards and Standards
- ☐ Discuss Employer Rights/Obligations
- ☐ Encouraged Informal Conference
- ☐ Offered Abatement Assistance
- ☐ Discussed Consultation Programs
- ☐ Employer/Employee Questionnaires

Opening Conference Worksheet  
Establishment ID #

U. S. Department of Labor  
Occupational Safety Health Administration



UPA # <input type="checkbox"/>	Inspection # <input type="checkbox"/>	CSHO ID / Consent?	Denied Entry - Yes / No	Person Denying - Date & Time
	1327540			

Voluntary Compliance Programs	State Consultation Onsite? <input type="checkbox"/> Yes <input type="checkbox"/> No	OSHA VPP Site? <input type="checkbox"/> Yes <input type="checkbox"/> No	OSHA Partnership? <input type="checkbox"/> Yes <input type="checkbox"/> No
-------------------------------	---	---	--

Business Name: <u>TOWER CONSULTANT INC. (TCI)</u>	President/Owner: <u>JEAN LECORDER</u>
---	---------------------------------------

Site Address: <u>905 STATE HWY FF TOWSON, MD 65652</u>	Site Phone: <u>---</u>	Site FAX: <u>---</u>
--	------------------------	----------------------

Mailing Address: <u>15 SURREY CT COLUMBIA SC 29204</u>	Mail Phone: <u>214-679 4278</u>	Mail FAX: <u>---</u>
--	-------------------------------------	----------------------

Number of EE's on Site: <u>(0) 10</u>	Number Of Covered Employees 12 MO.: <u>10</u>	Number of Employees Controlled by Employer: <u>10</u>	Federal Tax ID: <u>20-2458839</u>	Contractor General or Sub: <u>(C)</u>	Corp/Part/Sole: <u>(C)</u>	Interstate Commerce: <u>yes</u>
---------------------------------------	---	---	-----------------------------------	---------------------------------------	----------------------------	---------------------------------

Entry Date: <u>4/20/18</u>		Opening Conference Date: <u>4/20/18</u>		Walk-Around Date: <u>---</u>	
Time: <u>---</u>		Time: <u>---</u>		Time: <u>---</u>	

Employer Representatives Contracted	Name: <u>GREG KELISH</u>	Title: <u>CEO</u>	Function: <u>0</u>	Walk-Around: <u>---</u>
	Name: <u>JEAN LECORDER</u>	Title: <u>President</u>	Function: <u>0</u>	Walk-Around: <u>---</u>
	Name: <u>Thomas Buckner</u>	Title: <u>ATTORNEY, ESQ.</u>	Function: <u>(C)</u>	Walk-Around: <u>---</u>
	Name: <u>---</u>	Title: <u>---</u>	Function: <u>---</u>	Walk-Around: <u>---</u>

Employee Representation OSH Act 8(e) Employee Participation	Local #/Union Name/Rep: <u>Non</u>	Address and Telephone: <u>---</u>
	Local #/Union Name/Rep: <u>---</u>	Address and Telephone: <u>---</u>
	Local #/Union Name/Rep: <u>---</u>	Address and Telephone: <u>---</u>

Inform Employer of:	<input type="checkbox"/> Walkthrough (items on complaint, plain site, issues identified by employees, possible referrals to CSHO's)	<input type="checkbox"/> Pictures and videotaping (recording sound)
	<input type="checkbox"/> Expansion may occur based on info from records, program review, & walk-around inspection - 8(f)(2)	<input type="checkbox"/> Confidential/Private employee interviews - 8(a)(2)
	<input type="checkbox"/> Trade Secret/Proprietary information disclaimer, Pictures & Video - Section 15	<input type="checkbox"/> Employee Rights - 11(c)
		<input type="checkbox"/> Outside contractors on site
		<input type="checkbox"/> Safety and Health Program Evaluation

Record Keeping & Related Information:	Req. Date/Time: <u>---</u>	Rec. <input type="checkbox"/> OSHA 300 logs and OSHA 300A - Summary for Past Five Years
	YTD: <u>---</u>	<input type="checkbox"/> OSHA 300 log for Current YTD, Total employee hours work YTD, and Avg.# of employees

Health & Safety Programs & Training Records	Req. <input type="checkbox"/> Rec. <input type="checkbox"/> Hazard Communication	Req. <input type="checkbox"/> Rec. <input type="checkbox"/> BBP-Exposure Control	Req. <input type="checkbox"/> Rec. <input type="checkbox"/> Fall Protection
	<input type="checkbox"/> Lock Out / Tag Out	<input type="checkbox"/> PPE Hazard Assessment	<input type="checkbox"/> Trenching
	<input type="checkbox"/> Forklift Training Program	<input type="checkbox"/> Confined Space	<input type="checkbox"/> Evac. Procedures <u>---</u>
	<input type="checkbox"/> Respiratory Program	<input type="checkbox"/> Assured Grounding/GFCI	<input type="checkbox"/> Other: <u>---</u>

Safety and Health Program Evaluation	<input type="checkbox"/> Written Safety and Health Program	<input type="checkbox"/> Conduct Safety Meetings
	<input type="checkbox"/> Written Safety and Health Program on Site	Where? <u>---</u>
	<input type="checkbox"/> Enforcement/Disciplinary Program	How Often? <u>---</u>
	<input type="checkbox"/> Safety Training Program	Who Conducts? <u>---</u>

PPE Required	<input type="checkbox"/> Hard Hat <input type="checkbox"/> Steel Toe Boots/Shoes <input type="checkbox"/> Safety Glasses <input type="checkbox"/> Safety Goggles <input type="checkbox"/> Hearing Protection
	<input type="checkbox"/> Respirators <input type="checkbox"/> Fall Protection <input type="checkbox"/> Other: <u>---</u>

1040120608

(\*) → See Back



## Ray, Chester E. - OSHA

---

**From:** Ray, Chester E. - OSHA  
**Sent:** Tuesday, May 15, 2018 12:20 PM  
**To:** gkelish@Tower-tci.com; jal@Tower-tci.com  
**Cc:** Lorek, Karena - OSHA; Ewing, Bryan - OSHA; Robinson, Kimberly R. - OSHA; Lowrey, Steve - OSHA; Maloney, David - OSHA; Gordon, Charles W- SOL  
**Subject:** TCI Information/Document Request

Mr. Kelish:

In our continuing investigation of the Steve Lemay, LLC Fatality Accident, the Occupational Safety and Health Administration (OSHA) is requesting the following information/documents:

- Contract and written scope of work (TCI, Lemay, and MSU)
- Structural Analysis and Design Calculations
- Drawing Packages
  - o Original fabrication and erection drawings from 1971
  - o Structural modification and fabrication drawings from 2002
  - o Structural modification and fabrication drawings for current renovations

Respectfully,

Chet Ray  
Safety Compliance Officer  
Dept. of Labor - OSHA  
Region 7 - Kansas City Area Office  
P - 816.483.9531  
[ray.chester@dol.gov](mailto:ray.chester@dol.gov)



## Ray, Chester E. - OSHA

---

**From:** Thomas R. Buchanan <tbuchanan@mcdowellrice.com>  
**Sent:** Wednesday, May 30, 2018 3:00 PM  
**To:** Ray, Chester E. - OSHA  
**Cc:** Lorek, Karena - OSHA; Robinson, Kimberly R. - OSHA; Maloney, David - OSHA; Ewing, Bryan - OSHA; Lowrey, Steve - OSHA; Jason Buchanan; jal@Tower-tci.com; gkelish@Tower-tci.com; Thomas R. Buchanan  
**Subject:** RE: Telephone Conference  
**Attachments:** 17.289.002\_KOZK Springfield, MO\_MSU Signed Agreement.pdf; 17.289.002 Springfield (Fordland), MO Erection Package (Revision 1).pdf  
  
**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Chester,

In answer to your questions:

- Current Total Number of employees for TCI 11 employees total -- including Jean and Greg.
- Average Total Number of employees over the past twelve months 11 employees.
- Federal Tax ID 20-2458839
- Is the company represented by a Union, if so please provide the Name and Local Number, Address and Business Agent Not Applicable
- Attached is the contract between TCI and the University for design services. Pursuant to the contract, TCI personnel were never expected nor on site prior to the accident. As provided in Article 1.0.3, the parties eliminated the potential site visit to occur before TCI's design work occurred.
- We previously provided OSHA with the rigging plan created by Steve Lemay LLC. As provided in General Note 9 of Sheet G-1 of the attached design documents, the rigging plan was prepared by the contractor, who was responsible for all construction and job site safety. (see General Notes 1, 2, 3, 7 and 8).

Regards,

Tom

Thomas R. Buchanan, Esq.  
Board Certified Civil Trial Advocate  
by the National Board of Trial Advocacy  
McDowell, Rice, Smith & Buchanan  
a professional corporation  
605 West 47th St., Suite 350  
Kansas City, MO 64112

phone (816) 753-5400  
mobile (816) 729-5832  
email: [Tbuchanan@mcdowellrice.com](mailto:Tbuchanan@mcdowellrice.com)

**United States of America**  
**DEPARTMENT OF LABOR**  
**Occupational Safety and Health Administration**  
***SUBPOENA DUCES TECUM***

**TO:** Custodian of Records for Tower Consultants Inc. (TCI)  
c/o Thomas K Buchanan, Attorney;  
McDowell Rice Smith & Buchanan P.C.  
605 W 47<sup>th</sup> Street, Suite 350  
Kansas City, MO 64112

*Pursuant to Section 8(b) of the Occupational Safety and Health Act (29 U.S.C. 657(b))  
you are hereby required to appear before **Karena Lorek, Area Director**, or her designee of the*

**OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION**  
**UNITED STATES DEPARTMENT OF LABOR**

*at 2300 Main Street Suite 168 in the City of **Kansas City, Missouri** on the 15<sup>h</sup> day of June  
2018 at 9:00 am o'clock of that day, and you are hereby required to bring with you and  
produce at said time and place the following books, papers and documents: The documents listed  
on the attached Appendix A.*

**FAIL NOT AT YOUR PERIL**

IN TESTIMONY WHEREOF *I have hereunto affixed my  
signature and the seal of the UNITED STATES  
DEPARTMENT OF LABOR at  
2300 Main Street, Suite 168 this  
4<sup>th</sup> day of June, 2018*



  
Karena Lorek  
Area Director, Occupational Safety and Health Administration  
UNITED STATES DEPARTMENT OF LABOR

## APPENDIX A

(Document Request for TCI c/o Thomas R Buchanan or related entities)

You are required to produce the following documents:

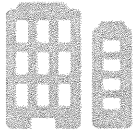
1. The documents, including emails, correspondence, and memorandums, including attachments, between Steve Lemay, LLC, Missouri State University, and Tower Consultants Inc. (TCI) regarding the Reinforce Tower, KOZK Project since January 1, 2017.



Government Contractors > TOWER CONSULTANTS, INC.

## TOWER CONSULTANTS, INC.

Columbia, South Carolina



**803-407-8489 x300**

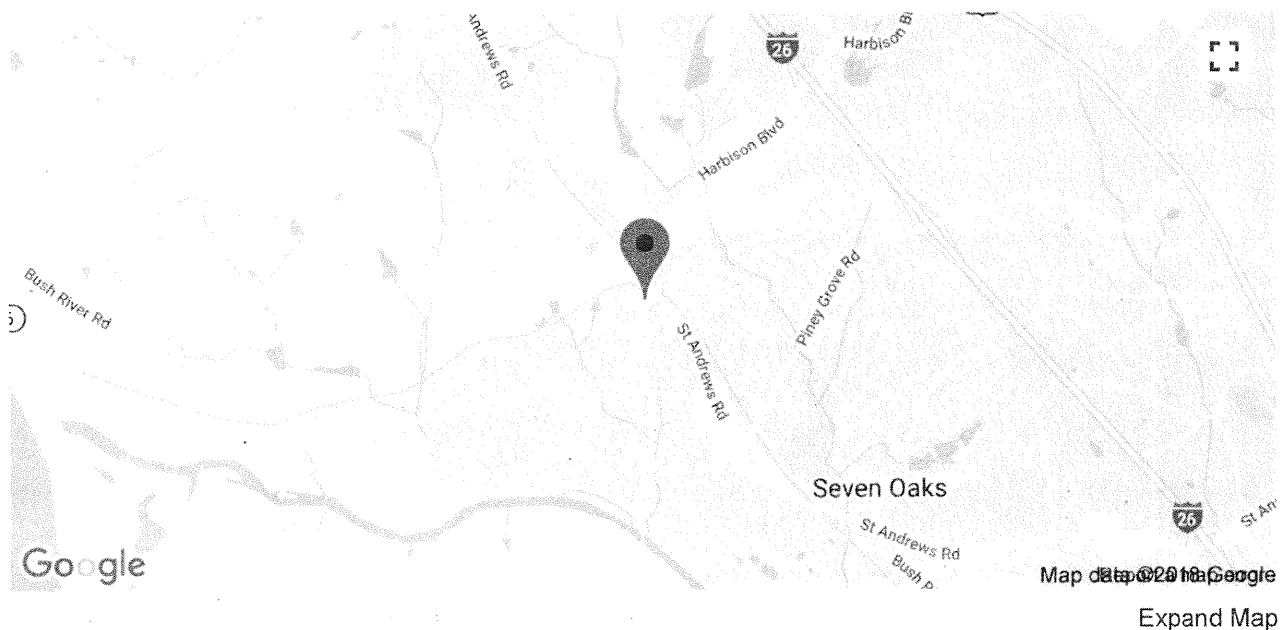
15 Surrey Ct  
Columbia, SC 29212-3139

Fax: 803-407-8691

### Products & Services

#### NAICS Code(s)

237130 Power and Communication Line and Related Structures Construction



**Found any discrepancies in your company profile?**

Request to update/remove the information

**Company Information**

Company Name: TOWER CONSULTANTS, INC.  
Address: 15 Surrey Ct  
City: Columbia  
State: South Carolina  
Zip Code: 29212-3139  
Phone: 803-407-8489 x300  
Fax: 803-407-8691  
Contact Person: CHERYL BROCK  
Legal Structure: Subchapter S Corporation  
Year Established: 2005

**See Also****Chao & Associates, Inc.**  
Columbia, Sc

Structural & Civil design & evalution, seismic analysis, const. management. Water & sanitary sewer main , pump station, roadways design.

**GENERATOR SERVICES INC**  
West Columbia, Sc

Complete emergency power generator services since 1991. We offer routine maintenance, sales, rental and emergency support services.

**Boykin Contracting, Inc.**  
West Columbia, Sc

General construction, airfield construction, interior renovations, water and sewer infrastucture, paving and grading, plumbing, electrical installation, traffic signals and ITS.

**HAMMER CONSTRUCTION, LLC**  
Columbia, Sc

We can perform all General Contracting and Construction Management services in the commercial sector, including all renovation, new construction, and

GOVERNMENT BID OPPORTUNITIES

**JACKSON, DONNA K**

Columbia, Sc

Network communications/structured cabling installations, and service.Fiber optic installation, troubleshooting, and repair.Conduit Installation.CCTV/CATV installation, and repair.Campus cabling design. Voice/Data circuit troubleshooting and repair.

Alabama Bids	Florida Bids	Louisiana Bids
Alaska Bids	Georgia Bids	Maine Bids
Arizona Bids	Hawaii Bids	Maryland Bids
Arkansas Bids	Idaho Bids	Massachusetts Bids
California Bids	Illinois Bids	Michigan Bids
Colorado Bids	Indiana Bids	Minnesota Bids
Connecticut Bids	Iowa Bids	Mississippi Bids
Delaware Bids	Kansas Bids	Missouri Bids
District of Columbia Bids	Kentucky Bids	Montana Bids
Nebraska Bids	Oklahoma Bids	Vermont Bids
Nevada Bids	Oregon Bids	Virginia Bids
New Hampshire Bids	Pennsylvania Bids	Washington Bids
New Jersey Bids	Rhode Island Bids	West Virginia Bids
New Mexico Bids	South Carolina Bids	Wisconsin Bids
New York Bids	South Dakota Bids	Wyoming Bids
North Carolina Bids	Tennessee Bids	
North Dakota Bids	Texas Bids	
Ohio Bids	Utah Bids	

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## Ray, Chester E. - OSHA

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**From:** Lorek, Karena - OSHA  
**Sent:** Monday, May 14, 2018 2:28 PM  
**To:** Ray, Chester E. - OSHA  
**Subject:** FW: Request for Documentation

Chet

Please see the below information and the email below

Gregory L. Kelish-CEO  
Tower Consultants Inc.  
15 Surrey Court  
Columbia, SC 29212  
Phone: 214-679-4278

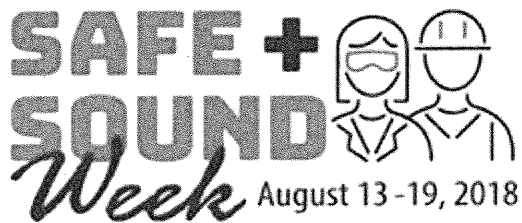
Thank you,

*Karena Lorek*  
Area Director  
Kansas City Area Office  
Direct 816-502-0327

For additional information regarding Safe and Sound please click the e-tag or link below.

### SAVE THE DATE

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**From:** Lorek, Karena - OSHA  
**Sent:** Friday, April 20, 2018 2:10 PM  
**To:** Greg Kelish (gkelish@Tower-tci.com)  
**Cc:** Jean Lecordier (jal@Tower-tci.com)  
**Subject:** Request for Documentation

Mr. Kelish

Thank you for speaking with me earlier this morning. I am just confirming our conversation that we had this morning which led to these documents that you provided today via email per our request.

You stated that Missouri State University who owned the tower and contacted your company to be the engineering company for the communication tower modifications. Your company conducted a structural analysis and generated design modification drawings, review and assist with the bidding process, and review the associated rigging plan as provided by the field service contractor. At the conclusion of the job, TCI was also supposed to conduct an inspection of the tower to ensure that the work completed by Steve Lemay LLC was compliant with the design drawings. The university requested from TCI a list of companies who could conduct this work for bids. On the bid list was Steve Lemay LLC, the university entered into a separate contract with Steve Lemay, LLC. Steve Lemay LLC, contacted TCI to provide materials for the job. During the week April 9, Steve Lemay LLC, started to rig the tower and painted the steel. April 19, 2018, Steve Lemay LLC began to modify the tower in accordance to the modification drawings and their rigging plan when the tower collapsed and a fatality occurred. During our conversation you mentioned several of the below listed documents including but not limited to structural analysis, rigging plans, contracts with the university and engineering documents. I requested these documents and you stated that you would email them to me and call me to confirm I received them.

Approximately two hours later, I received the requested documents plus additional documents. You also called to ensure I received everything that was requested. I also stated that we may have additional documents and or questions. You stated that you are the point of contact at 214-679-4278.

Thank you again for the fast response and for the documentation.

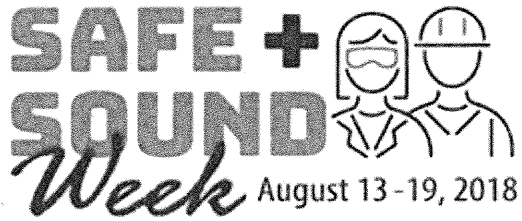
Thank you,

*Karena Lorek*  
Area Director  
Kansas City Area Office  
Direct 816-502-0327

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**From:** Ray, Chester E. - OSHA [mailto:Ray.Chester@dol.gov]  
**Sent:** Wednesday, May 30, 2018 9:29 AM  
**To:** Jason Buchanan <jb@mcdowellrice.com>; jal@Tower-tci.com; Thomas R. Buchanan <tbuchanan@mcdowellrice.com>; gkelish@Tower-tci.com  
**Cc:** Lorek, Karena - OSHA <Lorek.Karena@dol.gov>; Robinson, Kimberly R. - OSHA <Robinson.Kimberly.R@DOL.GOV>; Maloney, David - OSHA <Maloney.David@dol.gov>; Ewing, Bryan - OSHA <Ewing.Bryan@dol.gov>; Lowrey, Steve - OSHA <Lowrey.Steve@dol.gov>  
**Subject:** RE: Telephone Conference

#### Telephone Conference information:

**When:** Thursday, May 31, 2018 from 10:30am to 12:30pm (Time zone: Central Time (US & Ca))

**Who:** Karena Lorek, Area Director, KCAO

**Phone Number:** 866-676-6240

**Participants code:** 3650403

---

**From:** Ray, Chester E. - OSHA  
**Sent:** Tuesday, May 29, 2018 2:23 PM  
**To:** Jason Buchanan (jb@mcdowellrice.com); jal@Tower-tci.com; Thomas R. Buchanan (tbuchanan@mcdowellrice.com); gkelish@Tower-tci.com  
**Cc:** Lorek, Karena - OSHA; Robinson, Kimberly R. - OSHA; Maloney, David - OSHA; Gordon, Charles W- SOL; Ewing, Bryan - OSHA; Lowrey, Steve - OSHA  
**Subject:** Telephone Conference

Good Afternoon Everyone..... in our continuing ongoing investigation of the Steve Lemay, LLC Fatality, we would like to arrange a Telephone Conference between our OSHA Engineer Reps, OSHA Area Office Reps and TCI Reps. The purpose of the phone conference is for OSHA Engineer Reps to present some questions for information relating to some of the Site Specific Equipment, and procedures to be use by the work crew during the Tower Work. We would like to aim for May 31<sup>st</sup> at 10:30am Central Time. If agreed, I will provide the call in number and passcode in a later email.

Respectfully,

Chet Ray  
Safety Compliance Officer

U.S. Department of Labor  
Occupational Safety and Health Administration  
2300 Main Street, Suite 168  
Kansas City, MO 64108

Ph (816) 502-0313  
Fx (816) 483-9724

[Ray.chester@dol.gov](mailto:Ray.chester@dol.gov)



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OCT 24 2017

# Missouri State UNIVERSITY

## AGREEMENT FOR CONSULTING SERVICES

### THIS AGREEMENT

MADE THIS 23 DAY OF October IN THE YEAR OF 2017  
(In words, indicate day, month and year)

### BETWEEN

The Board of Governors of  
Missouri State University  
901 South National Avenue  
Springfield, MO 65897

AND: Tower Consultants, Inc.  
15 Surrey Court  
Columbia, SC 29212

PHONE: 803-407-8489 FAX:

HEREINAFTER CALLED THE OWNER

HEREINAFTER CALLED THE CONSULTANT

### WITNESSETH:

WHEREAS, the Owner and the Consultant intend that this document will set forth the Terms and Conditions and work necessary for this project, more particularly described herein.

It is the Owner's intent to obtain consulting services for:

PROJECT TITLE: Reinforce Tower, KOZK

MSU PROJECT NUMBER: 180830-027

MSU CONTRACT NUMBER: 180830-027.01

### PROJECT DESCRIPTION:

TCI conducted a recent study of the current tower per the requirements of ANSI / TIA 222-G. This study found that the tower would fail when subjected to the conditions required by the -G analysis. The University is looking for assistance with reconstructing this tower. TCI will develop construction documents that identify the structural modifications necessary to replace the transmission line. Additionally, TCI will assist the university in the bidding and contractor selection process, review submittal drawings, observe work, produce progress reports, and produce record drawings.

**ENTERED**

10/30/17

### COMPENSATION:

Compensation for Basic Services shall be a: (Check One)

☒ Fixed Fee

☐ Hourly Not-to-Exceed

☐ Percentage of Construction Costs

☐ Other

In the Amount of: 102,040.00

### AVAILABLE FUNDS:

Total allowable Project Budget: To be determined

Office of Planning, Design & Construction  
901 South National Avenue • Burgess House  
Springfield, Missouri 65897 • 417-836-5101 • Fax: 417-836-6884

[www.architect.missouristate.edu](http://www.architect.missouristate.edu)

An Equal Opportunity/Affirmative Action Institution

**PROJECT TEAM:**

The Owner's Designated Representative(s): Doug Sampson, AIA, LEED AP

The Consultant's Designated Representative(s): Ron Dozsa

Principal in Charge: Jean-Alain Lecordier

Email: [jal@tower-tci.com](mailto:jal@tower-tci.com)

Project Manager: Ron Dozsa

Email: [rdozsa@tower-tci.com](mailto:rdozsa@tower-tci.com)

Other(s):

*(List by Name, Title and Email)*

Jassen Hahn VP Sales [jhahn@tower-tci.com](mailto:jhahn@tower-tci.com)

Greg Kelish CEO [gkelish@tower-tci.com](mailto:gkelish@tower-tci.com)

**Sub-consultants retained at the Consultant's expense:**

*(List by discipline and, if known, identify them by name, email and address)*

Other important initial information is:

TERMS AND CONDITIONS OF AGREEMENT BETWEEN OWNER AND CONSULTANT

**ARTICLE 1 – GENERAL STATEMENT**

**1.0 CONSULTANTS RESPONSIBILITIES**

- 1.0.1 The Consultant assures the Owner that the Consultant is financially solvent, able to pay its debts and has sufficient working capital to complete the services required herein.
  - 1.0.2 The Consultant agrees to accept the Owner's program and project budget and further agrees to use professional skill and care to accomplish said Project within the intent of the program and established budget. In the event the Consultant determines that the Project cannot be accomplished within the established budget, he shall notify the Owner's Representative of this fact in writing, so that the Project scope can be reviewed and modified if necessary. Consequently, should the lowest acceptable bid(s) exceed the funds available, not due to events of force majeure, the Consultant shall be required to redesign or perform such corrective work as necessary to allow the Project to be successfully rebid and constructed within available funds, without additional cost to the Owner.
  - 1.0.3 The Consultant ~~agrees to observe the job site prior to commencing his Work and~~ shall use reasonable care to verify that all relevant information supplied to him by the Owner is correct and accurate.
- 1.1 The Consultant shall design and detail all plans to be in compliance with the following building codes:
- 1.1.1 International Building Code 2012
  - 1.1.2 International Fire Code 2012
  - 1.1.3 International Mechanical Code 2012
  - 1.1.4 International Plumbing Code 2012
  - 1.1.5 International Fuel Gas Code 2012
  - 1.1.6 NEC 2011
  - 1.1.7 In addition, all applicable state and federal laws and regulations including but not limited to:
    - 1.1.7.1 Section 504 of the Federal Rehabilitation Act of 1973
    - 1.1.7.2 The Americans with Disabilities Act (ADA)
    - 1.1.7.3 Missouri State Statutes Chapter 8
    - 1.1.7.4 Section 8.812 Minimum Energy Efficiency Standards
    - 1.1.7.5 Applicable Life Safety Codes shall be incorporated herein by reference.
- 1.2 The Consultant and its subconsultants shall be currently registered by the State of Missouri. All project drawings and specifications shall bear the seal of the Professional Architect or Engineer.
- 1.3 If Consultant renders basically architectural services, he hereby agrees that all plans, specifications, detail drawings, etc., for engineering work shall be done by a registered professional Engineer in his own organization, or agrees to employ without additional cost to the Owner, and subject to the approval of the Owner's Representative, the services of registered professional Engineers regularly engaged in the work. The Consultant shall enter into contract agreements with such registered professional Engineers which contracts shall bind the Engineers in terms and responsibilities substantially as set forth herein regarding design and construction observation services.
- 1.4 If the Consultant renders basically engineering services, he hereby agrees that all plans, specifications, detailed drawings, etc., for architectural work pertaining to this Project shall be done by a registered professional Architect in his own organization, or agrees to employ without additional cost to the Owner, and subject to the approval of the Owner's Representative the services of a registered professional Architect regularly engaged in the work. The Consultant shall enter into a contract agreement with such registered professional Architects, which contract shall bind the Architects to terms and responsibilities substantially as set forth herein regarding design and construction observation services.



## ARTICLE 2 – DEFINITIONS

- 2.0 Wherever used in this Agreement, the following meanings shall be given the terms as herein defined:
- 2.0.1 "Additional Services" – Professional services that may, if authorized in writing by the Owner, be rendered by the Consultant in addition to the basic services identified in the Owner-Consultant agreement.
  - 2.0.2 "Agreement" – The Contract executed by the Owner and the Consultant.
  - 2.0.3 "Construction Cost" – The total cost or estimated cost to the Owner of all elements of the project designed or specified by the Consultant, including the cost at current market rates of labor and materials furnished by the Owner and equipment specified, selected, designed, or specially provided for by the Consultant (plus reasonable allowance for the Contractor's overhead and profit). Construction cost also includes a reasonable allowance for contingencies for market conditions at the time of bidding and for changes in the work during construction; however, it does not include compensation of the Consultant and its Subconsultant or the costs of the land, rights-of-way, financing, or other costs that remain the responsibility of the Owner.
  - 2.0.4 "Consultant" – Shall refer to the Architect, Engineer or other design professional when employed by the University, or their duly authorized representative.
  - 2.0.5 "Fixed Fee" – Compensation for professional services on a lump-sum basis shall include all incurred reimbursables or other variables except as may be specifically designated by the Owner in advance.
  - 2.0.6 "Hourly Not-to-Exceed" – Compensation for professional services calculated on an hourly basis, and total cost will not be exceeded without prior written approval.
  - 2.0.7 "Owner" – The Board of Governors, Missouri State University, acting by and through its duly authorized representatives.
  - 2.0.8 "Percentage of Construction Costs" – Compensation based on a percentage of actual construction cost.
  - 2.0.9 "Project Budget" – The total funds available to complete a project including, but not limited to, Consulting Fees, Construction Contracts, Project Administration, Construction Contingency, Furniture, Fixtures & Equipment, Telecommunications and Relocation Costs.

## ARTICLE 3 – BASIC SERVICES

- 3.0 The Consultant's Basic Services consist of the phases described as follows and include, but are not limited to the services as detailed in the project description. The Consultant shall obtain written approval of the Owner's Representative before proceeding with each phase.
- 3.1 The Consultant shall satisfy the requirements for the lawful practice of professional services, architecture, landscape architecture, engineering, and/or land surveying as applicable to the project in the State of Missouri and shall perform its services in a professional manner consistent with a level of care and skill exercised by other practicing consultants performing such services prescribed by the Owner.
- 3.2 The Consultant shall provide services for the Project to comply with all applicable federal, state and local laws, statutes, ordinances, codes, orders, rules and regulations in effect as of the date of services rendered, and shall assist the Owner in obtaining required written approval of all governmental authorities having jurisdiction over the project prior to execution of the contract(s) for construction. Review or approval of the Consultant's documents by the Owner shall not relieve the Consultant of any obligations for such compliance or for assistance in obtaining governmental approval. The Owner shall be responsible for any additional costs due to subsequent retraction or modification of written approval by a governmental authority, unless such retraction or modification is the result of a negligent error or omission in the Contract Documents discovered after the original approval.
- 3.3 The Consultant shall document all meetings with minutes provided to the Owner within seven (7) calendar days following the meeting. The minutes should document all those in attendance, document all items of discussion, and record any decisions made. Upon receipt of the written minutes, the Owner shall have seven (7) calendar days to review the minutes and respond back to the Consultant with any required modifications to the minutes.

- 3.4 It is the University's policy to avoid contracting with Consultants who have unacceptable organizational conflicts of interest. An organizational conflict of interest means that because of existing or planned activities, a Consultant is unable or potentially unable to render impartial assistance, or has an unfair competitive advantage, or a firm's objectivity is, or might be, impaired. The Consultant must warrant that, to the best of their knowledge and belief, there are no relevant facts or circumstances which could give rise to an organizational conflict of interest. Consultants are prohibited from competing for the follow-on contracts to the current design contract. Firms must adhere to and accept this as a limitation on future contracting provision in order to avoid any organizational conflict of interest.
- 3.5 SCHEMATIC DESIGN PHASE
- 3.5.1 The Consultant shall confer with the Owner to ascertain the requirements of the Project and shall confirm the viability of such requirements to the Owner's Representative.
- 3.5.2 The Consultant shall prepare Schematic Design Studies consisting of drawings and other documents illustrating the scale and relationship of Project components for approval by the Owner's Representative.
- 3.5.3 The Consultant shall provide a preliminary evaluation of the program and the project budget requirements each in terms of the other.
- 3.5.4 The Consultant shall consider environmentally responsible design alternatives, such as material choices and building orientation, together with other considerations based on program aesthetics, in developing a design that is consistent with the Owner's program, schedule and budget for the Cost of the Work.
- 3.5.5 Based on the mutually agreed upon program, design concept, schedule, and project budget requirements, the Consultant shall prepare, for review and approval by the Owner, Schematic Design Documents consisting of drawings and other documents illustrating the scale and relationship of project components. Minimum submittal requirements for Schematic Design Phase shall include five sets of the following:
- 3.5.5.1 Drawings – Architectural and others as applicable to the project including but not limited to site plans, floor plans, and elevations.
- 3.5.5.2 Schedule – Project time line including all design phases and proposed construction phases.
- 3.5.5.3 Preliminary budget estimates based on general scope requirements. Consultant shall be responsible for project design being within established budget. This estimate shall take into account the expected construction start date and any completion deadlines.
- 3.5.5.4 Narrative outlining mechanical, electrical, plumbing, structural, and specialized systems associated with the project.
- 3.5.6 The Consultant shall present the Schematic Design Documents at a time and location as specified by the Owner.
- 3.6 DESIGN DEVELOPMENT PHASE
- 3.6.1 The Consultant shall prepare from the Schematic Design Submittal approved by the Owner's Representative, including any adjustments authorized by the Owner, the Design Development Documents consisting of drawings and other documents to fix and describe the size and character of the entire Project as to structural, mechanical and electrical systems, materials and such other essentials as may be appropriate.
- 3.6.2 The Consultant shall to the best of their knowledge, information and belief comply with all applicable codes, standards and the Owner's design guidelines in the preparation of project drawings and specifications, unless otherwise authorized by the Owner. The Consultant shall acknowledge such action by sealing the contract documents as required by state statute.
- 3.6.3 The Consultant shall prepare documents to include additive or deductive alternate bids requested by the Owner to keep the project within the approved budget. Compensation for such alternates shall be included as part of the Basic Services fee.
- 3.6.4 Minimum submittal requirements for Design Development Phase shall include five sets of the following:
- 3.6.4.1 Drawings – Architectural, mechanical, electrical, plumbing, code review or other.
- 3.6.4.2 Schedule – Updated project time line including all design phases and proposed construction phases.

3.6.4.3 Updated budget based on design development documents. Budget shall delineate areas of cost. Consultant shall be responsible for project design being within budget. This estimate shall take into account the expected construction start date and any completion deadlines.

3.6.4.4 Outline specifications. Unedited specifications not applicable to this project will not be acceptable.

### 3.7 CONSTRUCTION DOCUMENT PHASE

3.7.1 The Consultant shall prepare from the Design Development Submittal approved by the Owner's Representative, including any further adjustments authorized by the Owner, Construction Documents setting forth in detail the requirements for the construction of the entire Project including information necessary to bid the Project.

3.7.2 The Consultant shall to the best of their knowledge, information and belief comply with all applicable codes, standards and the Owner's design guidelines in the preparation of project drawings and specifications, unless otherwise authorized by the Owner. The Consultant shall acknowledge such action by sealing the contract documents as required by state statute.

3.7.3 The Consultant shall prepare documents to include additive or deductive alternate bids requested by the Owner to keep the project within the approved budget. Compensation for such alternates shall be included as part of the Basic Services fee.

3.7.4 The Consultant shall submit appropriate documents to obtain the written approval of the appropriate authority for all proposed connections to private or public utility systems or public and private roads and streets, when such connections are planned as part of the Project.

3.7.5 Minimum submittal requirements for Construction Documents Phase shall include five sets of the following:

3.7.5.1 Drawings – Architectural, structural, mechanical, electrical, plumbing, code review or other.

3.7.5.2 Schedule – Updated project time line including all design phases and proposed construction phases.

3.7.5.3 Updated budget based on Construction Documents Phase. Budget shall delineate areas of cost and Consultant shall be responsible for project design being within established budget and completion deadlines. This estimate shall take into account the expected construction start date. The Consultant shall make no provisions for a bidding contingency in this estimate.

3.7.5.5 Structural calculations.

3.7.5.6 Final specifications.

### 3.8 BIDDING PHASE

3.8.1 The Consultant, following the Owner's Representative's approval of the Construction Document submittal and the Final Statement of Estimated Construction Cost, shall assist the Owner as follows:

3.8.1.1 Production – Provide the quantity of construction documents as necessary to the location designated by the Owner's Representative.

3.8.1.2 Distribution – The Owner's Representative is responsible for distribution of all construction documents as necessary.

3.8.1.3 Pre-Bid Conference – Consultant Representative is responsible for attending, recording minutes and offering clarification of any outstanding issues.

3.8.1.4 Substitutions – Consultant must receive and process Requests for Substitutions in a timely manner.

3.8.1.5 Addenda – Consultant must offer clarifications and answer questions as dictated by the project. Sealed Addenda must be issued by the start of business, no less than three (3) business days prior to bid opening.

3.8.1.6 Bid Opening – Consultant attendance is optional.

3.8.1.7 Review – Consultant must review all bids and make a written recommendation for the Contractor within three (3) business days.

3.8.1.8 Contract – The Owner will prepare the Construction Contract award(s).

### 3.9 CONSTRUCTION ADMINISTRATION PHASE

- 3.9.1 The Construction Administration Phase will commence with the award of the Construction Contract(s).
- 3.9.2 Missouri State University General Conditions will dictate Administration during the Construction Phase. The Consultant shall provide for Administration of the Construction Phase and shall advise and consult with the Owner's Representative and have authority to act on the behalf of the Owner to the extent provided in the General Conditions unless otherwise modified in writing.
- 3.9.3 The Consultant must recommend in writing approval or disapproval of all Contractor Requests for Substitutions as required in the General Conditions.
- 3.9.4 The Consultant shall act as the initial interpreter of the requirements of the Construction Documents.
- 3.9.5 The Consultant shall at all times have access to the Work.
- 3.9.6 Pre-Construction Meeting – Owner, Consultant and Contractor(s) must attend the pre-construction meeting. It is Consultants responsibility to present comprehensive meeting minutes to the Owner's Representative within five (5) business days of the pre-construction meeting detailing information as stated to provide an accurate representation of those items held considerable to the Owner's interest.
- 3.9.7 Progress Meetings — Owner, Consultant and Contractor(s) shall schedule no less than one progress meeting ~~per month~~ during the construction period. Consultant shall review the project schedule, budget and address any outstanding issues as necessary. It is Consultants responsibility to present comprehensive meeting minutes to the Owner's Representative within five (5) business days of any scheduled progress meeting detailing information as stated to provide an accurate representation of progress and those items held considerable to the Owner's interest.
- 3.9.8 Site Visits – The Consultant shall visit the site ~~at intervals~~ appropriate to the stage of construction in order to familiarize him/herself generally with the progress and quality of the Work and to determine if the Work is proceeding in accordance with the Contract Documents. The Consultant shall provide to the Owner an anticipated schedule of visits based on construction milestones, appropriate intervals or both. For each site visit made, the Consultant shall submit to the Owner's Representative a written progress and observation report within five (5) business days. This Consultant should summarize each visit and present the current status of the Project with regard to pending changes, design or observed construction problems and schedule variations. Other additional site visits necessitated by the Consultant's error, omission, unauthorized changes or negligence, shall be accomplished without additional cost to the Owner. All observations, including those specified to be performed by the Designer in the Contract Documents and all clarifications required, shall be scheduled, performed and issued in a manner to prevent delay to the Contractor. The Consultant shall not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, and the Consultant shall not be responsible for the Contractor's failure to carry out the Work in accordance with the Construction Documents, nor for the acts or omissions of the Contractor or Subcontractors, or any other person performing work. However, the Consultant shall report observed practices which are not in the best interest of the Owner with regard to cost and schedule to the Owner's Representative of which the Consultant becomes aware of.
- 3.9.9 Based on such observations at the site and on Contractor's written request for payment, the Consultant shall determine the amount owed to the Contractor and shall certify requests for payment in such amounts. The Consultant shall recommend payment on the basis of Work complete to date; and that to the best of the Consultant's knowledge, information and belief, the quality of the Work is in accordance with the Construction Documents. For any request which is seeking payment for stored materials, it is the responsibility of the Consultant to gain verification of its' location, a copy of the Contractors liability insurance for any stored materials not located on Missouri State University property, invoices verifying the purchase of said materials and to verify that Contractor is seeking payment for finished product versus raw materials. Certification of payment shall not be deemed to represent that the Consultant has made any examination to ascertain how and for what purpose the Contractor has used the moneys paid.
- 3.9.10 The Consultant may recommend rejection of Work, which does not conform to the Construction Documents. Whenever the Consultant considers it necessary or advisable to confirm the requirements of the Construction Documents, he may request approval of the Owner's Representative for special inspection and/or testing.

- 3.9.10.1 The Consultant shall review and respond to all Requests for Information generated on the project within ten (10) consecutive calendar days of receipt thereof. The Consultant shall provide any and all information necessary to fully respond to the request.
- 3.9.11 The Consultant shall prepare Proposal Requests, Supplemental Instructions and Change Orders in accordance with the form and procedures prescribed by the Owner's Representative. The Consultant shall provide an independent cost estimate for all proposal requests issued. These cost estimates shall be provided to the Owner prior to the receipt of the cost provided by the Contractor(s). Following receipt of the Contractor pricing, the Consultant shall review and make a written recommendation to the Owner regarding acceptance of the Contractor's proposal.
- 3.9.12 Upon notification from the Contractor that the project is complete and ready for review, the Consultant shall prepare a punch list and submit it to the Owner for their review. It is the responsibility of the Consultant to verify completion and notification shall be sent to the Owner and Contractor upon completion of all punch list items. The Consultant shall determine dates of Substantial Completion and shall receive, review, and deliver to the Owner written warranties and documents required by the Contract Documents and supplied by the Contractor.
- 3.9.13 The Consultant shall provide a substantial completion inspection, a final inspection, and a warranty inspection and any other visits required by the construction documents for milestone events.
- 3.9.14 During the warranty period of the Construction Contract(s), the Consultant shall work with the Owner's Representative to secure correction of any defects that become apparent. Services provided by the Consultant during the warranty period shall be provided at no cost to the Owner if said services are necessary to correct defects in the Work resulting from errors or omissions in the design prepared by the Consultant. However, if such services are provided to correct defects resulting from defective material or poor workmanship provided by the Contractor, said services shall be considered Additional Services and the Consultant compensated accordingly provided such services have been previously authorized in writing by the Owner's Representative.
- 3.9.15 ~~The Consultants Representative or one familiar with the Work and his architectural or engineering consultants, as applicable, shall perform an inspection of the project eight to ten months after start of the warranty period. A written report of the specific results shall be submitted to the Owner's Representative within thirty (30) days of the inspection.~~
- 3.10 POST CONSTRUCTION PHASE
- 3.10.1 As part of the basic services, Consultant shall provide Owner with one set of Record Drawings and one set of prints that reflect as-built conditions. These plans shall incorporate all changes. Reference to a separate document is not allowed. Each sheet of the plans shall be clearly labeled "Record Drawings" and show the date revised. One example sheet of the Consultant's format is to be submitted for Owner's approval before proceeding with entire set. In addition, a copy of all Record Drawings and Project Specifications shall be provided on approved electronic media. All drawings and details shall be prepared utilizing AutoCAD application programs and be compatible with the latest version of AutoCAD. The Consultant must deliver files in .dwg format along with Consultant's .ctb file showing standard layers and line weights along with any associated external references. Along with the electronic AutoCAD files, a copy of these documents shall also be provided in .pdf format. The .pdf format files shall be indexed according to the drawing set and shall be named according to the name of the sheet. Reasonable effort shall be made to insure accuracy. The Consultant shall provide these documents within twenty-eight (28) calendar days of the receipt of the marked up drawings from the Contractor. Only the cost of printing will be allowed as a reimbursable expense.

#### **ARTICLE 4 – CHANGE ORDERS**

- 4.0 The Consultant shall prepare and estimate Change Orders in writing, which shall be considered as part of the Contract Documents, when approved by the Owner. The method and amount of additional compensation, if applicable, shall be agreed upon in writing, by the Owner, before preparing Change Order documents.
- 4.1 The Consultant shall prepare design documents for change orders due to design errors and omissions at no cost to the Owner.
- 4.2 The Consultant will reimburse the Owner for the non-value added cost of change orders due to design errors when the cumulative total non-value added cost of all such change orders exceeds 0.1% of the total construction cost or \$1,000, whichever is greater. The non-value added cost of each change order will be determined by the additional cost to the Owner less the value added to the project. Value is added to the project if specifying the correct work in the original construction contract would have resulted in a greater contract amount.
- 4.3 The Owner will consider the Consultant's omission of documented Owner instructions, requirements and/or problems from the specified work as a design error or omission.

#### **ARTICLE 5 - ADDITIONAL SERVICES**

- 5.0 Additional Services shall be provided only upon prior written authorization by the Owner's Representative.

#### **ARTICLE 6 – OWNER'S RESPONSIBILITIES**

- 6.0 The Owner shall provide information regarding his requirements for the Project as well as information required of him in order to promote the orderly progress of the Work.
- 6.1 If the Owner observes or otherwise becomes aware of any fault or defect in the Project or nonconformance with the Contract Documents, he shall give prompt written notice thereof to the Consultant.
- 6.2 The Owner will allocate a fixed limit for construction cost as hereinafter defined.
- 6.3 The Owners Representative is authorized to act in its behalf with respect to the Project. The Owner or his representative will examine documents submitted by the Consultant and will render decisions pertaining thereto promptly to avoid unreasonable delays in the progress of the Consultant's work.
- 6.4 All of the above items relating to Owner's responsibilities shall in no way abrogate the Consultant's responsibility.

#### **ARTICLE 7 – COMPETITIVE BIDDING REQUIREMENTS**

- 7.0 Under statutory provisions of the State of Missouri, the Owner is required to competitively bid all construction projects. Further, all costs for any given construction project must be within the funds available for said Project.

#### **ARTICLE 8 – ALTERNATES**

- 8.0 Upon approval of the Owner, the Consultant may include in the Project additive or deductive alternates.
- 8.1 When alternates are included for the purpose of determining cost, or to protect the budget established for the Base Bid(s) or for any other reason, no additional compensation will be allowed the Consultant for alternates without prior written approval by the Owner.
- 8.2 Base bids need to be a usable project. Therefore, the Consultant, in determining his final estimate, must include Base Bid and necessary alternate costs within the funds available for construction, unless otherwise approved by the Owner's Representative.

#### **ARTICLE 9 – DIRECT PERSONNEL EXPENSE**

- 9.0 Direct Personnel Expense is defined as the cost of salaries on an hourly basis and includes mandatory benefits such as payroll taxes and customary benefits such as insurance, sick leave, vacation, holiday, pensions and other such costs that relate to employees engaged on the Project by Consultant.
- 9.1 Employees are those who are engaged on the Project and have specific responsibilities which may aid in its completion.

- 9.2 Should Direct Personnel Expense be selected by way of an Hourly Not-to-Exceed method of compensation, the Consultant will submit a complete list of employees to be engaged on the Project along with a schedule of rates and benefits for those employees. Said rates shall remain valid for the length of contract. Should an employee be reassigned, terminated or replaced during the duration of contract, a written notice shall be given and approved by the Owner prior to payment.

#### **ARTICLE 10 – REIMBURSABLE EXPENSES**

- 10.0 Reimbursable expenses are in addition to the professional fee determined by the Basic Rate. The production and distribution of all copies of the bidding documents will be a reimbursable expense at Consultant's direct cost without Consultant's overhead and profit, if such service is not provided by the Owner.
- 10.1 Telephone calls, FAX transmissions, electronic messages, postage, office supplies, rent, utilities, general clerical and secretarial services, depreciation, mileage and/or other travel costs, meals and lodging for out-of-town trips, photocopying costs, and expenses of a similar nature will not be considered a reimbursable expense under this Agreement unless such items are specifically authorized in advance, in writing by the Owner.
- 10.2 If authorized in advance in writing by the Owner, direct expense of special consultants for other than the normal services furnished by the Consultant will be reimbursable expenses.
- 10.3 If authorized in advance in writing by the Owner, the production and/or reproduction of presentation models, mock-ups, final renderings and reports for the Owner's use are reimbursable direct expenses unless required in this agreement. However, study models, mock-ups, and perspective sketches are considered as necessary to the Consultant's design process and are included in Basic Services.
- 10.4 If authorized in advance in writing by the Owner, Mileage reimbursement for privately-owned automobiles used to travel between the Consultant's and its Subconsultants' places of business and the Owner's offices or Project site shall not exceed the mileage allowance rate for the State of Missouri; the standard automobile mileage reimbursement rate for the IRS less three cents per mile.

#### **ARTICLE 11 – CONSULTANT'S ACCOUNTING RECORDS**

- 11.0 Records and receipts of the Consultant's Direct Personnel, Consultant and Reimbursable Expenses pertaining to the Project shall be kept on a generally recognized accounting basis. The Owner reserves the right to request and receive Consultant documentation regarding any taxes, expenses, or other charges that Consultant claims Owner is obligated to pay.

#### **ARTICLE 12 – OWNER'S REPRESENTATIVE**

- 12.0 For the purposes of this Agreement, the before mentioned, or his designee, shall serve as the Owner's Representative. No plans and specifications or changes thereto will be accepted, nor any payments made without approval by the Owner.

#### **ARTICLE 13 – OWNERSHIP OF DOCUMENTS**

- 13.0 Drawings, specifications and other documents, including those in electronic form, prepared by the Consultant and its Subconsultants are Instruments of Service for use solely with respect to the Project. The Consultant and its Subconsultants shall be deemed the authors and owners of their respective Instruments of Service and shall retain all common law, statutory and other reserved rights, including copyrights. Neither the Owner nor the Consultant or its Subconsultants shall use the documents produced pursuant to the Agreement for any other Project. However, the Owner may use, including copy, modify and amend such Instruments of Service at any time including but not limited to expanding, correcting any deficiencies to, or making any renovations or repairs to the Project. Any such use without written verification or adaptation by the Consultant for the specific purpose intended shall be at the user's sole risk and without liability or legal exposure to the Consultant or its independent Contractors or Consultants.

#### **ARTICLE 14 – INSURANCE**

- 14.0 The Consultant shall provide and maintain, during the life of the Agreement, insurance acceptable to the Owner which will afford protection and coverage in accordance with the requirements set forth below.
- 14.1 Commercial General Liability Coverage comparable to Comprehensive General Liability coverage to protect the Consultant and its Subconsultant performing work covered by this Agreement from claims for damages for personal injury, bodily injury (including wrongful death), and from claims for property damage which may arise from the operation under the Agreement. The coverage will provide protection for all operations by the Consultant or its Subconsultant or by anyone employed by the Consultant or its Subconsultant. In addition, the coverage is to include "Missouri State University, the Board of Governors of Missouri State University, its members, agents and employees" as "additional insureds". The amount of the insurance shall not be less than

a minimum of \$1,000,000 combined single limit, per occurrence and \$2,000,000 aggregate, for both bodily injury and property damage combined.

In lieu of the "Additional Insured", an Owners-Contractors-Protective policy may be provided evidencing "The Board of Governors of Missouri State University, its members, agents and employees" as the Named Insured.

- 14.2 Comprehensive Automobile Liability coverage will be provided by the Consultant for all Owned, Hired, and Non-Owned vehicles. The coverage is to include for protection of the Consultant and its Subconsultant or by anyone employed by either of them. The minimum limit of coverage to be provided is \$1,000,000 combined single limit for bodily injury and property damage, per occurrence and aggregate.
- 14.3 Professional Liability Insurance will be provided by the Consultant to cover claims arising out of the negligent acts, errors and omissions by the Consultant or anyone employed by them. The coverage provided shall not be less than \$1,000,000 per claim or annual aggregate. The Consultant shall require its Subconsultant similarly to provide Professional Liability coverage.
- 14.4 Worker's Compensation Insurance Coverage A: Worker's Compensation Insurance for all the Consultant's employees at the site of the project, and in case any work is sublet, the Consultant shall require its Subconsultant similarly to provide Worker's Compensation Insurance for all of the latter's employees. This coverage shall comply in all respects with the requirement of the Statutes of the State of Missouri. Coverage B: Employer's Liability, in a limit no less than \$500,000.
- 14.5 All insurance shall be procured through agencies and be written by insurance companies which are acceptable to and approved by the Owner. All coverages placed are subject to the Owner's approval as to form and content, as well as Carrier. All required coverages shall be obtained and paid for by the Consultant.
- 14.6 The Consultant shall furnish the Owner with certificates, policies, or binders which indicate the Consultant and/or the Owner and other Consultants (where required) are covered by the required insurance showing type, amount, class of operations covered, effective dates and dates of expiration of policies prior to commencement of the work. All certificates, policies, or binders shall give Missouri State University thirty (30) day's written notice before cancellation.
- 14.7 Upon receipt of any notice of cancellation, the Consultant shall, within ten (10) days, procure other policies of insurance similar in all respects to the policy or policies about to be canceled or altered; and if the Consultant fails to provide, procure and deliver acceptable policies of insurance or satisfactory certificates or other evidence thereof, the Owner may obtain such insurance at the cost and expense of the Consultant without notice to the Consultant.
- 14.8 It is understood and agreed that the insurance required by the provisions of this article is required in the public interest and that the Owner does not assume any liability for acts of the Consultant, its Subconsultant or their employees in the performance of the Agreement.

#### **ARTICLE 15 – SUCCESSORS AND ASSIGNEES**

- 15.0 The Owner and the Consultant each binds himself, his partners, successors, assignees and legal representatives to the other party to this Agreement and to the partners, successors, assignees and legal representatives of such other party with respect to all covenants of this Agreement. The Consultant shall not assign, sublet or otherwise transfer his interest in this Agreement without the written consent of the Owner.

#### **ARTICLE 16 – DISPUTES AND DISAGREEMENTS**

- 16.0 In order to prevent all disputes or disagreements between the parties to this Agreement in relation to the performance on the part of the Consultant, it is expressly agreed and understood that in case any controversy or difference of opinion shall arise between the parties as to the quality, quantity or value of the Work, the decision of the University Architect shall be final and binding on all parties, unless the Consultant pursues the mediation procedure set forth below by written request within 30 days of the determination of the University Architect. Such disputes shall be decided in the courts unless the parties agree in writing to arbitration. Notwithstanding anything to the contrary contained in the contract documents, in the event a dispute shall arise between the Owner and the Consultant regarding the performance on the part of the Consultant, the Consultant agrees to participate in one mandatory non-binding mediation session prior to filing a lawsuit. The parties involved agree to split the costs of the mediation. The mediation shall be administered by a mediator appointed by the Missouri Bar Association's alternative dispute resolution committee, unless the parties agree to another mediator. If a resolution of the dispute cannot be reached in the mediation, the



parties are free to pursue any other alternative of resolving the dispute which they choose, whether it be arbitration, litigation, or some other means.

- 16.1 Any lawsuit to enforce this Agreement shall be brought in the Circuit Court of Greene County, Missouri. A prevailing party will be entitled to its court costs and expenses, including a reasonable attorney's fee. Nothing in this Agreement shall be construed to waive any sovereign, governmental, or official immunity applicable to any party, its officers or employees.

#### **ARTICLE 17 – INTERRUPTION OF WORK**

- 17.0 Interruption of Work may be necessary, when appropriate, in any fixed-fee, percentage or hourly not-to-exceed contract. In the best interest of any successful project, it may be necessary as result of any cause for the Owner to initiate an Interruption of Work. The Owners Representative will issue a Notice in writing if it is advisable to suspend work pending a decision by the Owner regarding the feasibility of the projects continuance. Notice to the Consultant that Interruption of Work is necessary should include (1) A description of the work to be suspended; (2) Instructions concerning the Owners need for further services; (3) Guidance to the Consultant on what action is to be taken by the Owner; and (4) Other suggestions, if any, to the Consultant for resuming progress.
- 17.1 As soon as feasible, after a Notice for Interruption of Work has been issued, the Owners Representative shall take appropriate action to (1) Terminate the contract; (2) Cancel the Interruption of Work; or (3) Extend the period of the interruption if it is deemed necessary.
- 17.2 Upon written approval of the Owners Representative, the Owner shall pay all payments due to the Consultant for services completed, up until the time of Interruption. Consultant's contract with the Owner shall remain valid through an Interruption of Work until such time that a Termination is necessary. Consultant shall have the right to reasonable compensation for additional services due to the interruption of work and subsequent resumption of work if due to no fault of the Consultant.

#### **ARTICLE 18 – TERMINATION**

- 18.0 This Agreement may be terminated by the Owner's Representative upon mailing notice of termination to the Consultant at least seven (7) days in advance of the date of termination if the Consultant substantially fails to perform according to the terms and conditions of this Agreement in the opinion of the Owner's Representative or funds for the Project are not appropriated or are insufficient to proceed with the Project. The Owner's Representative may also terminate this Agreement by the same procedure at the end of any phase or part thereof as set forth in this Agreement. In the event of termination, the Consultant shall be paid his compensation for services performed up until the date of termination subject to amounts withheld to satisfy any amount due the Owner by reasons of any prior default of the Consultant or otherwise.

#### **ARTICLE 19 – EQUAL EMPLOYMENT OPPORTUNITY AND PUBLIC ACCOMMODATION**

- 19.0 Consultant will not discriminate based on sex, age, race, color, religion, national origin, or disability (handicap) with respect to employment, public accommodation, or access, as required by Executive Order No. 11246 of September 24, 1965, incorporated herein by reference and the Missouri Fair Employment and Public Accommodation Practices Act, Chapter 213 RSMo., and will further comply with any applicable provisions of the Americans with Disabilities Act of 1990, Titles VI and VII of the Civil Rights Act of 1964, all incorporated herein by reference, and will hold harmless Missouri State University from any violation or claimed violation of law, ordinance or regulation arising from this Agreement.

#### **ARTICLE 20- STATUTORY PREFERENCE**

- 20.0 Preference will be given to Missouri labor, products, commodities and materials, as may be required by Section 8.280 RSMo and Section 34.350 RSMo, incorporated herein by reference.

#### **ARTICLE 21 – EMPLOYMENT OF UNAUTHORIZED ALIENS**

- 21.0 The Consultant shall comply with all the provisions of Section 285.530, RSMo, for all services in excess of \$5,000.00.
- 21.1 Consultant shall complete and return the Affidavit for Compliance with Section 285.530, RSMo., attached hereto and provide documentation evidencing current enrollment in a federal work authorization Program, e.g., the electronic signature page from the E-Verify program's Memorandum of Understanding. The required documentation must be from the federal work authorization program provider. E-verify, <http://www.dhs.gov/e-verify>, is a FREE internet-based federal work authorization program operated by the Department of Homeland Security, U.S. Citizenship and Immigration Services.
- 21.2 The Consultant shall only utilize personnel authorized to work within the United States and in the State of Missouri in accordance with applicable federal and state laws. This includes but is not limited to the Illegal Immigration Reform and Immigrant Responsibility Act.
- 21.3 The Consultant shall affirm its enrollment and participation in a federal work authorization program with respect to the employees working in connection with the contracted services. The Consultant further certifies that it does not knowingly employ any person who is an unauthorized alien in connection with the contracted services.
- 21.4 If the Consultant is found to be in violation of this requirement or the applicable laws of the state or federal laws and regulations, and if Missouri State University has reasonable cause to believe that the Consultant has knowingly employed individuals who are not eligible to work in the United States, the University shall have the right to cancel the contract immediately without penalty or recourse and suspend or debar the Consultant from doing business with the University.
- 21.5 The Consultant agrees to fully cooperate with any audit or investigation from federal, state or local law enforcement agencies.

#### **ARTICLE 22 - ANTI-KICK BACK**

- 22.0 Consultant shall comply with all provisions of the Copeland "Anti-Kick Back" Act (18 U.S.C. 874) as supplemented in Department of Labor Regulations (29 C.F.R., Part 3), incorporated herein by reference.
- 22.1 Consultant hereby certifies that no person employed on the Work has been induced to or required to give up any part of the compensation to which he is otherwise entitled. Consultant further certifies that it is not sought by collusion, payment to any person, or otherwise to obtain any advantage over Owner or made any payment or promise of other consideration to Missouri State University or its agents to cause award of this contract to Consultant.

#### **ARTICLE 23 - UNIVERSITY NON-DISCRIMINATION STATEMENT**

- 23.0 Missouri State University is a community of people with respect for diversity. The University emphasizes the dignity and equality common to all persons and adheres to a strict nondiscrimination policy regarding the treatment of individual faculty, staff, and students. In accord with federal law and applicable Missouri statutes, the University does not discriminate on the basis of race, color, religion, sex, national origin, ancestry, age, disability, or veteran status in employment or in any program or activity offered or sponsored by the University. In addition, the University does not discriminate on any basis not related to the applicable educational requirements for students or the applicable job requirements for employees. The University maintains a grievance procedure incorporating due process available to any person who believes he or she has been discriminated against. Missouri State University is an Equal Opportunity/Affirmative Action employer. Inquiries concerning the grievance procedure, Affirmative Action Plan, or compliance with federal and state laws and guidelines should be addressed to the Equal Opportunity Officer, 901 South National Avenue, Springfield, Missouri 65897, phone 417-836-4252.

#### ARTICLE 24 – ACCESS TO RECORDS AND REPORTS

- 24.0 Consultant agrees to provide Missouri State University or any of their duly authorized representatives with access to any books, documents, papers and record of the Consultant which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions.

#### ARTICLE 25 – COMPENSATION

- 25.0 Consultant's Payment Schedule – Payments for Consultant's Basic Services shall be made monthly and will be in proportion to services performed within each phase and will total the following percentages of total compensation:

Upon Execution of Agreement:	fifteen percent	(15%)	8
Schematic Design Phase:	fifteen percent	(15%)	
Design Development Phase:	twenty percent	(10%)	8
Construction Documents Phase:	thirty-five percent	(30%)	8
Bidding Phase:	five percent	( 5%)	
Construction Administration Phase:	twenty percent	(20%)	
Post Construction:	five percent	( 5%)	
<hr/>			
Total Basic Compensation:	one hundred percent	(100%)	

- 25.1 Additional Services – For any Additional Services authorized by the Owner and provided by the Consultant, payment will be based on an amount negotiated by the Owner and Consultant prior to the specific Additional Service being rendered. Payment will be made monthly upon presentation of the Consultant's statement of services rendered.
- 25.2 Reimbursable Expenses – Reimbursable Expenses shall be provided by the Consultant and payment made by the Owner per the terms in Article 10.
- 25.3 Invoices – Payment will be made upon submission of a detailed invoice. The invoice must include the total fee, a percentage of completion, the previous fees billed and the current fee billing. Any reimbursable expenses shall be listed separately by line item and invoices shall contain, or be attached to, documentation that is satisfactory to the Owner per the terms of Article 10. Applicable reporting requirements must be met before payment will be made.
- 25.4 Payments, Sums Withheld – No deductions will be made from the Consultant's compensation on account of penalty, liquidated damages, or other sums withheld from payments to Contractor(s), or on account the cost of changes in the Work other than those for which the Consultant has been adjudged to be liable. Payments are due and payable upon receipt of an approved Consultant's invoice. An amount unpaid 30 days after the invoice date shall bear reasonable interest from the date payment is due in accordance with Chapter 431.180, RSMo.

#### ARTICLE 26 - SEVERABILITY

- 26.0 In case any one or more of the provisions contained in this Agreement shall, for any reason, be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provisions of this Agreement; this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein. This Agreement shall be governed by the laws of the State of Missouri.

#### ARTICLE 27 – SUPPLEMENTAL DOCUMENTS

- 27.0 This Agreement, by this specific reference, shall include the following supplemental documents:

TCI's Proposal # TCI-17-108A

THIS AGREEMENT represents the entire integrated agreement between the Owner and the Consultant and supersedes all prior negotiations, representations or agreements, either written or oral. This Agreement may be amended only by written instrument signed by both Owner and Consultant.

EXECUTED IN DUPLICATE THE DATE AND YEAR FIRST ABOVE MENTIONED

THE BOARD OF GOVERNORS OF  
MISSOURI STATE UNIVERSITY

Signature

Douglas H. Sampson, AIA, University Architect

Printed Name & Title

Date

Initial

Project Manager

10-24-2017

Firm

Signature

JEAN-ALAIN LECORDIER PRESIDENT

Printed Name & Title

Date

**Affidavit for Compliance with Section 285.530, RSMo (For Contracts over \$5,000.00)**

Before me, the undersigned Notary Public, in and for the County of Lexington, State  
of South Carolina personally came and appeared Jean-Alain Leander  
President of the Tower Consultants, Inc.  
(Position) (Name of Company)


a (corporation) (partnership) (proprietorship) in carrying out the contract and work in connection with  
Missouri State University Kozak Springfield (Fudbird) MO  
(Name of Project)

located at Missouri State University, after being duly sworn did depose and say:

- (1) That said company is enrolled in and participates in a federal work authorization program with respect to the employees working in connection with the contracted services; and
- (2) that said company does not knowingly employ any person who is an unauthorized alien in connection with the contracted services.

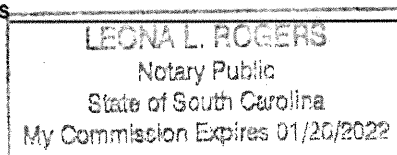
The terms used in this affidavit shall have the meaning set forth in Section 285.530 RSMo., et seq.

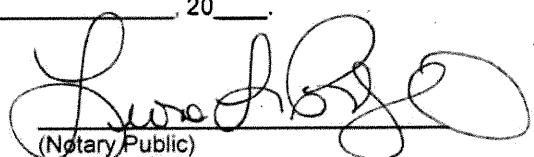
**Documentation of participation in a federal work authorization program is attached to this affidavit.**

  
(Signature)

Subscribed and sworn to me this 23<sup>rd</sup> day of October 2017

My Commission expires \_\_\_\_\_, 20\_\_\_\_.



  
(Notary Public)



Company ID Number: 1241077

**Approved by:**

<b>Employer</b> TOWER CONSULTANTS INC	
<b>Name (Please Type or Print)</b> LEONA L ROGERS	<b>Title</b>
<b>Signature</b> Electronically Signed	<b>Date</b> 10/23/2017
<b>Department of Homeland Security – Verification Division</b>	
<b>Name (Please Type or Print)</b> USCIS Verification Division	<b>Title</b>
<b>Signature</b> Electronically Signed	<b>Date</b> 10/23/2017



Company ID Number: 1241077

Information Required for the E-Verify Program	
Information relating to your Company:	
Company Name	TOWER CONSULTANTS INC
Company Facility Address	15 SURREY COURT COLUMBIA, SC 29212
Company Alternate Address	
County or Parish	LEXINGTON
Employer Identification Number	202458839
North American Industry Classification Systems Code	541
Parent Company	
Number of Employees	10 to 19
Number of Sites Verified for	1



Company ID Number: 1241077

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

SOUTH CAROLINA

1 site(s)





Company ID Number: 1241077

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

Name LEONA L ROGERS  
Phone Number (803) 407 - 8489 ext. 300  
Fax Number  
Email Address LROGERS@TOWER-TCI.COM



Company ID Number: 1241077

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Tower Consultants, Inc.

## *Engineering & Project Management Services Proposal*

KOZK-TV  
Ozarks Public Television  
Missouri State University  
Springfield, Missouri

Attention: Mr. Brent Moore  
Tel: (417) 836-3504

Proposal Number TCI-17-108A  
1,891-ft Guyed Tower  
Springfield (Fordland), Missouri

Your Tower Consultants Inc. Contact is:

Jassen Hahn  
VP Sales  
jhahn@tower-tci.com  
Tower Consultants, Inc.  
15 Surrey Ct.  
Columbia, SC 29212  
469-644-2215 (Dallas, TX)

(Quotation valid 30 Days from Proposal Date)  
All proposals are subject to final review and acceptance by Tower Consultants Inc.



Tower Consultants, Inc.

October 5, 2017

KOZK-TV  
Ozarks Public Television  
Missouri State University  
Springfield, Missouri

Attention: Mr. Brent Moore

**Re: Engineering & Project Management Services Proposal  
1,891-ft Guyed Tower  
Springfield (Fordland), Missouri**

Dear Mr. Moore,

Attached please find our proposal for engineering and project management services as specified below for the 1,891-ft guyed tower located at Springfield (Fordland), Missouri in reference with TCI Feasibility Structural Analysis Report 17.0289.001 dated May 19, 2017.

*Information provided in this proposal is confidential, and is not to be used for distribution or copied unless authorization is provided in writing by TCI.*

Should you have any questions regarding this proposal, or need further information at this time, please do not hesitate to contact me at (469) 644-2215 or Jean-Alain Lecordier at (803) 319-5005.

**Note: All Purchase orders to execute this proposal must include reference to this proposal to be valid.**

Sincerely,

Tower Consultants Inc.

Digitally signed by Jassen Hahn  
DN: cn=Jassen Hahn, o=Tower  
Consultants Inc., ou,  
email=jhahn@tower-tci.com,  
c=US  
Date: 2017.10.05 14:26:38 -05'00'

Jassen Hahn, VP Sales

Attachments: Proposal, Tower Services Agreement



Tower Consultants, Inc.

## ***PROPOSAL***

**Proposal # TCI-17-108A**

**Date: October 5, 2017**

**Ref: Springfield (Fordland), Missouri**

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### **Proposal:**

#### **1. Tower Engineering and Project Management Services:**

TCI will provide the following engineering and project management services as follows:

- 1.1. Finalize Rigorous Analysis and design required Modifications.
- 1.2. Prepare Bid Drawing Package.
- 1.3. Provide MSU with a list of qualified TCI Field Service Crews for obtaining bids.
- 1.4. Assist MSU in reviewing bids and selecting a Field Service Contractor.
- 1.5. TCI will design and furnish required modification material to the MSU selected Field Service Contractor.
- 1.6. TCI Project Management of the project, including coordination of the material and Field Service Crew Schedule.
- 1.7. TCI will review the associated Rigging Plan as provided by the Field Service Contractor.
- 1.8. At project completion TCI will perform a Post Modification Inspection (PMI).
- 1.9. Submit a final written report with photographs to MSU.

### **Pricing Summary:**

TCI proposes to perform tower modification services per analysis referenced in cover letter above for the following lump sum amounts:

Price for 1.1 Rigorous Analysis .....\$ 16,680.00

Price for 1.2 Bid Drawing Package .....\$ 32,280.00

Price for 1.3 List of Qualified Field Service Contractors .....(Price Included in 1.2)



Tower Consultants, Inc.

Price for 1.4 Field Service Contractor Bid Reviews .....\$ 5,000.00

Price for 1.5 Materials Cost to be provided to Qualified Field Service Contractor (*Materials Pricing is excluded from this proposal*).

Price for 1.6 TCI Project Management Services .....\$ 24,480.00

Price for 1.7 Field Service Contractor Rigging Plan Review .....\$ 6,820.00

Price for 1.8 Post Modification Inspection (PMI) .....\$ 16,780.00

Price for 1.9 Project Completion Report ..... (Price Included in 1.8)

Schedule: To be determined by mutual agreement between customer and TCI.

**Payment Terms:**      ~~50% Down Payment~~  
                                  ~~50% Upon Completion~~  
 As mutually agreed upon within the Agreement for Consulting Services.

Total Proposal Fee: \$102,040.00

*Approved*  
*05/23/2017*

**GENERAL NOTES: (Where Applicable)**

1. This proposal is for services, materials and project management as listed above. Any additional work to be performed will be quoted on a cost plus or fixed price basis.
2. This proposal does not include any fees or costs associated with building permits, performance and payment bonds that may be required. Depending on the jurisdiction, obtaining a Building Permit can be a very simple procedure but sometimes it can be a complicated, lengthy and costly effort. Direct cost incurred by TCI shall be passed thru to Customer per a Change Order with a 25% markup.
3. This proposal is based on the assumption that the tower has been properly installed and maintained, including, but not limited to the following:
  - a. Proper alignment and plumb.
  - b. Correct guy tensions.
  - c. Correct bolt tightness.
  - d. No deterioration or damage to any structural component.
  - e. All equipment, T/L's, antennas, etc, is properly secured to the tower per manufacturer's recommendation.
4. All work to be completed during daylight hours. Proposal does not include the use of RF suits.
5. Power reduction on some antennas, as well as down time, should be expected during tower modifications. Customer is responsible to coordinate all power reductions to be within OSHA safe acceptable levels. If RF suits are required additional charges may be applicable.
6. Transmission Line (T/L) installed on the Tower and in the Support Bridge defined within this contract shall be run to the transmitter building exterior wall face, unless noted otherwise.



Tower Consultants, Inc.

7. Modification to guy tensions is based on the assumption that sufficient adjustment is available at the end termination of the guy connection at anchor end. In the event that tension cannot be adjusted due to lack of end termination adjustment, a structural analysis may be required to validate the resulting final tension values.
8. Proposal is based on crew having adequate road conditions to site, adequate staging at site, and clear access to each anchor.
9. Any power-lines that interfere with the project must be removed or relocated and are not covered in the proposed pricing.
10. Erection is based on normal site access to tower base and guy paths by two-wheel drive construction vehicles and shall utilize erection procedures and methods that have been employed in the industry for the last 50 years. Any conditions that alter or modify those conditions shall be cause for re-negotiation.
11. Customer hereby agrees and acknowledges that Tower Consultants Inc. shall have no liability whatsoever to Customer or to others for any work or services performed by any persons other than Tower Consultants Inc. or its direct subcontractors in connection with the implementation of any structural changes or modifications recommended by Tower Consultants Inc.
12. This contract is based on the use of non-unionized labor. Should TCI be required to use unionized workers or should prevailing wage conditions be applicable, additional charges shall be applicable. Also, TCI will not be responsible for any delays that are caused by any such union action.
13. This proposal for tall tower work includes a "Weather clause", see attached Tower Services Agreement.
14. All Purchase orders to execute this proposal must include reference to this proposal to be valid.
15. **TAXES:** Seller's price does not include sales, use, excise, or any other Federal, State or Municipal taxes that under applicable law Seller may legally collect from Buyer. Consequently, in addition to the prices specified herein, the amount of any present or future sales, use, excise or other tax applied directly to the products or services sold or the sale there under shall be paid by the Buyer where permitted under applicable law or in lieu thereof, the Buyer shall provide a tax exemption certificate acceptable to the taxing authorities.
16. Pricing assumes that the waiver allowing the crew to "ride the line" in accordance with customer's Operating Policies & Procedures shall be approved. TCI shall submit the request for waiver within ten (10) days of contract award. Failure to approve the requested waiver shall result in the submission of a change order to account for the additional time on-site. Crew mobilization may be delayed until approval of either; (1) the requested waiver or (2) the proposed change order.
17. Any third-party inspections requested by the customer at the completion of a project must be performed and completed while the crew is on-site and rigged to the tower. TCI shall notify the customer with as much advance notice as possible (usually one week). If guy tensions are to be verified, the third-party inspector shall approve, or make the necessary adjustments, confirm, and give final approval prior to leaving the site.
18. If a third-party inspection is performed after the crew has left the site, a change order may be required to cover additional expenses to mobilize personnel. If required, the proposal assumes that the customer will work with local utility companies for the temporary lowering of telephone and electrical lines that may cross under tower guy paths or rigging lines during the project.



Tower Consultants, Inc.

Presented by:  
**Tower Consultants Inc.**

Accepted by:  
**Ozarks Public Television  
Missouri State University**

A handwritten signature in dark ink, appearing to read 'Jassen Hahn', is written over a horizontal line.

Digitally signed by Jassen  
Hahn  
DN: cn=Jassen Hahn,  
o=Tower Consultants Inc., ou,  
email=jhahn@tower-tci.com,  
c=US  
Date: 2017.10.05 14:26:57  
-05'00'

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Jassen Hahn, VP Sales

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Mr. Brent Moore

**ALL AGREEMENTS ARE SUBJECT TO TERMS AND CONDITIONS ABOVE**





Tower Consultants, Inc.

## **Tower Services Agreement (Where Applicable)**

This Tower Modification Agreement (the "Agreement") is made by and between KOZK-TV (Missouri State University) ("Customer") and Tower Consultants Incorporated ("Consultant").

Whereas Customer wishes to retain the services of the Consultant for the purpose of completing tower modifications at the Customer's tower facility as further set forth in this Agreement; and

Whereas Consultant wishes to provide such services to Customer pursuant to the terms and conditions of this Agreement.

In consideration of the mutual promises and covenants contained herein and for other valuable consideration, the receipt of which is hereby acknowledged, the parties agree to the following terms and conditions:

### **Section 1: Scope of Work**

Consultant shall provide equipment, materials and qualified, experienced employees, professionals and others necessary for the performance of the work described above. Consultant reserves the right to make reasonable substitutions of labor or materials that are deemed necessary to facilitate the completion of the Scope of Work, provided that any such substitutions shall be of equal or greater quality (in the case of materials) and experience, expertise and skill (in the case of labor). Any substitutions that increase the cost to Customer require the Customer's prior written consent by means of a change order executed in accordance with Section 2(C)(v).

### **Section 2: Compensation and Payment Schedule**

- (A) **Late Payments:** Invoices shall be paid in full within 30 days from the date thereof, unless otherwise specified on the invoice and any amounts not paid by the due date will be deemed past due. Customer may be assessed a late charge of 1.5% per month on any past due amount. Additionally, Customer shall reimburse Consultant for all costs and expenses reasonably incurred by Consultant in efforts to collect past due amounts, including but not limited to, court costs and reasonable attorney's fees. If a payment is more than 90 days past due, Consultant has the immediate right to cease work and evacuate its site crew pending payment. Customer shall be responsible for all mobilization, re-rigging and remobilization costs. Additionally, such nonpayment shall have the effect of extending the number of days required to complete the Scope of Work.
- (B) **Taxes and Fees:** The stated Contract Price does not include any applicable taxes. In addition to such quoted price, Customer shall pay all present and future foreign, federal, state and local taxes, and fees applicable to the construction, sale, purchase or use of the products identified in this Agreement. To the extent Consultant is required to pay such taxes or fees, Customer shall reimburse these to Consultant within 30 days after receipt of invoice.
- (C) **Price Adjustments:** The Contract Price is subject to change based on certain conditions which are reasonably contemplated by the parties at the time of the Agreement and may include the following:
  - (i) **Weather:** The Contract Price includes labor but does not include Inclement Weather days as hereinafter defined. The Contract Price may be subject to an upward adjustment by Consultant for any Inclement Weather days. Each Inclement Weather day shall be calculated at the rate of \$575.00 per day, per man in the crew. All days lost due to Inclement Weather shall be reported to the Customer as soon thereafter as reasonably possible, and may have the effect of proportionately extending the number of days required to



**Tower Consultants, Inc.**

complete the Scope of Work. Notwithstanding the foregoing, it shall be understood that ground activities may continue even on Inclement Weather days if it is safe to conduct such activities, in which case, there shall be no upward adjustment in fees under this section and there shall be no extension in days required to complete the Scope of Work. In the event of an extended weather delay (more than 3 days), Customer and Consultant may mutually agree in writing to cease work and have crews return at a later date. Inclement Weather is based on local reports by the National Weather Service and industry experience and shall be defined as those days that in the reasonable discretion of Consultant's on-site supervisor are unsafe or ill advised to perform the work.

- (ii) **Materials and Information:** The Contract Price is based on carrying out the Scope of Work in one continuous operation and does not contemplate interruption or delays due to missing information to be supplied by Customer or materials purchased separately by Customer, including but not limited to, necessary permits, coaxial lines, transmission line hangers, antenna, reflectors or electrical power. All materials to be furnished by Customer that are necessary for completion of installation must be on the tower site prior to the commencement of tower erection or, in the alternative, scheduled in such a manner as to avoid delaying the erection crew. Customer must also furnish all requested information in a timely manner including, but not limited to, transmission line drawings (if necessary). The Contract Price may be subject to an upward adjustment including remobilization charges if the foregoing conditions are not met. Any such delay may have the effect of extending the number of days required to complete the Scope of Work. The parties acknowledge that as of the date of this Agreement, customer has furnished all required materials to Consultant.
- (iii) **Access:** The Consultant is aware of the site conditions and accepts the site without additional preparation by the Customer. Consultant will require the use of the access road to the transmitter building and all the adjacent available raised work area for use throughout the project. Customer shall:
  - a) Provide necessary trusses to support the antenna during construction.
  - b) Provide necessary fittings and any gases (ie: nitrogen) required to pressure check all the transmission lines;
  - c) Provide electrical power to the base of the tower,
  - d) Provide toilet facilities if required by local, state or federal authorities; and
  - e) Provide access to a telephone hookup.
- (iv) **Change Orders:** Consultant and Customer contemplate the possibility that changes in the Scope of Work may be required. Any such change shall be done by way of a Change Order specifically detailing the proposed change in the Scope of Work and shall thereafter be deemed an Amendment to this Agreement. Change Orders shall be in writing and signed by both parties. Change Orders may cause the Contract Price to be adjusted to reflect the cost incurred or saved plus a reasonable profit allocable to the work performed, if applicable. In the event that the Customer requests a material change in the Scope of Work, and if such requested change is likely to delay completion of the Work, the parties shall agree in writing, on a reasonable time-frame for completion of the project and any additional expenses to be covered by Customer in connection with such change.



Tower Consultants, Inc.

### Section 3: Warranty

For a period of twelve (12) months from the date of completion of the work, Consultant warrants that the product and/or service shall conform to the specifications provided in this Agreement and any supporting documents thereto and that the product and/or service will be free from defects in material and workmanship, except defects in the raw materials (including steel) supplied to Consultant by others if applicable. Consultant makes no warranty with respect to those products or components thereof not manufactured by Consultant but agrees that Customer shall be entitled to any assignable benefits of any warranties given to Consultant by the manufacturers or suppliers of such products or components. This warranty is valid only if all of the following conditions have been satisfied:

- a) Consultant receives written notice of any claimed defect within sixty (60) days of the time Customer learns or should have learned of the defect, whichever is earlier, but in no event later than twelve (12) months from the day the work was completed;
- b) Customer affords Consultant a reasonable opportunity to inspect and examine the alleged defect; and
- c) Consultant determines, in its sole reasonable discretion, that the product and/or service is nonconforming or is defective as to material or workmanship which is not wholly or in part due to any misuse, improper maintenance, neglect, accident, vandalism, unauthorized repair or modification, defect in the raw materials or severe weather conditions. This limitation on the validity of warranties shall govern not only the express warranty made by Consultant herein, but also any other warranty that, contrary to the terms of this Agreement is deemed or implied by law to be in effect.

Consultant makes no warranty as to merchantability or fitness for a particular purpose and all implied warranties as to the foregoing are hereby disclaimed and excluded. Consultant shall not be obligated to change, modify or repair any of its work due to a Customer change in loading configuration of the structure. Consultant shall have no obligation to change, modify or improve any of its work to conform to changes in design, manufacture or engineering standards or customs, which occur after the date of this Agreement. Consultant's performance shall be judged in accordance with the standards and customs that were generally accepted in the tower design industry as of the Effective Date of this Agreement.

### Section 4: Limitation of Liability

Except for negligent or willful misconduct, neither party shall be liable to the other for consequential damages neither for breach of this Agreement nor for any special or exemplary damages in any action based on tortuous acts or omissions by such party in any way related to this Agreement.

### Section 5: Insurance

Consultant has procured, at no expense to Customer, the insurance coverage's set forth below insuring Consultant, its employees and directors, and shall maintain such coverage's in full force and effect as specified herein. The insurance specified below is placed with insurance companies rated at least A/VII by Best's Rating Service

- (i) Commercial General Liability Insurance as follows:
  - (a) Bodily Injury & Property Damage Combined Single Limit:  
\$2,000,000 General Aggregate  
\$2,000,000 Products-Completed Operations Aggregate  
\$1,000,000 Personal & Advertising Injury  
\$1,000,000 Each Occurrence – Stop Gap Liability



**Tower Consultants, Inc.**

**\$10,000,000 Excess Liability Umbrella Coverage**

- (ii) **Errors and Omissions –Professional Liability:**
  - (a) **\$2,000,000 General Aggregate**  
**\$1,000,000 Per Claim**
- (iii) **Comprehensive Automobile Liability Insurance, inc, hired and non-owned vehicles, if any, in the amount of One Million Dollars (\$1,000,000.00) covering bodily injury, including personal injury resulting there from, and property damage.**
- (iv) **Worker's Compensation and Employers' Liability:**
  - (a) **\$1,000,000 Each Accident**  
**\$1,000,000 Disease policy limit**  
**\$1,000,000 Disease each employee**

**Section 6: Events of Default**

Should either party fail to perform any material obligation or observe any material term or covenant or condition under this Agreement after thirty (30) days written notice thereof, sent in accordance with Section 15, such failure shall be deemed an Event of Default. The non-defaulting party shall have the option of terminating this Agreement, is entitled to seek recovery for any damages sustained as a result of the breach including, but not limited to, expectation damages, court costs and reasonable attorney's fees and may seek to avail themselves of any remedy available at law or in equity. These remedies shall be cumulative and not in the alternative.

**Section 7: Non-Solicitation**

Customer agrees not to pursue any employee of Consultant's for employment within its company or any other company for a period of one year from the Effective Date of this Agreement.

**Section 8: Section Headings**

The section headings contained in this Agreement are inserted as a matter of convenience and are for reference only and in no way define, limit or describe the scope or intent of this Agreement or in any way affect the interpretation of the terms and provisions hereof.

**Section 9: Waiver of Rights**

Neither parties exercise of any right hereunder, not its delay or failure to do so, shall constitute a waiver of such right or any other right hereunder nor shall any right be deemed to have been waived unless the waiver be in writing and signed by a duly authorized officer of Consultant or Customer.

**Section 10: Arbitration**

Claims, disputes or other matters in question between the parties to this Agreement arising out of or relating to this Agreement or breach thereof may, upon mutual agreement of the parties (which agreement shall be memorialized in a separate writing signed by the parties), be subject to and decided by arbitration in accordance with the Construction Industry Arbitration Rules of the American Arbitration Association currently in effect. Provided that the parties agree to arbitrate,



Tower Consultants, Inc.

demand for arbitration shall be filed in writing with the other party to this Agreement and with the American Arbitration Association. Any such demand for arbitration shall be made within a reasonable time after the claim, dispute or other matter in question has arisen. In no event shall the demand for arbitration be made after the date when institution of legal or equitable proceedings based on such claim, dispute or other matter in question would be barred by the applicable statutes of limitations. The award rendered by the arbitrator(s) shall be final and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

#### **Section 11: Governing Law and Venue**

The laws of the State of South Carolina shall govern the validity, performance and enforcement of this Agreement.

#### **Section 12: Integration**

This Agreement and the rider attached hereto, together, represents the entire agreement of the parties with respect to the subject matter hereof. All agreements entered into prior hereto are revoked and superseded by this Agreement. The parties except as expressly set have made no representations, warranties, inducements or oral agreements forth herein. This Agreement may not be changed, modified assigned or rescinded except in writing and signed by all parties hereto; any attempt at oral modifications of this Agreement shall be null and void.

#### **Section 13: Authority**

Each party represents by signing this Agreement that they have the authority to enter into the same and binds each party, their heirs, successors, assigned fellow beneficiaries in trust and/or partners to the terms and conditions as herein set forth.

#### **Section 14: Notices**

Any notice or other communication hereunder must be given in writing and (a) delivered in person, (b) transmitted by facsimile or other telecommunications mechanism or (c) mailed by certified or registered mail or nationally recognized courier service, postage prepaid, receipt requested, as follows:

If to Tower Consultants, address to:

Leona Rogers  
Business Manager  
Tower Consultants, Inc.  
15 Surrey Ct.  
Columbia, SC 29212  
Ph: 803-407-8489  
Fax: 803-407-8691  
[lrogers@tower-tci.com](mailto:lrogers@tower-tci.com)

If to Customer, address to:

KOZK-TV  
Ozarks Public Television  
Missouri State University  
Springfield, Missouri



Tower Consultants, Inc.

or to such other address or to such other person as either party shall have last designated by such notice to the other party. If such notice is submitted by fax, a hard copy addressed to the appropriate party must follow.

PROJECT NO.: 180830-027  
MISSOURI STATE UNIVERSITY  
1891.0-FT GUYED TOWER  
KOZK FORDLAND  
905 STATE HIGHWAY FF  
FORDLAND, MISSOURI 65602  
(37°10'11.0"N, 92°56'31.0"W)  
(WEBSTER COUNTY)



KOZK  
 SPRINGFIELD, MO  
 1891'-0 GUYED  
 TOWER  
 ERECTION  
 DRAWINGS

1	1/17/80	WEB	UNRECORDED
10	11/3/77	WEB	RELEASED FOR

INDEX

Category Sequence

五

Sheet No.:  
Project No.: 17.289.002  
Drawn By: MEB

THIS DOCUMENT CONTAINS  
CONFIDENTIAL INFORMATION AND IS  
TO BE CONSIDERED AN INTELLECTUAL PROPERTY  
OF TOWER CONSULTANTS, INC. THE  
INFORMATION IS DISCLOSED ON A  
CONFIDENTIAL BASIS AND IS NOT TO BE  
REPRODUCED OR TRANSMITTED IN ANY  
MANNER FOR ANY OTHER  
PURPOSE OTHER THAN INTENDED BY  
TOWER CONSULTANTS, INC.  
REPRODUCTION, TRANSMISSION, OR  
DISCLOSURE TO OTHERS, OR OTHER  
UNAUTHORIZED USE, WITHOUT THE EXPRESS  
WRITTEN CONSENT OF TOWER  
CONSULTANTS, INC. IS STRICTLY  
PROHIBITED.

VICINITY MAP			
TOWER DESIGNED FOR A WIND SPEED OF 90-MPH WITH NO ICE & 30-MPH WITH 1" OF RADIAL ICE PER EIA/TA-222-G STANDARD.		PROJECT DESCRIPTION	
MISSOURI STATE UNIVERSITY IS PROPOSING TO PERFORM A TOWER MODIFICATION IN ORDER TO COMPLY WITH ANSI/ETIA-222-G STANDARD WITH PROPOSED LOADING ON THE EXISTING 1891.0-FT GUYED TOWER.		PROJECT DESCRIPTION	
PROJECT INFORMATION		PROJECT INFORMATION	
APPLICANT: MISSOURI STATE UNIVERSITY 15 SURREY CT. COLUMBIA, MO 65212 PH: 417-436-5101		LAND OWNER: MISSOURI STATE UNIVERSITY	
EMERGENCY CONTACT: BRENT MOORE MISSOURI STATE UNIVERSITY PH: 417-486-3504		JURISDICTION: WEBSTER COUNTY, MISSOURI	
CONTRACTOR LIST		CONTRACTOR LIST	
TOWER CONTRACTOR: Tower Consultants, Inc. 15 Surrey Ct. Columbia, SC 29212 (803) 507-0468		CONTRACTOR LIST	
LEGEND		LEGEND	
T-1 = TITLE SHEET		T-1 = TITLE SHEET	
G-1 = GENERAL NOTES		G-1 = GENERAL NOTES	
G-2 = MODIFICATION DESCRIPTION		G-2 = MODIFICATION DESCRIPTION	
E-1 = TOWER ELEVATION DRAWING		E-1 = TOWER ELEVATION DRAWING	
E-2 = TOWER ELEVATION DRAWING		E-2 = TOWER ELEVATION DRAWING	
E-3 = TOWER ELEVATION DRAWING		E-3 = TOWER ELEVATION DRAWING	
E-4 = CROSS SECTION		E-4 = CROSS SECTION	
E-5 = DIAGONAL REPLACEMENT		E-5 = DIAGONAL REPLACEMENT	
E-6 (REV 01) = SPLIT PIPE REINFORCING		E-6 (REV 01) = SPLIT PIPE REINFORCING	
E-7 = HORIZONTAL REINFORCEMENT		E-7 = HORIZONTAL REINFORCEMENT	
E-8 = GUY WIRE REPLACEMENT		E-8 = GUY WIRE REPLACEMENT	
E-9 = TENSION CHART		E-9 = TENSION CHART	
E-10 = POST MODIFICATION CHECKLIST		E-10 = POST MODIFICATION CHECKLIST	

# GENERAL NOTES

## GENERAL


1. ALL METHODS, MATERIALS, AND WORKMANSHIP SHALL FOLLOW THE DICTATES OF GOOD CONSTRUCTION PRACTICE.
  2. ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS WITH A MINIMUM OF 10 YEARS EXPERIENCE IN TOWER AND FOUNDATION CONSTRUCTION.
  3. ALL DIMENSIONS, MATERIALS, AND DETAILS OF THE EXISTING STRUCTURES ARE INCLUDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL RELEVANT INFORMATION PRIOR TO CONSTRUCTION OR FABRICATION AND NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY VARIANCE OR DISCREPANCIES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB.
  4. DIMENSIONS AND ELEVATIONS GIVEN FOR THE NEW CONSTRUCTION MUST ALSO BE VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION AND ERECTION TO ASSURE PROPER FIT AND ALIGNMENT OF THE STRUCTURAL COMPONENTS IN ACCORDANCE WITH THE INTENT OF THE CONTRACT DOCUMENTS.
  5. ANY SUBSTITUTIONS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
  6. ANY MANUFACTURED DESIGN ELEMENTS MUST CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE THE WORK IS BEING PERFORMED. IF REQUIRED CONTRACTOR TO PREPARE PERMIT DRAWING SET SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE WORK IS BEING PERFORMED. ALL PERMITS, LICENSES, APPROVALS AND OTHER REQUIREMENTS FOR CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
  7. ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND SAFETY REGULATIONS.
  8. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS. ALL INSTALLATION PROCEDURES, SAFEGUARDS AND MEANS AND METHODS OF CONSTRUCTION ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
  9. A DETAILED RIGGING PLAN SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE OWNER FOR APPROVAL. THE RIGGING PLAN SHALL INCLUDE AS A MINIMUM: BRIEF TOWER DESCRIPTION, HOIST MODEL AND CAPACITY, DATA, WIRE ROPE SIZE AND CONSTRUCTION, SHEAVER/BLOCK DIAMETER AND CAPACITY, CHOKER SIZE AND CAPACITY, RIGGING DETAILS TO THE TOWER, PLANNED LIFT WEIGHTS, GIN POLE SIZE AND CAPACITY AND A DIAGRAM LOCATING KEY RIGGING COMPONENTS.
- ### APPLICABLE CODES AND STANDARDS
1. ANSI/TIA/EIA: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.
  2. IBC: INTERNATIONAL BUILDING CODE, LATEST EDITION.
  3. ASTM: STANDARDS FOR BUILDING CODES, LATEST EDITION.
  4. ACI 318: AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, LATEST EDITION.
  5. ACI 315: AMERICAN CONCRETE INSTITUTE, DETAILS AND DETAILING OF CONCRETE REINFORCEMENT, LATEST EDITION.
  6. CSRI: CONCRETE STEEL REINFORCING INSTITUTE, MANUAL OF STANDARD PRACTICE, LATEST EDITION.
  7. AISI: AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
  8. AWS: AMERICAN WELDING SOCIETY, STRUCTURAL WELDING CODE, LATEST EDITION.
- ### STEEL AND FABRICATION
1. ALL STEEL FABRICATION TO BE DONE BY AN AISI CERTIFIED FABRICATION FACILITY IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION.
  2. ALL STEEL TO BE ASTM A572 GR.50 (50KSI MIN YIELD STRENGTH) U.N.O.; BOLTS TO BE ASTM A325 WITH ANCO LOCKNUTS U.N.O.
  3. ALL MATERIAL TO BE HOT DIPPED GALVANIZED PER ASTM A123 OR ASTM A153.
  4. BOLT HOLE DIAMETER SHALL NOT BE MORE THAN  $\frac{1}{16}$ " LARGER THAN NOMINAL BOLT DIAMETER AND SHALL BE PUNCHED OR DRILLED U.N.O.

## FIELD INSTALLATION

1. ALL GALVANIZED SURFACE THAT ARE SCRATCHED OR DAMAGED SHALL BE REPAIRED USING A ZINC RICH TWO PART EPOXY SUCH AS CARBOLINE 15 OR EQUIVALENT.
  2. A490 BOLTS SHALL BE SPRAY PAINTED WITH A COAT OF COLD GALVANIZING PRIOR TO INSTALLATION FOLLOWED BY A COAT OF A ZINC RICH TWO PART EPOXY SUCH AS CARBOLINE 15 OR EQUIVALENT AFTER INSTALLATION.
  3. HARDWARE INTERFERING WITH THE INSTALLATION OF REINFORCING MATERIAL SHALL BE TEMPORARILY MOVED AND REINSTALLED AFTER THE COMPLETION OF THE WORK.
  4. WHEN FIELD WELDING IS REQUIRED THE STEEL SHALL BE CLEANED OF ALL PAINT AND GALVANIZING TO A BARE METAL. AS SPECIFIED PER AWS D1.1. PREHEATING AND POST HEATING MAY BE REQUIRED.
  5. WELDED AREAS ARE TO BE TOUCHED UP USING A ZINC RICH TWO PART EPOXY SUCH AS CARBOLINE 15 OR EQUIVALENT.
- ### TIGHTENING OF BOLTS AND NUTS
1. ALL HIGH STRENGTH BOLTS TO BE TIGHTENED TO THE SNUG TIGHT CONDITION AS SPECIFIED IN THE CURRENT EDITION OF THE AISI "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS". BOLTS REQUIRING FULL PRETENSION TO BE TIGHTENED BY "THE TURN OF THE NUT METHOD" U.N.O.
- ### FOUNDATIONS
1. CONTRACTOR SHALL VERIFY THE LOCATION OF UNDERGROUND UTILITIES IN THE AREA WHERE THE WORK IS TO BE PERFORMED.
  2. DRILLED SHAFT INSTALLED IN ACCORDANCE WITH ACI-336 (LATEST EDITION).
- ### CONCRETE
1. ALL CONCRETE FOR FOUNDATIONS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI, AFTER 28 DAYS.
  2. THE CONCRETE MIX SHALL NOT CONTAIN LESS THAN  $6\frac{1}{2}$  SACKS OF CEMENT (ASTM C 150 TYPE II) PER CUBIC YARD.
  3. THE CONCRETE SHALL HAVE A MAXIMUM AGGREGATE SIZE OF  $\frac{1}{4}$ ".
  4. THE CONCRETE MIX SHALL PRODUCE A MAXIMUM SLUMP OF 5"  $\pm$  1".
  5. THE CONCRETE MIX SHALL HAVE A TOTAL AIR CONTENT OF 5%, WITH A TOLERANCE OF PLUS OR MINUS 1.5%. AIR-ENTRAINING ADMIXTURES SHALL CONFORM TO ASTM C 260.
  6. THE CONCRETE MIX SHALL HAVE A MAXIMUM WATER-CEMENT RATIO OF 0.45. WATER REDUCING OR ACCELERATING ADMIXTURES SHALL CONFORM TO ASTM C 494.
  7. THE CONCRETE SHALL NOT CONTAIN CALCIUM CHLORIDE OR ANY OTHER ADMIXTURE CONTAINING CHLORIDE OTHER THAN NATURAL IMPURITIES.
  8. FORM WORK SHALL CONFORM TO ACI 318 (LATEST EDITION) SPECIFICATIONS.
  9. ALL CONCRETE SHALL BE PLACED IN A MONOLITHIC POUR UNLESS SHOWN OTHERWISE ON THE DRAWINGS.
  10. PROVIDE CHAMFERS AT ALL EXPOSED CORNERS OF CONCRETE.
  11. CONCRETE WORK UNDER EXTREME WEATHER CONDITIONS SHALL CONFORM TO ACI 318 (LATEST EDITION) SPECIFICATIONS.

## STEEL REINFORCEMENT (REBAR)

1. ALL REINFORCING STEEL TO BE GRADE 60 DEFORMED BILLET STEEL PER ASTM A615.
2. REINFORCEMENT SHALL BE FABRICATED AND PLACED IN ACCORDANCE WITH THE ACI 315 AND CSRI. SUPPORT REINFORCING AS REQUIRED BY CSRI TO PREVENT DISPLACEMENT UPON CONCRETE POURING.
3. MAINTAIN ALL CLEARANCES NOTED ON THE DRAWINGS. WHERE NO DIMENSIONS ARE NOTED, USE THE ACI RECOMMENDED CLEARANCES.
4. FOR CONCRETE POURED AGAINST SOIL, THE MINIMUM COVER FOR ALL REINFORCING BARS SHALL BE 3".
5. TIE BARS SECURELY WITH #16 ANNEALED WIRE AND SUPPORT AS REQUIRED.
6. ALL WELDED WIRE FABRIC TO BE PER ASTM A185. ALL BARS AND WIRE SHALL BE FREE OF RUST, MILL SCALE, DIRT, OR OTHER FOREIGN MATERIAL PRIOR TO CASTING CONCRETE.
7. PROVIDE MINIMUM LAP SPLICES OF 36 BAR DIAMETERS UNLESS NOTED OTHERWISE.
8. FIELD BENDING OF REINFORCEMENT BARS IS NOT PERMITTED. DO NOT WELD REINFORCING BARS.

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TOWER CONSULTANTS, INC. 11000 W. 10th Ave., Suite 200 Golden, CO 80601 Tel: 303.440.2800 Fax: 303.440.2801 www.tip-usa.com			
KOKZ 1891'-0 GUYED TOWER			
Sheet No.: G-1 Project No.: 17.289.002 Drawn By: WEB Checked By: MBB/JY Date: 11/3/17			
SPRINGFIELD, MO GENERAL NOTES			



7. REPLACE GUY LEVEL 6 AND ADJUST THE GUY WIRE INITIAL TENSION USING THE TANGENT INTERCEPT METHOD TO THE VALUES LISTED IN THE CHART BELOW. REUSE EXISTING GROUNDING AND HFD (SEE E-8 & E-9):

7. REPLACE GUY LEVEL 6 AND ADJUST THE GUY WIRE INITIAL TENSION USING THE TANGENT INTERCEPT METHOD TO THE VALUES LISTED IN THE CHART BELOW. REUSE EXISTING GROUNDING AND HFD (SEE E-8 & E-9):

3. A TEMPORARY BRACE MUST BE INSTALLED THAT IS OF EQUIVALENT OR GREATER CAPACITY THAN THE MEMBER BEING REPLACED. THE TEMPORARY BRACE SHALL BE PLACED ADJACENT TO THE MEMBER BEING REPLACED SUCH THAT IT WILL TAKE THE LOAD AFTER THE EXISTING MEMBER IS REMOVED

A TEMPORARY FRAME IS REQUIRED ABOVE AND BELOW GUY LEVELS DURING DIAGONAL REPIACEMENT.

4. REPLACE THE EXISTING SOLID ROD DIAGONAL MEMBERS WITH A NEW HIGHER CAPACITY MEMBER AT THE FOLLOWING LOCATIONS (SEE E-5):

50.5" - 60.5"	(1 BAY)	7/8" $\phi$ S.R., ASTM A572-50, 5/8" $\phi$ A325X BOLTS
80.5" - 100.5"	(2 BAYS)	1" $\phi$ S.R., ASTM A572-50, 5/8" $\phi$ A490X BOLTS
100.5" - 110.5"	(1 BAY)	7/8" $\phi$ S.R., ASTM A572-50, 5/8" $\phi$ A325X BOLTS
130.5" - 160.5"	(3 BAYS)	7/8" $\phi$ S.R., ASTM A572-50, 5/8" $\phi$ A325X BOLTS
570.5" - 590.5"	(2 BAYS)	1 1/4" $\phi$ S.R., ASTM A572-50, 3/4" $\phi$ A490X BOLTS
590.5" - 630.5"	(4 BAYS)	1 1/4" $\phi$ S.R., ASTM A572-50, 3/4" $\phi$ A490X BOLTS
630.5" - 650.5"	(2 BAYS)	7/8" $\phi$ S.R., ASTM A572-50, 5/8" $\phi$ A325X BOLTS
770.5" - 800.5"	(3 BAYS)	1" $\phi$ S.R., ASTM A572-50, 3/4" $\phi$ A325X BOLTS
800.5" - 830.5"	(3 BAYS)	7/8" $\phi$ S.R., ASTM A572-50, 5/8" $\phi$ A325X BOLTS
980.5" - 990.5"	(1 BAY)	1" $\phi$ S.R., ASTM A572-50, 3/4" $\phi$ A325X BOLTS
1010.5" - 1020.5"	(1 BAY)	7/8" $\phi$ S.R., ASTM A572-50, 5/8" $\phi$ A325X BOLTS
1180.5" - 1190.5"	(1 BAY)	1" $\phi$ S.R., ASTM A572-50, 3/4" $\phi$ A325X BOLTS
1230.5" - 1240.5"	(1 BAY)	7/8" $\phi$ S.R., ASTM A572-50, 5/8" $\phi$ A325X BOLTS

5. REINFORCE THE EXISTING LEGS BY ADDING SPLIT PIPE REINFORCING AT THE FOLLOWING LOCATIONS (SEE E-6)

0.0' - 60.5'	(2 SECTIONS)	HALF HSS 5.5" O.D. x 0.5" WALL, FY=50KSI MIN.
60.5' - 150.5'	(3 SECTIONS)	HALF HSS 5.25" O.D. x 0.5" WALL, FY=50KSI MIN.
150.5' - 210.5'	(2 SECTIONS)	HALF HSS 5.5" O.D. x 0.5" WALL, FY=50KSI MIN.
210.5' - 390.5'	(6 SECTIONS)	HALF HSS 5.25" O.D. x 0.5" WALL, FY=50KSI MIN.
390.5' - 420.5'	(1 SECTION)	HALF HSS 5.125" O.D. x 0.5" WALL, FY=50KSI MIN.
420.5' - 450.5'	(1 SECTION)	HALF HSS 5.25" O.D. x 0.5" WALL, FY=50KSI MIN.
450.5' - 600.5'	(5 SECTIONS)	HALF HSS 5.125" O.D. x 0.5" WALL, FY=50KSI MIN.
600.5' - 810.5'	(7 SECTIONS)	HALF HSS 4.875" O.D. x 0.5" WALL, FY=50KSI MIN.
810.5' - 1020.5'	(7 SECTIONS)	HALF HSS 4.75" O.D. x 0.5" WALL, FY=50KSI MIN.

5. REINFORCE THE EXISTING LEGS BY ADDING SPLIT PIPE REINFORCING AT THE FOLLOWING LOCATIONS (SEE E-6)

0.0' - 60.5'	(2 SECTIONS)	HALF HSS 5.5" O.D. x 0.5" WALL, FY=50KSI MIN.
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150.5' - 210.5'	(2 SECTIONS)	HALF HSS 5.5" O.D. x 0.5" WALL, FY=50KSI MIN.
210.5' - 390.5'	(6 SECTIONS)	HALF HSS 5.25" O.D. x 0.5" WALL, FY=50KSI MIN.
390.5' - 420.5'	(1 SECTION)	HALF HSS 5.125" O.D. x 0.5" WALL, FY=50KSI MIN.
420.5' - 450.5'	(1 SECTION)	HALF HSS 5.25" O.D. x 0.5" WALL, FY=50KSI MIN.
450.5' - 600.5'	(5 SECTIONS)	HALF HSS 5.125" O.D. x 0.5" WALL, FY=50KSI MIN.
600.5' - 810.5'	(7 SECTIONS)	HALF HSS 4.875" O.D. x 0.5" WALL, FY=50KSI MIN.
810.5' - 1020.5'	(7 SECTIONS)	HALF HSS 4.75" O.D. x 0.5" WALL, FY=50KSI MIN.

6. REINFORCE THE EXISTING DOUBLE ANGLE HORIZONTAL MEMBERS BY ADDING A SINGLE ANGLE MEMBER BETWEEN THE DOUBLE ANGLES AT THE FOLLOWING LOCATIONS (SEE E-7):

590.5' (1 LEVEL) L3 1/2 x 2 1/2 x 3/8, 5/8"  $\phi$  A325X BOLTS

## MODIFICATION DESCRIPTION:

7. REPLACE GUY LEVEL 6 AND ADJUST THE GUY WIRE INITIAL TENSION USING THE TANGENT INTERCEPT METHOD TO THE VALUES LISTED IN THE CHART BELOW. REUSE EXISTING GROUNDING AND HFD (SEE E-8 & E-9):

3. A TEMPORARY BRACE MUST BE INSTALLED THAT IS OF EQUIVALENT OR GREATER CAPACITY THAN THE MEMBER BEING REPLACED. THE TEMPORARY BRACE SHALL BE PLACED ADJACENT TO THE MEMBER BEING REPLACED SUCH THAT IT WILL TAKE THE LOAD AFTER THE EXISTING MEMBER IS REMOVED

A TEMPORARY FRAME IS REQUIRED ABOVE AND BELOW GUY LEVELS DURING DIAGONAL REPIACEMENT.

4. REPLACE THE EXISTING SOLID ROD DIAGONAL MEMBERS WITH A NEW HIGHER CAPACITY MEMBER AT THE FOLLOWING LOCATIONS (SEE E-5):

50.5" - 60.5"	(1 BAY)	7/8" $\phi$ S.R., ASTM A572-50, 5/8" $\phi$ A325X BOLTS
80.5" - 100.5"	(2 BAYS)	1" $\phi$ S.R., ASTM A572-50, 5/8" $\phi$ A490X BOLTS
100.5" - 110.5"	(1 BAY)	7/8" $\phi$ S.R., ASTM A572-50, 5/8" $\phi$ A325X BOLTS
130.5" - 160.5"	(3 BAYS)	7/8" $\phi$ S.R., ASTM A572-50, 5/8" $\phi$ A325X BOLTS
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5. REINFORCE THE EXISTING LEGS BY ADDING SPLIT PIPE REINFORCING AT THE FOLLOWING LOCATIONS (SEE E-6)

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590.5' (1 LEVEL) L3 1/2 x 2 1/2 x 3/8, 5/8"  $\phi$  A325X BOLTS

7. REPLACE GUY LEVEL 6 AND ADJUST THE GUY WIRE INITIAL TENSION USING THE TANGENT INTERCEPT METHOD TO THE VALUES LISTED IN THE CHART BELOW. REUSE EXISTING GROUNDING AND HFD (SEE E-8 & E-9):

GUY LEVEL	EXISTING GUY PROPERTIES			RECOMMENDED GUY PROPERTIES		
	GUY ANCHOR	GUY SIZES	% OF U.L.T.	GUY ANCHOR	GUY SIZES	% OF U.L.T.
2 <sup>nd</sup> (top)	Outer Anchor	3/16" x 95" BS	8.24%	Outer Anchor	1/2" x 75" BS	10.7%
3 <sup>rd</sup>	Outer Anchor	5/8" x 95" BS	11.25%	Outer Anchor	5/8" x 95" BS	11.25%
4 <sup>th</sup>	Outer Anchor	3/4" x 95" BS	10.22%	Outer Anchor	3/4" x 95" BS	10.6%
5 <sup>th</sup>	Outer Anchor	1" x 95" BS	9.67%	Outer Anchor	1" x 95" BS	10.6%
6 <sup>th</sup>	Middle Anchor	1" x 95" BS	10.52%	Middle Anchor	1" x 95" BS	8.9%
7 <sup>th</sup>	Middle Anchor	1 1/4" x 95" BS	12.5%	Middle Anchor	1 1/4" x 95" BS	9.6%
8 <sup>th</sup>	Middle Anchor	1 1/2" x 95" BS	12.98%	Middle Anchor	1 1/2" x 95" BS	8.9%
9 <sup>th</sup>	Middle Anchor	1 3/4" x 95" BS	9.34%	Middle Anchor	1 3/4" x 95" BS	8.0%
10 <sup>th</sup>	Inner Anchor	1 1/2" x 95" BS	12.30%	Inner Anchor	1 1/2" x 95" BS	9.9%
11 <sup>th</sup>	Inner Anchor	1 3/4" x 95" BS	12.5%	Inner Anchor	1 3/4" x 95" BS	9.9%
12 <sup>th</sup> (bot)	Inner Anchor	1 1/2" x 95" BS	12.30%	Inner Anchor	1 1/2" x 95" BS	12.9%

NOTE: VALUES SHOWN ABOVE ARE VALID AT 60 DEGREES FAHRENHEIT; A P&T CHART WITH TEMPERATURE CORRECTIONS WILL BE REQUIRED FOR FIELD ADJUSTMENTS

8. ALL MATERIAL SHALL BE HOT DIP GALVANIZED IN ACCORDANCE TO ASTM SPECIFICATIONS.
9. ALL REINFORCING MATERIAL SHALL BE PAINTED IN THE FIELD TO MATCH THE EXISTING COLOR SCHEME OF THE TOWER.
10. THE MODIFICATION MATERIAL AND INSTALLATION DRAWINGS CONTAINED HEREIN ARE BASED ON THE ASSUMPTION THAT THE TOWER HAS BEEN PROPERLY INSTALLED AND MAINTAINED, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- A. PROPER ALIGNMENT AND PLUMBNESS.
- B. CORRECT GUY TENSIONS.
- C. CORRECT BOLT TIGHTNESS.
- D. NO SIGNIFICANT DETERIORATION OR DAMAGE TO ANY COMPONENT.

**11. ALL MATERIAL REQUIRED BY SHEETS E-1 THROUGH E-8 FURNISHED TO CONTRACTOR BY TCI. FOR PRICING PLEASE CONTACT:**

**RON DOZSA**  
**425-778-5169**

### DESIGN INFORMATION:

1. THIS DRAWING PACKAGE IS BASED ON TOWER CONSULTANTS ANALYSIS REPORT 17.289.001, DATED MAY 19, 2017.

2. THE TOWER IS DESIGNED FOR THE EXISTING AND PROPOSED LOADING AS LISTED IN THE REPORT REFERENCED ABOVE.

### ANTENNA WORK:

1. REMOVE THE FOLLOWING LINES (SEE CROSS SECTION ON E-4):

0' - TOP 6 1/8" RIGID LINE

2. INSTALL THE FOLLOWING LINES' (SEE CROSS SECTION ON E-4):

0' - TOP 6 1/8" RIGID LINE

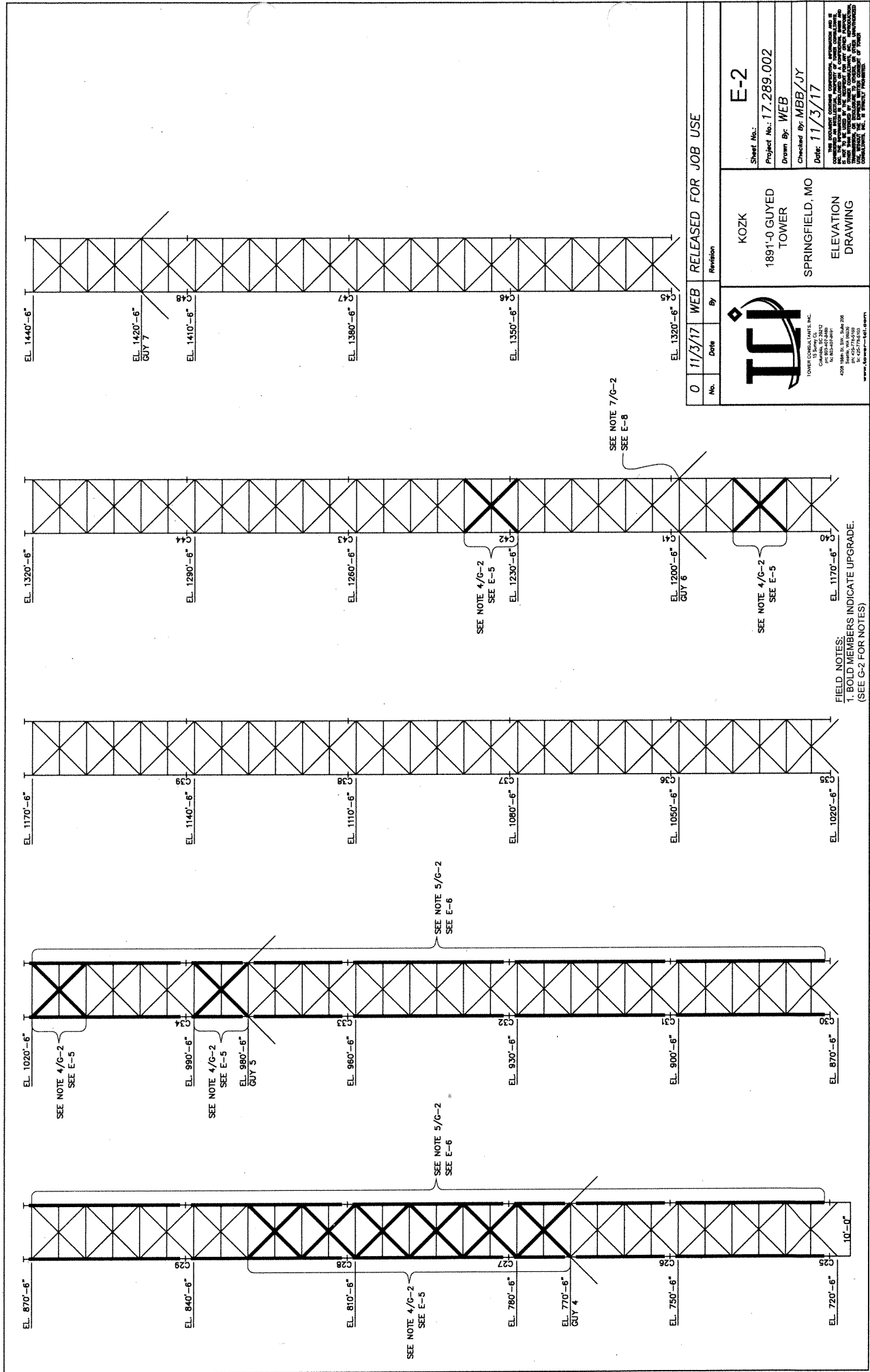
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**ILI**

IONEN CONSULTANTS, INC.  
13, Sunrise Ct.  
Columbia, SC 29812  
ph: 803-407-4680  
fx: 803-407-4691

4209 199th St. SW, Suite 205  
Seattle, WA 98148  
ph: 206-776-5560  
fx: 206-776-5563



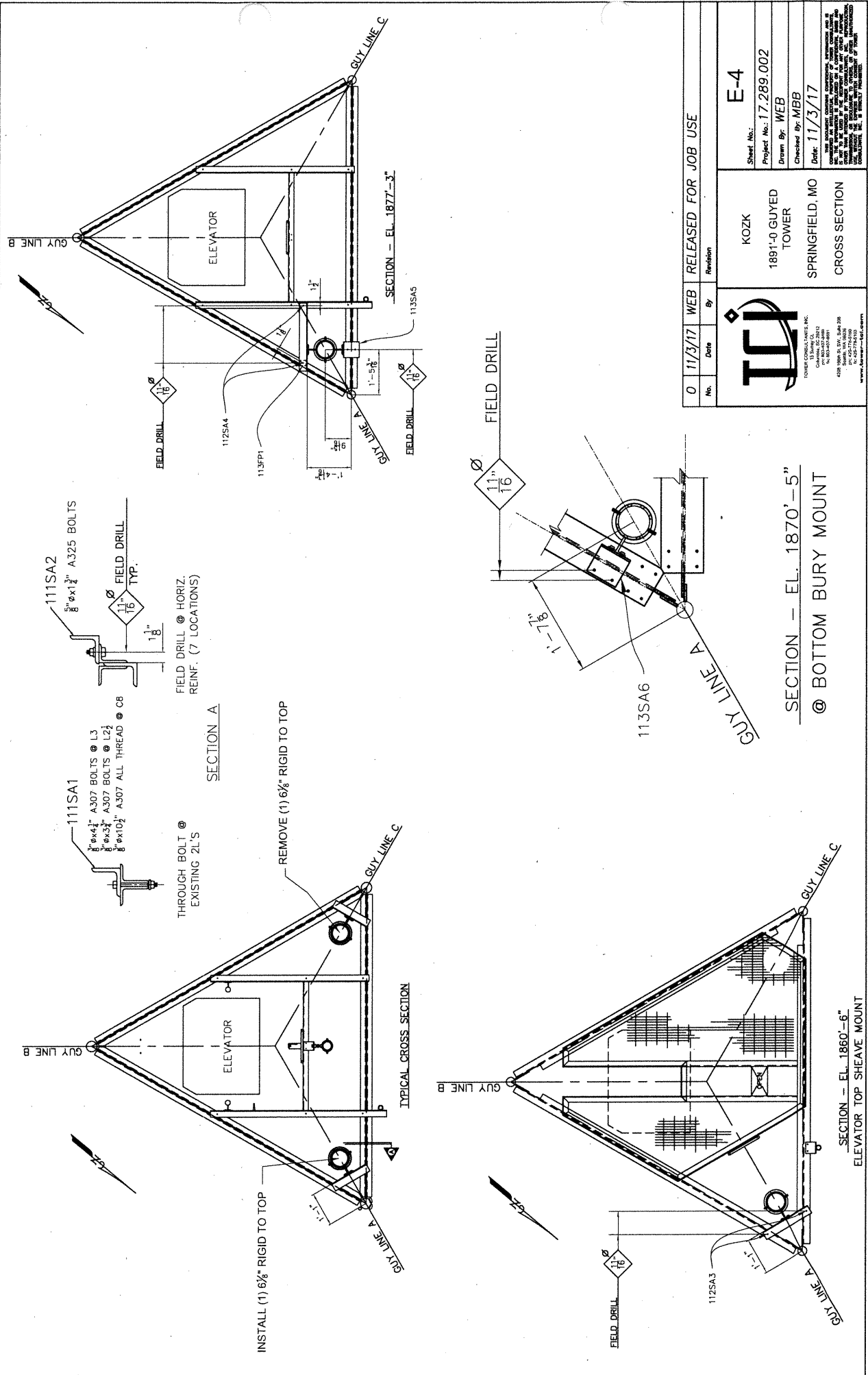
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Revision		

KOZK		Sheet No. <b>E-2</b>
1891'-0 GUYED TOWER		Project No. 17.289.002
SPRINGFIELD, MO		Drawn By: WEB
ELEVATION DRAWING		Checked By: MBB/JY
		Date: 11/3/17

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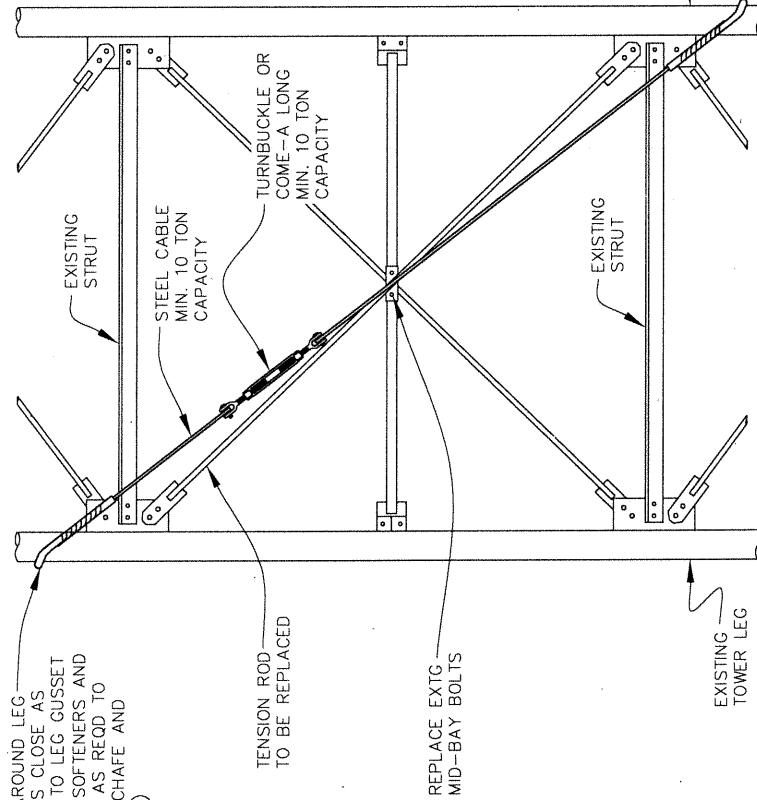
  

<b>KOZK</b> 1891-0 GUYED TOWER SPRINGFIELD, MO CROSS SECTION	<b>E-4</b> Sheet No.: Project No.: 17.289.002 Drawn By: WEB Checked By: MBB Date: 11/3/17
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CHOKER AROUND LEG-  
PLACED AS CLOSE AS  
POSSIBLE TO LEG GUSSET  
(PROVIDE SOFTENERS AND  
BLOCKING AS REQD TO  
PREVENT CHAFE AND  
SLIPPAGE.)



TYP ELEVATION VIEW OF DIAGONAL REPLACEMENT  
(TYP 3 SIDES)

#### NOTES FOR TEMPORARY BRACING DURING DIAGONAL REPLACEMENT:

1. ALL STRESS IN THE BAR DIAGONAL SHALL BE REMOVED BY THE USE OF A COME-A-LONG OR BY A TURNBUCKLE AS SHOWN IN THE ABOVE DIAGRAM BEFORE THE BAR DIAGONAL IS REPLACED WITH THE NEW MEMBER. THE RIGGING, INCLUDING COME-A-LONG OR TURNBUCKLE, CABLE SLING, ECT., SHALL HAVE A MINIMUM STRENGTH OF 20,000 LBS.
2. ONLY ONE DIAGONAL PER PANEL SHALL BE REPLACED AT A TIME, AND ALL BOLTS PROPERLY INSTALLED BEFORE PROCEEDING TO THE REPLACEMENT OF THE OTHER DIAGONAL IN THAT PANEL.
3. COAT ALL REAMED HOLES WITH A ZINC RICH TWO PART EPOXY AS REQUIRED.
4. A490 BOLTS SHALL BE COATED WITH A ZINC RICH TWO PART EPOXY MASTIC SUCH AS CARBOLINE CARBOMASTIC 15 OR EQUIVALENT.

#### RESTRICTIONS

- NO TOWER MEMBER IS TO BE REPLACED WHEN A WIND VELOCITY GREATER THAN 20 MPH EXISTS OR WHEN A WIND VELOCITY OF GREATER THAN 20 MPH IS PREDICTED DURING THE PROCEDURE.
- THE ABOVE PROCEDURES MUST BE FOLLOWED WITHOUT VARIATION UNLESS APPROVED BY THE ENGINEER ON RECORD.
- IF A DIAGONAL REPLACEMENT OCCURS ABOVE OR BELOW A GUY LEVEL, A TEMPORARY FRAME IS REQUIRED, ALONG WITH THE ABOVE PROCEDURE. THE TEMPORARY FRAME SHOULD BE PROVIDED BY THE ERECTOR AND APPROVED BY TCI BEFORE REPLACEMENT IS DONE. USE (2) COME-A-LONGS WHEN TEMPORARY FRAME IS IMPEDED BY EXISTING EQUIPMENT.


NOTE: FRAME IS REQUIRED IF DIAGONAL IS REPLACED ABOVE OR BELOW A GUY WIRE.

NOTE:

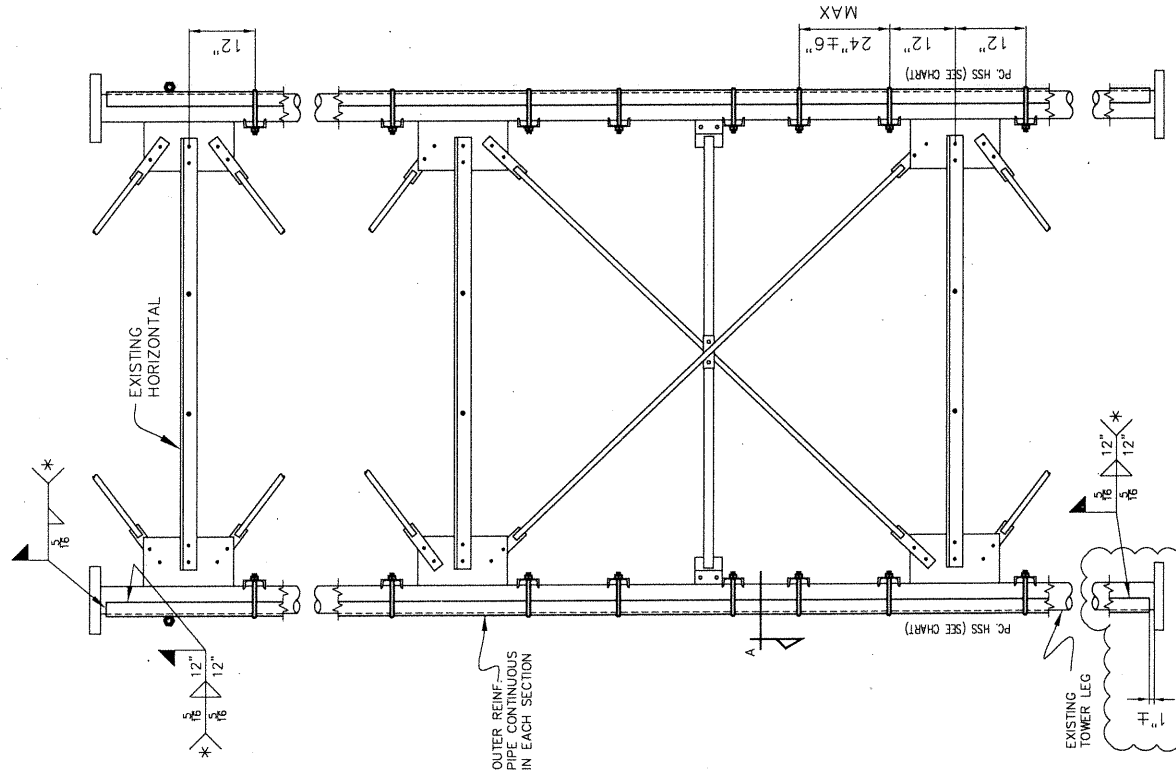
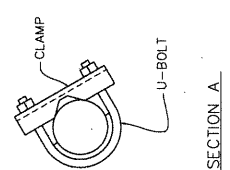
FRAME TO BE PROVIDED BY THE ERECTOR AND APPROVED BY TCI

DIAGONAL REPLACEMENT					
ELEVATION	BAYS	NEW DIAGONAL	END BOLTS*	MID-BAY BOLTS*	REMAINING REQD
50.5' - 60.5'	1	101X3	5/8"Ø A325X x2	5/8"Ø A325X x3	NO
80.5' - 100.5'	2	100X2	5/8"Ø A490X x2	5/8"Ø A325X x3	NO
100.5' - 110.5'	1	100X1	5/8"Ø A325X x2	5/8"Ø A325X x3	NO
130.5' - 150.5'	2	100X1	5/8"Ø A325X x2	5/8"Ø A325X x3	NO
150.5' - 160.5'	1	101X4	5/8"Ø A325X x2	5/8"Ø A325X x3	NO
570.5' - 580.5'	1	102X6	3/4"Ø A490X x2-1/2	5/8"Ø A325X x3	NO
580.5' - 590.5'	1	103X8	3/4"Ø A490X x2-1/2	5/8"Ø A325X x3	NO
590.5' - 630.5'	4	100X2	5/8"Ø A490X x2	5/8"Ø A325X x3	NO
630.5' - 650.5'	2	100X1	5/8"Ø A325X x2	5/8"Ø A325X x3	NO
770.5' - 780.5'	1	102X5	3/4"Ø A325X x2-1/4	5/8"Ø A325X x3	NO
780.5' - 800.5'	2	103X7	3/4"Ø A325X x2-1/4	5/8"Ø A325X x3	NO
800.5' - 830.5'	3	100X1	5/8"Ø A325X x2	5/8"Ø A325X x3	NO
980.5' - 990.5'	1	102X5	3/4"Ø A325X x2-1/4	5/8"Ø A325X x3	NO
1010.5' - 1020.5'	1	100X1	5/8"Ø A325X x2	5/8"Ø A325X x3	NO
1180.5' - 1190.5'	1	103X7	3/4"Ø A325X x2-1/4	5/8"Ø A325X x3	NO
1230.5' - 1240.5'	1	100X1	5/8"Ø A325X x2	5/8"Ø A325X x3	NO

\* ALL BOLTS REQUIRE (1) HARDENED WASHER AND (1) ANCO LOCKNUT EACH

0	11/3/17	WEB	By	Revision	RELEASED FOR JOB USE
No.	Date				
<div style="text-align: center;">  <p>TCI TOWER CONSTRUCTION, INC. 10000 S. 10th Ave., Suite 300 Tucson, AZ 85727 Tel: 520-747-4881 Fax: 520-747-4882 www.tci-usa.com</p> </div>					
<div style="text-align: center;"> <p>KOZK</p> <p>1891'0 GUYED TOWER</p> <p>SPRINGFIELD, MO</p> <p>DIAGONAL REPLACEMENT</p> </div>			<div style="text-align: center;"> <p>E-5</p> <p>Sheet No.: Project No.: 17.289.002 Drawn By: WEB Checked By: MBB/JY Date: 11/3/17</p> </div>		

SPLIT PIPE				
ELEVATION	SECTIONS	REINFORCING PIPE	U-BOLTS	CLAMP
0.0' - 30.5'	1	105M6	108UB60 (C/C 6-3/4")	108M19
30.5' - 60.5'	1	105M1	108UB60 (C/C 6-3/4")	108M19
60.5' - 90.5'	1	107M15	108UB60 (C/C 6-3/4")	108M19
90.5' - 150.5'	2	105M2	108UB60 (C/C 6-3/4")	108M19
150.5' - 180.5'	1	106M7	108UB60 (C/C 6-3/4")	108M19
180.5' - 210.5'	1	105M1	108UB60 (C/C 6-3/4")	108M19
210.5' - 270.5'	2	105M2	108UB60 (C/C 6-3/4")	108M19
270.5' - 300.5'	1	107M15	108UB60 (C/C 6-3/4")	108M19
300.5' - 360.5'	2	105M2	108UB60 (C/C 6-3/4")	108M19
360.5' - 390.5'	1	106M8, 106M9	108UB60 (C/C 6-3/4")	108M19
390.5' - 420.5'	1	105M3	108UB60 (C/C 6-3/4")	108M19
420.5' - 450.5'	1	105M2	108UB60 (C/C 6-3/4")	108M19
450.5' - 480.5'	1	107M16	108UB60 (C/C 6-3/4")	108M19
480.5' - 540.5'	2	105M3	108UB60 (C/C 6-3/4")	108M19
540.5' - 570.5'	1	106M10	108UB60 (C/C 6-3/4")	108M19
570.5' - 600.5'	1	105M3	108UB60 (C/C 6-3/4")	108M19
600.5' - 660.5'	2	105M4	108UB50 (C/C 5-3/4")	108M20
660.5' - 690.5'	1	107M17	108UB50 (C/C 5-3/4")	108M20
690.5' - 750.5'	2	105M4	108UB50 (C/C 5-3/4")	108M20
750.5' - 780.5'	1	106M11, 106M12	108UB50 (C/C 5-3/4")	108M20
780.5' - 810.5'	1	105M4	108UB50 (C/C 5-3/4")	108M20
810.5' - 870.5'	2	105M5	108UB50 (C/C 5-3/4")	108M20
870.5' - 900.5'	1	107M18	108UB50 (C/C 5-3/4")	108M20
900.5' - 960.5'	2	105M5	108UB50 (C/C 5-3/4")	108M20
960.5' - 990.5'	1	107M13, 107M14	108UB50 (C/C 5-3/4")	108M20
990.5' - 1020.5'	1	105M5	108UB50 (C/C 5-3/4")	108M20



\*APPLY HEAVY COAT OF ZINC RICH  
TWO PART EPOXY PAINT AFTER  
WELDING

1	1/17/18	WEB	REVISD SPLIT PIPE CLEARANCE
0	11/3/17	WEB	RELEASED FOR JOB USE
No.	Date	By	Revision

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**KOZK**

1891'-0 GUYED  
TOWER

SPRINGFIELD, MO

SPLIT PIPE  
REINFORCING

Sheet No.: **E-6**

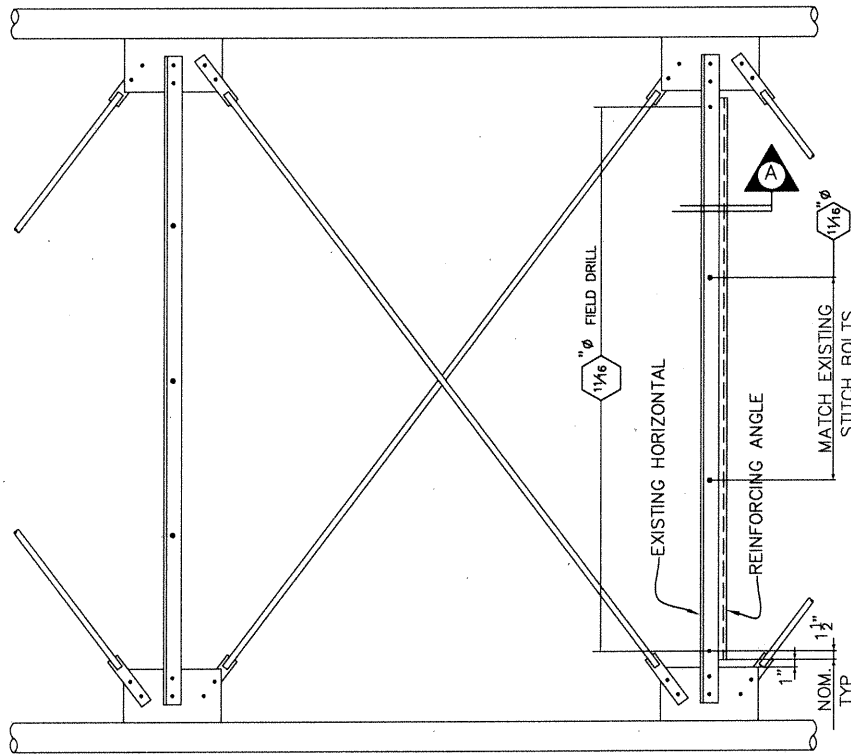
Project No: 17.289.002

Drawn By: WEB

Checked By: MBB/JY

Date: 11/3/17

TYPICAL SPLIT PIPE REINFORCING  
(TYP 3 SIDES)



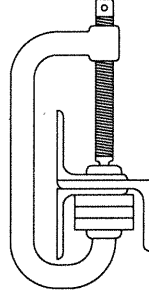
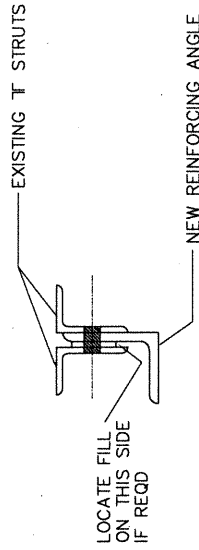
TYPICAL STRUT REINFORCING  
(TYPICAL 3 SIDES)

HORIZONTAL REINFORCEMENT			
ELEVATION	LEVELS	REINFORCING ANGLE	BOLTS*
590.5'	1	(3) 104S1	5/8"φ A325X x 2-1/4"


\*ALL BOLTS REQUIRE (1) HARDENED WASHER AND (1) ANCO LOCKNUT EACH

## PROCEDURE TO REINFORCE DOUBLE ANGLE STRUTS


- A. DOUBLE ANGLE STRUTS
1. CLAMP STRUT WITH "C" CLAMPS AND SHIMS (TACKED OR FASTENED TO THE CLAMP). USE ONE (1) CLAMP PER STITCH BOLT (LOCATED NEAR STITCH BOLT). SEE DETAIL "1" OTHER STYLE CLAMPS ARE PERMITTED PROVIDED STRUT ANGLES ARE RESTRAINED FROM MOVING HORIZONTALLY.
  2. REMOVE STITCH BOLTS AND SPACERS FROM THE STRUT TO BE REINFORCED.
  3. IMMEDIATELY INSERT REINFORCING ANGLE BETWEEN THE DOUBLE ANGLES, INSERT STITCH BOLTS AND TIGHTEN.
  4. FIELD DRILL HOLES FOR END BOLTS AT 1 1/2" FROM EACH END OF THE REINFORCING ANGLE.
  5. COAT ALL FIELD DRILLED HOLES WITH A ZINC RICH TWO PART EPOXY.
  6. INSERT END BOLTS AND TIGHTEN.
- B. OPERATIONAL CONSTRAINTS
1. NO TOWER MEMBER IS TO BE REINFORCED WHEN A WIND VELOCITY GREATER THAN 15 MPH EXISTS OR WHEN A WIND VELOCITY OF GREATER THAN 15 MPH IS PREDICTED DURING THE OPERATION OF REINFORCING THE TOWER MEMBER.
  2. REINFORCE THE STRUTS ONE AT A TIME. ONLY REINFORCE STRUTS WHEN "C" CLAMPS ARE INSTALLED.
  3. THE ABOVE PROCEDURES TO BE FOLLOWED WITHOUT VARIATION.



DETAIL 1

0	11/3/17	WEB	RELEASED FOR JOB USE
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<b>KOZK</b> 1891'-0 GUYED TOWER SPRINGFIELD, MO HORIZONTAL REINFORCING		Sheet No.: <b>E-7</b> Project No.: <b>17.289.002</b> Drawn By: <b>WEB</b> Checked By: <b>MBB/JY</b> Date: <b>11/3/17</b>	
<small>           TOWER CONSULTANTS, INC.            1000 N. 10TH ST., SUITE 200            OMAHA, NE 68102-4499            (402) 596-8100 FAX (402) 596-8080            WWW.TOWERCONSULTANTS.COM         </small>			

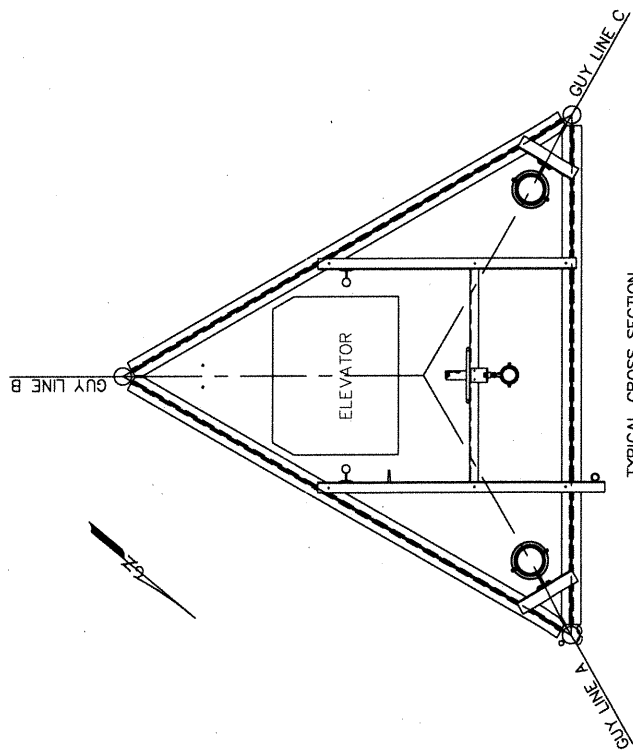


0	11/3/17	WEB	By	Revision	<div>  <p> <b>TOWER CONSULTANTS, INC.</b>            4209 Wilson St., Suite 200            Culverton, CA 95923            Tel: 916-233-8991            Fax: 916-233-8991            www.tcl-engineering.com         </p> </div>
No.	Date				
		WEB			<div> <p><b>KOZAK</b></p> <p><b>1891-0 GUYED TOWER</b></p> <p><b>SPRINGFIELD, MO</b></p> <p><b>GUY WIRE REPLACEMENT</b></p> </div>
					<div> <p><b>E-8</b></p> <p><b>Sheet No.:</b></p> <p><b>Project No. 17.289.002</b></p> <p><b>Drawn By: WEB</b></p> <p><b>Checked By: MBB/JY</b></p> <p><b>Date: 11/3/17</b></p> <p> <small>             THIS DOCUMENT IS THE PROPERTY OF TOWER CONSULTANTS, INC. IT IS TO BE USED ONLY FOR THE PROJECT AND LOCATION SPECIFICALLY IDENTIFIED HEREON. IT IS NOT TO BE REPRODUCED, COPIED, REPHRASED, OR OTHERWISE USED FOR ANY OTHER PROJECT OR LOCATION WITHOUT THE WRITTEN PERMISSION OF TOWER CONSULTANTS, INC. IT IS HEREBY FORWARDED TO YOU UNDER A NON-EXCLUSIVE LICENSE.           </small> </p> </div>

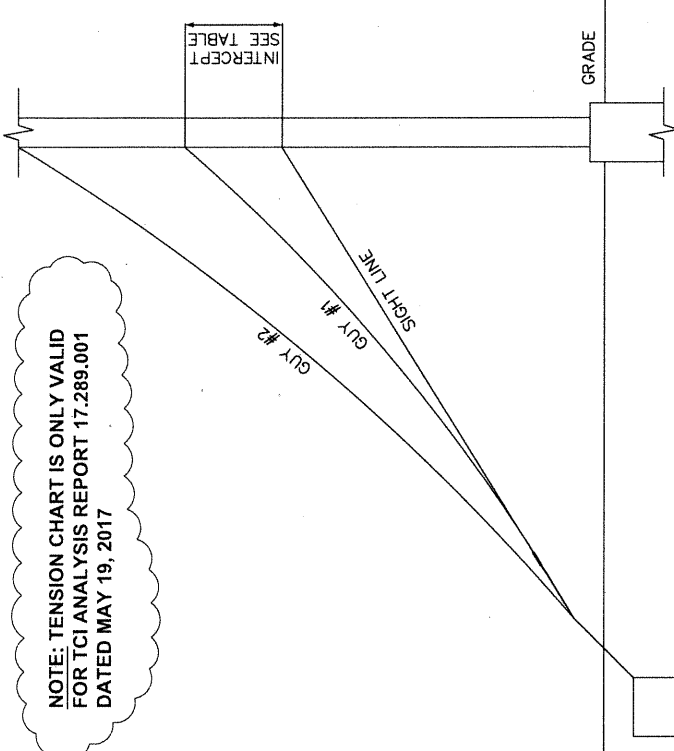
Guy Wire Initial Tension (kips)										
Guy Level	Guy Elevation (ft)	Guy Size	30	40	50	60	70	80	90	100
9	1890.5	1-7/16" BS	28.34	28.13	27.92	27.72	27.52	27.32	27.13	26.93
8	1650.5	1-9/16" BS	33.84	33.55	33.28	33.00	32.73	32.46	32.20	31.94
7	1420.5	1-5/16" BS	21.76	21.57	21.38	21.20	21.02	20.84	20.67	20.50
6	1200.5	1-3/8" HSS	21.97	21.73	21.51	21.28	21.06	20.84	20.63	20.42
5	980.5	1-1/4" BS	17.95	17.72	17.50	17.28	17.07	16.86	16.66	16.46
4	770.5	1-1/8" BS	14.70	14.47	14.25	14.04	13.84	13.64	13.44	13.25
3	570.5	1-3/16" BS	14.67	14.36	14.06	13.76	13.47	13.20	12.93	12.66
2	370.5	1-1/16" BS	13.69	13.25	12.83	12.42	12.03	11.65	11.29	10.95
1	180.5	1-1/16" BS	18.86	18.08	17.31	16.56	15.84	15.14	14.48	13.89

Guy Wire Intercept (ft)										
Guy Level	Guy Elevation (ft)	Guy Size	Transit Distance	30	40	50	60	70	80	90
9	1890.5	1-7/16" BS	10'	334.34	338.49	338.63	340.77	342.91	345.05	347.18
8	1650.5	1-9/16" BS	10'	283.35	285.45	287.55	289.66	291.75	293.85	295.94
7	1420.5	1-5/16" BS	10'	263.29	265.35	267.40	269.44	271.48	273.52	275.54
6	1200.5	1-3/8" HSS	10'	175.38	177.05	178.73	180.41	182.08	183.76	185.43
5	980.5	1-1/4" BS	10'	142.52	144.18	145.84	147.49	149.14	150.79	152.44
4	770.5	1-1/8" BS	10'	114.42	116.06	117.70	119.34	120.98	122.61	124.23
3	570.5	1-3/16" BS	10'	47.93	48.91	49.89	50.89	51.89	52.91	53.93
2	370.5	1-1/16" BS	10'	27.33	28.19	29.08	29.99	30.93	31.88	32.85
1	180.5	1-1/16" BS	10'	14.14	14.75	15.39	16.07	16.79	17.55	18.34

Adjust the guy wire intercept/tension based on the measurements of the guy wire in the B-line (Southeast) direction.



TYPICAL CROSS SECTION



ELEVATION VIEW

NOTES:

1. DURING THE INITIAL GUY TENSIONING PROCEDURES AND AT THE TIME OF INSPECTION, THE GUY TENSIONS AND/OR INTERCEPTS SHOULD BE IN ACCORDANCE WITH THE VALUES SHOWN ABOVE. USE THE TEMPERATURE WHICH ACTUALLY EXISTS AT THE TIME THE TENSION IS BEING CHECKED. FOR TEMPERATURES OTHER THAN THOSE SHOWN ABOVE, INTERPOLATE OR EXTRAPOLATE OTHER VALUES.
2. TOWER PLUMBING AND INITIAL TENSIONING OF GUYS SHOULD BE DONE ONLY IN CALM WEATHER AND WITH NO ICE ON GUYS.
3. INTERCEPTS AND TENSIONS ARE USED FOR GUY DIRECTION "B".
4. GUY #1 IS BOTTOM GUY; GUY #2 IS NEXT, ETC.
5. USE GUY SCOPE FOR DETERMINING GUY INTERCEPTS.
6. TENSION AND/OR INTERCEPT TOLERANCES  $\pm 5\%$ .
7. AFTER RETENSIONING FINAL SET OF GUYS GO BACK AND RECHECK ALL LEVELS, AND RETENSION WHERE REQUIRED.
8. PLUMB AND TWIST TO BE VERIFIED, RECORDED, AND IF REQUIRED ADJUSTED TO BE IN CONFORMANCE WITH ANSI/TIA-222-G.

No.	Date	By	Revision
0	11/3/17	WEB	RELEASED FOR JOB USE

<b>TCI</b> TOWER CONSULTANTS, INC. 4200 15th St., SW, Suite 300 Calgary, AB T2C 1S2 Canada Tel: (403) 243-8891 Fax: (403) 243-8892 www.tci.ca	<b>KOZK</b> 1891-0 GUYED TOWER SPRINGFIELD, MO TENSION CHART	Sheet No.: <b>E-9</b> Project No.: <b>17.289.002</b> Drawn By: <b>WEB</b> Checked By: <b>MBB</b> Date: <b>11/3/17</b>
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NOTE: TENSION CHART IS ONLY VALID FOR TCI ANALYSIS REPORT 17.289.001 DATED MAY 19, 2017

# POST-MODIFICATION CHECKLIST

REQUIRED	SECTION	REPORT ITEM	BRIEF DESCRIPTION (SEE ENG-SOW-10007)
PRE-CONSTRUCTION			
X	6.1.1	MI CHECKLIST DRAWING	THIS CHECKLIST SHALL BE INCLUDED IN THE MI REPORT
NA	6.1.2	EOR APPROVED SHOP DRAWINGS	FABRICATION DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW. THE CONTRACTOR SHALL PROVIDE THE APPROVED SHOP DRAWINGS TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	6.1.3	FABRICATION INSPECTION	A LETTER FROM THE FABRICATOR, STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI REPORT, SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	6.1.4	FABRICATOR CERTIFIED WELD INSPECTION	CRITICAL SHOP WELDS THAT REQUIRE TESTING ARE NOTED ON THESE CONTRACT DRAWINGS. A CERTIFIED WELD INSPECTOR SHALL PERFORM NON-DESTRUCTIVE TESTING AND REPORT THE RESULTS TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	6.1.5	MATERIAL TEST REPORT (MTR)	WILL CERTIFICATION SHALL BE PROVIDED FOR ALL STEEL WITH A YIELD STRENGTH GREATER THAN 36 KSI AND THIS DOCUMENTATION SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	6.1.6	FABRICATOR NDE INSPECTION	A VISUAL OBSERVATION OF A PORTION OF THE EXISTING STRUCTURE (AS NOTED ON THESE DRAWINGS) IS REQUIRED AND A WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	6.1.7	NDE REPORT OF MONOPOLE BASE PLATE (AS REQUIRED)	A VISUAL OBSERVATION OF THE POLE TO BASE PLATE CONNECTION IS REQUIRED AND A WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	6.1.8	PACKING SLIPS	MI REPORTING SURVEILLANCE LIST SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
CONSTRUCTION			
X	6.2.1	CONSTRUCTION INSPECTIONS	A LETTER FROM THE GENERAL CONTRACTOR STATING THAT THE WORKMANSHIP WAS PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND THESE CONTRACT DRAWINGS SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	6.2.2	FOUNDATION INSPECTIONS	A VISUAL OBSERVATION OF THE EXCAVATION AND REBAR SHALL BE PERFORMED BEFORE PLACING THE CONCRETE. A WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	6.2.3	CONCRETE COMP. STRENGTH AND SLUMP TESTS	THE CONCRETE MIX DESIGN, SLUMP TEST, AND COMPRESSIVE STRENGTH TESTS SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	6.2.4	POST INSTALLED ANCHOR ROD VERIFICATION	WITH CROWN REQUIREMENTS AND A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	6.2.5	BASE PLATE GROUT VERIFICATION	A LETTER FROM THE GENERAL CONTRACTOR SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	6.2.6	CONTRACTOR'S CERTIFIED WELD INSPECTION	A CERTIFIED WELD INSPECTOR SHALL INSPECT AND TEST AS NECESSARY ALL FIELD WELDS AND REPORT THE RESULTS TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	6.2.7	EARTHWORK: LIFT AND DENSITY	FOUNDATION SUB-GRADES SHALL BE INSPECTED AND APPROVED BY A GEOTECHNICAL ENGINEER AND A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	6.2.8	ON SITE COLD GALVANIZING VERIFICATION	THE GENERAL CONTRACTOR SHALL PROVIDE DOCUMENTATION TO THE MI INSPECTOR VERIFYING THAT ANY ON-SITE COLD GALVANIZING WAS APPLIED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI REPORT.
X	6.2.9	GUY WIRE TENSION REPORT	SUPPLY AND INSTALLATION SHALL PROVIDE A REPORT TO THE MI INSPECTOR INDICATING THE TEMPERATURE AND TENSION IN EVERY GUY CABLE FOR INCLUSION IN THE MI REPORT.
X	6.2.10	QC AS-BUILT DOCUMENTS	THE MI INSPECTOR SHALL SUBMIT A COPY OF THE CONTRACT DRAWINGS EITHER STATING "INSTALLED AS DESIGNED" OR NOTING ANY CHANGES THAT WERE REQUIRED AND APPROVED BY THE ENGINEER OF RECORD DUE TO FIELD CONDITIONS.
POST-CONSTRUCTION			
X	6.3.1	MI INSPECTOR REDLINE OR RECORD DRAWING(S)	THE MI INSPECTOR SHALL OBSERVE AND REPORT ANY DISCREPANCIES BETWEEN THE CONTRACTORS REDLINE DRAWING AND THE ACTUAL COMPLETED INSTALLATION.
NA	6.3.2	POST-INSTALLED ANCHOR RODS	POST-INSTALLED ANCHOR RODS SHALL BE TESTED AND A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	6.3.3	PHOTOGRAPHS	PHOTOGRAPHS SHALL BE SUBMITTED TO THE MI WHICH DOCUMENT PHASES OF THE CONSTRUCTION. THE PHOTOS SHALL BE ORGANIZED IN A MANNER THAT EASILY IDENTIFIES THE EXACT LOCATION OF THE PHOTO.

NOTE: X DENOTES A DOCUMENT REQUIRED FOR THE MI REPORT. NA DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE MI REPORT.

## MODIFICATION INSPECTION NOTES:

**GENERAL:**  
 MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF TOWER MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS COMPLETED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR). THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF. NOR DOES THE MI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.

ALL MIs SHALL BE CONDUCTED BY A TOWER CONSULTANT, INC. (TO) ENGINEERING OR ENGINEERING SERVICE VENDOR (ESV) THAT IS APPROVED TO PERFORM ELEVATED WORK. TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING PRIOR TO THE MI. THE MI INSPECTOR EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY.

THE MI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE MI TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS

THE MI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR (GC) INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE MI REPORT TO CROWN.

**GENERAL CONTRACTOR:**  
 THE GC IS REQUIRED TO CONTACT THE MI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE MI INSPECTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS

THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI CHECKLIST.

**RECOMMENDATIONS:**  
 RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING A MI REPORT:

- IT IS SUGGESTED THAT THE GC PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE PRIOR TO THE MI TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
- THE GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
- ANY GUY WIRE TENSIONING OR RE-ENGINEERING OPERATIONS
- IT MAY BE BENEFICIAL TO INSTALL ALL TOWER MODIFICATIONS PRIOR TO CONDUCTING THE FOUNDATION INSPECTIONS TO ALLOW FOUNDATION AND MI INSPECTIONS(S) TO BE CONDUCTED AT THE SAME TIME.
- IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY DEFICIENCIES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC HAS THE OPTION TO COORDINATE WITH THE MI INSPECTOR TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON SITE.

CANCELLATION OR DELAYS IN SCHEDULED MI  
 IF THE GC AND MI INSPECTOR AGREE TO A DATE ON WHICH THE MI WILL BE CONDUCTED, THE GC SHALL BE RESPONSIBLE FOR DELAYS OR CANCELLATIONS. THE GC SHALL BE RESPONSIBLE FOR ANY COSTS INCURRED BY THE MI INSPECTOR DUE TO CANCELLATION OR DELAY INCURRED BY EITHER PARTY FOR ANY TIME (E.G. TRAVEL AND LODGING, COSTS OF KEEPING EQUIPMENT ON-SITE, ETC.). IF TO CONTRACTS DIRECTLY FOR A THIRD PARTY MI, EXCEPTIONS MAY BE MADE IN THE EVENT THAT THE MI INSPECTOR CANNOT ATTEND DUE TO UNUSUAL CIRCUMSTANCES OR OTHER CONDITIONS THAT MAY COMPROMISE THE SAFETY OF THE PARTIES INVOLVED.

**WORKING WITH THE MI INSPECTOR:**  
 THE MI INSPECTOR WOULD FAIL THE MI ("FAILED MI"). THE GC SHALL WORK WITH THE MI INSPECTOR TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:

- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE MI REPORT.
- OR, WITH THE CUSTOMER'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT USING THE AS-BUILT CONDITION TO VERIFY THE MODIFICATION/REINFORCEMENT.

MI VERIFICATION INSPECTIONS  
 TO RESERVE THE RIGHT TO CONDUCT A MI VERIFICATION INSPECTION TO VERIFY THE ACCURACY AND COMPLETENESS OF PREVIOUSLY COMPLETED MI INSPECTIONS(S) ON TOWER MODIFICATION PROJECTS.


ALL VERIFICATION INSPECTIONS SHALL BE HELD TO THE SAME SPECIFICATIONS AND REQUIREMENTS IN THE CONTRACT DOCUMENTS.

VERIFICATION INSPECTIONS MAY BE CONDUCTED BY AN INDEPENDENT ASV FIRM AFTER A MODIFICATION PROJECT IS COMPLETED, AS MARKED BY THE DATE OF AN ACCEPTED "PASSING MI" OR "PASS AS NOTED MI" REPORT FOR THE ORIGINAL PROJECT.

PHOTOS  
 BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND CONSTRUCTION
- FINAL INSTALLED CONDITION
- POST CONSTRUCTION PHOTOGRAPHS
- FINAL INFELD CONDITION

PHOTOS OF ELEVATED MODIFICATIONS TAKEN FROM THE GROUND SHALL BE CONSIDERED IMMEDIATE.

0	11/3/17	WEB	RELEASED FOR JOB USE
No.	Date	By	Revision
			
KOZK 1891-0 GUYED TOWER SPRINGFIELD, MO		Sheet No.: <b>E-10</b> Project No.: <b>17.289.002</b> Drawn By: <b>WEB</b> Checked By: <b>MBB</b> Date: <b>11/3/17</b>	
POST MODIFICATION CHECKLIST			
<small>         TOWER CONSULTANT, INC.          4000 N. 10th St., Suite 200          Omaha, NE 68102-4801          Phone: 402.477.9200          Fax: 402.477.9200          Email: info@towerconsultant.com          www.towerconsultant.com       </small>			