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RECEIVED
12/21/17

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Associate
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1300 Clinton Square
Rochester, NY 14604-1792
585-263-1000

December 20, 2017

VIA FEDERAL EXPRESS

Lynn Day
Town of Lansing
29 Auburn Road
Lansing, New York 14882

RE: Application by Bell Atlantic Mobile Systems of Allentown, Inc. d/b/a Verizon Wireless for Site Plan Review from the Town of Lansing Planning Board to perform an antenna upgrade on an existing wireless telecommunications facility located at 425 Conlon Road, Town of Lansing, New York (Verizon Wireless' "North Lansing" Cell Site)

Dear Ms. Day:

By application dated December 13, 2017 (the "Application"), Bell Atlantic Mobile Systems of Allentown, Inc. d/b/a Verizon Wireless ("Verizon Wireless" or "Applicant") applied to the Town of Lansing (the "Town") for the necessary approvals to perform an antenna upgrade for the above-referenced Project in the Town. Thereafter, the Town's Code Officer requested that structural documentation relating to the third party modifications to be performed on the existing tower be included in the Application.

Accordingly, this booklet shall serve as Verizon Wireless' formal response to the request for additional information and is intended to supplement Verizon Wireless' December 13, 2017 Application.

To that end, the Applicant has enclosed the following exhibits/enclosures in response to the Town's request for additional information (lettered to follow Exhibits A-H submitted previously):

- Exhibit I: Antenna Swap Modification Drawings; and
- Exhibit J: Tower Structural Modification Design Report.

Please do not hesitate to contact me should you have any questions or require additional information.

6037-5491-7209.1



Town of Lansing
December 20, 2017
Page 2

Thank you.

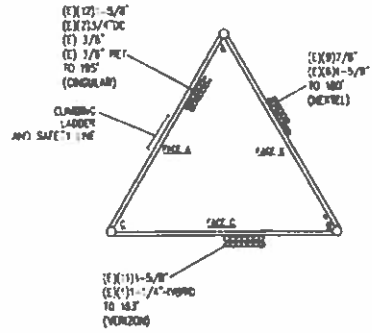
Very truly yours,


Robert J. Brenner

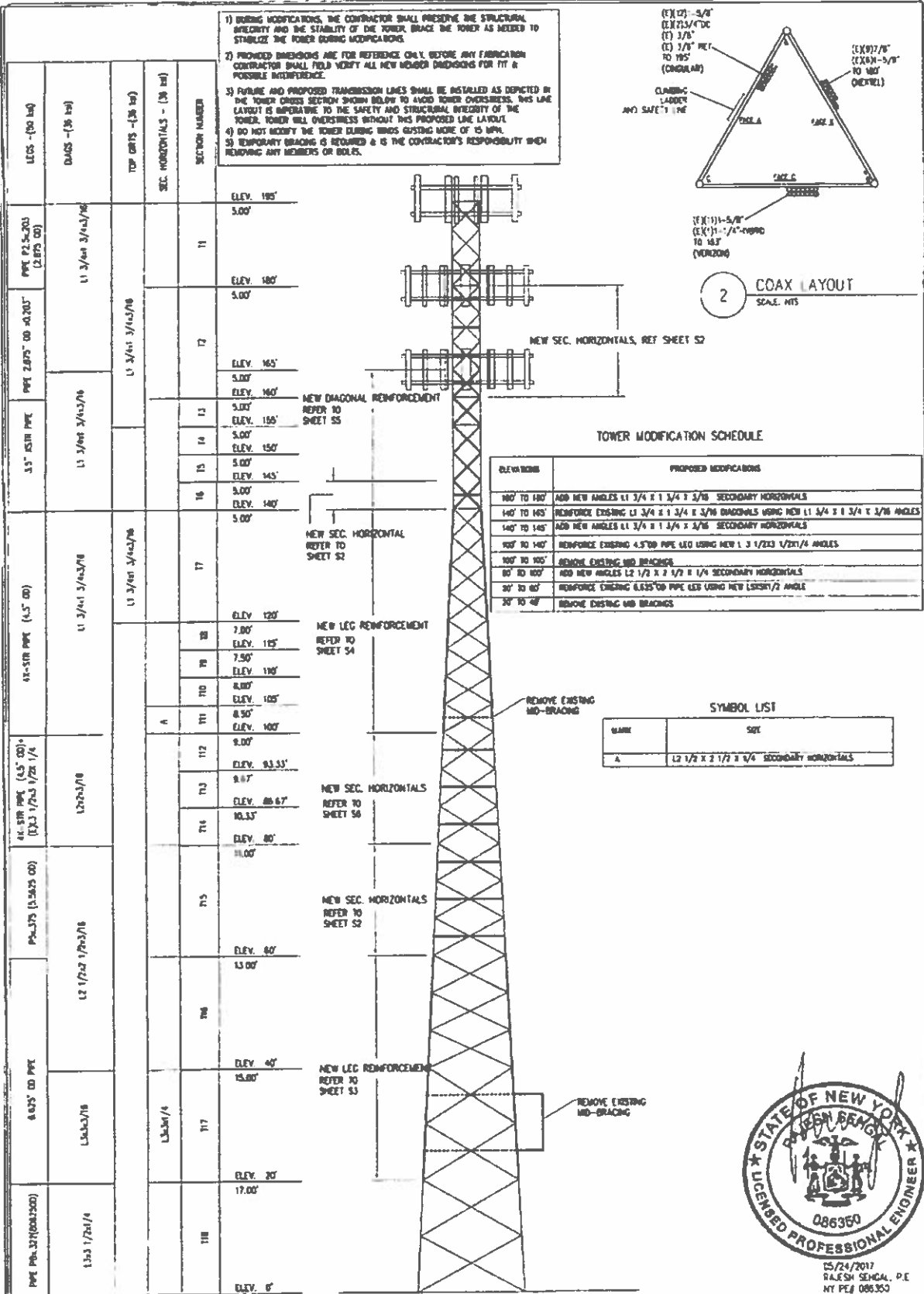
Enclosures
RJB/mg

EXHIBIT I

- 1) DURING MODIFICATIONS, THE CONTRACTOR SHALL PRESCRIBE THE STRUCTURAL SECURITY AND THE STABILITY OF THE TOWER BRACE THE TOWER AS NEEDED TO STABILIZE THE TOWER DURING MODIFICATIONS.
- 2) PROVIDED DIMENSIONS ARE FOR REFERENCE ONLY. BEFORE ANY FABRICATION CONTRACTOR SHALL FIELD VERIFY ALL NEW MEMBER DIMENSIONS FOR FIT & POSSIBLE INTERFERENCE.
- 3) FUTURE AND PROPOSED TRANSMISSION LINES SHALL BE INSTALLED AS DEPICTED IN THE TOWER CROSS SECTION SHOWN BELOW TO AVOID TOWER OVERSTRESS. THIS LINE LAYOUT IS ESSENTIAL TO THE SAFETY AND STRUCTURAL INTEGRITY OF THE TOWER. TOWER WILL OVERSTRESS WITHOUT THIS PROPOSED LINE LAYOUT.
- 4) DO NOT MODIFY THE TOWER CLIMBING RINGS EXISTING MORE OF 15 MPH.
- 5) TEMPORARY BRACING IS REQUIRED & IS THE CONTRACTOR'S RESPONSIBILITY WHEN REMOVING ANY MEMBERS OR BOLES.



2 COAX LAYOUT
SCALE: NTS



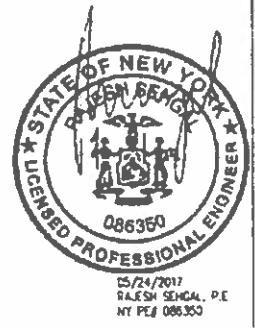
TOWER MODIFICATION SCHEDULE

ELEVATIONS	PROPOSED MODIFICATIONS
140' TO 145'	ADD NEW ANGLES L1 3/4 X 1 3/4 X 3/8 SECONDARY HORIZONTALS
140' TO 145'	REINFORCE EXISTING L1 3/4 X 1 3/4 X 3/8 DIAGONALS USING NEW L1 3/4 X 1 3/4 X 3/8 ANGLES
140' TO 145'	ADD NEW ANGLES L1 3/4 X 1 3/4 X 3/8 SECONDARY HORIZONTALS
100' TO 140'	REINFORCE EXISTING 4.5\"/>

SYMBOL LIST

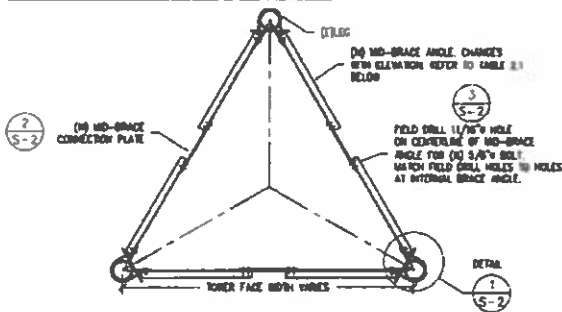
NAME	SIZE
A	L2 1/2 X 2 1/2 X 3/4 SECONDARY HORIZONTALS

1 TOWER ELEVATION
SCALE: NTS

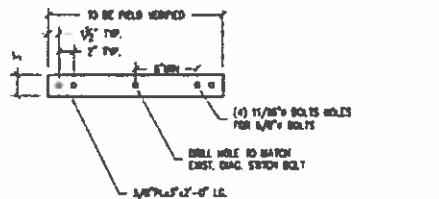


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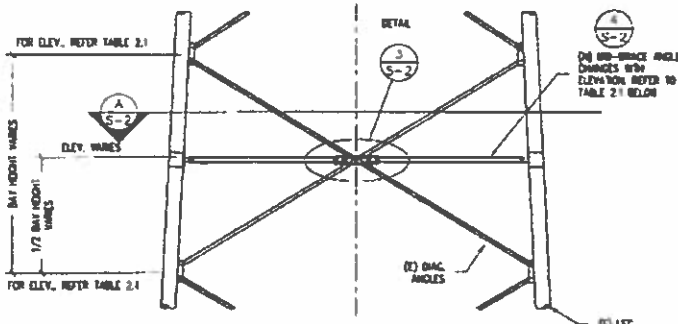
ADD JOB: 17-2120 SHEET S1 OF 8	DRAWN BY: MP CHECK BY: MP APP'D BY: RS	THE DESCRIPTION: NY13341-A-03 LANSING NORTH LANSING, NY CLIENT: SBA COMMUNICATIONS	<table border="1"> <thead> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>5/24/2017</td> <td>TOWER MODIF.</td> <td>MP</td> </tr> </tbody> </table>	REV	DATE	DESCRIPTION	BY	0	5/24/2017	TOWER MODIF.	MP	 ALLPRO CONSULTING GROUP, INC. 127 Laramie St., Albany, New York 12242-1174 Phone: 518-486-1800 Fax: 518-486-1873 www.allpro.com
REV	DATE	DESCRIPTION	BY									
0	5/24/2017	TOWER MODIF.	MP									



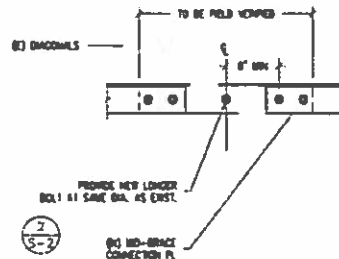
(A) TYPICAL SECTION - N-W MID BRACING
SCALE: N.T.S.



(2) NEW MID BRACE CONNECTION PLATE DETAIL
SCALE: N.T.S.

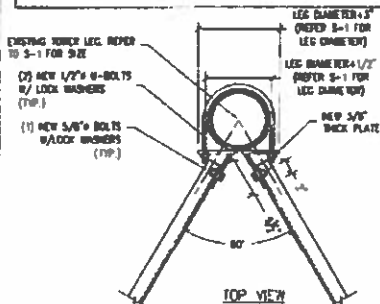


(B) TYPICAL ELEVATION - NEW MID BRACING
SCALE: N.T.S.



(3) CONNECTION DETAIL
SCALE: N.T.S.

ALL LENGTHS & DIMENSIONS TO BE VERIFIED PRIOR TO ANY FABRICATION



(1) NEW LEG BRACKET DETAIL
SCALE: N.T.S.

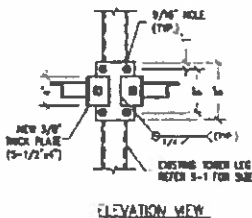
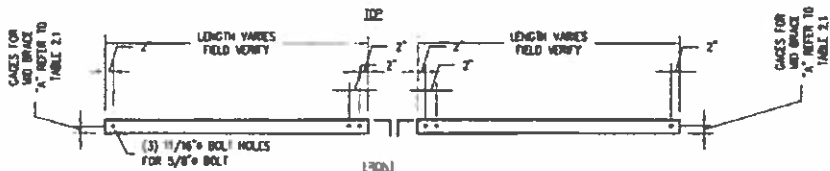


TABLE 2.1 - NEW MID BRACE SCHEDULE

ELEV.	(1) DIMENSION	(2) LEG PIPE	(3) MID BRACE 1" x 2"
100'-100'	L1 3/4" x 1 3/4" x 3/16"	P 2.875 OD ± 0.280" W	L1 3/4" x 1 3/4" x 3/16" 3/4"
80'-80'	L2 1/2" x 1 1/2" x 3/16"	P 2.500" OD ± .370" W	L2 1/2" x 1 1/2" x 3/16" 1 1/2"

NOTE: - FIELD VERIFY FACE WIDTH PRIOR TO FABRICATION.
ALL MID BRACE STEEL GRADE S 55 K12.



(4) NEW INTERNAL BRACE ANGLE DETAIL
SCALE: N.T.S.



05/24/2017
RAJESH SENEGAL, P.E.
NY P.E.# 086350

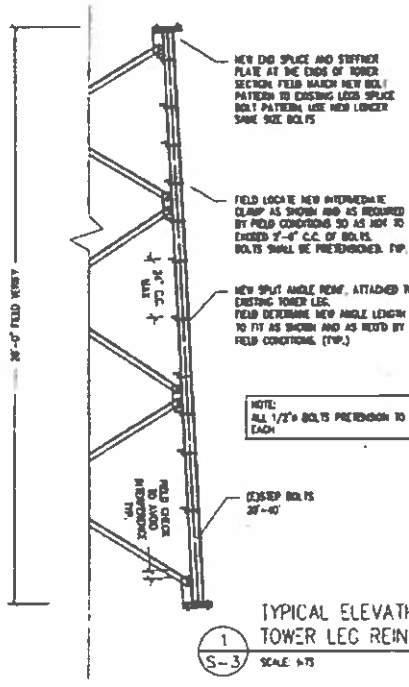
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ACO JOB: 17-2120	DRAWN BY: MP
SHEET: S-2	DATE BY: MP
OF 8	APP'D BY: RS

SITE DESCRIPTION: NY13341-A-03 LANSING NORTH LANSING, NY
CLIENT: SBA COMMUNICATIONS

REV	DATE	DESCRIPTION	BY
0	5/24/2017	TOWER MODIF	MP





1
S-3
TYPICAL ELEVATION
TOWER LEG REINFORCEMENT
SCALE: NTS

TABLE 3.1 - LEG REINFORCEMENT SCHEDULE TABLE

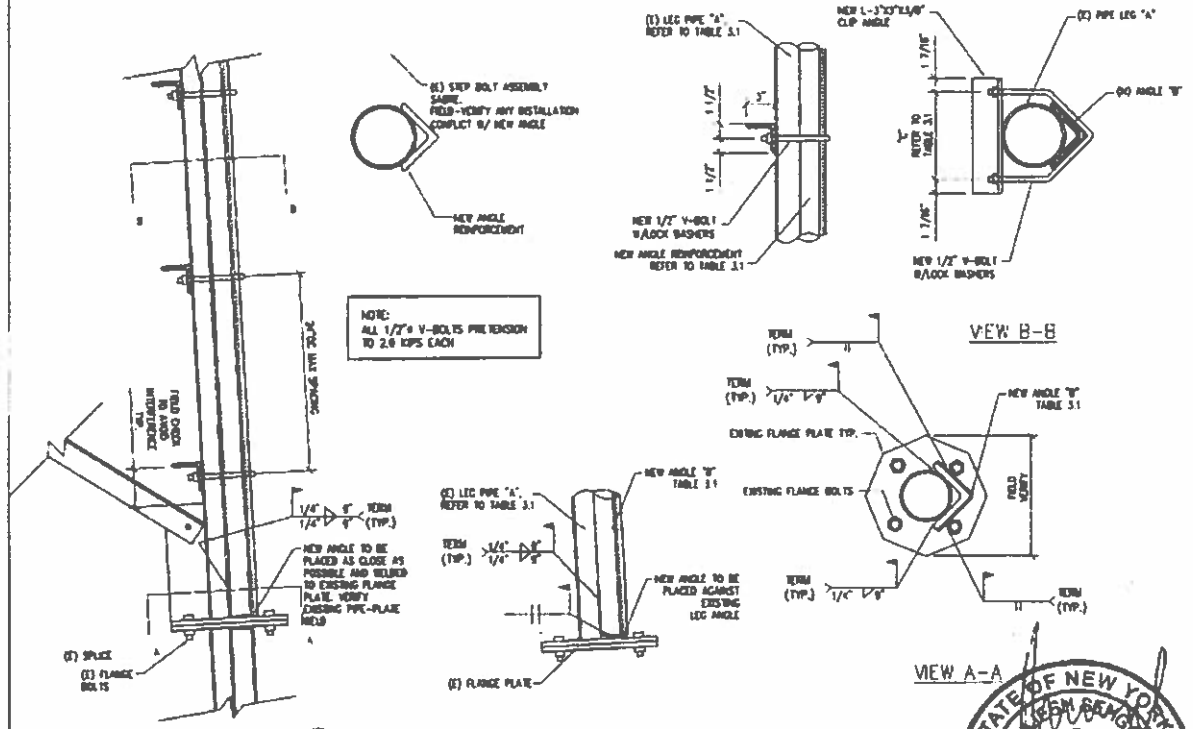
ELEV	EXISTING LEG PIPE SIZE "A"	NEW ANGLE REINFORCEMENT "B"	C"	END CONNECTIONS	
				TOP	BOTTOM
20' TO 60'	0.625" OD x 20' W	1.5x4x1/2 (Fy=60 ksi)	9.0"	DETAIL 1-S3 & 2-S3	DETAIL 1-S3 & 2-S3
TOTAL: 1 SECTION					

PROVIDED DIMENSIONS ARE FOR REFERENCE ONLY. BEFORE ANY FABRICATION CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS FOR FIT & POSSIBLE IMPORTANCE.

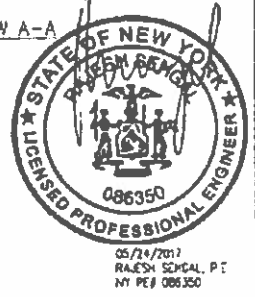
** WELD NEW ANGLE TO EXISTING LEG BASE PLATE

WHEN WELDING, EXTRA CAUTION MUST BE GIVEN TO THE POSSIBILITY OF A FIRE HAZARD. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE FIRE PROTECTION DURING WELDING. ONLY A CONTRACTOR EXPERIENCED IN SIMILAR WORK SHALL PERFORM THE RECOMMENDED MODIFICATIONS. CONTRACTOR TO PROVIDE FIRE PROTECTION TO ALL EXISTING COLE & COORDINATE EMERGENCY FIRE PROTECTION PLAN. DO NOT MODIFY THE TOWER BURSTING BRIDS OF MORE THAN 15 MPH. TEMPORARY BRACING IS REQUIRED AND IS THE CONTRACTOR'S RESPONSIBILITY WHEN REMOVING ANY MEMBERS, BOLT OR CARRYING OUT ANY OTHER MODIFICATIONS TO THE TOWER.

DURING FIELD WELDING, EXTRA CAUTION MUST BE GIVEN TO THE POSSIBILITY OF A FIRE HAZARD. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE FIRE PROTECTION DURING WELDING. ONLY A CONTRACTOR EXPERIENCED IN SIMILAR WORK SHALL PERFORM THE RECOMMENDED MODIFICATIONS.



2
S-3
LEG REINFORCEMENT DETAILS
SCALE: NTS



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NO. AND SHEET	17-2120 S3 8
DRAWN BY	MP
CHKD. BY	MP
APP'D BY	RS

PROJECT DESCRIPTION	NY13341-A-03 LANSING NORTH LANSING, NY
CLIENT	SBA COMMUNICATIONS

REV	DATE	DESCRIPTION	BY
0	5/24/2017	TOWER MODIF.	MP

ALLPRO
CONSULTING GROUP, INC.
100 LYNCH ST., SUITE 200, TOWSON, MD 21286, PA 1900
Phone: 410-288-4888 Fax: 410-288-4889
www.allproinc.com

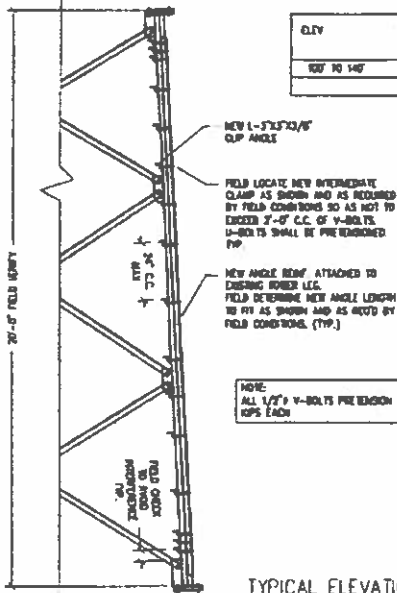
TABLE 4.1 - LEG REINFORCEMENT SCHEDULE TABLE

CLV	EXISTING LEG PIPE SIZE "A"	NEW ANGLE REINFORCEMENT "B"	C	END CONNECTIONS	
				TOP	BOTTOM
100 TO 140'	4" Ø 3 0.337" Ø	(L35" x 3 1/2" x 1/4" x 20#)	5.5"	DETAIL 1-84 & 2-84	DETAIL 1-84 & 2-84

TOTAL 1 SECTION

PROVIDED DIMENSIONS ARE FOR REFERENCE ONLY. BEFORE ANY FABRICATION CONTRACTOR SHALL VERIFY ALL DIMENSIONS FOR FIT & POSSIBLE INTERFERENCE.

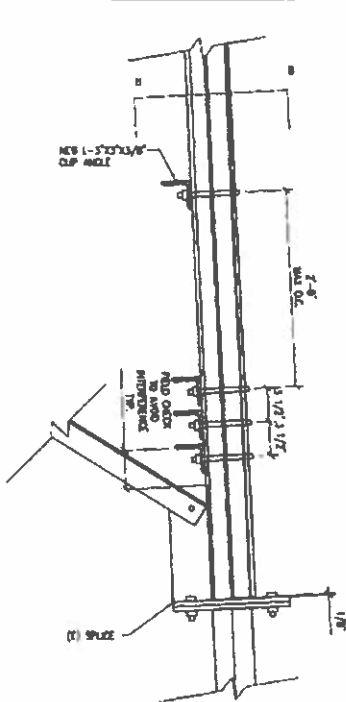
WHEN WELDING, EXTRA CAUTION MUST BE GIVEN TO THE POSSIBILITY OF A FIRE HAZARD. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE PROTECTION DURING WELDING. ONLY A CONTRACTOR EXPERIENCED IN THIS WORK SHALL PERFORM THE RECOMMENDED WELDING. CONTRACTOR TO PROVIDE FIRE PROTECTION TO ALL EXISTING COATS & COORDINATE ELECTRICAL FIRE PROTECTION PLAN.
DO NOT MODIFY THE SPACER DURING WINDS OF MORE THAN 15 MPH. TEMPORARY BRACING IS REQUIRED AND IS THE CONTRACTOR'S RESPONSIBILITY WHEN REMOVING ANY MEMBER, BOLT OR CARrying OUT ANY OTHER MODIFICATIONS TO THE TOWER.



1 TYPICAL ELEVATION TOWER LEG REINFORCEMENT
SCALE: NTS

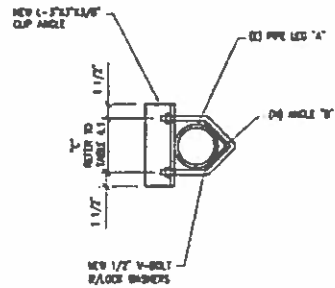
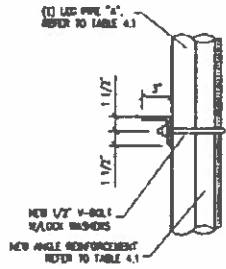
NOTE:
ALL 1/2" V-BOLTS PRE TENSION TO 2.0 KIPS EACH

NOTE:
ALL 1/2" V-BOLTS PRE TENSION TO 2.0 KIPS EACH



2 LEG REINFORCEMENT DETAILS
SCALE: NTS

NOTE:
ALL 1/2" V-BOLTS PRE TENSION TO 2.0 KIPS EACH



VIEW 9-3



05/24/2017
RAJESH SENGAL, P.E.
NY PE# 086350

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ADD JOB: 17-2120
SHEET: S4
OF: 8

DRAWN BY: MP
CHECKED BY: MP
APPROVED BY: RS

PROJECT DESCRIPTION: NY13341-A-03 LANSING NORTH
LANSING, NY
CLIENT: SBA COMMUNICATIONS

REV	DATE	DESCRIPTION	BY
0	5/24/2017	TOWER MODIF.	MP



DURING MODIFICATIONS, THE CONTRACTOR SHALL PRESERVE THE STRUCTURAL INTEGRITY AND THE STABILITY OF THE TOWER. BRACE THE TOWER AS NEEDED TO STABILIZE THE TOWER DURING MODIFICATION.

PROVIDED DIMENSIONS ARE FOR REFERENCE ONLY BEFORE ANY FABRICATION CONTRACTOR SHALL FIELD VERIFY ALL NEW MEMBER DIMENSIONS FOR FIT & POSSIBLE INTERFERENCE.

DO NOT MODIFY THE TOWER DURING WINDS OF MORE THAN 15 MPH.

TEMPORARY BRACING IS REQUIRED AND IS THE CONTRACTOR'S RESPONSIBILITY WHEN REMOVING ANY MEMBERS, BOLT OR CARRYING OUT ANY OTHER MODIFICATIONS TO THE TOWER. INSTALL MODIFICATION ONE MEMBER AT A TIME. CUTTING AND TRIMMING OF TOWER'S MEMBER IS NOT ALLOWED UNLESS NOTED OTHERWISE.

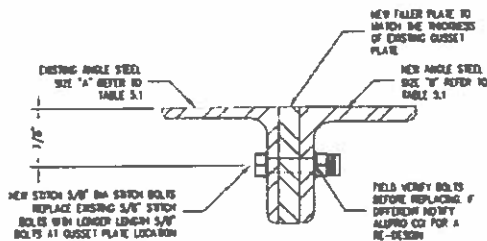
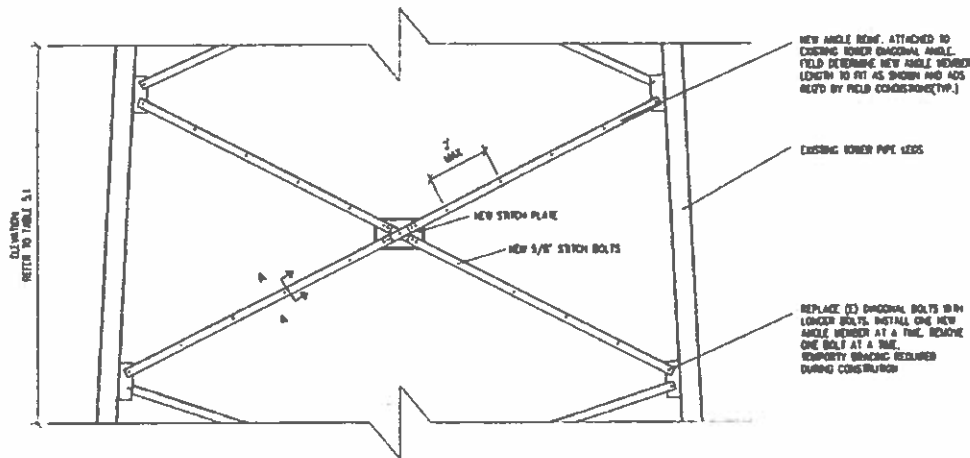
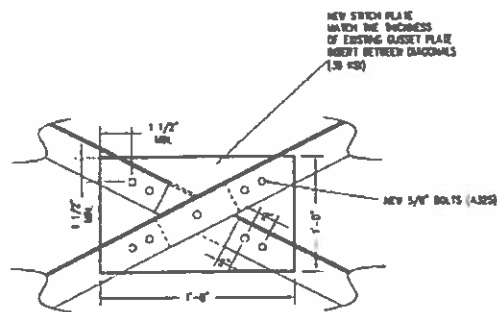


TABLE 5.1-DIAGONAL REINFORCEMENT SCHEDULE TABLE

ELEV	EXISTING DIAGONAL ANGLE SIZE "A"	NEW DIAGONAL ANGLE SIZE "B"	GRADE
160' TO 165'	L1 3/4x1 3/4x3/16	L1 3/4x1 3/4x3/16	A36 (36KSI)
140' TO 160'	L1 3/4x1 3/4x3/16	L1 3/4x1 3/4x3/16	



1 DIAGONAL MODIFICATION
S-5 SCALE: NTS



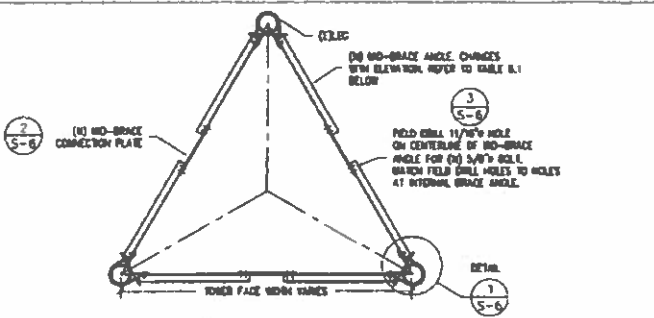
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NY PE# 086350

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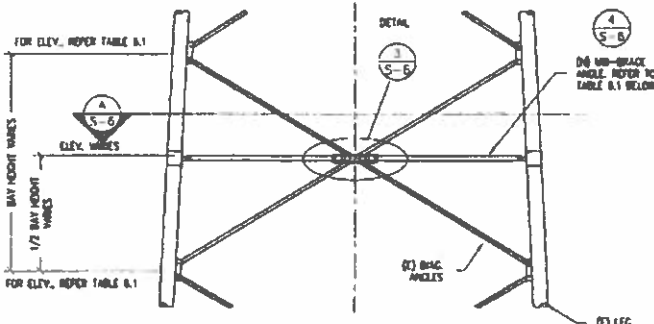
ADD. SHEET	17-2120
DRAWN BY	MP
CHECKED BY	MP
APP'D BY	RS
SHEET	55
OF	8

SITE DESCRIPTION	NY13341-A-03 LANSING NORTH LANSING, NY
CLIENT	SBA COMMUNICATIONS

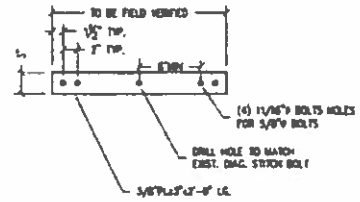
REV	DATE	DESCRIPTION	BY
0	5/24/2017	TOWER MODIF.	MP



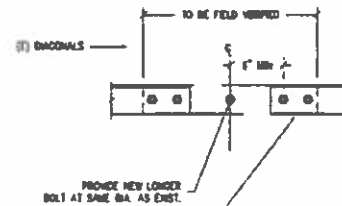
(A) TYPICAL SECTION - NEW MID BRACING
SCALE: N.T.S.



(B) TYPICAL ELEVATION - NEW MID BRACING
SCALE: N.T.S.



(2) NEW MID BRACE CONNECTION PLATE DETAIL
SCALE: N.T.S.



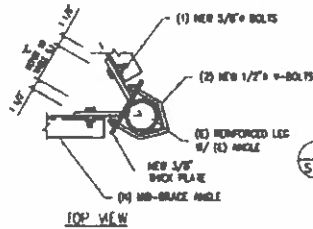
(3) CONNECTION DETAIL
SCALE: N.T.S.

ALL LENGTHS & DIMENSIONS TO BE VERIFIED PRIOR TO ANY FABRICATION

TABLE 6.1 - NEW MID BRACE SCHEDULE

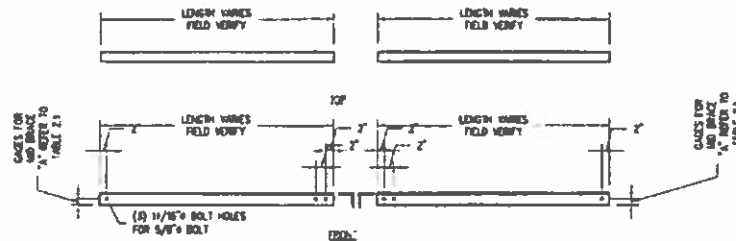
ELEV.	(1) DIAGONALS	(2) LEGS	(3) MID BRACE
007-107	1/2x3/8	2x4.5\"/>	

NOTE - FIELD VERIFY FACE DIMS PRIOR TO FABRICATION
ALL MID BRACE STEEL GRADE IS 50 KSI.



(1) NEW MID-BRACE ANGLE DETAIL
SCALE: N.T.S.
@ 80' - 0" - 100' - 0"

(1) NEW LEG BRACKET DETAIL
SCALE: N.T.S.



(4) NEW INTERNAL BRACE ANGLE DETAIL
SCALE: N.T.S.



05/24/2017
RAKESH SENCHAL, P.E.
NY P.E.# 086350

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SHEET	S-6
OF	8

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PROJECT DESCRIPTION:
NY13341-A-03 LANSING NORTH
LANSING, NY

CLIENT:
SBA COMMUNICATIONS

REV	DATE	DESCRIPTION	BY
0	5/24/2017	TOWER MODIF.	MP



GENERAL AND TECHNICAL SPECIFICATION NOTES

1. PROPOSED MODIFICATIONS COMPLY WITH ANSI/TIA/EIA-222-G, FOR 89 MPH NOMINAL WIND SPEED 40 MPH WIND WITH 0.75" ICE. THE TOWER IS ASSUMED TO BE IN GOOD CONDITION AND PROPERLY MAINTAINED.
2. EXISTING TOWER DATA AS PER:
 - 2.1 ORIGINAL TOWER DRAWINGS BY SABRE COMMUNICATIONS . JOB # 05-01047, DATED 05/05/2006
 - 2.2 TOWER MODIFICATIONS BY FDM ENGINEERING, INC., . JOB # 12-10A68E S2, DATED 04/12/2013
 - 2.3 TOWER MODIFICATIONS BY FDM ENGINEERING, INC., . JOB # 11-02009E S1, DATED 02/25/2011
3. ALL MODIFICATION FABRICATION AND INSTALLATION SHOULD BE DONE BY A CONTRACTOR EXPERIENCED IN SIMILAR WORK.
4. CONTRACTOR SHALL OBSERVE ALL OSHA AND OTHER APPLICABLE SAFETY GUIDELINES DURING
5. ALL FABRICATION AND INSTALLATION PROCEDURES AND SITE SAFETY ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR
6. DURING INSTALLING THE MODIFICATION, THE CONTRACTOR SHALL PRESERVE THE STRUCTURAL INTEGRITY AND STABILITY OF THE TOWER. BRACE THE TOWER AS NEEDED TO STABILIZE THE TOWER
7. CONTRACTOR SHALL OBSERVE ALL WEATHER CONDITIONS. DO NOT MODIFY THE TOWER DURING WINDS OF MORE THAN 15 MPH.
8. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND FIT BEFORE FABRICATION.
9. MODIFICATION DRAWINGS DO NOT INCLUDE ALL THE EXISTING FIELD CONDITIONS, SOME OF WHICH MAY INTERFERE WITH THE INSTALLATION. CONTRACTOR SHALL CONDUCT A FIELD SURVEY TO IDENTIFY ANY POTENTIAL DIFFICULTIES IN THE INSTALLATION BEFORE WORK COMMENCES. CONTACT THE ENGINEER IF THE FIELD CONDITIONS REQUIRE ANY CHANGES IN THE MODIFICATION.
10. CONTRACTOR MAY HAVE TO MOVE EXISTING TRANSMISSION LINES AND OTHER OBSTRUCTIONS TO ADD THE MODIFICATION. COORDINATE ALL SUCH PROCEDURES WITH THE TOWER OWNER.
11. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL LICENSES, PERMITS AND ANY OTHER APPROVALS REQUIRED FOR CONSTRUCTION.
12. PAINT THE NEW MEMBERS TO MATCH THE EXISTING TOWER. ALL WELDED SURFACES NEED TO BE FIELD GALVANIZED OR RUST PROOFED AND PAINTED TO PREVENT FUTURE CORROSION.
13. ALL STEEL PLATES AND OTHER MISCELLANEOUS MEMBERS SHALL MEET ASTM A36 STEEL SPECIFICATIONS, 36 KSI MIN. YIELD STRENGTH.
14. ALL STEEL SHALL BE HOT DIPPED GALVANIZED AS PER ASTM A123 SPECIFICATIONS.
15. ALL STEEL HARDWARE SHALL BE HOT DIPPED GALVANIZED AS PER ASTM A153
16. ALL FINISHED BOLT HOLES SHALL NOT BE MORE THAN 1/16 INCH LARGER THAN THE BOLT DIAMETER UNLESS NOTED OTHERWISE.
17. ALL BOLTS SHALL BE TIGHTENED USING TURN-OF-THE-NUT METHOD.
18. ALL BOLT HOLES EDGE DISTANCES SHALL BE 1 INCH UNLESS OTHERWISE NOTED.
19. FOR ACCURATE FIT OF THE NEW MEMBERS SOME FIELD PUNCHING MAY BE REQUIRED IF GALVANIZING IS REMOVED, RE-COAT WITH TWO COATS OF GAL-COAT OR EQUIVALENT COATING.
20. DO NOT HEAT STRUCTURAL MATERIAL FOR STRAIGHTENING BENT OR WARPED MEMBERS.
21. CLEAN THE SITE OF ALL DEBRIS UPON COMPLETION OF THE WORK. STORE ALL SURPLUS MATERIALS NEATLY IN AN AREA APPROVED BY THE OWNER.
22. CONTRACTOR SHALL PROVIDE FIRE PROTECTION BEFORE FIELD WELDING.
23. ALL BOLTS SHALL BE DOMESTIC, NEW 5/8 INCH DIAMETER HIGH STRENGTH GALVANIZED BOLTS, BEARING 110% 'X', UNLESS NOTED OTHERWISE IN THE DRAWINGS AND SHALL CONFORM TO ASTM A325 SPECIFICATIONS. USE ANCO LOCKNUTS & FLAT WASHERS ON ALL BOLTS.
24. ANY FIELD CUTS MUST BE THOROUGHLY CLEANED AND OCHURF COATED.



05/24/2017
 RA KESH SENEGAL, P.E.
 NY REG # 088350

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ACQ. JOB #	17-2120
PROJECT	S7
OFFICE	8

DESIGN BY	MP
CHECK BY	MP
APP'D. BY	RS

SITE DESCRIPTION	NY13341-A-03 LANSING NORTH
	LANSING, NY
CLIENT	SBA COMMUNICATIONS

REV	DATE	DESCRIPTION	BY
0	5/24/2017	TOWER MOD.	MP



MODIFICATION INSPECTION NOTES:

GENERAL

THE MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF TOWER MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

THE MI IS TO CONFIRM INSTALLATION COMPLETION 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 REMAINS WITH THE EOR AT ALL TIMES.

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 AS SOON AS A PO IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. CONTACT INFORMATION IS NOT GIVEN, CONTACT ALLPRO CONSULTING GROUP, INC.

MI INSPECTOR

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 ALLPRO GC.

GENERAL CONTRACTOR

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

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

THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH MI REQUIREMENTS OF THE MI CHECKLIST AND AS/TA-222 CODE

RECOMMENDATIONS

THE FOLLOWING 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 3 BUSINESS DAYS NOTICE, PREVIOUSLY TO, 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
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE SIMULTANEOUSLY FOR ANY ON-SITE REINFORCING OR RE-ANCHORING OPERATIONS
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY DEFICIENCIES CORRECTED DURING THE MI. THEREFORE THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY 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, AND EITHER PARTY CANCELS OR DELAYS BEFORE GC SHALL NOT BE RESPONSIBLE FOR ANY COSTS, LIES, LOSS OF DEPOSITS AND/OR OTHER PENALTIES RELATED TO THE CANCELLATION OR DELAY INCURRED BY EITHER PARTY FOR ANY TIME (E.G. TRAVEL AND LOADING, COSTS OF SETTING EQUIPMENT ON-SITE, ETC.).

CORRECTION OF FAILING MIPs

IF THE MODIFICATION INSTALLATION WOULD FAIL THE MI (FAILED MIP) THE GC SHALL WORK WITH MODIFICATION INSPECTION TO COORDINATE A REINFORCEMENT PLAN IN ONE OF TWO WAYS:

- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENTAL MI.
- OR, WITH TOWER OWNER'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT USING THE AS-BUILT CONDITION.

MI VERIFICATION INSPECTIONS

TOWER'S OWNER RESERVES THE RIGHT TO CONDUCT A MI VERIFICATION INSPECTION TO VERIFY THE ACCURACY AND COMPLETENESS OF PREVIOUSLY COMPLETED MI INSPECTIONS ON TOWER MODIFICATION PROJECTS.

ALL VERIFICATION INSPECTIONS SHALL BE HELD TO THE SAME SPECIFICATIONS AND REQUIREMENTS BY THE CONTRACT DOCUMENTS AND IN ACCORDANCE WITH AS/TA-222 CODE.

VERIFICATION INSPECTION MAY BE CONDUCTED BY AN INDEPENDENT ADV/AS/SH 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.

REQUIRED 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 INSPECTION
 - RAW MATERIALS
 - PHOTOS OF ALL CRITICAL DETAILS
 - FOUNDATION MODIFICATIONS
 - WELD PREPARATION
 - BOLT INSTALLATION AND TORQUE
 - FINAL INSTALLED CONDITION
 - SURFACE COATING REPAIR
- POST CONSTRUCTION PHOTOGRAPHS
- FINAL IN-FIELD CONDITION

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

MODIFICATION INSPECTION CHECKLIST	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED	REPORT ITEM
PRE-CONSTRUCTION	
X	MI CHECKLIST DRAWING
N/A	EOR APPROVED SHOP DRAWING
N/A	FABRICATION INSPECTION
X	FABRICATOR CERTIFIED WELD INSPECTION
X	WELDING TEST REPORT
N/A	FABRICATOR NDE INSPECTION
N/A	NDE REPORT OF WINDPOLE GASKET PLATE (AS REQUIRED)
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH AND SLUMP TESTS
N/A	POST INSTALLED ANCHOR ROD VERIFICATION
N/A	BASE PLATE BOLT VERIFICATION
N/A	CONTRACTOR'S CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
X	ON-SITE COOLD CALIBRATING VERIFICATION
N/A	OLY WIRE TENSION REPORT
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	MI INSPECTOR REDLINE OR RECORD DRAWINGS
N/A	POST INSTALLED ANCHOR ROD PULL OUT TESTING
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	



05/24/2017
 RAJESH SENCHAL, P.E.
 NY PE # 086350

ALL DRAWINGS AND WRITTEN MATERIALS CONTAINED HEREIN ARE THE PROPERTY OF ALLPRO CONSULTING GROUP, INC. AND MAY NOT BE DUPLICATED, USED OR REPRODUCED.

ADD. JOB NO. 17-2120	DRAWN BY: MP
SHEET S8	DATE BY: MP
OF 8	APP'D BY: RS

SITE DESCRIPTION NY13341-A-03 LANSING NORTH
LANSING, NY
CLIENT SBA COMMUNICATIONS

REV	DATE	DESCRIPTION	BY
0	5/24/2017	TOWER MODIF.	MP



EXHIBIT J



CONSULTING GROUP, INC

9221 Lyndon B. Johnson Freeway, #204, Dallas, TX 75243 * PHONE 972-231-8893 * FAX 1-866-364-8375
www.allprocgi.com * e-mail: info@allprocgi.com

**Tower Structural Modification Design Report for
SBA Network Services, Inc.**



Existing 195' Modified Self Support Tower

SBA Site Name: North Lansing

SBA Site ID: NY13341-A-03

Carrier Name: Verizon

Carrier Site Name: 250781/ Lansing North

App ID: 52946, v2

Site Location: 425 Conlon Road

Lansing, NY 14882

Latitude: 42.564675

Longitude: -76.512825

ACGI Job # 17-2120

Previous ACGI Job # 17-0975

ANALYSIS RESULTS		
Tower Components	101.4%	Acceptable
Tower Foundation	104.6%	Acceptable
Net Change in Tower Stress	-40.2%	From previous structural analysis by Allpro Consulting Group, Inc ACGI # 17-0975 dated 05/24/2017.

Prepared By:
Moises Perez, EIT
Staff Engineer



05/24/2017

Approved By:
Rajesh Sehgal, P.E.
NY PE # 086350

TABLE OF CONTENTS

ANALYSIS SUMMARY 3

SCOPE & SOURCE OF INFORMATION..... 3

 SOURCE OF INFORMATION..... 3

ANALYSIS METHODS & DATA..... 5

 SITE DATA 5

 TOWER DATA 5

 TOWER HISTORY 5

CONCLUSIONS..... 6

 RESULT SUMMARY 6

ASSUMPTIONS 7

RECOMMENDATIONS 7

DISCLAIMER..... 8

APPURTENANCE LISTING 9

 EXISTING LOAD DESCRIPTION 9

 FINAL VERIZON LOAD DESCRIPTION 9

SUMMARY OF WORKING PERCENTAGE OF STRUCTURAL COMPONENTS 10



1. ANALYSIS SUMMARY

The existing 195' Self Support Tower located in Lansing, New York was analyzed by Allpro Consulting Group, Inc. (ACGI) for proposed Verizon antennas, radios and coaxes as authorized by SBA Communication Corp. Based on the results of the analysis, the existing tower with below mentioned proposed and existing loading is found to be acceptable and in compliance with TIA-222-G-Addendum 2, Structural Standards for Steel Antenna Towers and Antenna Supporting Structures and 2015 New York State Building Code (IBC 2015) after the installation of the proposed modifications.

2. SCOPE & SOURCE OF INFORMATION

The purpose of this structural analysis is to determine whether the existing structure is capable of supporting additional proposed loads.

SOURCE OF INFORMATION		
Tower Data:	Sabre Communication Corp.	Original Tower Design Drawings by Sabre Communication Corp. Job # 05-01047, dated 05/05/2006
	FDH Engineering, Inc.	Previous structural analysis by FDH Engineering, Inc. Project Number: 15BCBM1400 (R1) dated 01/29/2015.
	FDH Engineering, Inc.	Previous Modification Design by FDH Engineering, Inc. , Job # 12-10A68E S2, dated 04/12/2013
		Previous Modification Design by FDH Engineering, Inc. , Job # 11-02009E S1, dated 02/25/2011.
Allpro Consulting Group, Inc.	Previous structural analysis by Allpro Consulting Group, Inc ACGI # 17-0975 dated 05/24/2017.	
Foundation Data:	Sabre Communication Corp.	Original Tower Design Drawings by Sabre Communication Corp. Job # 05-01047, dated 05/05/2006
Soil Data:	Tierney Geotechnical Engineering	Geotechnical Investigation prepared by Tierney Geotechnical Engineering TGE 04.067, dated 11/18/2004.



<p>Loading Data:</p>	<p>FDH Engineering, Inc.</p> <p>Allpro Consulting Group, Inc.</p> <p>sbsite.com</p>	<p>Previous structural analysis by FDH Engineering, Inc. Project Number: 15BCBM1400 (R1) dated 01/29/2015.</p> <p>Previous structural analysis by Allpro Consulting Group, Inc ACGI # 17-0975 dated 05/24/2017.</p> <p>Existing loading as per Site Summary Report by SBA dated 08/26/2016.</p> <p>Proposed final loading for Verizon as per sbsite.com, Application # 52946, v2</p>
<p>Authorization:</p>	<p>SBA Communication Corp.</p>	

3. ANALYSIS METHODS & DATA

The analysis was performed in accordance with Telecommunication Industry Association specification TIA-222-G-Addendum 2. The tower was modeled using TNX Tower, a 3-D finite element program. TNX Tower is a general-purpose modeling, analysis, and design program created specifically for communication towers using the EIA-222-C, EIA-222-D, TIA/EIA-222-F or TIA -222-G standards. The 3-D model included the tower, with existing appurtenances and all proposed loads.

SITE DATA	
SBA Site Name:	North Lansing
SBA Site Number:	NY13341-A-03
Carrier Site Name:	250781 / Lansing North
City, State:	Lansing, NY
County:	Tompkins
Code Wind Load Requirement:	TIA-222-G (89mph nominal wind speed) & 2015 New York State Building Code (IBC 2015)
Wind Load Used:	TIA-222-G Code: <ul style="list-style-type: none"> • Nominal wind speed of 89 mph (3 second gust wind speed) • Structure Class II. • Exposure Category C. • Topographic Category 1. • Crest Height 0.00 ft. • A wind speed of 40 mph is used in combination with ice. • Nominal ice thickness of 0.75 in.
Seismic Check:	$S_s=0.128 < 1.0$, thus seismic loading can be ignored as per 2.7.3 of the TIA-222-G Code

TOWER DATA	
Tower Type:	3 Sided Self Supported Tower
Height:	195'
Cross Section:	Triangular
Steel Strength:	Legs – 50 ksi, Bracing/36 ksi
Type of Foundation:	Individual spread Footing w/ modifications

TOWER HISTORY	
Tower Manufacturer / Model:	Sabre Communications
Date of Original Design:	05/05/2006
Previous Modifications:	FDH Engineering, Inc. , Job # 11-02009E S1, dated 02/25/2011 + Job # 12-10A68E S2, dated 04/12/2013
Original Design Code Reqs:	TIA-222-F with 70 mph Basic Wind Speed and 0.5" ice.

4. CONCLUSIONS

RESULT SUMMARY			
MEMBER	% Capacity	Pass/Fail	
Leg	101.4 %	Acceptable	
Diagonal	100.3 %	Acceptable	
Sec. Horizontal	45.5 %	Pass	
Girt	27.4 %	Pass	
Bolt Check	89.0 %	Failed	
Foundation Capacity (see attached MATHCAD sheet for details)	Overturning	17.8 %	Pass
	Bearing	5.0%	Pass
	Shear	16.0%	Pass
	Uplift	96.2%	Pass
Anchor Bolts	104.6%	Acceptable	
OVERALL TOWER RATING= 104.6 % (Acceptable)			

As per the results of the analysis, the existing tower is acceptable and in code compliance for the new and existing antenna loads after the installation of the proposed modification.

Maximum tower member stress is more than allowable but within 105%, making it acceptable under the EIA/TIA-222-G code and 2015 International Building Code (IBC 2015) requirements.

5. ASSUMPTIONS

This analysis was completed based on the following assumptions:

- Tower has been properly maintained
- Tower erection was in accordance to manufacturer drawings
- Leg flanges have been properly designed by manufacturer to not be a limiting reaction
- Welds have been properly designed and installed by manufacturer to not be a limiting reaction
- Foundation was constructed in accordance to manufacturer drawings
- Foundation does not have structural damage
- Bolts have been properly tightened according to manufacturer specifications

- Appurtenance, mount and transmission line sizes and weights are best estimates using the tnxTower database and manufacturer information

6. RECOMMENDATIONS

The existing tower is recommended for the final loading listed on page number 8 after installing proposed modification.

Modification Summary:

- 1) 20'-40' Remove existing mid-bracings.
- 2) 20'-60' Reinforce existing 6.625"OD pipe leg using New L 5X5X1/2.
- 3) 100'-60' Add new L2 1/2 X 2 1/2 X 1/4 Secondary Horizontals.
- 4) 100'-105' Remove existing mid-bracings.
- 5) 100'-60' Add new L 2 1/2X2 1/2X 1/4 Secondary Horizontals
- 6) 140'-100' Reinforce existing 4.5"OD pipe leg using New L 3 1/2X3 1/2X1/4
- 7) 140'-145' Add new L1 3/4 X 1 3/4 X 3/16 Secondary Horizontals
- 8) 165'-140' Reinforce existing L1 3/4 X 1 3/4 X 3/16 diagonals using New L1 3/4 X 1 3/4 X 3/16.
- 9) 180'-160' Add new L1 3/4 X 1 3/4 X 3/16 Secondary Horizontals

7.

DISCLAIMER

Installation procedures and related loading are not within the scope of this analysis. A contractor experienced in similar work should perform all installation work. The engineering services provided by Allpro Consulting Group, Inc. (ACGI) are limited to the computer analysis and calculations of the structure with the proposed and existing loads. This analysis is considered void if the loading mentioned in this report is changed or is different as installed. It is assumed that the existing structure is properly maintained and is in good condition free of any defects. Scope of this analysis does not include existing connections, except as noted in this report.

ACGI does not make any warranties, expressed or implied in connection with this engineering analysis report and disclaims any liability arising from deficiencies or any existing conditions of the original structure. ACGI will not be responsible for consequential or incidental damages sustained by any parties as a result of any data or conclusions included in this Report. The maximum liability of ACGI pursuant to this report shall be limited to the consulting fee received for the preparation of the report.

8. APPURTENANCE LISTING

EXISTING LOAD DESCRIPTION							
<u>ELEV. (ft.)</u>	<u>Qty.</u>	<u>Antenna Description</u>	<u>Mount Type & Qty.</u>	<u>TX. LINE(in)</u>	<u>TENANT</u>		
195±	6	Andrew DBXLH-9090C-R2M	(3) 13' T Frames	(12) 1-5/8" (1) 3/8" RET (1) 3/8" Fiber (2) 3/4" DC	New Cingular		
	3	Andrew SBNH-1D6565C					
	3	Ericsson RRUS-11					
	3	Ericsson RRUS-12 B2					
	1	Raycap DC6-48-60-18-8F	Direct				
194±	6	Andrew E15Z01P0401	(3) 13' T-Frames				
	6	KMW KDXCV00120 DIPLEXER					
180±	3	Andrew 932LG65VTE-B	(3) 16' T-Frames			(6) 1-5/8" (9) 7/8"	Nextel
	9	Antel RWA 80016CF					
163±	3	CSS X7C-880-2 antennas	(3) 13' T-Frames			(23) 1-5/8" (1) 1-1/4" Hybrid	Verizon
	3	CSS X7C-880-2 antennas					
	6	CSS QAP-680-V antennas					
	3	Alcatel Lucent RRH AWS 2x60W					
	3	Alcatel Lucent RRH 700 2x60					
	1	Raycap RRFDC-3315-PF-48					

FINAL VERIZON LOAD DESCRIPTION					
<u>ELEV (ft.)</u>	<u>Qty.</u>	<u>Antenna Description</u>	<u>Mount Type & Qty.</u>	<u>TX. LINE(in)</u>	<u>TENANT</u>
163±	6	Commscope NHH 65C-R3B antennas	(3) 13' T-Frames	(11) lines AVA7 @ 1 5/8" 1 Hybrid @ 1 1/4"	Verizon
	3	Css X7C-880-2 antennas			
	3	Alcatel-Lucent RRH AWS 2x60W			
	3	Alcatel-Lucent RRH 700 2x60 radio			
	1	Raycap RRFDC-3315-PF-48			

Notes:

1. ACGI should be notified of any discrepancies found in the data listed in this report.
2. Notify ACGI if any potential physical and other interference with existing antennas for a redesign.



9. SUMMARY OF WORKING PERCENTAGE OF STRUCTURAL COMPONENTS

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	#P _{allow} lb	% Capacity	Pass Fail
T1	195 - 180	Leg	P2.5x.203 (2.875 OD)	1	-17304.80	57192.30	30.3	Pass
		Diagonal	L1 3/4x1 3/4x3/16	11	-3232.22	10105.40	32.0	Pass
T2	180 - 175	Top Girt	L1 3/4x1 3/4x3/16	5	-489.46	6363.47	7.7	Pass
		Leg	Pipe 2.875"ODx0.203"	25	-27825.50	71261.60	39.0	Pass
		Diagonal	L1 3/4x1 3/4x3/16	36	-4995.01	10105.40	49.4	Pass
T3	175 - 170	Secondary Horizontal	L1 3/4x1 3/4x3/16	39	-481.95	10250.70	4.7	Pass
		Top Girt	L1 3/4x1 3/4x3/16	29	-462.17	6363.47	7.3	Pass
		Leg	Pipe 2.875"ODx0.203"	42	-39965.30	71261.60	56.1	Pass
T4	170 - 165	Diagonal	L1 3/4x1 3/4x3/16	48	-5495.30	10105.40	54.4	Pass
		Secondary Horizontal	L1 3/4x1 3/4x3/16	51	-692.22	10250.70	6.8	Pass
		Leg	Pipe 2.875"ODx0.203"	54	-54286.90	71261.60	76.2	Pass
T5	165 - 160	Diagonal	L1 3/4x1 3/4x3/16	59	-5603.28	10105.40	55.4	Pass
		Secondary Horizontal	L1 3/4x1 3/4x3/16	62	-940.28	10250.70	9.2	Pass
		Leg	Pipe 2.875"ODx0.203"	64	-68020.40	71261.60	95.5	Pass
T6	160 - 155	Diagonal	2L1 3/4x1 3/4x3/16	71	-8315.91	30641.50	27.1	Pass
		Secondary Horizontal	L1 3/4x1 3/4x3/16	75	-1377.74	10250.70	13.4	Pass
		Leg	P3.5x.318 (4.00 OD)	76	-89182.90	141878.00	62.9	Pass
T7	155 - 150	Diagonal	2L1 3/4x1 3/4x3/16	86	-8121.15	30641.50	26.5	Pass
		Top Girt	L1 3/4x1 3/4x3/16	80	-1744.56	6363.47	27.4	Pass
		Leg	P3.5x.318 (4.00 OD)	88	-110183.00	141878.00	77.7	Pass
T8	150 - 145	Diagonal	2L1 3/4x1 3/4x3/16	95	-8833.75	30983.90	28.5	Pass
		Leg	P3.5x.318 (4.00 OD)	97	-133121.00	141878.00	93.8	Pass
		Diagonal	2L1 3/4x1 3/4x3/16	104	-9031.00	30983.90	29.1	Pass
T9	145 - 140	Leg	P3.5x.318 (4.00 OD)	106	-152595.00	159270.00	95.8	Pass
		Diagonal	2L1 3/4x1 3/4x3/16	114	-10605.30	30983.90	34.2	Pass
		Secondary Horizontal	L1 3/4x1 3/4x3/16	115	-2643.03	10378.90	25.5	Pass
T10	140 - 120	Leg	4 X-STR PIPE + L31/2x31/2X1/4	118	-192027.00	231541.00	82.9	Pass
		Diagonal	L1 3/4x1 3/4x3/16	129	-3187.69	7266.42	43.9	Pass
		Top Girt	L1 3/4x1 3/4x3/16	121	-737.74	6539.71	11.3	Pass
T11	120 - 115	Leg	4 X-STR PIPE + L31/2x31/2X1/4	148	-198625.00	231541.00	85.8	Pass
		Diagonal	L1 3/4x1 3/4x3/16	156	-3227.23	6570.79	49.1	Pass
		Leg	4 X-STR PIPE + L31/2x31/2X1/4	157	-205015.00	231541.00	88.5	Pass
T12	115 - 110	Diagonal	L1 3/4x1 3/4x3/16	165	-3283.81	5958.87	55.1	Pass
		Leg	4 X-STR PIPE + L31/2x31/2X1/4	166	-211298.00	231541.00	91.3	Pass
		Diagonal	L1 3/4x1 3/4x3/16	174	-3343.55	5419.78	61.7	Pass
T13	110 - 105	Leg	4 X-STR PIPE + L31/2x31/2X1/4	175	-217656.00	231541.00	94.0	Pass
		Diagonal	L1 3/4x1 3/4x3/16	183	-3459.61	4943.91	70.0	Pass
		Leg	4 X-STR PIPE + L31/2x31/2X1/4	184	-223697.00	247181.00	90.5	Pass
T14	105 - 100	Diagonal	L2x2x3/16	191	-4477.55	5616.85	79.7	Pass
		Secondary Horizontal	L2 1/2x2 1/2x1/4	195	-3879.38	15394.90	25.2	Pass
		Leg	4 X-STR PIPE + L31/2x31/2X1/4	196	-232062.00	247249.00	93.9	Pass
T15	100 - 93.3333	Diagonal	L1 3/4x1 3/4x3/16	203	-4494.96	5100.68	88.1	Pass
		Leg	4 X-STR PIPE + L31/2x31/2X1/4	205	-4024.45	14022.60	28.7	Pass
		Secondary Horizontal	L2 1/2x2 1/2x1/4	205	-4024.45	14022.60	28.7	Pass
T16	93.3333 - 86.6667	Diagonal	L2x2x3/16	203	-4494.96	5100.68	88.1	Pass
		Secondary Horizontal	L2 1/2x2 1/2x1/4	205	-4024.45	14022.60	28.7	Pass
		Leg	4 X-STR PIPE + L31/2x31/2X1/4	205	-4024.45	14022.60	28.7	Pass

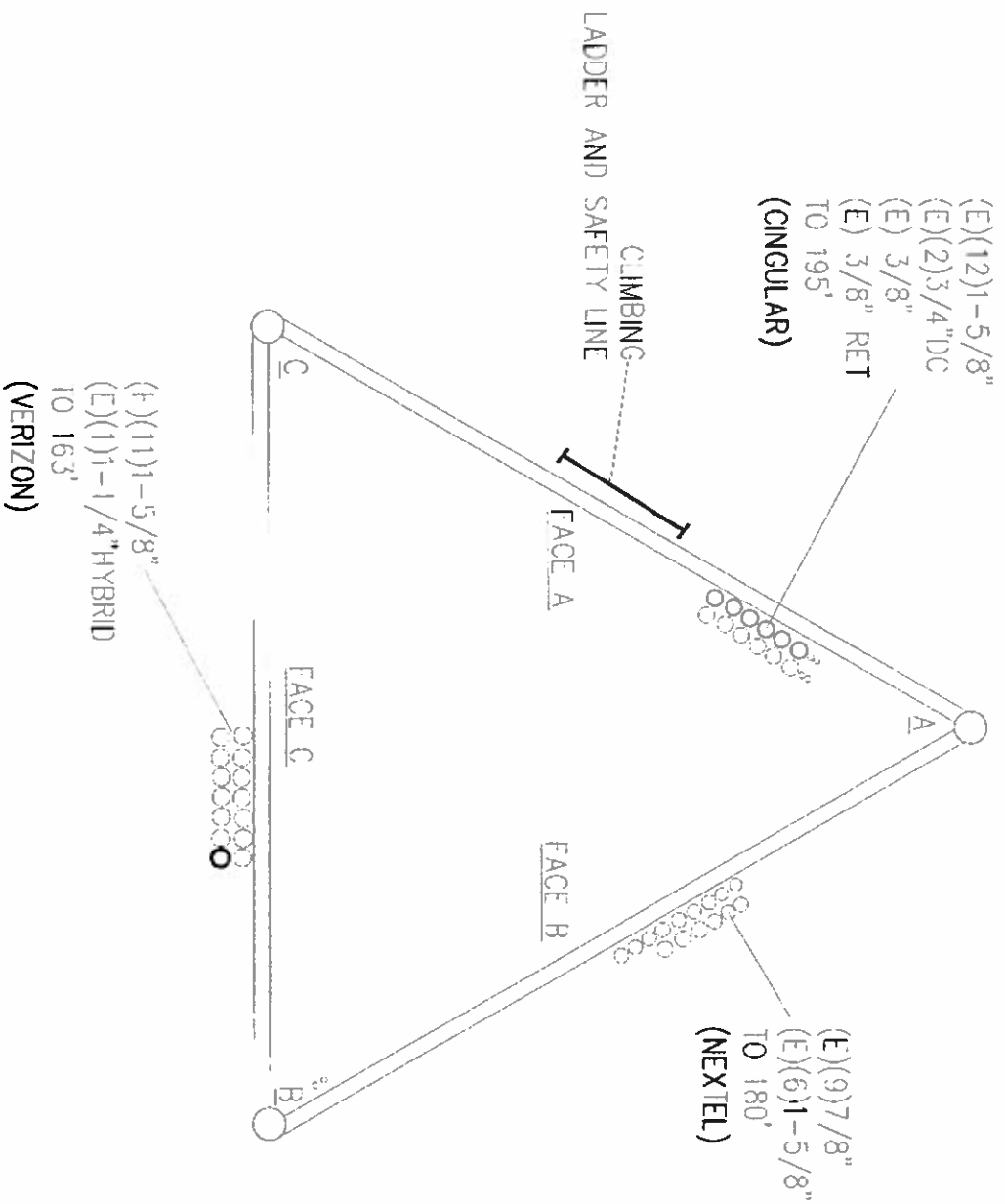


NY13341-A-03 /North Lansing- 195' SST

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	oP _{allow} lb	% Capacity	Pass Fail	
T17	86.6667 - 80	Leg	4 X-STR PIPE - L31/2x31/2X1/4	208	-240145.00	247307.00	97.1	Pass	
T18	80 - 60	Diagonal	L2x2x3/16	215	-4657.42	4643.51	100.3	Acceptable	
		Secondary Horizontal	L2 1/2x2 1/2x1/4	217	-4164.64	12810.10	32.5	Pass	
		Leg	P5x.375 (5.5625 OD)	220	-264668.00	265080.00	99.8	Pass	
		Diagonal	L2 1/2x2 1/2x3/16	227	-5343.65	7202.14	74.2	Pass	
T19	60 - 40	Secondary Horizontal	L2 1/2x2 1/2x1/4	229	-4589.90	10090.20	45.5	Pass	
		Leg	P6x0.280 (6.625 OD)+ L5x5x1/2	250	-290854.00	418160.00	69.6	Pass	
T20	40 - 20	Diagonal	L2 1/2x2 1/2x3/16	258	-5276.08	5743.37	91.9	Pass	
		Leg	P6x0.280 (6.625 OD)+ L5x5x1/2	271	-314433.00	366036.00	85.9	Pass	
T21	20 - 0	Diagonal	L3x3x3/16	279	-6452.39	6808.12	94.8	Pass	
		Leg	P8x.322	286	-339088.00	334421.00	101.4	Acceptable	
		Diagonal	L3x3 1/2x1/4 (SLV)	293	-7442.78	9282.70	80.2	Pass	
							Summary		
							Leg (T21)	101.4	Acceptable
							Diagonal (T17)	100.3	Acceptable
							Secondary Horizontal (T18)	45.5	Pass
							Top Gir (T6)	27.4	Pass
							Bolt Checks	89.0	Pass
							RATING =	101.4	Acceptable

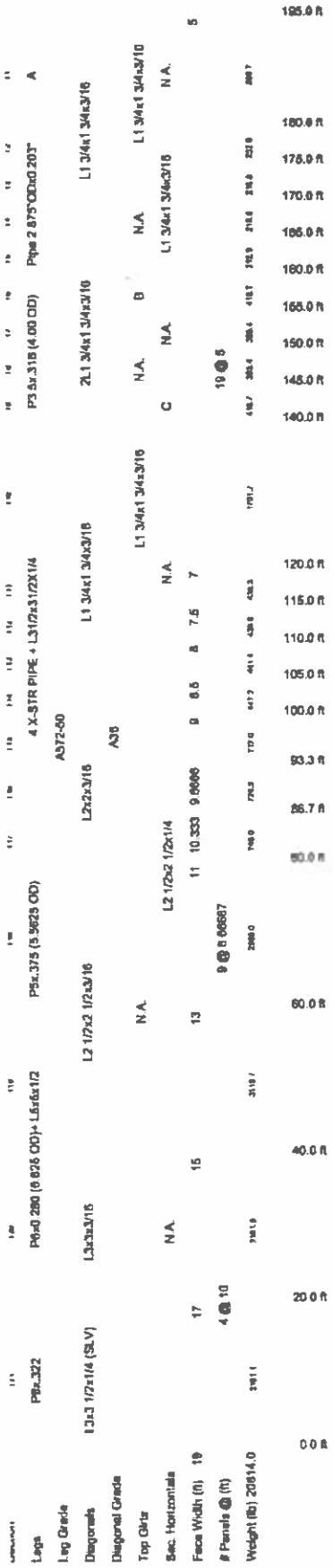
APPENDIX

COAX LAYOUT



COAX LAYOUT

TOWER ELEVATION DRAWING



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(E) Lightning Rod # copper	195	(E) 932LG65VTE-8 (NEXTEL)	180
(2) (E) D6XLH-8090C-R2M	195	(E) 932LG65VTE-8 (NEXTEL)	180
(2) (E) D6XLH-8090C-R2M	195	(3) (E) RWA 80016CF (NEXTEL)	180
(2) (E) D6XLH-8090C-R2M	195	(3) (E) RWA 80016CF (NEXTEL)	180
(E) SBNH-1D6686C	195	(3) (E) RWA 80016CF (NEXTEL)	180
(E) SBNH-1D6686C	195	(2) (P) NHH-65C-R3B (VERIZON)	163
(E) SBNH-1D6686C	195	(2) (P) NHH-65C-R3B (VERIZON)	163
(2) (E) RRUUS 11	195	(2) (P) NHH-65C-R3B (VERIZON)	163
(2) (E) RRUUS 11	195	(E) X7C-880-2 (VERIZON)	163
(E) DC8-48-80-0-8F	195	(E) X7C-880-2 (VERIZON)	163
(2) (E) KDXCV00120 Coupler	194	(E) X7C-880-2 (VERIZON)	163
(2) (E) KDXCV00120 Coupler	194	(E) RRH2x80 AWS (VERIZON)	163
(2) (E) ETDG819G-12UB	194	(E) RRH2x80 AWS (VERIZON)	163
(2) (E) ETDG819G-12UB	194	(E) RRH2x80 AWS (VERIZON)	163
(2) (E) ETDG819G-12UB	194	(E) RRH2x80-700 (VERIZON)	163
(2) (E) KDXCV00120 Coupler	194	(E) RRH2x80-700 (VERIZON)	163
(E) 13' T-FRAME	192	(E) RRH2x80-700 (VERIZON)	163
(E) 13' T-FRAME	192	(E) RRFD03-3315-PF-48 (VERIZON)	163
(E) 13' T-FRAME	192	(E) 13' T-FRAME (VERIZON)	163
(E) 16' T-FRAME (NEXTEL)	181	(E) 13' T-FRAME (VERIZON)	163
(E) 16' T-FRAME (NEXTEL)	181	(E) 13' T-FRAME (VERIZON)	163
(E) 16' T-FRAME (NEXTEL)	181		

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	P2.5x203 (2.875 OD)	C	L1 3/4x1 3/4x3/16
B	L1 3/4x1 3/4x3/16		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in Tompkins County, New York.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 89 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 40 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 101.4%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:

DOWN: 345881 lb
SHEAR: 30519 lb

UPLIFT: -306397 lb
SHEAR: 27192 lb

AXIAL
120798 lb

SHEAR 10120 lb MOMENT 1225275 lb-ft

TORQUE 807 lb-ft
40 mph WIND - 0.7500 in ICE

AXIAL
43831 lb

SHEAR 47106 lb MOMENT 5448690 lb-ft

TORQUE 2626 lb-ft
REACTIONS - 89 mph WIND

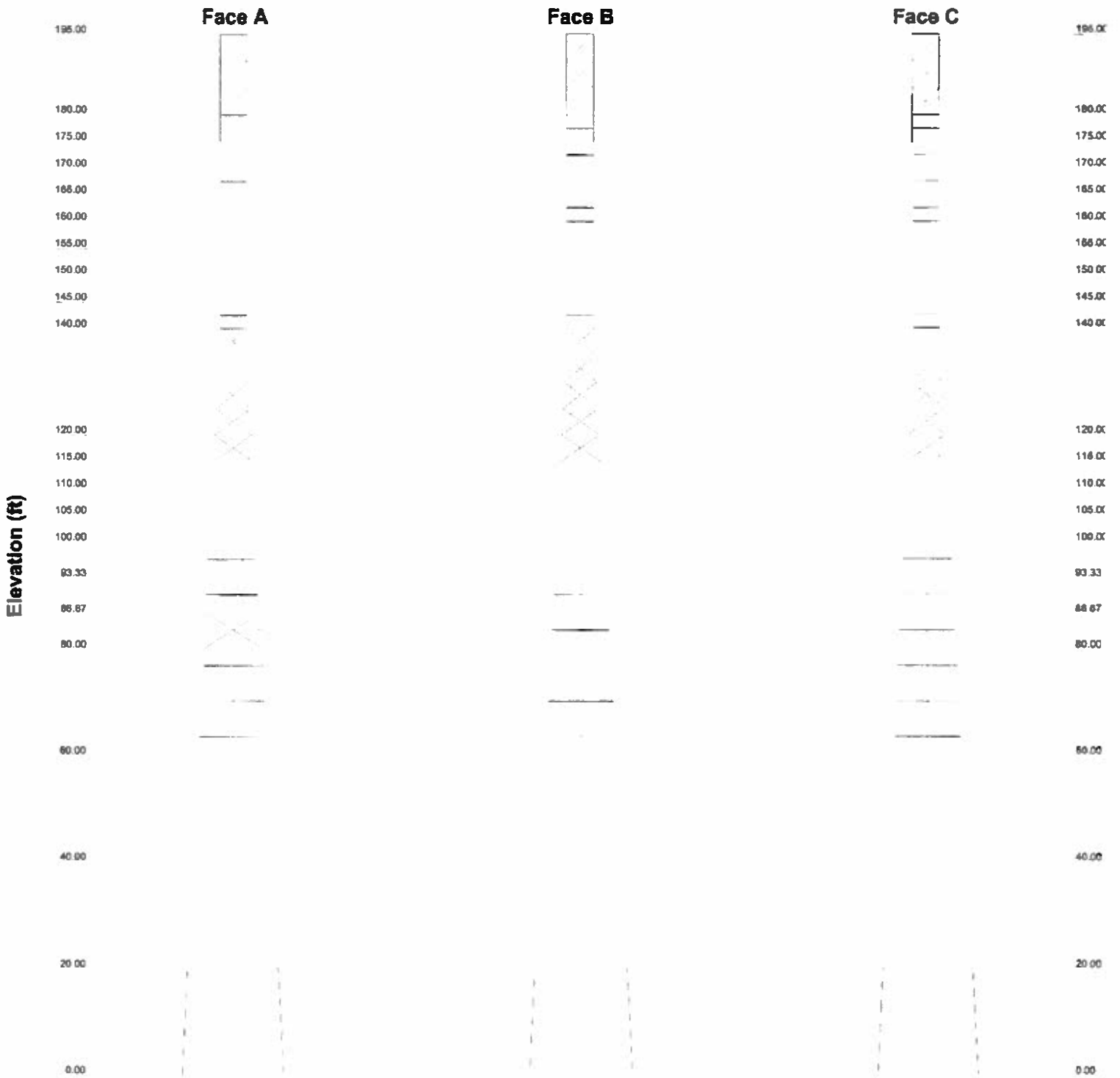
ALLPRO CONSULTING GROUP 9221 LYNDON B. JOHNSON FWY 204 DALLAS, TX Phone: (972)231-8893 FAX: 866-364-8375	Job: 17-2120 MODIFICATION DESIGN		
	Project: NY13341-A-03 / North Lansing195' SST		
	Client: SBA	Drawn by: mperoz	App'd:
	Code: TIA-222-G	Date: 05/24/17	Scale:
	Path:		Dwg No:



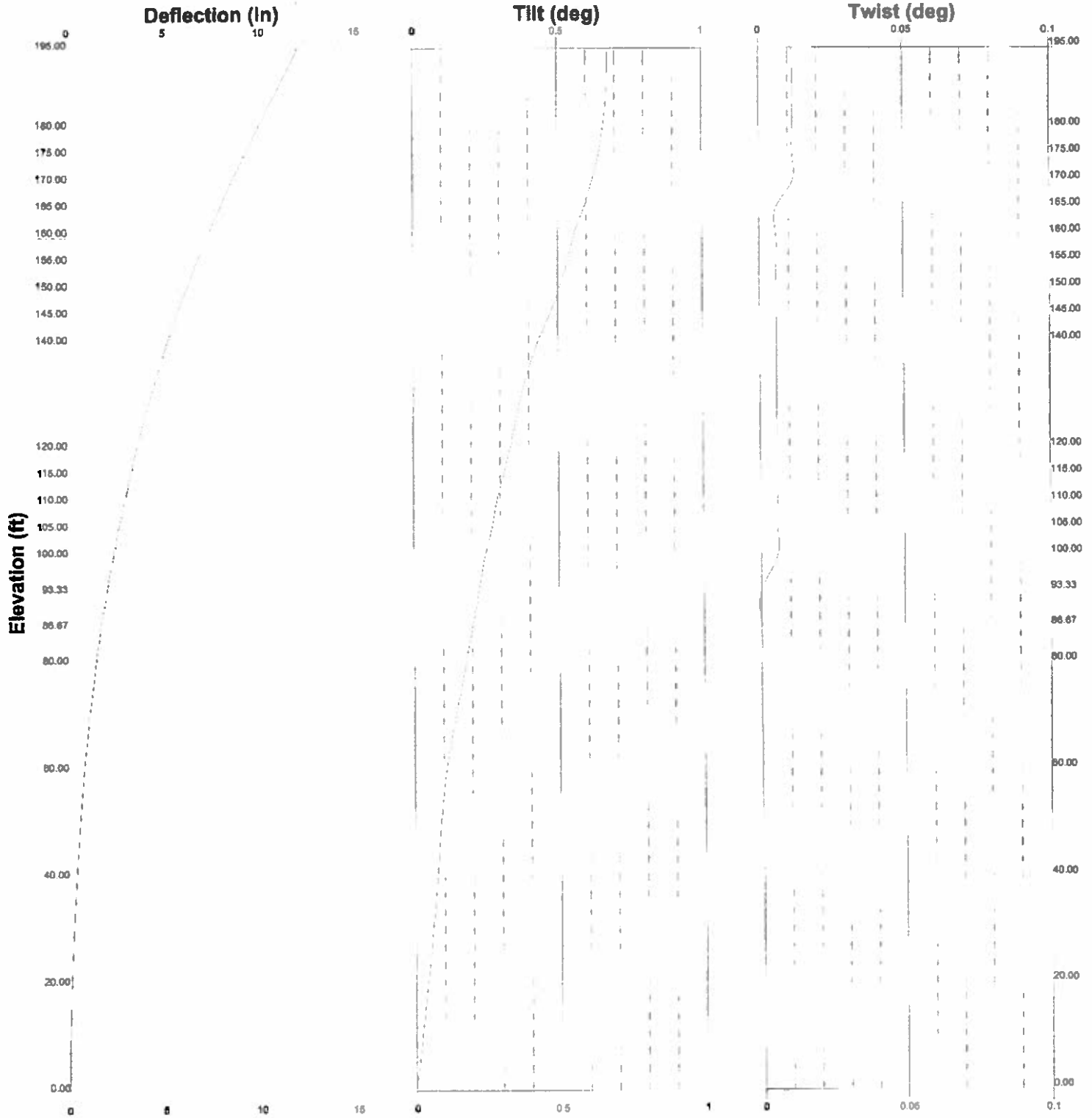
MISCELLANEOUS PLOTS

0' - 195'

> 100% 90%-100% 75%-90% 50%-75% < 50% Overstress



ALLPRO CONSULTING GROUP 9221 LYNDON B. JOHNSON FWY 204 DALLAS, TX Phone: (972)231-8893 FAX: 866-364-8375	Job: 17-2120 MODIFICATION DESIGN	Project: NY13341-A-03 / North Lansing 195' SST	App'd:
	Client: SBA	Drawn by: mperez	Scale:
	Code: TIA-222-G	Date: 05/24/17	Desg No:
	Path:	Date:	Scale:
	Path:	Date:	Scale:



ALLPRO CONSULTING GROUP 9221 LYNDON B. JOHNSON FWY 204 DALLAS, TX Phone: (972)231-8893 FAX: 866-364-8375	Job: 17-2120 MODIFICATION DESIGN	App'd:	
	Project: NY13341-A-03 / North Lansing 195' SST	Drawn by: mperez	Scale: P
	Client: SBA	Date: 05/24/17	Draw No.
	Code: TIA-222-G	Path:	Date:
	Path:	Date:	Date: