

February 10, 2011
File No. 25140.00

Mr. Keith Kinney
Engineer/I.T. Manager
Clear Channel Radio
1003 Norfolk Square
Norfolk, Virginia 23502

Re: Directional Antenna Alignment, Located in Chesapeake, Virginia

Dear Mr. Kinney:

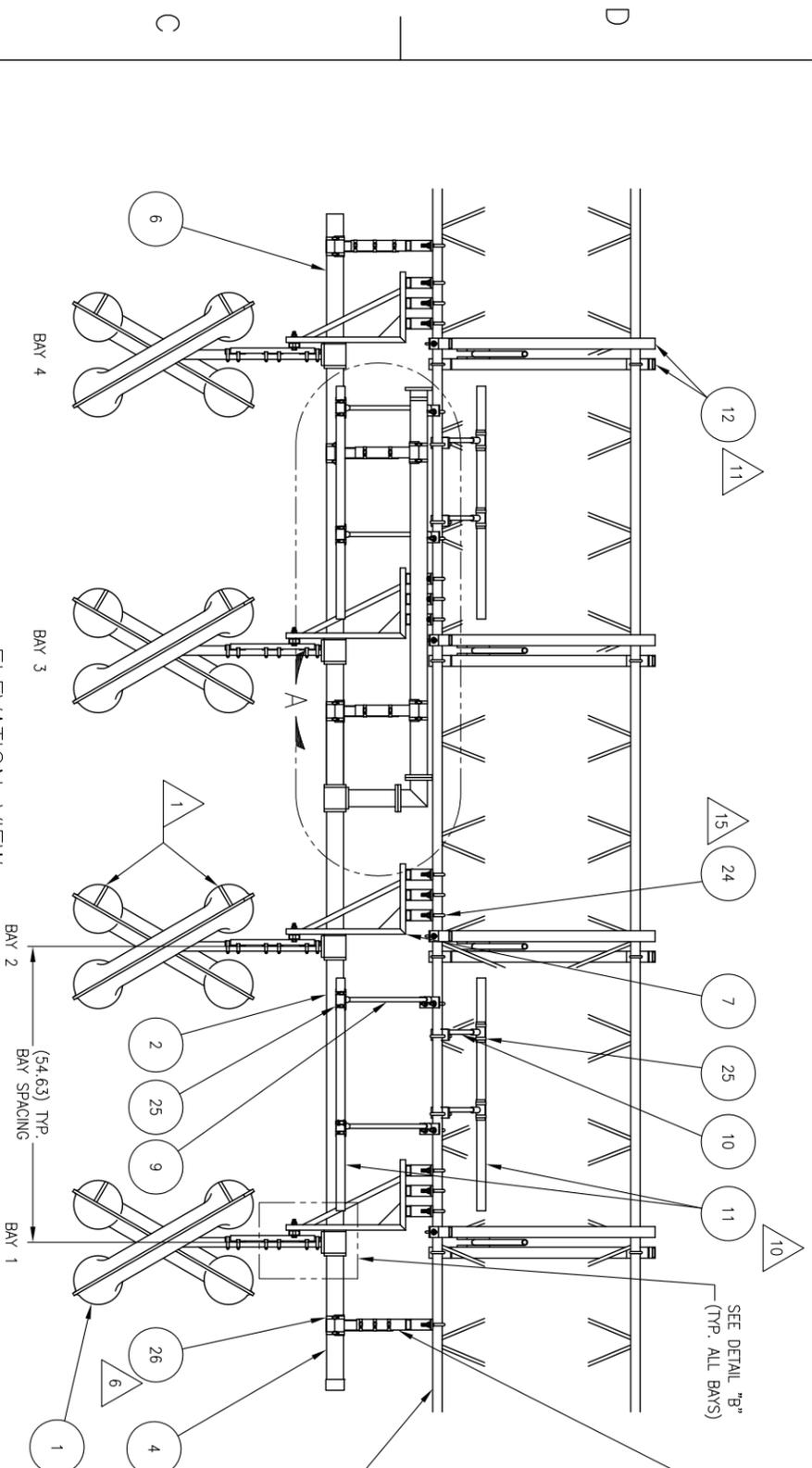
This letter is to certify that the 4-bay directional antenna system installed for Clear Channel Radio (WKUS) on January 28, 2011 in Chesapeake, Virginia, Tax Parcel ID 1320000000031, located at the intersection of Poindexter Street and I-464 was found to be oriented to 151° 15' true north, a deviation of 0° 15' from 151° orientation specified by the antenna manufacturer on the plans prepared by Electronics Research, Inc. entitled "MP-4C-DA-SP Installation" dated February 5, 2010 and revised February 1, 2010 having a revision description of "Revised Antenna Orientation Per Test Site".

Sincerely,

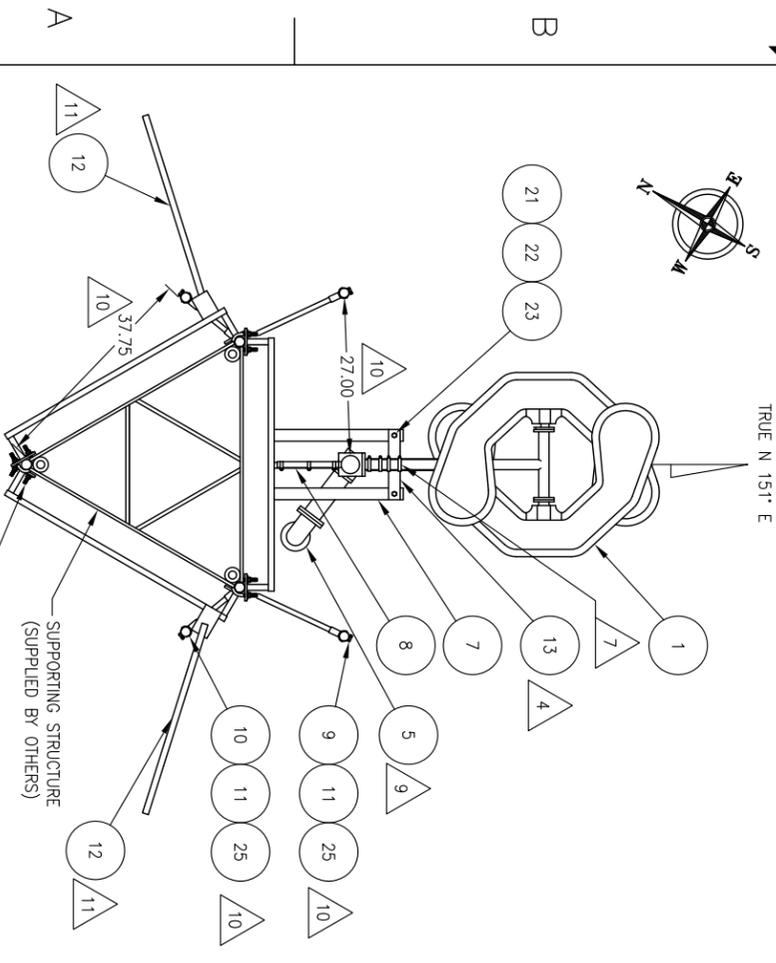
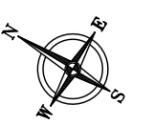
Baldwin & Gregg, LTD



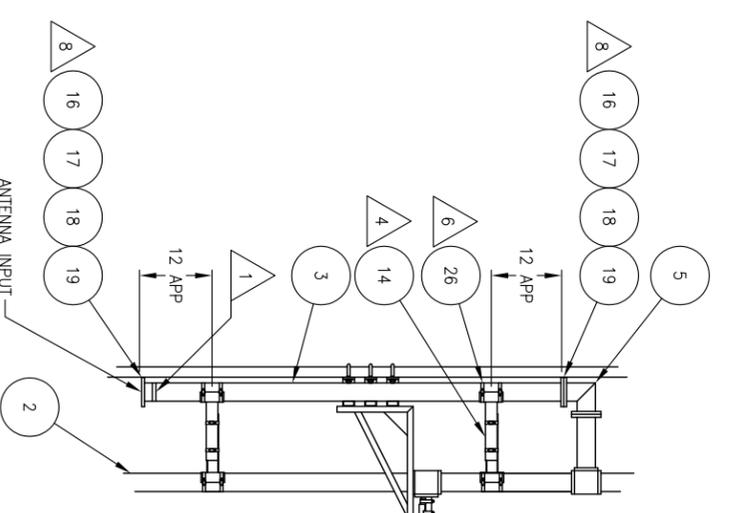
Eric S. Patterson, L.S.
Director of Surveys



ELEVATION VIEW
SCALE: 1:16

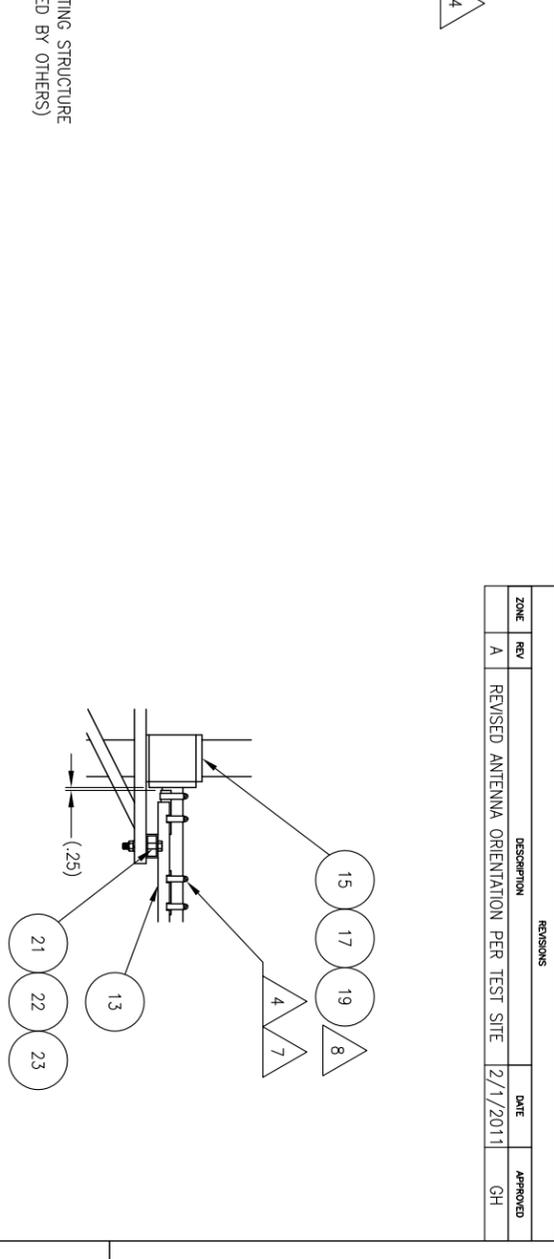


TOP VIEW
SCALE: 1:16



DETAIL "A"
SCALE: 1:16

NOTE: DIRECTORS HAVE BEEN OMITTED FOR CLARITY.



DETAIL "B"
SCALE: 1:8

- NOTES:
- ALL RED BANDS DESIGNATE SIDE TO BE MOUNTED DOWNWARD
 - ASSEMBLE ANTENNA SYSTEM BY MATING CORRESPONDING NUMBERS.
 - OVERALL LENGTH OF ANTENNA SYSTEM IS 18'-2" APPROXIMATE.
 - ENSURE TO PLUMB ANTENNA VERTICALLY BY LOOSENING HOSE CLAMPS ON PRE-CLAMPED SUPPORT SADDLES AND ADJUSTABLE LINE BRACKETS.
 - FINAL ORIENTATION TO BE DETERMINED BY LICENSED SURVEYOR.
 - HOSE CLAMPS USED TO SECURE LINE BRACKETS TO INTERBAY LINE.
 - HOSE CLAMPS USED TO SECURE ELEMENTS TO SUPPORT SADDLE.
 - APPLY 1/2 GREASE PACKET TO EACH O-RING.
 - CENTERFEED CAN BE ROTATED TO AVOID ANY OBSTRUCTIONS.
 - VERTICAL DIRECTORS ARE INTERLEAVED BETWEEN BAY PAIRS. DIMENSIONS ARE THE SAME FOR BOTH SIDES.
 - HORIZONTAL DIRECTORS ARE MOUNTED AT BAY LEVEL.
 - UNLESS OTHERWISE NOTED, ALL BOLTED CONNECTIONS SHALL INITIALLY BE BROUGHT TO A SNUG-TIGHT CONDITION WHERE JOINT TIGHTNESS IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE PILES INTO FIRM CONTACT. A SYSTEMATIC APPROACH SHALL BE USED TO BRING THE JOINT INTO A SNUG-TIGHT CONDITION STARTING WITH THE MOST RIGID PART OF THE JOINT AND PROCEEDING TOWARD THE FREE EDGES.
 - APPLY AN ADDITIONAL 1/3 TURN TO ALL BOLTED CONNECTIONS FOR FINAL TIGHTENING. UNLESS OTHERWISE NOTED, FINAL TIGHTENING OF ALL BOLTS SHOULD BE COMPLETED AFTER FINAL CONSTRUCTION OF THE STRUCTURE/ASSEMBLY. PLEASE NOTE, SPECIAL ATTENTION SHALL BE GIVEN TO TIGHTENING OF 1/2" DIAMETER A325 BOLTS, U-BOLTS, AND THREADED RODS AS TO PREVENT STRIPPING THE THREADS FROM OVER-TIGHTENING.
 - THE C.O.R. FOR THIS ANTENNA IS 420'.
 - ITEMS ARE TYPICAL THROUGHOUT THE ANTENNA ARRAY.

QTY.	UM	PART NO.	DESCRIPTION	ITEM NO.
13	EA	HC0048	#48 HOSE CLAMP, SS	26
35	EA	HC0028	#28 HOSE CLAMP, SS	25
66	EA	UB0813-0262GA	1/2-13 X 2.63" U-BOLT, GA	24
9	EA	NU0813	1/2-13 HEX NUT, SS	23
9	EA	WL08SS	1/2" SPLIT LOCKWASHER, SS	22
9	EA	SC0813H0300	1/2-13 X 3" LG H.H., SS	21
6	EA	GREASE	SILICONE GREASE PACKETS	20
11	EA	OR2340S	3 1/8 SILICONE O-RING	19
13	EA	NU0616	3/8-16 HEX NUT, SS	18
48	EA	WL06SS	3/8" SPLIT LOCKWASHER, SS	17
13	EA	SC0616H0150	3/8-16 X 1.50 LG H.H., SS	16
35	EA	SC0616H0087	3/8-16 X .88 LG H.H., SS	15
2	EA	BT1014	LINE TO LINE BRACKETS	14
4	EA	BT25121A-7	ANTENNA SADDLE	13
8	EA	BT25121A-6	HORIZONTAL DIRECTORS	12
8	EA	BT25121A-5	VERTICAL DIRECTORS	11
8	EA	BT25121A-4	VERTICAL DIRECTOR BRKS 10.25"	10
8	EA	BT25121A-3	VERTICAL DIRECTOR BRKS 18"	9
2	EA	BT25121A-2	LINE BRACKETS	8
4	EA	BT25121A-1	ELEMENT BRACKETS	7
1	EA	CO0033	24" LINE STUB	6
1	EA	CL3064C-50.63	CENTERFEED ASSEMBLY	5
1	EA	CL3063B-25.31	1/4 WAVE STUB	4
1	EA	CL30351	6" MATCHING SECTION	3
2	EA	CL3061B-50.63	INTERBAY LINE	2
4	EA	AE-IP-3BRD	RADIATING ELEMENT	1

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ZONE	REV	DESCRIPTION	DATE	APPROVED
A		REVISED ANTENNA ORIENTATION PER TEST SITE	2/1/2011	GH

REVISIONS	DATE	APPROVED

REV	DATE	BY	DESCRIPTION
1	2/4/2010	L. SEIBERT	ISSUE FOR CONSTRUCTION
2	2/5/2010	C. LEGATE	REVISED ANTENNA ORIENTATION PER TEST SITE
3	2/4/2010	G. HUMBERT	REVISED ANTENNA ORIENTATION PER TEST SITE

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