



TRIP REPORT

CIVIL ENGINEERING DIVISION VISIT

Prepared by: C.E.WRIGHT / E.R.NESS

Station visited: LORSTA KARGABURUN

Dates of visit: 10 OCT 84 to 25 OCT 84

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PART I - CIVIL ENGINEERING DIVISION VISIT, PREPARATION
(to be completed prior to departure from London)

Trip # : _____
Station to be visited : _____ KARGABURUN , TURKEY

Visitor(s) : _____ LTJG C.E.WRIGHT

_____. LT E.R.NESS

Dates of visit : 10 OCT 84 to 25 OCT 84

Pending Follow-up items from previous Civil Engineering visits to check /update status

Trip #	Items	
		REALIGN TOWER FROM PHIL BAKER'S 1984 TOWER
		INSPECTION.

Matters of special importance to be checked on behalf of ACTEUR Divisions
(Number each item)

#	Division	Item
		N/A

Planned accomplishments during visit. (Number each item. Use continuation sheets if necessary. Add items as necessary that may arise during in-briefing with CO/Station Leader/Station Manager).

1. Review Part IV (Areas of Interest) with the CO/Station Leader/ Station Manager and/or Chief Engineer to determine if problem areas exist that require further investigation.

NOTE: With regard to Host Nation and Omega Stations, first determine ACTEUR limit of responsibilities prior to delving into areas of station operation and maintenance.

2. All ACTEUR CWO visits: Complete Engineering Administration Checklist (TAB E to Appendix 12 to Annex V of the OPLAN).

- 3.1 Re-align tower and adjust tensions as needed.

- 3.2 Familiarization of station for E.R.NESS.

- 3.3 Resolve roofing contract problems (Eng Proj 0018).

- 3.4 Inspect mess deck rehab (Eng Proj 0009).

- 3.5 Resolve engine room door problems (Eng Proj 0022).

- 3.6 Gain design data for replacing sewer system.

- 3.7 Gain design data for replacing potable water system.

- 3.8 Review with station existing SSMRs.

- 3.9 Inspect and obtain particular dimensions of beach house.

- 3.10 Check on condition of radial ground plane.

ACTUAL ACCOMPLISHMENTS

- 2.1 Re-aligned and retensioned tower as suggested in 1984 Tower Inspection Report. The initial tower plot and tension readings showed the tower to be out of alignment tolerance and several tension values were high. The tower was adjusted three times; first, minor adjustments of the radials; second, major adjustment of the radial and structural guys, and lastly, minor adjustment of the structural and TLE guys, which the results are documented in plot four. The results of the first and second adjustments are shown in plots two and three respectively. The structural tensions were left at the mid to upper portion of the allowable range but about half the TLE guys were left a bit above the allowable range. Because of the balanced structural tensions and excellent alignment the TLE guys were left at their high values since they too were reasonably balanced.
- 2.2 Station familiarization was conducted by station personnel for LT E. Ness.
- 2.3 The roofing project #0018 is approximately 70% complete. This project was initially plagued by serious specification deviations by the contractor. This apparently was the result of a complete lack of knowledge and understanding of U.S. contract procedures. At this point, all of the serious discrepancies in the contract have been resolved by the COTR or corrected by the contractor.

The following contract problems and their solutions are outlined as follows:

- a. Existing roofing was initially removed from all of the buildings, although it was specified that each building would be completed individually. Contractor changed work schedule to install at least one ply of roofing protection as soon as possible on each roof.

whenever is necessary to ensure an excellent finished product.

b. Specified insulation materials and submittals were completely ignored by contractor, who installed lightweight concrete, perlite and cement as both sloping material and insulator. Installation closely inspected visually, and a theodolite check of the slope found it satisfactory.

c. Roofing ply system design was ignored by the contractor without any notification. A Turkish roofing system was installed on the COQ and Barracks Building. Method was analyzed and accepted as satisfactory, with minor modifications. the job without an explanation. However, the

d. Cantstrips were not installed, flashing installed improperly on the COQ and Barracks Building. Contractor removed flashing from barracks, installed special edge protectors, will cut off flashing from the COQ and provide installation of new specified flashing. and operation is adequate. Project is

e. Bitumen was not heated with method advertised in submittals, and not constantly monitored. An acceptable method was

negotiated.

f. Flashing not acceptable for reuse on transmitter building.

Contractor supplied 60% new materials.

g. Roof slopes on transmitter building and signal power building were installed differently than as specified. Roofing system design modified to accommodate new slopes in both roofs.

h. No flashing supplied to go over venting stacks or other protrusions out of roof. Turkish alternative examined and accepted.

Replace Station Windows project #2006.

2.4 In retrospect it is fair to assume that many of these problems could have been avoided by more thorough screening of the prospective contractor and by the presence of the Project Engineer during the initial start of the work. In order to bring the contractor back to the specification, Coast Guard personnel were utilized constantly during the installation to explain and direct the contractor in accordance with the specification. However, the contractor has been extremely co-operative and willing to do whatever is necessary to ensure an excellent finished product. A

final inspection of the contract by the Project Engineer is essential. Also two four square meter roofs were not included in the contract. The contractor will submit a price to include these as an amendment. It is predicted that he will finish these roofs as specified.

- 2.5 Engine Room Door project # 0022: The contract has been hindered by an apparent lack of interest on the part of the contractor. There were long delays and absences by the contractor from the job without an explanation. However, the GFE was of marginal quality so the contractor has had to install the door twice. The first installation had to be removed because the frames supplied were too narrow for the doors and had to be modified. The contractor enlarged the frames, reinstalled the doors and the installation and operation is adequate. Project is 90% complete.
- 2.6 Minor Rehab project #0009. This project was delayed by a mistake on the part of the COR who instructed the contractor to panel 4 station walls instead of the specified 2. As a result, there was insufficient GFE materials and the project had to be postponed until more supplies arrive. During discussion with the station personnel it was decided to solicit a bid from the contractor to include a dropped ceiling in the contract. A proposal was submitted and is being evaluated.
- 2.7 Replace Station Windows project #2006. This is a recently completed project. The overall quality of the materials and installation is excellent. However, the station is significantly affected by insects, and window screens are desperately needed.
- 2.8 Design data for replacing leach field and sewer systems (#4069) was collected. Seven test holes were excavated to inspect the pipe runs that make up the system and the 10" concrete pipe was found to

be very soft in numerous places. Also, several of the manholes need to be re-worked to provide correct drainage and flow. MKC Audy will direct particular tests to determine data necessary to design a new leachfield.

2.9 All completed, new, cancelled and current SSMRs were discussed. Station priorities and ACTEUR opinions were shared and a station priority list developed.

2.10 Rehab Beach House project 4024.

Station self-help program was inspected and discussed. Future plans were approved. Concrete deck installation is now underway.

2.11 COQ Rehab project 4061

Design data and station input was obtained for the project. A basic floor plan and outline of work to be done was developed and found acceptable by the station CO.

2.12 Station security is of primary concern to the station personnel. A letter was hand carried with ideas on how to improve overall station security.

2.13 It is recommended that the station vehicle allowance be raised to 3 vehicles. Very briefly, because of breakdowns, maintenance and unavailability of parts, the station is quite frequently without a useable vehicle. The station is collecting data to justify this these request. It is strongly recommended that this be approved.

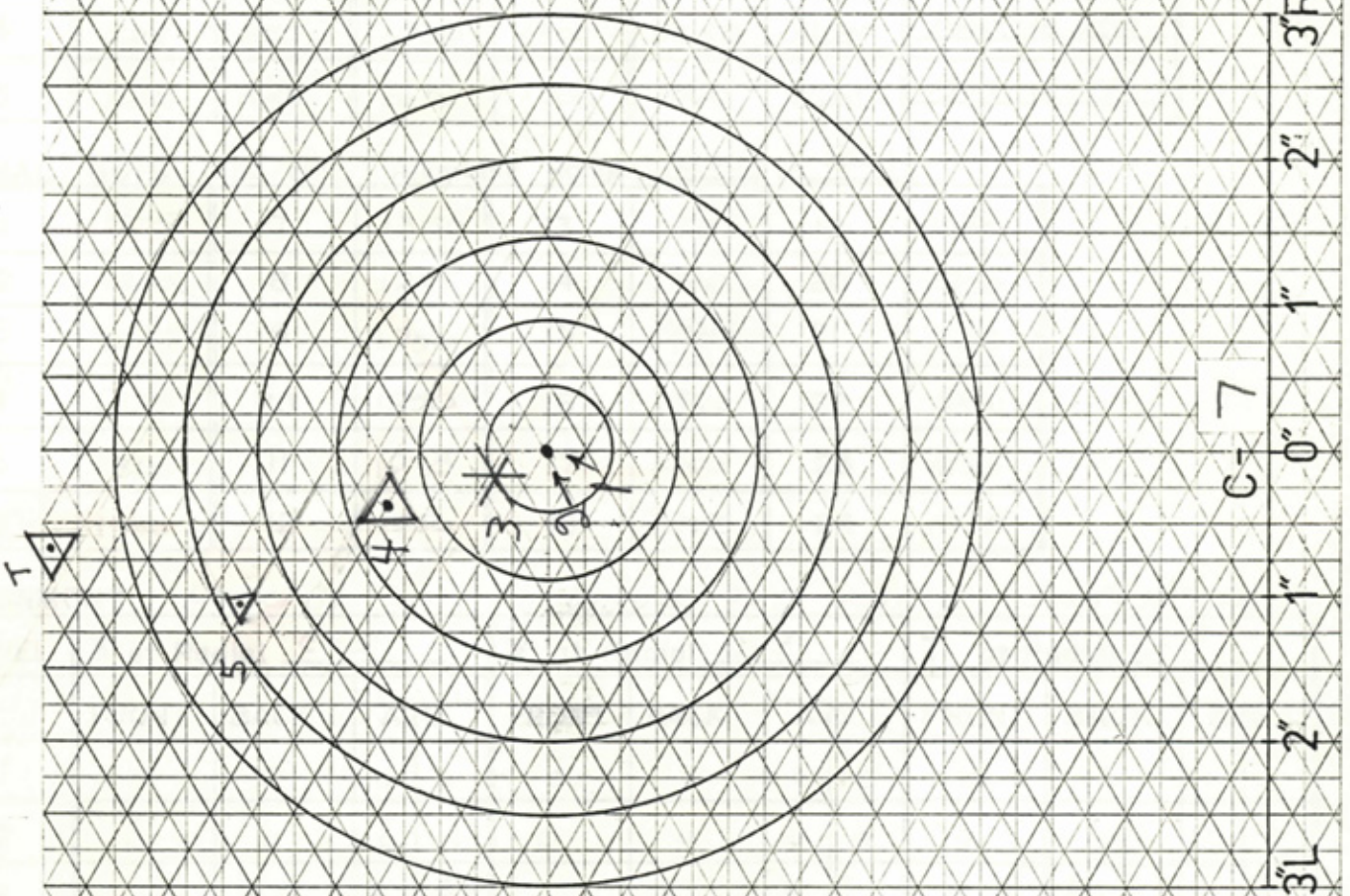
LORSTA: KARABURUN

DATE: 12 OCT 1984

WIND FM C-6 AT 5-7 KNTS

MAXIMUM DEFLECTION
 BETWEEN GUY LEVELS =
 1 1/2"

Plot 1



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SHEET

LORSTA KARGABURUN, DATE 11/12 OCT 84, WIND FM C- AT KTS.

SECTIONS

STRUCTURAL

GUYS

11 OCT 84

WIND @ 7 KTS FM C-10

TEMP = 94°F/34°C

LEVEL	LANE 1		LANE 2		LANE 3		ALLOWABLE RANGE
	A	B	A	B	A	B	
1	1250	1250	1225	1275	1250	1215	1260 to 1450
2	1175	1125	1225	1250	1150	1250	1120 to 1290
3	1340	1380	1300	1300	1425	1400	1240 to 1430
4	1125	1100	1250	1300	1050	1025	1000 to 1150
5	1600	1600	1650	1700	1560	1600	1500 to 1725

RADIAL GUYS 11 OCT 84 Allowable Range 1050 to 1208

1	1225	7	1350	13	1350	19	1175
2	1300	8	1225	14	1300	20	1200
3	1275	9	1250	15	1250	21	1175
4	1225	10	1250	16	1300	22	1200
5	1300	11	1275	17	1200	23	1225
6	1300	12	1250	18	1250	24	1275

ALIGNMENT 12 OCT 84

WIND @ 7 KTS FM C-6 TEMP = 101°F/38.5°C

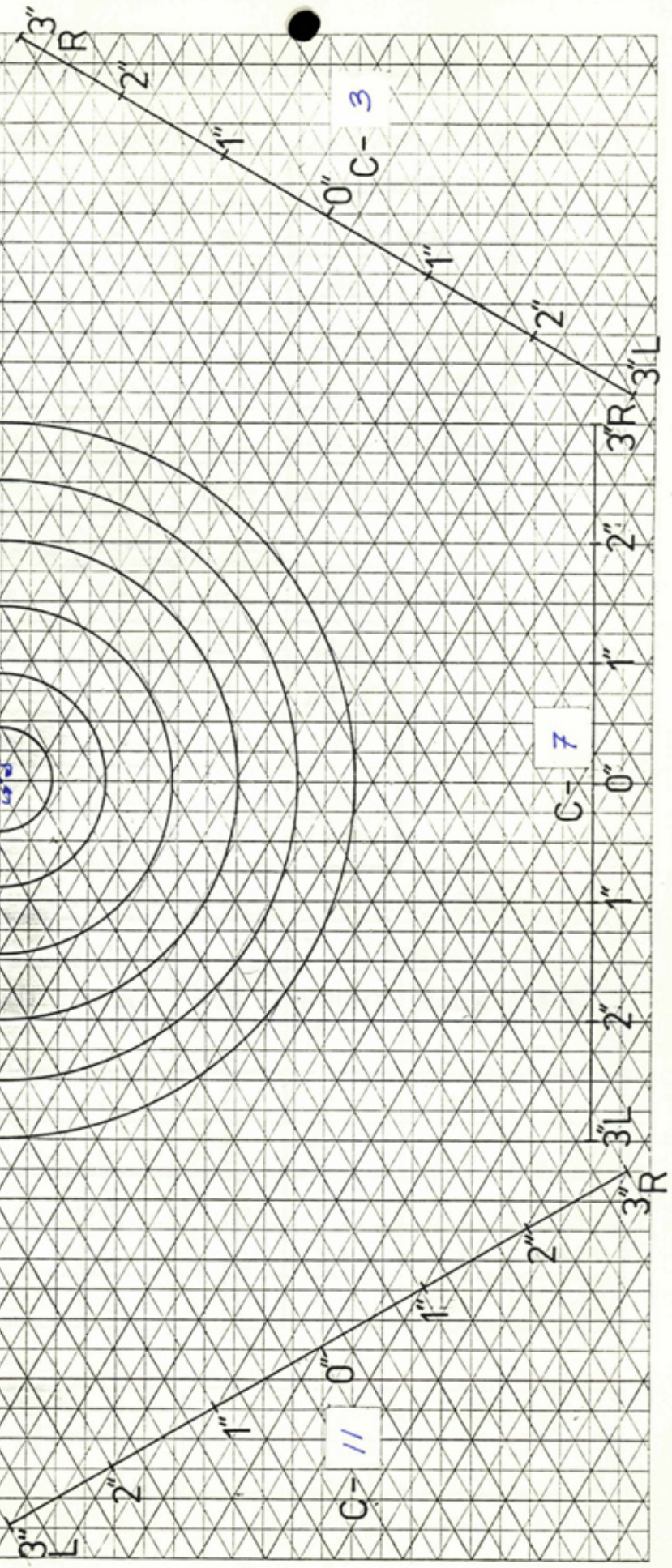
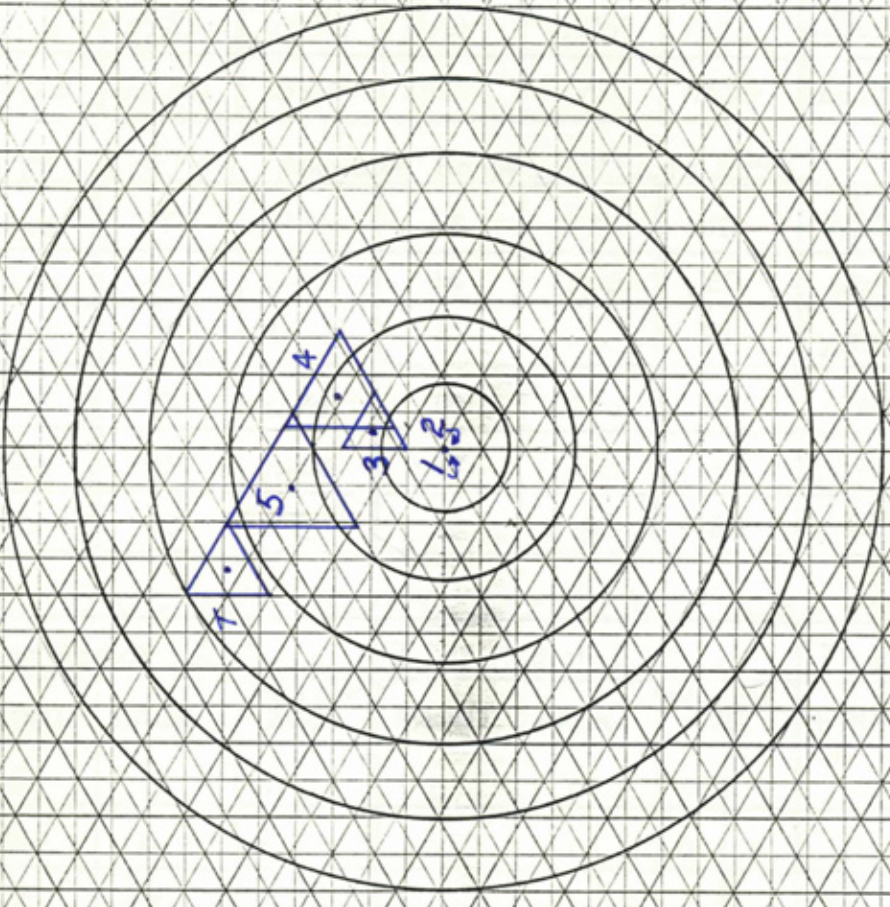
LEVEL	A at Radial <u>C-3</u>			A at Radial <u>C-7</u>			T at Radial <u>C-11</u>		
	FRONT	BACK	AVG.	FRONT	BACK	AVG.	FRONT	BACK	AVG.
1	0	0	0 0	0	0	0 0	0	0	0 0
2	0	0	0 0	0	0	0 0	0	0	0 0
3	0	$\frac{1}{8} R$	$\frac{1}{16} \frac{3}{16} R$	0	$\frac{1}{8} L$	$\frac{1}{16} \frac{3}{16} L$	$\frac{1}{8} L$	$\frac{1}{8} L$	$\frac{1}{8} \frac{3}{8} L$
4	$\frac{1}{4} R$	$\frac{1}{3} R$	$\frac{7}{24} \frac{7}{8} R$	$\frac{1}{8} L$	$\frac{1}{4} L$	$\frac{3}{16} \frac{9}{16} L$	$\frac{1}{3} L$	$\frac{1}{3} L$	$\frac{1}{3} 1 L$
5	$\frac{1}{3} R$	$\frac{1}{2} R$	$\frac{5}{12} \frac{1}{4} R$	$\frac{1}{3} L$	$\frac{1}{3} L$	$\frac{1}{3} 1 L$	$\frac{3}{4} L$	$\frac{7}{8} L$	$\frac{13}{16} \frac{7}{16} L$
T	$\frac{3}{4} R$	$\frac{7}{8} R$	$\frac{13}{16} \frac{7}{16} R$	$\frac{1}{8} L$	$\frac{1}{4} L$	$\frac{3}{16} \frac{9}{16} L$	$\frac{1}{8} L$	$\frac{1}{4} L$	$\frac{3}{16} \frac{9}{16} L$

TWIST

LEVEL	B	1	2	3	4	5	T
READING							

Plot 2

LORSTA: KARGABURUN
 DATE: 15 OCT 84
 WIND FM C-16 AT 8 KNTS
 MAXIMUM DEFLECTION
 BETWEEN GUY LEVELS =
1 1/2"



C-3

C-11

C-7

SHEET

LORSTA KARGABURUN, DATE 15/16 OCT 84, WIND FM C-___ AT ___ KTS.

IONS

STRUCTURAL GUYS 16 OCT 84 TEMP = 60°F / 16°C WIND FM C-1 @ 5-10 KTS

LEVEL	LANE 1		LANE 2		LANE 3		ALLOWABLE RANGE
	A	B	A	B	A	B	
1	1325	1360	1275	1325	1400	1345	1260 to 1450
2	1215	1210	1175	1200	1275	1350	1120 to 1290
3	1350	1450	1250	1270	1600	1550	1240 to 1430
4	1100	1090	1090	1110	1125	1100	1000 to 1150
5	1525	1500	1500	1525	1775	1800	1500 to 1725

RADIAL GUYS 16 OCT 84 Allowable Range 1050 to 1208

1	1225	7	1275	13	1275	19	1150
2	1300	8	1175	14	1300	20	1215
3	1200	9	1200	15	1100	21	1225
4	1225	10	1175	16	1225	22	1175
5	1250	11	1200	17	1140	23	1250
6	1200	12	1175	18	1180	24	1325

ALIGNMENT 15 OCT 84 TEMP = 83°F / 28°C WIND FM C-16 @ 7-8 KTS

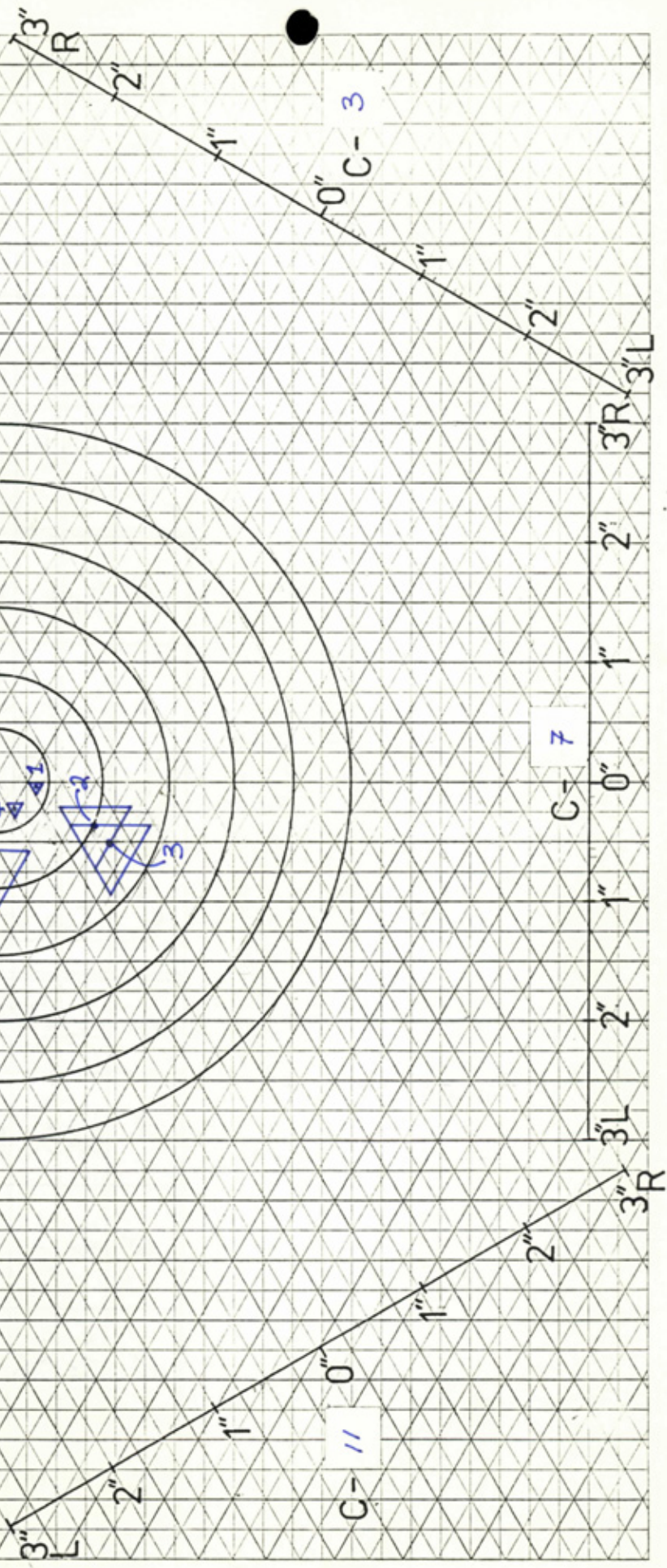
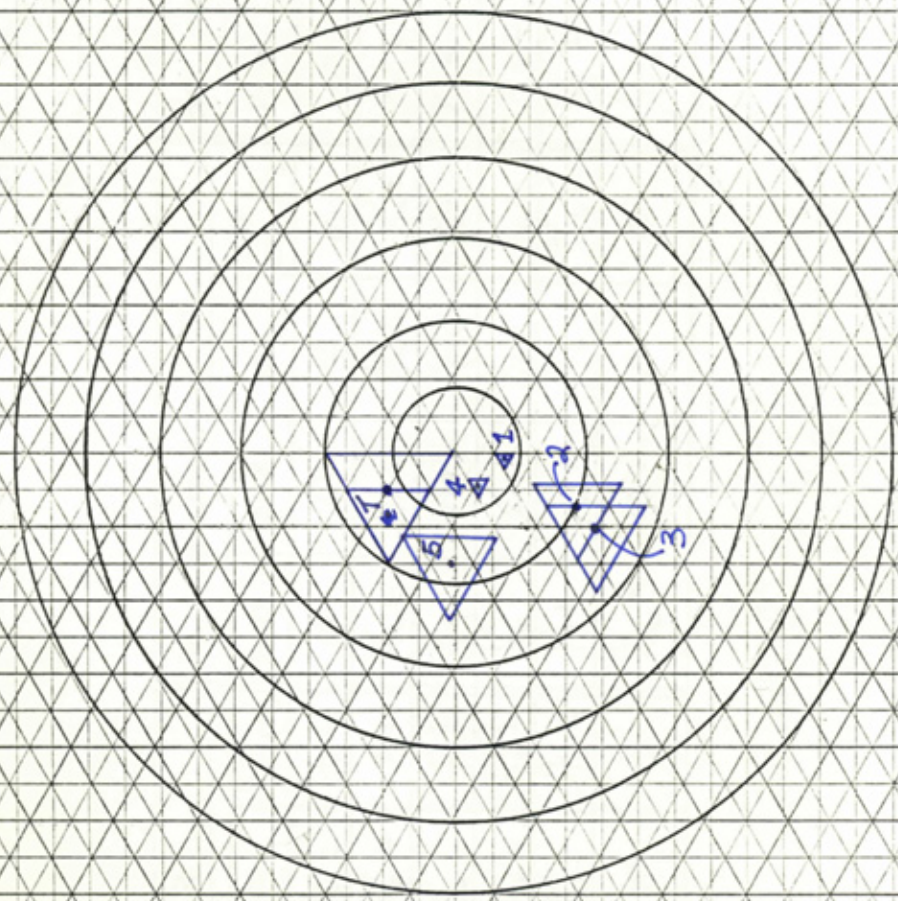
LEVEL	A at Radial C-3				A at Radial C-7				T at Radial C-11			
	FRONT	BACK	AVG	OFF	FRONT	BACK	AVG	OFF	FRONT	BACK	AVG	OFF
1	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0
3	$\frac{1}{8}R$	$\frac{1}{4}R$	$\frac{3}{16}$	$\frac{9}{16}R$	0	0	0	0	$\frac{1}{8}L$	0	$\frac{1}{16}$	$\frac{3}{16}L$
4	$\frac{1}{3}R$	$\frac{1}{3}R$	$\frac{1}{3}$	1R	0	$\frac{1}{16}R$	$\frac{1}{32}$	$\frac{3}{32}R$	$\frac{1}{4}L$	0	$\frac{1}{8}$	$\frac{3}{16}L$
5	$\frac{1}{3}R$	$\frac{1}{3}R$	$\frac{1}{3}$	1R	$\frac{1}{4}L$	$\frac{1}{8}L$	$\frac{3}{16}$	$\frac{9}{16}L$	$\frac{1}{3}L$	$\frac{1}{4}L$	$\frac{1}{4}$	$\frac{3}{4}L$
T	$\frac{1}{3}R$	$\frac{1}{3}R$	$\frac{1}{3}$	1R	$\frac{1}{3}L$	$\frac{1}{3}L$	$\frac{1}{3}$	1L	$\frac{2}{3}L$	$\frac{1}{3}L$	$\frac{1}{2}$	$\frac{1}{2}L$

TWIST

LEVEL	B	1	2	3	4	5	T
READING							

Plot 3

LORSTA: KARGABURUN
DATE: 16 OCT 84
WIND FM C- AT 0 KNTS
MAXIMUM DEFLECTION
BETWEEN GUY LEVELS =
1 1/2"



C- 3

C- 11

C- 7

LORAN STATION KARGABURUNDATE 16 OCT 84WIND CALMTEMP 70° F

ALIGNMENT

LEVEL	LEG DIAM	3				7				11			
		AT RADIAL		AT RADIAL		AT RADIAL		AT RADIAL		AT RADIAL		AT RADIAL	
		FRONT	BACK	AVG	OFF SET (")	FRONT	BACK	AVG	OFF SET (")	FRONT	BACK	AVG	OFF SET (")
1	3"	$\frac{1}{8}L$	$\frac{1}{8}L$	$\frac{1}{8}L$	$\frac{3}{8}L$	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ	ϕ
2	3"	$\frac{3}{8}L$	$\frac{3}{8}L$	$\frac{3}{8}L$	$1\frac{1}{8}L$	$\frac{1}{16}L$	$\frac{1}{16}L$	$\frac{1}{16}L$	$\frac{3}{16}L$	$\frac{1}{8}R$	$\frac{1}{16}R$	$\frac{1}{8}R$	$\frac{3}{8}R$
3	3"	$\frac{1}{2}L$	$\frac{3}{8}L$	$\frac{7}{16}L$	$1\frac{5}{16}L$	$\frac{1}{8}L$	$\frac{1}{16}L$	$\frac{1}{8}L$	$\frac{3}{8}L$	$\frac{1}{8}R$	$\frac{1}{16}R$	$\frac{1}{8}R$	$\frac{3}{8}R$
4	3"	$\frac{3}{8}L$	$\frac{1}{4}L$	$\frac{5}{16}L$	$1\frac{5}{16}L$	$\frac{1}{16}L$	ϕ	$\frac{1}{16}L$	$\frac{3}{16}L$	$\frac{1}{32}L$	ϕ	ϕ	ϕ
5	3"	$\frac{1}{4}L$	$\frac{1}{8}L$	$\frac{3}{16}L$	$\frac{9}{16}L$	$\frac{1}{8}L$	$\frac{3}{16}L$	$\frac{3}{16}L$	$\frac{9}{16}L$	$\frac{1}{8}L$	$\frac{1}{4}L$	$\frac{3}{16}L$	$\frac{9}{16}L$
TOP	3"	ϕ	ϕ	ϕ	ϕ	$\frac{1}{16}R$	ϕ	ϕ	ϕ	$\frac{1}{4}L$	$\frac{1}{4}L$	$\frac{1}{4}L$	$\frac{3}{4}L$



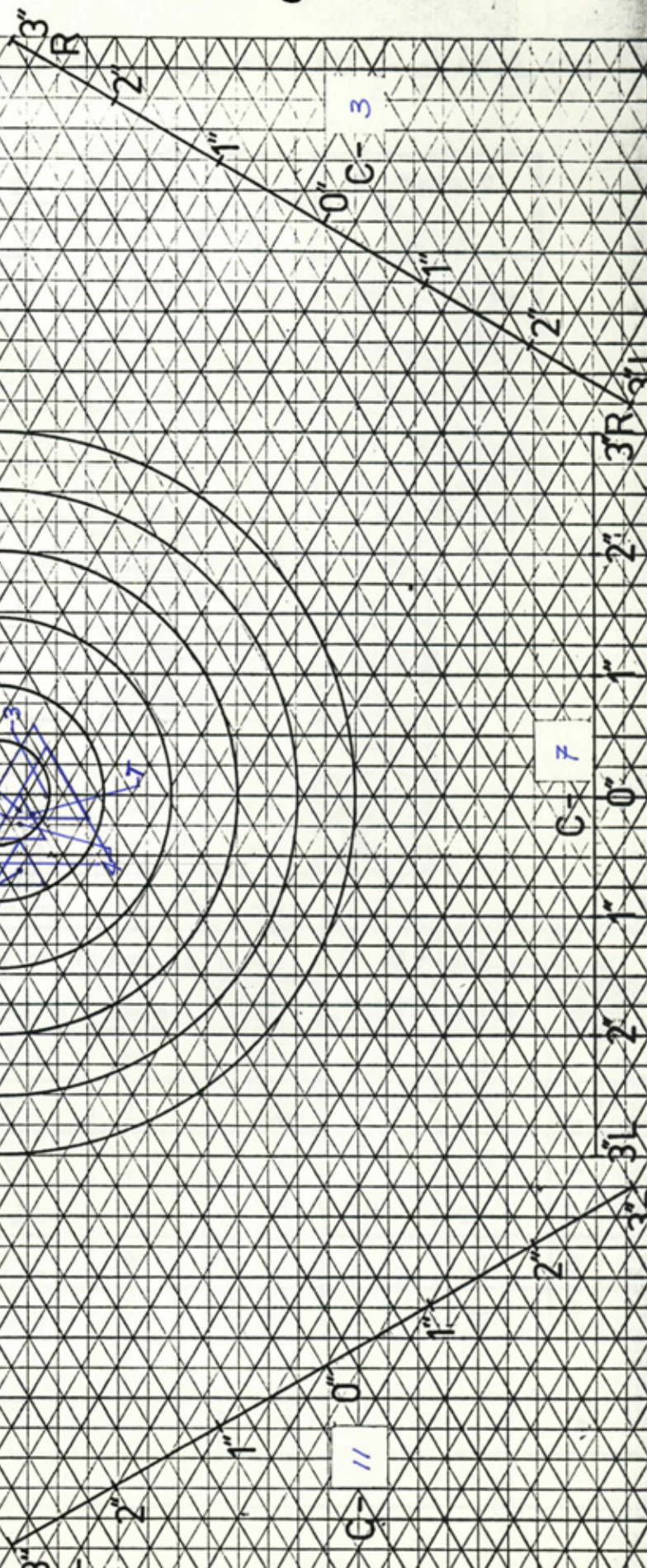
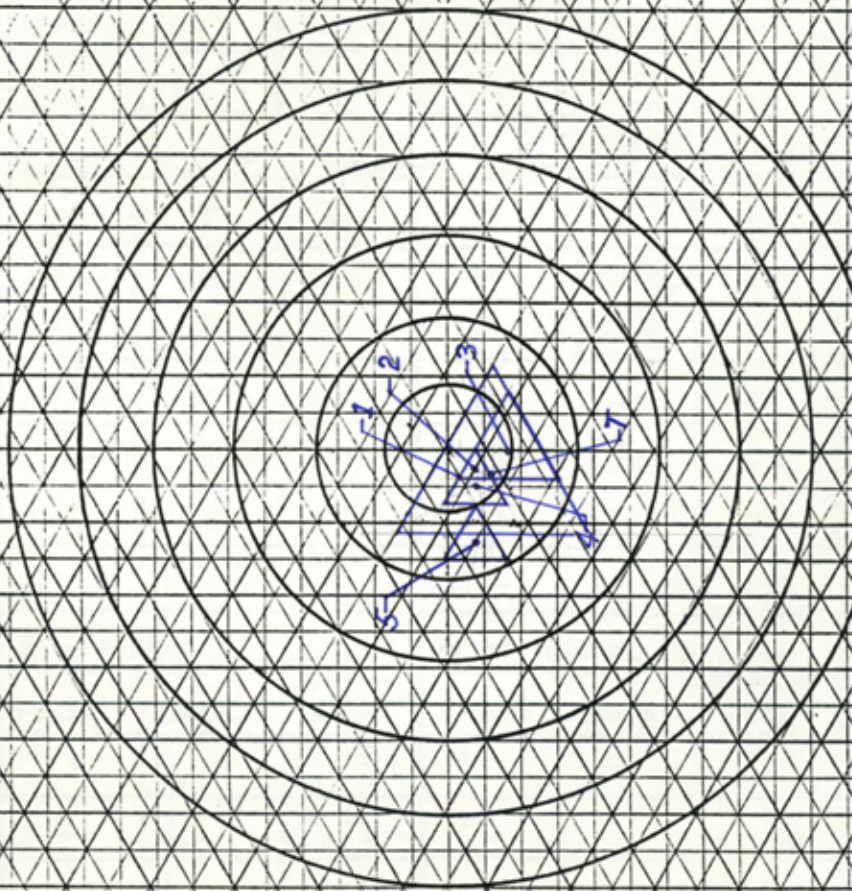
LORSTA: KARGABURUN

DATE: 16 OCT 84

WIND FM C- - AT 0 KNTS

MAXIMUM DEFLECTION
BETWEEN GUY LEVELS =
1 1/2"

Plot 4



DATA SHEET

LORSTA KARGABURAN, DATE 16 OCT 84, WIND FM C-N/A AT Ø KTS.
17 OCT 84 C-3 5-8 KTS

TENSIONS

STRUCTURAL GUYS 17 OCT 84 TEMP = 50°F/10°C

LEVEL	LANE 1		LANE 2		LANE 3		ALLOWABLE @ 60°F RANGE
	A	B	A	B	A	B	
1	1410	1440	1300	1350	1450	1400	1260 to 1450
2	1325	1290	1150	1200	1350	1225	1120 to 1290
3	1450	1500	1175	1225	1510	1560	1240 to 1430
4	1150	1140	1075	1075	1160	1170	1000 to 1150
5	1640	1675	1500	1550	1730	1730	1500 to 1725

RADIAL GUYS 17 OCT 84 Allowable Range 1050 to 1208 @ 60°F, DESIGN TEMP

1	1300	7	1300	13	1260	19	1180
2	1350	8	1160	14	1350	20	1250
3	1300	9	1210	15	1100	21	1220
4	1275	10	1125	16	1200	22	1250
5	1300	11	1140	17	1200	23	1450
6	1250	12	1150	18	1200	24	1450

ALIGNMENT 16 OCT 84 WIND = Ø KTS TEMP = 70°F

LEVEL	A at Radial C-3				A at Radial C-7				T at Radial C-11			
	FRONT	BACK	AVG	OFF	FRONT	BACK	AVG	OFF	FRONT	BACK	AVG	OFF
1	$\frac{1}{16} L$	$\frac{1}{16} L$	$\frac{1}{16}$	$\frac{3}{16} L$	$\frac{1}{16} L$	Ø	$\frac{1}{32}$	$\frac{3}{32} L$	Ø	Ø	Ø	Ø
2	$\frac{1}{8} L$	$\frac{1}{16} L$	$\frac{3}{32}$	$\frac{9}{32} L$	$\frac{1}{16} L$	Ø	$\frac{1}{32}$	$\frac{3}{32} L$	$\frac{1}{16} R$	$\frac{1}{16} R$	$\frac{1}{16}$	$\frac{3}{16} R$
3	$\frac{1}{8} L$	$\frac{1}{16} L$	$\frac{3}{32}$	$\frac{9}{32} L$	Ø	$\frac{1}{16} L$	$\frac{1}{32}$	$\frac{3}{32} L$	$\frac{3}{8} R$	$\frac{1}{16} R$	$\frac{7}{32}$	$\frac{21}{32} R$
4	$\frac{1}{8} L$	$\frac{1}{32} L$	$\frac{5}{64}$	$\frac{15}{64} L$	$\frac{1}{4} L$	Ø	$\frac{1}{8}$	$\frac{3}{8} L$	$\frac{1}{8} R$	Ø	$\frac{1}{16}$	$\frac{3}{16} R$
5	$\frac{3}{16} L$	$\frac{1}{16} L$	$\frac{1}{8}$	$\frac{3}{8} L$	$\frac{3}{16} L$	$\frac{3}{8} L$	$\frac{9}{32}$	$\frac{27}{32} L$	Ø	Ø	Ø	Ø
T	$\frac{1}{16} L$	Ø	$\frac{1}{32}$	$\frac{3}{32} L$	$\frac{1}{8} L$	$\frac{1}{4} L$	$\frac{3}{16}$	$\frac{9}{16} L$	$\frac{1}{4} R$	$\frac{1}{8} R$	$\frac{3}{16}$	$\frac{9}{16} R$

TWIST

LEVEL	B	1	2	3	4	5	T
READING							