

# OBSTRUCTION DATA SHEET

**ODS 277**  
**MUSCLE SHOALS REGIONAL AIRPORT**  
**MUSCLE SHOALS, ALABAMA**

**DIGITIZED FROM**

**OC 277**  
**SURVEYED FEBRUARY 1991**  
**11TH EDITION**



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## OBSTRUCTION DATA SHEET

The Obstruction Data Sheet (ODS) provides digital obstruction and runway data for use in aircraft arrival and departure planning. This information has been obtained using field survey and photogrammetric methods by the Photogrammetry Branch of the National Ocean Service in accordance with Federal Aviation Regulations Part 77 (FAR-77), "Objects Affecting Navigable Airspace" and FAA Nr. 405, "Specifications - Airport Obstruction Chart and Related Products."

The ODS is a derivative of the Airport Obstruction Chart (OC). The source OC is indicated on the ODS cover. All objects, both obstructing and nonobstructing, that carry an elevation on the OC are listed in the ODS. The ODS (and OC) depict a representation of objects that existed at the time of the OC field survey.

ODS information is arranged as follows:

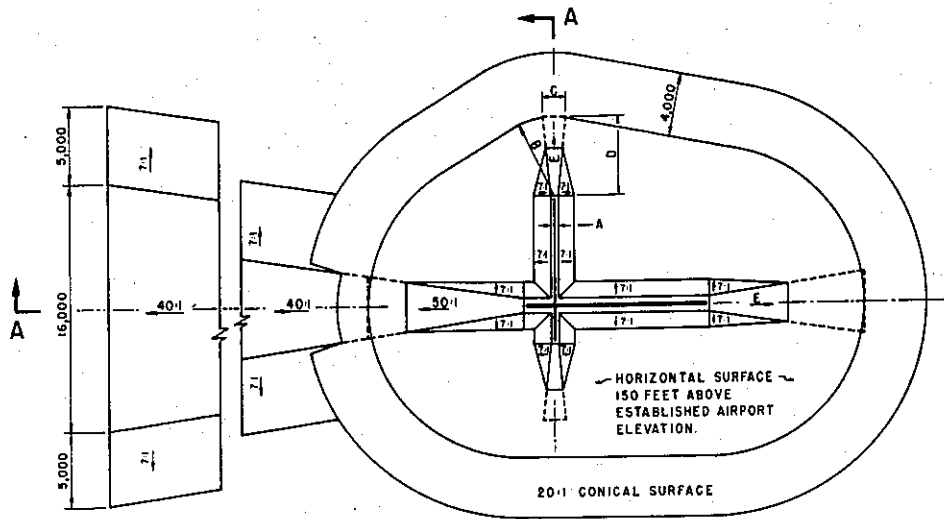
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the physical end and threshold of Runway 9R. Objects in the Runway 27L approach or primary are listed with Runway 27L. (Objects in the common 9R/27L primary area are listed with both runways.)
2. All objects not included in "1" above are listed with the Airport Reference Point (ARP).
3. Runway configuration and runway lengths, widths, and elevations are presented on the ODS last page.

The FAR-77 imaginary approach surfaces for which the obstruction surveys were performed are coded in the ODS as follows (see footnote 2 on page 3):

A(V) ..... Utility runway - visual approach only  
 A(NP) ..... Utility runway - nonprecision instrument approach  
 B(V) ..... Nonutility runway - visual approach only  
 C ..... Nonutility runway - nonprecision instrument approach with  
 visibility minimums greater than 3/4 mile  
 D ..... Nonutility runway - nonprecision instrument approach with  
 visibility minimums as low as 3/4 mile  
 PIR ..... Precision instrument runway  
 SUPLC ... Supplemental C underlying a B(V)

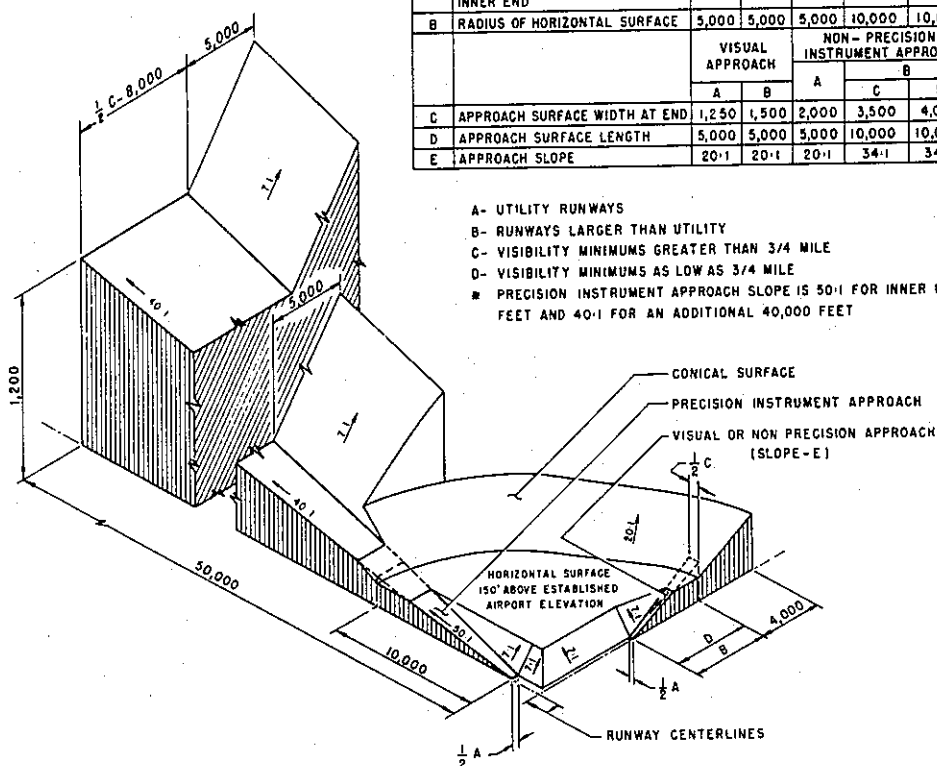
FAR-77 imaginary surface dimensions are defined on page 2 of this report.

Primary surface width is determined by the widest approach at the two approach/primary interfaces for that runway.



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	B		
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1,000	1,000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
		VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT APPROACH
		A	B	A	B		
C	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	*
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	*

- A- UTILITY RUNWAYS
- B- RUNWAYS LARGER THAN UTILITY
- C- VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
- D- VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
- \* PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET



ISOMETRIC VIEW OF SECTION A-A

FAR-77 CIVIL AIRPORT  
IMAGINARY SURFACES

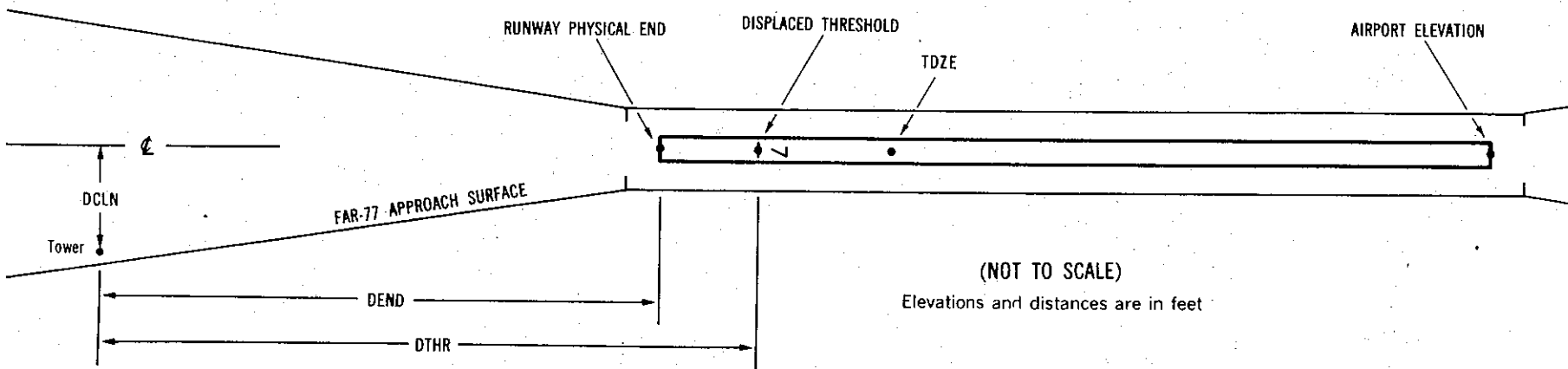
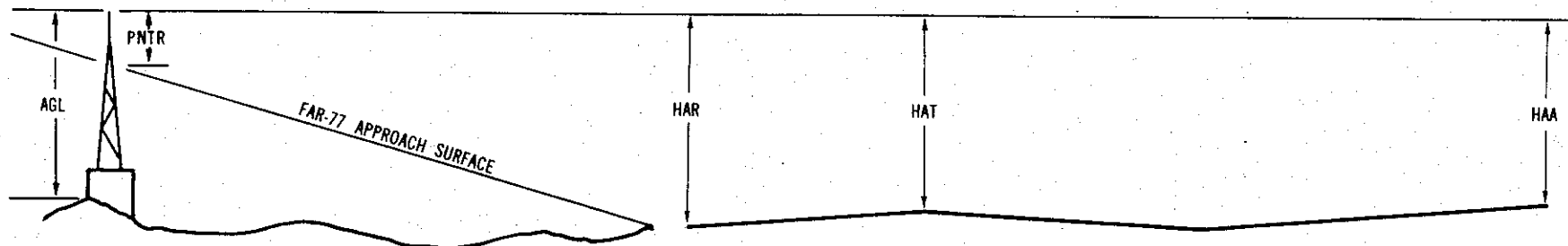
# ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

OBJECT	LAT	LONG	A <sup>8</sup>	ELEV <sup>9</sup>	AGL <sup>10</sup>	HAR <sup>11</sup>	HAT <sup>11</sup>	HAA <sup>11</sup>	DEND <sup>12</sup>	DTHR <sup>12</sup>	DCLN <sup>12</sup>	PNTR <sup>13</sup>
XXXXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX
XXXXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX

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(NOT TO SCALE)

Elevations and distances are in feet

## EXPLANATION OF FOOTNOTES

- 1 Data block identifier. If a runway number is entered (reference runway), this data block will contain data pertinent to the reference runway and to objects in the FAR-77 approach and primary area of the reference runway. If ARP is entered, this data block will contain the ARP position and data relative to all objects not in an FAR-77 approach or primary area.
- 2 For the reference runway, the lowest FAR-77 approach surface for which an obstruction survey was performed. (More than one surface may be surveyed.)
- 3 Reference runway approach physical end elevation/touchdown zone elevation
- 4 Latitude and longitude of reference runway approach physical end
- 5 Reference runway geodetic azimuth reckoned clockwise from south
- 6 Reference runway displaced threshold elevation/touchdown zone elevation
- 7 Latitude and longitude of reference runway displaced threshold
- 8 Accuracy Code:
- |   | Horizontal | Vertical |
|---|------------|----------|
| 1 | = 20       | A = 2    |
| 2 | = 40       | B = 5    |
|   |            | C = 20   |
- 9 Mean Sea Level (MSL) elevation at top of object. This value includes 15 feet added to noninterstate roads, 17 feet added to interstate roads, and 23 feet added to railroad tracks.
- 10 Height above ground level (AGL). AGLs are provided only for those objects appearing on the OC that are equal to, or greater than, 200 feet AGL. AGL accuracy is  $\pm 10$  feet.
- 11 HAA - Height above airport  
 HAR - Height above reference runway approach physical end  
 HAT - Height above reference runway touchdown zone elevation
- 12 DEND - Distance along reference runway centerline from point perpendicular to object to reference runway approach physical end  
 DTHR - Distance along reference runway centerline from point perpendicular to object to reference runway threshold  
 DCLN - Distance left (L) or right (R) of reference runway centerline as observed facing forward in a landing aircraft.
- A negative value for DEND or DTHR indicates object is in primary area on roll-out side of zero distance point.
- 13 PNTR - Penetration of indicated FAR-77 approach or primary surface (see footnote 2).

OC0277

AIRPORT ELEVATION 550

11 C 542/544 344456.138N 08737 1.164W 2940651

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
ROD ON OL GLIDE SLOPE	344437.23	0873558.29	1A	607		65	63	57	-5570		399L	57
TREE	344443.33	0873613.59	1A	560		18	16	10	-4152		441L	15
TREE	344449.86	0873634.61	1A	554		12	10	4	-2282		326L	13
TREE	344451.36	0873639.82	1A	562		20	18	12	-1823		287L	23
TREE	344453.25	0873643.07	1A	559		17	15	9	-1497		351L	19
SIGN	344454.70	0873703.91	1A	545		3	1	-5	150		226R	3
ANTENNA ON BUILDING	344457.73	0873711.38	1A	559		17	15	9	844		202R	-2
OL ON LOCALIZER	344459.58	0873710.46	1A	546		4	2	-4	850		0L	-15
TREE	344454.82	0873714.83	1A	572		30	28	22	986		587R	7
TREE	344503.69	0873714.11	1A	572		30	28	22	1298		255L	-2
POLE	344505.88	0873714.02	1A	569		27	25	19	1381		460L	-8
TREE	344504.53	0873724.21	1A	601		59	57	51	2102		12R	3
TREE	344504.27	0873732.95	1A	608		66	64	58	2757		333R	-9
TREE	344511.31	0873729.43	1A	617		75	73	67	2780		436L	-1

29 PIR 550/550 344429.084N 0873547.967W 1140733

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
SIGN	344454.70	0873703.91	1A	545		-5	-5	-5	-6843		226L	3
TREE	344453.25	0873643.07	1A	559		9	9	9	-5196		351R	19
TREE	344451.36	0873639.82	1A	562		12	12	12	-4870		287R	23
TREE	344449.86	0873634.61	1A	554		4	4	4	-4411		326R	13
TREE	344443.33	0873613.59	1A	560		10	10	10	-2541		441R	15
ROD ON OL GLIDE SLOPE	344437.23	0873558.29	1A	607		57	57	57	-1123		399R	57
RAILROAD	344422.09	0873528.87	1A	555		5	5	5	1744		6R	-26
TREE	344415.98	0873528.50	1A	589		39	39	39	2024		545L	3
TREE	344422.23	0873511.18	1A	612		62	62	62	3086		623R	4
TRANSMISSION TOWER	344418.31	0873443.79	1A	658		108	108	108	5333		1195R	5
OL ON TRANSMISSION TOWER	344358.99	0873443.52	1A	657		107	107	107	6153		577L	-12

OC0277

AIRPORT ELEVATION 550

36 A(V) 541/547 344423.430N 0873657.678W 1812203

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
GROUND	344410.48	0873657.29	1A	551		10	4	1	1308		64R	-45

18 A(V) 539/547 344502.979N 0873656.535W 0012204

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	344509.85	0873657.84	1A	558		19	11	8	692		125R	-6
TREE	344513.11	0873655.70	1A	584		45	37	34	1026		45L	4

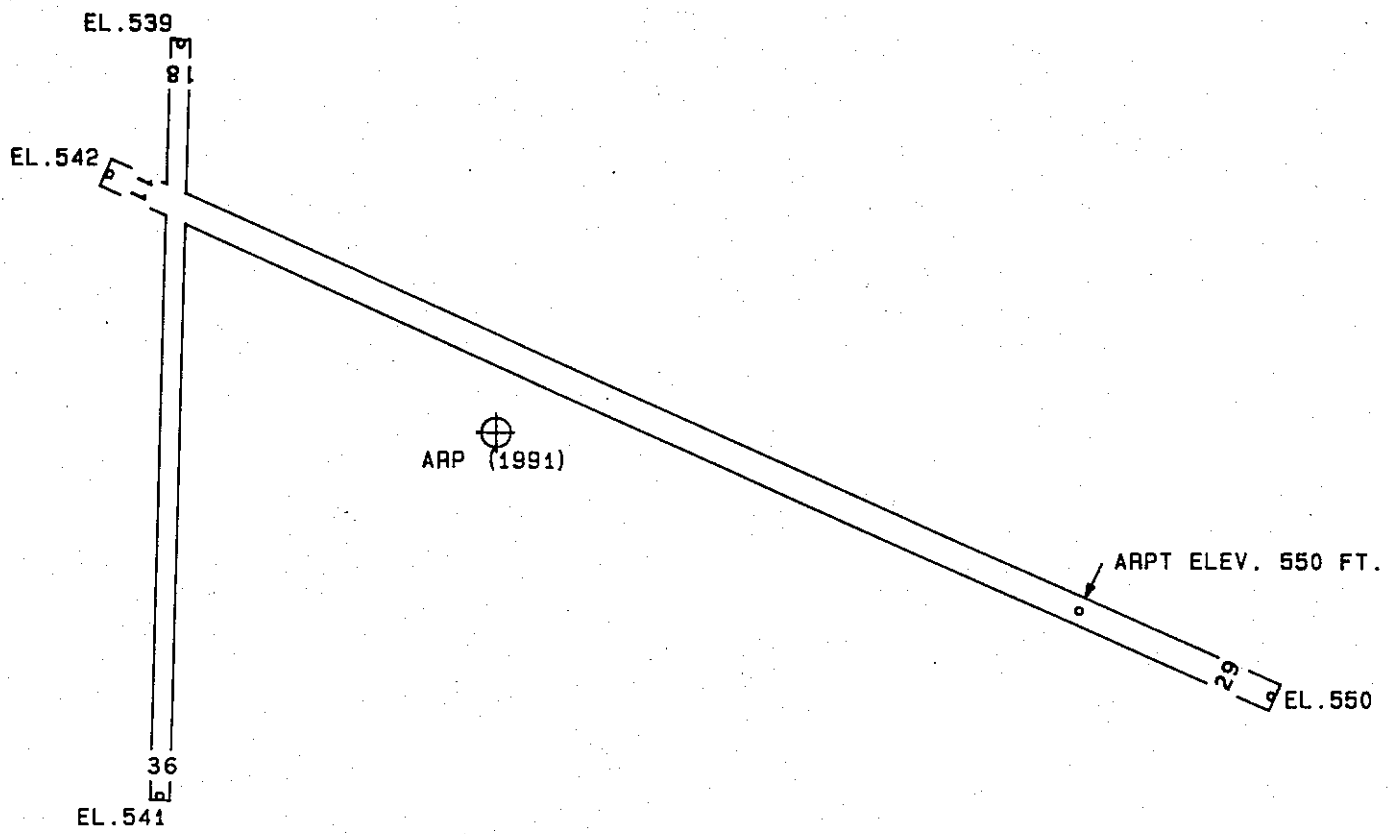
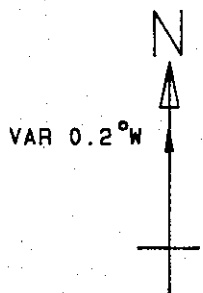


OC0277

AIRPORT ELEVATION 550

ARP 344442.834N 0873636.736W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG BEARING	DISTANCE
TREE	344451.92	0873633.41	1A	598		48	17 3	959
ROD ON OL ANEMOMETER	344445.33	0873650.89	1A	562		12	282 14	1208
OL ON LIGHTED WINDSOCK	344445.43	0873652.10	1A	571		21	281 46	1309
ANTENNA ON HANGAR	344457.58	0873649.20	1A	580		30	325 19	1818
TREE	344430.68	0873653.82	1A	566		16	229 27	1882
TREE	344426.57	0873654.01	1A	573		23	221 26	2187
OL ON HANGAR	344502.39	0873649.38	1A	580		30	332 7	2241
ROD ON OL DF ANTENNA	344448.64	0873703.01	1A	569		19	285 11	2269
TREE	344422.42	0873654.01	1A	568		18	215 8	2517
TREE	344505.34	0873652.39	1A	569		19	330 21	2624
TREE	344427.81	0873703.83	1A	601		51	236 18	2724
ANTENNA ON OL AIRPORT BCN	344447.19	0873709.33	1A	612		62	279 24	2755
TREE	344507.92	0873652.60	1A	584		34	332 38	2861
TREE	344422.60	0873701.58	1A	568		18	225 35	2913
TREE	344508.41	0873654.22	1A	560		10	330 46	2968
TREE	344423.09	0873703.70	1A	591		41	228 38	3008
ANTENNA	344442.05	0873715.72	1B	656		106	268 49	3254
POLE	344508.78	0873700.17	1A	574		24	323 30	3272
TREE	344418.10	0873703.60	1A	592		42	222 5	3358
TREE	344440.38	0873556.57	1A	579		29	94 25	3361
TREE	344453.14	0873715.07	1A	613		63	288 14	3365
TREE	344408.98	0873703.51	1A	600		50	213 21	4088
TREE	344436.69	0873544.04	1A	606		56	98 14	4442
ROD ON STACK	344541.11	0873547.22	1B	718		168	35 14	7196
TRANSMISSION TOWER	344526.48	0873524.71	1B	699		149	53 55	7456
TRANSMISSION TOWER	344442.09	0873442.36	1B	688		138	90 39	9546
TRANSMISSION TOWER	344523.64	0873443.01	1B	682		132	66 42	10348
OL ON WATER TANK	344618.47	0873739.48	1B	688		138	331 46	10995
VENT ON WATER TANK	344236.05	0873640.66	2C	653		103	181 40	12822



TOUCHDOWN ZONE RUNWAY ELEVATION	
11	544
29	550
36	547
18	547

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(NOT TO SCALE)