



LOS ANGELES COUNTY **REDISTRICTING 2021**

Initial Analysis of Submitted Plans
10-26-21

Presentation to the County of LOS ANGELES CITIZENS REDISTRICTING COMMISSION

ARCBridge Consulting & Training Inc.
www.arcbridge.com



Number of plans submitted

AS OF 10-26-21

Number of Plans submitted

As of 10-26-21 23 plans have been submitted

- 2 plans were submitted using non-RDU based software
- 17 submitted by Citizens
- 6 submitted by commissioners
- 1 Cm. Mary Kenney
- 2 Cm. Stecher
- 3 Cm. Holtzman

Evaluation Factors

- **Maximum Deviation**
- **Communities of Interest**
 - 348 Consolidated Statistical Areas (226 Cities and 122 unincorporated areas)
 - 99 NC Split
 - 27 COI Splits
- **Compactness score – Polsby Popper Test**
- **Minority Districts**

Compactness

District Compactness

District	Name
1	District 1
Area:	481.60
Perimeter:	162.48
Width/Length Ratio:	0.510
Population Density:	4,166.76
Reock Test:	0.257
Polsby-Popper Test:	0.229
Convex Hull Ratio:	0.778
Schwarzberg Test:	2.089
Grofman Test:	7.404

Measures of Compactness

Polsby-Popper

The Polsby-Popper (PP) measure (polsby & Popper, 1991) is the ratio of the area of the district (A_D) to the area of a circle whose circumference is equal to the perimeter of the district (P_D). A district's Polsby-Popper score falls with the range of $[0, 1]$ and a score closer to 1 indicates a more compact district.

$$PP = 4\pi \times \frac{A_D}{P_D^2}$$



Evaluation Model

Classification	As-is Minor Changes	As-is with Major Changes	Totally New	Other				Top Score
Not Scored	1	2	3	4				
Max Deviation	<2	2-4	4-6	6-8	8-10	>10		
	5	4	3	2	1	0		5
Minority Districts	5	4	3	2	1	0		
	1	2	5	3	2	0		5
348 CSAs Split	Under 10	10-15	16-25	26-35	36-45	>45		
	5	4	3	2	1	0		5
99 NC Split	Under 5	5-10	11-15	16-20	21-24	>25		
	5	4	3	2	1	0		5
27 COI Splits	Under 5	5-9	10-14	15-18	18-21	>21		
	5	4	3	2	1	0		5
Polsby Popper – compactness score	5	4	3	2	1	0		
>.20	5	4	3	2	1	0		5
Demographer's	5	4	3	2	1	0		5
Total Points								35

Map ID	Notes	Classification	Max Deviation	Minority Majority Districts	NC Split	Cities CSA Split	COI-A Split	COI-B Split	COI-C Split	Compactness Polsby Popper >2.0	Demographer Score		Overall Score	Map ID
OP-001			8.92	3	37	60	20	16	19					OP-001
Score			1	5	0	0	1	2	1	2			12	Score
OP-002			2.17	3	30	41	17	16	19					OP-002
Score			4	5	0	1	2	2	1	1			16	Score
OP-003			1.13	2	19	22	14		14					OP-003
Score			5	3	2	3	3		3	2			21	Score
OP-004			1.55	2	19	24	14	14	14					OP-004
Score			5	3	2	3	3	3	3	3			25	Score
OP-005			0.76	2	18	23	16	15	16					OP-005
Score			5	3	2	3	2	2	2	2			21	Score
OP-006			5.42	3	23	44	18	13	16					OP-006
Score			3	5	1	1	2	3	2	1			18	Score
OP-007			7.92	3	10	27	12	11	13					OP-007
Score			2	5	3	2	3	3	3	3			24	Score

Map ID	Notes	Classification	Max Deviation	Minority Majority Districts	NC Split	Cities CSA Split	COI-A Split	COI-B Split	COI-C Split	Compactness Polsby Popper >2.0	Demographer Score		Overall Score	Map ID
OP-0017			0.2		15	18	12	14	14					
Score			5		3	3	3	3	3	4			24	Score
OP-0018			4.57		19	21	11	10	12					
Score			3		3	3	3	3	3	4			22	Score
OP-0019			1.54		30	36	19	17	19					
Score			5		0	1	2	2	2	4			16	Score
OP-0020			6.15		27	38	19	16	19					
Score			2		0	1	1	2	1	1			8	Score